

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION 3G-4G PLATE CERTIFICATION TEST (BRIDGE WELDER) WELDING PROCEDURE SPECIFICATION (WPS) AWS D1.5

Specifications & Codes: NCDOT Standard Specifications/AASHTO/AWS D1.5, Section 2, 5 and 12

Material Specifications: ASTM A-36, 3/8" Thickness

Welding Process: SMAW Manual or Semi- Automatic or Automatic: Manual

Filler Metal Specification: AWS A5.1 Classification: E-7018

Manufacturer: NCDOT Approved Electrodes Single or Multiple Pass Multiple Position of Weld Vertical & Overhead

Welding Current: DC Polarity: Positive Progression: Vertical - up

Root Treatment: N/A

Preheat Temp: 50° minimum Interpass: 450° maximum Post Heat: N/A

Pass Num.	Electrode Size	Welding Current		Travel Speed		Joint Details
		Amperes	Volts			
All	1/8"	90-150	20-23	6-9 ipm		SEE ATTACHMENT

PREHEAT	
Thickness	Min. Temp.
Up to 3/4"	50°

COMMENTS:

The backing bar must be in close contact with the test material.

Remove all rust and mill scale within one inch of the area to be welded prior to fit-up. Remove all slag and spatter between passes. Clean the completed weld of all debris, slag and spatter.

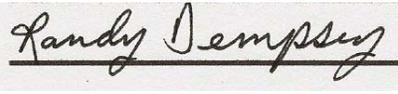
Fill the groove to the full cross section of the member.

WPS Description 3G-4G Plate Certification Test

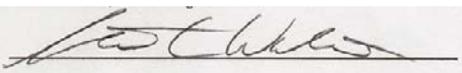
WPS #: 040209009

Revision #: 3

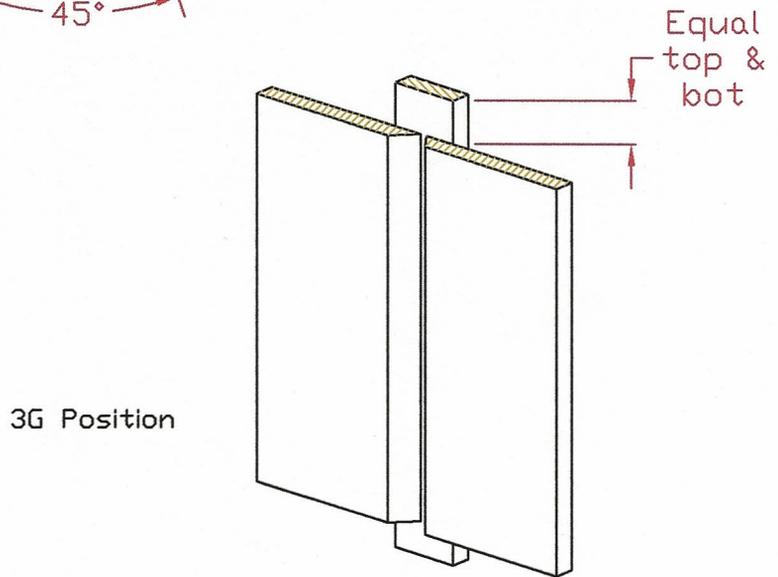
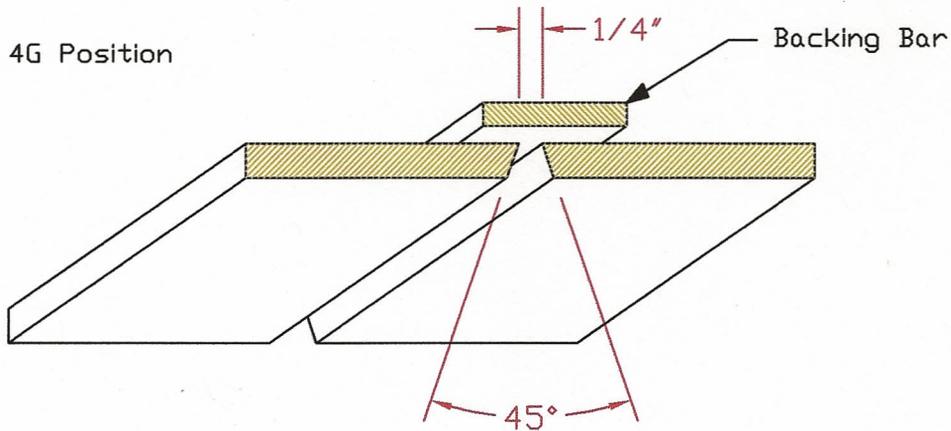
Written By: Randy Dempsey, CWI/CWE, Transportation Technician IV



Signature: _____
Authorized By: Steve Walton, Metals Engineer

Signature: _____


WPS 3G-4G PLATE CERTIFICATION TEST 040209009 R3
JOINT DETAIL ATTACHMENT

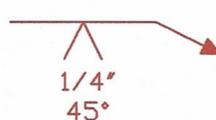


3G-4G GROOVE WELD
JOINT DETAILS

Weld Symbol definitions per AWS A2.4:2007



BACKING
BAR



BEVEL WELD, ARROW
SIDE with BEVEL ANGLE
& ROOT OPENING

Illustrations for 3G-4G Plate Certification (Bridge Welder)



Coupon Fit-up.



Completed weld.



NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)