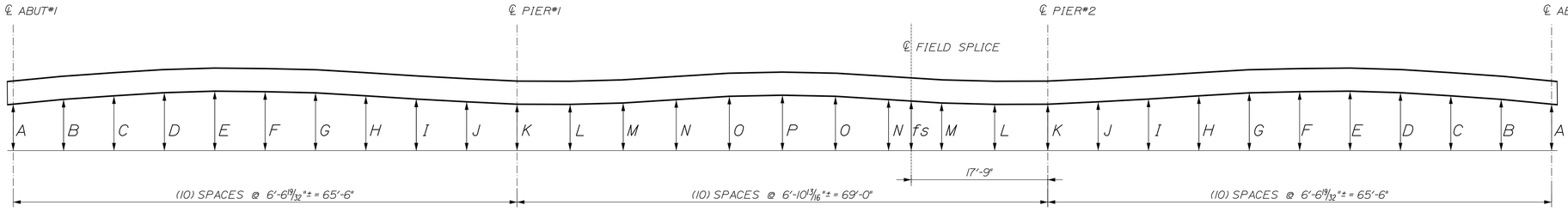
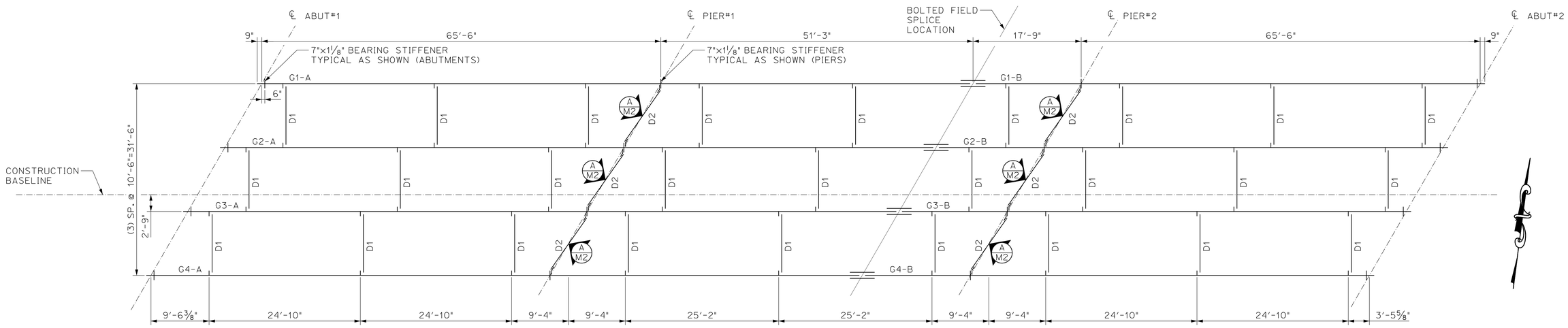


GIRDER LINE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	fs*
G1 & G4	6"	6 5/8"	7 1/16"	7 1/2"	7 11/16"	7 5/8"	7 1/2"	7 1/16"	6 11/16"	6 5/16"	6"	5 15/16"	6 3/16"	6 5/8"	7 1/16"	7 3/16"	5 15/16"
G2 & G3	6"	6 11/16"	7 3/16"	7 5/8"	7 7/8"	7 13/16"	7 5/8"	7 3/16"	6 3/4"	6 5/16"	6"	5 15/16"	6 3/16"	6 5/8"	7 1/16"	7 3/16"	5 15/16"

* BLOCKING DIMENSION IS TAKEN AS A DIMENSION FROM THE REFERENCE LINE IN THE ASSEMBLED BEAM TO THE BOTTOM OF THE BOTTOM FLANGE EXCEPT AT THE FIELD SPLICE LOCATION WHERE THE DIMENSION IS TO THE OUTSIDE OF THE BOTTOM OF THE FIELD SPLICE PLATE

1/1 ROCKINGHAM BLOCKING ELEVATION
SCALE: 1/8" = 1'-0"



2/1 ROCKINGHAM FRAMING PLAN VIEW
SCALE: 1/8" = 1'-0"

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.

2.) ALL EDGES OF FLAME CUT MATERIAL SUBJECTED TO CALCULATED STRESSES SHALL BE ROUNDED TO A MINIMUM RADIUS OF 1/16", OR AN EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE.

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.

4.) FLANGE PLATE MATERIAL, SHALL HAVE AN EDGE HARDNESS HRc 30 AVERAGE AND MAX SINGLE HRc 35

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 SHEET M2

FIELD CONNECTIONS

1.) FIELD BOLTS SHALL HAVE A HEAVY HEX NUT, HEX HEAD, AND ONE HARD 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.

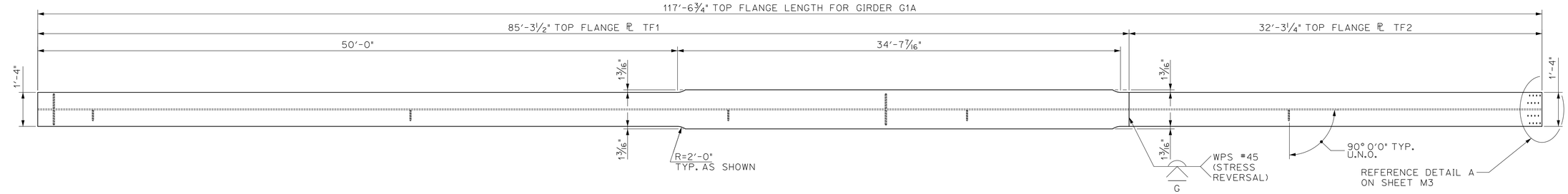
CLEANING AND PAINTING

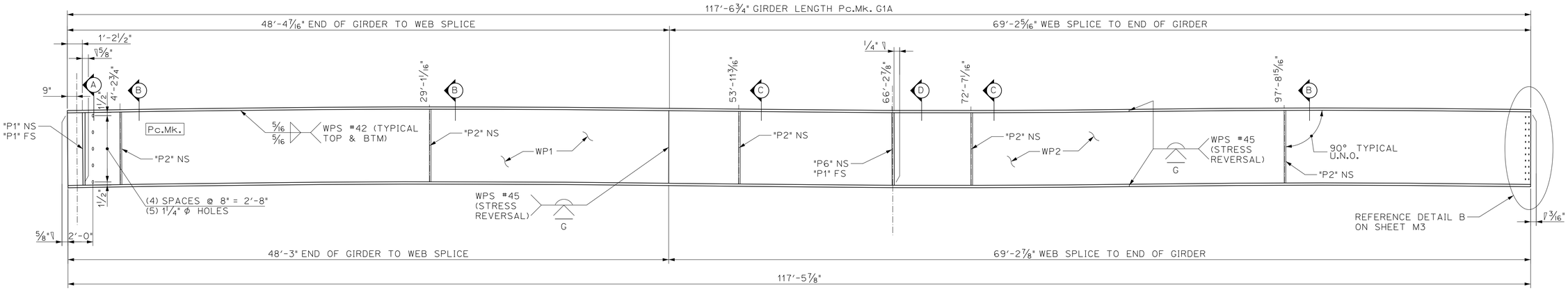
1.) UNPAINTED STEEL SHALL BE BLAST CLEANED TO SSPC SP-6 TO ACHIEVE A UNIFORM WEATEHERED APPEARANCE.

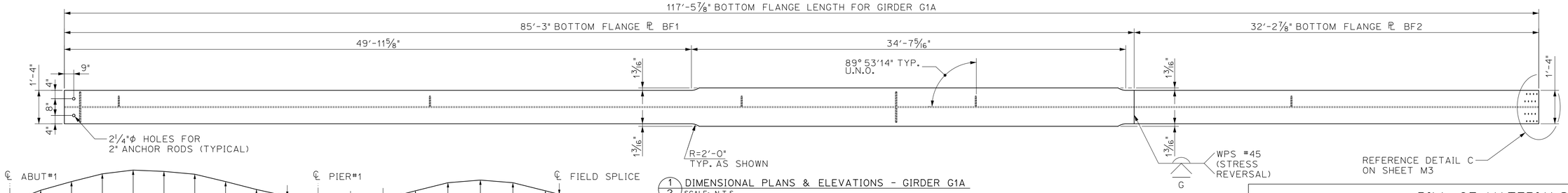
FINISH	N/A			
MATERIAL	SEE DETAIL SHEETS			
HOLES				
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP				
	NO	DATE	DESCRIPTION	BY
	REVISIONS			

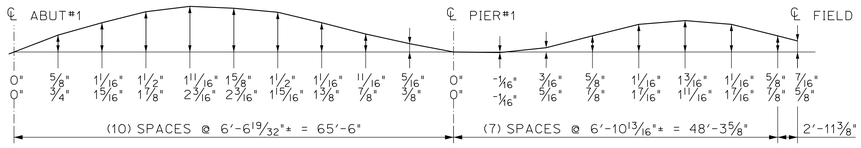
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER ETC	FRAMING PLAN & BLOCKING ELEVATION	PROJECT NO. 14-178
DATE FEB 2015	US ROUTE 4 over CONNECTICUT RIVER LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)	
CHECKED	LOC: Cold River Bridges, LLC	DWG. NO. 1
DATE FEB 2015		





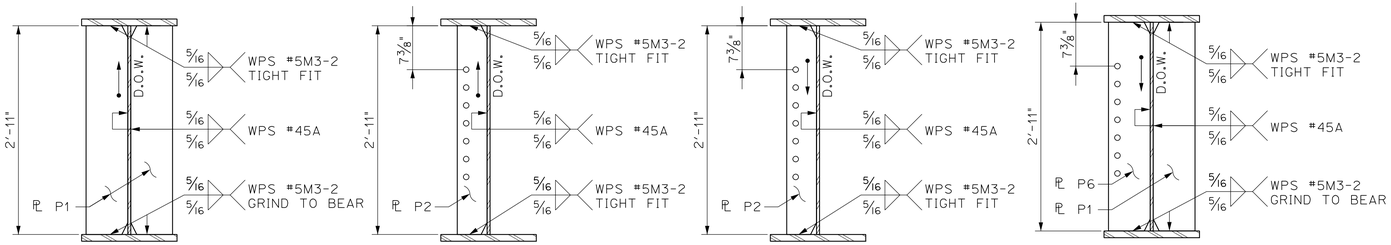




1/2 DIMENSIONAL PLANS & ELEVATIONS - GIRDER G1A
SCALE: N.T.S

GIRDER G1A CAMBER DIAGRAM

THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION - TOTAL CAMBER IN FINISHED BEAM IN A NO-LOAD POSITION
BTM. DIMENSION - TOTAL CAMBER OF WEB ℄ @ TIME WEB IS CUT
ADDITIONAL CAMBER TO ACCOMODATE FOR CAMBER THAT WILL BE LOST DURING FABRICATION



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

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

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

D/2 DIMENSIONAL SECTION
SCALE: 1"=1′-0"

BILL OF MATERIALS

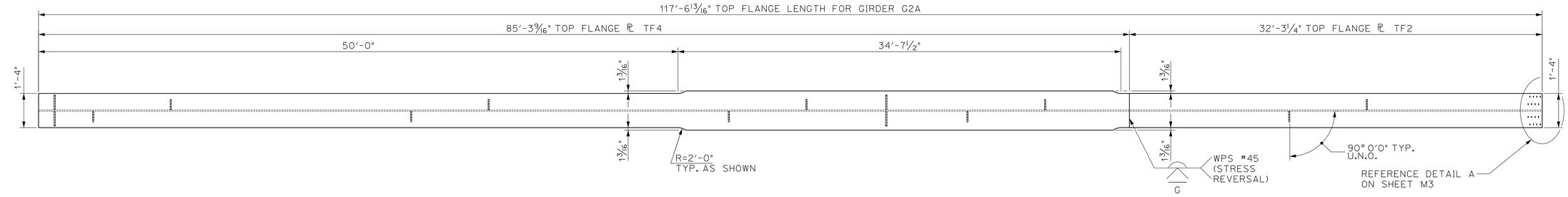
SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G1A			GIRDER G1A	117′-6¾"	22,700#	
		1	WP1	WEB PLATE 35"x½"	48′-4 7/16"	2,900#	CVN
		1	WP2	WEB PLATE 35"x½"	69′-2⅞"	4,150#	CVN
		1	TF1	FLANGE ℄ 1⅛"x18⅜"	85′-3½"	5,550#	CVN
		1	TF2	FLANGE ℄ 1⅛"x16"	32′-3¼"	2,000#	CVN
		1	BF1	FLANGE ℄ 1⅛"x18⅜"	85′-3"	5,550#	CVN
		1	BF2	FLANGE ℄ 1⅛"x16"	32′-2⅞"	2,000#	CVN
		3	P1	SEE SHEET M1		80#	
		1	P6	SEE SHEET M1		80#	
		5	P2	SEE SHEET M1		25#	

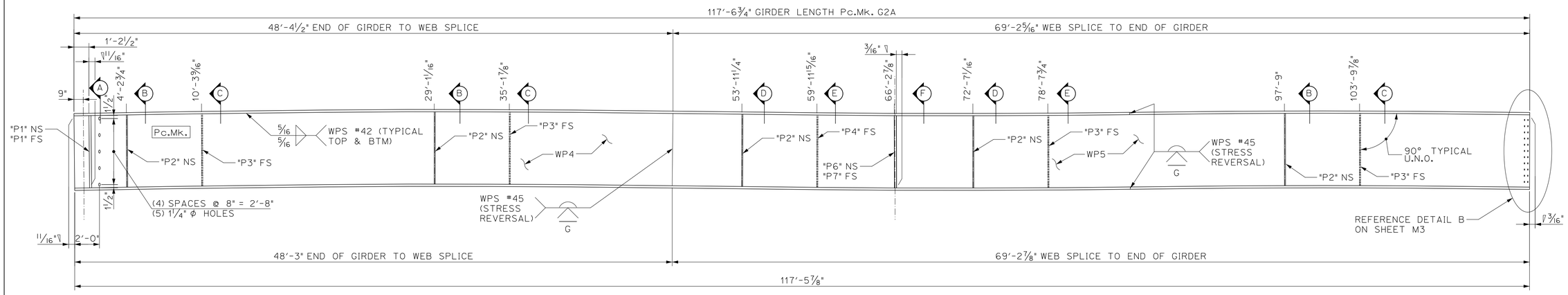
FINISH	SSPC SP-10		
MATERIAL	AASHTO M270 (ASTM A709) GR. 50W		
HOLES			
ELECTRODES	PER WELD PROCEDURE		
WELDS	PER WELD PROCEDURE		
SURFACE PREP			

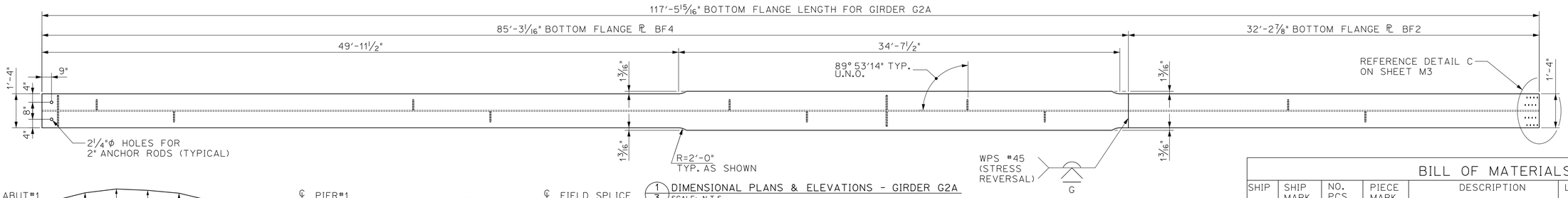
NO	DATE	DESCRIPTION	BY
		REVISIONS	

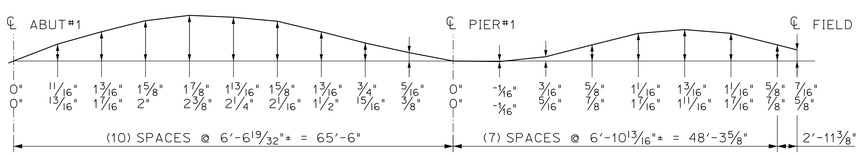
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER ETC	GIRDER G1A	PROJECT NO. 14-178
DATE FEB 2015	US ROUTE 4 over CONNECTICUT RIVER LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)	
CHECKED		DWG. NO. 2
DATE FEB 2015	CC: Cold River Bridges, LLC	









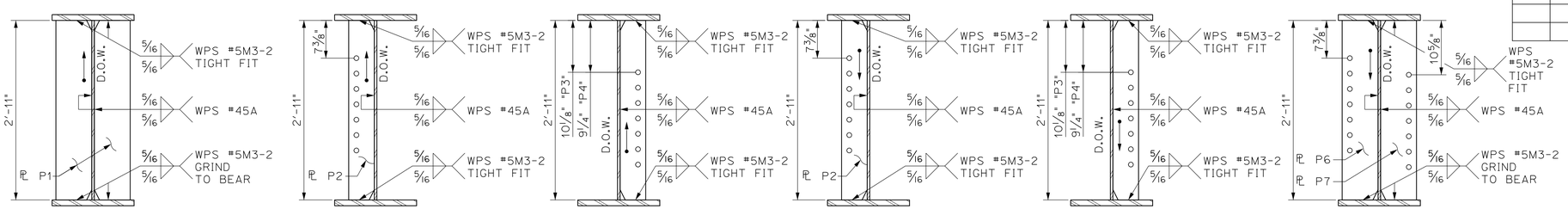
GIRDER G2A CAMBER DIAMBER

THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION - TOTAL CAMBER IN FINISHED BEAM IN A NO-LOAD POSITION
BTM. DIMENSION - TOTAL CAMBER OF WEB ℄ @ TIME WEB IS CUT
ADDITIONAL CAMBER TO ACCOMODATE FOR CAMBER THAT WILL BE LOST DURING FABRICATION

1/3 DIMENSIONAL PLANS & ELEVATIONS - GIRDER G2A
SCALE: N.T.S

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G2A			GIRDER G2A	117′-6 3/4"	22,800#	
		1	WP4	WEB PLATE 35"x1/2"	48′-4 1/2"	2,900#	CVN
		1	WP5	WEB PLATE 35"x1/2"	69′-2 5/16"	4,150#	CVN
		1	TF4	FLANGE ℄ 1 1/8"x18 3/8"	85′-3 9/16"	5,550#	CVN
		1	TF2	FLANGE ℄ 1 1/8"x16"	32′-3 1/4"	2,000#	CVN
		1	BF4	FLANGE ℄ 1 1/8"x18 3/8"	85′-3 1/16"	5,550#	CVN
		1	BF2	FLANGE ℄ 1 1/8"x16"	32′-2 7/8"	2,000#	CVN
		2	P1	SEE SHEET M1		80#	
		1	P6	SEE SHEET M1		80#	
		1	P7	SEE SHEET M1		25#	
		5	P2	SEE SHEET M1		25#	
		4	P3	SEE SHEET M1		25#	
		1	P4	SEE SHEET M1		25#	



1/3 DIMENSIONAL SECTION — SCALE: 1"=1′-0"
2/3 DIMENSIONAL SECTION — SCALE: 1"=1′-0"
3/3 DIMENSIONAL SECTION — SCALE: 1"=1′-0"
4/3 DIMENSIONAL SECTION — SCALE: 1"=1′-0"
5/3 DIMENSIONAL SECTION — SCALE: 1"=1′-0"
6/3 DIMENSIONAL SECTION — SCALE: 1"=1′-0"

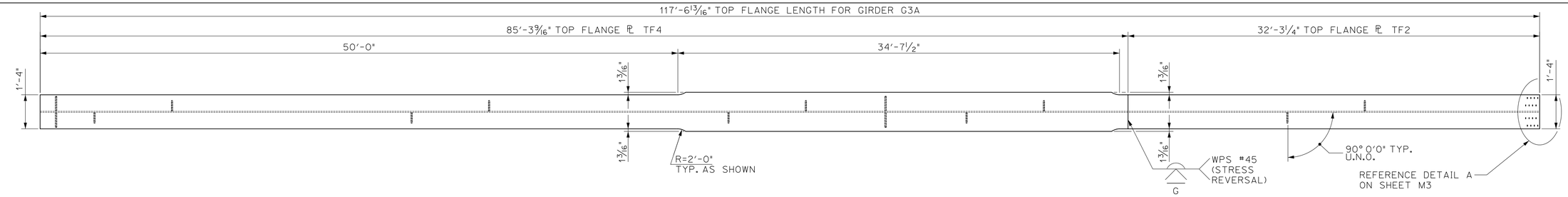
FINISH	SSPC SP-10		
MATERIAL	AASHTO M270 (ASTM A709) GR. 50W		
HOLES			
ELECTRODES	PER WELD PROCEDURE		
WELDS	PER WELD PROCEDURE		
SURFACE PREP			

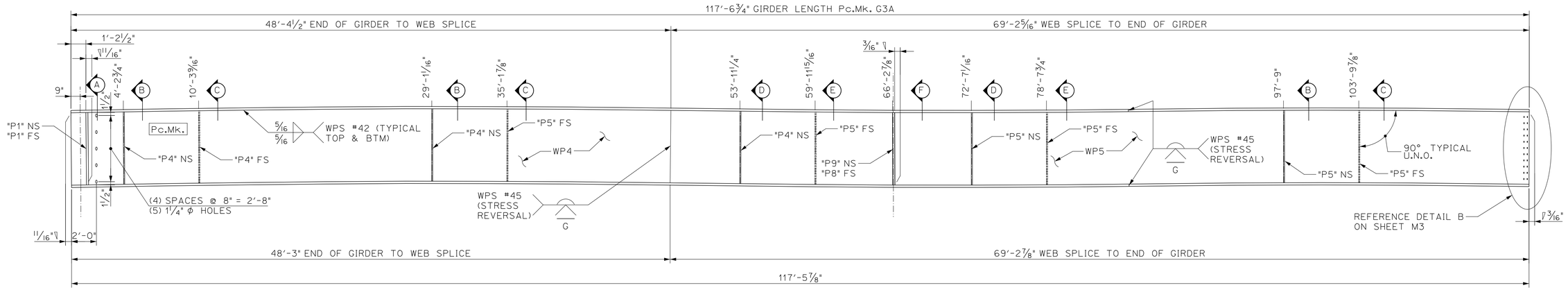
NO.	DATE	DESCRIPTION	BY

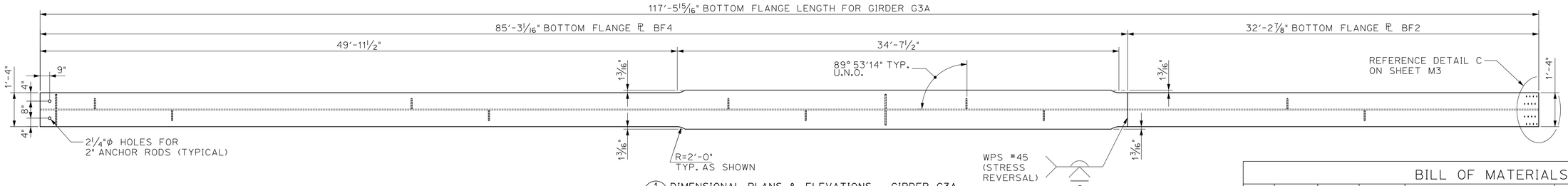
REVISIONS

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

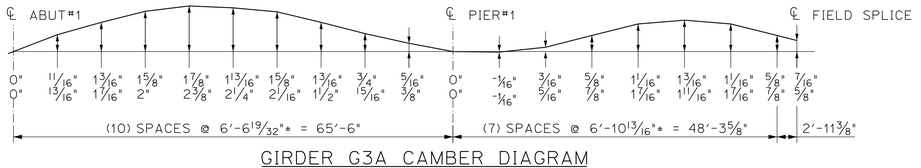
DRAFTER ETC	GIRDER G2A	PROJECT NO. 14-178
DATE FEB 2015	US ROUTE 4 over CONNECTICUT RIVER LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)	
CHECKED	SC: Cold River Bridges, LLC	DWG. NO. 3
DATE FEB 2015		







1/4 DIMENSIONAL PLANS & ELEVATIONS - GIRDER G3A
SCALE: N.T.S

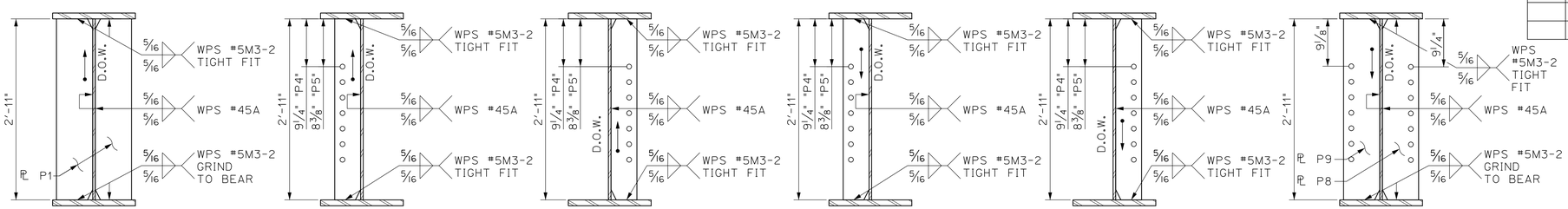


GIRDER G3A CAMBER DIAGRAM

THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION - TOTAL CAMBER IN FINISHED BEAM IN A NO-LOAD POSITION
BTM. DIMENSION - TOTAL CAMBER OF WEB ℄ @ TIME WEB IS CUT
ADDITIONAL CAMBER TO ACCOMODATE FOR CAMBER THAT WILL BE LOST DURING FABRICATION

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G3A			GIRDER G3A	117'-6 3/4"	22,800#	
		1	WP4	WEB PLATE 35"x1/2"	48'-4 1/2"	2,900#	CVN
		1	WP5	WEB PLATE 35"x1/2"	69'-2 5/16"	4,150#	CVN
		1	TF4	FLANGE ℄ 1 1/8"x18 3/8"	85'-3 9/16"	5,550#	CVN
		1	TF2	FLANGE ℄ 1 1/8"x16"	32'-3 1/4"	2,000#	CVN
		1	BF4	FLANGE ℄ 1 1/8"x18 3/8"	85'-3 1/16"	5,550#	CVN
		1	BF2	FLANGE ℄ 1 1/8"x16"	32'-2 7/8"	2,000#	CVN
		2	P1	SEE SHEET M1		80#	
		1	P8	SEE SHEET M1		80#	
		1	P9	SEE SHEET M1		25#	
		4	P4	SEE SHEET M1		25#	
		6	P5	SEE SHEET M1		25#	



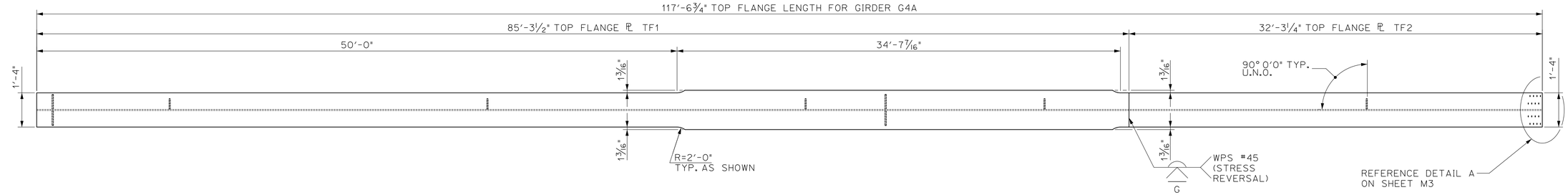
1/4 DIMENSIONAL SECTION A — SCALE: 1"=1'-0"
1/4 DIMENSIONAL SECTION B — SCALE: 1"=1'-0"
1/4 DIMENSIONAL SECTION C — SCALE: 1"=1'-0"
1/4 DIMENSIONAL SECTION D — SCALE: 1"=1'-0"
1/4 DIMENSIONAL SECTION E — SCALE: 1"=1'-0"
1/4 DIMENSIONAL SECTION F — SCALE: 1"=1'-0"

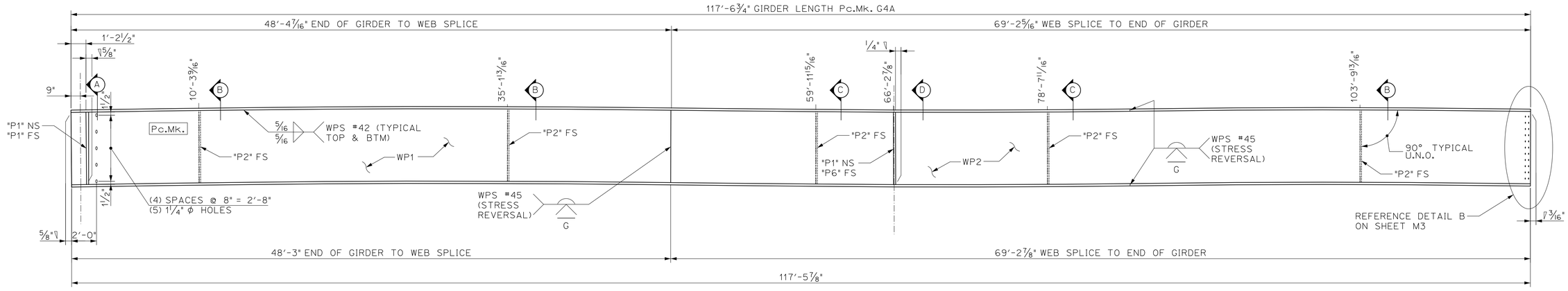
FINISH	SSPC SP-10		
MATERIAL	AASHTO M270 (ASTM A709) GR. 50W		
HOLES			
ELECTRODES	PER WELD PROCEDURE		
WELDS	PER WELD PROCEDURE		
SURFACE PREP			

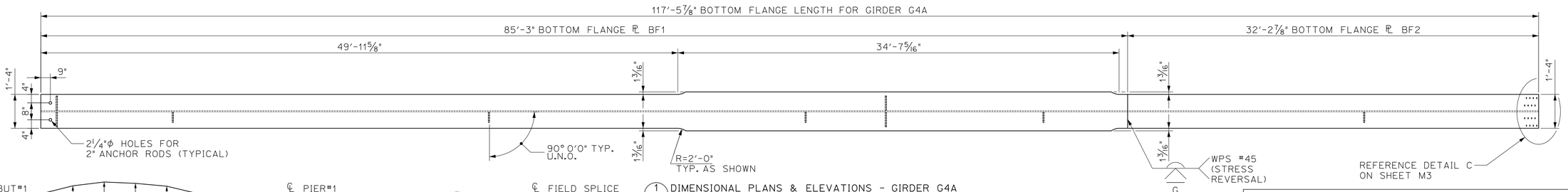
NO	DATE	DESCRIPTION	BY
		REVISIONS	

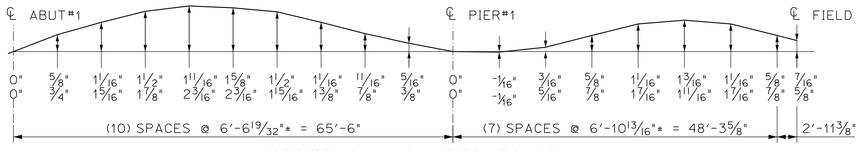
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 - FAX: (207) 265-4054

DRAFTER ETC	GIRDER G3A	PROJECT NO. 14-178
DATE FEB 2015	US ROUTE 4 over CONNECTICUT RIVER LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)	
CHECKED		DWG. NO. 4
DATE FEB 2015	CC: Cold River Bridges, LLC	





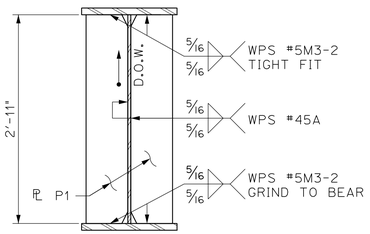




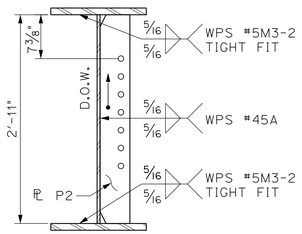
1/5 DIMENSIONAL PLANS & ELEVATIONS - GIRDER G4A
SCALE: N.T.S

GIRDER G4A CAMBER DIAGRAM

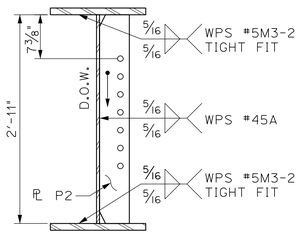
THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION - TOTAL CAMBER IN FINISHED BEAM IN A NO-LOAD POSITION
BTM. DIMENSION - TOTAL CAMBER OF WEB ℄ @ TIME WEB IS CUT
ADDITIONAL CAMBER TO ACCOMODATE FOR CAMBER THAT WILL BE LOST DURING FABRICATION



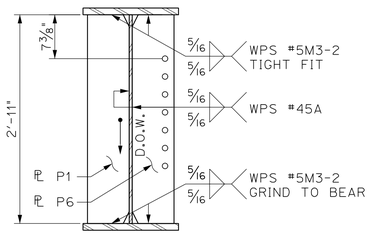
A/5 DIMENSIONAL SECTION
SCALE: 1"=1′-0"



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



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



D/5 DIMENSIONAL SECTION
SCALE: 1"=1′-0"

BILL OF MATERIALS

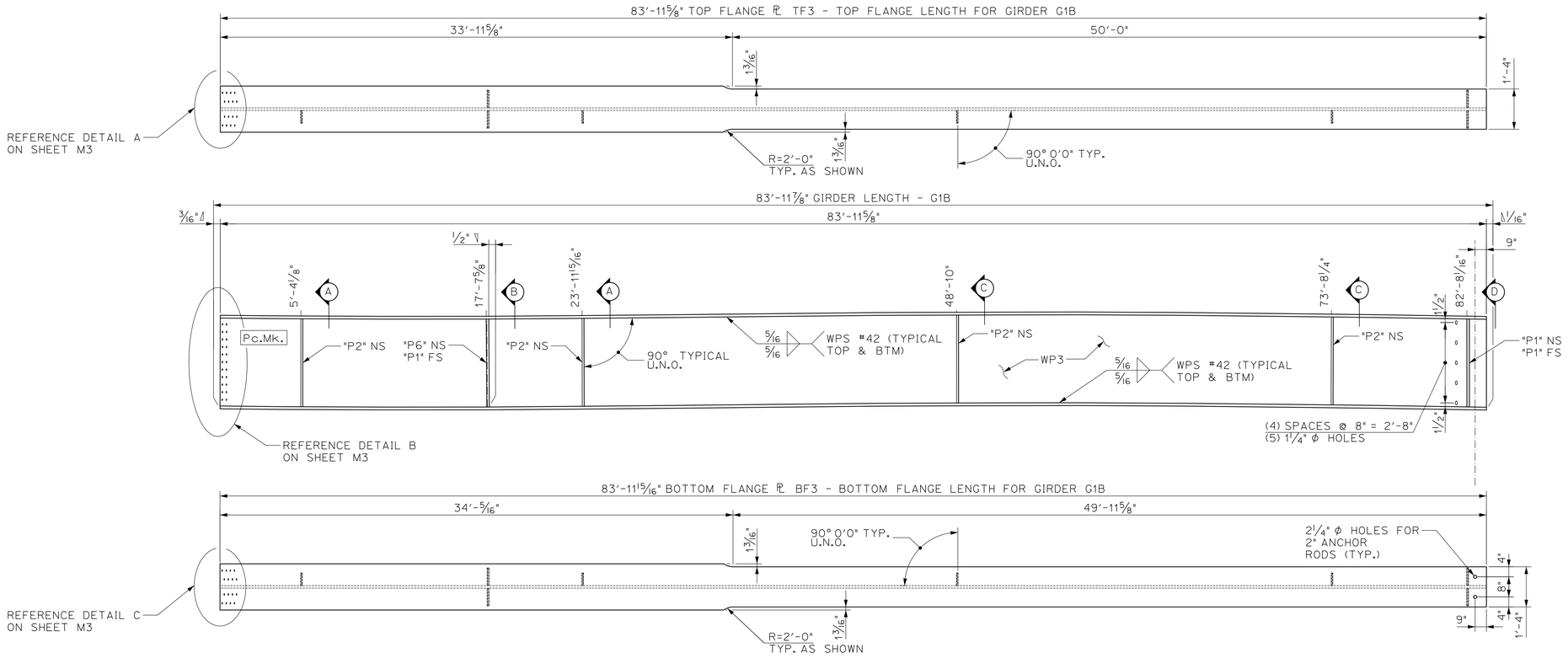
SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G4A			GIRDER G4A	117′-6¾"	22,700#	
		1	WP1	WEB PLATE 35"x½"	48′-4 7/16"	2,900#	CVN
		1	WP2	WEB PLATE 35"x½"	69′-2⅞"	4,150#	CVN
		1	TF1	FLANGE ℄ 1⅛"x18⅜"	85′-3½"	5,550#	CVN
		1	TF2	FLANGE ℄ 1⅛"x16"	32′-3¼"	2,000#	CVN
		1	BF1	FLANGE ℄ 1⅛"x18⅜"	85′-3"	5,550#	CVN
		1	BF2	FLANGE ℄ 1⅛"x16"	32′-2⅞"	2,000#	CVN
		3	P1	SEE SHEET M1		80#	
		1	P6	SEE SHEET M1		80#	
		5	P2	SEE SHEET M1		25#	

FINISH	SSPC SP-10		
MATERIAL	AASHTO M270 (ASTM A709) GR. 50W		
HOLES			
ELECTRODES	PER WELD PROCEDURE		
WELDS	PER WELD PROCEDURE		
SURFACE PREP			

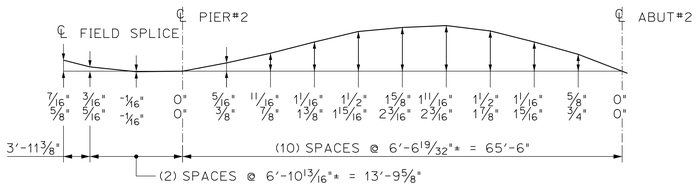
NO	DATE	DESCRIPTION	BY
		REVISIONS	

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

DRAFTER ETC	GIRDER G4A	PROJECT NO. 14-178
DATE FEB 2015	US ROUTE 4 over CONNECTICUT RIVER LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)	
CHECKED		DWG. NO. 5
DATE FEB 2015	CC: Cold River Bridges, LLC	

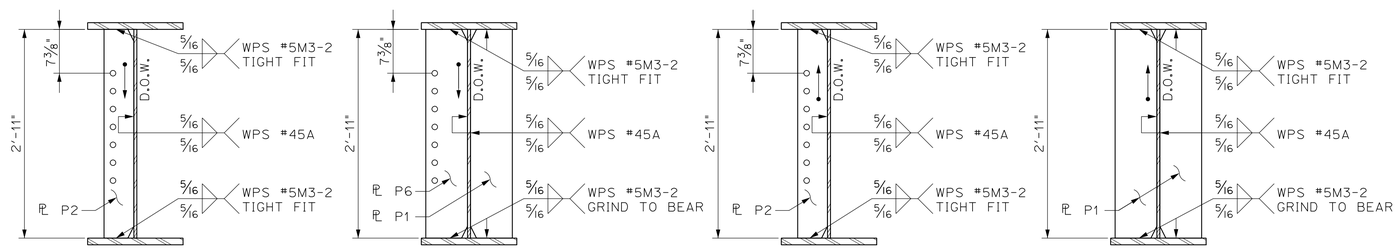


1/6 DIMENSIONAL PLANS & ELEVATIONS - GIRDER G1B
SCALE: N.T.S



GIRDER G1B CAMBER DIAGRAM

THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION - TOTAL CAMBER IN FINISHED BEAM IN A NO-LOAD POSITION
BTM. DIMENSION - TOTAL CAMBER OF WEB ℄ @ TIME WEB IS CUT
ADDITIONAL CAMBER TO ACCOMODATE FOR CAMBER THAT WILL BE LOST DURING FABRICATION



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

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

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

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

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G1B			GIRDER G1B	83'-11 7/8"	16,500#	
		1	WP3	WEB PLATE 35"x1/2"	83'-11 7/8"	5,000#	CVN
		1	TF3	FLANGE ℄ 1 1/8"x18 3/8"	83'-11 5/8"	5,500#	CVN
		1	BF1	FLANGE ℄ 1 1/8"x18 3/8"	83'-11 15/16"	5,500#	CVN
		3	P1	SEE SHEET M1		80#	
		1	P6	SEE SHEET M1		80#	
		4	P2	SEE SHEET M1		25#	

FINISH SSPC SP-10
MATERIAL AASHTO M270 (ASTM A709) GR. 50W
HOLES
ELECTRODES PER WELD PROCEDURE
WELDS PER WELD PROCEDURE
SURFACE PREP

NO	DATE	DESCRIPTION	BY

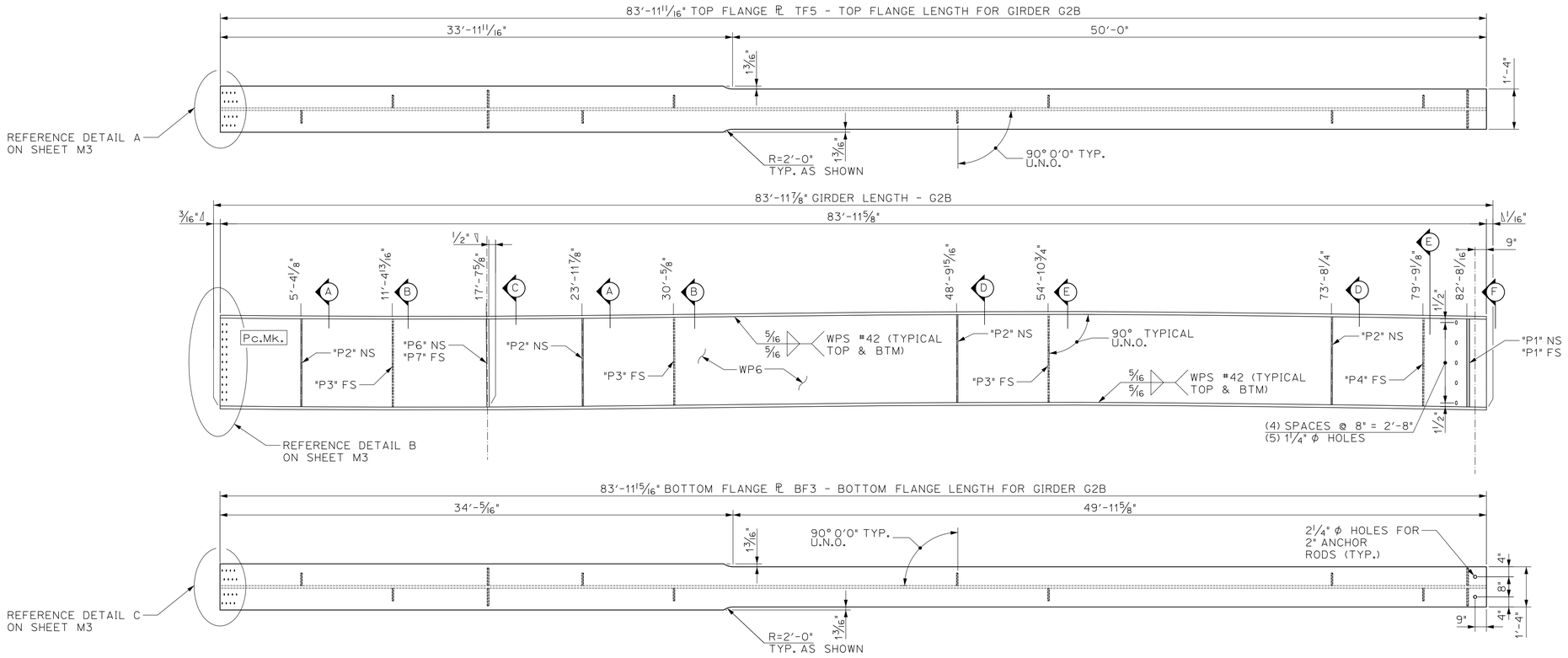
REVISIONS

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

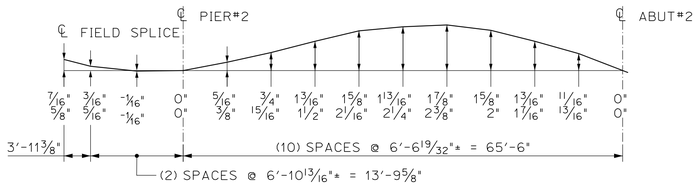
DRAFTER ETC
DATE FEB 2015
CHECKED
DATE FEB 2015

GIRDER G1B
US ROUTE 4 over CONNECTICUT RIVER
LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)
SC: Cold River Bridges, LLC

PROJECT NO. 14-178
DWG. NO. 6



1/7 DIMENSIONAL PLANS & ELEVATIONS - GIRDER G2B
SCALE: N.T.S

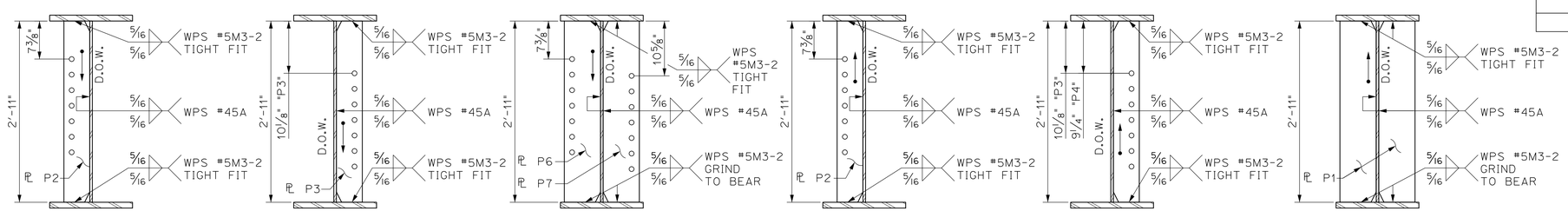


GIRDER G2B CAMBER DIAGRAM

THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION - TOTAL CAMBER IN FINISHED BEAM IN A NO-LOAD POSITION
BTM. DIMENSION - TOTAL CAMBER OF WEB ℄ @ TIME WEB IS CUT
ADDITIONAL CAMBER TO ACCOMODATE FOR CAMBER THAT WILL BE LOST DURING FABRICATION

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G2B			GIRDER G2B	83′-11 7/8"	16,600#	
		1	WP6	WEB PLATE 35"x1/2"	83′-11 7/8"	5,000#	CVN
		1	TF5	FLANGE ℄ 1 1/8"x18 3/8"	83′-11 11/16"	5,500#	CVN
		1	BF3	FLANGE ℄ 1 1/8"x18 3/8"	83′-11 15/16"	5,500#	CVN
		2	P1	SEE SHEET M1		80#	
		1	P6	SEE SHEET M1		80#	
		1	P7	SEE SHEET M1		80#	
		4	P2	SEE SHEET M1		25#	
		3	P3	SEE SHEET M1		25#	
		1	P4	SEE SHEET M1		25#	



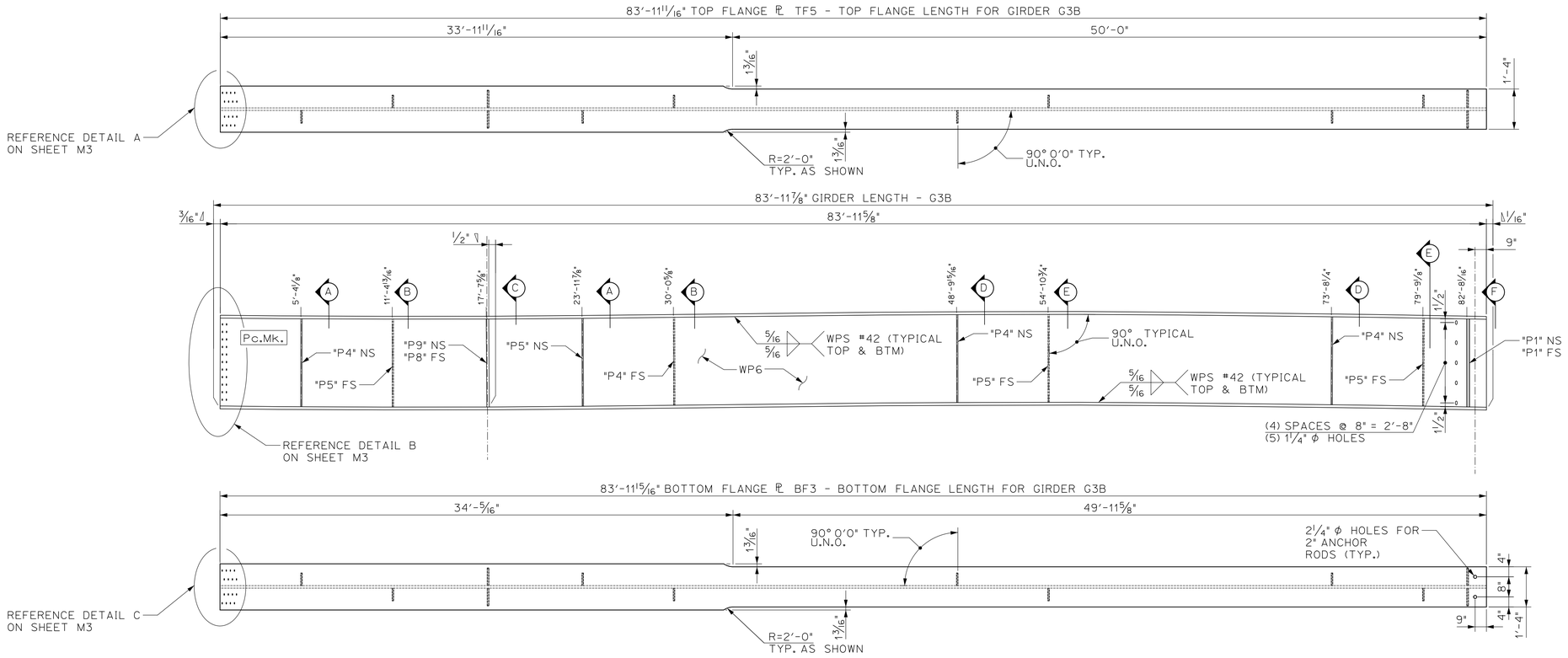
A 7 DIMENSIONAL SECTION SCALE: 1"=1′-0"
B 7 DIMENSIONAL SECTION SCALE: 1"=1′-0"
C 7 DIMENSIONAL SECTION SCALE: 1"=1′-0"
D 7 DIMENSIONAL SECTION SCALE: 1"=1′-0"
E 7 DIMENSIONAL SECTION SCALE: 1"=1′-0"
F 7 DIMENSIONAL SECTION SCALE: 1"=1′-0"

FINISH	SSPC SP-10		
MATERIAL	AASHTO M270 (ASTM A709) GR. 50W		
HOLES			
ELECTRODES	PER WELD PROCEDURE		
WELDS	PER WELD PROCEDURE		
SURFACE PREP			

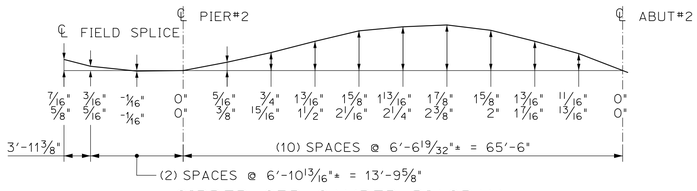
NO	DATE	DESCRIPTION	BY
		REVISIONS	

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

DRAFTER ETC	GIRDER G2B	PROJECT NO. 14-178
DATE FEB 2015	US ROUTE 4 over CONNECTICUT RIVER LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)	
CHECKED		DWG. NO. 7
DATE FEB 2015	SC: Cold River Bridges, LLC	



1/8 DIMENSIONAL PLANS & ELEVATIONS - GIRDER G3B
SCALE: N.T.S

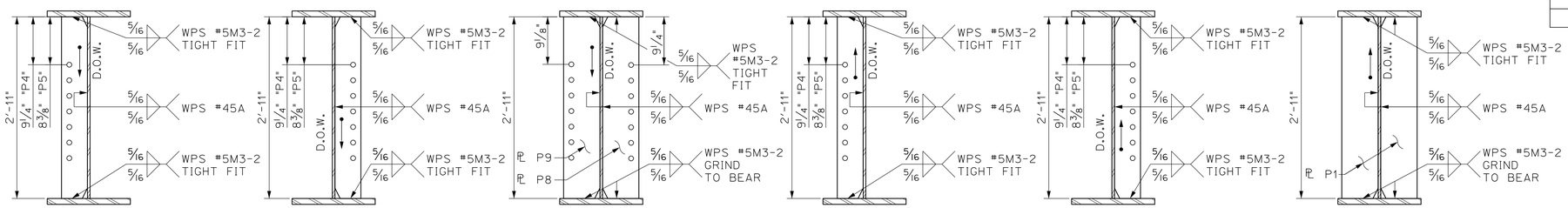


GIRDER G3B CAMBER DIAGRAM

THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION - TOTAL CAMBER IN FINISHED BEAM IN A NO-LOAD POSITION
BTM. DIMENSION - TOTAL CAMBER OF WEB ℄ @ TIME WEB IS CUT
ADDITIONAL CAMBER TO ACCOMODATE FOR CAMBER THAT WILL BE LOST DURING FABRICATION

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G3B			GIRDER G3B	83′-11 7/8"	16,600#	
		1	WP6	WEB PLATE 35"x1/2"	83′-11 7/8"	5,000#	CVN
		1	TF5	FLANGE ℄ 1 1/8"x18 3/8"	83′-11 11/16"	5,500#	CVN
		1	BF3	FLANGE ℄ 1 1/8"x18 3/8"	83′-11 5/16"	5,500#	CVN
		2	P1	SEE SHEET M1		80#	
		1	P8	SEE SHEET M1		80#	
		1	P9	SEE SHEET M1		80#	
		4	P4	SEE SHEET M1		25#	
		4	P5	SEE SHEET M1		25#	



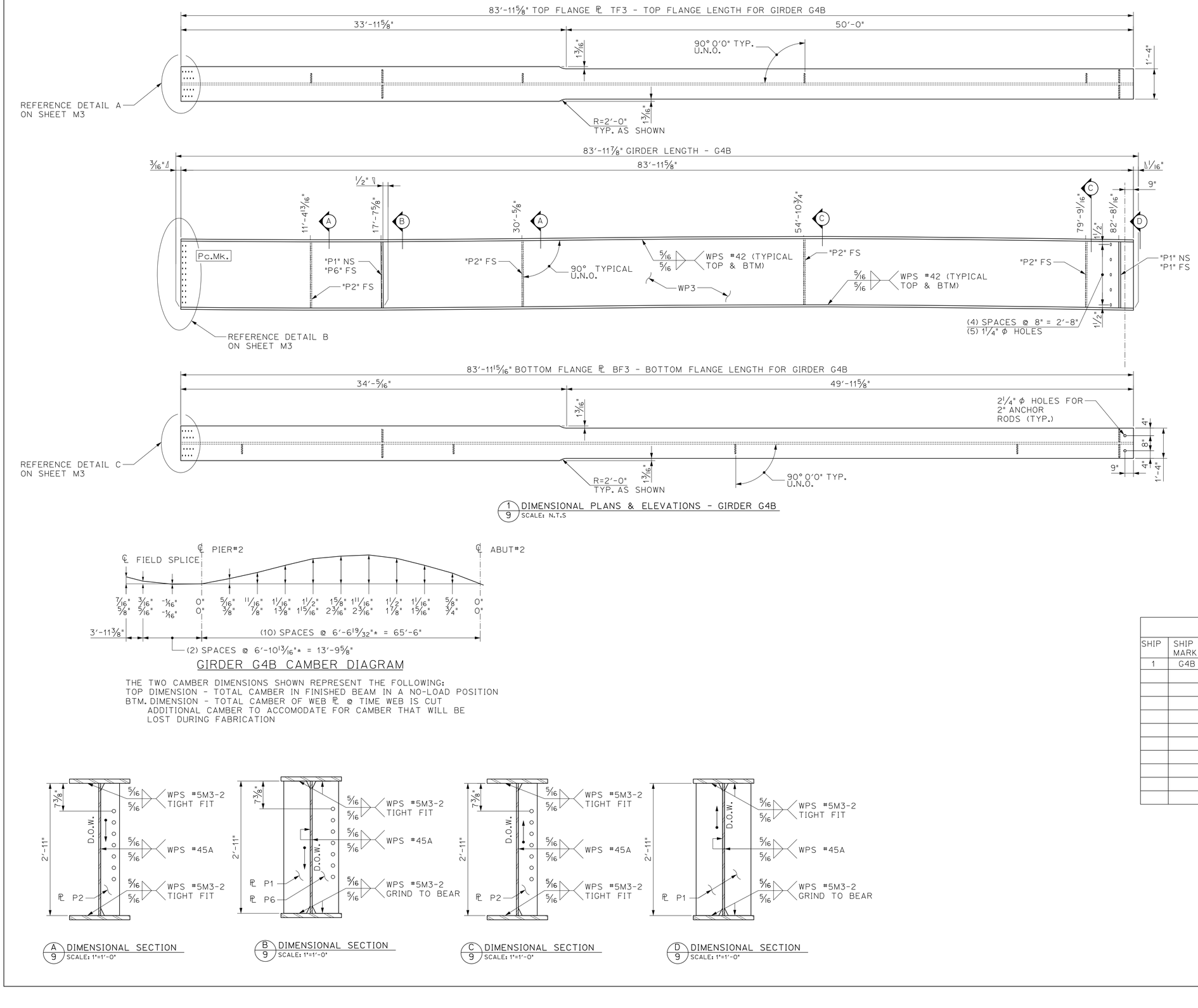
A 8 DIMENSIONAL SECTION SCALE: 1"=1′-0"
B 8 DIMENSIONAL SECTION SCALE: 1"=1′-0"
C 8 DIMENSIONAL SECTION SCALE: 1"=1′-0"
D 8 DIMENSIONAL SECTION SCALE: 1"=1′-0"
E 8 DIMENSIONAL SECTION SCALE: 1"=1′-0"
F 8 DIMENSIONAL SECTION SCALE: 1"=1′-0"

FINISH	SSPC SP-10			
MATERIAL	AASHTO M270 (ASTM A709) GR. 50W			
HOLES				
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP				

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 ETC	GIRDER G3B	PROJECT NO. 14-178
DATE FEB 2015	US ROUTE 4 over CONNECTICUT RIVER LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)	
CHECKED	SC: Cold River Bridges, LLC	DWG. NO. 8
DATE FEB 2015		



1/9 DIMENSIONAL PLANS & ELEVATIONS - GIRDER G4B
SCALE: N.T.S

GIRDER G4B CAMBER DIAGRAM

THE TWO CAMBER DIMENSIONS SHOWN REPRESENT THE FOLLOWING:
TOP DIMENSION - TOTAL CAMBER IN FINISHED BEAM IN A NO-LOAD POSITION
BTM. DIMENSION - TOTAL CAMBER OF WEB ℄ @ TIME WEB IS CUT
ADDITIONAL CAMBER TO ACCOMODATE FOR CAMBER THAT WILL BE LOST DURING FABRICATION

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

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

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

D 9 DIMENSIONAL SECTION
SCALE: 1"=1'-0"

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
1	G4B			GIRDER G4B	83'-11⅞"	16,500#	
		1	WP3	WEB PLATE 35"x½"	83'-11⅞"	5,000#	CVN
		1	TF3	FLANGE ℄ 1⅛"x18⅜"	83'-11⅝"	5,500#	CVN
		1	BF1	FLANGE ℄ 1⅛"x18⅜"	83'-11 15/16"	5,500#	CVN
		3	P1	SEE SHEET M1		80#	
		1	P6	SEE SHEET M1		80#	
		4	P2	SEE SHEET M1		25#	

FINISH	SSPC SP-10			
MATERIAL	AASHTO M270 (ASTM A709) GR. 50W			
HOLES				
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP				

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 ETC.	GIRDER G4B	PROJECT NO. 14-178
DATE FEB 2015	US ROUTE 4 over CONNECTICUT RIVER LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)	
CHECKED	SC: Cold River Bridges, LLC	DWG. NO. 9
DATE FEB 2015		

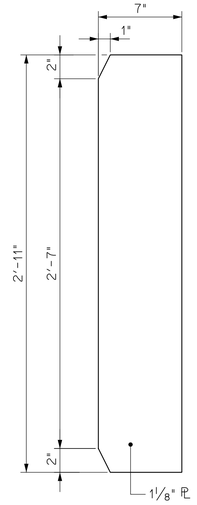


PLATE P1
(20) REQ'D

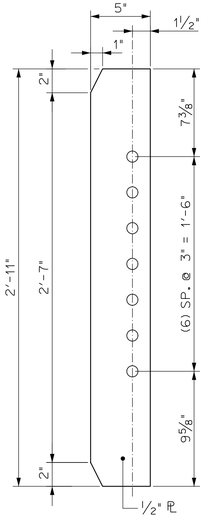


PLATE P2
(27) REQ'D

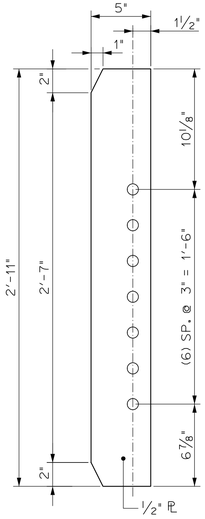


PLATE P3
(7) REQ'D

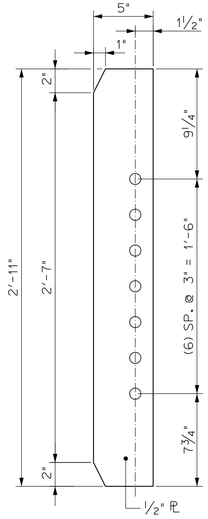


PLATE P4
(10) REQ'D

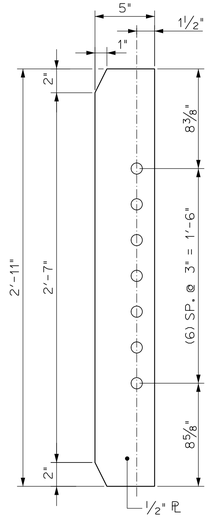


PLATE P5
(10) REQ'D

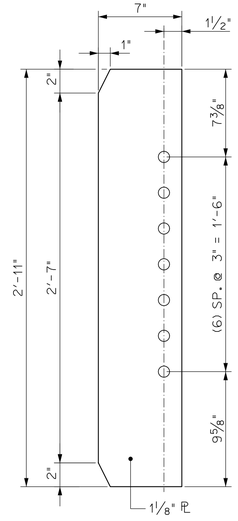


PLATE P6
(6) REQ'D

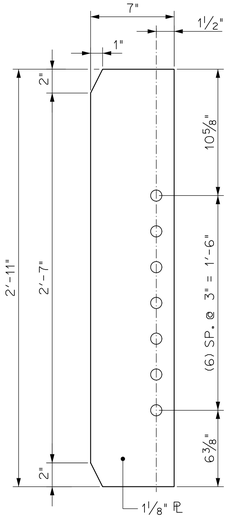


PLATE P7
(2) REQ'D

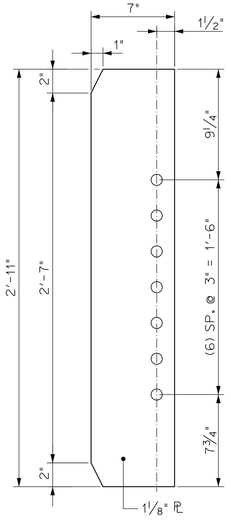


PLATE P8
(2) REQ'D

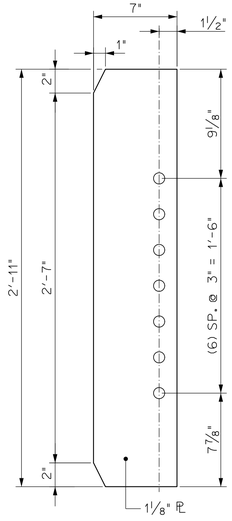
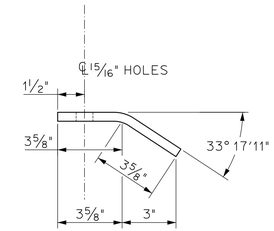
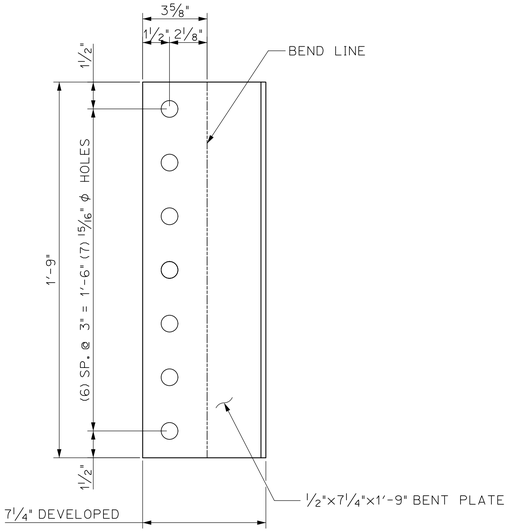


PLATE P9
(2) REQ'D



BP1 PLAN VIEW



BP1 ELEVATION VIEW
(12) REQUIRED

COMPLETE BOLT SCHEDULE

NO. BOLTS	PIECE MARK	LENGTH	DESCRIPTION	LOCATION
378	FB1	2¼"	⅞" ϕ ASTM A325, TYPE 3 BOLT (WEATHERING) W/ N&W	DIAPHRAGM TYPE D1 TO CONNECTION PLATE
260	FB2	3"	⅞" ϕ ASTM A325, TYPE 3 BOLT (WEATHERING) W/ N&W	DIAPHRAGM TYPE D2 TO CONN PL & WEB SPLICE PL BOLTS
256	FB3	3½"	⅞" ϕ ASTM A325, TYPE 3 BOLT (WEATHERING) W/ N&W	FLANGE SPLICE PL BOLTS

BILL OF MATERIALS

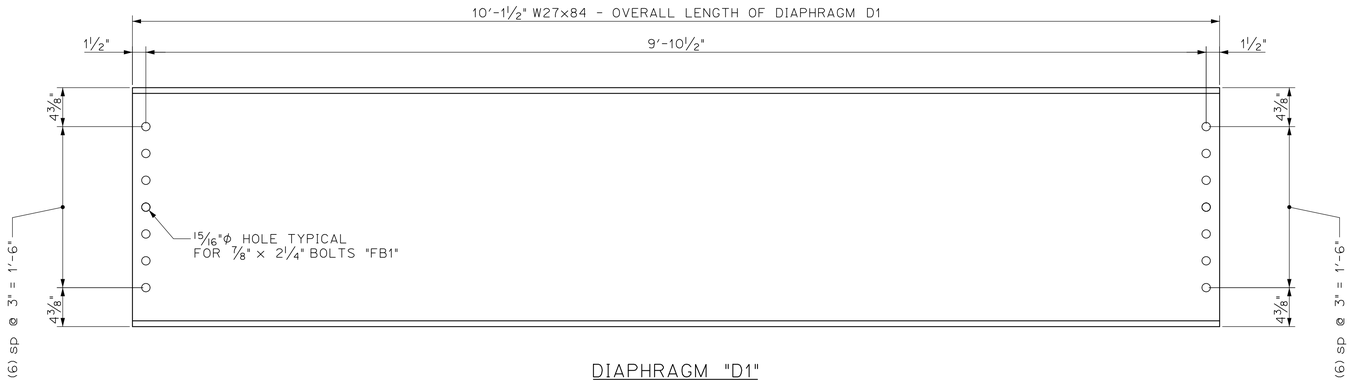
SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
		20	P1	1⅛"×7" BRG STIFFENER	35"	80#	
		27	P2	½"×5" CONN. PL	35"	25#	
		7	P3	½"×5" CONN. PL	35"	25#	
		10	P4	½"×5" CONN. PL	35"	25#	
		10	P5	½"×5" CONN. PL	35"	25#	
		6	P6	1⅛"×7" BRG STIFFENER	35"	80#	
		2	P7	1⅛"×7" BRG STIFFENER	35"	80#	
		2	P8	1⅛"×7" BRG STIFFENER	35"	80#	
		2	P9	1⅛"×7" BRG STIFFENER	35"	80#	
		12	BP1	½"×7¼" BENT PL	21"	25#	

FINISH	SSPC SP-10
MATERIAL	AASHTO M270 (ASTM A709) GR. 50W
HOLES	
ELECTRODES	PER WELD PROCEDURE
WELDS	PER WELD PROCEDURE
SURFACE PREP	

NO	DATE	DESCRIPTION	BY
		REVISIONS	

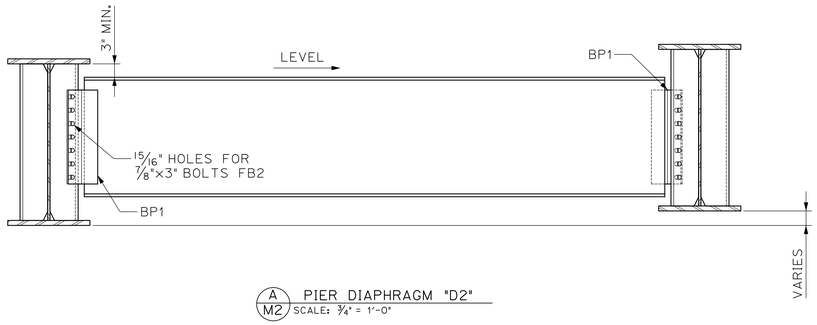
ARC ENTERPRISES, INC.
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER ETC	MISC DETAILS - CONN. PL. & BRG STIFF.	PROJECT NO. 14-178
DATE FEB 2015	US ROUTE 4 over CONNECTICUT RIVER LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)	
CHECKED	CC: Cold River Bridges, LLC	DWG. NO. M1
DATE FEB 2015		



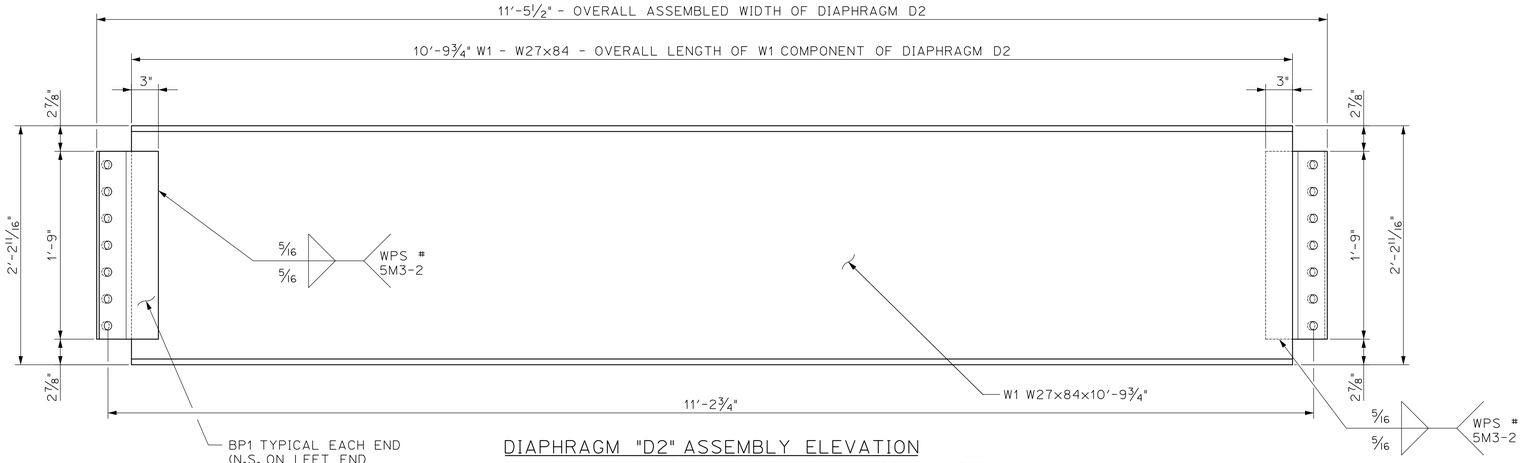
DIAPHRAGM "D1"

(27) DIAPHRAGM D1 REQ'D



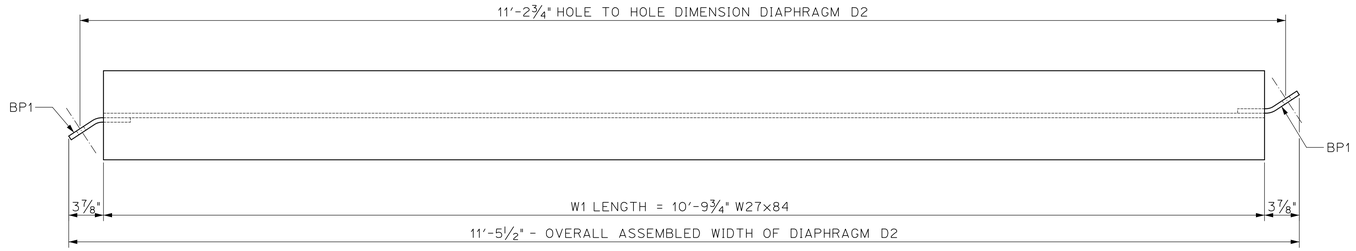
A / M2 PIER DIAPHRAGM "D2"

SCALE: ¾" = 1'-0"



DIAPHRAGM "D2" ASSEMBLY ELEVATION

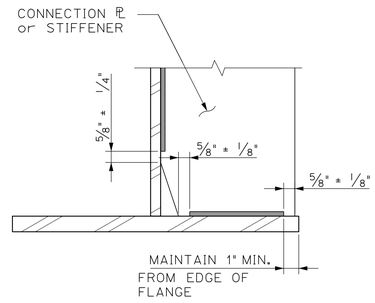
NOTE: - TERMINATE WELDS AS PER WELD TERMINATION DETAIL SHEET M1



DIAPHRAGM "D2" ASSEMBLY PLAN

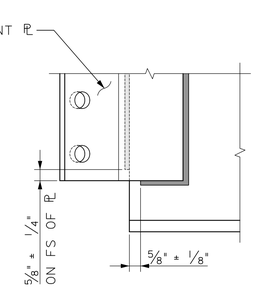
(6) W1 REQUIRED
(12) BP1 REQUIRED

(6) D2 ASSEMBLIES



TYPICAL CONNECTION ℄ WELD TERMINATION DETAIL

N.T.S.



BENT ℄ WELD TERMINATION DETAIL

N.T.S.

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
27	D1			W27x84 INT. DIAPHRAGMS	10'-1½"	900#	
6	D2			W27x84 PIER DIAPHRAGMS	11'-5½"	1000#	
		6	W1	W27X84	10'-9¾"	910#	
		12	BP1	SEE SHT M1 (WELD TO W1)	21#	25#	

FINISH	SSPC SP-10			
MATERIAL	AASHTO M270 (ASTM A709) GR. 50W			
HOLES				
ELECTRODES	PER WELD PROCEDURE			
WELDS	PER WELD PROCEDURE			
SURFACE PREP				

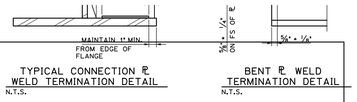
NO	DATE	DESCRIPTION	BY

REVISIONS

ARC ENTERPRISES, INC.

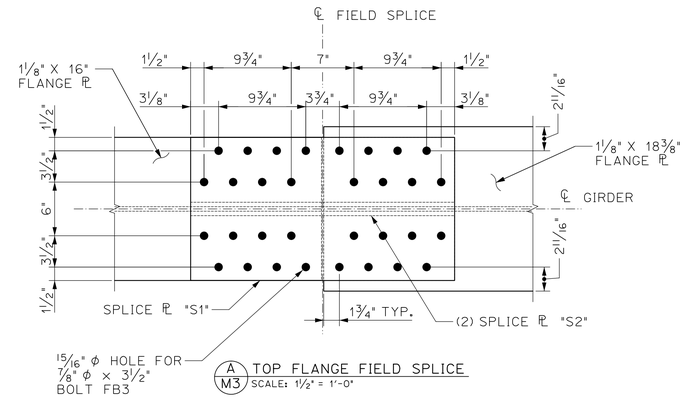
ADVANCED RESOURCES & CONST. ENTERPRISES, INCORPORATED
P.O. BOX 120 KINGFIELD, ME. 04947
PHONE: (207) 265-2646 – FAX: (207) 265-4054

DRAFTER ETC	MISC. DETAILS - DIAPHRAGMS	PROJECT NO. 14-178
DATE FEB 2015	US ROUTE 4 over CONNECTICUT RIVER LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)	
CHECKED	SC: Cold River Bridges, LLC	DWG. NO. M2
DATE FEB 2015		

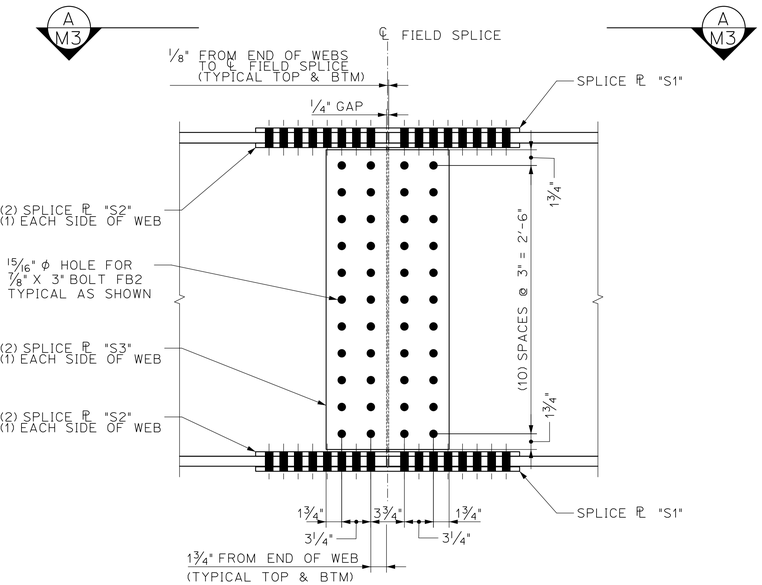


TYPICAL CONNECTION ℄ WELD TERMINATION DETAIL
N.T.S.

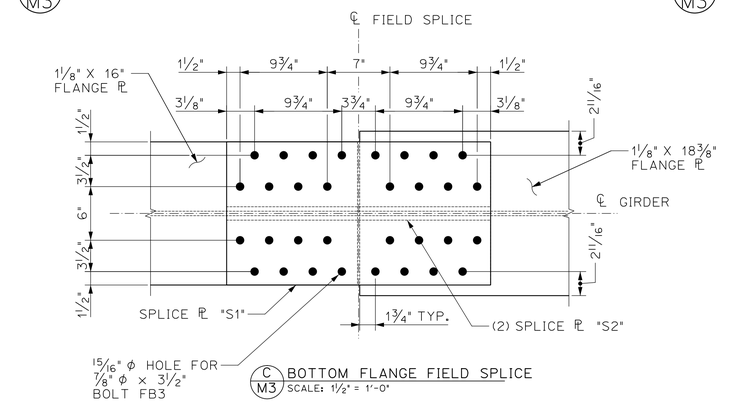
BENT ℄ WELD TERMINATION DETAIL
N.T.S.



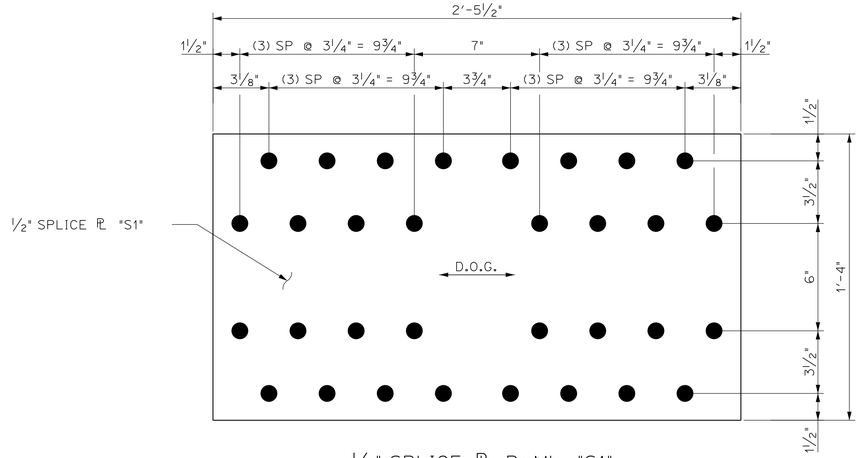
A M3 TOP FLANGE FIELD SPLICE
SCALE: 1½" = 1'-0"



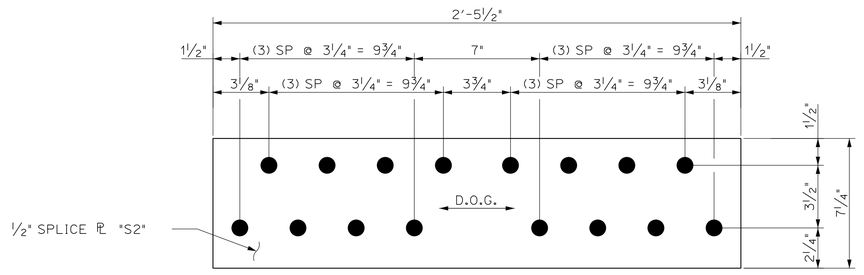
B M3 WEB FIELD SPLICE
SCALE: 1½" = 1'-0"



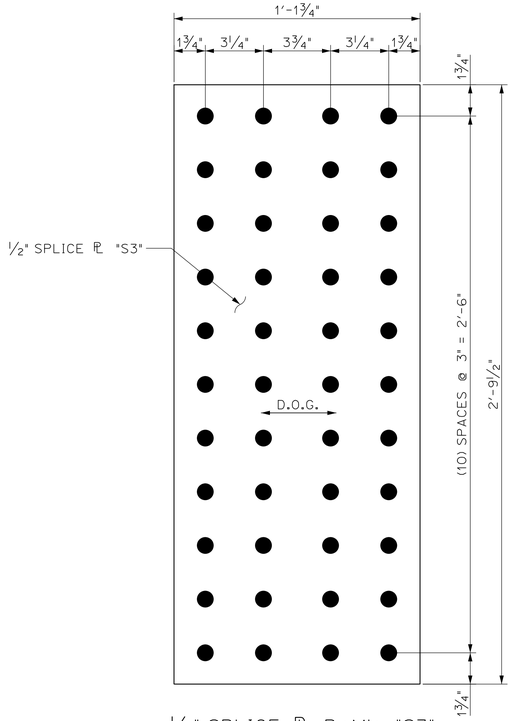
C M3 BOTTOM FLANGE FIELD SPLICE
SCALE: 1½" = 1'-0"



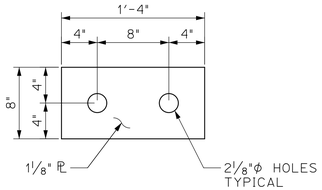
½" SPLICE ℄, PcMk "S1"



½" SPLICE ℄, PcMk "S2"



½" SPLICE ℄, PcMk "S3"



LEVELING ℄ LP1

BILL OF MATERIALS

SHIP	SHIP MARK	NO. PCS.	PIECE MARK	DESCRIPTION	LENGTH	WEIGHT	MATERIAL
		8	S1	½"×16" FLANGE SP ℄(T&B)	2'-5½"	70#	
		16	S2	½"×7¼" FLANGE SP ℄(T&B)	2'-5½"	30#	
		8	S2	½"×1'-1¾" WEB SPLICE ℄	2'-9½"	70#	
		8	LP1	1⅛"×8" LEVELING PLATE	1'-4"	40#	

FINISH	SSPC SP-10		
MATERIAL	AASHTO M270 (ASTM A709) GR. 50W		
HOLES			
ELECTRODES	PER WELD PROCEDURE		
WELDS	PER WELD PROCEDURE		
SURFACE PREP			

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 ETC	MISC DETAILS - SPLICES & SPLICE PL.	PROJECT NO. 14-178
DATE FEB 2015	US ROUTE 4 over CONNECTICUT RIVER LEBANON, NH - HARTFORD, VT (NH PROJECT 14957)	
CHECKED	SC: Cold River Bridges, LLC	DWG. NO. M3
DATE FEB 2015		