

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION CONCRETE GIRDER SIP ANGLE 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, A572, (A709-36, 50), (M270-GR250, 345) Unlimited 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 single Position of Weld Flat, Horizontal

Welding Current: DC Polarity: Positive Progression: N/A

Root Treatment: N/A

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

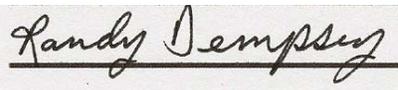
Pass Num.	Electrode Size	Welding Current		Travel Speed		Joint Details
		Amperes	Volts			
All	1/8"	90-150	20-23	6-9 ipm		SEE ATTACHMENT

PREHEAT	
Thickness	Min. Temp.
Up to 3/4"	50°
Over 3/4" to 1 1/2"	70°
Over 1 1/2" to 2 1/2"	150°
Over 2 1/2"	225°

COMMENTS:
Remove all coating, rust, dirt and mill scale within one inch of the area to be welded prior to fit-up. Repair all weld discontinuities. Clean the completed weld of all debris, slag and spatter.

WPS Description: Concrete Girder SIP Angle

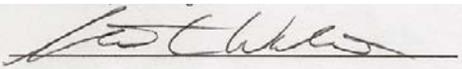
Written By: Randy Dempsey, CWI/CWE, TT IV

Signature: 

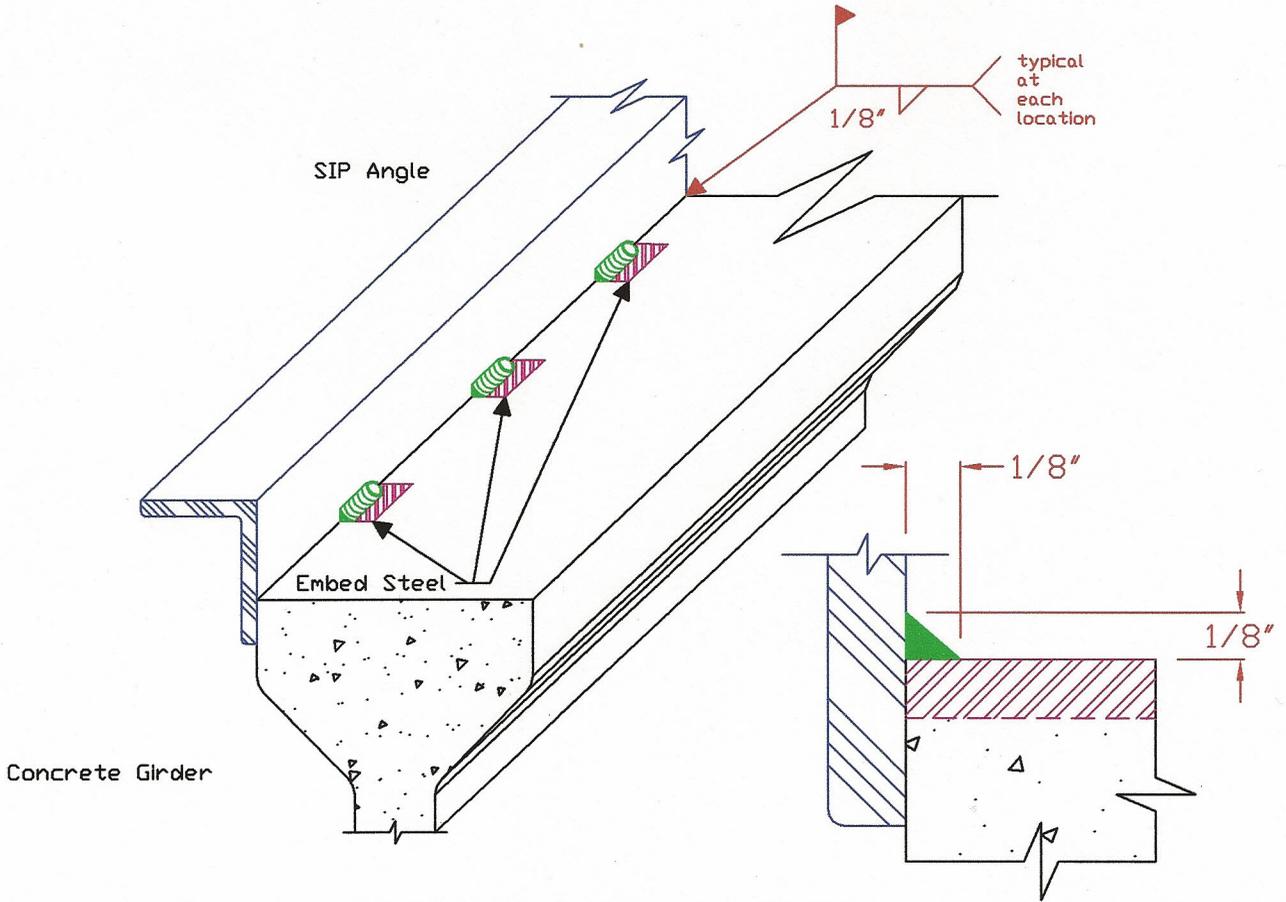
WPS #: 011609006

Authorized By: Steve Walton, Metals Engineer

Revision #: 4

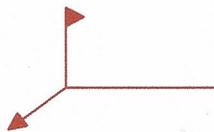
Signature: 

WPS CONCRETE GIRDER SIP ANGLE 011609006 R4
JOINT DETAIL ATTACHMENT

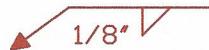


CONCRETE GIRDER
SIP ANGLE DETAILS

Weld Symbol definitions per AWS A2.4:2007



FIELD WELD SYMBOL



FILLET WELD, ARROW
SIDE with WELD SIZE

Illustrations for welding SIP angle to the embed steel on pre-stressed concrete girders.



Unacceptable weld (inadequate length)



Acceptable weld (slag should be removed)

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)