

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. 2
FAP 315	(18BRY-1)BR	FULTON	166	46 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #88753

WATERWAY INFORMATION

Flood	Freq. Yr.	Structure Number	Q C.F.S.		Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Flood	10	029-0068	21305	24123	4720	6555	463.2	1.3	0.7	464.5	463.9
		029-0067	4474	1692	1689	619					
		overtopping	35	-	-	-					
		Total	25815	25815	6409	7174					
Design	50	029-0068	23318	35650	5293	7488	464.6	1.4	1.2	466.0	465.8
		029-0067	5248	2702	1689	722					
		overtopping	9786	-	-	-					
		Total	38352	38352	6982	8210					
Base	100	029-0068	26161	40432	5489	7837	465.1	1.2	1.2	466.3	466.3
		029-0067	3948	3182	1689	762					
		overtopping	13505	-	-	-					
		Total	43614	43614	7178	8599					
Overtopping	10	029-0068	20009	-	4439	-	462.5	0.8	-	463.3	-
		029-0067	4005	-	1689	-					
		Total	24014	-	6128	-					
Max. Calc.	500	029-0068	26627	51941	5945	8756	466.5	0.9	0.9	467.4	467.4
		029-0067	5156	4210	1689	873					
		overtopping	24368	-	-	-					
		Total	56151	56151	7634	9629					

Exist. 10-yr. velocity: 4.5 ft./sec. (029-0004); 2.6 ft./sec. (029-0003)
Prop. 10-yr. velocity: 3.7 ft./sec. (029-0004); 2.7 ft./sec. (029-0003)
Max. H.W.E. 463.75' (date varies)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu. Yd.		279	279
Stone Riprap, Class A4	Ton		446	446
Stone Riprap, Class A5	Ton		2208	2208
Filter Fabric	Sq. Yd.		3010	3010
Slopedwall 4 Inch	Sq. Yd.		133.0	133.0
Structure Excavation	Cu. Yd.		820	820
Rock Excavation for Structures	Cu. Yd.		14.3	14.3
Concrete Structures	Cu. Yd.		552	552
Concrete Superstructure	Cu. Yd.	930.4		930.4
Bridge Deck Grooving	Sq. Yd.	2990		2990
Protective Coat	Sq. Yd.	3776		3776
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	6066		6066
Reinforcement Bars, Epoxy Coated	Pound	239570	55590	295160
Reinforcement Bars	Pound		30580	30580
Furnishing Steel Piles HP10x57	Foot		560	560
Furnishing Steel Piles HP12x74	Foot		1299	1299
Driving Steel Piles	Foot		1859	1859
Test Pile Steel HP 10x57	Each	1		1
Test Pile Steel HP 12x74	Each	2		2
Name Plates	Each	1		1
Bridge Seat Sealer	Sq. Ft.		270	270
Floating Bearings, Guided Expansion, 150 K	Each		6	6
Floating Bearings, Guided Expansion, 250 K	Each		6	6
Floating Bearings, Guided Expansion, 400 K	Each		6	6
Floating Bearings, Guided Expansion, 650 K	Each		6	6
Floating Bearings, Fixed, 350 K	Each		6	6
Drainage Scuppers, DS-11	Each		4	4
Bar Splicers	Each		84	84
Drilled Shaft in Soil 36"	Foot		145	145
Drilled Shaft in Rock 30"	Foot		80	80
Drilled Shaft in Rock 36"	Foot		184	184
Drilled Shaft in Rock 24"	Foot		72	72
Fabric Reinforced Elastomeric Trough	Foot	87		87
Temporary Soil Retention System	Sq. Ft.		261	261
Underwater Structure Excavation Protection - Location 1	Each		1	1
Removal of Existing Structures No. 2	Each		1	1
Permanent Casing	Foot		70	70

GENERAL NOTES

Calculated weight of Structural Steel = 1,574,400 lbs. (AASHTO M270 Grade 50) = 9,240 lbs. (AASHTO M270 Grade 36)

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.

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

Anchor bolts shall be set before bolting cross frames over supports.

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 tension flanges, webs and all splice plate material except fill plates.

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

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

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 shimmed the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The contractor shall drive one steel HP 10x57 test pile in a permanent location at the North abutment as directed by the Engineer before ordering the remainder of piles.

The contractor shall drive two steel HP 12x74 test piles, one each at Pier 1 and Pier 2, as directed by the Engineer before ordering the remainder of piles.

Bridge Seat Sealer shall be applied to the seat area of the North and South Abutments.

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 on sheet 9 of 45, the next pour shall not be made until both of the following requirements are met:

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

All construction joints shall be bonded.

If the Contractor elects to use cantilever forming brackets on the exterior girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06 of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior girder at each of these additional bracket locations.

Fasteners shall be high strength bolts. Bolts 7/8" φ, open holes 15/16" φ, unless otherwise noted.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the North Abutment.

The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number DS2004132, which was issued for the permanent construction.

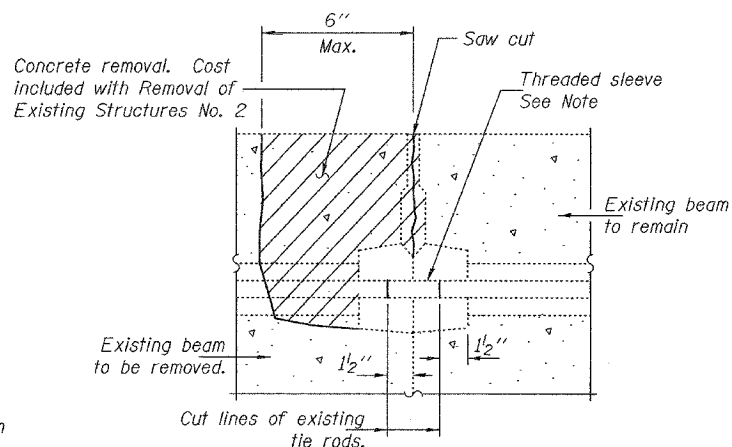
Before starting work, the Contractor shall submit the proposed method of structural steel erection for approval by the Engineer as provided in Article 505.08 (e) of the Standard Specifications.

The Contractor shall submit for approval by the Engineer the procedure for blocking the floating bearings prior to erecting structural steel.

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 provisions for "Cleaning and Painting New Metal Structures".

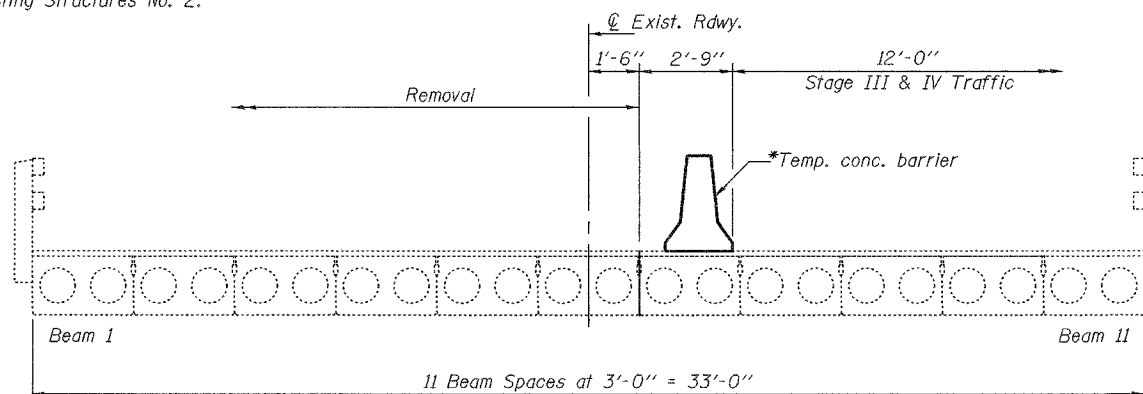
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BEAM REMOVAL DETAIL
AT TRANSVERSE TIES

Note: Remove existing 3" threaded sleeve. Replace with 3 1/2" x 3 1/2" x 1/2" plate washer (with 1 1/2" φ hole) and nut. Cost included with Removal of Existing Structures No. 2.



STAGING

Looking south
Remove PPC deck beams (1 thru 6) in spans 7 & 8 during Stage III Construction.

* For details of Temporary Concrete Barrier, see sheet 43 of 46.
* For quantity of Temporary Concrete Barrier, see roadway plans.

DESIGNED	MJT/FT
CHECKED	FT/SEM
DRAWN	h.t. parsons
CHECKED	FT/SEM

May 16, 2005
EXAMINED *Thomas J. Damagala*
SUPERVISOR OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

GENERAL DATA & STAGING DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.00
STRUCTURE NO. 029-0068