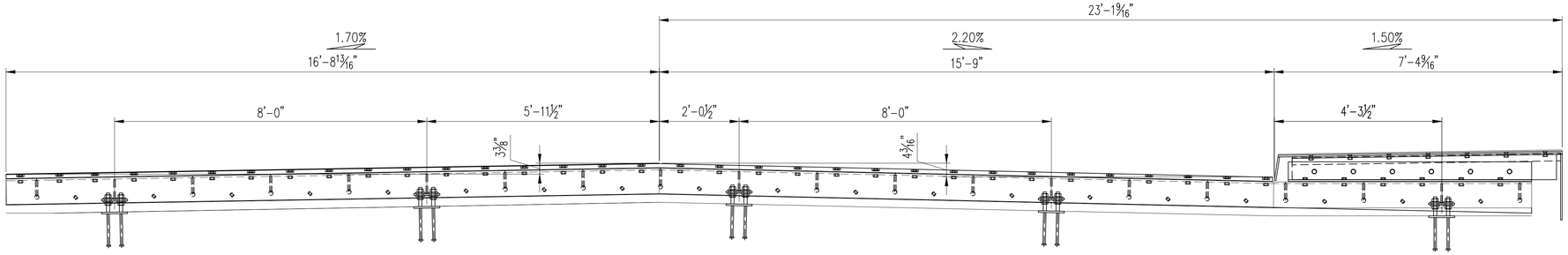
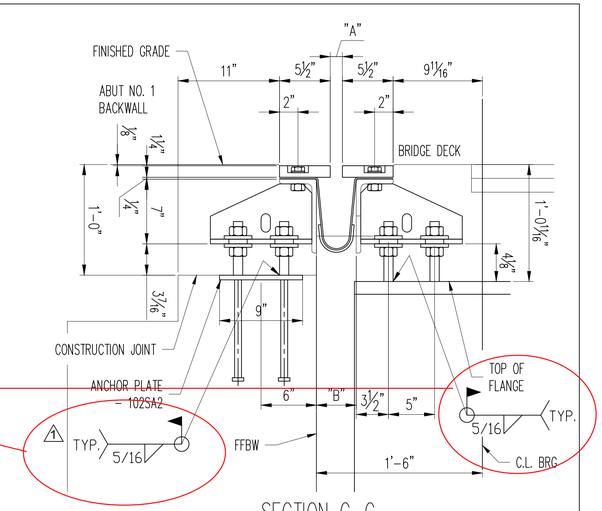


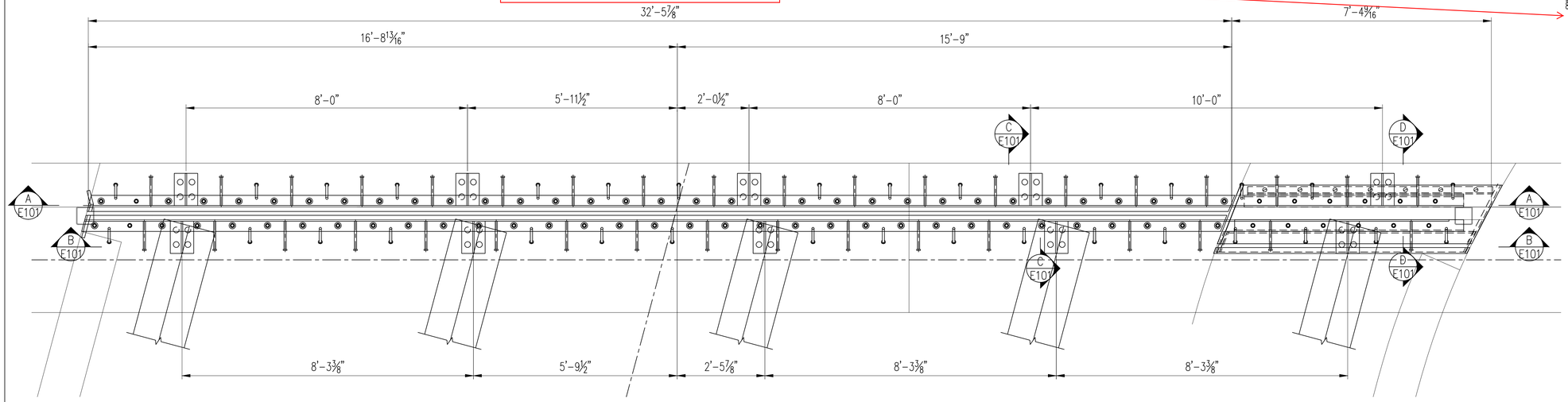
⚠1 SECTION A-A

DIMENSIONS SHOWN ALONG FFBW

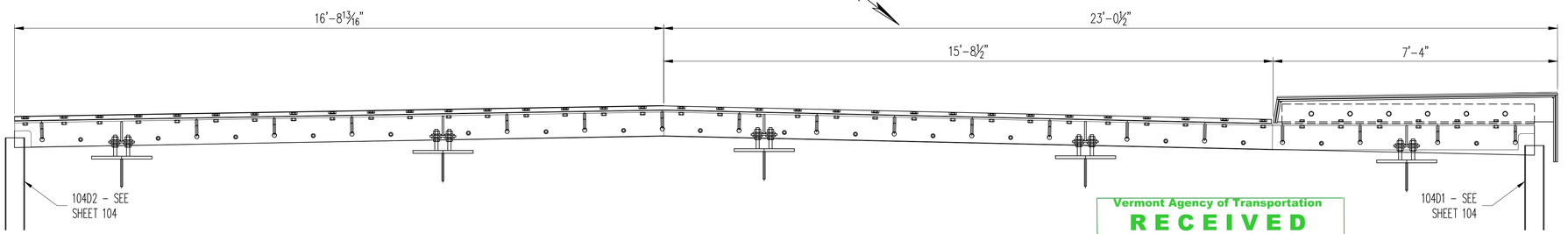
Field welds and WPS to come later from contractor?



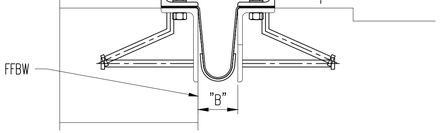
suggest replacing this finish with galvagrit or slipNOT coating, as those are much more durable finishes.



⚠1 EXPANSION JOINT PLAN



⚠1 SECTION B-B



SECTION D-D

ROTATED

TEMP. SETTING CHART		
TEMP °F	DIM "A"	DIM "B"
0	1 7/8"	4 7/8"
15°	1 11/16"	4 11/16"
30°	1 1/2"	4 1/2"
45°	1 5/16"	4 5/16"
60°	1 1/8"	4 1/8"
75°	15/16"	3 15/16"
90°	3/4"	3 3/4"
105°	9/16"	3 9/16"

Vermont Agency of Transportation
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CK'D BY MEM OK'D BY
Apr. 03, 2015
RESUBMIT
BY C. Carlson DATE 04-14-2015

NOTES:
- ALL DIMENSIONS SHOWN HORIZONTAL U.N.O.
- ALL DIMENSIONS SHOWN AT 45°F.

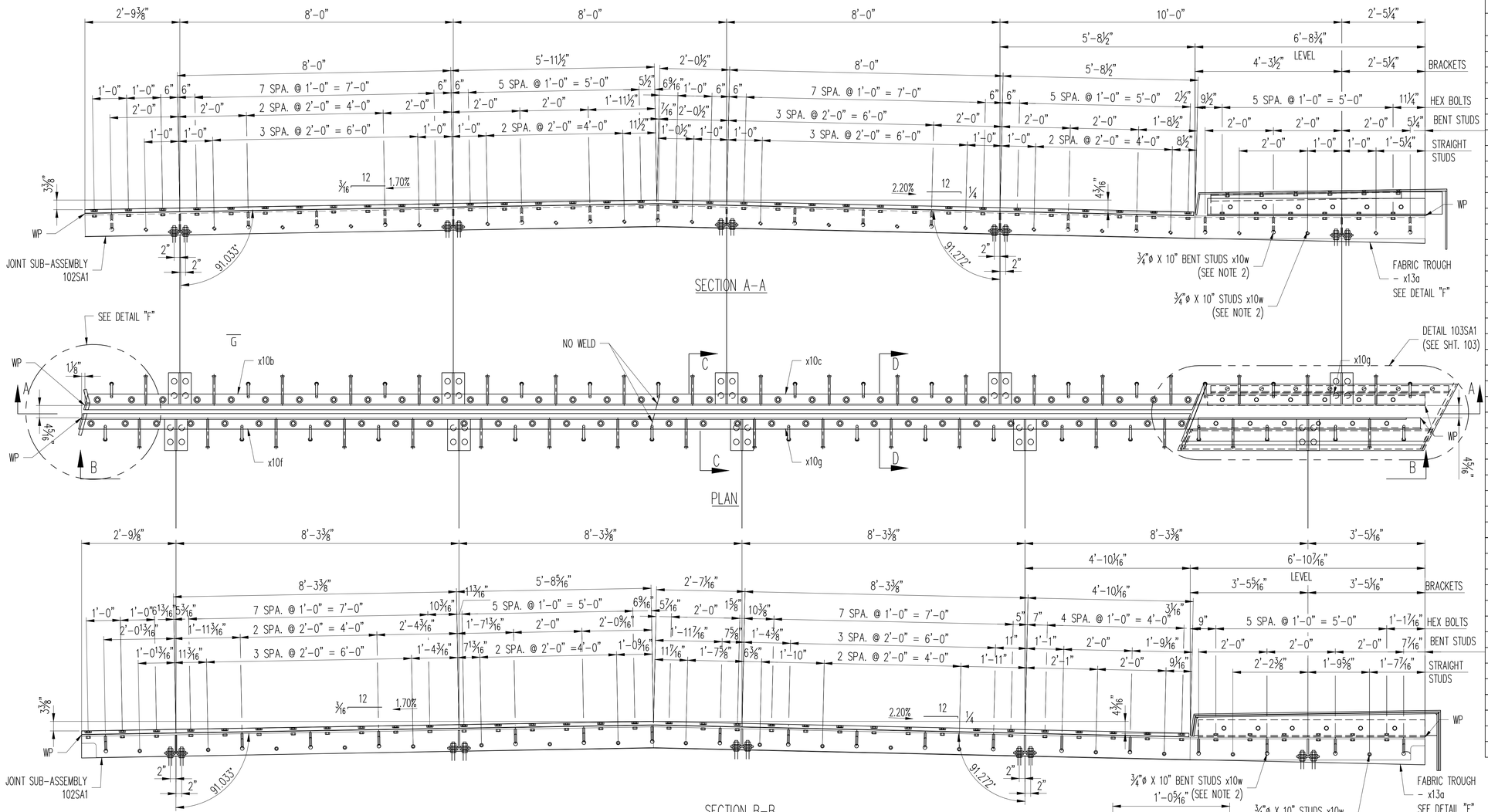
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	3/4/15	PER APPROVAL	JEB	JER		

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-250 U.N.O.	GALV. - PER STD. 726.08	AS NOTED	AS NOTED

DESCRIPTION: EXPANION JOINT - ERECTION SHEET

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: BRIDGE NO. 2 (TH 8) TH 8 (RIVER STREET) URBAN COLLECTOR - FAU 3052 STATE OF VERMONT AGENCY OF TRANS.	DRAWN: JEB	DATE: 1/5/15
	CHKD: JER	DATE: 1/10/15
LOCATION: RUTLAND COUNTY, VT	JOB NO. 597	DWG NO. E101
PROJ NO. BRF 3000 (16)		REV. 1
CUSTOMER: KUBRICKY CONSTRUCTION, CORP.		



BILL OF MATERIAL

BLOCK QTY.	BLOCK NO.		MARK	NO. PCS	SHAPE	LENGTH FT	LENGTH IN		REMARKS	
	1	1	101JA1	ONE	FINGER JOINT	38	2 3/16		GALV	
		2								
		3	x10b	1	PL 1/4 X 5 1/2	16	10 5/16		GALV	1
		4	x10c	1	PL 1/4 X 5 1/2	15	10 1/16		GALV	1
		5								
		6	x10f	1	PL 1/4 X 5 1/2	16	10 5/16		GALV	1
		7	x10g	1	PL 1/4 X 5 1/2	15	9 3/4		GALV	1
		8	x10h	1	PL 1 X 1	0	8		GALV	
		9	x10j	1	PL 1 X 1	0	2 3/4		GALV	
		10	x10k	1	PL 1 X 1	0	5		GALV	
		11	x10m	10	PL ½ X 8	0	11		GALV	
		12	x10n	10	PL ½ X 6	0	11		GALV	
		13	x10p	80	PL ⅜ X 3	0	3		GALV	
		14	x10t	10	L4 X 4 X ¼	1	2 5/8		GALV	
		15								
		16	x11b	1	L8 X 4 X ½	16	9 15/16		GALV	1
		17	x11c	1	L8 X 4 X ½	15	10 3/16		GALV	1
		18	x11d	1	L8 X 4 X ½	6	8 5/8		GALV	1
		19								
		20	x11g	1	L8 X 4 X ½	16	9 15/16		GALV	1
		21	x11h	1	L8 X 4 X ½	15	9 9/16		GALV	1
		22	x11k	1	L8 X 4 X ½	6	11 13/16		GALV	1
		23	x12a	1	PL ½ X 20	8	0		GALV	
		24	x12b	1	PL ⅜ X 2	7	2 1/4		GALV	
		25	x12c	1	PL ½ X 7 7/16	1	9 13/16		GALV	1
		26	x12d	1	PL ⅜ X 2 3/16	0	7 5/16		GALV	1
		27	x12f	1	PL ½ X 21	1	10 1/4		GALV	1
		28	x12g	1	PL ⅝ X 2	1	8 7/8		GALV	1
		29	x12h	1	PL ½ X 7	7	3 1/4		GALV	1
		30	x12k	1	PL ½ X 6 13/16	0	7 7/8		GALV	1
		31	x12m	1	PL ½ X 7 5/8	1	8 3/8		GALV	1
		32	x12n	1	L2½ X 2½ X ⅜	7	0 5/16		GALV	1
		33	x12p	1	PL ½ X 7 3/8	7	3 1/16		GALV	1
		34	x12r	1	PL ½ X 7 3/8	7	0 5/16		GALV	1
		35	x12t	1	L6 X 4 X ½	6	5 5/16		GALV	1
		36	x12v	1	L6 X 4 X ½	6	8 1/2		GALV	1
		37	x13a	1	NP 5/32 X 26	39	4 13/16		FABRIC TROUGH	1
		38	x10w	69	¾ DIA STUD	0	10		HEADED STUD	
		39	x10x	10	¾ DIA STUD	0	7		HEADED STUD	
		40	m1	2	1/16 X 3 TAPE	39	0		AASHTO M198	
		41	m2	46	½ DIA GALV BOLTS	0	2½		W/ NUT & WASHER	
		42	m3	20	½ DIA GALV BOLTS	0	3½		W/ NUT & WASHER	
		43	m4	24	½ DIA GALV BOLTS	0	2¼		W/ NUT & WASHER	
		44	m5	7	½ DIA FLTHD SCREWS	0	2		W/ NUT	
		45	1m1	40	1"ø THRD. RODS	0	7		W/ 2-NUTS	

Vermont Agency of Transportation
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CK'D BY MEM OK'D BY
Apr. 03, 2015
RESUBMIT
BY C. Carlson DATE 04-14-2015

NOTES:
1.) 1/16" X 3" BUTYL RUBBER TAPE MK m1 PER AASHTO M198 CENTERED ON EACH LINE OF BOLTS AND PLACED BETWEEN ANGLE AND FABRIC.
2.) STUDS WELDED AT 2'-0" O.C. BENT AS SHOWN ALTERNATE STRAIGHT STUDS AT 2'-0" O.C.
3.) WELD NUTS UNDERNEATH ON (3) SIDES COAT BOLT & NUT THREADS WITH NICKEL BASED NEVER SEIZE LUBE.

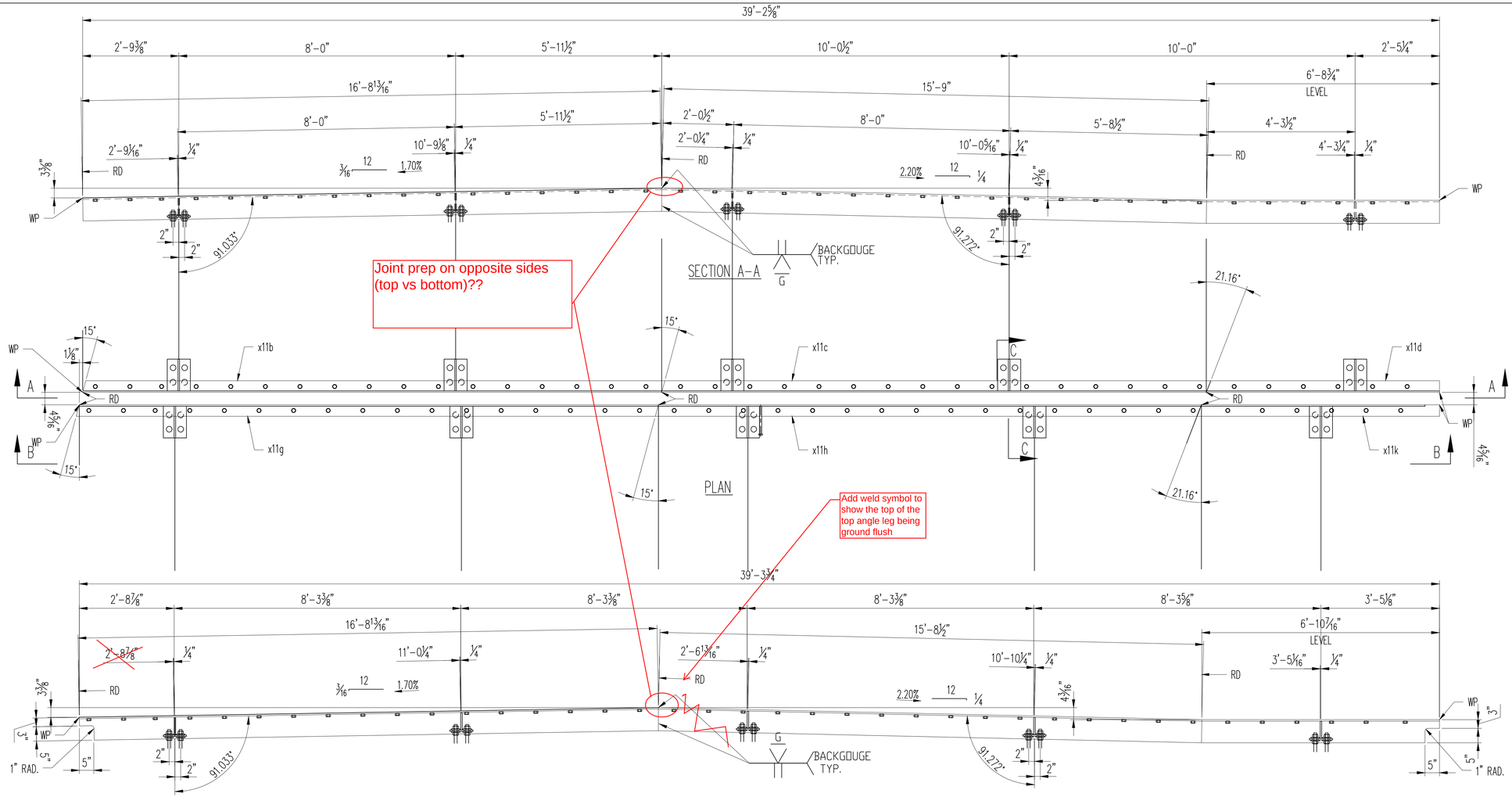
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	3/4/15	PER APPROVAL	JEB	JER		

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-250 U.N.O.	GALV. - PER STD. 726.08	AS NOTED	AS NOTED

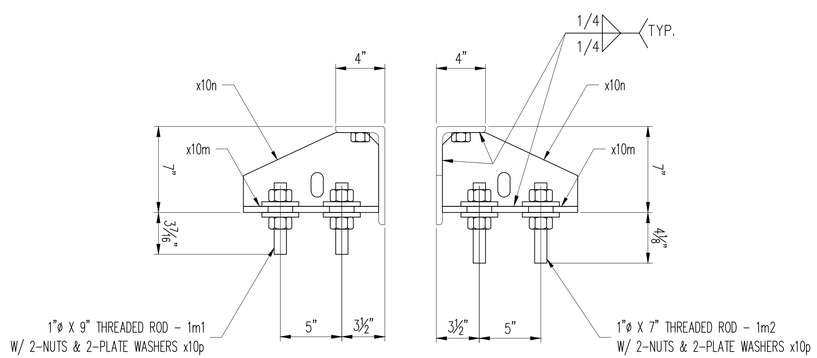
DESCRIPTION: EXPANSION JOINT - ASSEMBLY SHEET

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

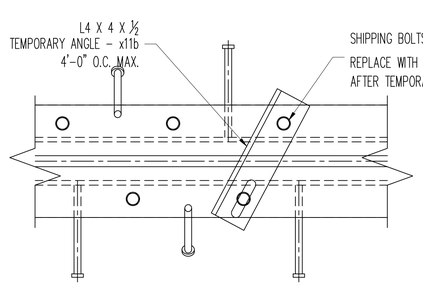
STRUCTURE: BRIDGE NO. 2 (TH 8) TH 8 (RIVER STREET) URBAN COLLECTOR - FAU 3052 STATE OF VERMONT AGENCY OF TRANS.	DRAWN: JEB	DATE: 1/5/15	
	CHKD: JER	DATE: 1/10/15	
LOCATION: RUTLAND COUNTY, VT	JOB NO. 597	DWG NO. 101	
PROJ NO. BRF 3000 (16)			
CUSTOMER: KUBRICKY CONSTRUCTION, CORP.		REV. 1	



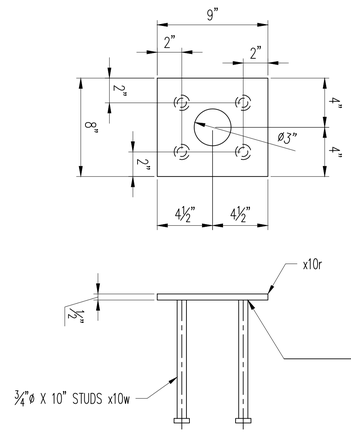
1 ~ LOWER JOINT SUB-ASSEMBLY ~ 102SA1 ⚠1



SECTION C-C
ROTATED



SHIPPING DETAIL



5 ~ ANCHOR PLATES ~ 102SA2

NOTES:
1.) ⅛" X 3" BUTYL RUBBER TAPE MK m1 PER AASHTO M198 CENTERED ON EACH LINE OF BOLTS AND PLACED BETWEEN ANGLE AND FABRIC.
2.) STUDS WELDED AT 2'-0" O.C. BENT AS SHOWN ALTERNATE STRAIGHT STUDS AT 2'-0" O.C.
3.) WELD NUTS UNDERNEATH ON (3) SIDES COAT BOLT & NUT THREADS WITH NICKEL BASED NEVER SEIZE LUBE.

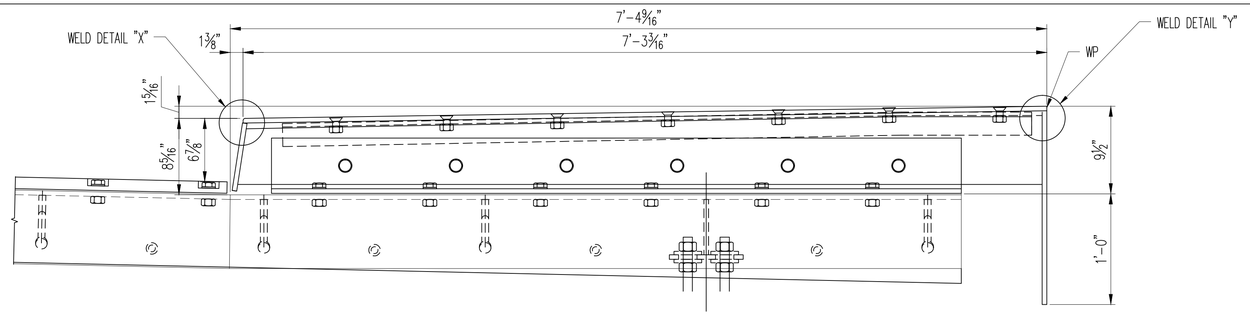
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
⚠1	3/4/15	PER APPROVAL	JEB	JER		

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-250 U.N.O.	GALV. - PER STD. 726.08	AS NOTED	AS NOTED

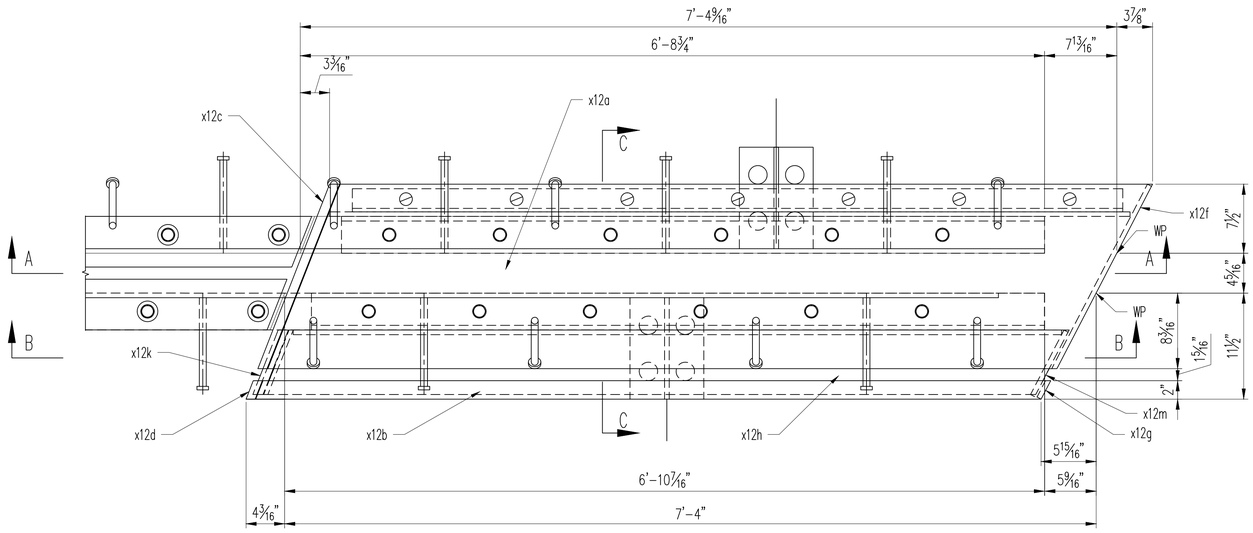
DESCRIPTION: EXPANSION JOINT - ASSEMBLY SHEET

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

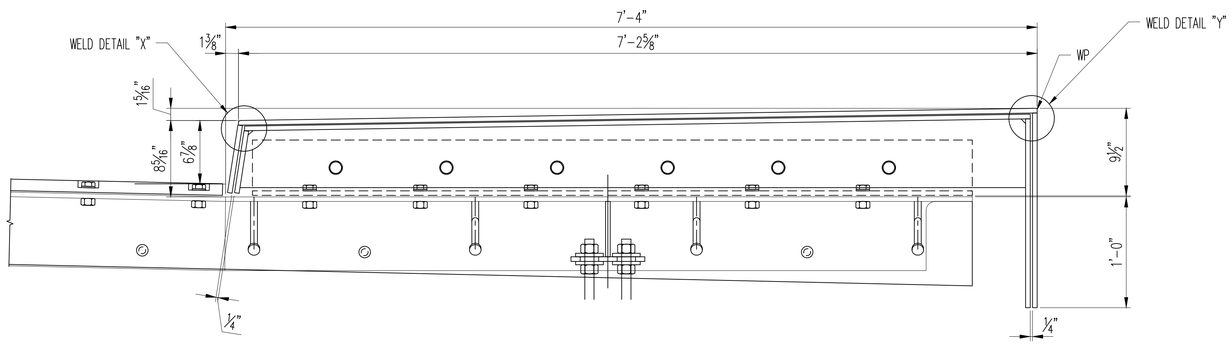
STRUCTURE:	BRIDGE NO. 2 (TH 8) TH 8 (RIVER STREET) URBAN COLLECTOR - FAU 3052 STATE OF VERMONT AGENCY OF TRANS.	DRAWN: JEB	DATE: 1/5/15
		CHKD: JER	DATE: 1/10/15
LOCATION:	RUTLAND COUNTY, VT	JOB NO. 597	DWG NO. 102
PROJ NO.	BRF 3000 (16)		REV. ⚠1
CUSTOMER:	KUBRICKY CONSTRUCTION, CORP.		



SECTION A-A

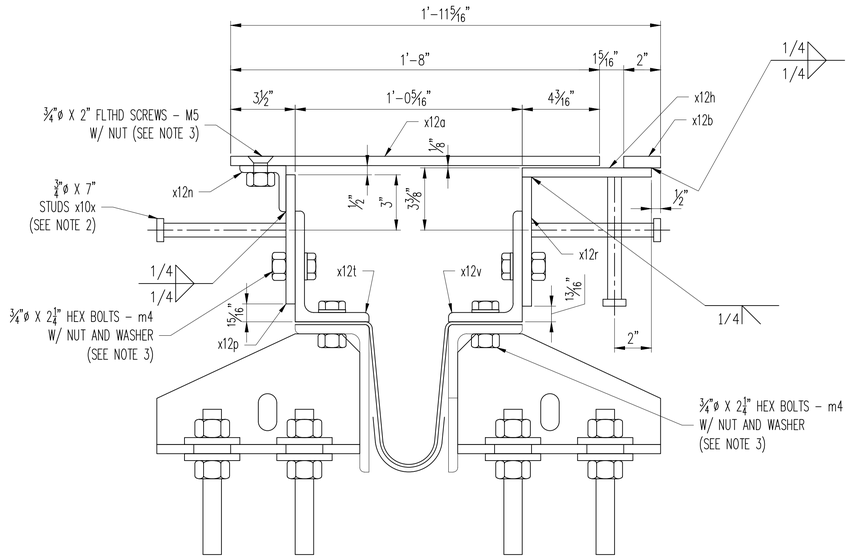


PLAN



SECTION B-B

1 ~ LOWER SIDEWALK SUB-ASSEMBLY ~ 103SA1 ⚠1



SECTION C-C

ROTATED

WELD DETAIL "X"

WELD DETAIL "Y"

NOTES:
1.) 1/16" X 3" BUTYL RUBBER TAPE MK m1 PER AASHTO M198 CENTERED ON EACH LINE OF BOLTS AND PLACED BETWEEN ANGLE AND FABRIC.
2.) STUDS WELDED AT 2'-0" O.C. ALTERNATING IF NECESARY
3.) WELD NUTS UNDERNEATH ON (3) SIDES COAT BOLT & NUT THREADS WITH NICKEL BASED NEVER SEIZE LUBE.

WPS with Joint prep for 1/4" single bevel?

Vermont Agency of Transportation
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Apr. 03, 2015
RESUBMIT
BY C. Carlson DATE 04-14-2015

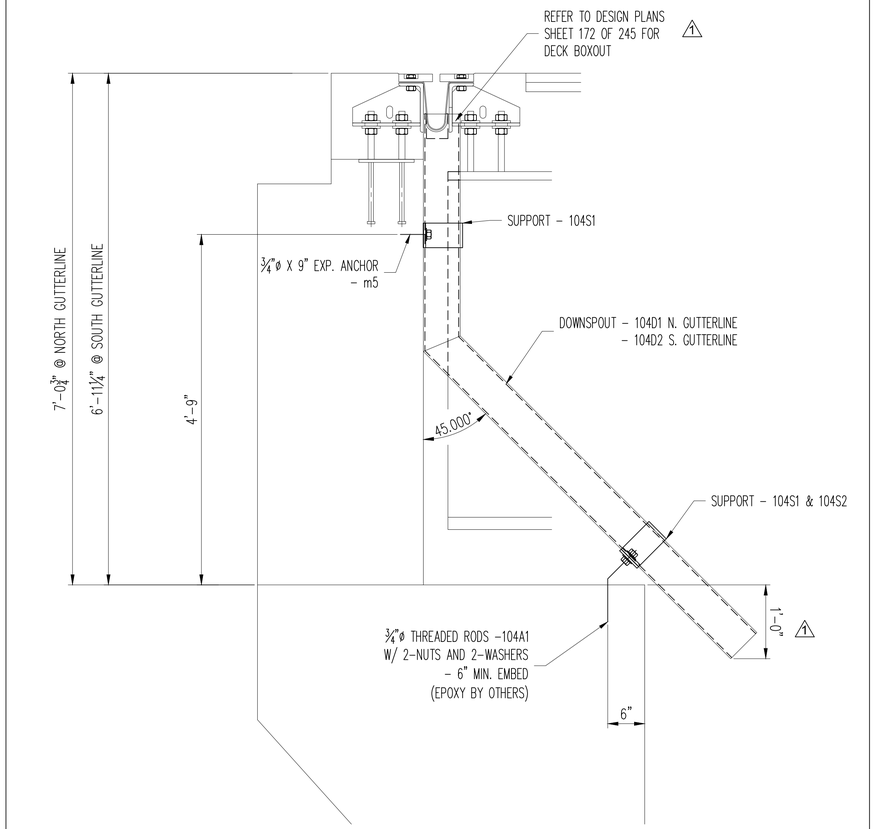
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
⚠1	3/4/15	PER APPROVAL	JEB	JER		

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-250 U.N.O.	GALV. - PER STD. 726.08	AS NOTED	AS NOTED

DESCRIPTION: EXPANSION JOINT - ASSEMBLY SHEET

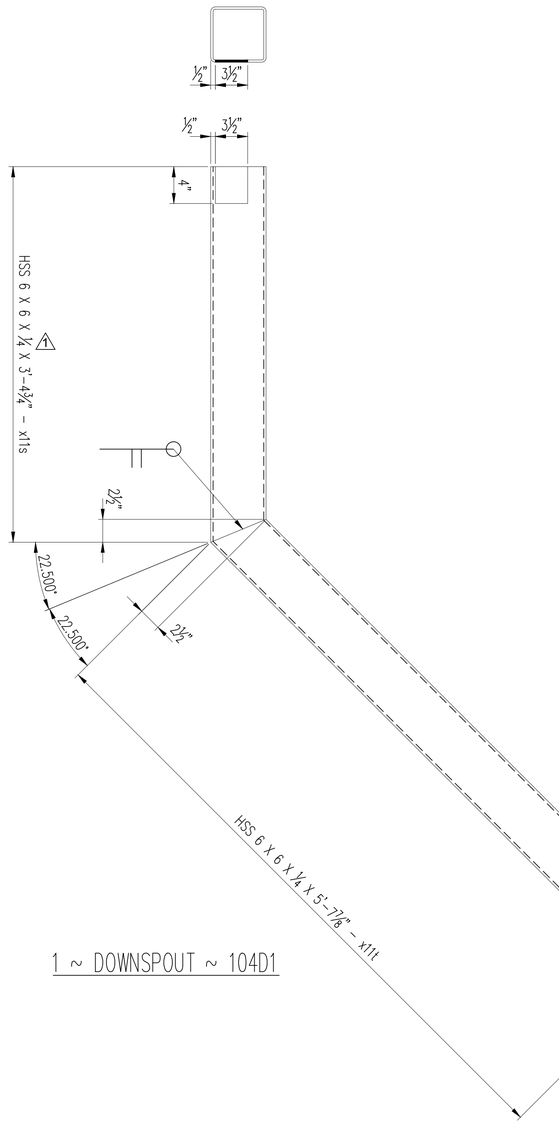
CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: BRIDGE NO. 2 (TH 8) TH 8 (RIVER STREET) URBAN COLLECTOR - FAU 3052 STATE OF VERMONT AGENCY OF TRANS.	DRAWN: JEB	DATE: 1/5/15	
	CHKD: JER	DATE: 1/10/15	
LOCATION: RUTLAND COUNTY, VT	JOB NO. 597	DWG NO. 103	
PROJ NO. BRF 3000 (16)			
CUSTOMER: KUBRICKY CONSTRUCTION, CORP.		REV. ⚠1	

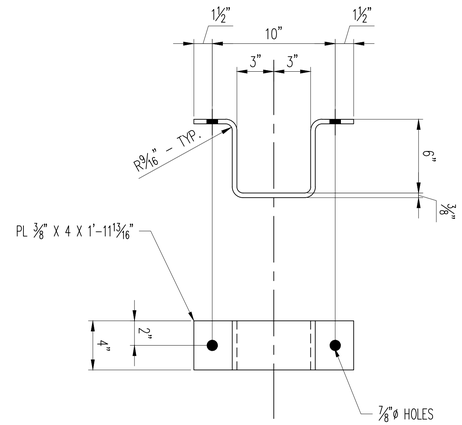


SECTION F-F

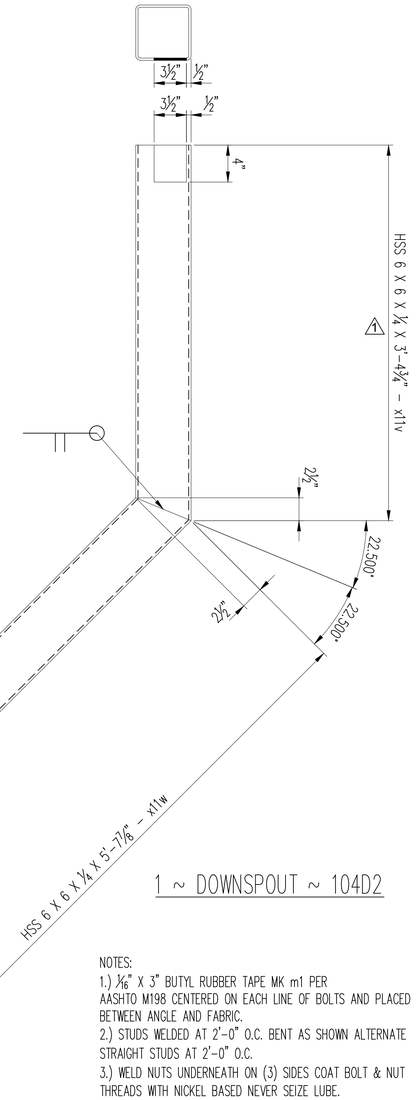
SHEET E101



1 ~ DOWNSPOUT ~ 104D1

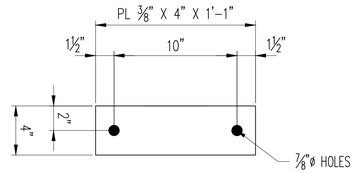


4 ~ SUPPORT ~ 104S1

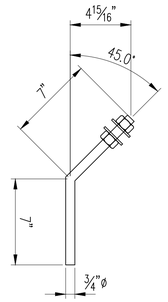


1 ~ DOWNSPOUT ~ 104D2

NOTES:
1.) ⅛" X 3" BUTYL RUBBER TAPE MK m1 PER AASHTO M198 CENTERED ON EACH LINE OF BOLTS AND PLACED BETWEEN ANGLE AND FABRIC.
2.) STUDS WELDED AT 2'-0" O.C. BENT AS SHOWN ALTERNATE STRAIGHT STUDS AT 2'-0" O.C.
3.) WELD NUTS UNDERNEATH ON (3) SIDES COAT BOLT & NUT THREADS WITH NICKEL BASED NEVER SEIZE LUBE.



2 ~ SUPPORT ~ 104S2



4 ~ ANCHOR RODS ~ 104A1

BILL OF MATERIAL

BLOCK QTY.	BLOCK NO.		MARK	NO. PCS	SHAPE	LENGTH FT	LENGTH IN		REMARKS	
		1	102SA2	5	ANCHOR PL.	0	9		GALV	
		2	x10r	5	PL ½ X 8	0	9		GALV	
		3	x10w	20	¾ DIA STUD	0	10		HEADED STUD	
		4								
		5	104D1	1	DOWNSPOUT	8	3		GALV	
		6	x11s	1	HSS 6 X 6 X ¼	3	4¾		A500B	1
		7	x11t	1	HSS 6 X 6 X ¼	5	7⅛		A500B	
		8								
		9	104D2	1	DOWNSPOUT	8	3		GALV	
		10	x11v	1	HSS 6 X 6 X ¼	3	4¾		A500B	1
		11	x11w	1	HSS 6 X 6 X ¼	5	7⅛		A500B	
		12								
		13	104S1	4	SUPPORT.	1	1		GALV	
		14	x14c	4	PL ⅜ X 4	1	11 13/16		GALV	
		15								
		16	104S2	2	SUPPORT.	1	1		GALV	
		17	x14d	2	PL ⅜ X 4	1	1		GALV	
		18								
		19	104A1	4	ANCHOR RODS	1	2			
		20	1m3	4	1"ø THRD. RODS	1	2		W/ 2-NUTS & 2-WASHERS	
		21								
		22			FIELD BOLTS:					
		23	m2	20	¾ DIA GALV BOLTS	0	2½		W/ NUT & WASHER	
		24	m6	4	¾ DIA EXP. ANCH.	0	9		W/ NUT & WASHER	

Vermont Agency of Transportation
RECEIVED
CK'D BY MEM OK'D BY
Apr. 03, 2015
RESUBMIT
BY C. Carlson DATE 04-14-2015

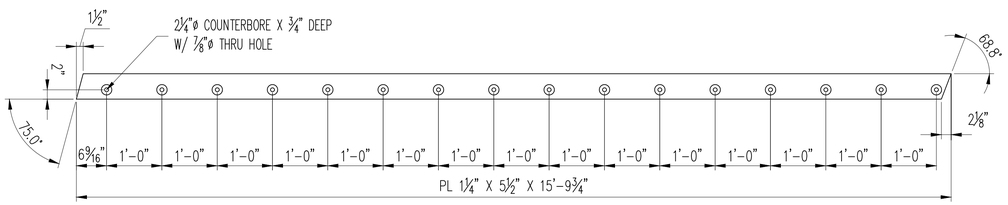
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	3/4/15	PER APPROVAL	JEB	JER		

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-250 U.N.O.	GALV. - PER STD. 726.08	AS NOTED	AS NOTED

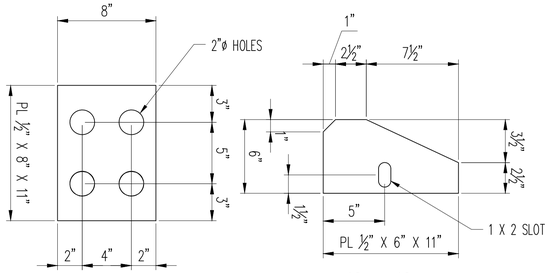
DESCRIPTION: EXPANSION JOINT - ASSEMBLY SHEET

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: BRIDGE NO. 2 (TH 8) TH 8 (RIVER STREET) URBAN COLLECTOR - FAU 3052 STATE OF VERMONT AGENCY OF TRANS.		DRAWN: JEB	DATE: 1/5/15
		CHKD: JER	DATE: 1/10/15
LOCATION: RUTLAND COUNTY, VT		JOB NO.	DWG NO.
PROJ NO. BRF 3000 (16)		597	104
CUSTOMER: KUBRICKY CONSTRUCTION, CORP.			REV. 1

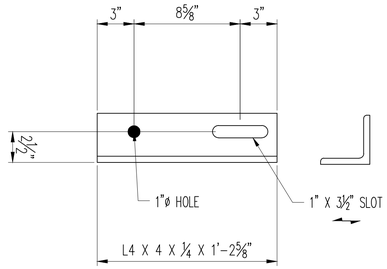


⚠1 1 ~ x10g

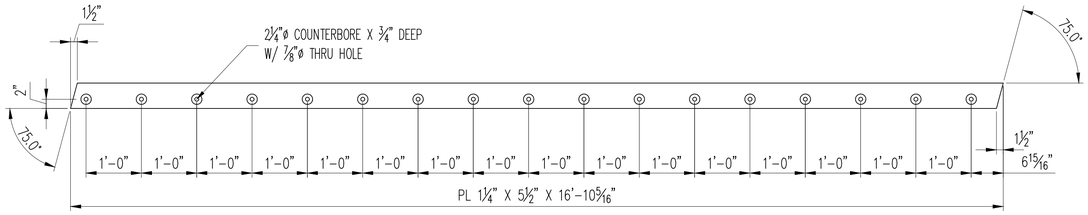


10 ~ x10m

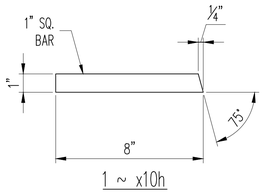
10 ~ x10n ⚠1



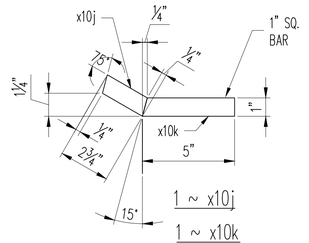
10 ~ x10t



⚠1 1 ~ x10f



1 ~ x10h



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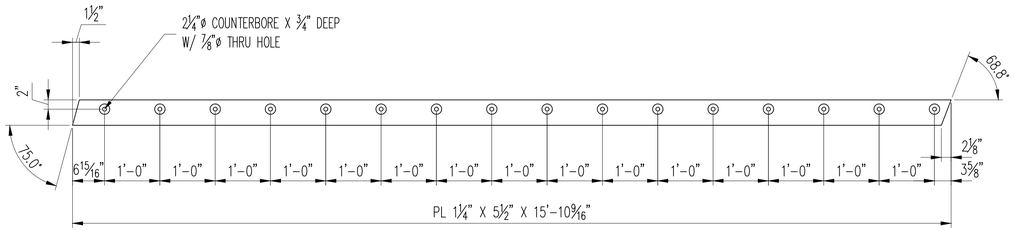

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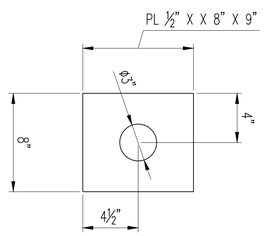

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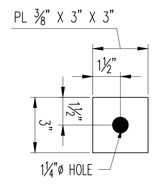

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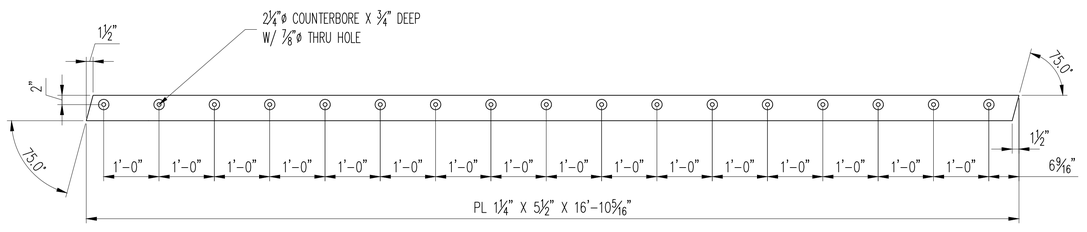

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REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
⚠1	3/4/15	PER APPROVAL	JEB	JER		

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-250 U.N.O.	GALV. - PER STD. 726.08	AS NOTED	AS NOTED

DESCRIPTION: EXPANSION JOINT - DETAIL SHEET

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE:	BRIDGE NO. 2 (TH 8) TH 8 (RIVER STREET) URBAN COLLECTOR - FAU 3052 STATE OF VERMONT AGENCY OF TRANS.	DRAWN: JEB	DATE: 1/5/15
		CHKD: JER	DATE: 1/10/15
LOCATION:	RUTLAND COUNTY, VT	JOB NO.	DWG NO.
PROJ NO.	BRF 3000 (16)	597	X10
CUSTOMER:	KUBRICKY CONSTRUCTION, CORP.		REV. ⚠1

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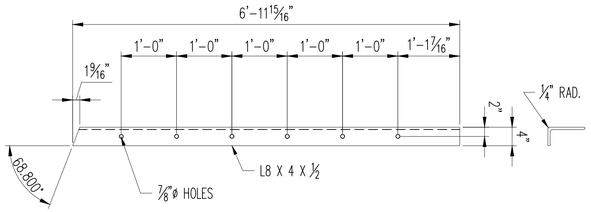
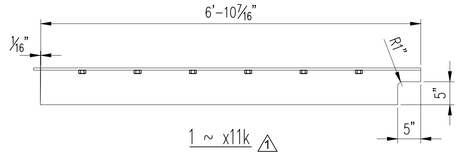
BY C. Carlson DATE 04-14-2015





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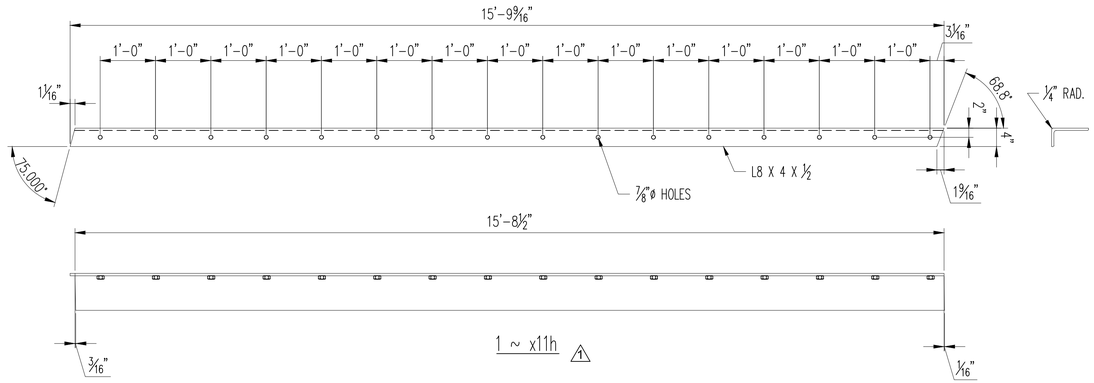

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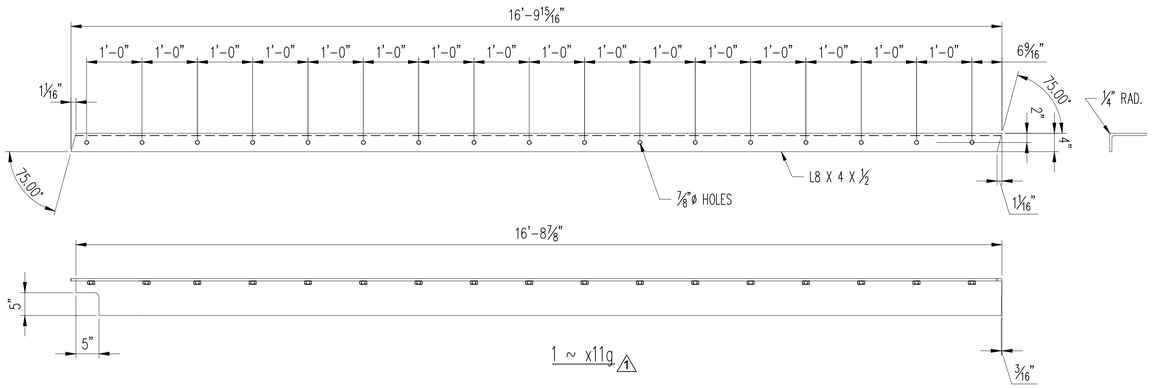

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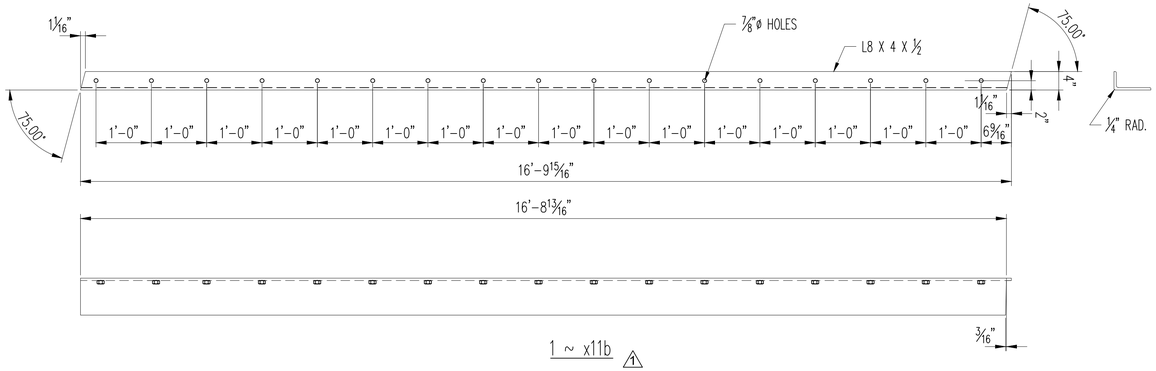

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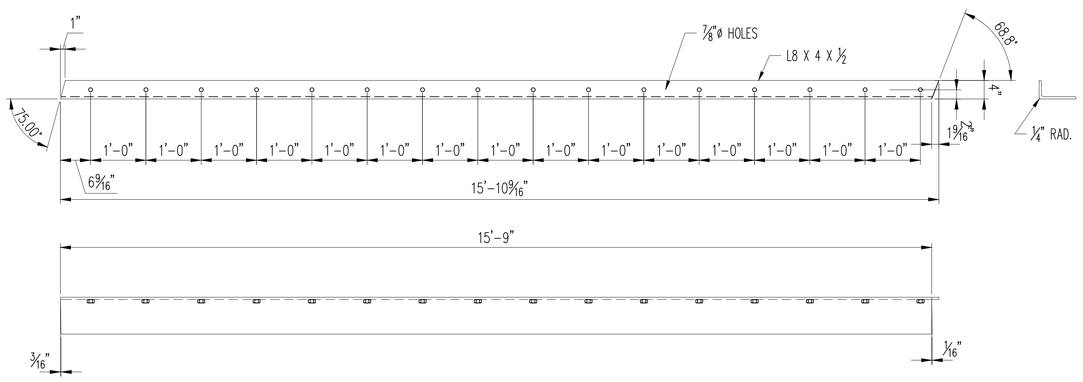

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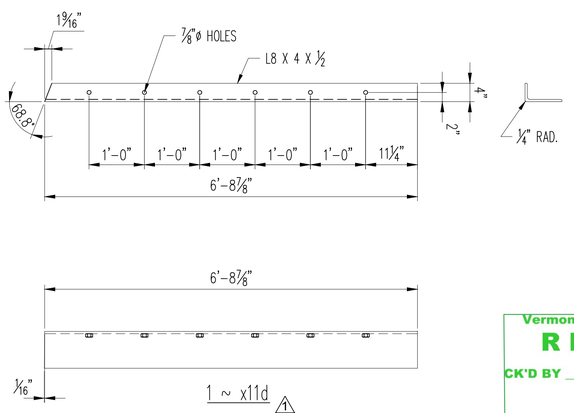

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BY C. Carlson DATE 04-14-2015

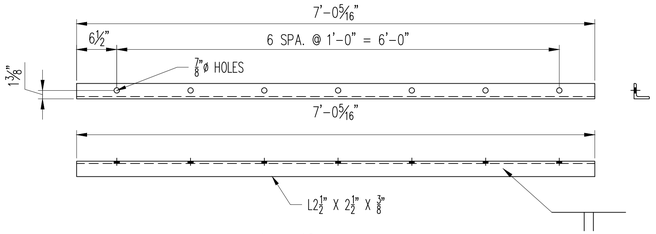
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
1	3/4/15	PER APPROVAL	JEB	JER		

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-250 U.N.O.	GALV. - PER STD. 726.08	AS NOTED	AS NOTED

DESCRIPTION: EXPANSION JOINT - DETAIL SHEET

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: BRIDGE NO. 2 (TH 8) TH 8 (RIVER STREET) URBAN COLLECTOR - FAU 3052 STATE OF VERMONT AGENCY OF TRANS.	DRAWN: JEB	DATE: 1/5/15
	CHKD: JER	DATE: 1/10/15
LOCATION: RUTLAND COUNTY, VT	JOB NO. 597	DWG NO. X11
PROJ NO. BRF 3000 (16)		
CUSTOMER: KUBRICKY CONSTRUCTION, CORP.		REV. 1



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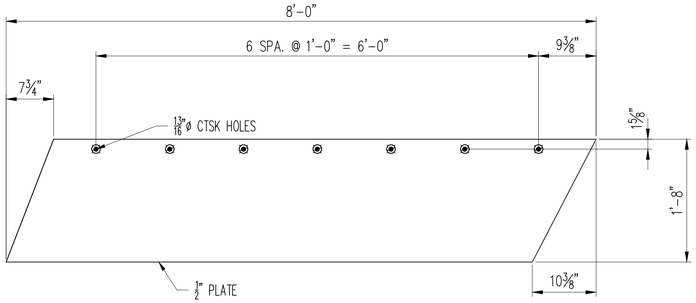

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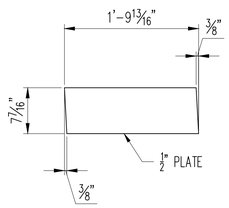

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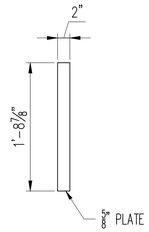

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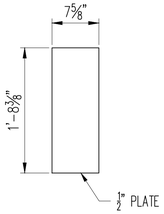

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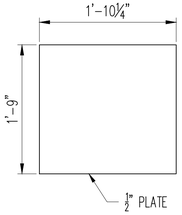

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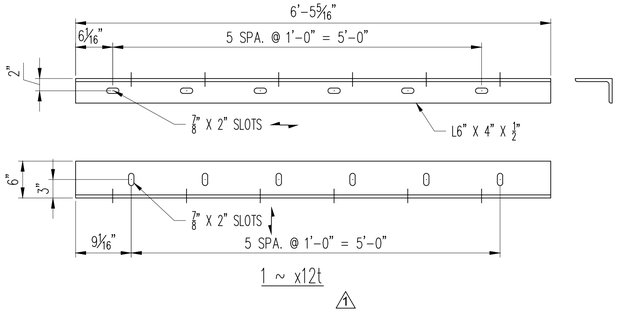

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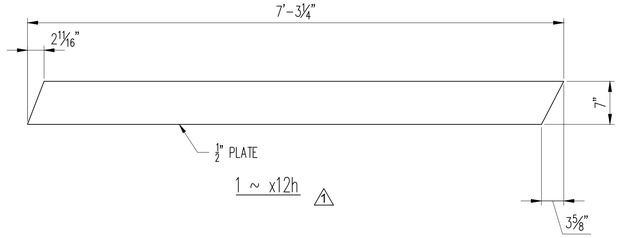

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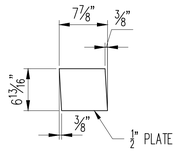

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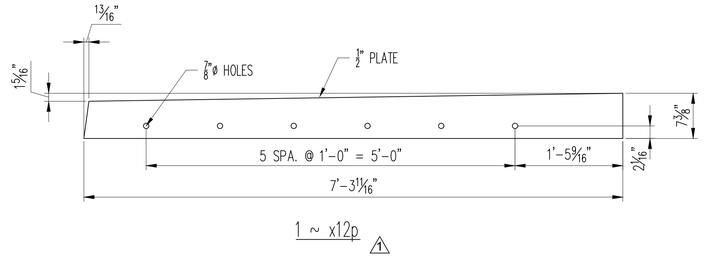

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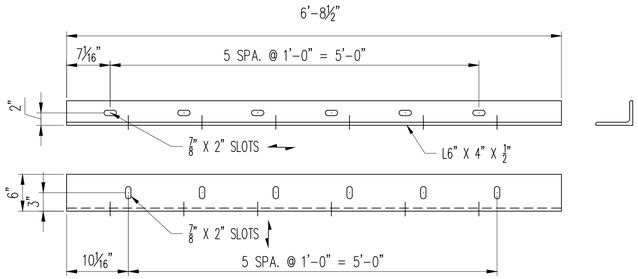

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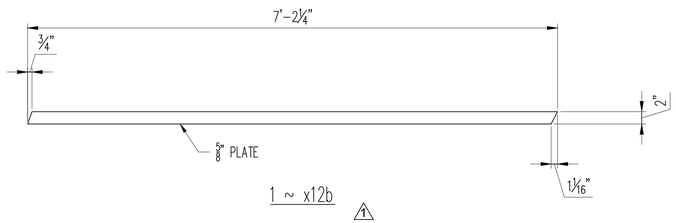

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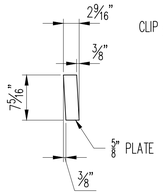

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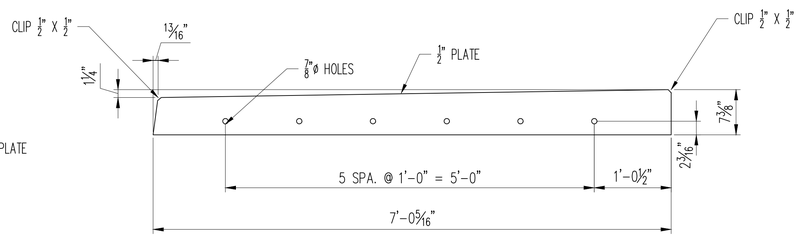

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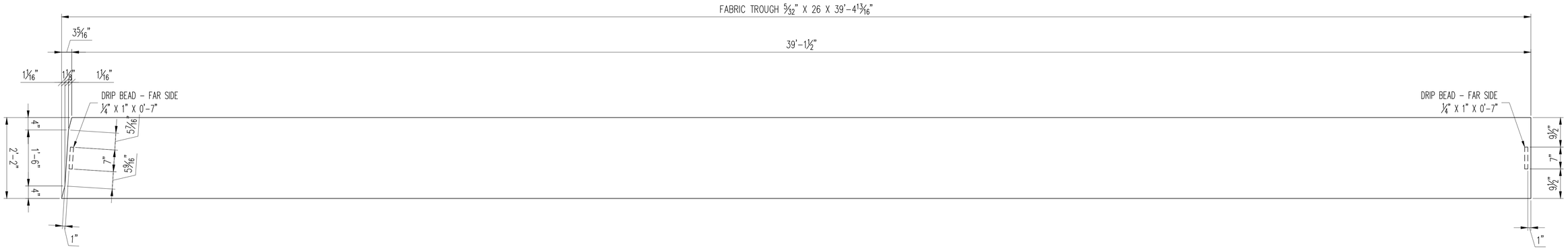
REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
⚠1	3/4/15	PER APPROVAL	JEB	JER		

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-250 U.N.O.	GALV. - PER STD. 726.08	AS NOTED	AS NOTED

DESCRIPTION: EXPANSION JOINT - DETAIL SHEET

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE. PHONE (207) 780-6722
SOUTH PORTLAND, ME 04106 FAX. (207) 780-6726

STRUCTURE: BRIDGE NO. 2 (TH 8) TH 8 (RIVER STREET) URBAN COLLECTOR - FAU 3052 STATE OF VERMONT AGENCY OF TRANS.	DRAWN: JEB	DATE: 1/5/15	
	CHKD: JER	DATE: 1/10/15	
LOCATION: RUTLAND COUNTY, VT	JOB NO. 597	DWG NO. X12	
PROJ NO. BRF 3000 (16)			
CUSTOMER: KUBRICKY CONSTRUCTION, CORP.		REV. ⚠1	



1 ~ X13a ⚠1

1.) FABRIC TROUGH SHALL BE 3-PLY PREFORMED FABRIC MATERIAL CONFORMING TO SECTION 707.07 AND SHALL BE CUT PRE-ASSEMBLY FROM ONE PIECE.

2.) DRIP BEAD OF FABRIC MATERIAL SHALL BE CEMENTED TO THE BOTTOM OF THE FABRIC TROUGH.

Vermont Agency of Transportation
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BY C. Carlson DATE 04-14-2015

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
⚠1	3/4/15	PER APPROVAL	JEB	JER		

MATERIAL:	SURFACE PREP. & PAINT:	HOLES:	SHOP BOLTS:
M270M-250 U.N.O.	GALV. - PER STD. 726.08	AS NOTED	AS NOTED

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	CHKD: JER	DATE: 1/10/15
LOCATION: RUTLAND COUNTY, VT	JOB NO. 597	DWG NO. X13
PROJ NO. BRF 3000 (16)		
CUSTOMER: KUBRICKY CONSTRUCTION, CORP.		REV. ⚠1

BASF

The Chemical Company

suggest replacing this coating with Galvagrit or SlipNOT coating as they are much more durable coatings

PRODUCT DATA

7 07 18 00 **Traffic Coatings**

TRAFICGUARD® EP35

Rapid-setting, epoxy-based concrete overlay system

Description

Traficguard® EP35 is a rapid-curing, skid-resistant, epoxy-based concrete overlay system. When mixed with aggregate it can be used as a repair mortar.

Yield

Parking Decks: 40 - 60 ft²/gallon (1.0 - 1.5 m²/L), depending on porosity and profile of substrate

Bridge Decks: 20 - 40 ft²/gallon (0.5 - 1.0 m²/L), depending on porosity and profile of substrate

80 ft²/gallon (1.96 m²/L) as a primer for epoxy binder

Binder yield varies depending on mix ratio (aggregate to epoxy) and aggregate size and gradation. A 3 to 1 ratio will yield approximately 650 in³.

Packaging

10 gallon (38 L) kits

110 gallon (412 L) kits

Color

Blonde

Shelf Life

2 years when properly stored

Storage

Store in unopened containers at 60 to 80° F (16 to 27° C) in clean, dry conditions.

Features / Benefits

Features	Benefits
• Rapid strength development	Minimizes traffic disruption
• Waterproof	Prevents chloride ion contamination, freeze-thaw damage, and salt scaling
• Low modulus	Accommodates thermal movement in the substrate
• 90% lighter than typical concrete overlays	Limits dead load in suspended structures
• Excellent adhesion to the substrate	Prevents delamination extending surface life
• Skid-resistant	Increased safety for vehicles and pedestrians
• 1 to 1 mix ratio by volume	Simplifies application
• Produces a durable surface	Increased service life
• No primer required	Faster installation
• 100% solids	VOC-compliant system meets all federal regulations

Where to Use

APPLICATION

- Parking decks and ramps
- Bridge decks
- Steel decks
- Warehouse floors
- Elevated airport runways
- As a lightweight alternative to concrete overlays
- When rapid overlay installation and quick turnaround times are required
- As a skid-resistant coating
- Balconies

LOCATION

- Horizontal surfaces
- Interior and exterior

SUBSTRATE

- Concrete
- Steel

How to Apply

Surface Preparation

STEEL

Shotblast steel substrates and clean to meet the requirements of SSPC-SP10, with a minimum 4 mil (0.2 mm) profile. If flash rust appears, the surface must be reblasted.

CONCRETE

1. The concrete surface should be clean, dry, and free of oil, contaminants, laitance, and debris, and fully cured for 28 days.

2. Patch or repair deck delaminations and spalls and cracks with the appropriate MBT® repair product and allow to cure.

3. Mechanically prepare the surface to expose coarse aggregate and remove all loose materials. Meet the requirements of ICRI Guideline No. 03732 Standard CSP 6. To ensure proper surface preparation, perform "direct tension" testing (in accordance with ACI 503 Appendix A) every 4,500 ft² (414 m²).

Technical Data

Composition

Traficguard® EP35 is a two component epoxy-based binder.

Test Data

PROPERTY	RESULTS	TEST METHODS
Mix ratio, by volume	1 to 1	
Viscosity, poise, at 75° F (24° C); #3 spindle at 20 rpm	20 – 25	ASTM D 2393
Gel time, min, at 72° F (22° C); (Modified to test 70 g sample)	15 – 20	ASTM C 881
Compressive strength, psi (MPa)		ASTM D 695
24 hrs	4,000 – 4,500	
7 days	6,500 – 7,000	
Compressive strength, psi (MPa) Mixed with aggregate		ASTM C 579
3 hrs	3,000 – 3,500	
24 hrs	5,000 – 5,500	
Modulus of Elasticity in Compression, psi (MPa)	1.21 x 10^5 (834)	ASTM C 695
Tensile strength, psi (MPa), at 7 days	6,525	ASTM D 638
Tensile elongation, %, at 7 days	>30	ASTM D 638
Adhesion Pull Test 24 hrs	>536 psi (break in concrete)	ASTM D 7234 (ACI 503 Appendix A)
Hardness Shore D @ 7 days	62	ASTM D 2240
Abrasion - Taber		ASTM D 4060
1000 cycles - CS 17 wheel	70 mg (neat) 77 mg (with aggregate)	
Thermal compatibility, 5 cycles Modified: 8 hours @ 60°C plus 16 Hours @ -21°C	Pass	ASTM C 884
Water absorption, % 24 hrs	0.02	ASTM D 570
Rapid Chloride Permeability Chloride ion penetration @ 28 days	0 negligible	ASTM C1202 (AASHTO T277)

All application and performance values are typical for the material, but may vary with test methods, conditions, and configurations.

Mixing

1. Thoroughly mix each separate component for 2 – 3 minutes.
2. Mix Part A (resin) and Part B (hardener) in the proper ratio (1 to 1 by volume), using a slow-speed drill (500 rpm) and paddle for 2 – 3 minutes.
3. Because of the quick cure rate of this product, do not mix more material usable within the pot life of 15 – 25 minutes at 75° F (24° C). Elevated temperatures decrease pot life, and reduced temperatures increase pot life.

BROADCAST-AGGREGATE METHOD

PARKING DECKS

1. Spread the mixed Traficguard® EP35 onto the substrate with a notched squeegee at a rate of 60 ft²/gallon (1.0 m²/L). Place the epoxy to permit a continuous operation by applying the second mix immediately behind the first mix.
2. Begin the aggregate broadcast immediately, but stop to maintain a wet edge. Broadcast Dynagrip Aggregate # 9 to complete saturation (approximately 1.1 lb/ft² (5.4 kg/m²). If wet spots develop, immediately broadcast additional aggregate until a dry surface is re-established.
3. Apply the second coat in the same manner described above at a rate of 40-60 ft²/gal. The maximum recoat window is 24 hours.

BRIDGE DECKS

1. If the application takes place early in the evening, the deck may be opened to traffic early the next morning.
2. Spread the mixed Traficguard® EP35 onto the substrate with a notched squeegee at a rate of 40 ft²/gallon (1.0 m²/L) or 2.5 gallons/100 ft². Place the epoxy to permit a continuous operation by applying the second mix immediately behind the first mix.

3. Begin the aggregate broadcast immediately, but stop to maintain a wet edge. Broadcast Dynagrip Aggregate #8 or #9 to complete saturation (approximately 1.1 lb/ft² (5.4 kg/m²). If wet spots develop, immediately broadcast additional aggregate until a dry surface is re-established.

4. Apply the second coat in the same matter but at a rate of 20 ft²/gallon (2 m²/L) or 80 mils. The maximum recoat window is 24 hours.

EPOXY BINDER

1. Mix the 2 components of Traficguard® EP35 using the recommended procedures under the Mixing section.

2. Slowly add up to 5 parts by volume of oven-dried sand to 1 part of mixed epoxy.

3. For larger applications, a paddle-type (mortar) mixer may be used. However, the A and B components must first be mixed together using a slow-speed drill as outlined previously.

4. For epoxy concrete applications, consult your local BASF representative.

5. Prime the area to receive the epoxy mortar using neat resin (parts A and B mixed but with no aggregate). Some applications, e.g., paving dams, will require forming to prevent the material from slumping into the joint.

6. Place the epoxy mortar into the repair area and level with a trowel or float. Excess working of the surface will bring resin to the top, which will create a slick finish when cured. To prevent this, broadcast aggregate to refusal onto leveled surface.

7. Allow time for sufficient curing before removing forms, if applicable.

HOT-WEATHER APPLICATION

1. In hot weather, precondition materials to 65 to 70° F before mixing and applying.

2. Continuous mixes of 30 gallons can be mixed every 3 minutes but must be dumped within 6 minutes, be spread within 10 minutes of placement, and broadcast within 20 minutes.

COOL-WEATHER APPLICATION

1. Application can proceed in temperatures as low as 50° F (10° C). Condition all components to 80 to 100° F (27 to 38° C) before mixing and applying.

2. At 50° F (10° C), a hand-operated surface roller may become necessary to ensure the aggregate penetrates the cool resin.

Drying Time

PRODUCT AND SUBSTRATE

TEMPERATURE, ° F (° C)	OPEN TO TRAFFIC, MIN*
60 (16)	210
65 (18)	195
70 (21)	180
80 (27)	150
90 (32)	120
100 (38)	90

*Times are typical for the material but may vary with ambient conditions

Aggregate

Dynagrip Aggregate is recommended with Traficguard® EP35 polymer concrete overlay. Dynagrip Aggregate is a hard-wearing, angular, dark-gray aggregate.

- Dynagrip Aggregate #8 is a coarser aggregate suitable for bridge decks and other surfaces.
- Dynagrip Aggregate #9 is a less coarse aggregate.

Alternatively, an angular shaped silica or basalt aggregate may be used. The aggregate shall be an angular-shaped silica with Mohs scale hardness of 7 or greater or basalt with a hardness of 6 or greater. The alternate aggregate must be clean, dry (less than 0.2% moisture), and conform to the following gradation.

PERCENT, BY WEIGHT, PASSING IN INDICATED U.S. STANDARD-SIEVE SERIES

COARSE AGGREGATE				
Sieve #	4	8	16	30
% Passing	100	30 – 75	0 – 5	0 – 1

Clean Up

Clean tools and equipment with xylene immediately after using. Wash hands and skin with soap or industrial hand cleaner, not with solvent. Cured material must be removed mechanically.

For Best Performance

- Precondition all components to 70° F (21° C) for 24 hours before using.
- Minimum ambient, surface, aggregate and epoxy temperature should be 50° F (10° C) and rising at the time of application.
- Do not apply when rain is expected within 12 hours.
- Finished product is a vapor barrier and should not be applied to on-grade slabs subject to exterior service conditions or other structures where moisture-vapor transmission is a concern.
- Do not use neat (without aggregate).
- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

Health and Safety

TRAFICGUARD EP35 PART A

Warning

Traficguard EP35 Part A contains Epoxy resin (25068-38-6); Oxirane, mono [(C12-14-alkyloxy)methyl] derivs. (68609-97-2)

Risks

SENSITIZER. IRRITANT. May cause allergic skin reaction. May cause skin, eye and respiratory irritation. Ingestion may cause irritation.

Precautions

Use only with adequate ventilation. Avoid contact with skin, eyes and clothing. Keep container closed when not in use. Wash thoroughly after handling. DO NOT take internally. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains material listed by the state of California as known to cause cancer, birth defects, or other reproductive harm.

VOC Content

0 g/L or 0 lbs/gal less water and exempt solvents when components are mixed and applied per BASF instructions.

TRAFICGUARD EP35 PART B

Danger—Corrosive

Traficguard EP35 Part B contains 4-nonylphenol, branched (84852-15-3); Polyetherdiamine (9046-10-0); 2,4,6-tris-(dimethylaminomethyl)-phenol (90-72-2); 1,3-Cyclohexanedimethanamine (2579-20-6)

Risks

CORROSIVE. Causes burns. Corrosive to eyes. Harmful if inhaled or swallowed.

Precautions

DO NOT get in eyes, on skin or clothing. Wash thoroughly after handling. Keep container closed. DO NOT take internally. Use only with adequate ventilation. DO NOT breathe vapors. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable Federal, state and local regulations.

First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

Proposition 65

This product contains materials listed by the State of California as known to cause cancer, birth defects or other reproductive harm.

VOC Content

0 g/L or 0 lbs/gal less water and exempt solvents when components are mixed and applied per BASF instructions.

For medical emergencies only, call ChemTrec (1-800-424-9300).

BASF Corporation
Building Systems
Valley Park Drive
Hopee, MN, 55379
www.BuildingSystems.BASF.com
Customer Service 800-433-9517
Technical Service 800-243-6739

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Casco Bay Steel Structures, Inc.

WELDING PROCEDURE SPECIFICATION

Material specification ASTM Gr. 50 + G-50W
Welding process Gas Metal ARC Welding (GMAW)
Manual or machine Semi Auto
Position of welding Flat + Horizontal
Filler metal specification AWS-A5.28
Filler metal classification E80C-Ni1 ESAB
Flux N A
Shielding gas 90%AR/10%CO2 Flow rate 35CFH +0/-4, Elec. Stickout 5/8
Single or multiple pass Single & multiple
Single or multiple arc Single
Welding current DC
Polarity DCEP
Welding progression See Detail
Root treatment Blast Clean-wire Brush-Area To be Free of slag-RUST-Moisture
Preheat and interpass temperature See Table and as Required
Posheat temperature As Required
Heat Input Min 24.4 KJ/in Max 38.3 KJ/in
* 35.0 KJ/in Min for single pass

P.Q.R. 418-FCM=34.8 KJ/IN

Minimum Preheat and Interpass Temperature, °C [°F]

Welding Process (Base Metal)	Thickness of Thickest Part at Point of Welding, mm [in]: To 20 mm [3/4 in] Incl.	Over 20 mm [3/4 in] to 40 mm [1-1/2 in] Incl.	Over 40 mm [1-1/2 in] to 65 mm [2-1/2 in] Incl	Over 65 mm [2-1/2 in]
SAW; GMAW; FCAW; SMAW (M270M [M270] [A 709M (A 709)] 345 [50],	10 [50]	20 [70]	65 [150]	110 [225]
FCM Gr50	150°F	200°F	225°F	325°F
FCM Gr50W	150°F	250°F	325°F	350°F

Preheats to the NYSSCM

	Gr 50	Gr 50W
to 3/4	50F	100F
over 3/4 to 1-1/2	70F	200F
over 1-1/2 to 2-1/2	150F	300F
over 2-1/2	225	350F

There are 3 sets of pre-heat temps, shouldn't 2 of these be removed?

FCM??

Max Interpass 440°

WELDING PROCEDURE

Sec. 5.12.4.2
AWS D1.5 Joint detail Fillet

Pass no.	Electrode size	Welding current: Amperes	Welding current: Volts	Travel speed
		307	29.2	15.5
		338.7	31	17.5
		To	To	To
REQ	.052	276.3	27	13.5
* 1 Pass	.052	338.7 to 281.3	31 to 28.0	17.5 to 13.5

2F
To 3/8
To 5/8
1F
To 1/2

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. FCM 610
Revision no. _____

Contractor Casco Bay Steel
Authorized By Paul E. Goodale
Date 8-1-2013

Casco Bay Steel Structures, Inc.

WELDING PROCEDURE SPECIFICATION

Material specification ASTM Gr 50 + 50W
Welding process Gas Metal ARC welding (GMAS)
Manual or machine Semi AUTO
Position of welding Flat + Horizontal
Filler metal specification AWS-A5-28
Filler metal classification E 80C-Ni1 ESAB
Flux NA
Shielding gas 90%AR/10% Co2 Flow rate 35CFH + 3/4, Elec. STICKOUT 5/8
Single or multiple pass Single or MULTiple
Single or multiple arc Single
Welding current DC
Polarity DC EP
Welding progression See Detail
Root treatment Blast Clean-Wire Brush-Area To be Free of Slag-RUST-Moisture
Preheat and interpass temperature See Table
Postheat temperature As Required
Heat Input Min 24.4 KJ/in Max 38.3 KJ/in PQR #418-FCM = 34.8 KJ/in

Are these for New York??

Minimum Preheat and Interpass Temperature, °C [°F]

Welding Process (Base Metal)	Thickness of Thickest Part at Point of Welding, mm [in]: To 20 mm [3/4 in] Incl.	Over 20 mm [3/4 in] to 40 mm [1-1/2 in] Incl.	Over 40 mm [1-1/2 in] to 65 mm [2-1/2 in] Incl.	Over 65 mm [2-1/2 in]
SAW; GMAW; FCAW; SMAW (M270M [M270] [A 709M (A 709)] Gr. 250 [36], 345 [50], 345W [50W], HPS 345W [HPS 50W])	10 [50]	20 [70]	65 [150]	110 [225]
SAW; GMAW; FCAW; SMAW (M270M [M270] [A 709M (A 709)] Gr. HPS 485W [HPS 70W], 690 [100], 690W [100W])[a]	10 [50]	50 [125]	80 [175]	110 [225]

Preheats to the NYSSCM

	Gr 50	Gr 50W
to 3/4	50F	100F
over 3/4 to 1-1/2	70F	200F
over 1-1/2 to 2-1/2	150F	300F
over 2-1/2	225F	350F

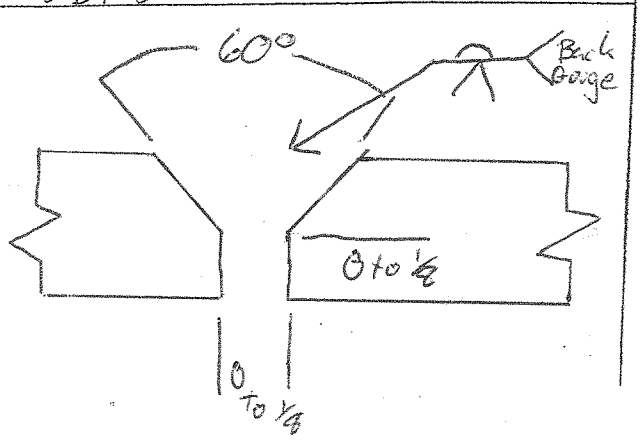
Max Interpass 440°F For Secondary Material

WELDING PROCEDURE

Pass no.	Electrode size	Welding current: Amperes	Welding current: Volts	Travel speed
		307	29.2	15.5
AS	.052	338.7	31	17.5
REQ		To	To	To
		276.3	27	13.5

See 5.12.4.2 AWS D1-5

Joint detail B.U2-GF



This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 6/3
Revision no.
Contractor Casco Bay Steel Structures
Authorized By
Date 12/17/14