Vermont Agency of Transportation
RECEIVED
ON: March 21, 2016
and Checked for
CONFORMANCE
BY: ABC DATE:

FIELD BOLT LIST — A325 Type 1 BOLTS (MECH. GALV.)

LINE	NO REQ'D.	BOLT DIAM.	BOLT LEN.	BOLTS /CONN.	# OF CONN.	GRIP	THICKNESS OF PCS. CONNECTED						WASH CODE	PIECES CONNECTED AND REMARKS
1														CONNECTIONS AT THE ENDS
2														OF FLOORBEAMS:
3														END CONN. ANGLES TO WEBS
4	96	7/8	3 1/2	12	8	2 1/16	3/4	9/16	3/4				L1	@ 16FB0,16FB8,17FB9 & 17FB19
5														TOP & BTM ANGLES TO FLANGES
6	128	7/8	3 1/4	8	16	1 5/8	3/4	7/8					L1	@ 16FB0,16FB8,17FB9 & 17FB19
7														END CONN. ANGLES TO WEBS
8														@ 18FB1,18FB7,18FB10,18FB18
9														19FB3,19FB5,19FB12,19FB16
10	90	7/8	3	5	18	1 9/16	1/2	9/16	1/2				L1	& 19FB14
11														TOP WT's TO TOP FLANGES
12														@ 18FB1,18FB7,18FB10,18FB18
13														19FB3,19FB5,19FB12,19FB16
14	144	7/8	3	8	18	1 3/8	1/2	7/8					L1	& 19FB14
15														BTM WT's TO BTM FLANGES&FILL
16														@ 18FB1,18FB7,18FB10,18FB18
17														19FB3,19FB5,19FB12,19FB16
18	144	7/8	3 1/4	8	18	1 5/8	1/2	1/4	7/8				L1	& 19FB14
19														END CONN. ANGLES TO WEBS
20														@ 20FB2,20FB6,21FB11,21FB17
21	70	7/8	3	5	14	1 9/16	1/2	9/16	1/2				L1	22FB4,22FB13 & 22FB15
22														TOP & BTM WT's TO FLANGES
23														@ 20FB2,20FB6,21FB11,21FB17
24	112	7/8	3	4	28	1 3/8	1/2	7/8					L1	22FB4,22FB13 & 22FB15
25														
26														CONNECTIONS AT JOINT L0:
27														DIAGONALS 29L0U1N &
28	104	7/8	4	26	4	2 9/16	1 9/16	1					L1	14L0U1S TO GUSSET PLATE
29														FLBM 16FB0 TO GUSSET PLATE
30	80	7/8	4	40	2	2 7/16	3/4	1	11/16				L1	& POST AT (N & S)
31	8	7/8	3 3/4	4	2	2 5/16	5/8	1	11/16				L1	BRKT 24BK1 AT NORTH SIDE
32	4	7/8	3 3/4	4	1	2 5/16	5/8	1	11/16				L1	BRKT 27BK1 AT SOUTH SIDE
33														
34														CONNECTIONS AT JOINT L1:
35														VERTICALS 12V1N & 12V1S
36	40	7/8	3	20	2	1 7/16	1/2	3/16	3/4				L1	TO GUSSET PLATE & FILL
37														FLBM 18FB1 TOP WT TO GUSSET
38	16	7/8	3 3/4	8	2	2 1/4	13/16	3/4	3/16	1/2			L1	& VERTICALS (N & S)
39														FLBM 18FB1 ANGLES TO GUSSET
40	16	7/8	3 1/2	8	2	1 15/16	1/2	3/4	3/16	1/2			L1	& VERTICALS (N & S)
41														VERTICALS 12V1N & 12V1S
42	16	7/8	3	8	2	1 7/16	1/2	3/4	3/16				L1	TO G.PL & FILL @ FLBM 18FB1
43														FLBM 18FB1 ANGLES TO GUSSET
44	4	7/8	3 1/2	2	2	1 15/16	1/2	3/4	11/16				L1	& CHORD (N & S)
45														FLBM 18FB1 BTM WT TO GUSSET
46	16	7/8	3 3/4	8	2	2 1/4	13/16	3/4	11/16				L1	& CHORD (N & S)
47	4	7/8	2 3/4	4	1	1 1/8	5/8	1/2					L1	BRKT 26BK1 AT NORTH SIDE(T)
48	4	7/8	3 1/2	4	1	2 1/16	5/8	3/4	11/16				L1	BRKT 26BK1 AT NORTH SIDE(B)
49	4	7/8	3 1/2	4	1	2 1/16	5/8	3/4	11/16				L1	BRKT 27BK3 AT SOUTH SIDE
50														
51														CONNECTIONS AT JOINT L2:
52														DIAGONALS 15L2U1N &
53	56	7/8	3 1/2	14	4	1 15/16	5/8	1/16	1 1/4				L1	15L2U1S TO GUSSET & FILL
54														DIAGONALS 15L2U3N &
55	56	7/8	3 1/2	14	4	1 15/16	5/8	1/16	1 1/4				L1	15L2U3S TO GUSSET & FILL
56														FLBM 20FB2 TOP WT TO GUSSET
57	8	7/8	4 1/4	4	2	2 3/4	13/16	1 1/4	1/16	5/8			L1	& BLOCKING POST (N & S)
58														FLBM 20FB2 ANGLES TO GUSSET
59	16	7/8	4	8	2	2 7/16	1/2	1 1/4	1/16	5/8			L1	& BLOCKING POST (N & S)
60														

WASHER CODES
L1: 1 Flat, 1 Load Ind.
L1W @ head,hard wa. @ nut

FIELD BOLT LIST — A325 Type 1 BOLTS (MECH. GALV.)

LINE	NO REQ'D.	BOLT DIAM.	BOLT LEN.	BOLTS /CONN.	# OF CONN.	GRIP	THICKNESS OF PCS. CONNECTED						WASH CODE	PIECES CONNECTED AND REMARKS
61														
62														FLBM 20FB2 ANGLES TO GUSSET
63	4	7/8	4	2	2	2 7/16	1/2	1 1/4	11/16				L1	& CHORD (N & S)
64														FLBM 20FB2 BTM WT TO GUSSET
65	8	7/8	4 1/4	4	2	2 3/4	13/16	1 1/4	11/16				L1	& CHORD (N & S)
66	4	7/8	2 3/4	4	1	1 1/4	5/8	5/8					L1	BRKT 24BK2 AT NORTH SIDE(T)
67	4	7/8	4	4	1	2 9/16	5/8	1 1/4	11/16				L1	BRKT 24BK2 AT NORTH SIDE(B)
68	4	7/8	4	4	1	2 9/16	5/8	1 1/4	11/16				L1	BRKT 27BK5 AT SOUTH SIDE
69														
70														CONNECTIONS AT JOINT L3:
71														VERTICALS 28V3N & 13V3S
72	40	7/8	3	20	2	1 7/16	1/2	3/16	3/4				L1	TO GUSSET PLATE & FILL
73														FLBM 19FB3 TOP WT TO GUSSET
74	16	7/8	3 3/4	8	2	2 1/4	13/16	3/4	3/16	1/2			L1	& VERTICALS (N & S)
75														FLBM 19FB3 ANGLES TO GUSSET
76	16	7/8	3 1/2	8	2	1 15/16	1/2	3/4	3/16	1/2			L1	& VERTICALS (N & S)
77														VERTICALS 28V3N & 13V3S
78	16	7/8	3	8	2	1 7/16	1/2	3/4	3/16				L1	TO G.PL & FILL @ FLBM 19FB3
79														FLBM 19FB3 ANGLES TO GUSSET
80	4	7/8	3 1/2	2	2	1 15/16	1/2	3/4	11/16				L1	& CHORD (N & S)
81														FLBM 19FB3 BTM WT TO GUSSET
82	16	7/8	3 3/4	8	2	2 1/4	13/16	3/4	11/16				L1	& CHORD (N & S)
83	4	7/8	2 3/4	4	1	1 1/8	5/8	1/2					L1	BRKT 26BK1 AT NORTH SIDE(T)
84	4	7/8	3 1/2	4	1	2 1/16	5/8	3/4	11/16				L1	BRKT 26BK1 AT NORTH SIDE(B)
85	4	7/8	3 1/2	4	1	2 1/16	5/8	3/4	11/16				L1	BRKT 27BK3 AT SOUTH SIDE
86														
87														CONNECTIONS AT JOINT L4:
88														DIAGONALS 15L4U3N &
89	56	7/8	3 1/2	14	4	1 15/16	5/8	1/16	1 1/4				L1	15L4U3S TO GUSSET & FILL
90														DIAGONALS 15L4U5N &
91	56	7/8	3 1/2	14	4	1 15/16	5/8	1/16	1 1/4				L1	15L4U5S TO GUSSET & FILL
92														FLBM 22FB4 TOP WT TO GUSSET
93	8	7/8	4 1/4	4	2	2 3/4	13/16	1 1/4	1/16	5/8			L1	& BLOCKING POST (N & S)
94														FLBM 22FB4 ANGLES TO GUSSET
95	16	7/8	4	8	2	2 7/16	1/2	1 1/4	1/16	5/8			L1	& BLOCKING POST (N & S)
96														FLBM 22FB4 ANGLES TO GUSSET
97	4	7/8	4	2	2	2 7/16	1/2	1 1/4	11/16				L1	& CHORD (N & S)
98														FLBM 22FB4 BTM WT TO GUSSET
99	8	7/8	4 1/4	4	2	2 3/4	13/16	1 1/4	11/16				L1	& CHORD (N & S)
100	4	7/8	2 3/4	4	1	1 1/4	5/8	5/8					L1	BRKT 24BK2 AT NORTH SIDE(T)
101	4	7/8	4	4	1	2 9/16	5/8	1 1/4	11/16				L1	BRKT 24BK2 AT NORTH SIDE(B)
102	4	7/8	4	4	1	2 9/16	5/8	1 1/4	11/16				L1	BRKT 27BK5 AT SOUTH SIDE
103														
104														CONNECTIONS AT JOINT L5:
105														VERTICALS 28V5N & 13V5S
106	40	7/8	3	20	2	1 7/16	1/2	3/16	3/4				L1	TO GUSSET PLATE & FILL
107														FLBM 19FB5 TOP WT TO GUSSET
108	16	7/8	3 3/4	8	2	2 1/4	13/16	3/4	3/16	1/2			L1	& VERTICALS (N & S)
109														FLBM 19FB5 ANGLES TO GUSSET
110	16	7/8	3 1/2	8	2	1 15/16	1/2	3/4	3/16	1/2			L1	& VERTICALS (N & S)
111														VERTICALS 28V5N & 13V5S
112	16	7/8	3	8	2	1 7/16	1/2	3/4	3/16				L1	TO G.PL & FILL @ FLBM 19FB5
113														FLBM 19FB5 ANGLES TO GUSSET
114	4	7/8	3 1/2	2	2	1 15/16	1/2	3/4	11/16				L1	& CHORD (N & S)
115														FLBM 19FB5 BTM WT TO GUSSET
116	16	7/8	3 3/4	8	2	2 1/4	13/16	3/4	11/16				L1	& CHORD (N & S)
117	4	7/8	2 3/4	4	1	1 1/8	5/8	1/2					L1	BRKT 26BK1 AT NORTH SIDE(T)
118	4	7/8	3 1/2	4	1	2 1/16	5/8	3/4	11/16				L1	BRKT 26BK1 AT NORTH SIDE(B)
119	4	7/8	3 1/2	4	1	2 1/16	5/8	3/4	11/16				L1	BRKT 27BK3 AT SOUTH SIDE
120														

WASHER CODES
L1: 1 Flat, 1 Load Ind.

FIELD BOLT LIST — A325 Type 1 BOLTS (MECH. GALV.)

LINE	NO REQ'D.	BOLT DIAM.	BOLT LEN.	BOLTS /CONN.	# OF CONN.	GRIP	THICKNESS OF PCS. CONNECTED						WASH CODE	PIECES CONNECTED AND REMARKS
121														CONNECTIONS AT JOINT L6:
122														DIAGONALS 15L6U5N &
123	56	7/8	3 1/2	14	4	1 15/16	5/8	1/16	1 1/4				L1	15L6U5S TO GUSSET & FILL
124														DIAGONALS 15L6U7N &
125	56	7/8	3 1/2	14	4	1 15/16	5/8	1/16	1 1/4				L1	15L6U7S TO GUSSET & FILL
126														FLBM 20FB6 TOP WT TO GUSSET
127	8	7/8	4 1/4	4	2	2 3/4	13/16	1 1/4	1/16	5/8			L1	& BLOCKING POST (N & S)
128														FLBM 20FB6 ANGLES TO GUSSET
129	16	7/8	4	8	2	2 7/16	1/2	1 1/4	1/16	5/8			L1	& BLOCKING POST (N & S)
130														FLBM 20FB6 ANGLES TO GUSSET
131	4	7/8	4	2	2	2 7/16	1/2	1 1/4	11/16				L1	& CHORD (N & S)
132														FLBM 20FB6 BTM WT TO GUSSET
133	8	7/8	4 1/4	4	2	2 3/4	13/16	1 1/4	11/16				L1	& CHORD (N & S)
134	4	7/8	2 3/4	4	1	1 1/4	5/8	5/8					L1	BRKT 24BK2 AT NORTH SIDE(T)
135	4	7/8	4	4	1	2 9/16	5/8	1 1/4	11/16				L1	BRKT 24BK2 AT NORTH SIDE(B)
136	4	7/8	4	4	1	2 9/16	5/8	1 1/4	11/16				L1	BRKT 27BK5 AT SOUTH SIDE
137														
138														CONNECTIONS AT JOINT L7:
139														VERTICALS 12V7N & 28V7S
140	40	7/8	3	20	2	1 7/16	1/2	3/16	3/4				L1	TO GUSSET PLATE & FILL
141														FLBM 18FB7 TOP WT TO GUSSET
142	16	7/8	3 3/4	8	2	2 1/4	13/16	3/4	3/16	1/2			L1	& VERTICALS (N & S)
143														FLBM 18FB7 ANGLES TO GUSSET
144	16	7/8	3 1/2	8	2	1 15/16	1/2	3/4	3/16	1/2			L1	& VERTICALS (N & S)
145														VERTICALS 12V7N & 28V7S
146	16	7/8	3	8	2	1 7/16	1/2	3/4	3/16				L1	TO G.PL & FILL @ FLBM 18FB7
147														FLBM 18FB7 ANGLES TO GUSSET
148	4	7/8	3 1/2	2	2	1 15/16	1/2	3/4	11/16				L1	& CHORD (N & S)
149														FLBM 18FB7 BTM WT TO GUSSET
150	16	7/8	3 3/4	8	2	2 1/4	13/16	3/4	11/16				L1	& CHORD (N & S)
151	4	7/8	2 3/4	4	1	1 1/8	5/8	1/2					L1	BRKT 26BK1 AT NORTH SIDE(T)
152	4	7/8	3 1/2	4	1	2 1/16	5/8	3/4	11/16				L1	BRKT 26BK1 AT NORTH SIDE(B)
153	4	7/8	3 1/2	4	1	2 1/16	5/8	3/4	11/16				L1	BRKT 27BK3 AT SOUTH SIDE
154														
155														CONNECTIONS AT JOINT L8:
156														DIAGONALS 29L8U7N &
157	104	7/8	4	26	4	2 9/16	1 9/16	1					L1	14L8U7S TO GUSSET PLATE
158														FLBM 16FB8 TO GUSSET PLATE
159	80	7/8	4	40	2	2 7/16	3/4	1	11/16				L1	& POST AT (N & S)
160	8	7/8	3 3/4	4	2	2 5/16	5/8	1	11/16				L1	BRKT 24BK1 AT NORTH SIDE
161	4	7/8	3 3/4	4	1	2 5/16	5/8	1	11/16				L1	BRKT 27BK1 AT SOUTH SIDE
162														

WASHER CODES
L1: 1 Flat, 1 Load Ind.

FIELD BOLT LIST — A325 Type 1 BOLTS (MECH. GALV.)

LINE	NO REQ'D.	BOLT DIAM.	BOLT LEN.	BOLTS /CONN.	# OF CONN.	GRIP	THICKNESS OF PCS. CONNECTED						WASH CODE	PIECES CONNECTED AND REMARKS
163														CONNECTIONS AT JOINT U1:
164														TOP CHORDS 9U1U3N &
165	108	7/8	4 1/4	27	4	2 13/16	1 9/16	1 1/4					L1	9U1U3S TO GUSSET PLATE
166														DIAGONALS 29L0U1N &
167	92	7/8	4 1/4	23	4	2 13/16	1 9/16	1 1/4					L1	14L0U1S TO GUSSET PLATE
168														DIAGONALS 15L2U1N &
169	72	7/8	3 1/2	18	4	1 15/16	5/8	1/16	1 1/4				L1	15L2U1S TO GUSSET PL & FILL
170														VERTICALS 12V1N & 12V1S
171	104	7/8	3 1/2	26	4	1 15/16	1/2	3/16	1 1/4				L1	TO GUSSET PLATE & FILL
172														
173														CONNECTIONS AT JOINT U3:
174														TOP CHORDS 9U1U3N &
175	112	7/8	4 1/2	28	4	3 1/16	1 9/16	3/4	3/4				L1	9U1U3S TO G. PL & CHORD PL
176														TOP CHORDS 9U3U5N &
177	112	7/8	4 1/2	28	4	3 1/16	1 9/16	3/4	3/4				L1	9U3U5S TO G. PL & CHORD PL
178														DIAGONALS 15L2U3N &
179	56	7/8	3	14	4	1 7/16	5/8	1/16	3/4				L1	15L2U3S TO GUSSET PL & FILL
180														DIAGONALS 15L4U3N &
181	56	7/8	3	14	4	1 7/16	5/8	1/16	3/4				L1	15L4U3S TO GUSSET PL & FILL
182														VERTICALS 28V3N & 13V3S
183	80	7/8	3	20	4	1 7/16	1/2	3/16	3/4				L1	TO GUSSET PLATE & FILL
184														
185														CONNECTIONS AT JOINT U5:
186														TOP CHORDS 9U3U5N &
187	112	7/8	4 1/2	28	4	3 1/16	1 9/16	3/4	3/4				L1	9U3U5S TO G. PL & CHORD PL
188														TOP CHORDS 9U7U5N &
189	112	7/8	4 1/2	28	4	3 1/16	1 9/16	3/4	3/4				L1	9U7U5S TO G. PL & CHORD PL
190														DIAGONALS 15L4U5N &
191	56	7/8	3	14	4	1 7/16	5/8	1/16	3/4				L1	15L4U5S TO GUSSET PL & FILL
192														DIAGONALS 15L6U5N &
193	56	7/8	3	14	4	1 7/16	5/8	1/16	3/4				L1	15L6U5S TO GUSSET PL & FILL
194														VERTICALS 28V5N & 13V5S
195	80	7/8	3	20	4	1 7/16	1/2	3/16	3/4				L1	TO GUSSET PLATE & FILL
196														
197														CONNECTIONS AT JOINT U7:
198														TOP CHORDS 9U7U5N &
199	108	7/8	4 1/4	27	4	2 13/16	1 9/16	1 1/4					L1	9U7U5S TO GUSSET PLATE
200														DIAGONALS 29L8U7N &
201	92	7/8	4 1/4	23	4	2 13/16	1 9/16	1 1/4					L1	14L8U7S TO GUSSET PLATE
202														DIAGONALS 15L6U7N &
203	72	7/8	3 1/2	18	4	1 15/16	5/8	1/16	1 1/4				L1	15L6U7S TO GUSSET PL & FILL
204														VERTICALS 12V7N & 28V7S
205	104	7/8	3 1/2	26	4	1 15/16	1/2	3/16	1 1/4				L1	TO GUSSET PLATE & FILL

WASHER CODES
L1: 1 Flat, 1 Load Ind.

[X] NO EXCEPTION TAKEN
[ ] MAKE CORRECTIONS NOTED
[ ] REJECTED
[ ] REVISE AND RESUBMIT
[ ] SUBMIT SPECIFIED ITEM

CHECKING IS ONLY FOR THE GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF THE WORK.

CHA

DATE 1/29/2016 BY J. Najdowski

ERECTOR NOTE:

BOLT ORIENTATION SHALL BE SUCH THAT THE BOLT HEAD SHALL BE ON THE OUTSIDE OR EXPOSED SIDE OF THE STEEL MEMBER WHENEVER POSSIBLE.

ERECTOR NOTE:

ALL BOLTS MUST BE LOCATED IN ACCORDANCE WITH THE FIELD BOLT LIST. CASCO BAY STEEL STRUCTURES, INC. WILL NOT BE RESPONSIBLE FOR FURNISHING ADDITIONAL BOLTS OR ANY OTHER RELATED COSTS OR DAMAGES RESULTING FROM IMPROPER LOCATION OF BOLTS.

NOTE:

FOR GENERAL NOTES SEE DRAWING GN1.

WORK THIS DWG. WITH DWG. E1, E2, E3, E5 & E6

REV.	DATE	REMARKS	DWN	CHK	APVL	SHOP
0		~				

MATERIAL: | SURFACE PREP. & PAINT: | HOLES: | SHOP BOLTS:

DESCRIPTION: FIELD BOLTS

CASCO BAY STEEL STRUCTURES, INC.
1 WALLACE AVE., SOUTH PORTLAND, ME 04106
PHONE (207) 780-6722 FAX. (207) 780-6726
TENSOR 3285

STRUCTURE:	TH-10 OVER OTTER CREEK PONY TRUSS BRIDGE	DRAWN: RB	DATE: 1/5/16
		CHKD: WJL	DATE: 1/20/16
LOCATION:	RUTLAND CITY, VERMONT	JOB NO.	DWG NO.
PROJ NO.	BRF 3000 (19)	598	E4
CUSTOMER:	KUBRICKY CONSTRUCTION CORP.		REV. △

WJL Thu, Jan 21, 2016 03:46:23 PM /users/jobs/3285/E4 : Rev0