

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	LETS	SHEET	SHEET NO. 1 6 SHEETS
FAI 70		EFFINGHAM	9	4	
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT	

Contract Number: 74311

Bench Mark: Spike in 2nd power pole  
South of C Sta. 2406+00 in East  
R/W of existing north south road.  
Elev. 612.73 (U.S.G.S.) datum.

**GENERAL NOTES**

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

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Cost of removal and 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 with Furnishing & Erecting Structural Steel.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. Fasteners shall be high strength bolts. Flange splice holes shall be 1 5/16" φ for 7/8" φ bolts. Web splice holes shall be 1 5/16" φ for 1" φ bolts.

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".

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6. See Special Provision "Cleaning and Painting New Metal Structures".

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated. Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

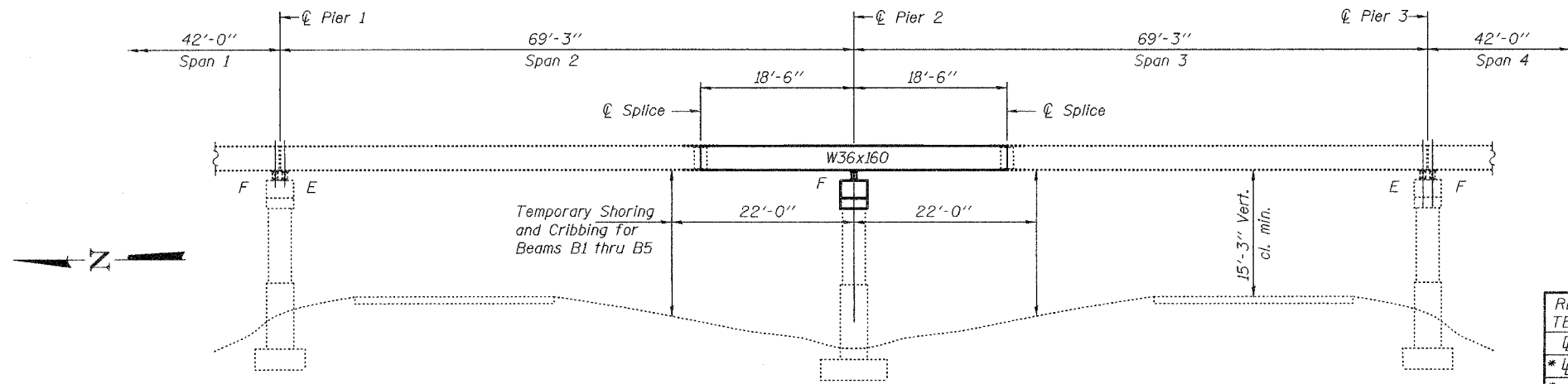
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

The Contractor shall provide support and/or shoring systems for the slab and beam in the area of existing beam removal. See Special Provisions "Temporary Shoring and Cribbing" and "Temporary Slab Support System."

Diaphragm connection holes shall be 1 5/16" φ for 3/4" φ bolts. Two hardened washers shall be required at diaphragm connections.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

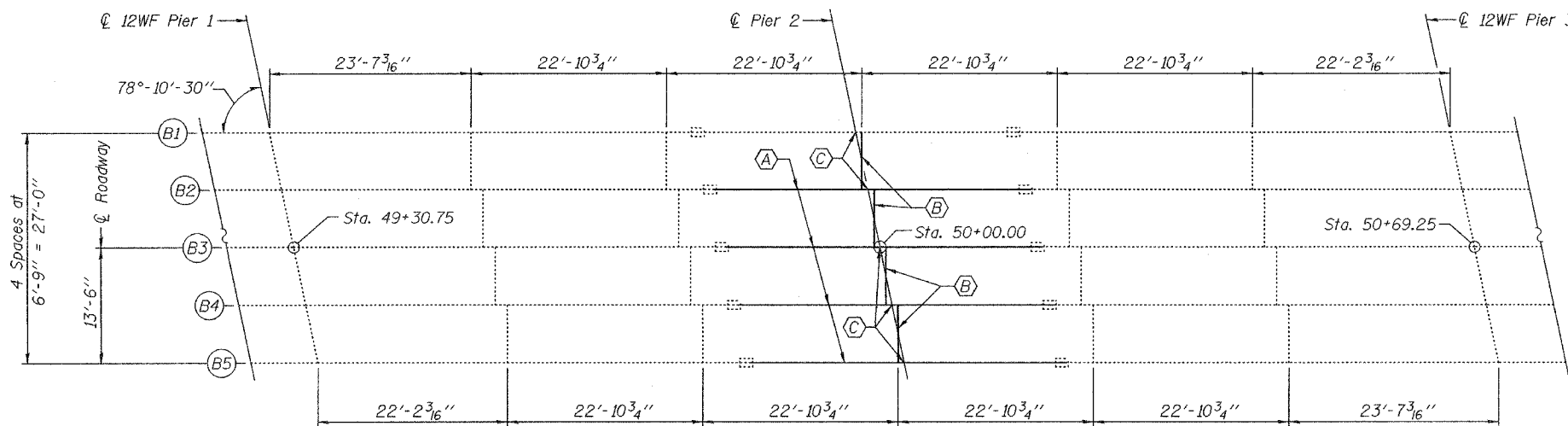
If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.



**ELEVATION**

Q	(k)	47.4
* L	(k)	31.4
* Imp.	(k)	9.4
Total	(k)	88.2

\* For Information Only.  
Bridge is to be closed to traffic.



**PLAN**

- (A) - Remove & Replace Beam
- (B) - Remove & Replace Diaphragm and Clip L's
- (C) - Remove & Replace Bearing

**CONSTRUCTION SEQUENCE**

1. Place Temporary Support and Shoring for Beams
2. Place Temporary Slab Support System
3. Remove Designated Beams and Diaphragms
4. Remove Existing Bearings and Pier Cap
5. Perform Concrete Repair and Construct Pier Cap
6. Place New Beams and Diaphragms
7. Place New Bearing Assemblies

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	31,250
Concrete Removal	Cu. Yd.	15.1
Concrete Structures	Cu. Yd.	13.4
Removal of Existing Bearings	Each	5
Structural Steel Removal	Pound	30,690
Temporary Shoring and Cribbing	L.S.	1
Temporary Slab Support System	L.S.	1
Concrete Superstructure	Cu. Yd.	2.9
Reinforcement Bars, Epoxy Coated	Pound	2530
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	87.2
Anchor Bolts, 1" φ	Each	10

**PLAN AND ELEVATION  
TR 258 OVER FAI 70  
EFFINGHAM COUNTY  
SN 025-0062**

DESIGNED	<i>[Signature]</i>
CHECKED	<i>[Signature]</i>
DRAWN	Steffen
CHECKED	AJB SJB

APRIL 16, 2008
EXAMINED <i>[Signature]</i> ENGINEER OF STRUCTURAL SERVICES
PASSED <i>[Signature]</i> ENGINEER OF BRIDGES AND STRUCTURES



EXPIRES 11-30-2008