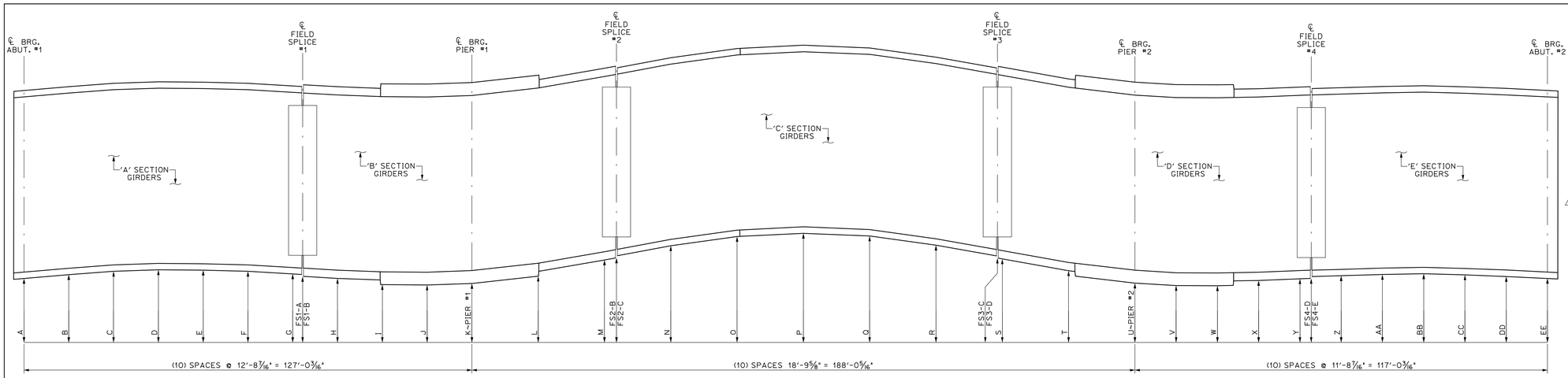


BLOCKING DIAGRAM ~ SEE CHART

NTS

ALL DIMENSIONS ARE TO THE OUTSIDE OF BOTTOM FLANGES

	ABUT.1 ℄ BRG.							FIELD SPLICE #1					PIER 1 ℄ BRG.			FIELD SPLICE #2							FIELD SPLICE #3					PIER 2 ℄ BRG.			FIELD SPLICE #4						
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	'A' SECTION "FS1-A"	'B' SECTION "FS1-A"	"H"	"I"	"J"	"K"	"L"	"M"	'A' SECTION "FS2-B"	'B' SECTION "FS2-C"	"N"	"O"	"P"	"Q"	"R"	'A' SECTION "FS3-C"	'B' SECTION "FS3-D"	"S"	"T"	"U"	"V"	"W"	"X"	"Y"	'A' SECTION "FS4-D"	'B' SECTION "FS4-E"	"Z"	"AA"	"BB"	"CC"	"DD"	"EE"
TYP. ALL GIRDERS	6"	6 1/2"	7"	7 3/16"	7 1/8"	7"	6 5/8"	6 9/16"	6 5/16"	6"	5 3/16"	5 1/8"	5 5/16"	6 5/16"	8 1/2"	8 13/16"	9 1/16"	10 7/16"	11 11/16"	12 3/16"	11 13/16"	10 9/16"	9 1/16"	8 13/16"	8 11/16"	7 1/16"	5 3/8"	5 1/16"	5"	5 3/4"	5 15/16"	6"	6 1/4"	6 3/8"	6 9/16"	6 5/8"	6 1/2"	6 1/4"	6"

GENERAL FABRICATION NOTES

MATERIAL SPECIFICATIONS

1.) ALL MATERIAL SHALL BE ASTM A709 GRADE 50W (UNO)

2.) ALL A709 GRADE 50 MATERIAL DENOTED "CVN" SHALL MEET THE CHARPY V-NOTCH TESTING REQUIREMENTS OF ZONE 2, H FREQUENCY: 15 FT-LB AT 40° (UP TO 2" WELDED)

ITEMS SHALL CALL OUT "CVN" FOR EACH APPLICABLE ITEM IN THE BILL OF MATERIALS

3.) BOLTS SHALL BE HIGH STRENGTH BOLTS ASTM A325, TYPE 3
NUTS SHALL BE A563 GRADE C3 OR DH3
WASHERS SHALL BE ASTM F436, TYPE 3

BOLTS AND NUTS SHALL BE ROTATIONAL CAPACITY TESTED. DO NOT MIX NUTS AND BOLTS FROM DIFFERENT CONTAINERS UNLESS ALL NUTS AND BOLTS HAVE THE SAME LOT NUMBER.

FABRICATION

1.) DIE STAMPING IS ALLOWED IN SPECIFIC LOCATIONS WITH THE APPROVAL OF THE ENGINEER.

1 2.) ALL EDGES OF FLAME CUT MATERIAL SUBJECTED TO CALCULATED STRESSES SHALL BE ROUNDED TO A MINIMUM RADIUS OF 1/16" per STANDARD SPEC. 506.12(d)

3.) ALL PLATES, FLAME CUT FROM LARGER PLATES, SHALL BE CUT SO THAT THE PRIMARY DIRECTION OF ROLLING IS PARALLEL TO THE MAIN TENSILE OR COMPRESSIVE STRESS per STANDARD 506.08 of 2011 SPECIFICATIONS.

4.) FLANGE PLATE MATERIAL SHALL HAVE AN EDGE HARDNESS NOT GREATER THAN HRc 30, ALLOWED per STANDARD SPEC. 506.09.

WELDING

1.) ALL WELDING PROCEDURES SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF SUBSECTION 506.10.

2.) NON DESTRUCTIVE TESTING OF WELDS SHALL BE IN ACCORDANCE WITH ANSI/AASHTO/AWS D1.5 – SECTION 6. FLANGE WELDS WILL BE CALLED OUT AS BEING IN EITHER COMPRESSION OR TENSION. WEB WELDS WILL LABEL EITHER TOP OR BOTTOM AS BEING IN COMPRESSION, OR BE LABELED AS BEING IN A STRESS REVERSAL AREA.

FLANGE SPLICES SHALL BE TESTED AS FOLLOWS:
FLANGE SPLICES IN TENSION ~ TESTED 100%
FLANGE SPLICES IN STRESS REVERSAL AREAS ~ TESTED 100%
FLANGE SPLICES IN COMPRESSION ~ TESTED 25%

WEB SPLICES SHALL BE TESTED AS FOLLOWS:
FOR 1/6 THE DEPTH OF THE WEB (TENSION AREA) ~ TESTED 100%
FOR THE REMAINING DEPTH OF WEB (COMPRESSION AREA) ~ TESTED 25 %

FOR 1/6 DEPTH OF THE WEB @ TOP & BTM. (STRESS REVERSAL) ~ TESTED 100%
THE REMAINING 2/3 OF THE WEB ~ TESTED 25%

3.) TERMINATE STIFFENER WELDS AS SHOWN IN THE "WELD TERMINATION DETAILS" ON SHEETS M2 & M3

FIELD CONNECTIONS

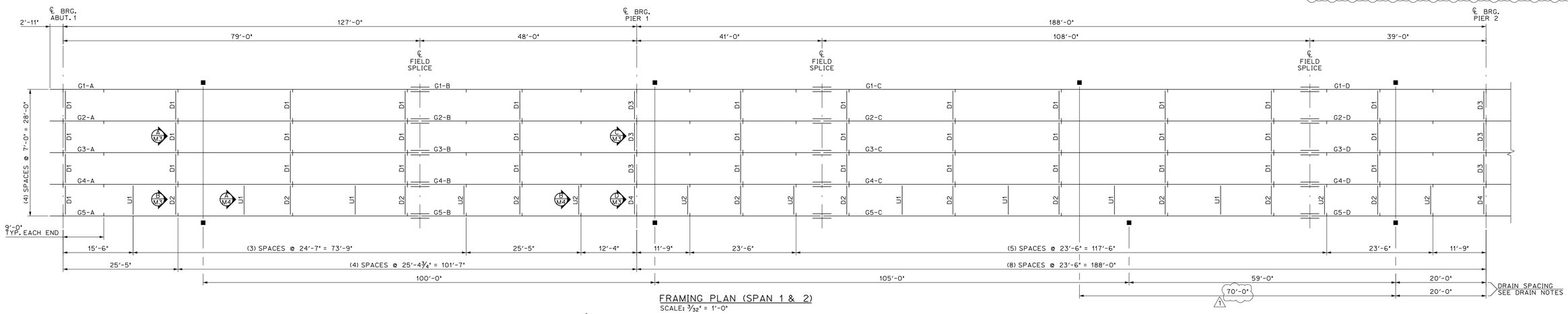
1 1.) FIELD BOLTS SHALL HAVE A HEAVY HEX NUT, HEX HEAD, AND ONE HARDENED WASHER EACH.

2.) PIECE MARKS WILL BE LOCATED AS SHOWN ON ERECTION DRAWINGS. ALL ERECTION MARKS, MATCH MARKS, AND WEIGHT MARKS MUST NOT BE EXPOSED IN THE FINISHED STRUCTURE.

3.) HARDENED WASHERS ARE REQUIRED OVER OVERSIZED HOLES.

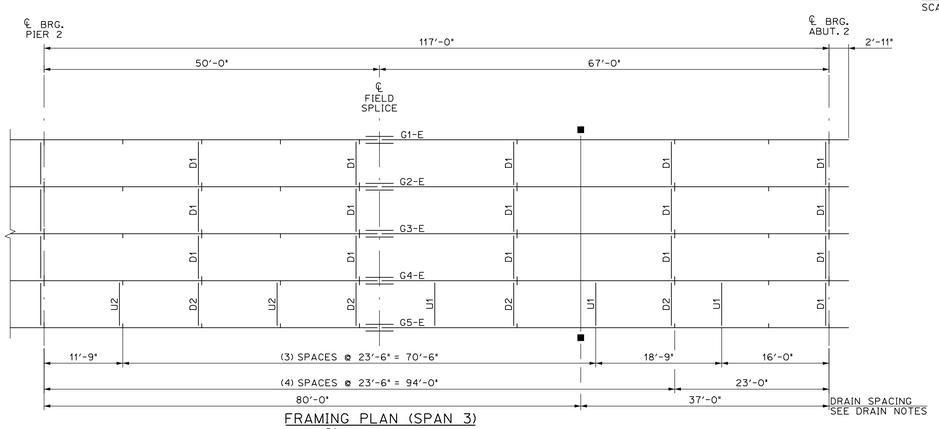
CLEANING AND PAINTING

1 1.) UNPAINTED STEEL SHALL BE BLAST CLEANED TO SSPC SP-6 TO ACHIEVE A UNIFORM WEATHERED APPEARANCE.



FRAMING PLAN (SPAN 1 & 2)

SCALE: 3/32" = 1'-0"



FRAMING PLAN (SPAN 3)

SCALE: 3/32" = 1'-0"

1

DRAIN NOTES:

1. DRAIN SPACING HAS BEEN REVISED TO MATCH THE CONTRACT DETAILS BASED ON THE COMMENTS FOR THE RevO SUBMISSION.

2. DRAINS ARE TO BE DETAILED IN A SEPARATE SUBMISSION.

PROJECT No. IM 089-2(43)
ITEM No. 506.55

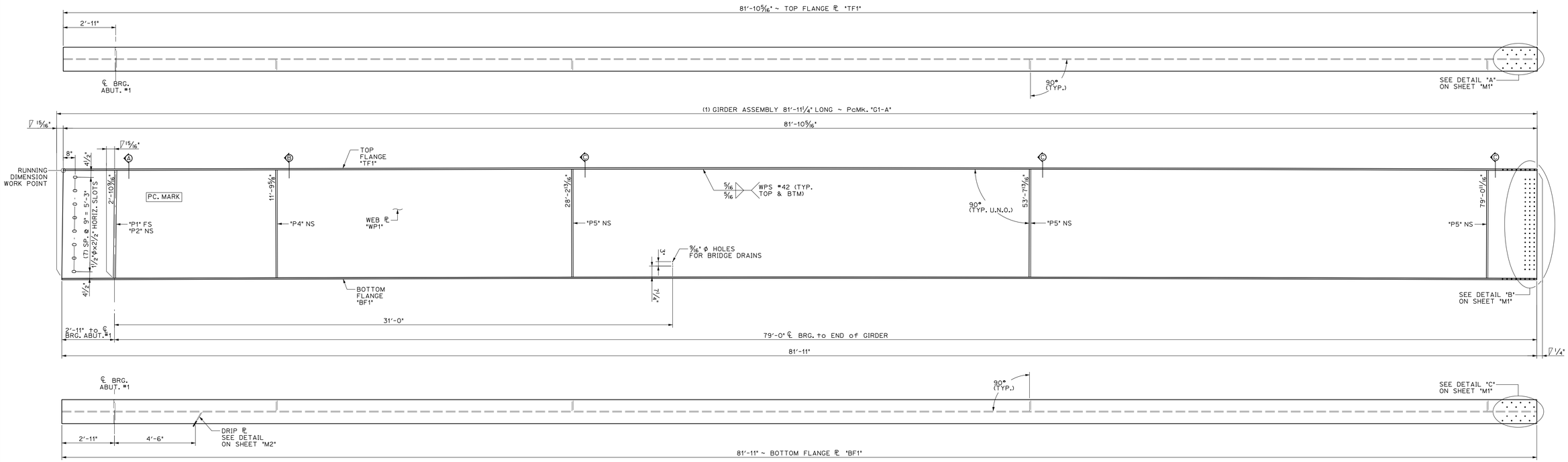
FINISH	N/A				
MATERIAL	SEE DETAIL SHEETS				
HOLES					
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP		1	2/17/15	DRAIN LOCATION & NOTES	JJH
		NO	DATE	DESCRIPTION	BY

REVISIONS

ARC ENTERPRISES, INC.

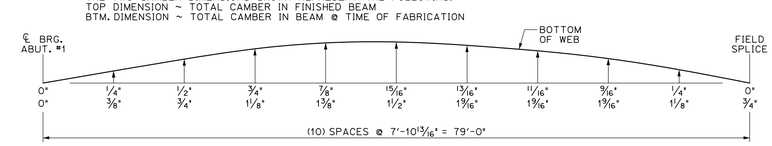
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER JJH	FRAMING PLAN		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		DWG. NO. 1
CHECKED DLM	SC: BECK & BELLUCCI		
DATE NOV. 2014			

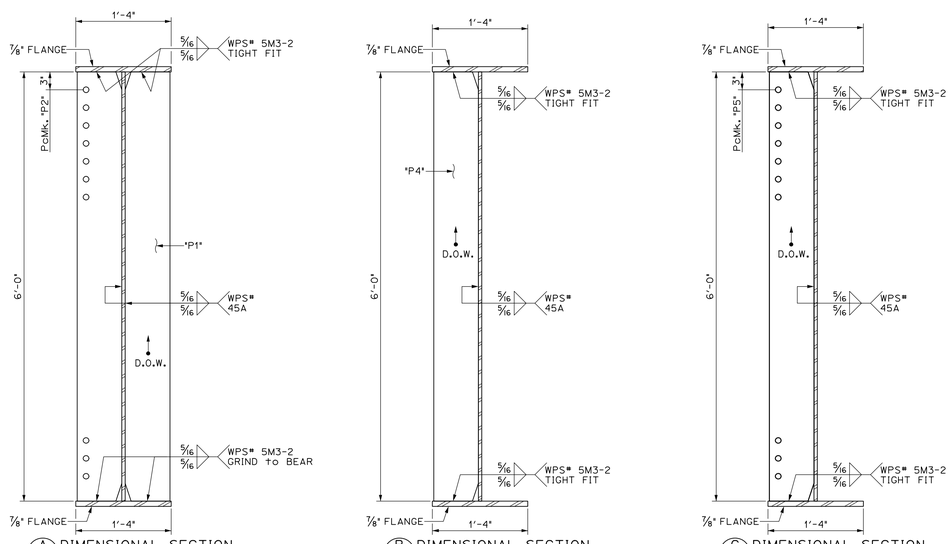


1/2 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G1-A"
SCALE: 3/8" = 1'-0"

THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION ~ TOTAL CAMBER IN FINISHED BEAM
BTM. DIMENSION ~ TOTAL CAMBER IN BEAM @ TIME OF FABRICATION



GIRDER "G1-A" CAMBER
N.T.S.



A/2 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

B/2 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

C/2 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G1-A			BRIDGE GIRDER ASSEMBLY	81'-11 1/4"	19,800#	
		1	WP1	℞ 9/16" × 72"	81'-11 1/4"	11,300#	CVN
		1	TF1	℞ 7/8" × 16"	81'-10 5/16"	3950#	CVN
		1	BF1	℞ 7/8" × 16"	81'-11"	3950#	CVN
		1	P1	SEE SHEET M2			
		1	P2	SEE SHEET M2			
		1	P4	SEE SHEET M2			
		3	P5	SEE SHEET M2			

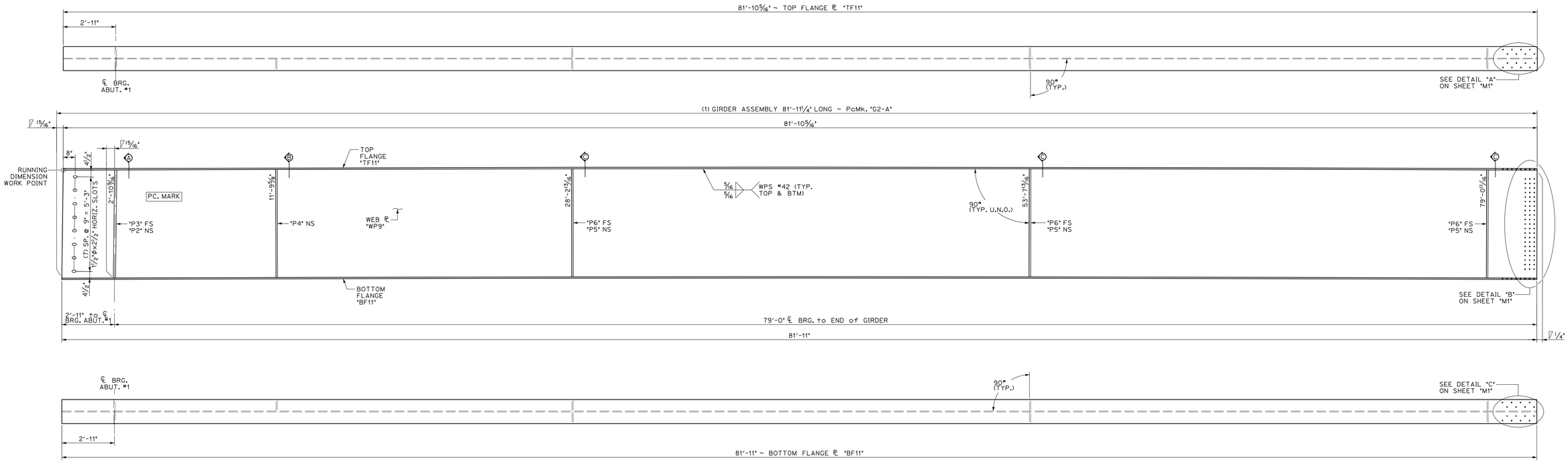
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16 " Ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6			
		NO	DATE	DESCRIPTION	BY

REVISIONS

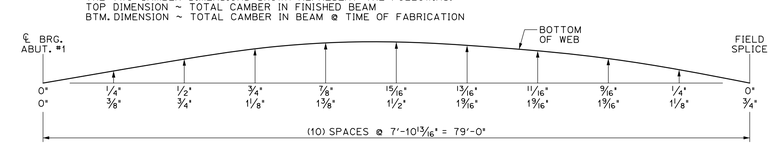
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER	JJH	GIRDER "G1-A"	PROJECT NO. 14-148
DATE	NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK	
CHECKED	DLM		DWG. NO.
DATE	NOV. 2014	SC: BECK & BELLUCCI	2

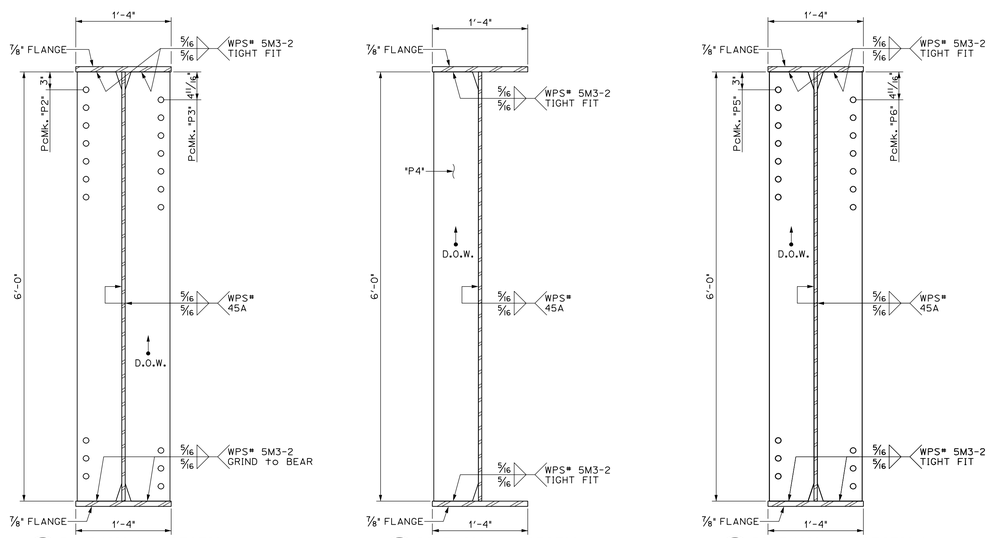


1/3 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G2-A"
SCALE: 3/8" = 1'-0"

THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION ~ TOTAL CAMBER IN FINISHED BEAM
BTM. DIMENSION ~ TOTAL CAMBER IN BEAM @ TIME OF FABRICATION



GIRDER "G2-A" CAMBER
N.T.S.



A/3 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

B/3 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

C/3 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G2-A			BRIDGE GIRDER ASSEMBLY	81'-11 1/4"	20,000#	
		1	WP9	℞ 9/16" x 72"	81'-11 1/4"	11,300#	CVN
		1	TF11	℞ 7/8" x 16"	81'-10 5/16"	3950#	CVN
		1	BF11	℞ 7/8" x 16"	81'-11"	3950#	CVN
		1	P2	SEE SHEET M2			
		1	P3	SEE SHEET M2			
		1	P4	SEE SHEET M2			
		3	P5	SEE SHEET M2			
		3	P6	SEE SHEET M2			

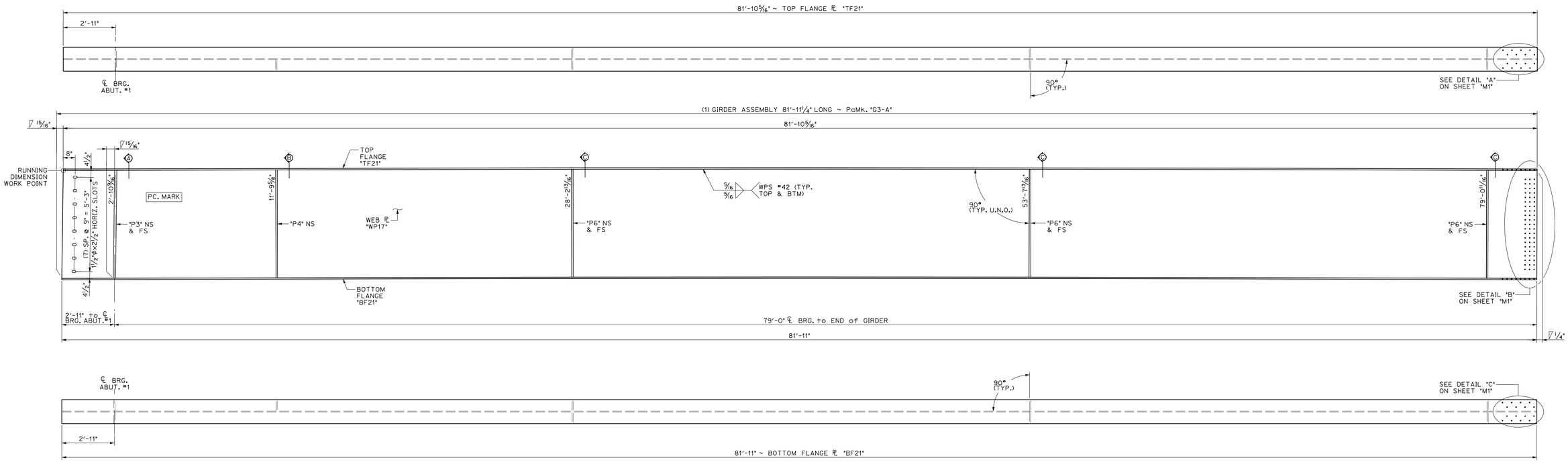
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16 " Ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6			
		NO	DATE	DESCRIPTION	BY

REVISIONS

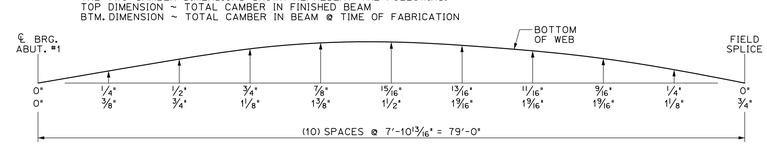
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER	JJH	GIRDER "G2-A"	PROJECT NO. 14-148
DATE	NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK	
CHECKED	DLM		DWG. NO.
DATE	NOV. 2014	SC: BECK & BELLUCCI	3



1/4 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G3-A"
SCALE: 3/8" = 1'-0"

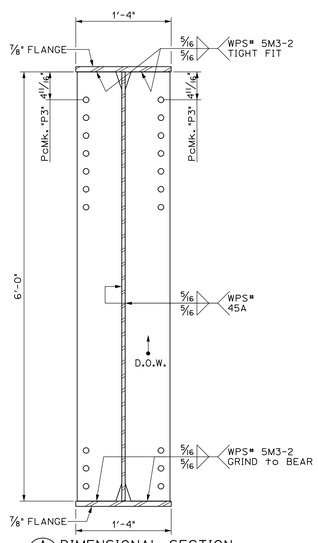
THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION ~ TOTAL CAMBER IN FINISHED BEAM
BTM. DIMENSION ~ TOTAL CAMBER IN BEAM @ TIME OF FABRICATION



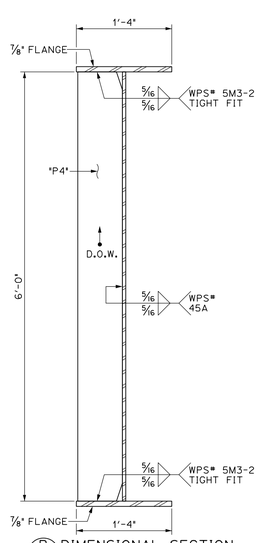
GIRDER "G3-A" CAMBER
N.T.S.

BILL OF MATERIALS

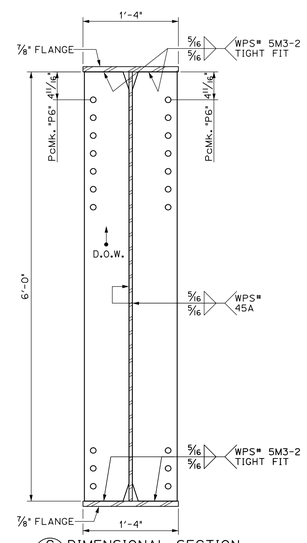
SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G3-A			BRIDGE GIRDER ASSEMBLY	81'-11 1/4"	20,000#	
		1	WP17	℄ 3/16" × 72"	81'-11 1/4"	11,300#	CVN
		1	TF21	℄ 7/8" × 16"	81'-10 5/16"	3950#	CVN
		1	BF21	℄ 7/8" × 16"	81'-11"	3950#	CVN
		2	P3	SEE SHEET M2			
		1	P4	SEE SHEET M2			
		6	P6	SEE SHEET M2			



A/4 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/4 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/4 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

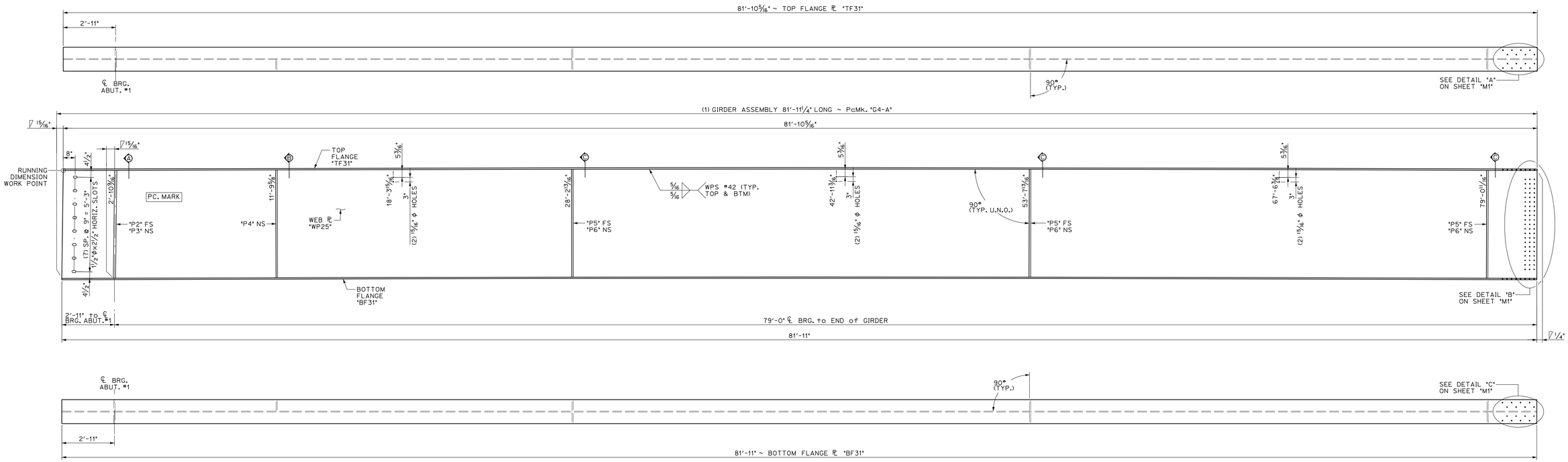
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16 " Ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6			
		NO	DATE	DESCRIPTION	BY

REVISIONS

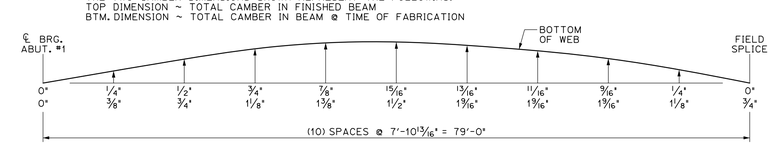
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER	JJH	GIRDER "G3-A"	PROJECT NO. 14-148
DATE	NOV. 2014	WATERBURY, VT BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK	
CHECKED	DLM		DWG. NO.
DATE	NOV. 2014	SC: BECK & BELLUCCI	4

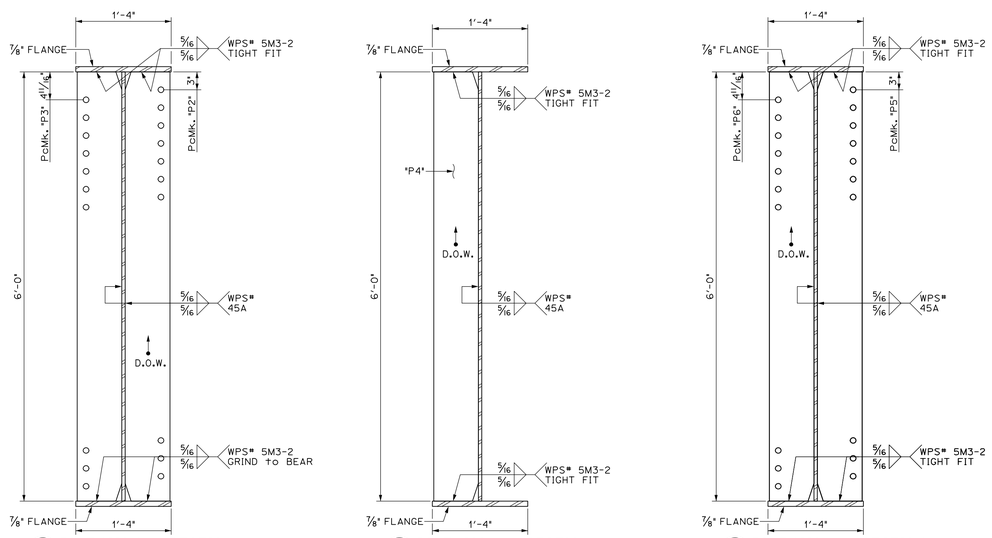


1/5 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G4-A"
SCALE: 3/8" = 1'-0"

THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION ~ TOTAL CAMBER IN FINISHED BEAM
BTM. DIMENSION ~ TOTAL CAMBER IN BEAM @ TIME OF FABRICATION



GIRDER "G4-A" CAMBER
N.T.S.



1/5 A DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

1/5 B DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

1/5 C DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G4-A			BRIDGE GIRDER ASSEMBLY	81'-11 1/4"	20,000#	
		1	WP25	℄ 3/16" × 72"	81'-11 1/4"	11,300#	CVN
		1	TF31	℄ 7/8" × 16"	81'-10 5/16"	3950#	CVN
		1	BF31	℄ 7/8" × 16"	81'-11"	3950#	CVN
		1	P2	SEE SHEET M2			
		1	P3	SEE SHEET M2			
		1	P4	SEE SHEET M2			
		3	P5	SEE SHEET M2			
		3	P6	SEE SHEET M2			

PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16 " Ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6			
		NO	DATE	DESCRIPTION	BY

REVISIONS

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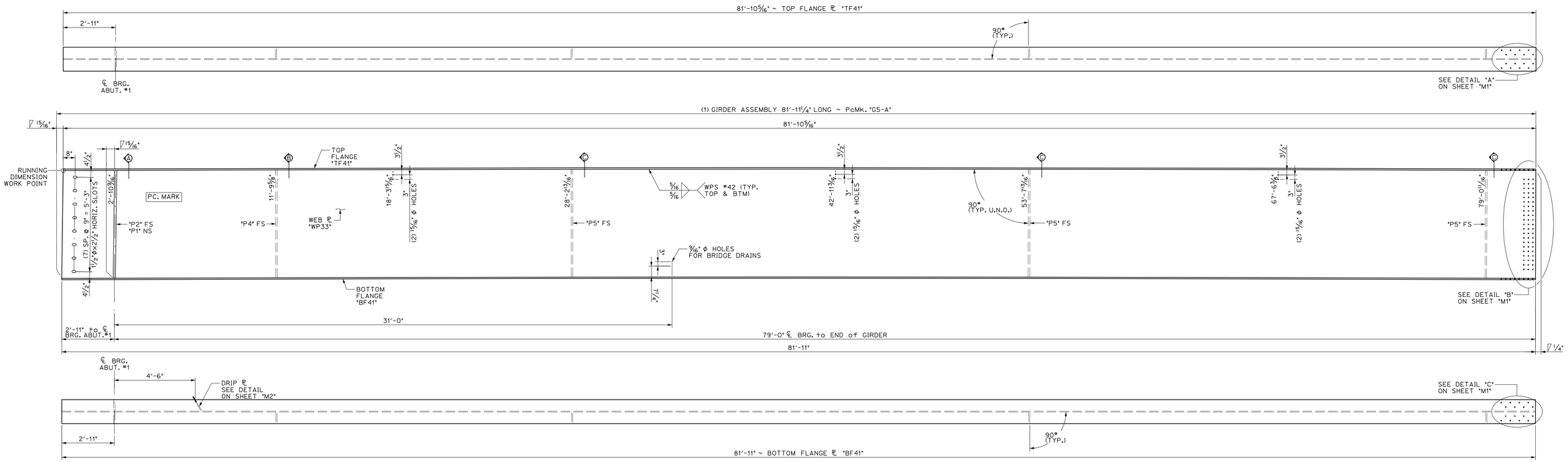
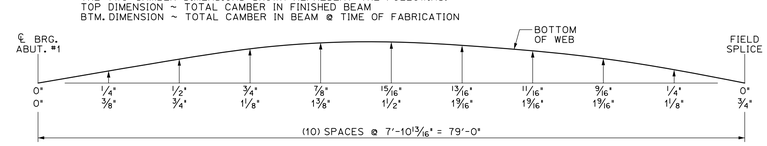
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER	JJH	GIRDER "G4-A"	PROJECT NO. 14-148
DATE	NOV. 2014	WATERBURY, VT BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK	
CHECKED	DLM		DWG. NO.
DATE	NOV. 2014	SC: BECK & BELLUCCI	5

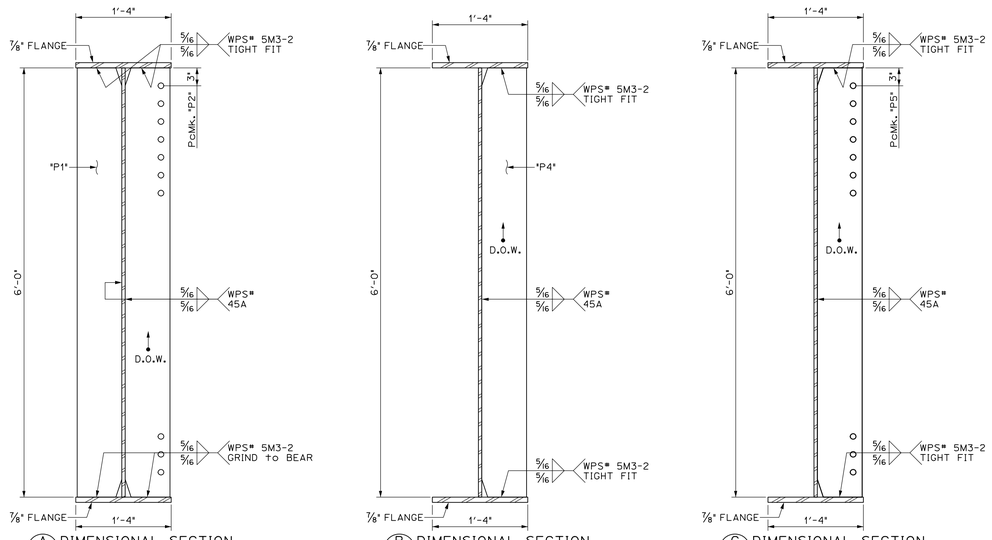


1/6 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G5-A"
SCALE: 3/8" = 1'-0"

THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION ~ TOTAL CAMBER IN FINISHED BEAM
BTM. DIMENSION ~ TOTAL CAMBER IN BEAM @ TIME OF FABRICATION



GIRDER "G5-A" CAMBER
N.T.S.



1/6 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

1/6 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

1/6 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G5-A			BRIDGE GIRDER ASSEMBLY	81'-11 1/4"	19,800#	
		1	WP33	℞ 9/16" × 72"	81'-11 1/4"	11,300#	CVN
		1	TF41	℞ 7/8" × 16"	81'-10 5/16"	3950#	CVN
		1	BF41	℞ 7/8" × 16"	81'-11"	3950#	CVN
		1	P1	SEE SHEET M2			
		1	P2	SEE SHEET M2			
		1	P4	SEE SHEET M2			
		3	P5	SEE SHEET M2			

PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16 " Ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6			
		NO	DATE	DESCRIPTION	BY

REVISIONS

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ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
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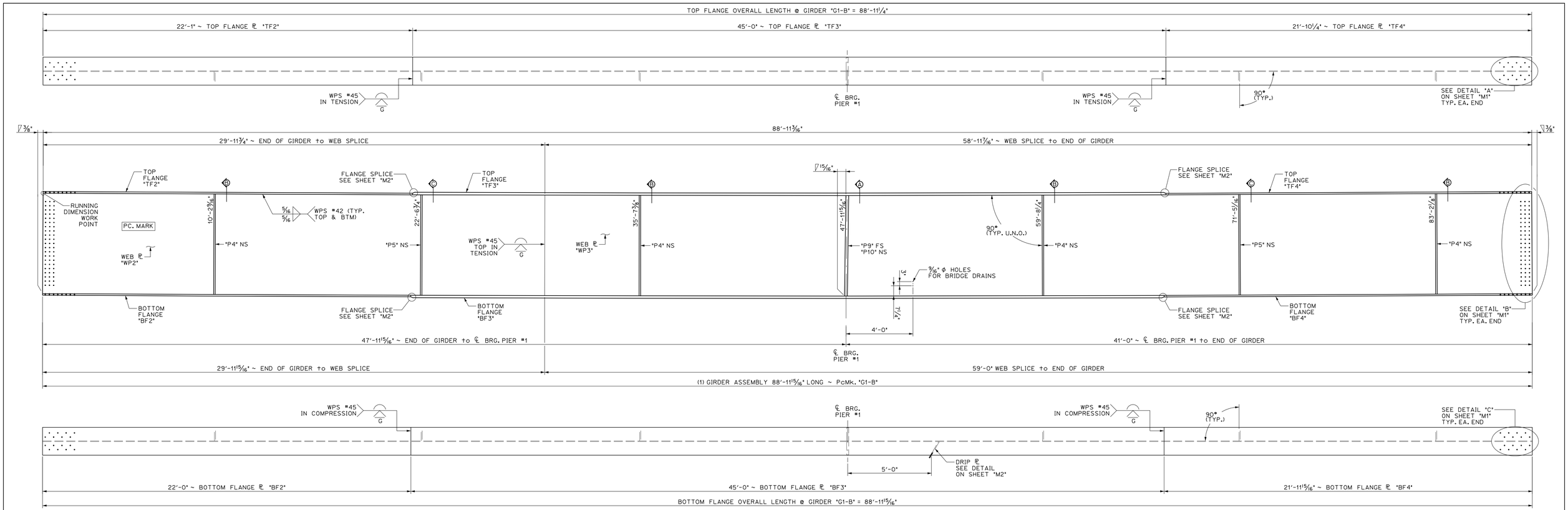
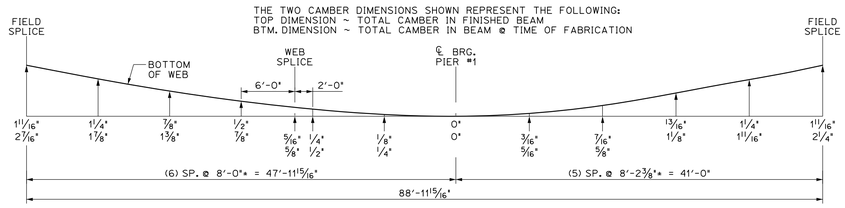
PHONE: (207) 265-2646 – FAX: (207) 265-4054

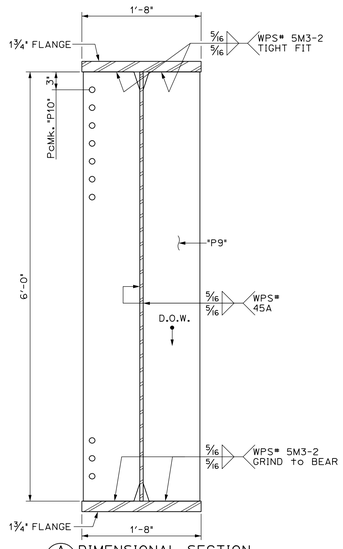
DRAFTER JJH	GIRDER "G5-A"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM			DWG. NO.
DATE NOV. 2014	BC: BECK & BELLUCCI		6



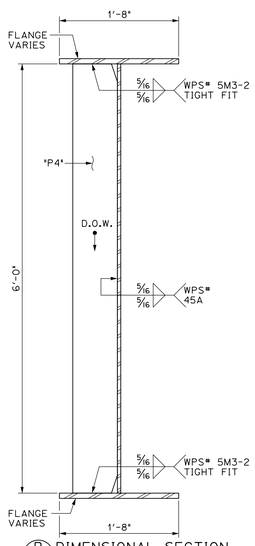
1/7 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G1-B"
SCALE: ⅜" = 1'-0"



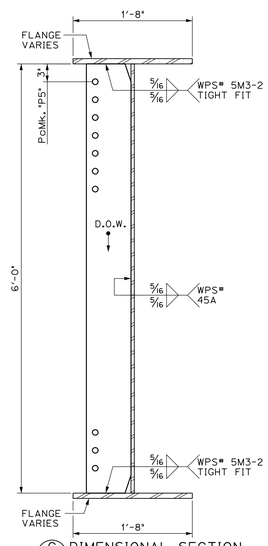
GIRDER "G1-B" CAMBER
N.T.S.



A/7 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/7 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/7 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G1-B			BRIDGE GIRDER ASSEMBLY	88'-11¹⁵⁄₁₆"	31,000#	
		1	WP2	ℙ ⅜" × 72"	29'-11¹⁵⁄₁₆"	4150#	CVN
		1	WP3	ℙ ⅜" × 72"	59'-0"	8150#	CVN
		1	TF2	ℙ 1⅛" × 20"	22'-1"	1725#	CVN
		1	TF3	ℙ 1¾" × 20"	45'-0"	5400#	CVN
		1	TF4	ℙ 1⅛" × 20"	21'-10¼"	1725#	CVN
		1	BF2	ℙ 1⅛" × 20"	22'-0"	1725#	CVN
		1	BF3	ℙ 1¾" × 20"	45'-0"	5400#	CVN
		1	BF4	ℙ 1⅛" × 20"	21'-11¹⁵⁄₁₆"	1725#	CVN
		4	P4	SEE SHEET M2			
		2	P5	SEE SHEET M2			
		1	P9	SEE SHEET M2			
		1	P10	SEE SHEET M2			

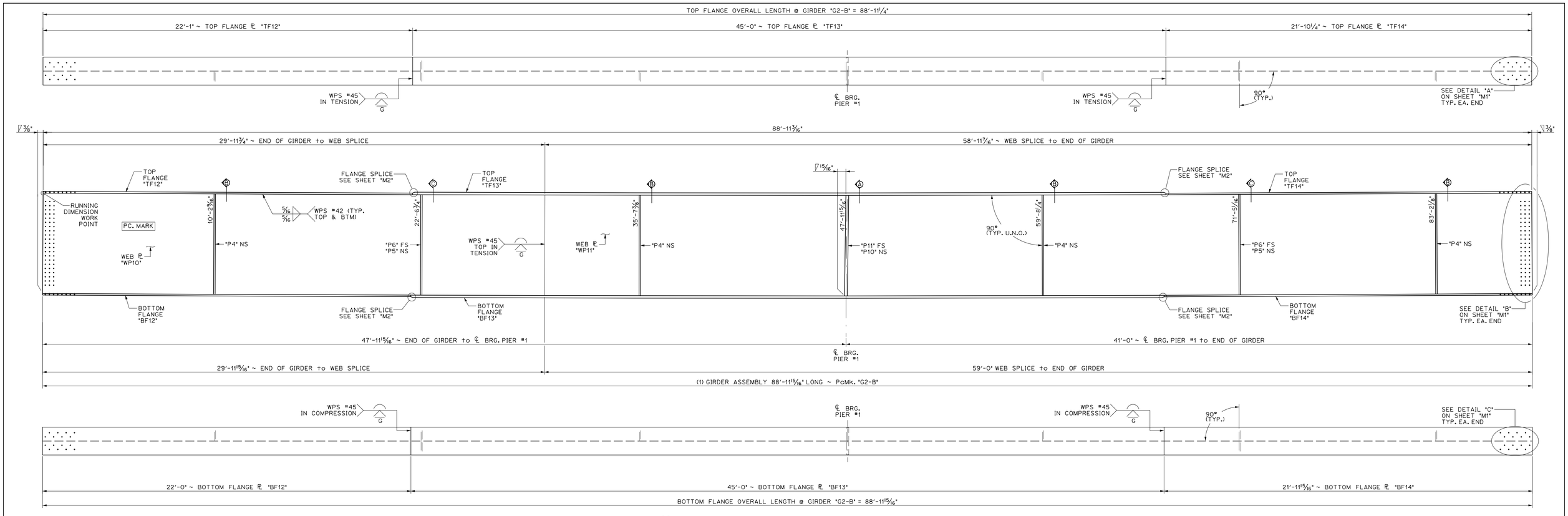
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6				
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W				
HOLES	15/16 " Ø U.N.O.				
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP	SSPC SP6				
		NO	DATE	DESCRIPTION	BY

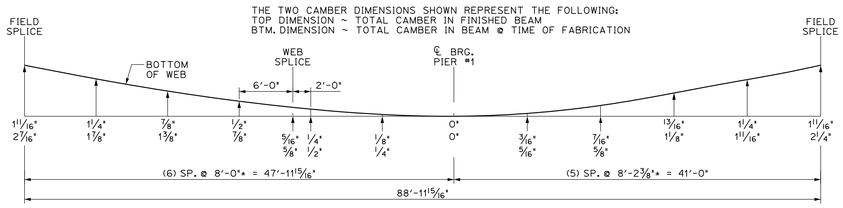
REVISIONS

ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

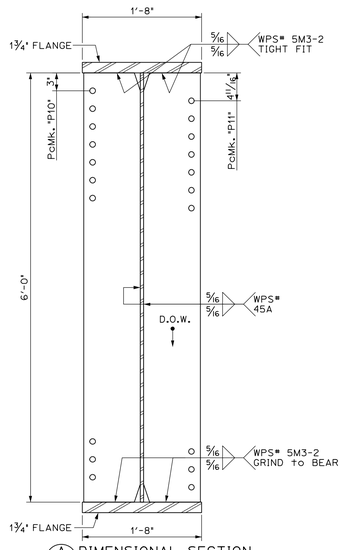
DRAFTER JJH	GIRDER "G1-B"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM			DWG. NO. 7
DATE NOV. 2014	BECK & BELLUCCI		



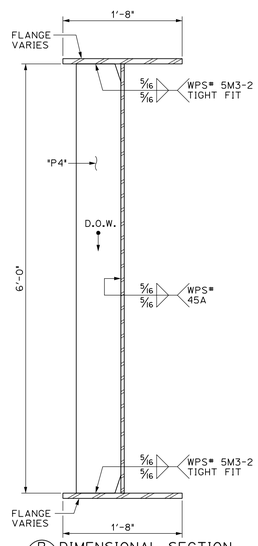
1/8 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G2-B"
SCALE: ⅜" = 1'-0"



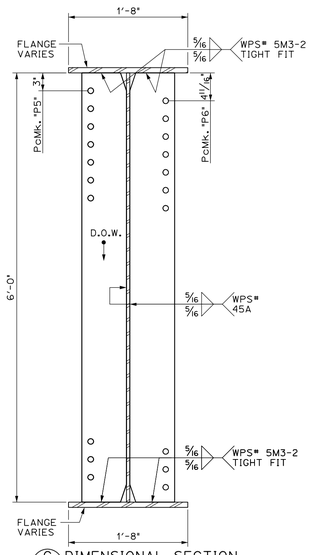
GIRDER "G2-B" CAMBER
N.T.S.



A/8 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/8 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/8 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G2-B			BRIDGE GIRDER ASSEMBLY	88'-11¹⁵⁄₁₆"	31,200#	
		1	WP10	ℙ ⅜" × 72"	29'-11¹⁵⁄₁₆"	4150#	CVN
		1	WP11	ℙ ⅜" × 72"	59'-0"	8150#	CVN
		1	TF12	ℙ 1⅛" × 20"	22'-1"	1725#	CVN
		1	TF13	ℙ 1¾" × 20"	45'-0"	5400#	CVN
		1	TF14	ℙ 1⅛" × 20"	21'-10¼"	1725#	CVN
		1	BF12	ℙ 1⅛" × 20"	22'-0"	1725#	CVN
		1	BF13	ℙ 1¾" × 20"	45'-0"	5400#	CVN
		1	BF14	ℙ 1⅛" × 20"	21'-11¹⁵⁄₁₆"	1725#	CVN
		4	P4	SEE SHEET M2			
		2	P5	SEE SHEET M2			
		2	P6	SEE SHEET M2			
		1	P10	SEE SHEET M2			
		1	P11	SEE SHEET M2			

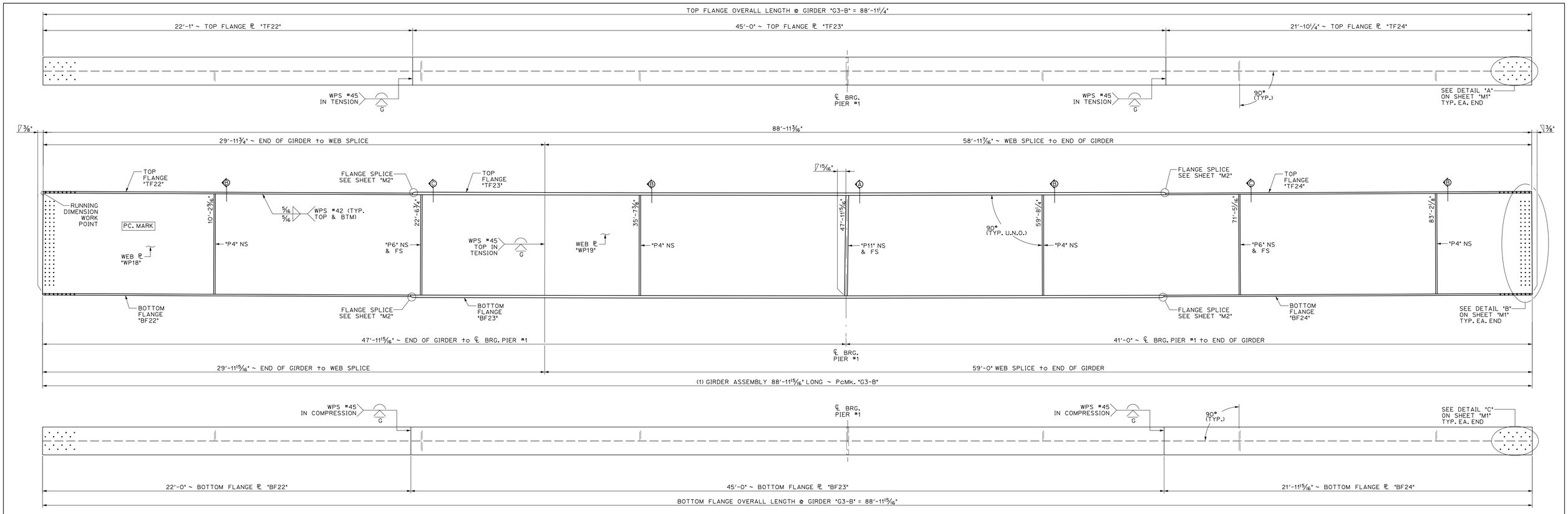
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6				
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W				
HOLES	15/16 " Ø U.N.O.				
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP	SSPC SP6				
		NO	DATE	DESCRIPTION	BY

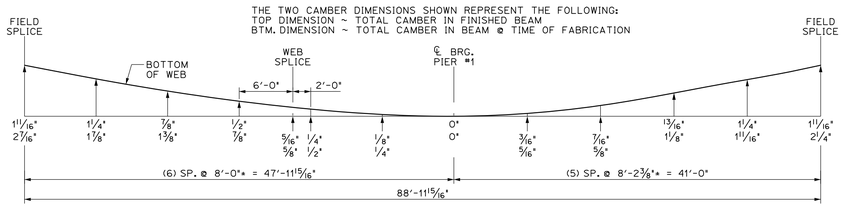
REVISIONS

ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

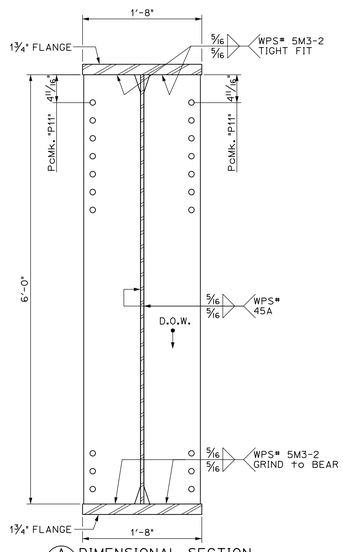
DRAFTER JJH	GIRDER "G2-B"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM			DWG. NO. 8
DATE NOV. 2014	BECK & BELLUCCI		



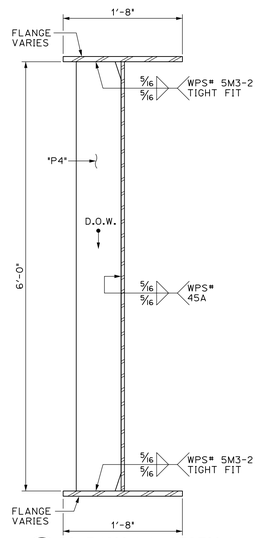
1/9 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G3-B"
SCALE: ⅜" = 1'-0"



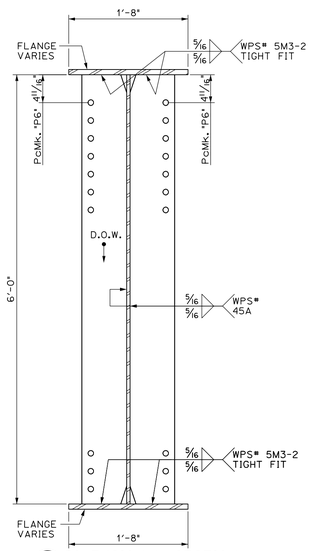
GIRDER "G3-B" CAMBER
N.T.S.



A/9 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/9 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/9 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G3-B			BRIDGE GIRDER ASSEMBLY	88'-11¹⁵⁄₁₆"	31,200#	
		1	WP18	℞ ⅜" × 72"	29'-11¹⁵⁄₁₆"	4150#	CVN
		1	WP19	℞ ⅜" × 72"	59'-0"	8150#	CVN
		1	TF22	℞ 1⅛" × 20"	22'-1"	1725#	CVN
		1	TF23	℞ 1¾" × 20"	45'-0"	5400#	CVN
		1	TF24	℞ 1⅛" × 20"	21'-10¼"	1725#	CVN
		1	BF22	℞ 1⅛" × 20"	22'-0"	1725#	CVN
		1	BF23	℞ 1¾" × 20"	45'-0"	5400#	CVN
		1	BF24	℞ 1⅛" × 20"	21'-11¹⁵⁄₁₆"	1725#	CVN
		4	P4	SEE SHEET M2			
		4	P6	SEE SHEET M2			
		2	P11	SEE SHEET M2			

PROJECT No. IM 089-2(43)
ITEM No. 506.55

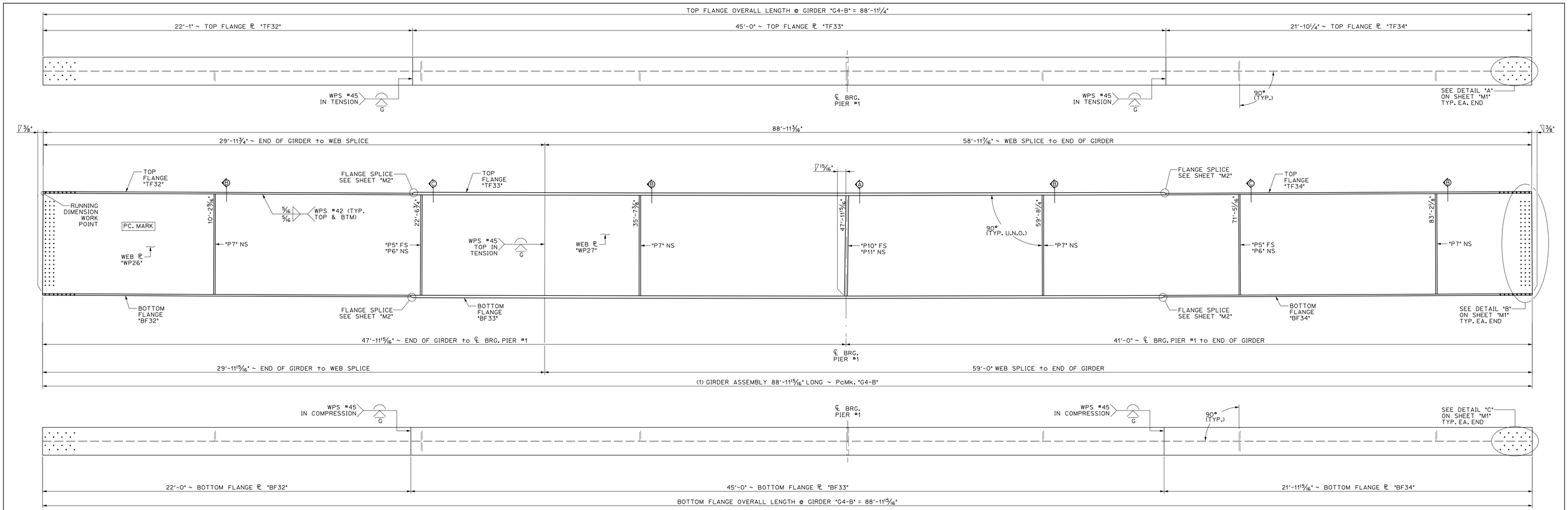
FINISH	SSPC SP6				
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W				
HOLES	15/16 " Ø U.N.O.				
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP	SSPC SP6				
		NO	DATE	DESCRIPTION	BY

REVISIONS

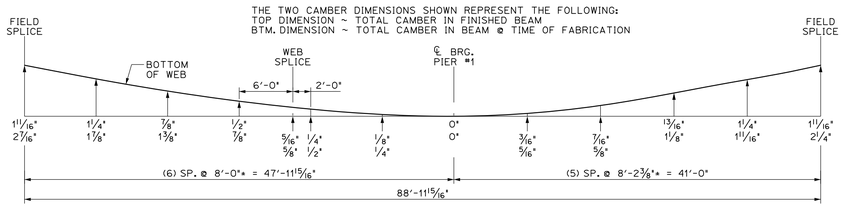
ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

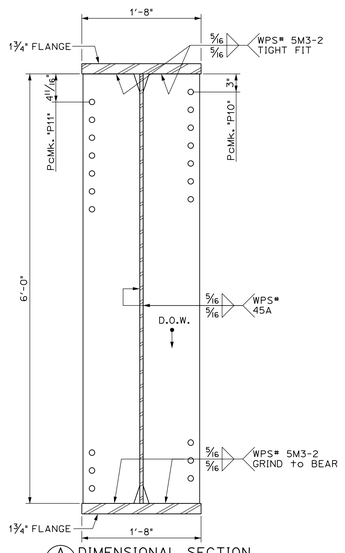
DRAFTER JJH	GIRDER "G3-B"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM			DWG. NO. 9
DATE NOV. 2014	BECK & BELLUCCI		



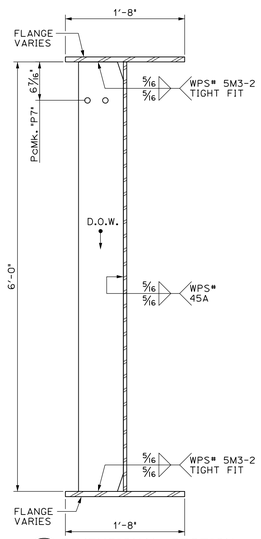
1/10 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G4-B"
SCALE: ⅜" = 1'-0"



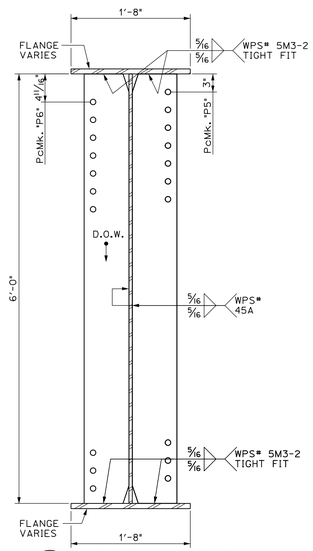
GIRDER "G4-B" CAMBER
N.T.S.



A/10 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/10 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/10 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G4-B			BRIDGE GIRDER ASSEMBLY	88'-11¹⁵⁄₁₆"	31,200#	
		1	WP26	ℙ ⅜" × 72"	29'-11¹⁵⁄₁₆"	4150#	CVN
		1	WP27	ℙ ⅜" × 72"	59'-0"	8150#	CVN
		1	TF32	ℙ 1⅛" × 20"	22'-1"	1725#	CVN
		1	TF33	ℙ 1¾" × 20"	45'-0"	5400#	CVN
		1	TF34	ℙ 1⅛" × 20"	21'-10¼"	1725#	CVN
		1	BF32	ℙ 1⅛" × 20"	22'-0"	1725#	CVN
		1	BF33	ℙ 1¾" × 20"	45'-0"	5400#	CVN
		1	BF34	ℙ 1⅛" × 20"	21'-11¹⁵⁄₁₆"	1725#	CVN
		2	P5	SEE SHEET M2			
		2	P6	SEE SHEET M2			
		4	P7	SEE SHEET M2			
		1	P10	SEE SHEET M2			
		1	P11	SEE SHEET M2			

PROJECT No. IM 089-2(43)
ITEM No. 506.55

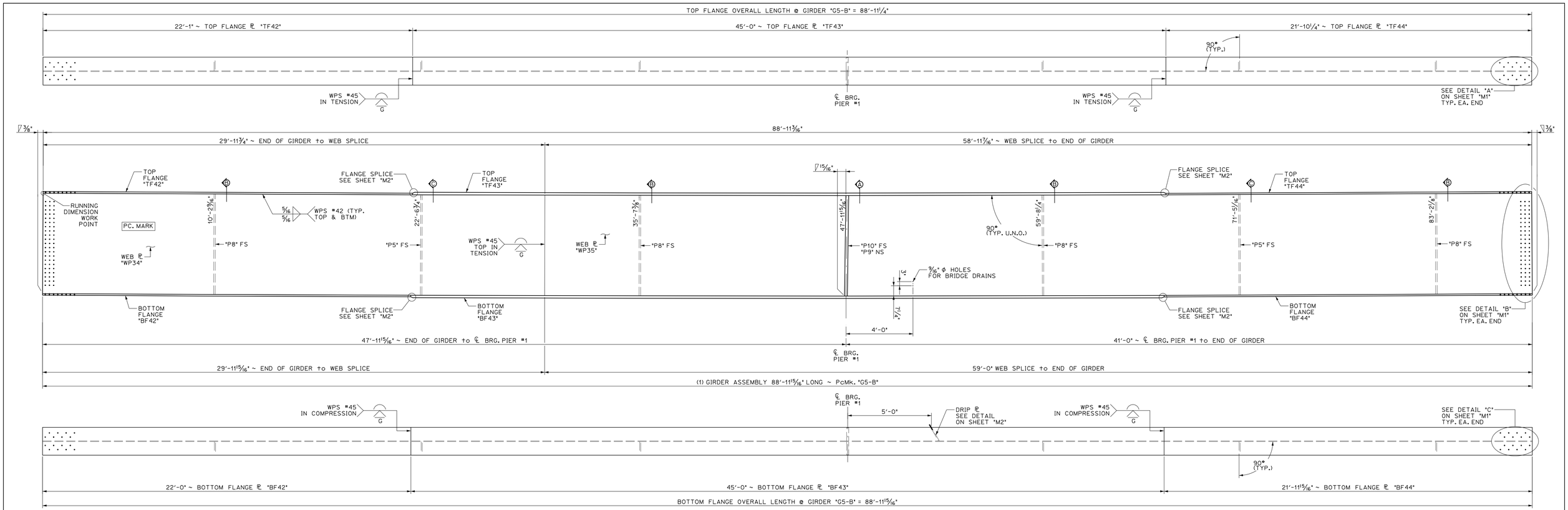
FINISH	SSPC SP6
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W
HOLES	15/16 " Ø U.N.O.
ELECTRODES	PER WELD PROCEDURE
WELDS	PER WELD PROCEDURE
SURFACE PREP	SSPC SP6

NO	DATE	DESCRIPTION	BY

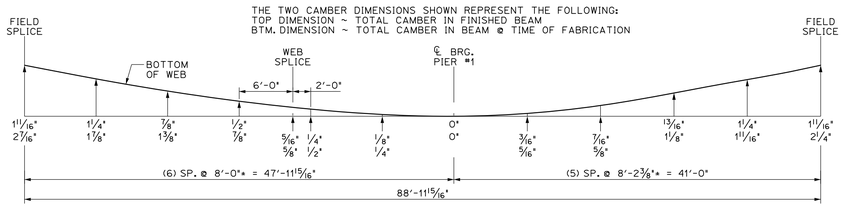
REVISIONS

ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

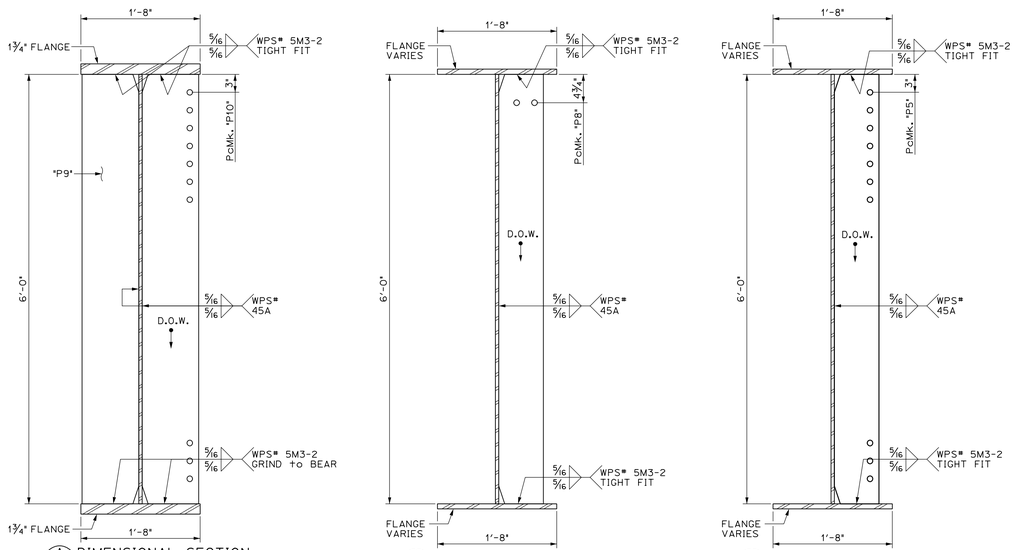
DRAFTER	JJH	GIRDER "G4-B"	PROJECT NO. 14-148
DATE	NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK	
CHECKED	DLM		DWG. NO. 10
DATE	NOV. 2014	BECK & BELLUCCI	



1/11 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G5-B"
SCALE: ⅜" = 1'-0"



GIRDER "G5-B" CAMBER
N.T.S.



A/11 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

B/11 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

C/11 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G5-B			BRIDGE GIRDER ASSEMBLY	88'-11¹⁵⁄₁₆"	31,000#	
		1	WP34	ℙ ⅜" × 72"	29'-11¹⁵⁄₁₆"	4150#	CVN
		1	WP35	ℙ ⅜" × 72"	59'-0"	8150#	CVN
		1	TF42	ℙ 1⅛" × 20"	22'-1"	1725#	CVN
		1	TF43	ℙ 1¾" × 20"	45'-0"	5400#	CVN
		1	TF44	ℙ 1⅛" × 20"	21'-10¼"	1725#	CVN
		1	BF42	ℙ 1⅛" × 20"	22'-0"	1725#	CVN
		1	BF43	ℙ 1¾" × 20"	45'-0"	5400#	CVN
		1	BF44	ℙ 1⅛" × 20"	21'-11¹⁵⁄₁₆"	1725#	CVN
		2	P5	SEE SHEET M2			
		4	P8	SEE SHEET M2			
		1	P9	SEE SHEET M2			
		1	P10	SEE SHEET M2			

PROJECT No. IM 089-2(43)
ITEM No. 506.55

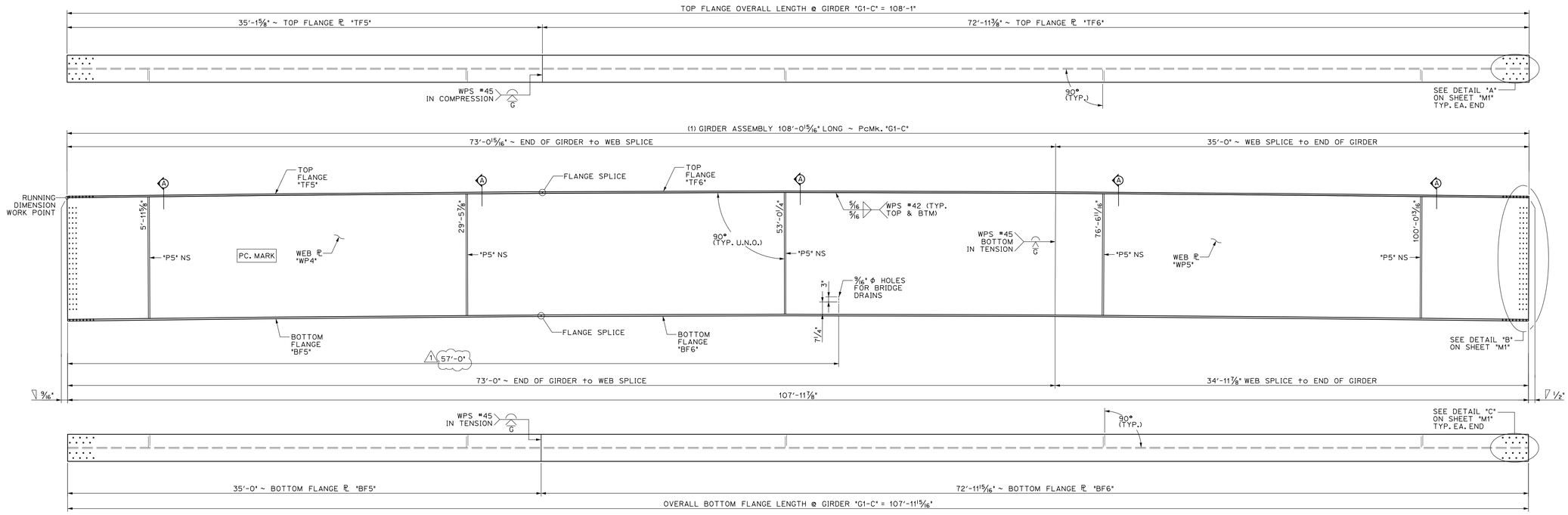
FINISH	SSPC SP6
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W
HOLES	15/16 " Ø U.N.O.
ELECTRODES	PER WELD PROCEDURE
WELDS	PER WELD PROCEDURE
SURFACE PREP	SSPC SP6

NO	DATE	DESCRIPTION	BY

REVISIONS

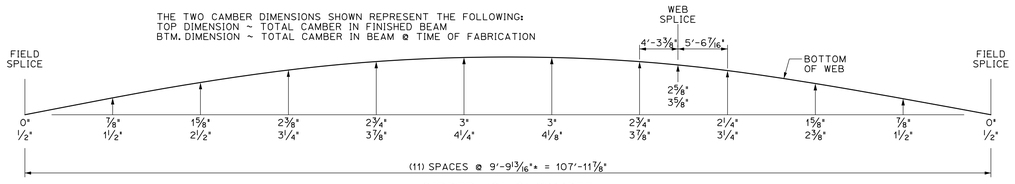
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER JJH	GIRDER "G5-B"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM			DWG. NO.
DATE NOV. 2014	BECK & BELLUCCI		11

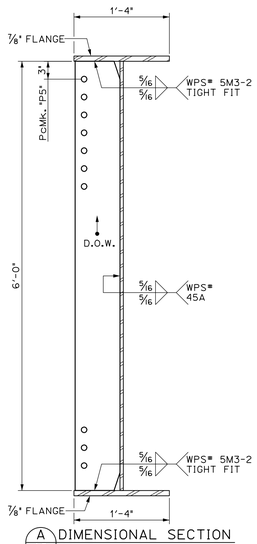


1/12 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G1-C"

HORIZONTAL SCALE: 1/4" = 1'-0"
VERTICAL SCALE EXAGGERATED 1.5:1



GIRDER "G1-C" CAMBER
N.T.S.



A/12 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G1-C			BRIDGE GIRDER ASSEMBLY	108'-0 15/16"	25,750#	
		1	WP4	℄ 9/16" x 72"	73'-1"	10,100#	CVN
		1	WP5	℄ 9/16" x 72"	35'-0"	4850#	CVN
		1	TF5	℄ 7/8" x 16"	35'-1 5/8"	1700#	CVN
		1	TF6	℄ 7/8" x 16"	72'-11 3/8"	3500#	CVN
		1	BF5	℄ 7/8" x 16"	35'-0"	1700#	CVN
		1	BF6	℄ 7/8" x 16"	72'-11 15/16"	3500#	CVN
		5	P5	SEE SHEET M2			

PROJECT No. IM 089-2(43)
ITEM No. 506.55

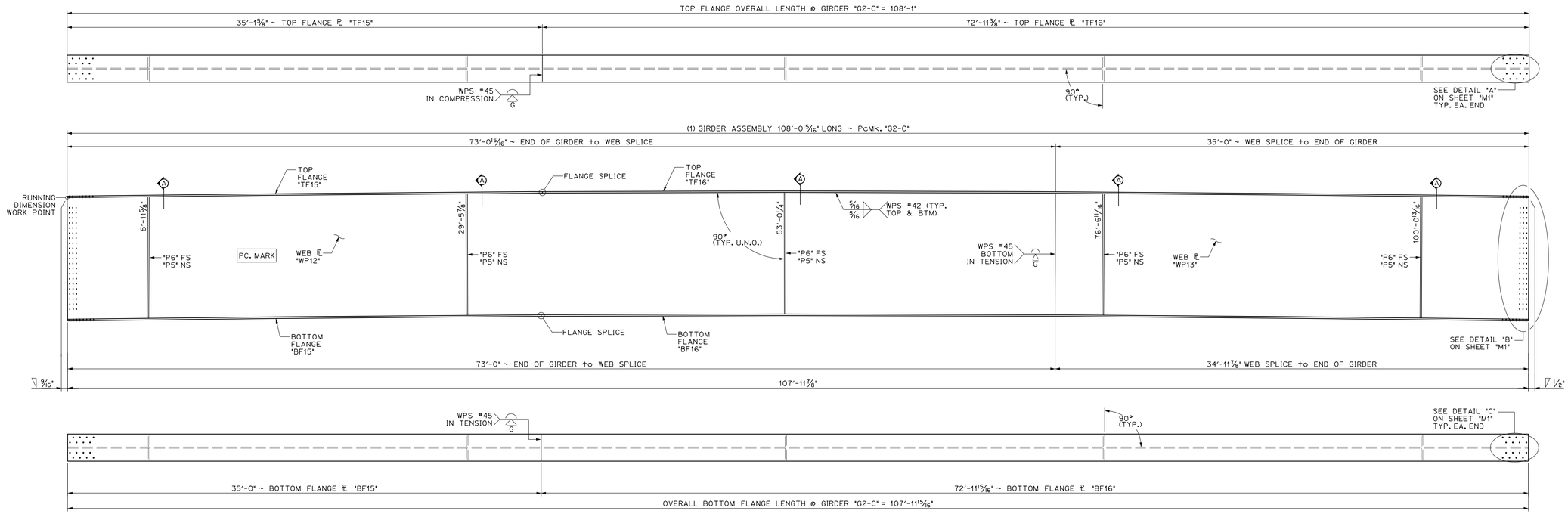
FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16 " Ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6	1	2/17/15	DRAIN HOLE LOCATION JJH

NO	DATE	DESCRIPTION	BY

REVISIONS

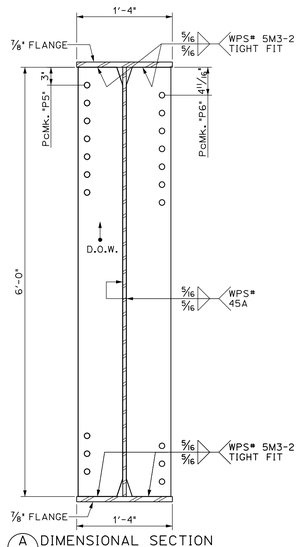
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER JJH	GIRDER "G1-C"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM			DWG. NO.
DATE NOV. 2014	BECK & BELLUCCI		12



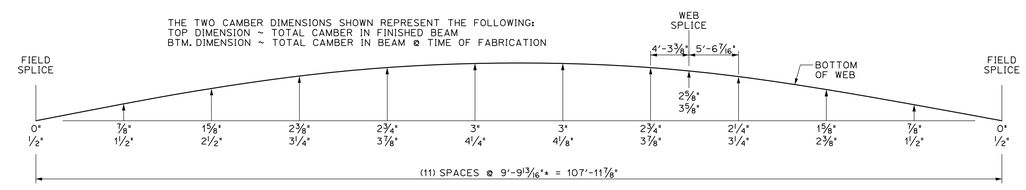
1/13 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G2-C"

HORIZONTAL SCALE: 1/4" = 1'-0"
VERTICAL SCALE EXAGGERATED 1.5:1



A/13 DIMENSIONAL SECTION

SCALE: 1" = 1'-0"



GIRDER "G2-C" CAMBER

N.T.S.

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G2-C			BRIDGE GIRDER ASSEMBLY	108'-0 15/16"	26,150#	
		1	WP12	℄ 9/16" x 72"	73'-1"	10,100#	CVN
		1	WP13	℄ 9/16" x 72"	35'-0"	4850#	CVN
		1	TF15	℄ 7/8" x 16"	35'-1 5/8"	1700#	CVN
		1	TF16	℄ 7/8" x 16"	72'-11 3/8"	3500#	CVN
		1	BF15	℄ 7/8" x 16"	35'-0"	1700#	CVN
		1	BF16	℄ 7/8" x 16"	72'-11 15/16"	3500#	CVN
		5	P5	SEE SHEET M2			
		5	P6	SEE SHEET M2			

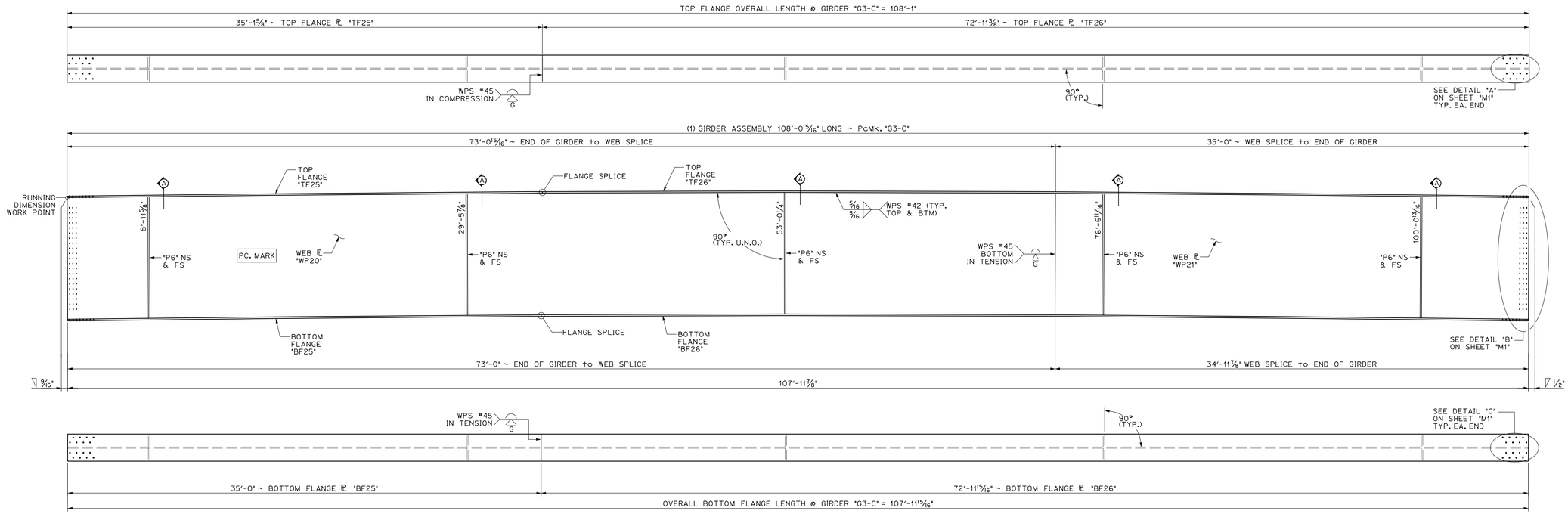
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16 " Ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6			
		NO	DATE	DESCRIPTION	BY

REVISIONS

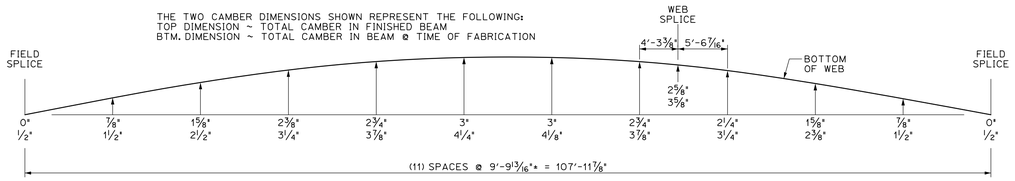
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER JJH	GIRDER "G2-C"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM			DWG. NO.
DATE NOV. 2014	BECK & BELLUCCI		13

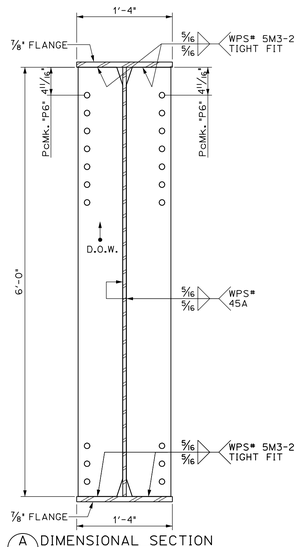


1/14 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G3-C"

HORIZONTAL SCALE: 1/4" = 1'-0"
VERTICAL SCALE EXAGGERATED 1.5:1



GIRDER "G3-C" CAMBER
N.T.S.



A/14 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G3-C			BRIDGE GIRDER ASSEMBLY	108'-0 15/16"	26,150#	
		1	WP20	℞ 9/16" x 72"	73'-1"	10,100#	CVN
		1	WP21	℞ 9/16" x 72"	35'-0"	4850#	CVN
		1	TF25	℞ 7/8" x 16"	35'-1 5/8"	1700#	CVN
		1	TF26	℞ 7/8" x 16"	72'-11 3/8"	3500#	CVN
		1	BF25	℞ 7/8" x 16"	35'-0"	1700#	CVN
		1	BF26	℞ 7/8" x 16"	72'-11 15/16"	3500#	CVN
		10	P6	SEE SHEET M2			

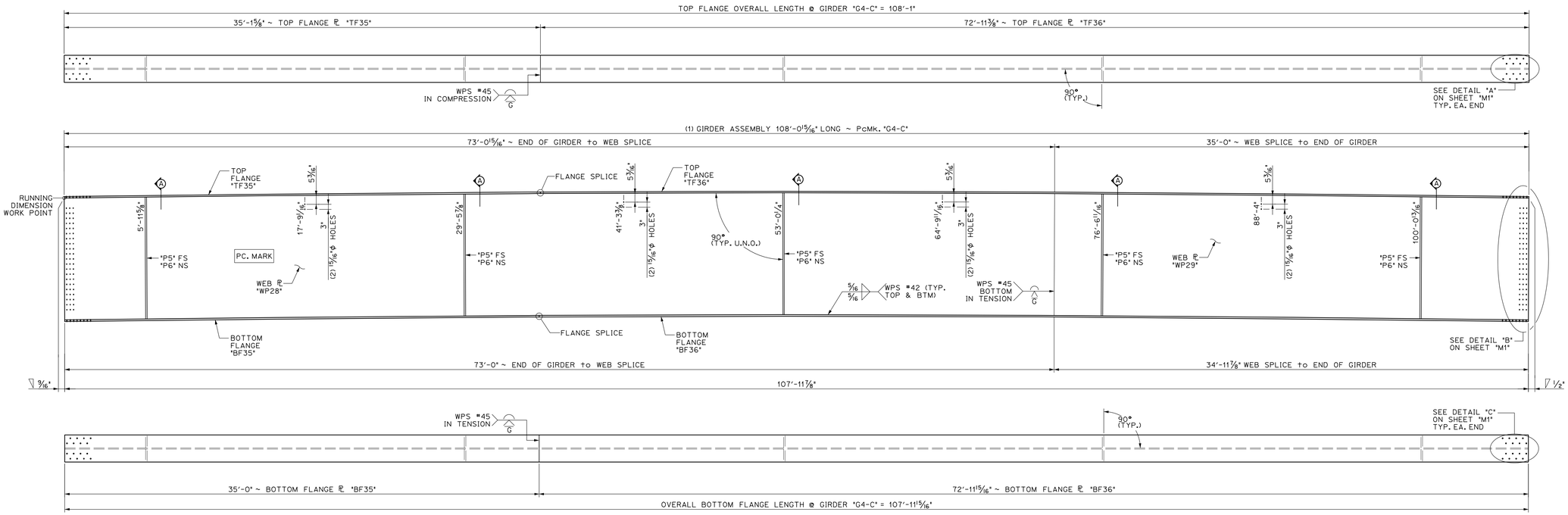
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6				
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W				
HOLES	15/16 " Ø U.N.O.				
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP	SSPC SP6				
		NO	DATE	DESCRIPTION	BY

REVISIONS

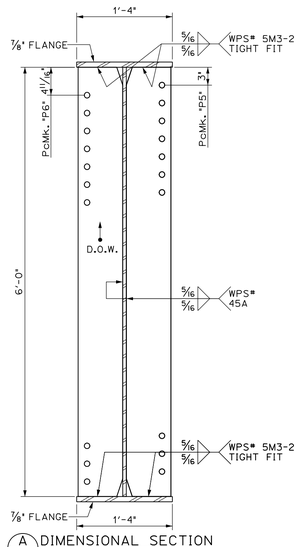
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER JJH	GIRDER "G3-C"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM			DWG. NO.
DATE NOV. 2014	BECK & BELLUCCI		14



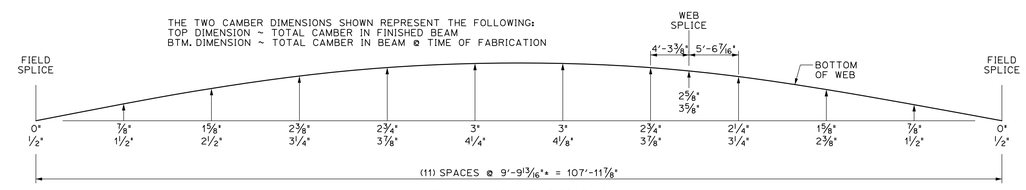
1/15 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G4-C"

HORIZONTAL SCALE: 1/4" = 1'-0"
VERTICAL SCALE EXAGGERATED 1.5:1



A/15 DIMENSIONAL SECTION

SCALE: 1" = 1'-0"



GIRDER "G4-C" CAMBER

N.T.S.

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G4-C			BRIDGE GIRDER ASSEMBLY	108'-0 15/16"	26,150#	
		1	WP28	℞ 9/16" x 72"	73'-1"	10,100#	CVN
		1	WP29	℞ 9/16" x 72"	35'-0"	4850#	CVN
		1	TF35	℞ 7/8" x 16"	35'-1 5/8"	1700#	CVN
		1	TF36	℞ 7/8" x 16"	72'-11 3/8"	3500#	CVN
		1	BF35	℞ 7/8" x 16"	35'-0"	1700#	CVN
		1	BF36	℞ 7/8" x 16"	72'-11 15/16"	3500#	CVN
		5	P5	SEE SHEET M2			
		5	P6	SEE SHEET M2			

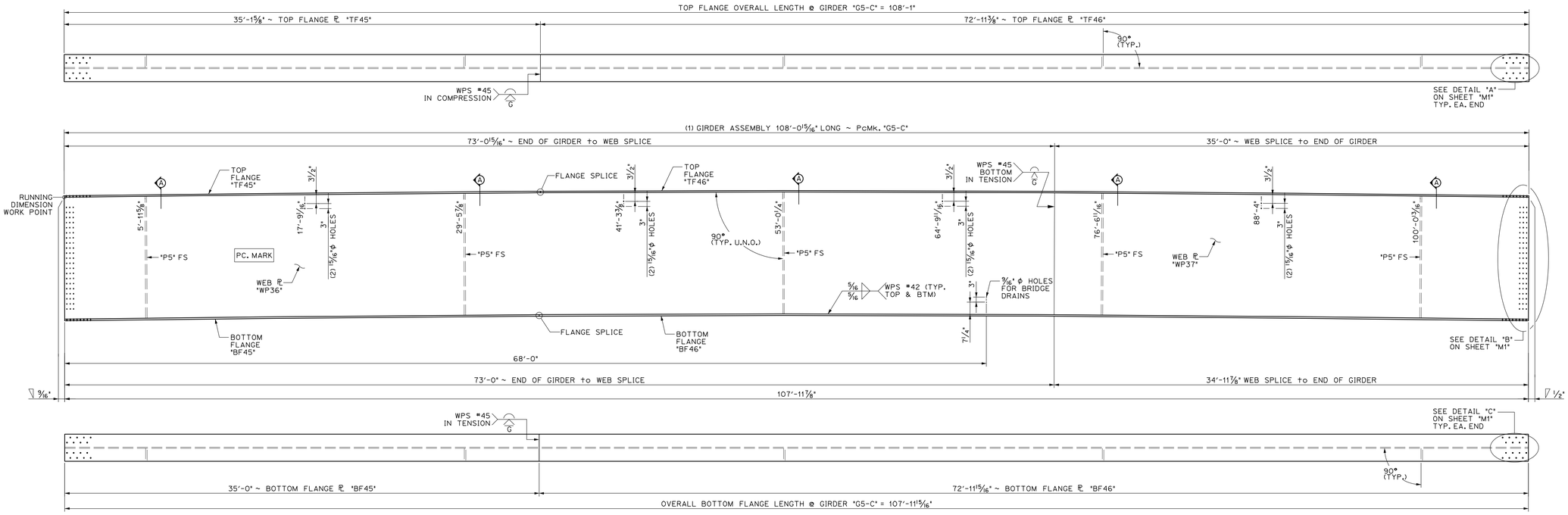
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6				
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W				
HOLES	15/16" Ø U.N.O.				
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP	SSPC SP6				
		NO	DATE	DESCRIPTION	BY

REVISIONS

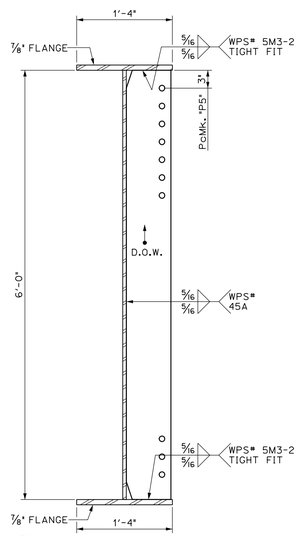
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER JJH	GIRDER "G4-C"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM			DWG. NO.
DATE NOV. 2014	BECK & BELLUCCI		15



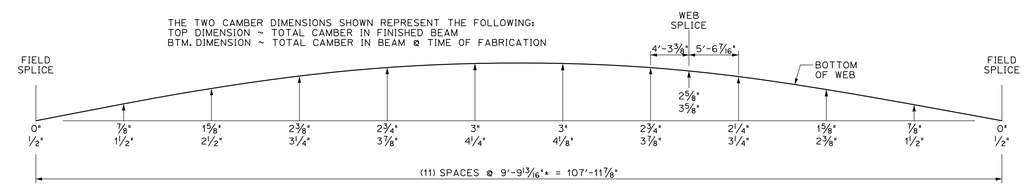
1/16 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G5-C"

HORIZONTAL SCALE: 1/4" = 1'-0"
VERTICAL SCALE EXAGGERATED 1.5:1



A/16 DIMENSIONAL SECTION

SCALE: 1" = 1'-0"



GIRDER "G5-C" CAMBER

N.T.S.

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G5-C			BRIDGE GIRDER ASSEMBLY	108'-0 15/16"	25,750#	
		1	WP36	ℙ 9/16" x 72"	73'-1"	10,100#	CVN
		1	WP37	ℙ 9/16" x 72"	35'-0"	4850#	CVN
		1	TF45	ℙ 7/8" x 16"	35'-1 5/8"	1700#	CVN
		1	TF46	ℙ 7/8" x 16"	72'-11 3/8"	3500#	CVN
		1	BF45	ℙ 7/8" x 16"	35'-0"	1700#	CVN
		1	BF46	ℙ 7/8" x 16"	72'-11 15/16"	3500#	CVN
		5	P5	SEE SHEET M2			

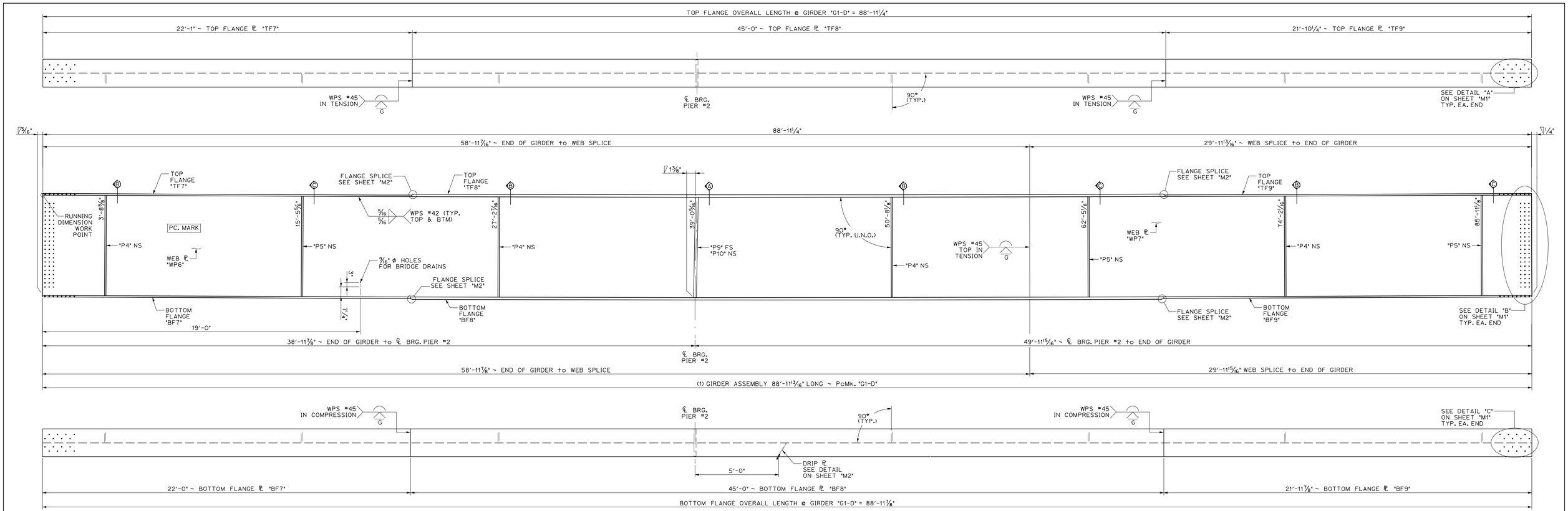
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6				
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W				
HOLES	15/16 " Ø U.N.O.				
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP	SSPC SP6				
		NO	DATE	DESCRIPTION	BY

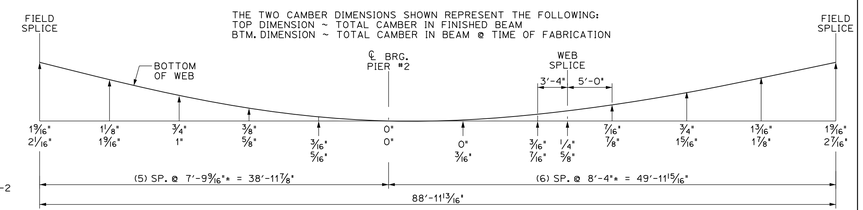
REVISIONS

ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

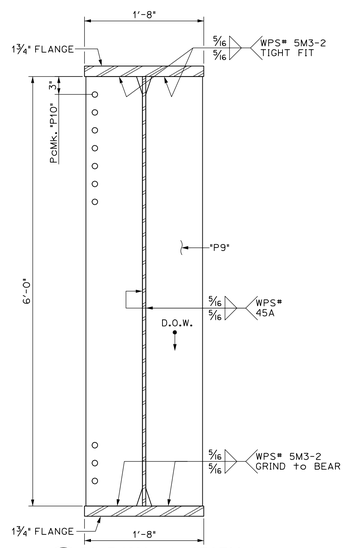
DRAFTER JJH	GIRDER "G5-C"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM			DWG. NO.
DATE NOV. 2014	BECK & BELLUCCI		16



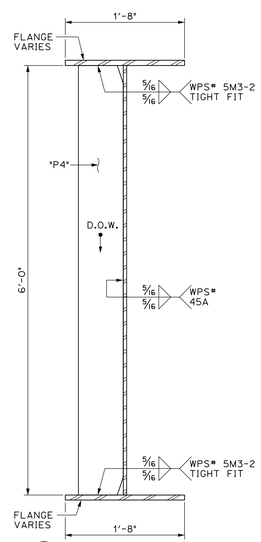
1/17 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G1-D"
SCALE: ⅜" = 1'-0"



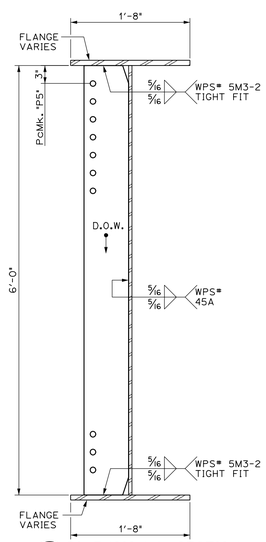
GIRDER "G1-D" CAMBER
N.T.S.



A 17 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B 17 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C 17 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G1-D			BRIDGE GIRDER ASSEMBLY	88'-11¹³⁄₁₆"	31,100#	
		1	WP6	℞ ⅜" × 72"	59'-0"	4150#	CVN
		1	WP7	℞ ⅜" × 72"	29'-11¹⁵⁄₁₆"	8150#	CVN
		1	TF7	℞ 1⅛" × 20"	22'-1"	1725#	CVN
		1	TF8	℞ 1¾" × 20"	45'-0"	5400#	CVN
		1	TF9	℞ 1⅛" × 20"	21'-10¼"	1725#	CVN
		1	BF7	℞ 1⅛" × 20"	22'-0"	1725#	CVN
		1	BF8	℞ 1¾" × 20"	45'-0"	5400#	CVN
		1	BF9	℞ 1⅛" × 20"	21'-11⅞"	1725#	CVN
		4	P4	SEE SHEET M2			
		3	P5	SEE SHEET M2			
		1	P9	SEE SHEET M2			
		1	P10	SEE SHEET M2			

PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6				
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W				
HOLES	15/16 " Ø U.N.O.				
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP	SSPC SP6				
		NO	DATE	DESCRIPTION	BY

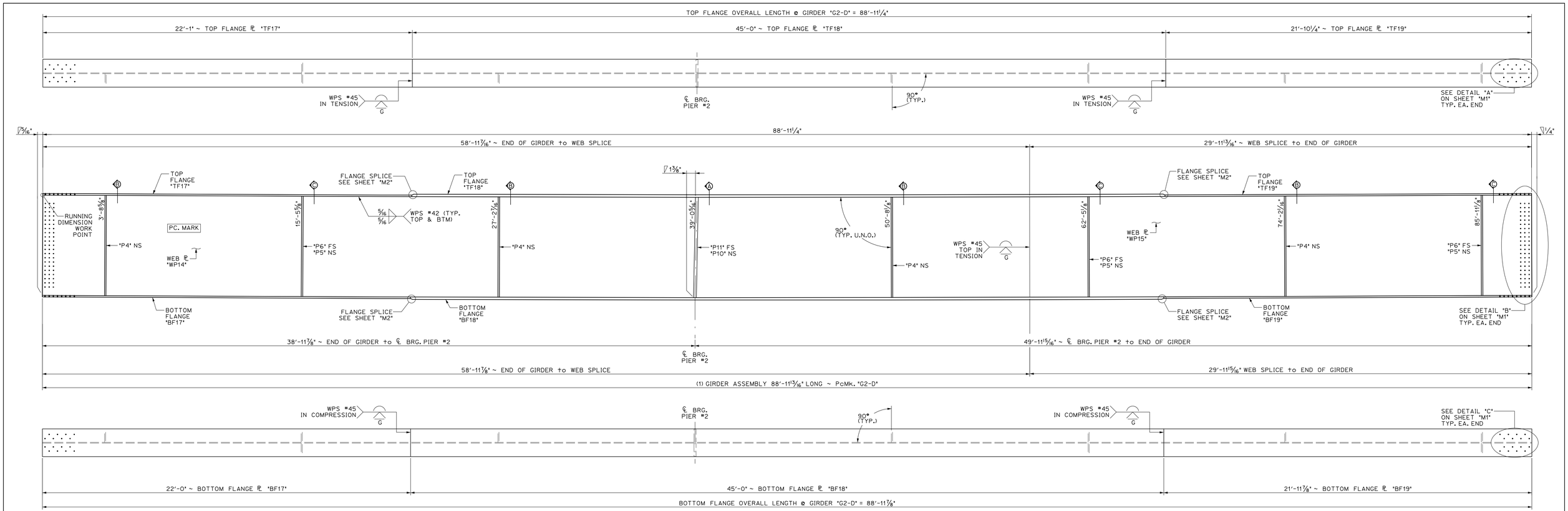
REVISIONS

ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

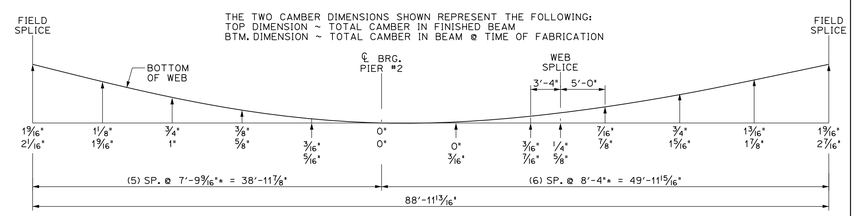
DRAFTER JJH
DATE NOV. 2014
CHECKED DLM
DATE NOV. 2014

GIRDER "G1-D"
WATERBURY, VT. BRIDGE 46A
I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK
SC: BECK & BELLUCCI

PROJECT NO. 14-148
DWG. NO. 17



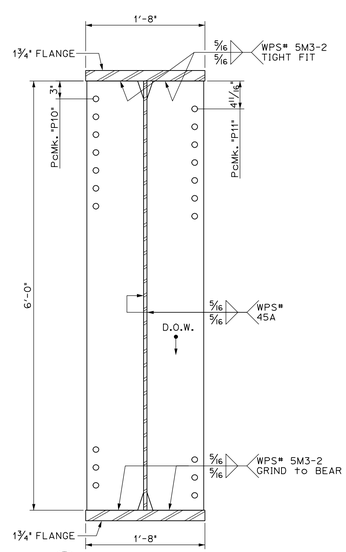
1/18 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G2-D"
SCALE: ⅜" = 1'-0"



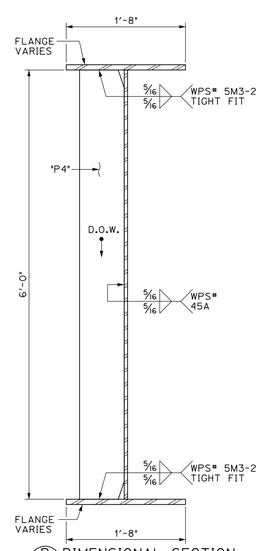
GIRDER "G2-D" CAMBER
N.T.S.

BILL OF MATERIALS

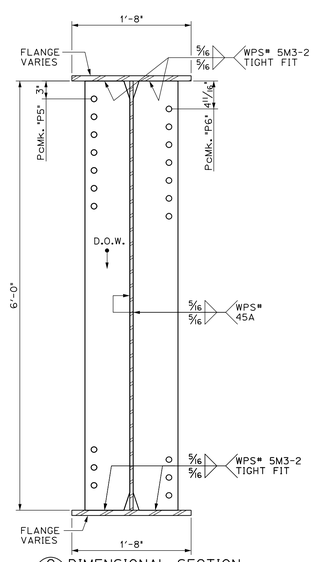
SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G2-D			BRIDGE GIRDER ASSEMBLY	88'-11¹³⁄₁₆"	31,300#	
		1	WP14	℞ ⅜" × 72"	59'-0"	4150#	CVN
		1	WP15	℞ ⅜" × 72"	29'-11¹⁵⁄₁₆"	8150#	CVN
		1	TF17	℞ 1⅛" × 20"	22'-1"	1725#	CVN
		1	TF18	℞ 1¾" × 20"	45'-0"	5400#	CVN
		1	TF19	℞ 1⅛" × 20"	21'-10¼"	1725#	CVN
		1	BF17	℞ 1⅛" × 20"	22'-0"	1725#	CVN
		1	BF18	℞ 1¾" × 20"	45'-0"	5400#	CVN
		1	BF19	℞ 1⅛" × 20"	21'-11⅞"	1725#	CVN
		4	P4	SEE SHEET M2			
		3	P5	SEE SHEET M2			
		3	P6	SEE SHEET M2			
		1	P10	SEE SHEET M2			
		1	P11	SEE SHEET M2			



A/18 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/18 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/18 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

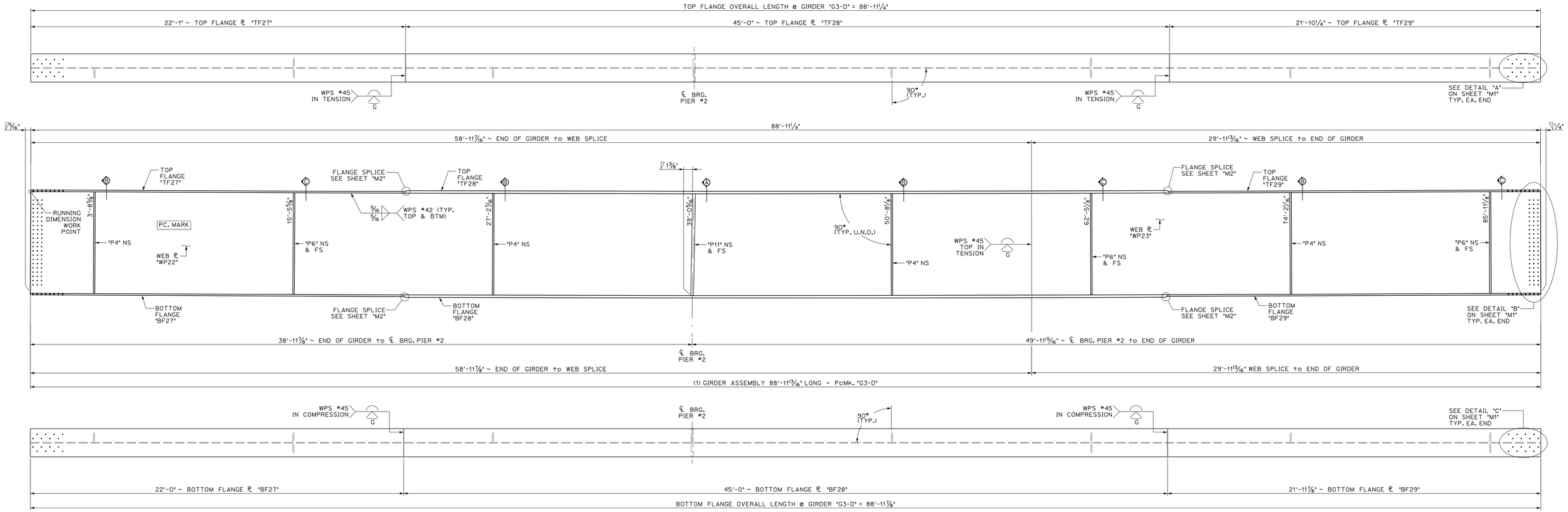
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6				
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W				
HOLES	15/16 " Ø U.N.O.				
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP	SSPC SP6				
		NO	DATE	DESCRIPTION	BY

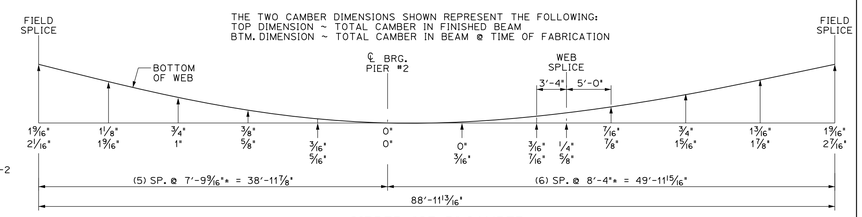
REVISIONS

ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER JJH	GIRDER "G2-D"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM	SC: BECK & BELLUCCI		DWG. NO. 18
DATE NOV. 2014			



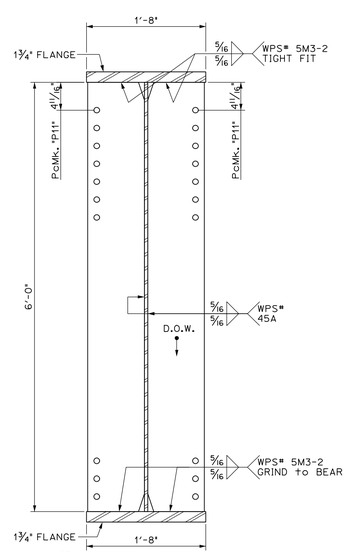
1/19 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G3-D"
SCALE: ⅜" = 1'-0"



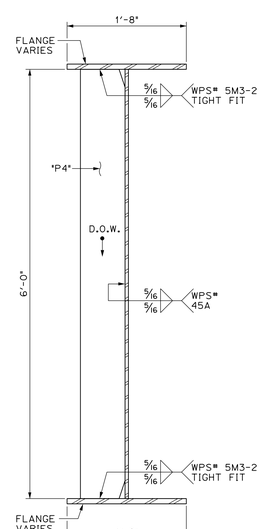
GIRDER "G3-D" CAMBER
N.T.S.

BILL OF MATERIALS

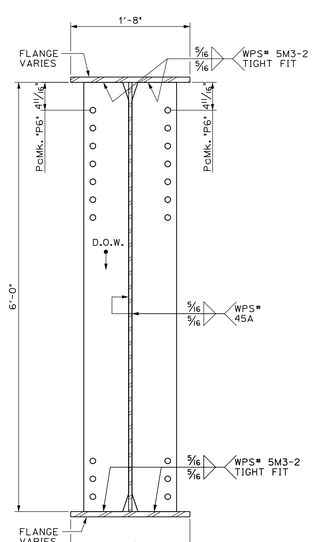
SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G3-D			BRIDGE GIRDER ASSEMBLY	88'-11 13/16"	31,300#	
		1	WP22	℞ 9/16" × 72"	59'-0"	4150#	CVN
		1	WP23	℞ 9/16" × 72"	29'-11 15/16"	8150#	CVN
		1	TF27	℞ 1⅛" × 20"	22'-1"	1725#	CVN
		1	TF28	℞ 1¾" × 20"	45'-0"	5400#	CVN
		1	TF29	℞ 1⅛" × 20"	21'-10¼"	1725#	CVN
		1	BF27	℞ 1⅛" × 20"	22'-0"	1725#	CVN
		1	BF28	℞ 1¾" × 20"	45'-0"	5400#	CVN
		1	BF29	℞ 1⅛" × 20"	21'-11⅞"	1725#	CVN
		4	P4	SEE SHEET M2			
		6	P6	SEE SHEET M2			
		2	P11	SEE SHEET M2			



A/19 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/19 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/19 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

PROJECT No. IM 089-2(43)
ITEM No. 506.55

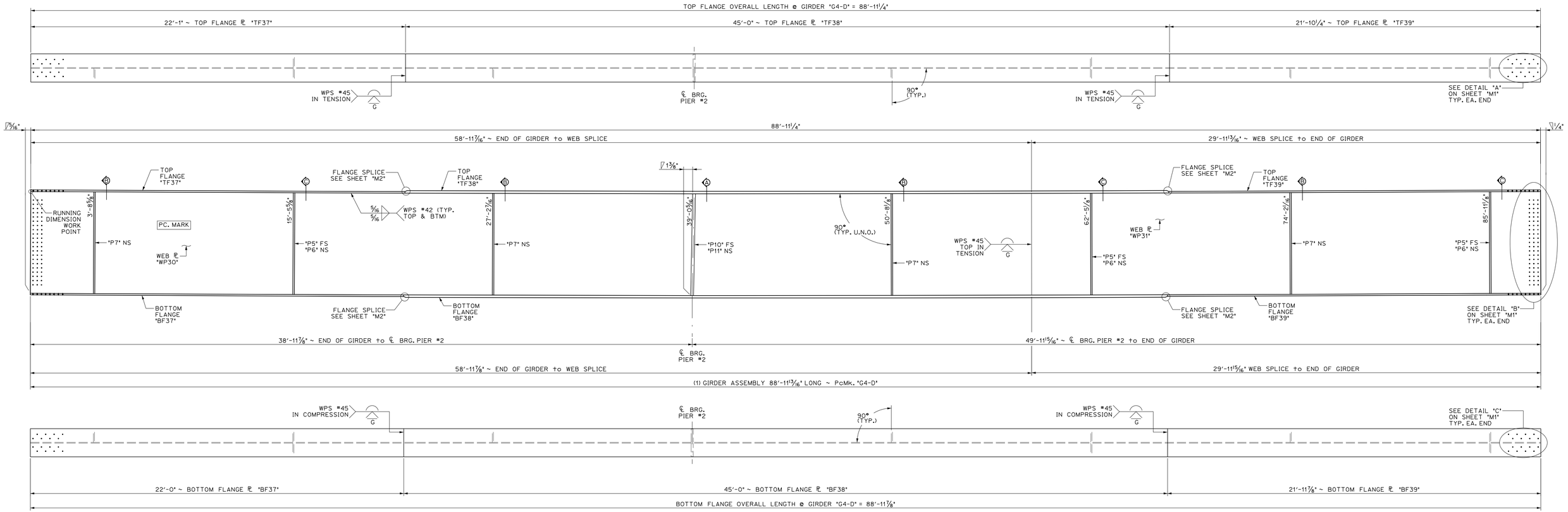
FINISH	SSPC SP6				
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W				
HOLES	15/16 " Ø U.N.O.				
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP	SSPC SP6				
		NO	DATE	DESCRIPTION	BY

REVISIONS

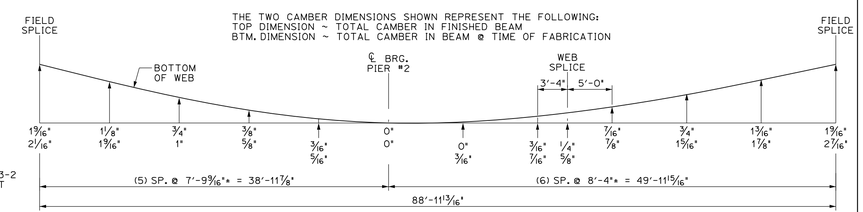
ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER JJH	GIRDER "G3-D"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM	SC: BECK & BELLUCCI		DWG. NO. 19
DATE NOV. 2014			



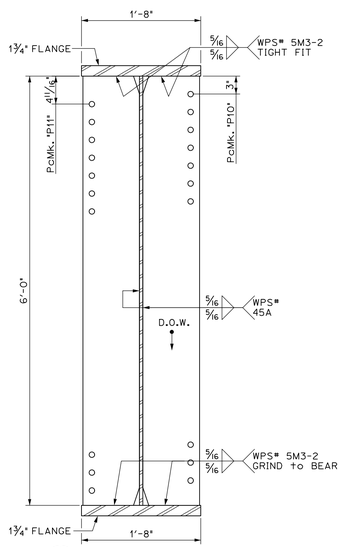
1/20 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G4-D"
SCALE: 3/8" = 1'-0"



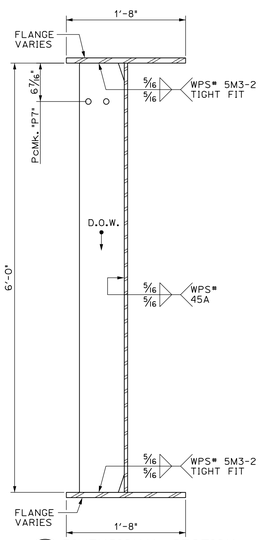
GIRDER "G4-D" CAMBER
N.T.S.

BILL OF MATERIALS

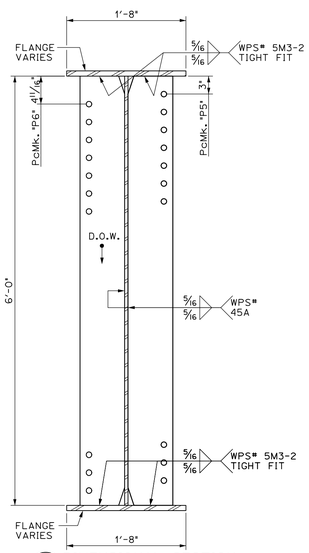
SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G4-D			BRIDGE GIRDER ASSEMBLY	88'-11 13/16"	31,300#	
		1	WP30	℞ 9/16" × 72"	59'-0"	4150#	CVN
		1	WP31	℞ 9/16" × 72"	29'-11 15/16"	8150#	CVN
		1	TF37	℞ 1 1/8" × 20"	22'-1"	1725#	CVN
		1	TF38	℞ 1 3/4" × 20"	45'-0"	5400#	CVN
		1	TF39	℞ 1 1/8" × 20"	21'-10¼"	1725#	CVN
		1	BF37	℞ 1 1/8" × 20"	22'-0"	1725#	CVN
		1	BF38	℞ 1 3/4" × 20"	45'-0"	5400#	CVN
		1	BF39	℞ 1 1/8" × 20"	21'-11 7/8"	1725#	CVN
		3	P5	SEE SHEET M2			
		3	P6	SEE SHEET M2			
		4	P7	SEE SHEET M2			
		1	P10	SEE SHEET M2			
		1	P11	SEE SHEET M2			



A/20 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/20 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/20 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

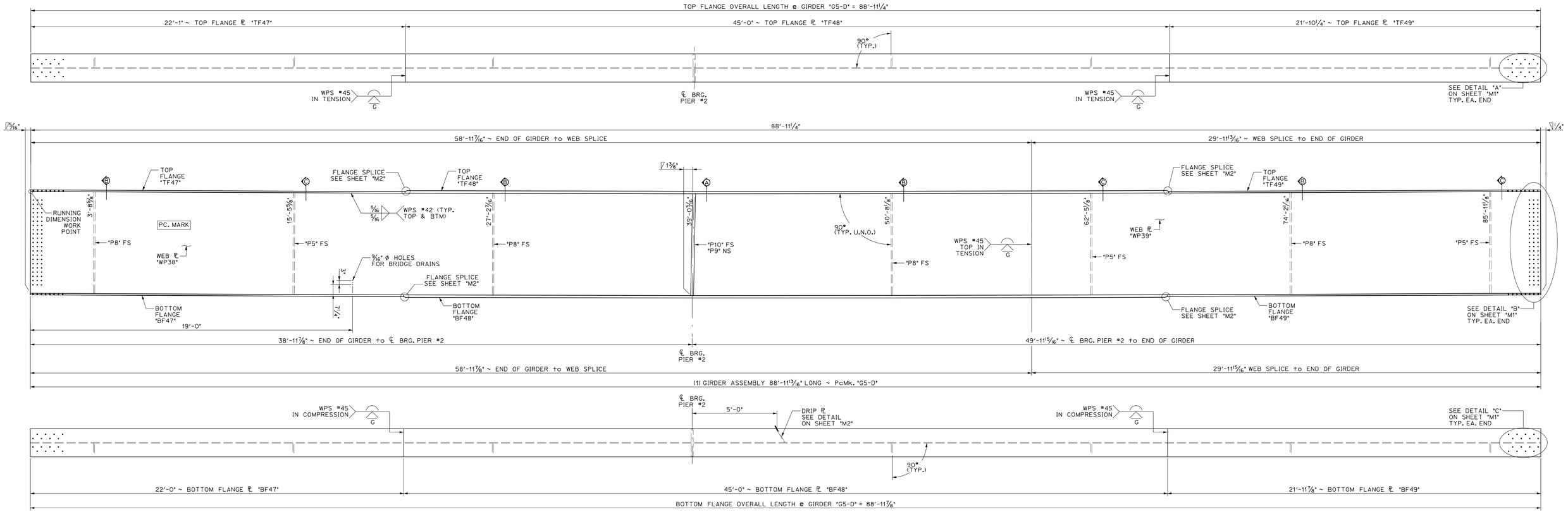
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6				
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W				
HOLES	15/16 " Ø U.N.O.				
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP	SSPC SP6				
		NO	DATE	DESCRIPTION	BY

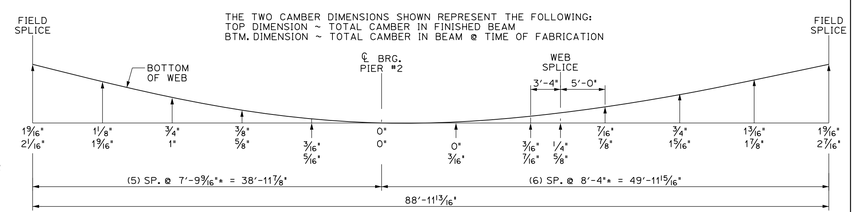
REVISIONS

ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

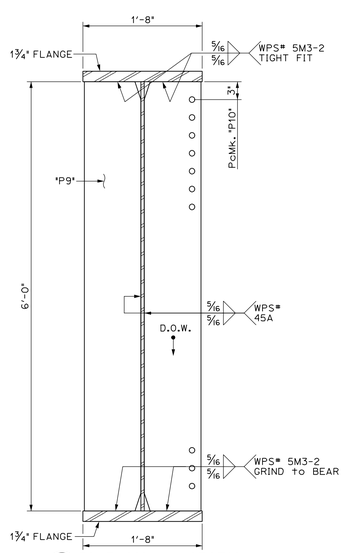
DRAFTER JJH	GIRDER "G4-D"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM	SC: BECK & BELLUCCI		DWG. NO. 20
DATE NOV. 2014			



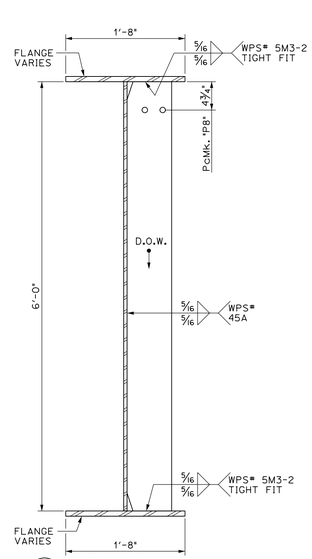
1/21 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G5-D"
SCALE: 3/8" = 1'-0"



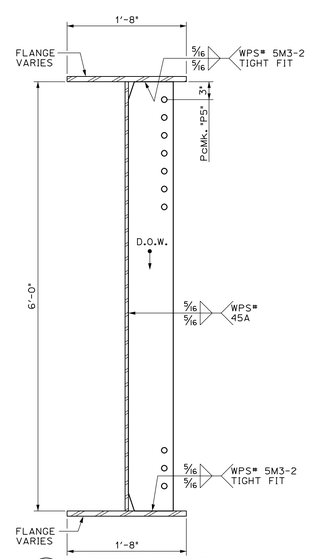
GIRDER "G5-D" CAMBER
N.T.S.



A/21 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/21 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/21 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G5-D			BRIDGE GIRDER ASSEMBLY	88'-11 13/16"	31,100#	
		1	WP38	℞ 9/16" x 72"	59'-0"	4150#	CVN
		1	WP39	℞ 9/16" x 72"	29'-11 15/16"	8150#	CVN
		1	TF47	℞ 1 1/8" x 20"	22'-1"	1725#	CVN
		1	TF48	℞ 1¾" x 20"	45'-0"	5400#	CVN
		1	TF49	℞ 1 1/8" x 20"	21'-10¼"	1725#	CVN
		1	BF47	℞ 1 1/8" x 20"	22'-0"	1725#	CVN
		1	BF48	℞ 1¾" x 20"	45'-0"	5400#	CVN
		1	BF49	℞ 1 1/8" x 20"	21'-11 7/8"	1725#	CVN
		3	P5	SEE SHEET M2			
		4	P8	SEE SHEET M2			
		1	P9	SEE SHEET M2			
		1	P10	SEE SHEET M2			

PROJECT No. IM 089-2(43)
ITEM No. 506.55

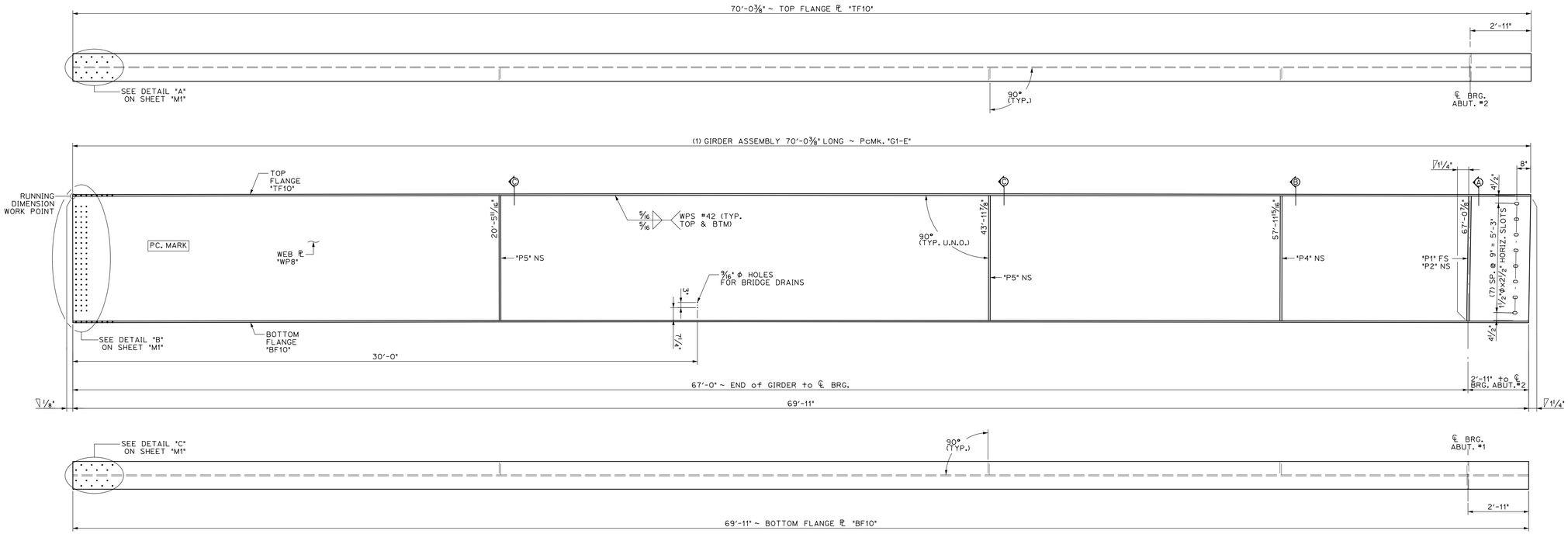
FINISH	SSPC SP6
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W
HOLES	15/16 " Ø U.N.O.
ELECTRODES	PER WELD PROCEDURE
WELDS	PER WELD PROCEDURE
SURFACE PREP	SSPC SP6

NO	DATE	DESCRIPTION	BY

REVISIONS

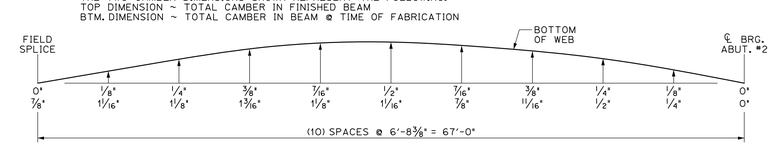
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER JJH	GIRDER "G5-D"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM	SC: BECK & BELLUCCI		DWG. NO. 21
DATE NOV. 2014			

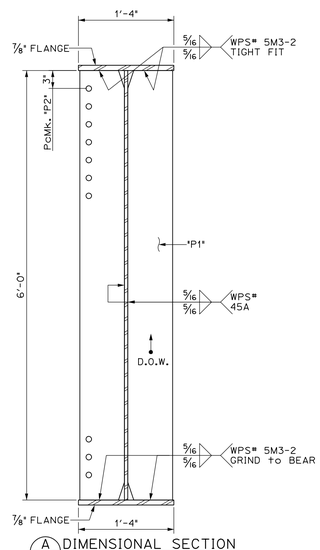


1/22 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G1-E"
SCALE: 3/8" = 1'-0"

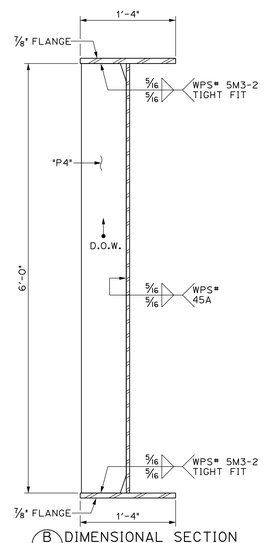
THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION ~ TOTAL CAMBER IN FINISHED BEAM
BTM. DIMENSION ~ TOTAL CAMBER IN BEAM @ TIME OF FABRICATION



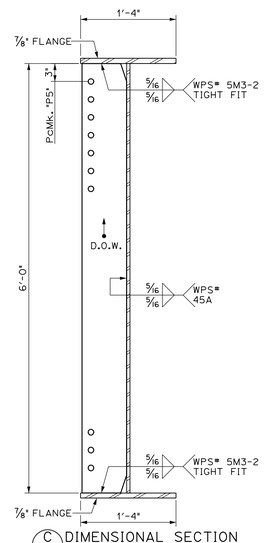
GIRDER "G1-E" CAMBER
N.T.S.



A/22 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/22 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/22 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G1-E			BRIDGE GIRDER ASSEMBLY	70'-0 3/8"	16,950#	
		1	WP8	ℙ 9/16" × 72"	70'-0 3/8"	9700#	CVN
		1	TF10	ℙ 7/8" × 16"	70'-0 1/4"	3350#	CVN
		1	BF10	ℙ 7/8" × 16"	69'-11"	3350#	CVN
		1	P1	SEE SHEET M2			
		1	P2	SEE SHEET M2			
		1	P4	SEE SHEET M2			
		2	P5	SEE SHEET M2			

PROJECT No. IM 089-2(43)
ITEM No. 506.55

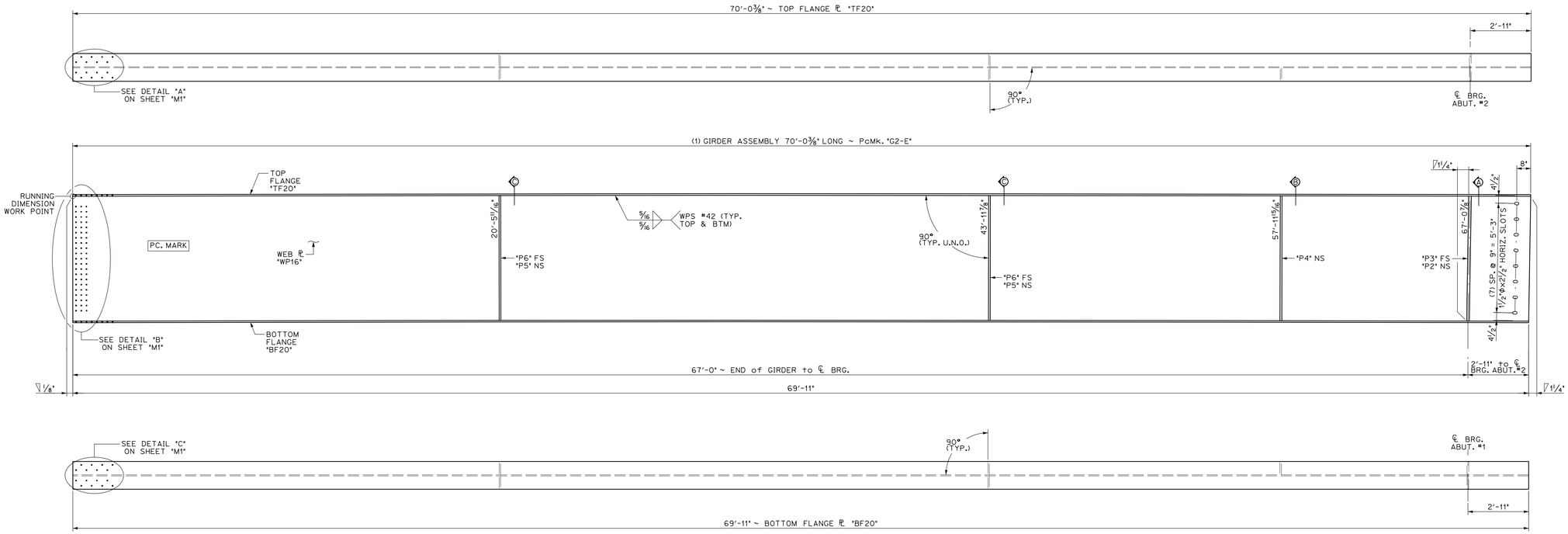
FINISH	SSPC SP6
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W
HOLES	15/16" Ø U.N.O.
ELECTRODES	PER WELD PROCEDURE
WELDS	PER WELD PROCEDURE
SURFACE PREP	SSPC SP6

NO	DATE	DESCRIPTION	BY

REVISIONS

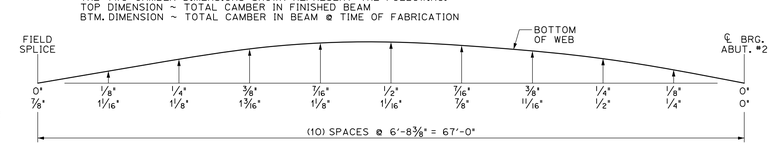
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER	JJH	GIRDER "G1-E"	PROJECT NO. 14-148
DATE	NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK	
CHECKED	DLM		DWG. NO.
DATE	NOV. 2014	BECK & BELLUCCI	22

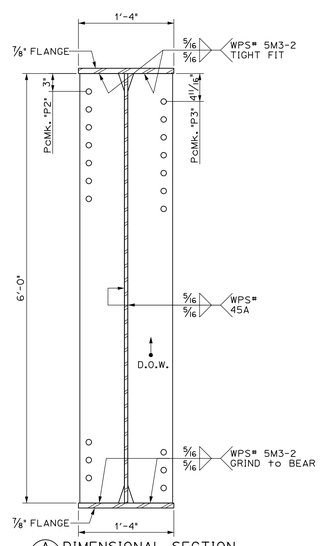


1/23 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G2-E"
SCALE: 3/8" = 1'-0"

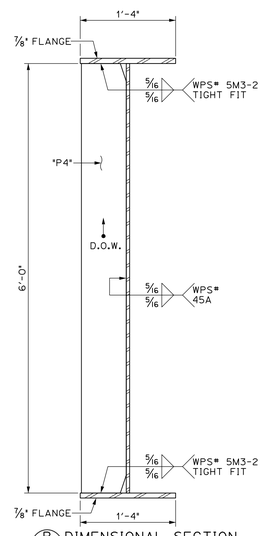
THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION ~ TOTAL CAMBER IN FINISHED BEAM
BTM. DIMENSION ~ TOTAL CAMBER IN BEAM @ TIME OF FABRICATION



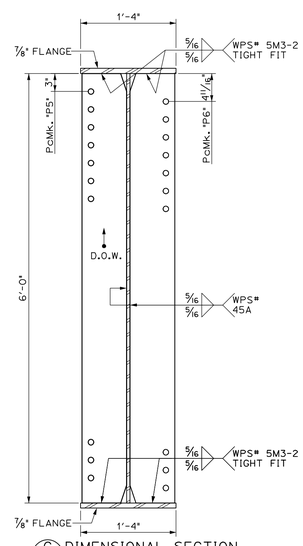
GIRDER "G2-E" CAMBER
N.T.S.



1/23 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



1/23 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



1/23 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G2-E			BRIDGE GIRDER ASSEMBLY	70'-0 3/8"	17,100#	
		1	WP16	ℙ 9/16" × 72"	70'-0 3/8"	9700#	CVN
		1	TF20	ℙ 7/8" × 16"	70'-0 3/8"	3350#	CVN
		1	BF20	ℙ 7/8" × 16"	69'-11"	3350#	CVN
		1	P2	SEE SHEET M2			
		1	P3	SEE SHEET M2			
		1	P4	SEE SHEET M2			
		2	P5	SEE SHEET M2			
		2	P6	SEE SHEET M2			

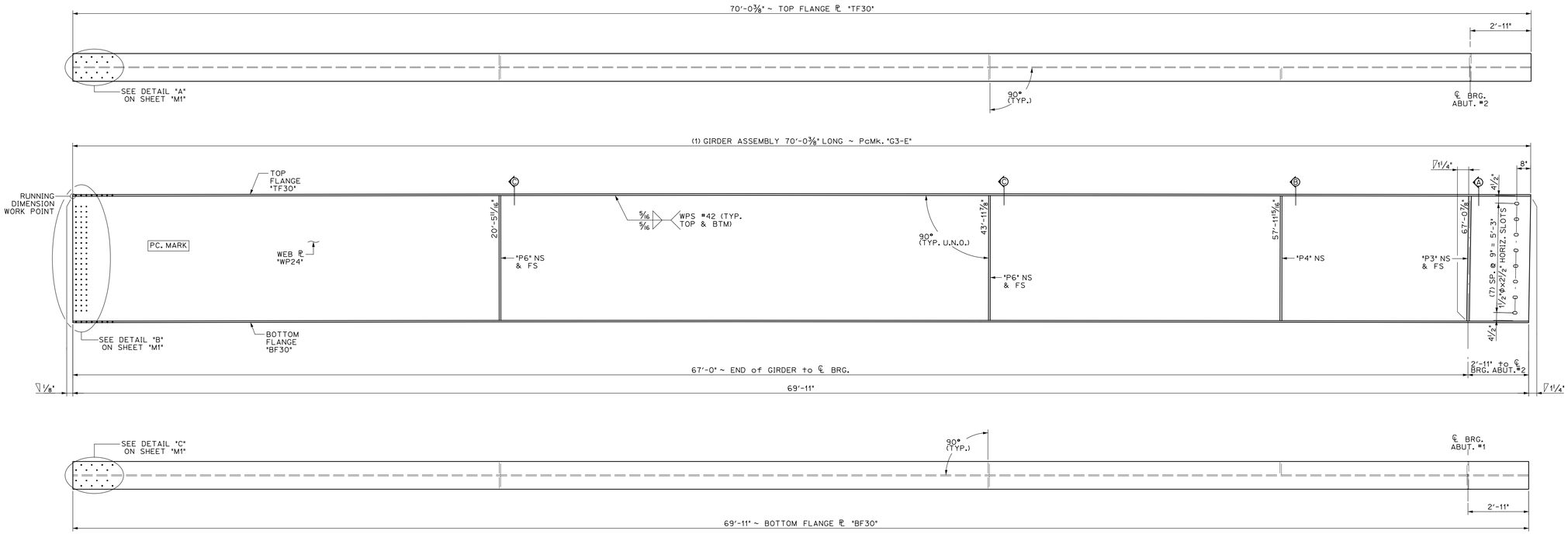
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16" Ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6			
		NO	DATE	DESCRIPTION	BY

REVISIONS

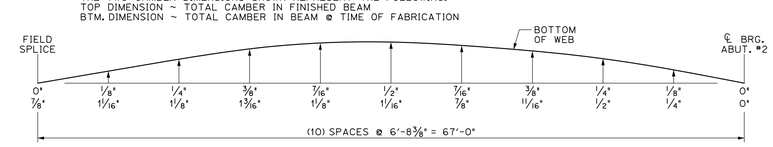
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER	JJH	GIRDER "G2-E"	PROJECT NO. 14-148
DATE	NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK	
CHECKED	DLM		DWG. NO.
DATE	NOV. 2014	BECK & BELLUCCI	23

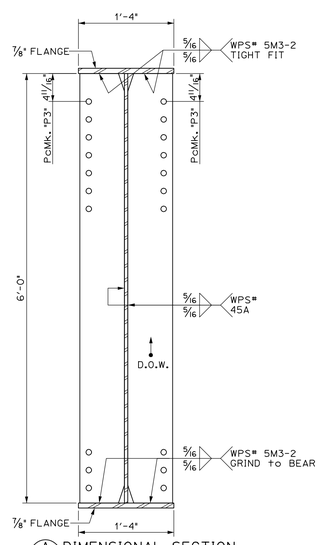


1/24 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G3-E"
SCALE: 3/8" = 1'-0"

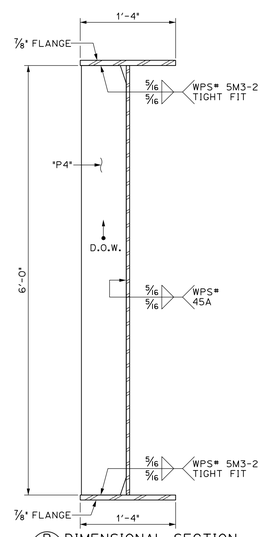
THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION ~ TOTAL CAMBER IN FINISHED BEAM
BTM. DIMENSION ~ TOTAL CAMBER IN BEAM @ TIME OF FABRICATION



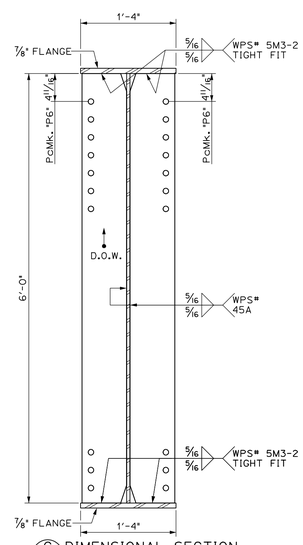
GIRDER "G3-E" CAMBER
N.T.S.



1/24 A DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



1/24 B DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



1/24 C DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G3-E			BRIDGE GIRDER ASSEMBLY	70'-0 3/8"	17,100#	
		1	WP24	℄ 9/16" × 72"	70'-0 3/8"	9700#	CVN
		1	TF30	℄ 7/8" × 16"	70'-0 3/8"	3350#	CVN
		1	BF30	℄ 7/8" × 16"	69'-11"	3350#	CVN
		2	P3	SEE SHEET M2			
		1	P4	SEE SHEET M2			
		4	P6	SEE SHEET M2			

PROJECT No. IM 089-2(43)
ITEM No. 506.55

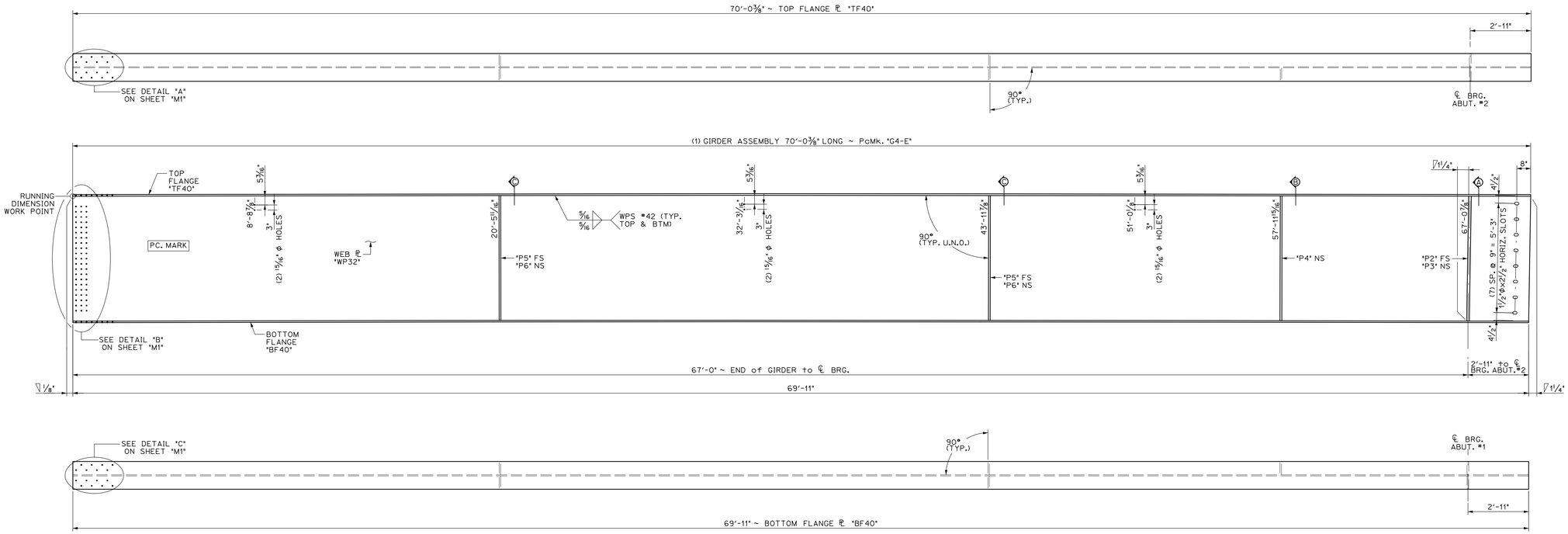
FINISH	SSPC SP6
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W
HOLES	15/16" Ø U.N.O.
ELECTRODES	PER WELD PROCEDURE
WELDS	PER WELD PROCEDURE
SURFACE PREP	SSPC SP6

NO	DATE	DESCRIPTION	BY

REVISIONS

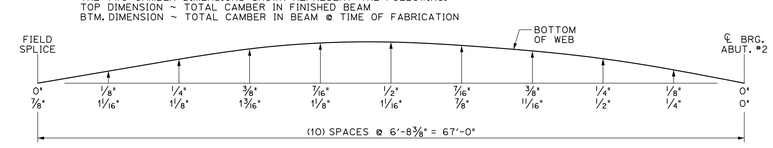
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER	JJH	GIRDER "G3-E"	PROJECT NO. 14-148
DATE	NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK	
CHECKED	DLM		DWG. NO.
DATE	NOV. 2014	BECK & BELLUCCI	24



1/25 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G4-E"
SCALE: 3/8" = 1'-0"

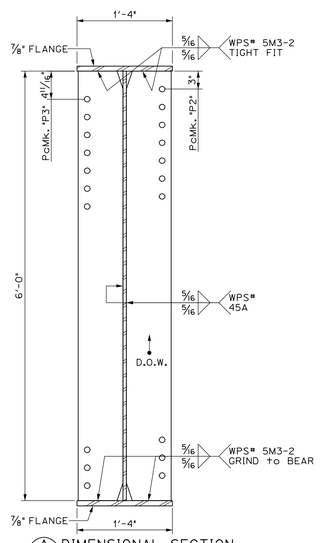
THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION ~ TOTAL CAMBER IN FINISHED BEAM
BTM. DIMENSION ~ TOTAL CAMBER IN BEAM @ TIME OF FABRICATION



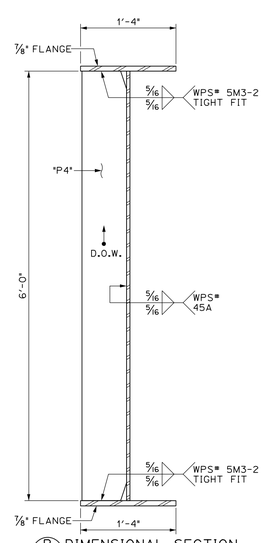
GIRDER "G4-E" CAMBER
N.T.S.

BILL OF MATERIALS

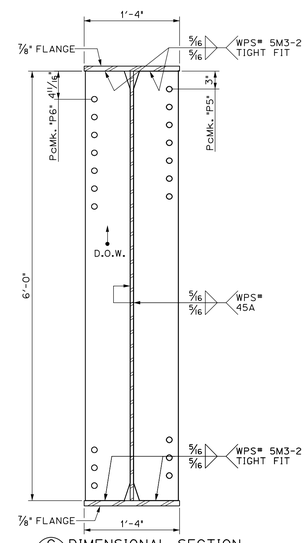
SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G4-E			BRIDGE GIRDER ASSEMBLY	70'-0 3/8"	17,100#	
		1	WP32	℄ 9/16" × 72"	70'-0 3/8"	9700#	CVN
		1	TF40	℄ 7/8" × 16"	70'-0 3/8"	3350#	CVN
		1	BF40	℄ 7/8" × 16"	69'-11"	3350#	CVN
		1	P2	SEE SHEET M2			
		1	P3	SEE SHEET M2			
		1	P4	SEE SHEET M2			
		2	P5	SEE SHEET M2			
		2	P6	SEE SHEET M2			



A/25 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/25 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/25 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

PROJECT No. IM 089-2(43)
ITEM No. 506.55

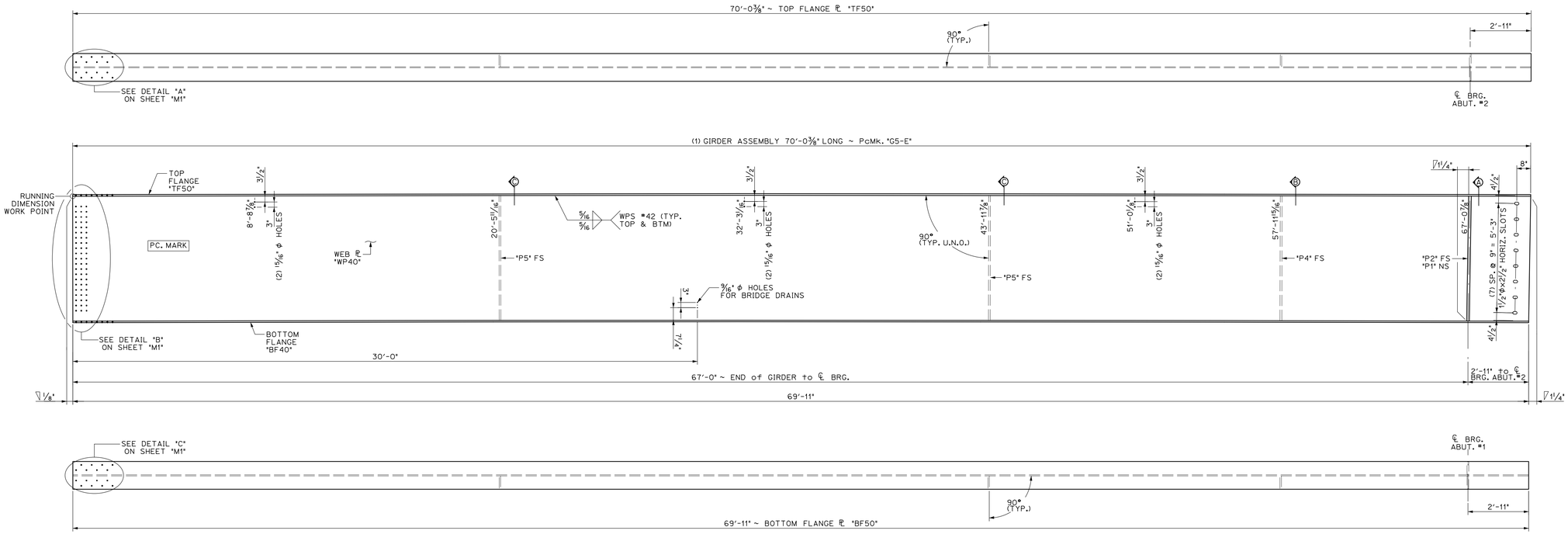
FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16" Ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6			
		NO	DATE	DESCRIPTION	BY

REVISIONS

ARC ENTERPRISES, INC.

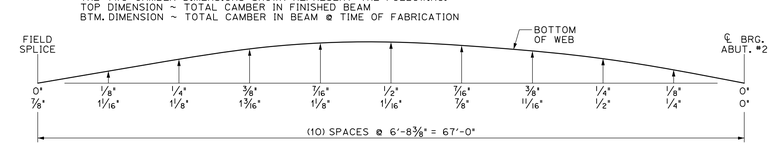
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER	JJH	GIRDER "G4-E"	PROJECT NO. 14-148
DATE	NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK	
CHECKED	DLM		DWG. NO.
DATE	NOV. 2014	BECK & BELLUCCI	25



1/26 DIMENSIONAL PLANS & ELEVATIONS ~ GIRDER "G5-E"
SCALE: 3/8" = 1'-0"

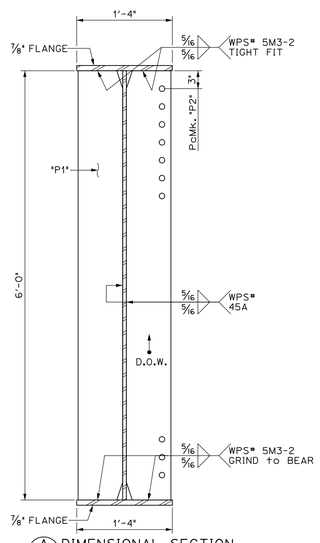
THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION ~ TOTAL CAMBER IN FINISHED BEAM
BTM. DIMENSION ~ TOTAL CAMBER IN BEAM @ TIME OF FABRICATION



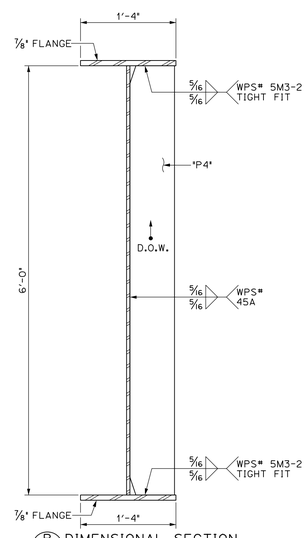
GIRDER "G5-E" CAMBER
N.T.S.

BILL OF MATERIALS

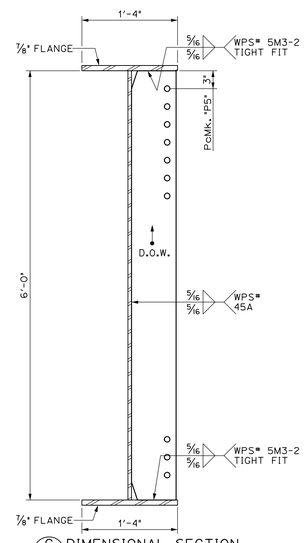
SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G5-E			BRIDGE GIRDER ASSEMBLY	70'-0 3/8"	16,950#	
		1	WP40	℄ 9/16" × 72"	70'-0 3/8"	9700#	CVN
		1	TF50	℄ 7/8" × 16"	70'-0 3/8"	3350#	CVN
		1	BF50	℄ 7/8" × 16"	69'-11"	3350#	CVN
		1	P1	SEE SHEET M2			
		1	P2	SEE SHEET M2			
		1	P4	SEE SHEET M2			
		2	P5	SEE SHEET M2			



A/26 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



B/26 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"



C/26 DIMENSIONAL SECTION
SCALE: 1" = 1'-0"

PROJECT No. IM 089-2(43)
ITEM No. 506.55

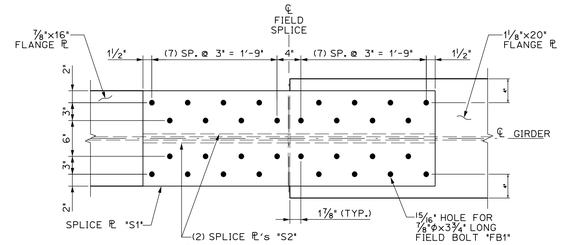
FINISH	SSPC SP6				
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W				
HOLES	15/16" Ø U.N.O.				
ELECTRODES	PER WELD PROCEDURE				
WELDS	PER WELD PROCEDURE				
SURFACE PREP	SSPC SP6				
		NO	DATE	DESCRIPTION	BY

REVISIONS

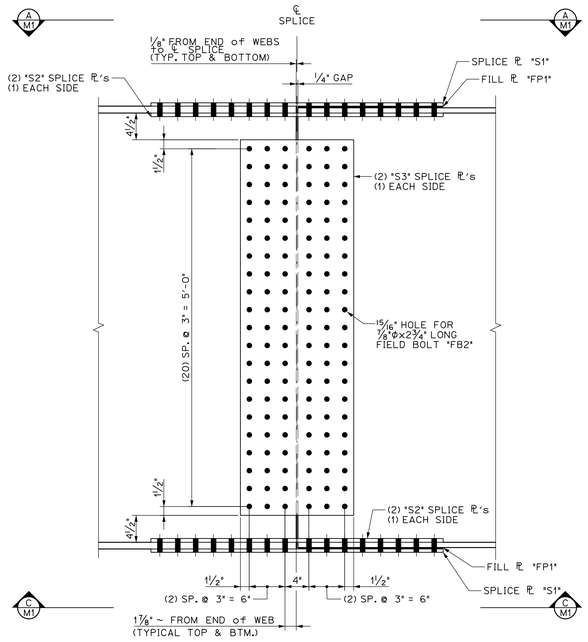
ARC ENTERPRISES, INC.

ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

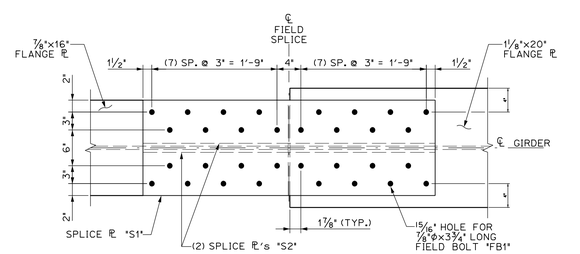
DRAFTER JJH	GIRDER "G5-E"		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM			DWG. NO.
DATE NOV. 2014	BECK & BELLUCCI		26



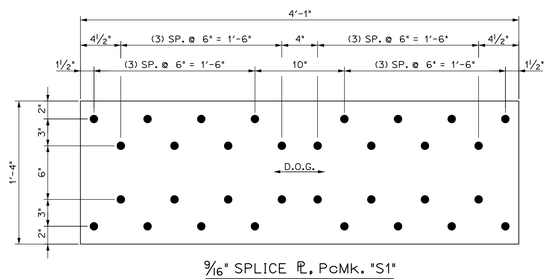
A/M1 TOP FLANGE FIELD SPLICE
SCALE: 1" = 1'-0"



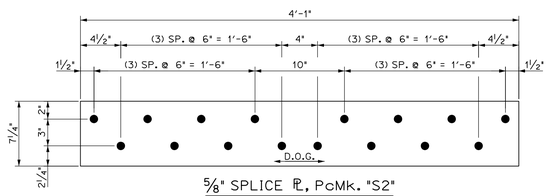
B/M1 WEB FIELD SPLICE
SCALE: 1" = 1'-0"
FIELD SPLICES 2&4 SHOWN
FIELD SPLICES 1&3 OPPOSITE HAND



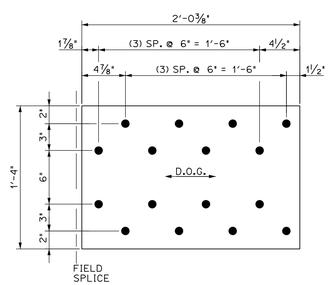
C/M1 BOTTOM FLANGE FIELD SPLICE
SCALE: 1" = 1'-0"



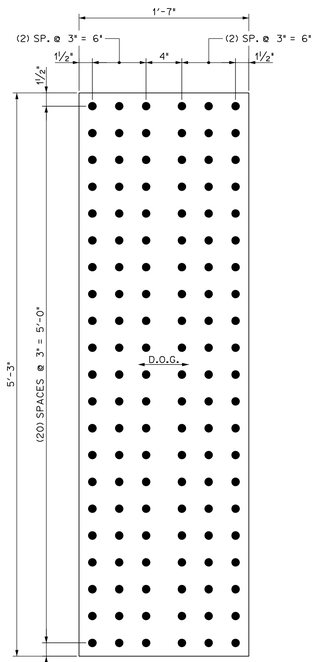
9/16" SPLICE ℙ, PcMk. "S1"
SCALE: 1 1/2" = 1'-0"



5/8" SPLICE ℙ, PcMk. "S2"
SCALE: 1 1/2" = 1'-0"



1/4" FILL ℙ, PcMk. "FP1"
SCALE: 1 1/2" = 1'-0"



7/16" SPLICE ℙ, PcMk. "S3"
SCALE: 1 1/2" = 1'-0"

COMPLETE BOLT SCHEDULE

NO. BOLTS	PIECE MARK	LENGTH	DESCRIPTION	LOCATION
1280	FB1	3 3/4'	7/8"ø BOLT w/N&W (WEATHERING) ASTM A325, TYPE 3	TOP & BTM. FLANGES FIELD SPLICE
2680	FB2	2 3/4"	7/8"ø BOLT w/N&W (WEATHERING) ASTM A325, TYPE 3	-WEB ℙ FIELD SPLICE -ABUTMENT DIAPHRAGMS
1200	FB3	2 1/2"	7/8"ø BOLT w/N&W (WEATHERING) ASTM A325, TYPE 3	INTERMEDIATE DIAPHRAGMS
160	FB4	3 1/4"	7/8"ø BOLT w/N&W (WEATHERING) ASTM A325, TYPE 3	PIER DIAPHRAGMS
72	FB5	2 1/4"	7/8"ø BOLT w/N&W (WEATHERING) ASTM A325, TYPE 3	"U1" & "U2" TYPE UTILITY SUPPORTS

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
40	S1			ℙ 9/16" x 16"	4'-1"	125# EACH	CVN
80	S2			ℙ 5/8" x 7 1/4"	4'-1"	65# EACH	CVN
40	S3			ℙ 7/16" x 19"	5'-3"	150# EACH	CVN
40	FP1			FILL ℙ 1/4" x 16"	2'-0 3/8"	30# EACH	

PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16 " ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6			

NO	DATE	DESCRIPTION	BY

REVISIONS

ARC ENTERPRISES, INC.
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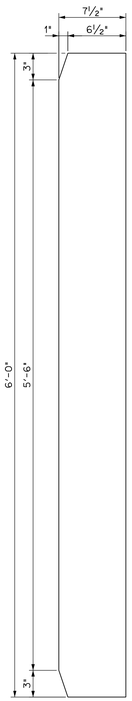
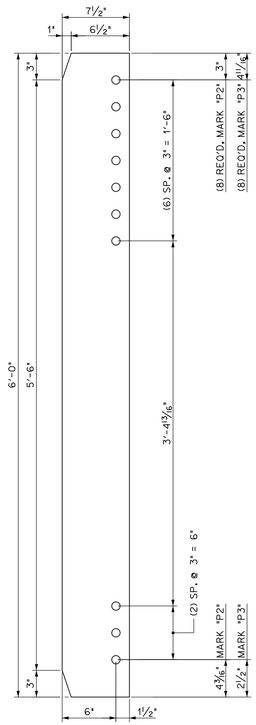
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

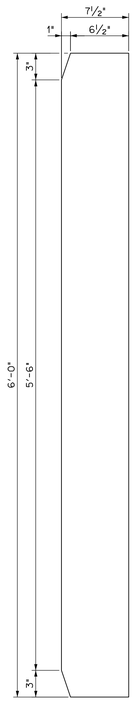
DRAFTER JJH	MISCELLANEOUS DETAILS		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM	BC: BECK & BELLUCCI		DWG. NO. M1
DATE NOV. 2014			



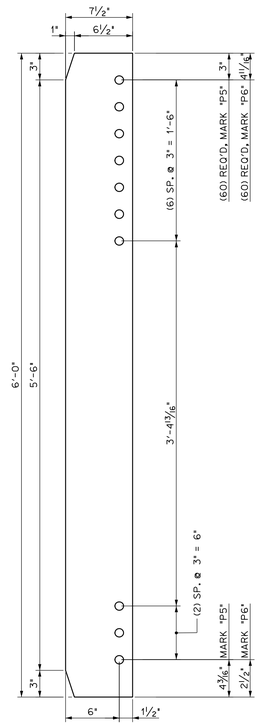
7/8" BEARING ℙ, MARK "P1"
SCALE: 1½" = 1'-0"
FOR USE ON FASCIA GIRDERS @ ABUTMENTS



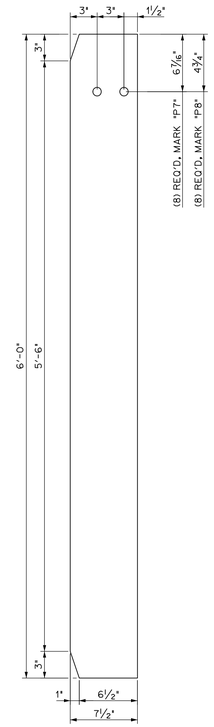
7/8" BEARING ℙ's
SCALE: 1½" = 1'-0"
FOR USE @ ABUTMENTS



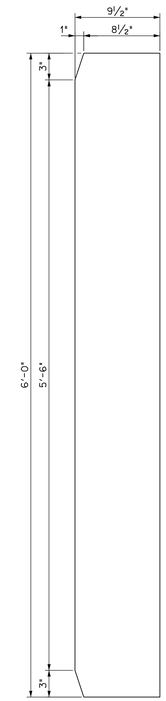
1/2" STIFFENER ℙ, MARK "P4"
SCALE: 1½" = 1'-0"



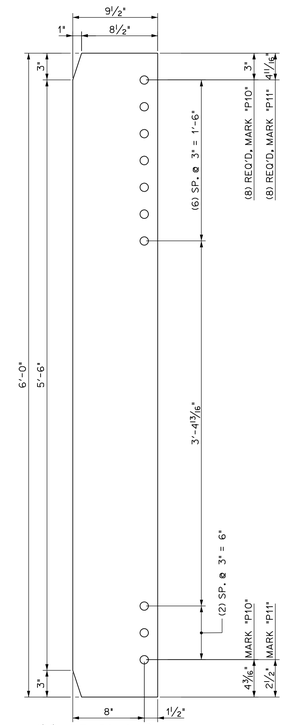
1/2" CONNECTION ℙ's
SCALE: 1½" = 1'-0"



1/2" CONNECTION ℙ's
SCALE: 1½" = 1'-0"
FOR USE AS ITS SUPPORT @ TRANSVERSE STIFFENER LOCATIONS



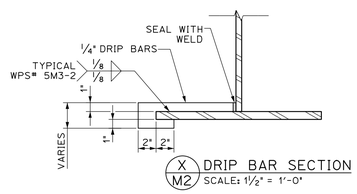
1 1/4" BEARING ℙ, MARK "P9"
SCALE: 1½" = 1'-0"
FOR USE ON FASCIA GIRDERS @ PIERS



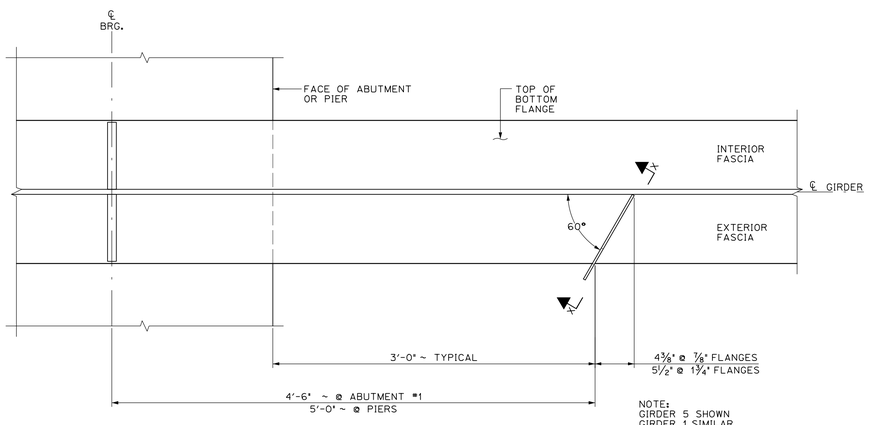
1 1/4" BEARING ℙ's
SCALE: 1½" = 1'-0"
FOR USE @ PIERS

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
4	P1			ℙ 7/8" × 7½"	6'-0"	135# EACH	
8	P2			ℙ 7/8" × 7½"	6'-0"	135# EACH	
8	P3			ℙ 7/8" × 7½"	6'-0"	135# EACH	
34	P4			ℙ ½" × 7½"	6'-0"	80# EACH	
60	P5			ℙ ½" × 7½"	6'-0"	80# EACH	
60	P6			ℙ ½" × 7½"	6'-0"	80# EACH	
8	P7			ℙ ½" × 7½"	6'-0"	80# EACH	
8	P8			ℙ ½" × 7½"	6'-0"	80# EACH	
4	P9			ℙ 1¼" × 9½"	6'-0"	250# EACH	
8	P10			ℙ 1¼" × 9½"	6'-0"	250# EACH	
8	P11			ℙ 1¼" × 9½"	6'-0"	250# EACH	

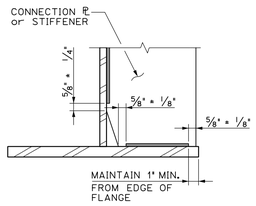


X/M2 DRIP BAR SECTION
SCALE: 1½" = 1'-0"

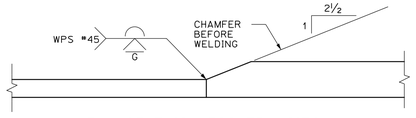


NOTE:
GIRDER 5 SHOWN
GIRDER 1 SIMILAR

DRIP BAR PLAN



TYPICAL CONNECTION ℙ WELD TERMINATION DETAIL
N.T.S.



FLANGE THICKNESS TRANSITON
SCALE: 3" = 1'-0"

PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16 " Ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6			
	NO	DATE	DESCRIPTION	BY

REVISIONS

ARC ENTERPRISES, INC.

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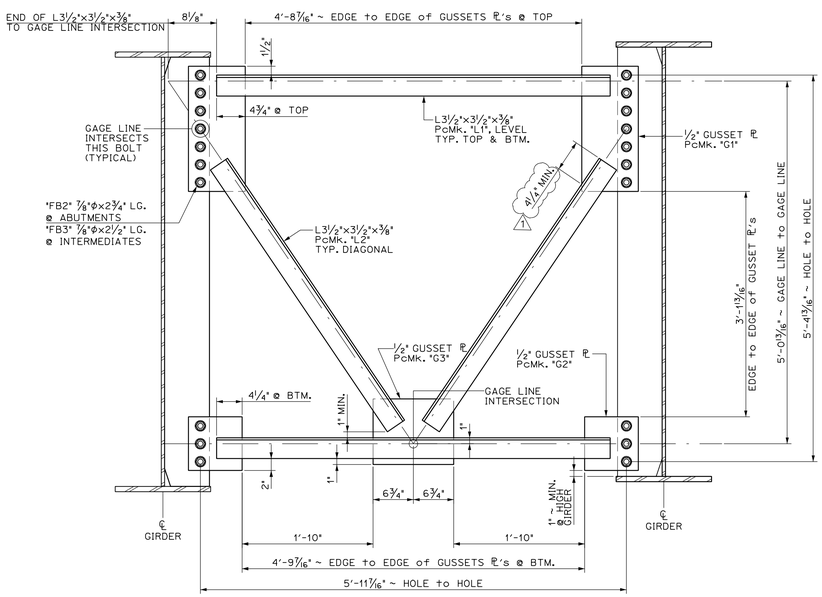
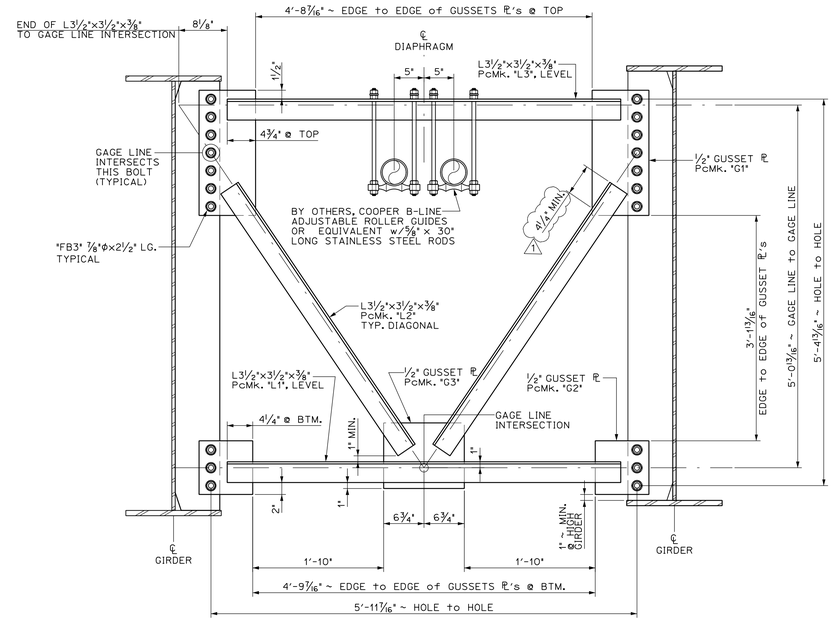
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

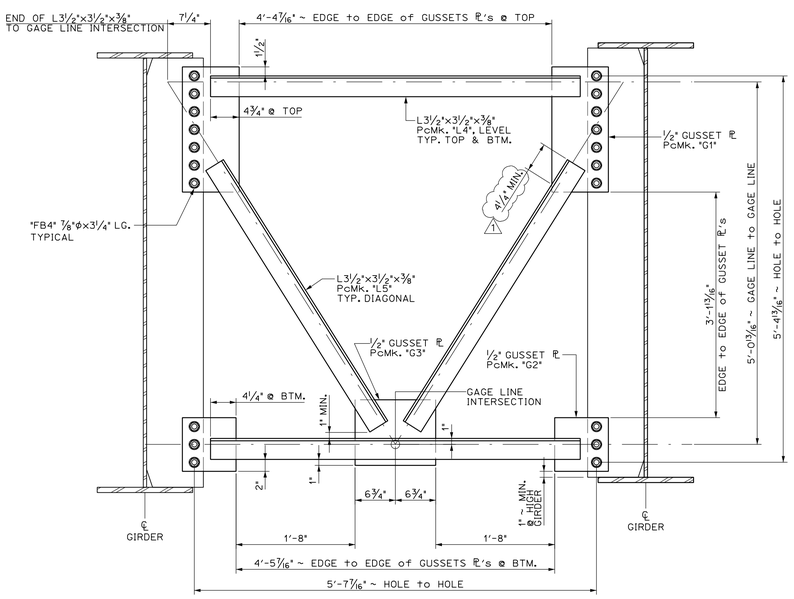
DRAFTER JJH	MISCELLANEOUS DETAILS	PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK	
CHECKED DLM	BC: BECK & BELLUCCI	DWG. NO. M2
DATE NOV. 2014		



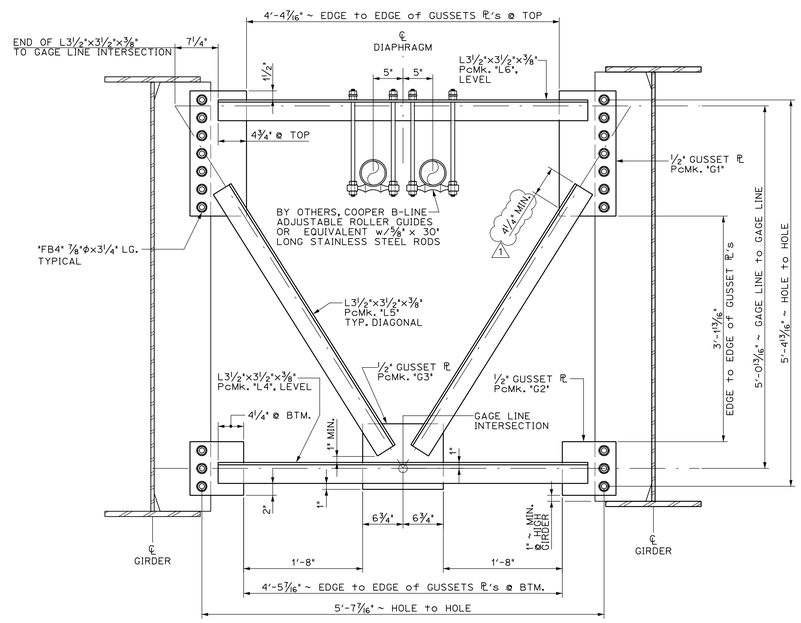
A M3 "D1" TYPE DIAPHRAGMS
SCALE: 1" = 1'-0"
(53) REQ'D TOTAL, (8) @ ABUTMENTS, & (45) INTERMEDIATES



B M3 "D2" TYPE DIAPHRAGMS
SCALE: 1" = 1'-0"
(15) REQ'D TOTAL, @ INTERMEDIATE LOCATIONS



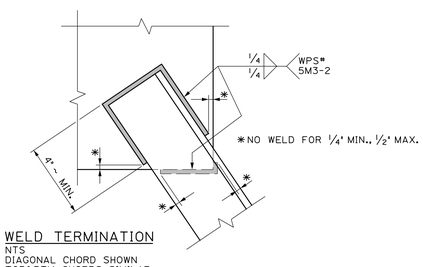
C M3 "D3" TYPE DIAPHRAGMS
SCALE: 1" = 1'-0"
(6) REQ'D TOTAL @ PIERS



D M3 "D4" TYPE DIAPHRAGMS
SCALE: 1" = 1'-0"
(2) REQ'D TOTAL @ PIERS

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
53	D1			INTERM. & ABUT. DIAPHRAGM		295# EACH	
		106	L1	L3½"×3½"×⅜"	5'-6"	50# EACH	
		106	L2	L3½"×3½"×⅜"	4'-5"	40# EACH	
		106	G1	℞ ½"×9½"	1'-9"	30# EACH	
		106	G2	℞ ½"×9"	0'-9"	15# EACH	
		53	G3	℞ ½"×11"	1'-1½"	25# EACH	
15	D2			INTERMEDIATE DIAPHRAGMS		295# EACH	
		15	L1	L3½"×3½"×⅜"	5'-6"	50# EACH	
		30	L2	L3½"×3½"×⅜"	4'-5"	40# EACH	
		15	L3	L3½"×3½"×⅜" w/UTILITY HOLES	5'-6"	50# EACH	
		30	G1	℞ ½"×9½"	1'-9"	30# EACH	
		30	G2	℞ ½"×9"	0'-9"	15# EACH	
		15	G3	℞ ½"×11"	1'-1½"	25# EACH	
6	D3			PIER DIAPHRAGMS		295# EACH	
		12	L4	L3½"×3½"×⅜"	5'-2"	50# EACH	
		12	L5	L3½"×3½"×⅜"	4'-3¾"	40# EACH	
		12	G1	℞ ½"×9½"	1'-9"	30# EACH	
		12	G2	℞ ½"×9"	0'-9"	15# EACH	
		6	G3	℞ ½"×11"	1'-1½"	25# EACH	
2	D4			PIER DIAPHRAGMS		295# EACH	
		2	L4	L3½"×3½"×⅜"	5'-2"	50# EACH	
		4	L5	L3½"×3½"×⅜"	4'-3¾"	40# EACH	
		2	L6	L3½"×3½"×⅜" w/UTILITY HOLES	5'-2"	50# EACH	
		4	G1	℞ ½"×9½"	1'-9"	30# EACH	
		4	G2	℞ ½"×9"	0'-9"	15# EACH	
		2	G3	℞ ½"×11"	1'-1½"	25# EACH	



WELD TERMINATION
NTS
DIAGONAL CHORD SHOWN
TOP&BTM. CHORDS SIMILAR

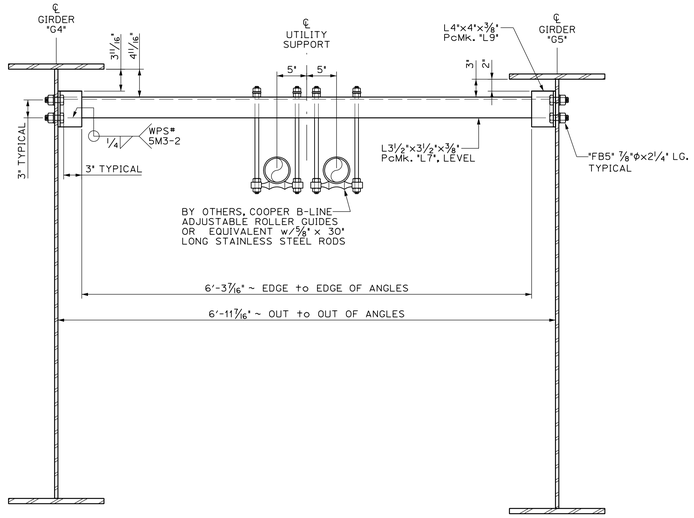
PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH SSPC SP6				
MATERIAL AASHTO M270 (ASTM A709) GRADE 50W				
HOLES 15/16 " Ø U.N.O.				
ELECTRODES PER WELD PROCEDURE				
WELDS PER WELD PROCEDURE				
SURFACE PREP SSPC SP6	1	2/17/15	MINIMUM WELD CALL-OUT	JJH
	NO	DATE	DESCRIPTION	BY

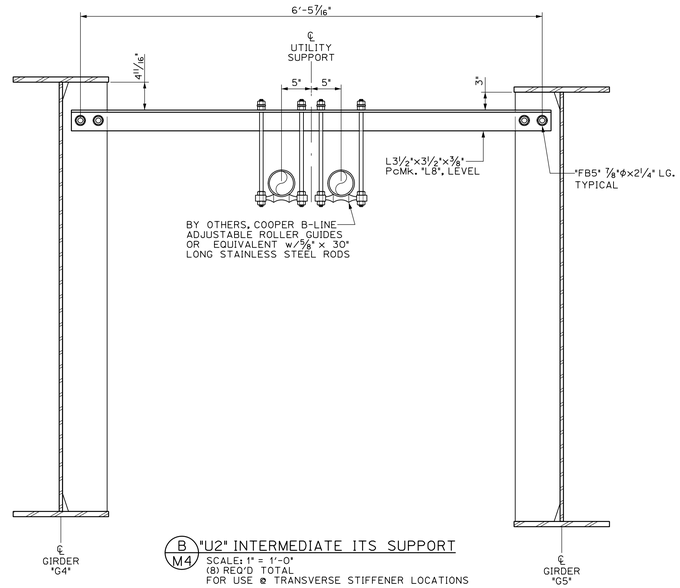
REVISIONS

ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER JJH	DIAPHRAGM DETAILS		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM	SC: BECK & BELLUCCI		DWG. NO. M3
DATE NOV. 2014			



A/M4 "U1" INTERMEDIATE ITS SUPPORT
SCALE: 1" = 1'-0"
(10) REQ'D TOTAL

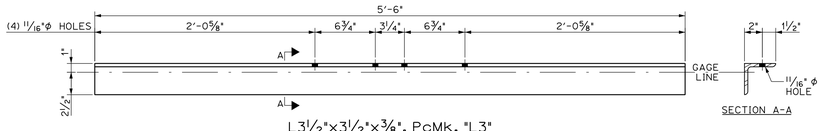


B/M4 "U2" INTERMEDIATE ITS SUPPORT
SCALE: 1" = 1'-0"
(8) REQ'D TOTAL
FOR USE @ TRANSVERSE STIFFENER LOCATIONS

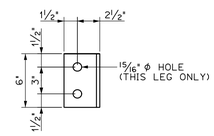
BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
10	U1			INTERMEDIATE ITS SUPPORT		70# EACH	
		10	L7	L3 1/2"x3 1/2"x3/8"	6'-9 1/2"	60# EACH	
		20	L9	L4"x4"x3/8"	0'-6"	5# EACH	
8	U2			INTERMEDIATE ITS SUPPORT		60# EACH	
		8	L8	L3 1/2"x3 1/2"x3/8"	6'-8 7/16"	60# EACH	
121	**L1			L3 1/2"x3 1/2"x3/8"	5'-6"	50# EACH	
136	**L2			L3 1/2"x3 1/2"x3/8"	4'-5"	40# EACH	
15	L3			L3 1/2"x3 1/2"x3/8" w/UTILITY HOLES	5'-6"	50# EACH	
14	**L4			L3 1/2"x3 1/2"x3/8"	5'-2"	50# EACH	
16	**L5			L3 1/2"x3 1/2"x3/8"	4'-3 3/4"	40# EACH	
2	L6			L3 1/2"x3 1/2"x3/8" w/UTILITY HOLES	5'-2"	50# EACH	
10	L7			L3 1/2"x3 1/2"x3/8"	6'-9 1/2"	60# EACH	
8	L8			L3 1/2"x3 1/2"x3/8"	6'-8 7/16"	60# EACH	
20	L9			L4"x4"x3/8"	0'-6"	5# EACH	
152	G1			PL 1/2"x9 1/2"	1'-9"	30# EACH	
152	G2			PL 1/2"x9"	0'-9"	15# EACH	
76	G3			PL 1/2"x11"	1'-1 1/2"	25# EACH	

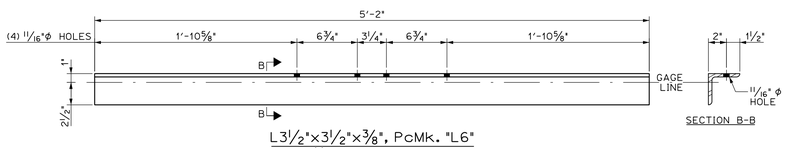
NOTE:
PIECES MARKED WITH A DOUBLE ASTERISK (**) IN THIS BILL OF MATERIAL HAVE BEEN INCLUDED FOR QUANTITY PURPOSES ONLY.
NO INDIVIDUAL PIECE MARK DETAIL HAS BEEN INCLUDED. THE MATERIAL IS JUST TO BE CUT TO THE DIMENSIONS SHOWN.



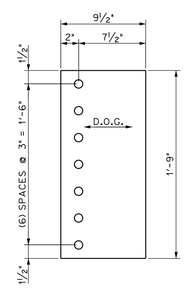
L3 1/2"x3 1/2"x3/8", PcMk. "L3"
SCALE: 1 1/2"=1'-0"
FOR USE ON "D2" TYPE DIAPHRAGMS



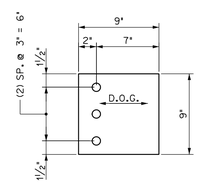
L4"x4"x3/8", PcMk. "L9"
SCALE: 1 1/2"=1'-0"
FOR USE ON "U1" TYPE SUPPORTS



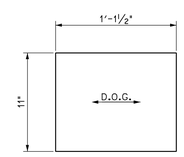
L3 1/2"x3 1/2"x3/8", PcMk. "L6"
SCALE: 1 1/2"=1'-0"
FOR USE ON "D4" TYPE DIAPHRAGMS



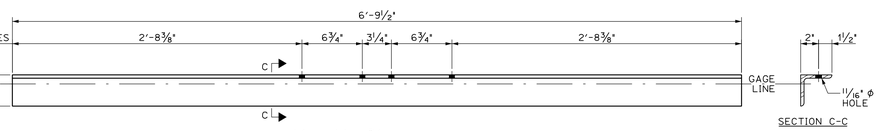
1/2" GUSSET PL, PcMk. "G1"
SCALE: 1 1/2" = 1'-0"



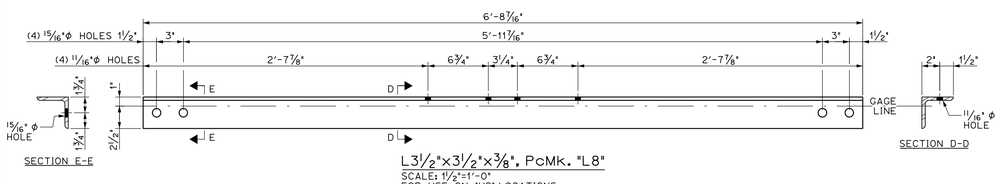
1/2" GUSSET PL, PcMk. "G2"
SCALE: 1 1/2" = 1'-0"



1/2" GUSSET PL, PcMk. "G2"
SCALE: 1 1/2" = 1'-0"



L3 1/2"x3 1/2"x3/8", PcMk. "L7"
SCALE: 1 1/2"=1'-0"
FOR USE ON "U1" TYPE SUPPORTS



L3 1/2"x3 1/2"x3/8", PcMk. "L8"
SCALE: 1 1/2"=1'-0"
FOR USE ON "U2" LOCATIONS

PROJECT No. IM 089-2(43)
ITEM No. 506.55

FINISH	SSPC SP6			
MATERIAL	AASHTO M270 (ASTM A709) GRADE 50W			
HOLES	15/16 " Ø U.N.O.			
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP	SSPC SP6			
		NO	DATE	DESCRIPTION	BY

REVISIONS

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PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER JJH	UTILITIES & MISC. PIECE MARK DETAILS		PROJECT NO. 14-148
DATE NOV. 2014	WATERBURY, VT. BRIDGE 46A I-89 EXIT RAMP over STOWE ST. & THATCHER BROOK		
CHECKED DLM	SC: BECK & BELLUCCI		DWG. NO. M4
DATE NOV. 2014			