#### GENERAL NOTES

Fasteners shall be AASHTO M 164 Type 1, mechanically galvanized bolts. Bolts  $^{7}_{8}$  in,  $\phi$ , holes  $^{15}_{16}$  in,  $\phi$ , unless otherwise noted.

Calculated weight of Structural Steel = AASHTO M 270 Grade 50 = 423,430 pounds AASHTO M 270 Grade 36 = 35,350 pounds

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.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of  $l_8$  inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

Concrete Sealer shall be applied to the designated areas of the abutments.

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

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 gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures".

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

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

In lieu of the hammer selection criteria and use of the FHWA Modified Gates formula specified in Section 512 of the Standard Specifications, the Contractor shall conduct a wave equation analysis to establish the driving criteria at all pile foundations which specify a nominal required bearing above 600 kips. The analysis and calculations shall be submitted to the Engineer for approval.

The Contractor is advised that the existing PPC deck beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Portions of Pier 6 from the original 1921 structure are buried and require removal for construction of proposed Pier 2. Cost of removal shall be included in Removal of Existing Structures.

The steel WF beams supporting deficient PPC deck beams shall be salvaged in accordance with Section 501.02 of the Standard Specifications for reuse by IDOT. The beams shall be removed, delivered to the IDOT Vandalia Maintenance Yard, and unloaded at the yard by the Contractor. Cost shall be included in Removal of Existing Structures.

Slipforming of the parapets is not allowed.

The SSPC QPI Painting Contractor Certification is required for this contract.

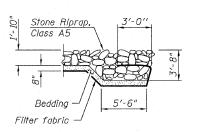
# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

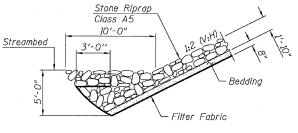
### TOTAL BILL OF MATERIAL

Stone Riprap, Class A5         Sq. Yd.         -         2,329         2,32           Filter Fabric         Sq. Yd.         -         2,329         2,32           Removal of Existing Structures         Each         -         -         1           Structure Excavation         Cu. Yd.         -         791         791           Concrete Structures         Cu. Yd.         23.4         408.3         431.1           Concrete Superstructure         Cu. Yd.         551.1         -         551.           Bridge Deck Grooving         Sq. Yd.         1,698         -         1,698           Concrete Encasement         Cu. Yd.         -         15.8         15.8           Profective Coat         Sq. Yd.         2,031         -         2,03           Furnishing and Erecting Structural Steel         L. Sum         1         -         1           Stud Shear Connectors         Each         5,232         -         5,23           Reinforcement Bars, Epoxy Coated         Pound         148,700         58,740         207,4           Bar Splicers         Each         1,421         300         1,72           Furnishing Steel Piles HP12X63         Foot         -         1,593         1,	ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Porous Granular Embankment, Special	Cu. Yd.	-	134	134
Filter Fabric   Sq. Yd.   -   2,329   2,32   Removal of Existing Structures   Each   -   1   Structure Excavation   Cu. Yd.   -   791	Stone Riprap, Class A5	Sg. Yd.	-	2,329	2,329
Structure Excavation   Cu. Yd.   -   791   791   Concrete Structures   Cu. Yd.   23.4   408.3   431.1   Concrete Superstructure   Cu. Yd.   551.1   -   551.1     55	Filter Fabric		-	2,329	2,329
Concrete Structures         Cu. Yd.         23.4         408.3         436.1           Concrete Superstructure         Cu. Yd.         551.1         -         551.           Bridge Deck Grooving         Sq. Yd.         1,698         -         1,698           Concrete Encasement         Cu. Yd.         -         15.8         15.8           Protective Coat         Sq. Yd.         2,031         -         2,03           Furnishing and Erecting Structural Steel         L. Sum         1         -         1           Stud Shear Connectors         Each         5,232         -         5,23           Reinforcement Bars, Epoxy Coated         Pound         148,700         58,740         207.4           Bar Splicers         Each         1,421         300         1,72.           Furnishing Steel Piles HP12X63         Foot         -         1,593         1,593           Furnishing Steel Piles HP14X89         Foot         -         3,399         3,399           Driving Piles         Foot         -         4,992         4,992           Test Pile Steel HP12X63         Each         -         2         2           Test Pile Steel HP12X69         Each         -         3         3 <td>Removal of Existing Structures</td> <td>Each</td> <td>-</td> <td>-</td> <td>1</td>	Removal of Existing Structures	Each	-	-	1
Concrete Superstructure         Cu. Yd.         551.1         -         551.           Bridge Deck Grooving         Sq. Yd.         1,698         -         1,698           Concrete Encasement         Cu. Yd.         -         15.8         15.8           Protective Coat         Sq. Yd.         2,031         -         2,03           Furnishing and Erecting Structural Steel         L. Sum         1         -         1           Stud Shear Connectors         Each         5,232         -         5,23           Reinforcement Bars, Epoxy Coated         Pound         148,700         58,740         207,4           Bar Splicers         Each         1,421         300         1,72           Furnishing Steel Piles HP12X63         Foot         -         1,593         1,593           Furnishing Steel Piles HP14X89         Foot         -         3,399         3,399           Driving Piles         Foot         -         4,992         4,992           Test Pile Steel HP14X89         Each         -         2         2           Test Pile Steel HP14X89         Each         -         3         3           Temporary Sheet Piling         Sq. Ft.         -         1,735         1,735 <td>Structure Excavation</td> <td>Cu. Yd.</td> <td>-</td> <td>791</td> <td>791</td>	Structure Excavation	Cu. Yd.	-	791	791
Bridge Deck Grooving         Sq. Yd.         1,698         -         1,698           Concrete Encasement         Cu. Yd.         -         15.8         15.8           Protective Coat         Sq. Yd.         2,031         -         2,03           Furnishing and Erecting Structural Steel         L. Sum         1         -         1           Stud Shear Connectors         Each         5,232         -         5,23           Reinforcement Bars, Epoxy Coated         Pound         148,700         58,740         207.4           Bar Splicers         Each         1,421         300         1,72           Furnishing Steel Piles HP12X63         Foot         -         1,593         1,593           Furnishing Steel Piles HP14X89         Foot         -         3,399         3,399           Driving Piles         Foot         -         4,992         4,992           Test Pile Steel HP12X63         Each         -         2         2           Test Pile Steel HP14X89         Each         -         2         2           Test Pile Steel HP14X89         Each         -         2         2           Name Plates         Each         1         -         1,735         1,735	Concrete Structures	Cu. Yd.	23.4	408.3	431.7
Concrete Encasement         Cu. Yd.         -         15.8         15.8           Protective Coat         Sq. Yd.         2,031         -         2,03           Furnishing and Erecting Structural Steel         L. Sum         1         -         1           Stud Shear Connectors         Each         5,232         -         5,23           Reinforcement Bars, Epoxy Coated         Pound         148,700         58,740         207,4           Bar Splicers         Each         1,421         300         1,72           Furnishing Steel Piles HP12X63         Foot         -         1,593         1,593           Furnishing Steel Piles HP14X89         Foot         -         3,399         3,399           Driving Piles         Foot         -         4,992         4,992           Test Pile Steel HP12X63         Each         -         2         2	Concrete Superstructure	Cu. Yd.	<i>551.1</i>	-	551.1
Protective Coat         Sq. Yd.         2,031         -         2,03           Furnishing and Erecting Structural Steel         L. Sum         1         -         1           Stud Shear Connectors         Each         5,232         -         5,23.           Reinforcement Bars, Epoxy Coated         Pound         148,700         58,740         207,4           Bar Splicers         Each         1,421         300         1,72           Furnishing Steel Piles HP12X63         Foot         -         1,593         1,593           Furnishing Steel Piles HP14X89         Foot         -         3,399         3,399           Driving Piles         Foot         -         4,992         4,992           Test Pile Steel HP12X63         Each         -         2         2           Test Pile Steel HP14X89         Each         -         3         3           Temporary Sheet Piling         Sq. Ft.         -         1,735         1,735           Name Plates         Each         1         -         1           Preformed Joint Strip Seal         Foot         76.0         -         76.0           Elastomeric Bearing Assembly, Type II         Each         12         -         12 <td>Bridge Deck Grooving</td> <td>Sq. Yd.</td> <td>1,698</td> <td></td> <td>1,698</td>	Bridge Deck Grooving	Sq. Yd.	1,698		1,698
Furnishing and Erecting Structural Steel L. Sum 1 - 1 Stud Shear Connectors Each 5,232 - 5,23. Reinforcement Bars, Epoxy Coated Pound 148,700 58,740 207,44 Bar Splicers Each 1,421 300 1,72. Furnishing Steel Piles HP12X63 Foot - 1,593 1,593 Furnishing Steel Piles HP14X89 Foot - 3,399 3,399 Driving Piles Foot - 4,992 4,992 Test Pile Steel HP12X63 Each - 2 2 Test Pile Steel HP12X63 Each - 3 3 Temporary Sheet Piling Sq. Ft 1,735 1,735 Name Plates Each 1 - 1 Preformed Joint Strip Seal Foot 76.0 - 76.0 Elastomeric Bearing Assembly, Type I Each 12 - 12 Elastomeric Bearing Assembly, Type II Each 12 - 12 Anchor Bolts, 114" Each 12 - 12 Anchor Bolts, 114" Each 24 - 24 Anchor Bolts, 112" Each 24 - 24 Concrete Sealer Sq. Ft 532 532 Geocomposite Wall Drain Sq. Yd 83 83 Pipe Underdrains for Structures 4" Foot - 180 180 Drainage Scuppers, DS-11 Underwater Structure Excavation Protection-Location 1	Concrete Encasement	Cu. Yd.	-	15.8	15.8
Stud Shear Connectors         Each         5,232         -         5,23           Reinforcement Bars, Epoxy Coated         Pound         148,700         58,740         207,4           Bar Splicers         Each         1,421         300         1,72           Furnishing Steel Piles HP12X63         Foot         -         1,593         1,593           Furnishing Steel Piles HP14X89         Foot         -         3,399         3,399           Driving Piles         Foot         -         4,992         4,992           Test Pile Steel HP12X63         Each         -         2         2           Test Pile Steel HP12X63         Each         -         3         3           Temporary Sheet Piling         Sq. Ft.         -         1,735         1,735           Name Plates         Each         1         -         1         -           Name Plates         Each         1         -         1         -         1         -         1         -         1         -         1         -         1         -         1         -         1         -         1         -         1         -         1         -         1         -         1	Protective Coat	Sq. Yd.	2,031	-	2,031
Reinforcement Bars, Epoxy Coated         Pound         148,700         58,740         207,44           Bar Splicers         Each         1,421         300         1,72           Furnishing Steel Piles HP12X63         Foot         -         1,593         1,593           Furnishing Steel Piles HP14X89         Foot         -         3,399         3,399           Driving Piles         Foot         -         4,992         4,992           Test Pile Steel HP12X63         Each         -         2         2           Test Pile Steel HP14X89         Each         -         3         3           Temporary Sheet Piling         Sq. Ft.         -         1,735         1,735           Name Plates         Each         1         -         1           Preformed Joint Strip Seal         Foot         76.0         -         76.0           Elastomeric Bearing Assembly, Type I         Each         12         -         12           Elastomeric Bearing Assembly, Type II         Each         12         -         12           Anchor Bolts, 1"         Each         12         -         12           Anchor Bolts, 1½"         Each         24         -         24	Furnishing and Erecting Structural Steel	L. Sum		-	
Bar Splicers         Each         1,421         300         1,72           Furnishing Steel Piles HP12X63         Foot         -         1,593         1,593           Furnishing Steel Piles HP14X89         Foot         -         3,399         3,399           Driving Piles         Foot         -         4,992         4,992           Test Pile Steel HP12X63         Each         -         2         2           Test Pile Steel HP14X89         Each         -         3         3           Temporary Sheet Piling         Sq. Ft.         -         1,735         1,735           Name Plates         Each         1         -         1           Preformed Joint Strip Seal         Foot         76.0         -         76.0           Elastomeric Bearing Assembly, Type I         Each         12         -         12           Elastomeric Bearing Assembly, Type II         Each         12         -         12           Anchor Bolts, 1"         Each         12         -         12           Anchor Bolts, 1"         Each         24         -         24           Concrete Sealer         Sq. Ft.         -         532         532           Geocomposite Wall Drain<	Stud Shear Connectors	Each			5,232
Furnishing Steel Piles HP12X63 Foot - 1,593 1,593 Furnishing Steel Piles HP14X89 Foot - 3,399 3,399 Driving Piles Foot - 4,992 4,999 Test Pile Steel HP12X63 Each - 2 2 Test Pile Steel HP14X89 Each - 3 3 Temporary Sheet Piling Sq. Ft 1,735 1,735 Name Plates Each 1 - 1 Preformed Joint Strip Seal Foot 76.0 - 76.0 Elastomeric Bearing Assembly, Type I Each 12 - 12 Elastomeric Bearing Assembly, Type II Each 12 - 12 Elastomeric Bearing Assembly, Type II Each 12 - 12 Anchor Bolts, 1" Each 12 - 12 Anchor Bolts, 1" Each 24 - 24 Anchor Bolts, 1½" Each 24 - 24 Concrete Sealer Sq. Ft 532 532 Geocomposite Wall Drain Sq. Yd 83 83 Pipe Underdrains for Structures 4" Foot - 180 180 Drainage Scuppers, DS-11 Each 4 - 4 Underwater Structure Excavation Protection-Location 1	Reinforcement Bars, Epoxy Coated				207,440
Furnishing Steel Piles HP14X89 Foot - 3,399 3,399 Driving Piles Foot - 4,992 4,999 Test Pile Steel HP12X63 Each - 2 2 Test Pile Steel HP14X89 Each - 3 3 Temporary Sheet Piling Sq. Ft 1,735 1,735 Name Plates Each 1 - 1 Preformed Joint Strip Seal Foot 76.0 - 76.0 Elastomeric Bearing Assembly, Type I Each 12 - 12 Elastomeric Bearing Assembly, Type II Each 12 - 12 Elastomeric Bearing Assembly, Type II Each 12 - 12 Anchor Bolts, 1" Each 12 - 12 Anchor Bolts, 14" Each 24 - 24 Anchor Bolts, 1½" Each 24 - 24 Concrete Sealer Sq. Ft 532 532 Geocomposite Wall Drain Sq. Yd 83 83 Pipe Underdrains for Structures 4" Foot - 180 180 Drainage Scuppers, DS-11 Each 4 - 4 Underwater Structure Excavation Protection-Location 1	Bar Splicers		1,421		1,721
Driving Piles         Foot         -         4,992         4,992           Test Pile Steel HP12X63         Each         -         2         2           Test Pile Steel HP14X89         Each         -         3         3           Temporary Sheet Piling         Sq. Ft.         -         1,735         1,735           Name Plates         Each         1         -         1           Preformed Joint Strip Seal         Foot         76.0         -         76.0           Elastomeric Bearing Assembly, Type I         Each         12         -         12           Elastomeric Bearing Assembly, Type II         Each         12         -         12           Anchor Bolts, 14"         Each         12         -         12           Anchor Bolts, 14"         Each         24         -         24           Anchor Bolts, 12"         Each         24         -         24           Concrete Sealer         Sq. Ft.         -         532         532           Geocomposite Wall Drain         Sq. Yd.         -         83         83           Pipe Underdrains for Structures 4"         Foot         -         180         180           Drainage Scuppers, DS-11	Furnishing Steel Piles HP12X63				1,593
Test Pile Steel HP12X63         Each         -         2         2           Test Pile Steel HP14X89         Each         -         3         3           Temporary Sheet Piling         Sq. Ft.         -         1,735         1,735           Name Plates         Each         1         -         1           Preformed Joint Strip Seal         Foot         76.0         -         76.0           Elastomeric Bearing Assembly, Type II         Each         12         -         12           Elastomeric Bearing Assembly, Type II         Each         12         -         12           Anchor Bolts, I"         Each         12         -         12           Anchor Bolts, I"         Each         24         -         24           Anchor Bolts, 1½"         Each         24         -         24           Concrete Sealer         Sq. Ft.         -         532         532           Geocomposite Wall Drain         Sq. Yd.         -         83         83           Pipe Underdrains for Structures 4"         Foot         -         180         180           Drainage Scuppers, DS-11         Each         4         -         4           Underwater Structure Excavation<					3,399
Temporary Sheet Piling   Sq. Ft.   -   1,735   1,735   Name Plates   Each   1   -   1			-		4,992
Temporary Sheet Piling   Sq. Ft.   -   1,735   1,735   Name Plates   Each   1   -   1				2	2
Name Plates    Each   1					
Preformed Joint Strip Seal Foot 76.0 - 76.0  Elastomeric Bearing Assembly, Type I Each 12 - 12  Elastomeric Bearing Assembly, Type II Each 12 - 12  Anchor Bolts, 11" Each 12 - 12  Anchor Bolts, 14" Each 12 - 12  Anchor Bolts, 12" Each 24 - 24  Anchor Bolts, 12" Each 24 - 24  Concrete Sealer Sq. Ft 532 532  Geocomposite Wall Drain Sq. Yd 83 83  Pipe Underdrains for Structures 4" Foot - 180 180  Drainage Scuppers, DS-11 Each 4 - 4  Underwater Structure Excavation Protection-Location 1 Each - 1				1,735	1,735
Elastomeric Bearing Assembly, Type I Each 12 - 12 Elastomeric Bearing Assembly, Type II Each 12 - 12 Anchor Bolts, 1" Each 12 - 12 Anchor Bolts, 14" Each 24 - 24 Anchor Bolts, 1½" Each 24 - 24 Concrete Sealer Sq. Ft 532 532 Geocomposite Wall Drain Sq. Yd 83 83 Pipe Underdrains for Structures 4" Foot - 180 180 Drainage Scuppers, DS-11 Each 4 - 4 Underwater Structure Excavation Protection-Location 1				·	
Elastomeric Bearing Assembly, Type II Each 12 - 12 Anchor Bolts, 1" Each 12 - 12 Anchor Bolts, 14" Each 24 - 24 Anchor Bolts, 15" Each 24 - 24 Concrete Sealer Sq. Ft 532 532 Geocomposite Wall Drain Sq. Yd 83 83 Pipe Underdrains for Structures 4" Foot - 180 180 Drainage Scuppers, DS-11 Each 4 - 4 Underwater Structure Excavation Protection-Location 1				-	
Anchor Bolts, $1^u$ Each $12$ - $12$ Anchor Bolts, $1^l_4$ " Each $24$ - $24$ Anchor Bolts, $1^l_2$ " Each $24$ - $24$ Concrete Sealer Sq. Ft $532$ 532 Geocomposite Wall Drain Sq. Yd $83$ 83 Pipe Underdrains for Structures $4^u$ Foot - $180$ 180 Drainage Scuppers, DS- $11$ Each $4$ - $4$ Underwater Structure Excavation Protection-Location $1$				-	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				-	
Anchor Bolts, $1_2''$ Each 24 - 24 Concrete Sealer Sq. Ft 532 532 Geocomposite Wall Drain Sq. Yd 83 83 Pipe Underdrains for Structures 4" Foot - 180 180 Drainage Scuppers, DS-11 Each 4 - 4 Underwater Structure Excavation Protection-Location 1 Each - 1 1	Anchor Bolts, 1"			-	
Concrete Sealer Sq. Ft 532 532 Geocomposite Wall Drain Sq. Yd 83 83 Pipe Underdrains for Structures 4" Foot - 180 180 Drainage Scuppers, DS-11 Each 4 - 4 Underwater Structure Excavation Protection-Location 1  Sq. Ft 532 532 Sq. Ft 532 532 Sq. Ft 180 180  Each - 180 180  Each - 1	Anchor Bolts, 14"			-	
Geocomposite Wall Drain Sq. Yd 83 83 Pipe Underdrains for Structures 4" Foot - 180 180 Drainage Scuppers, DS-11 Each 4 - 4 Underwater Structure Excavation Protection-Location 1 Each - 1			24	`-	
Pipe Underdrains for Structures 4" Foot - 180 180 Drainage Scuppers, DS-11 Each 4 - 4 Underwater Structure Excavation Protection-Location 1 Each - 1			-		
Drainage Scuppers, DS-11 Each 4 - 4 Underwater Structure Excavation Protection-Location 1 Each - 1			-		
Underwater Structure Excavation Each - 1 1 Protection-Location 1			-	180	
Protection-Location 1 Each - 1 1		Each	4		4
Protection-Location I		Fach	-	1	1
Asbestos Bearina Pad Removal   Each   -   -   52					_
			-	-	
Mechanical Splicers Each - 370 370	Mechanical Splicers	Each	-	370	370

#### INDEX OF SHEETS

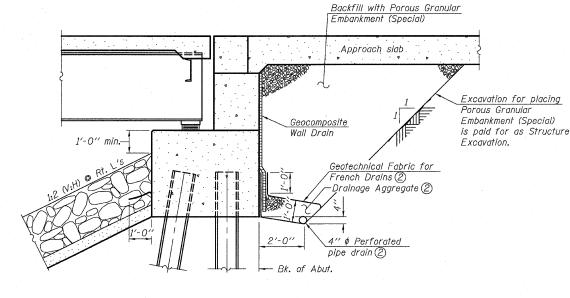
Sheet No.	<u>Description</u>
1	General Plan
2	General Data
3-4	Stage Construction Details
5	Temporary Concrete Barrier for Stage Construction
6-9	Top of Slab Elevations
10	Top of West Approach Slab Elevations
. 11	Top of East Approach Slab Elevations
12	Superstructure
13	Superstructure Details
14 - 15	Bridge Approach Slab Details
<i>1</i> 6	Preformed Joint Strip Seal
17	Drainage Scuppers, DS-11
18	Framing Plan
19-20	Girder Details
21-22	Bearing Details
23	West Abutment Details
24	East Abutment Details
25	Abutment Details
26	Pier 1 Details
27	Pier 2 Details
28	Pier 3 Details
29	HP Pile Details
30	Bar Splicer Assembly Details
31-38	Boring Logs





SECTION A-A

SECTION B-B



SECTION THRU PILE SUPPORTED

STUB ABUTMENT ①

Nata

- (1) All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. See roadway General Notes for additional requirements. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).
- (2) Included in the cost of Pipe Underdrains for Structures 4".

## <u>GENERAL DATA</u> STRUCTURE NO. 026-0105

SHEET NO. 2

38 SHEETS

F.A.P. SECTION

COUNTY TOTAL SHEETS NO.
752 (U-2BRI)B-1 FAYETTE 71 24

CONTRACT NO. 74235

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT

Eastport Business Center 1

DESIGNED MAG



Eastport Business Center 1 100 Lanter Court, Suite 1 Collinsville, Illinois 62234 618-345-2200 Design Firm License No. 184.001115

DESIGNED MAG

CHECKED DGL

DRAWN DGL

CHECKED NEL