CONSTRUCTION LEADERS

LETTER OF TRANSMITTAL			
DATE:	**August 25, 2015**	PCL JOB NO:	**5515002**
ATTN:	**Chris Barker**	TRANSMITTAL NO:	**092**

To: **State of Vermont Agency of Transportation**
One National Life Drive
Montpelier, VT 05633-5001
(802) 828-0053

Re: Hartford Lateral Slide
Project No.: IM 091-2(79)
Contract ID.: 12A132 County: Windsor PCL FILE NO: 5515002-057

WE ARE SENDING X Attached ____ Under separate cover via **Email & SP** the following:
____ Shop drawings ____ Prints ____ Plans ____ Samples X Specifications
____ Copy of Letter ____ Change Order ____ Other

COPIES	SPEC.	REVISION	DESCRIPTION
1	**506**		**Welding Procedure Specification (WPS) for Welding of Permanent Girders to Bearing Sole Plates**

TRANSMITTED for as checked below:

X For approval ____ Approved as submitted ____ Resubmit X Copies for approval
____ For your use ____ Approved as noted ____ Submit ____ Copies for distribution
____ As requested ____ Returned for corrections ____ Return ____ Corrected prints
____ For review and comment

Remarks:

Welding will be performed by Chris Bodisher (PCL) and Ralph Darrah (Ralph A. Darrah Welding).

Please return an email of this approved submittal to Erich Heymann (ewheymann@pcl.com) and Jeremy Mackling (jmackling@pcl.com).

We request the review and return of this submittal within 1 day. Please advise if this request cannot be met so we can plan accordingly.

By: **Erich Heymann,** Project Engineer

COPY TO: Project Files

CONSTRUCTION LEADERS

SUBMITTAL NO. : 57
Welding Procedure Specification (WPS)

Item No.	Specification	Description
1	506	Welding Procedure Specification (WPS) for Welding of Permanent Girders to Bearing Sole Plates

PROJECT:
HARTFORD LATERAL SLIDE
PROJECT NO.: IM 091-2(79)
CONTRACT ID.: 12A132

OWNER:
STATE OF VERMONT AGENCY OF TRANSPORTATION

ENGINEER OF RECORD:
STATE OF VERMONT AGENCY OF TRANSPORTATION

CONTRACTOR:
PCL CIVIL CONSTRUCTORS, INC.

AUGUST 25, 2015

3810 Northdale Blvd., Suite 200; Tampa, FL • (813) 264-9500 • (813) 264-6689 (fax)

WELDING PROCEDURE SPECIFICATION (WPS)
PREQUALIFIED ☐ QUALIFIED BY TESTING ☐
or PROCEDURE QUALIFICATION RECORDS (PQR) Yes ☐
AASHTO/AWS D1.5 Qualification Type 5.12.1 ☐ – 5.12.2 ☐ – 5.12.4 ☐

Contractor/
Organization PCL CIVIL CONSTRUCTORS, INC.
Welding Process(es) SMAW
Type: Manual ☒ Semiautomatic ☐
Mechanized ☐ Automatic ☐
Tandem ☐ Parallel ☐

JOINT DESIGN USED FILLET
Single ☒ Double Weld ☐
Backing: Yes ☐ No ☐ Material _____
Root Opening _____ Root Face Dimension _____
Groove Angle _____ Radius (J–U) _____
Backgouging: Yes ☐ No ☐ Method _____
Root Treatment _____

BASE METALS
Material Spec. AASHTO M270/270M
Type or Grade 50W (GIRDER), 36 (SOLE PLATE)
Thickness: Groove N/A Fillet _____
Diameter (Pipe) N/A

FILLER METALS
AWS Specification ANSI/AWS A5.1/ASMESFA5.1
AWS Classification E8018 C3
Manufacturer Trade Name EXCALIBUR

SHIELDING
Flux N/A Mfg. Trade Name _____
Electrode-Flux (Class) _____
Gas Composition _____
Flow Rate _____ Gas Cup Size _____

Identification Cert #1507806W
Revision _____ Date 08/25 By Christopher Bellisher
Authorized by Christopher Bellisher Date 08/25
Supporting PQR No.(s) _____

POSITION
Position of Groove _____ Fillet HORIZONTAL
Vertical Progression: Up ☐ Down ☐ N/A

ELECTRICAL CHARACTERISTICS
Transfer Mode (GMAW): Globular ☐ Spray ☐
Current: AC ☐ DCEP ☒ DCEN ☐ Pulsed ☐
Electrical Stick Out _____
Other _____

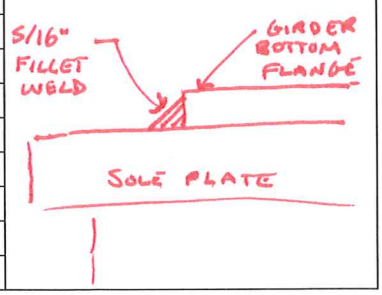
TECHNIQUE
Stringer or Weave Bead STRINGER
Multi-pass or Single Pass (per side) MULTI
Number of Electrodes AS REQUIRED
Electrode Spacing: Longitudinal _____
Lateral _____ Angle _____
Interpass Cleaning HAND OR POWER TOOLS

PREHEAT
Preheat Temp., Min. 70°F 110°F tack
Interpass Temp., Min. 70°F
Interpass Temp., Max. 500°F

POSTWELD HEAT TREATMENT
Temp. _____ Hold Time _____
Heating/Cooling Rate _____

HEAT INPUT
Calculated Heat Input Value: kJ/in ☐ kJ/mm ☐
Max. Heat Input _____ Min. Heat Input _____

WELDING PROCEDURE

Pass or Weld Layer(s)	Process	Filler Metals	Current		Volts	Travel Speed	Joint Details
		Diam.	Type & Polarity	Amps or Wire Feed Speed			
	SMAW	5/32	DCEP	190 AMPS	29.8-32		

Form N-2

Form N-2—Sample Welding Procedure Specification