

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO. FAP 347	SECTION	COUNTY Cook	SHEET NO. 17	SHEET NO. 1 5 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract Number: 62956

**GENERAL NOTES**

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Diaphragm connection holes shall be  $\frac{5}{16}$ "  $\phi$  for  $\frac{3}{4}$ "  $\phi$  bolts. Two hardened washers shall be required at diaphragm connections.

After the new beam is in its final position and/or beam straightening operations have been completed, the Engineer in the field shall check to see that the top flange is tight against the slab. If not, the Contractor shall inject epoxy between the existing concrete deck and the top flange of the beam. See Special Provision "Epoxy Injection".

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

Prior to pouring the new concrete deck, all loose rust, loose mill scale and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Cost of removal and/or re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included in the cost of Furnishing and Erecting Structural Steel.

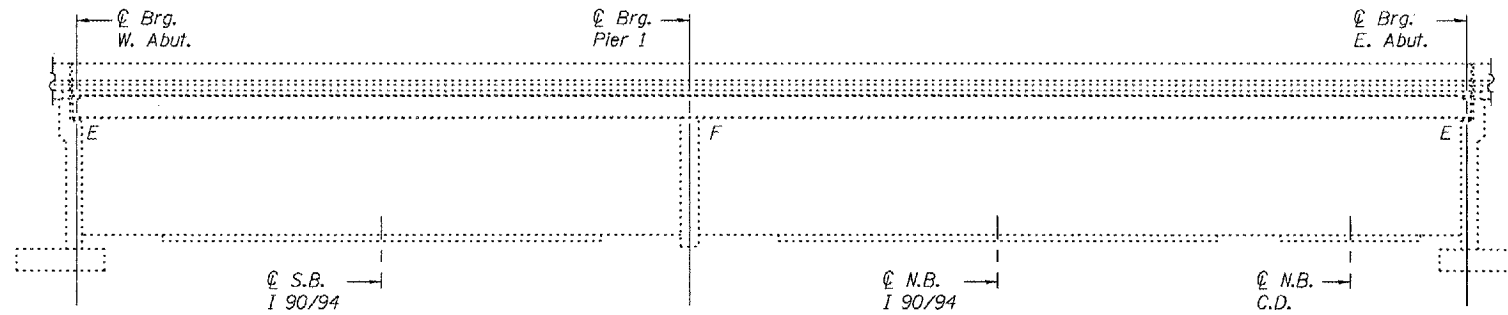
The organic zinc rich primer/epoxy/urethane paint system shall be used for painting of new structural steel except where otherwise noted. All coats shall be applied in the shop. The color of the urethane finish coat shall match the existing color on the beam section to be replaced. See Special Provision "Cleaning and Painting New Metal Structures".

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

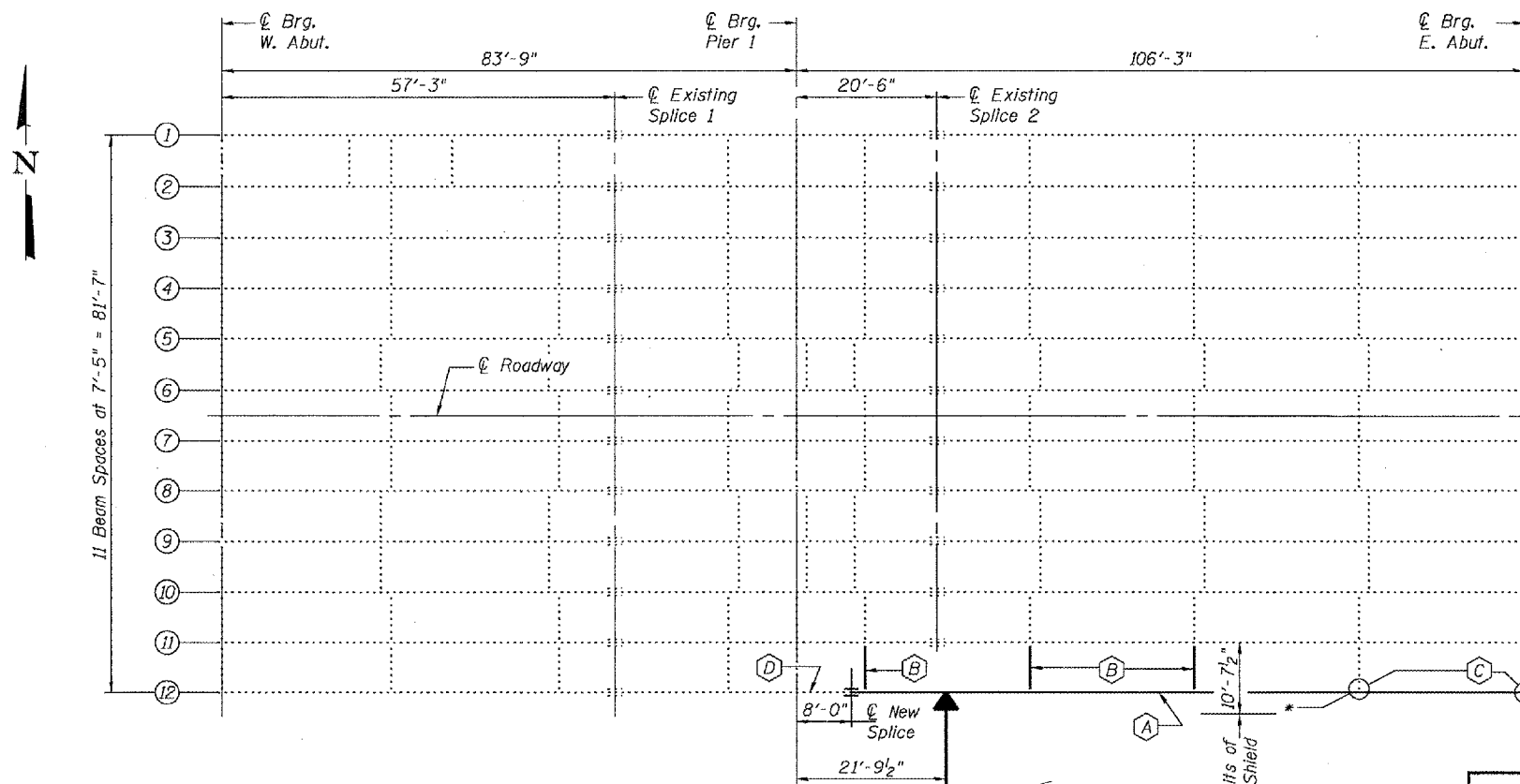
Joint plates and attached bars shall be shop painted with the inorganic zinc rich primer. No field paint required.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.

Fasteners shall be high strength bolts. Flange and Web splice holes shall be  $\frac{5}{16}$ "  $\phi$  for  $\frac{7}{8}$ "  $\phi$  bolts.



**ELEVATION**

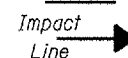


\*Existing clip angle to be removed using the air-arc method and grind smooth all weld material remaining on the diaphragm flanges. Cost included with Structural Steel Removal.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	53
Concrete Superstructure	Cu. Yd.	53
Furnishing and Erecting Structural Steel	Pound	25,570
Structural Steel Removal	Pound	25,480
Beam Straightening	L.S.	1
Stud Shear Connectors	Each	267
Protective Coat	Sq. Yd.	144.6
Removing and Re-erecting Existing Railing	Foot	103
Reinforcement Bars, Epoxy Coated	Pound	8,050
Protective Shield	Sq. Yd.	125

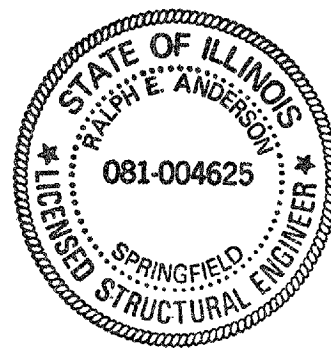
**PLAN**



- (A) Remove and replace Beam Segment.
- (B) Remove and replace existing Diaphragms and Clip angles.
- (C) Remove and replace existing Clip angles.
- (D) Beam Straightening required.

DESIGNED *Alan T. Holloway*  
CHECKED *Paul Bluff*  
DRAWN *ATB*  
CHECKED *ATH* / S.F.B.

EXAMINED *John A. Morris*  
PASSED *Ralph E. Anderson*



Expires November 30, 2006

**PLAN AND ELEVATION**  
**F.A.I. RT. 90/94**  
**COOK COUNTY**  
**SN 016-0478**