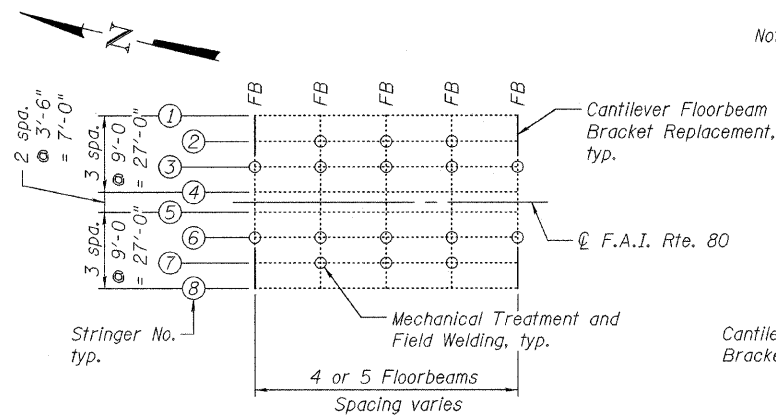
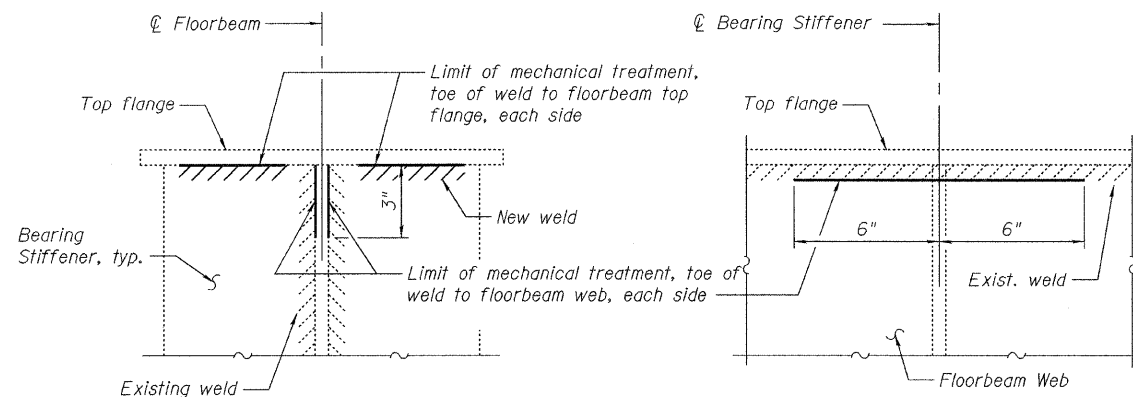


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



**PARTIAL FRAMING PLAN SHOWING
MECHANICAL TREATMENT AND
FIELD WELDING LOCATIONS**
414 Locations

Note:
Mechanical Treatment and Field Welding at Floorbeams along Stringer lines 2, 3, 6 and 7 as shown.



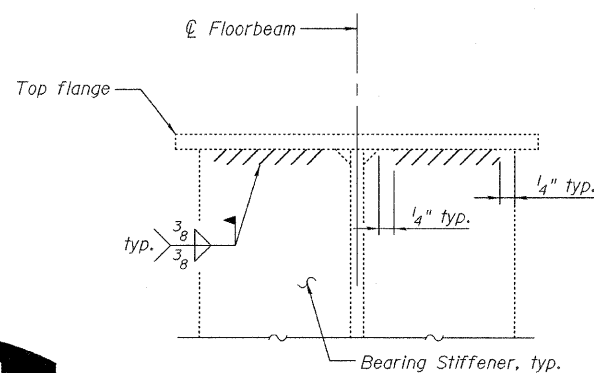
SECTION

Note: Stringer not shown.

ELEVATION

Note: Stringer not shown.

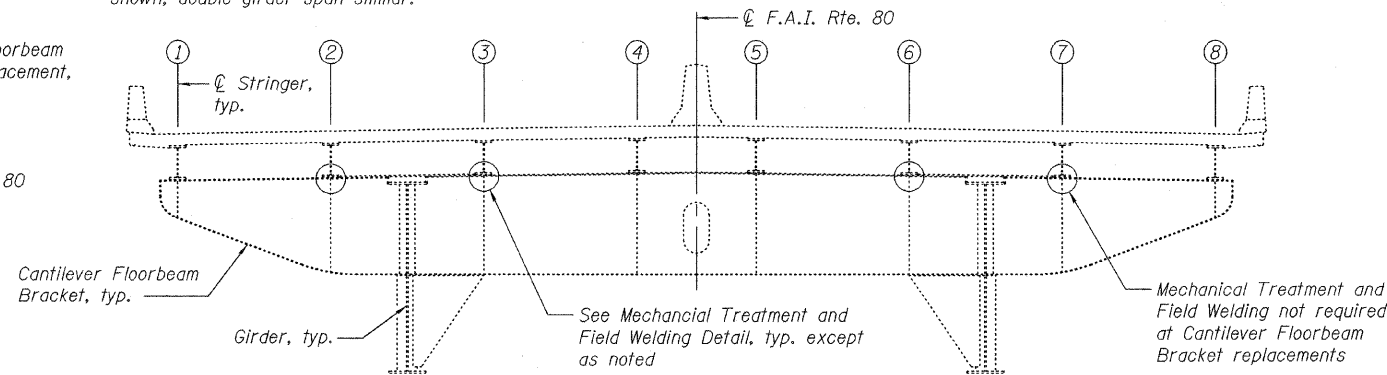
**DETAIL OF MECHANICAL TREATMENT
OF STEEL WELDS**



FIELD WELDING DETAIL

Note: Stringer not shown.

Note: Cross section of single girder span shown, double girder span similar.



TYPICAL SECTION AT EXISTING FLOORBEAM

Looking Upstation

FIELD WELDING NOTES:

Field Welding:

All field welding operations, including cleaning, testing and inspection, shall be performed in accordance with the AASHTO/AWS Bridge Welding Code D 1.5-2008 (BWC) and additional requirements as specified in these notes.

Steel base materials to be welded have been tested and are considered weldable grades of steel. Carbon equivalents for the floorbeam flange and stiffeners average 0.33 and 0.29 respectively. Therefore, the special weld procedure qualification testing and weldability investigation required by Clause 5.4.3 of the BWC are not required to be performed by the Contractor.

All field welding shall be performed by the manual Shielded Metal Arc Welding (SMAW) process. Other welding processes will not be considered for approval. Welding electrodes used to perform the welding shall be E7018-H4R classification. Welding electrode storage and handling on the worksite shall be in accordance with Clause 4.5 of the BWC and shall be constantly monitored and approved by the Contractor's QC Certified Welding Inspector (CWI).

Prior to start of the work, the Contractor shall submit to the Engineer for approval a properly prepared Welding Procedure Specification (WPS). The WPS shall include all information as required by the BWC.

Welder Qualification Tests:

Welders proposed to perform the work shall be qualified for overhead position fillet welds in accordance with BWC requirements. Copies of welder qualification documents shall be reviewed and approved by the Contractor's QC CWI and subsequently provided to the Engineer.

In addition, all welders shall be required to successfully complete a one-time special on-site overhead fillet weld qualification test immediately prior to start of the work. The qualification test shall be a fillet weld T-Test Plate (Option 1) as per Clause 5.23.1.4 of the BWC. Only visual and fillet weld break testing is required. Macroetch testing is not required. On-site welder qualification testing shall be administered by the Contractor's QC CWI. Cost for the additional testing shall be included with the various items of work. No additional compensation will be made to the Contractor for performing these tests.

Cleaning Prior To Welding:

The ends of the stiffeners and the area of the floorbeam flange to be welded shall be prepared by blast cleaning to a near-white condition (SSPC 10). All corrosion and paint shall be removed for at least three (3) inches beyond the limits of the weld zone, with special attention to remove corrosion at the root of the proposed fillet welds.

Surfaces to be welded shall be free of surface rust and meet SSPC-10 condition requirements immediately prior to welding. Should there be a delay between blast cleaning and welding that results in surface flash rusting, blast cleaning of the weld area shall be repeated.

The Contractor's attention is directed to the fact that the existing paint coatings on the structure may contain lead and the work must comply with all applicable Federal and state regulations regarding worker safety and environmental hazards for removal of lead-based coatings.

Welding Preheat:

Preheating operations shall be in accordance with Clause 4 of the BWC, except that the minimum preheat and interpass temperature shall be 250 degrees F. The Contractor's QC CWI shall verify and monitor minimum preheat and interpass temperatures.

Weld Quality:

All welds shall be visually inspected and approved by the Contractor's QC CWI.

Weld quality shall meet the requirements of Clause 6.26 of the BWC.

Fillet weld toe undercut shall not exceed 0.010 inches on the floorbeam flange and 1/32 inches on the stiffener.

Non-Destructive Testing (NDT) of Welds:

After visual inspection and approval by the Contractor's QC CWI, all welds shall be 100% inspected by Magnetic Particle Testing (MT). Personnel performing the MT and testing procedures shall be in accordance with Clause 6 of the BWC.

The Contractor's QC CWI shall verify qualifications of the NDT personnel, witness all MT testing and countersign all MT reports. Copies of completed MT reports shall be provided to the Engineer.

Costs for NDT shall be borne by the Contractor and included in the various items of work. No separate payment will be made for NDT.

Quality Control (QC) Inspection:

All phases of the work including cleaning, welding and testing shall be witnessed, inspected and approved by an inspector who is qualified as a Certified Welding Inspector (CWI) by the American Welding Society. Reference Clause 6 of the BWC.

The CWI shall be employed/engaged by the Contractor and costs will be included with the various items of work. No separate payment will be made for inspection costs. Scheduling of QC CWI inspection is the Contractor's responsibility.

Should the Contractor elect to perform work in multiple locations on the structure, a sufficient number of CWI's shall be made available to provide inspection at each work site location. The number of inspectors assigned and work locations shall be approved by the Engineer.

The Contractor's QC CWI shall prepare daily reports, suitable to the Engineer, which document the work inspected and welds approved.

All areas of the existing steel cleaned for field welding and/or mechanical treatment of welds shall be subsequently painted in accordance with the Special Provision "Cleaning and Painting Existing Steel Structures." As noted below, all required follow-up painting shall be included for payment with Field Welding of Stiffeners.

Field Welding of Stiffeners shall be paid for at the contract unit price per each which shall include the required field welding on both sides of an individual bearing stiffener. The contract unit price per each shall include all materials, equipment and labor required for surface preparation, welding, follow-up painting, welder qualification testing, and quality control inspection, including non-destructive testing.

MECHANICAL TREATMENT OF WELD NOTES:

Mechanical treatment of welds shall be performed as specified in the Special Provision "Mechanical Treatment of Steel Welds."

Mechanical Treatment of Steel Welds shall be paid for at the contract unit price per each location. Each location shall include treatment of the new field welds on both sides of an individual bearing stiffener, treatment of the existing vertical welds on both sides of an individual bearing stiffener, and treatment of the existing horizontal weld between the top flange and web of the floorbeam.

BILL OF MATERIAL

Item	Unit	Total
Mechanical Treatment of Steel Welds	Each	828
Field Welding of Stiffeners	Each	828

FIELD WELDING OF STIFFENERS

**I-80 OVER
MISSISSIPPI RIVER
STRUCTURE NO. 081-0011**

DESIGNED	YSS
CHECKED	DWP
DRAWN	PRC
CHECKED	YSS



09/17/09

SHEET NO. 33 33 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	80	(81-1B)M-4	ROCK ISLAND	75	60
	SN 081-0011		CONTRACT NO. 64F31		
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

Revised, added note 10/19/2009 D.W.P.