

Contract #72449

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Concrete Deck	Each	1		1
Structure Excavation	Cu. Yd.		192.7	192.7
Bridge Deck Grooving	Sq. Yd.	3,085		3,085
Protective Coat	Sq. Yd.	3,331		3,331
Concrete Structures	Cu. Yd.		146.6	146.6
Concrete Superstructure	Cu. Yd.	770.7		770.7
Steel Bridge Rail Type SM	Foot	1552		1552
Elastomeric Bearing Assembly, Type 1	Each		10	10
Elastomeric Bearing Assembly, Type 2	Each		5	5
Elastomeric Bearing Assembly, Type 3	Each		5	5
Structural Steel Removal	Pound	17,520		17,520
Concrete Removal	Cu. Yd.		157.8	157.8
Jack and Remove Existing Bearings	Each		20	20
Bridge Seat Sealer	Sq. Ft.		207	207
Furnishing and Erecting Structural Steel	L. Sum	0.07		0.07
Reinforcement Bars, Epoxy Coated	Pound	214,290	9,480	223,770
Stud Shear Connectors	Each	6,480		6,480
Stone Riprap, Class A4	Sq. Yd.		133	133
Filter Fabric	Sq. Yd.		133	133
Preformed Joint Strip Seal, 4"	Foot	76.6		76.6
Name Plates	Each	1		1
Slopewall Repair	Sq. Yd.		6.4	6.4
Temporary Support System	Each		2	2
Formed Concrete Repair (Depth < 5")	Sq. Ft.		460	460
Porous Granular Embankment (Special)	Cu. Yd.		158	158
Bar Splicers	Each	78		78
Controlled Low Strength Material	Cu. Yd.		3.2	3.2

**GENERAL NOTES**

Fasteners shall be high strength bolts AASHTO M 164, Type 1 or 2. Bolts 3/4", open holes 13/16", unless otherwise noted.

Calculated weight of structural steel = 16,884 lbs. (Gr 50), 20,449 lbs. (Gr 36)

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

Roadway expansion guards shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.

The roadway expansion plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.

All new Structural Steel shall be shop painted with an inorganic zinc rich primer, per AASHTO M300, Type 1. Cost included in cost of Furnishing and Erecting Structural Steel.

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 web doubler plates.

Field welding of construction accessories will not be permitted to beams or girders.

Slope wall repair areas shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft. Welded wire fabric shall lap the existing fabric a minimum of 6".

All construction joints shall be bonded.

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.

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.

All existing construction accessories welded to the top flange over the pier(s) between the quarter points of the beams or girders shall be removed. The remaining weld shall be ground smooth and inspected for cracks using magnetic particle testing. Any cracks that cannot be removed by grinding approximately 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of this work will be paid for according to Article 109.04.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Shims shall be provided for each bearing as noted.

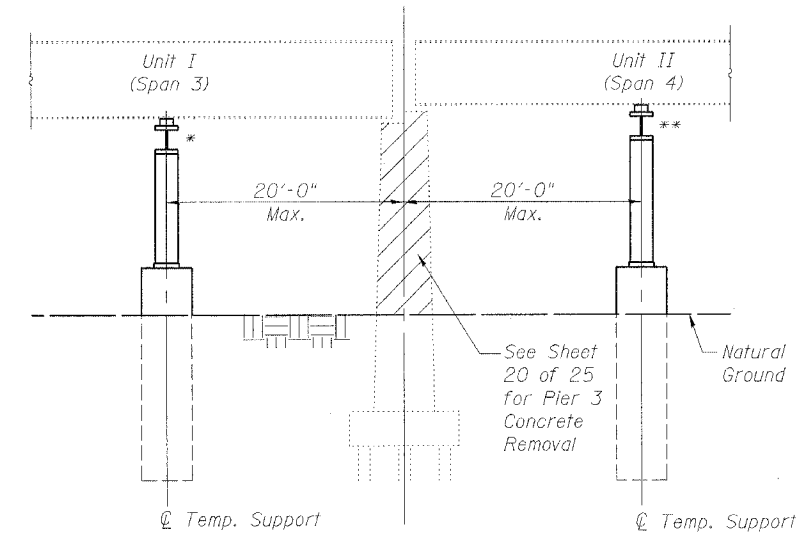
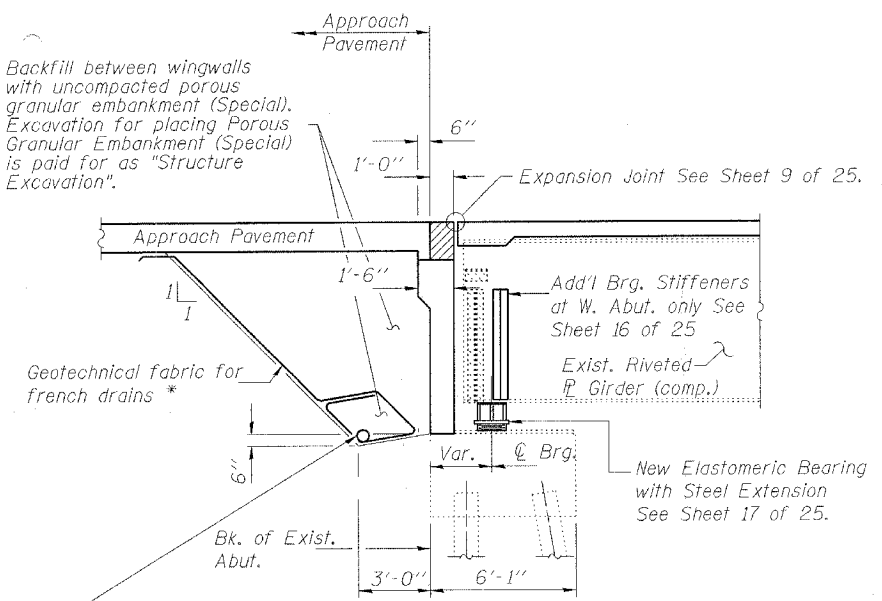
Bridge Seat Sealer shall be applied to the seat area of Pier 3.

When the deck pour is stopped for the day at one or more of the transverse Bonded Construction Joints in the Deck Pouring Sequence as shown, the next pour shall not be made until both of the following requirements are met:

1. At least 72 hours shall have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

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

Removal of existing bridge rails is included in the cost of "Removal of Existing Concrete Deck."



**TEMPORARY SUPPORT LOCATIONS AT PIER 3**  
(@ Rt. L's)

Unfactored Reactions

- \* 22k Dead Load/Girder plus 34k Lateral Wind Load (Total for 5 Girders)
- \*\* 18k Dead Load/Girder plus 30k Lateral Wind Load (Total for 5 Girders)

**SUGGESTED SEQUENCE FOR TEMPORARY SUPPORT PLACEMENT**

Provide Temporary Support Systems for Pier 3 Concrete Removal. Contractor to submit design calculations and drawing for approval. A seal from a Structural Engineer in the State of Illinois is required. See Sheet 18 and 19 of 25 for notes on Jacking Existing Superstructure.

At a minimum, the existing deck on Spans 3 and 4 shall be removed prior to jacking.

The existing beams shall be jacked in accordance with the special provision Jack and Remove Existing Bearings.

Pier 3 shall be rebuilt and bearings set prior to taking elevations of the top flanges.

**SECTION THRU ABUTMENT**  
(@ Rt. L's)

\* Included in the Cost of Porous Granular Embankment (Special)

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL NOTES & TOTAL BILL OF MATERIAL**  
 OLD U.S. ROUTE 36 OVER SANGAMON RIVER  
 F.A.U. ROUTE 797B  
 SECTION BR-1  
 SANGAMON COUNTY  
 STA. 70+00.00  
 STRUCTURE NUMBER 084-0052

DATE: JAN. 2005  
 DRAWN BY: NJV  
 CHECKED BY: PBB