

# Casco Bay Steel Structures, Inc.

## WELDING PROCEDURE SPECIFICATION

Material specification: ASTM Gr 50 (345) (FCAW)  
 Welding process: Flux Core Arc Welding  
 Manual or machine: Semi AUTO  
 Position of welding: Flat & Horizontal  
 Filler metal specification: AWS 5-21  
 Filler metal classification: E71T-1 - Lincoln Ultracore 71A95 DUL  
 Flux: MA  
 Shielding gas: 75% AR / 25% CO<sub>2</sub> Flow rate: 35 CFH + 8/-4, Etes. 5/8" +/-  
 Single or multiple pass: Single & Multiple  
 Single or multiple arc: Single  
 Welding current: DC  
 Polarity: DC EP  
 Welding progression: See Details  
 Root treatment: blast clean - wire brush - area free of slag - rust & moisture  
 Preheat and interpass temperature: See Table  
 Post heat temperature: AS Req.  
 Heat Input: Min 22.4 kJ/in Max 35.2 kJ/in PQR # FCM-SP2, 32 kJ/in

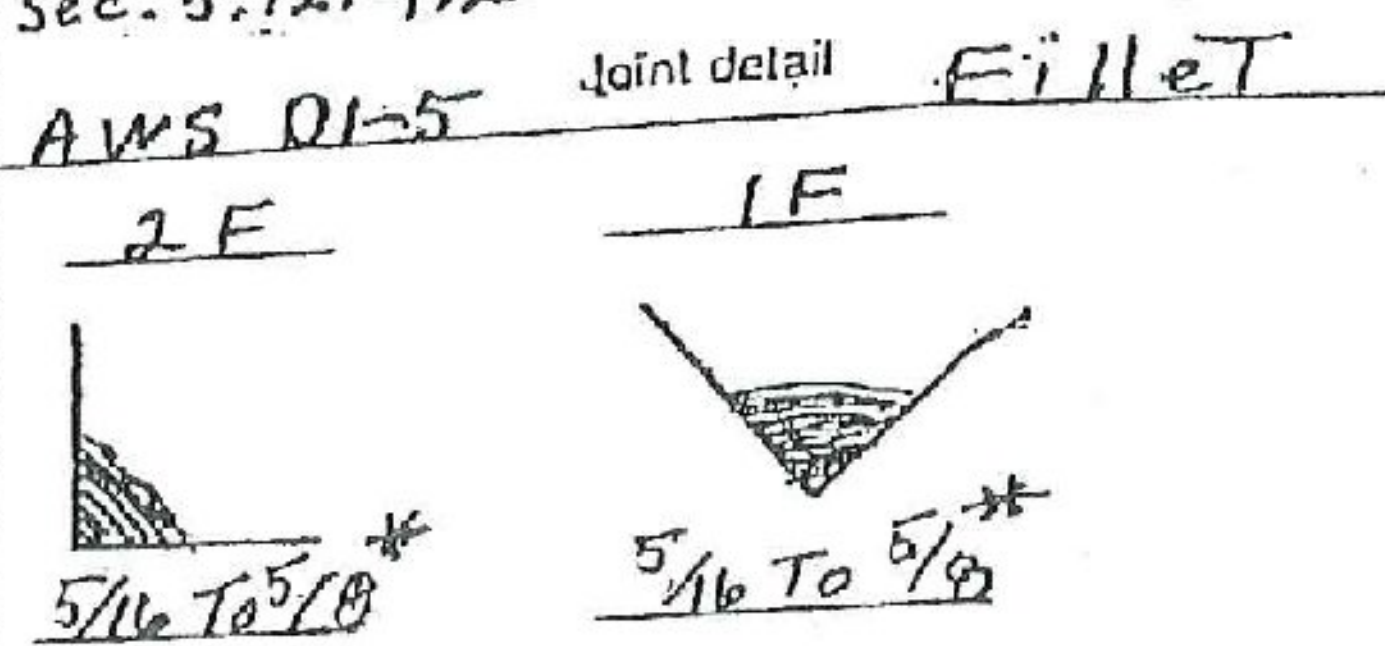
Minimum Preheat and Interpass Temperature, °C [°F]

Welding Process (Base Metal)	Thickness of Thickest Part at Point of Welding, mm [in]			
	To 20 mm [3/4 in] incl.	Over 20 mm to 40 mm [1-1/2 in] incl.	Over 40 mm to 65 mm [2-1/2 in] incl.	Over 65 mm [2-1/2 in]
SAW, SMAW, FCAW, SMAW (M270M [A770]) GMAW (A 709) Cr. 250 [36], 345 [50], 345W GMAW (A 709) Cr. 250 [36], 345 [50], 345W	10 [50]	20 [70]	63 [150]	110 [225]

Vermont AOT  
 Cambridge Br # 21  
 Proj NO. ARE-027-14  
 CBS-524

FCM-Gr50 150<sup>OF</sup> 200<sup>OF</sup> 235<sup>OF</sup> 325<sup>OF</sup> -H8  
 WELDING PROCEDURE

Max Interpass 400<sup>OF</sup>

Pass no.	Electrode size	Welding current		Travel speed	Sec. 5.12.4.2 AWS D1.5 Joint detail
		Amperes	Volts		
1 TO 4	1/16	297	29	16.4	Fillet 2F IF 
		326	31	18.9	
		To	To	To	
		267.3	27	13.9	

\* Weld size may use multiple Pass

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 VTrans Received OK BY JAC  
 Resubmit BY APPROVED DATE 4/15/13

This procedure may vary due to fabrication sequence, joint pass size, etc. unless the location of variables given in contract documents.

M.C. ST. VT. AOT  
 Casco Bay Steel  
 1-11-2013