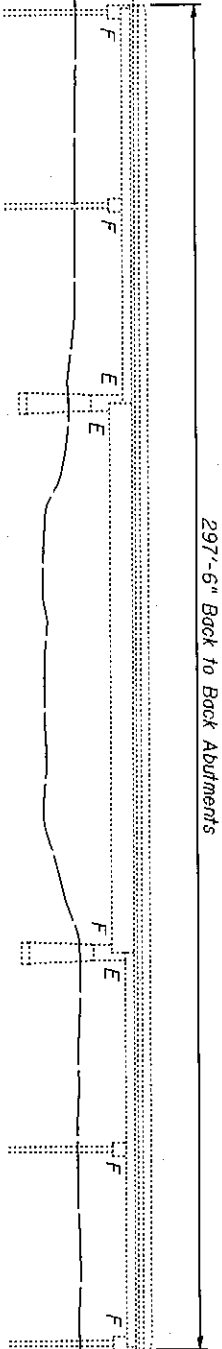
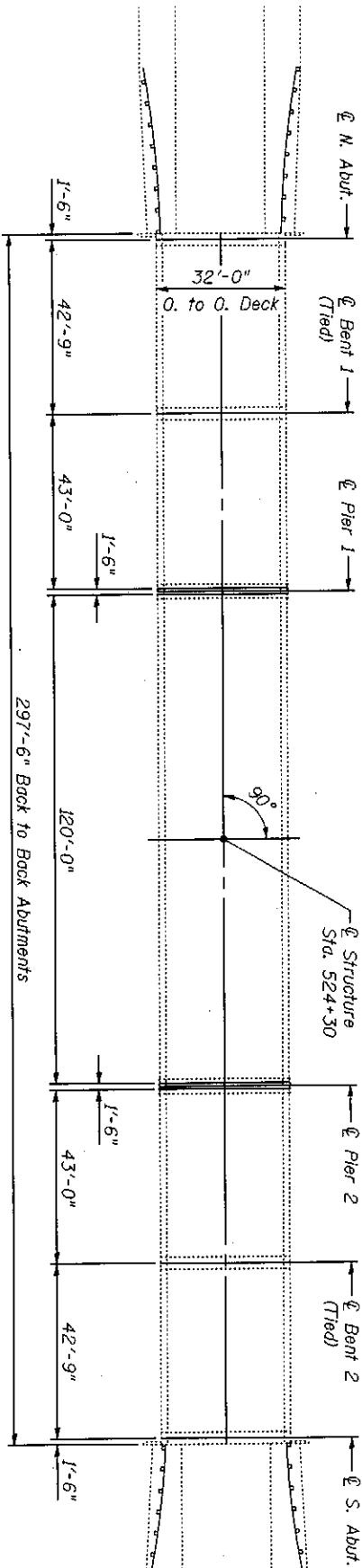


Existing Structure: SN 054-0009 is a 5 span steel beam with 7/2" bare concrete deck originally built in 1931 as SBI Rte. 120 under Sec. 102-BRC of Sta. 524+30. The four end span beam sizes are W24 while the center span is now a 60" E girder which replaced an original steel truss in 1977. The concrete deck was replaced and the substructure was rebuilt in 1977 as F.A. Rte 717 Sec. 102BR. The substructure units are open (spill thru) abutments and solid concrete bents on concrete piles and solid concrete pier bents on timber piles.



297'-6" Back to Back Abutments

ELEVATION



297'-6" Back to Back Abutments

PLAN

GENERAL NOTES

Fasteners shall be ASTM A325, Type 1, mechanically galvanized bolts. Web splice holes shall be 9/16" ϕ for 3/4" ϕ bolts. Flange splice holes shall be 9/16" ϕ for 9/16" ϕ bolts.

All Structural Steel shall be AASHTO M270, Grade 50. No field welding is permitted except as specified in the contract documents. Reinforcement bars designated (E) shall be epoxy coated.

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.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to existing plans are subject to nominal construction 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 at the unit price bid for the work.

Cleaning and field painting of structural steel shall be done under a separate pricing contract.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. 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".

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

All Structural steel shall be shop primed with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Structural Steel Repair or Furnishing and Erecting Structural Steel.

New diaphragms of abutments to be placed tight against concrete. Any gaps shall be filled with epoxy. See Special Provision "Epoxy Injection". Cost included with Furnishing and Erecting Structural Steel.

Protective Coat shall be applied to the new concrete of expansion joints including the inside face and tops of the parapets.

SCOPE OF WORK

- 1 Concrete Removal of Bent and Pier Joints
- 2 Install Temporary Shoring and Cribbing
- 3 Remove existing clip angles, diaphragms and tie plates restraining beam ends called out as needing repaired
- 4 Cut out Beam Ends as called for in Removal Details
- 5 Remove and replace bearings as shown in Bearing Details
- 6 Place new Beam Ends as called for in Repair Details
- 7 Replace Diaphragms and Anchor Bolts called out in Framing Plan
- 8 Bridge Deck Scarification 3/4"
- 9 Bridge Deck Repair
- 10 Reconstruct Joints at Piers & Bents with Performed Joint Strip Seal
- 11 Place new 2 1/4" microsilica concrete overlay
- 12 Plug Existing Floor Drains at locations shown

TOTAL BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	20.2
Concrete Superstructure	Sq. Yd.	22.7
Structural Steel Repair	Pound	4209
Reinforcement Bars, Epoxy Coated	Pound	2780
Temporary Shoring & Cribbing	Each	12
Structural Steel Removal	Pound	2016
Furnishing and Erecting Structural Steel	Pound	2016
Anchor Bolts, 1"	Sq. Yd.	50
Bridge Deck Scarification 3/4"	Sq. Yd.	889
Bridge Deck Microsilica Concrete Overlay, 2 1/4"	Sq. Yd.	889
Bar Splicers	Each	48
Performed Joint Strip Seal	Foot	136
Bridge Deck Grooving	Sq. Yd.	883
Protective Coat	Sq. Yd.	75
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	1
Elastomeric Bearing Assembly, Type I	Each	2
Plug Existing Floor Drains	Each	48

DESIGN STRESSES (1977 Construction)

FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi
 $f_s = 27,000$ psi (M223 Gr 50)
 $20,000$ psi (M183)

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 Stage Construction Details
- 3 Temporary Concrete Barrier
- 4 Deck Slab Repairs and Concrete Removal
- 5 Concrete Removal Details
- 6 Superstructure Details
- 7 Performed Joint Strip Seal
- 8 Bar Splicer Assembly Details
- 9 Framing Plan and Repair Locations
- 10 Repairs A thru C
- 11 Repair Details
- 12 Bearing Plate and Diaphragm Details
- 13 Bearing Details

GENERAL PLAN AND ELEVATION

IL 10 OVER SUGAR CREEK

F.A.P. RTE 717

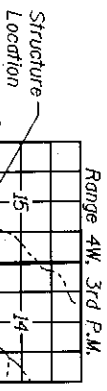
SECTION 102B-1, 102CR, 102BR-2)RS-5

STATION 524+30.00

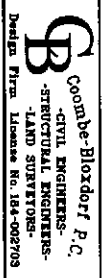
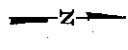
STRUCTURE NO. 054-0009



Mary Cooper Blodgett
 ILLINOIS STRUCTURAL NO. 4859
 EXPIRES 11/30/14
 DATE: 01/29/14



Structure Location



USER NAME	DESIGNED	CHECKED	DATE
LFCL	MCB	CFC	1/19/2014
MCB	MCB/CME	MCB/CME	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTION	COUNTY	TOTAL SHEET NO.
102B-1, 102CR, 102BR-2)RS-5	LOGAN	218
CONTRACT NO. 72B82		78