

**GENERAL NOTES:**

Fasteners shall be AASHTO M164 Type I, mechanically galvanized bolts. Bolts 7/8 in.  $\phi$ , holes 1 1/8 in.  $\phi$ , unless otherwise noted.  
 Calculated weight of Structural Steel (AASHTO M270, Grade 50) = 621200 lbs.  
 No field welding is permitted except as specified in the contract documents.  
 Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

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.

Protective coat shall not be applied to surfaces to which Membrane Waterproofing is applied.

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.

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

The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

All removal work shall be performed with care so that materials which are to remain in place or to be reused will not be damaged. It will be the Contractor's responsibility to repair or replace any members damaged as a result of the removal operation.

Where called for on the plans, existing structural steel, which is to remain in place shall be modified by drilling, sawing or a combination of both.

Flame cutting of members, which are to remain in place, will not be allowed. The use of oxyacetylene or oxy-MAPP gas cutting is not permitted, although arc gouging is permissible to cut out the central core of rivets if no cutting of the hole ID occurs. The rivet shall then be forced out by mechanical means. If cutting of the hole ID does occur, the hole shall be redrilled to the next larger-sized bolt which eliminates any cuts caused by arc gouging.

Where existing structural steel to remain has been cut or new holes have been drilled, the edges shall be dressed to a smooth, uniform surface with no notches or gouges.

All reinforcement bars that are damaged during concrete removal operation shall be repaired or replaced using an approved bar splicer or anchorage system. Cost is included in the cost of Concrete Removal.

The Contractor shall submit a detailed plan of proposed construction procedures and sequences for the proposed work on the bascule span to the Engineer for review and approval prior to commencing this work. Approval shall not relieve the Contractor of any responsibility for the stability of the bridge during the removal and replacement operations.

The cost of field welding and field drilling of new or existing structural members, as noted in the plans, shall be included in the cost of Furnishing and Erecting Structural Steel.

Work on the structure shall be done in such a manner that the closure of the bridge to river traffic (periods where the bridge is restricted to the down position) is prohibited. River traffic is to be maintained at all times. Work that requires the bridge to be immobilized shall be done with the bridge restricted to the up position.

For angles with unequal legs, the leader points to the angle leg mentioned first. Slipforming of parapets is not allowed.

New bolt spacing not shown on the structural steel plans shall conform to the details shown on the existing shop drawings available upon request as indicated in the special provisions.

DESIGNED	A. HAMMAD
CHECKED	J. GRAINAWI
DRAWN	D. C. PATEL
CHECKED	A. HAMMAD

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

**GENERAL NOTES FOR PAINT**

Cleaning and painting of existing structural steel shall be as specified in the Special Provision for "Cleaning and Painting Existing Steel Structures."  
 The Inorganic zinc rich primer/ Acrylic/Acrylic Paint System shall be used for the shop and field painting of new structural steel except where noted otherwise. See Special Provision "Cleaning and Painting New Metal Structures".  
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The designated areas cleaned per Near White Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 3 - EM/EM/AC. The SSPC-QP1 and SSPC-QP2 painting contractor certifications will be required for this bridge.

A minimum of two air monitors will be required to monitor abrasive blasting operations at this site. See Special Provisions for "Containment and Disposal of Lead Paint Cleaning Residues".

All machinery, electrical and mechanical systems shall be protected during cleaning and painting operations.

**FIXED SPANS**

All existing structural steel shall be cleaned per Near White Blast Cleaning - SSPC - SP10. This also includes all of Bent K on structure 016-0460.

The color of the final finish coat for all surfaces, including bearing devices, shall be Gray, Munsell No. 5B 7/1.

**BASCULE SPAN**

(INCLUDES ALL STEEL THAT MOVES, EVEN THE PARTS OF THE TRUSSES THAT EXTENDS BELOW THE FIXED SPANS)

All existing structural steel shall be cleaned per Near White Blast Cleaning - SSPC-SP10.

The color of the final finish coat for all steel shall be Gray, Munsell No. 5B 7/1.

**SCOPE OF WORK**

Remove the open steel grid deck and replace with an orthotropic deck system.

Remove and replace each existing fixed span reinforced concrete deck and sidewalks.

Bridge house rehabilitations consisting of roof replacement, window replacements, replacing and resetting of exterior stone cladding, and exterior joint sealing and other items as shown.

Perform structural concrete repairs and epoxy inject cracks. Reinforce concrete pedestals in the pits with Carbon Fiber Reinforced Polymer.

Remove the steel stringers in the movable spans.

Remove and replace bottom lateral bracing.

Repair/Replace Floorbeams and Floorbeam Brackets in the movable spans.

Repair cross girder K, part of adjacent west structure 016-0460.

Perform repairs to deteriorated columns in the fixed spans.

Repair Steel Truss members.

Remove the steel filled concrete sidewalk and stringers in the movable spans and replace with orthotropic sidewalk system.

Remove the steel curb in the movable spans and replace with F-Shape Aluminum Parapet.

The existing New Jersey Type Aluminum Parapet will remain, except for replacement of deteriorated posts and damaged sections.

Remove and replace ornamental railing in the movable spans with aluminum railing.

Remove and replace center breaks and rear breaks.

Remove the finger expansion joint at the west end and replace with a strip seal expansion joints.

Remove and replace the machinery rooms' roof overlay.

Remove debris and clean counterweight pits.

Balance the bridge.

Remove and replace the electrical and control system.

Repair bridge machinery.

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STATION 380+69.12  
 REBUILT 200 BY  
 STATE OF ILLINOIS  
 F.A.P. FT. 389  
 SEC. 2424.2B-R  
 LOADING HS20  
 STRUCTURE NO. 016-2445

**NAME PLATE**  
 See Std. 515001

**PB Americas, Inc.**  
 230 WEST MONROE STREET,  
 SUITE 900  
 CHICAGO, IL. 60606

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu. Yd.	--	4	4
Bridge Sidewalk Removal	Sq. Ft.	3878	--	3878
Removal of Existing Concrete Deck	L. Sum	1	--	1
Protective Shield	Sq. Yd.	1707	--	1707
Structure Excavation	Cu. Yd.	--	5.5	5.5
Concrete Structures	Cu. Yd.	--	1.7	1.7
Concrete Superstructure	Cu. Yd.	508	--	508
Bridge Deck Grooving	Sq. Yd.	988	--	988
Protective Coat	Sq. Yd.	1511	--	1511
Furnishing & Erecting Structural Steel	L. Sum	1	--	1
Stud Shear Connectors	Each	6302	--	6302
Structural Steel Removal	L. Sum	1	--	1
Structural Steel Repair	Pound	137850	--	137850
Cleaning & Painting Steel Bridge	L. Sum	1	--	1
Reinforcement Bars, Epoxy Coated	Pound	86010	190	86200
Steel Railing, Type 2399	Foot	161	--	161
Aluminum Railing	Foot	553	--	553
Name Plates	Each	2	--	2
Preformed Joint Strip Seal	Foot	129	--	129
Membrane Waterproofing	Sq. Ft.	1946	--	1946
Epoxy Crack Injection	Foot	--	144	144
Bridge Deck Latex Concrete Overlay, 2 1/4"	Sq. Yd.	1040	--	1040
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. Ft.	--	57	57
Masonry Wall Construction	Sq. Ft.	385	--	385
Rivet Removal and Replacement	Each	2888	--	2888
Removal of Existing Aluminum Railing	Foot	621	--	621
Carbon Fiber Reinforced Polymer Repair	Sq. Ft.	--	996	996
Temporary Raised Reflective Pavement Marker (Bridge, Special)	Each	50	--	50
F-Shape Aluminum Parapet	Foot	533	--	533
Temporary Thrie Beam Steel Plate Guardrail, Type D (Special)	Foot	454	--	454
Abrasion Resistant Polyurethane Bridge Wearing Surface	Sq. Ft.	20220	--	20220
Abrasion Resistant Polyurethane Sidewalk Wearing Surface	Sq. Ft.	3682	--	3682
Counterweight Pit Cleaning	Each	--	4	4
Furnishing & Erecting Steel Orthotropic Deck	Sq. Ft.	20220	--	20220
Furnishing & Erecting Steel Orthotropic Sidewalk	Sq. Ft.	3682	--	3682
Remove and Reinstall Existing Aluminum Parapet	Foot	741	--	741
Sidewalk Flooring over Rear Arm, 2"	Sq. Ft.	160	--	160
Bridge Decking over Rear Arm, 4 1/4"	Sq. Ft.	60	--	60
Timber Bumpers	Foot	--	32	32
Metal Handrails & Metal Guardrails	Foot	1235	--	1235
Metal Ladders	Each	--	9	9
Metal Ships Ladders	Each	--	9	9
Metal Grating	L. Sum	1	--	1
Concrete Stairs Repair	L. Sum	--	1	1
Stair Well Rehabilitation	L. Sum	--	1	1
Metal Stairs	L. Sum	--	1	1
Windows	L. Sum	--	1	1
Membrane Roofing	Each	2	--	2
Stone Masonry Repairs and Replacements	L. Sum	--	1	1
Metal Panels	L. Sum	--	1	1
Window Blinds	L. Sum	--	1	1
Containment and Disposal of Lead Paint Cleaning Residues	L. Sum	1	--	1
Containment and Disposal of Non-Lead Paint Cleaning Residues	L. Sum	1	--	1
Bridge Floor Removal	Sq. Yd.	2171	--	2171

\* Cost of Floor Drains/Scuppers is included in this Item.

**GENERAL DATA**  
**STRUCTURE NO. 016-2445**

SHEET NO. 2	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	389	2424.2B-R	COOK	398	83
163 SHEETS	CONTRACT NO. 60D61			FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT	

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