

Bench Mark: BM "104" - Punch mark on NE top flange bolt on fire hydrant on the NE side of IL Route 143 & SE side of Wiese Lane, approximately 200' NW of Ridgeview Road and SE of Bridge. Elev. 508.74

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	LENS	SHEET
FAP 789	56-BR-1	MADISON	23	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
8 SHEETS

GENERAL NOTES

Contract #76965

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 work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing name plate shall be cleaned and relocated adjacent to the new name plate. Cost included with Name Plates. The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

Repair of the substructure shall be completed prior to placement of the new deck beams. 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.

If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams.

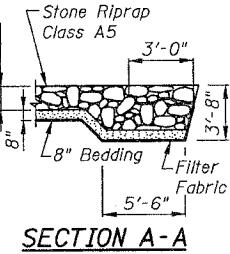
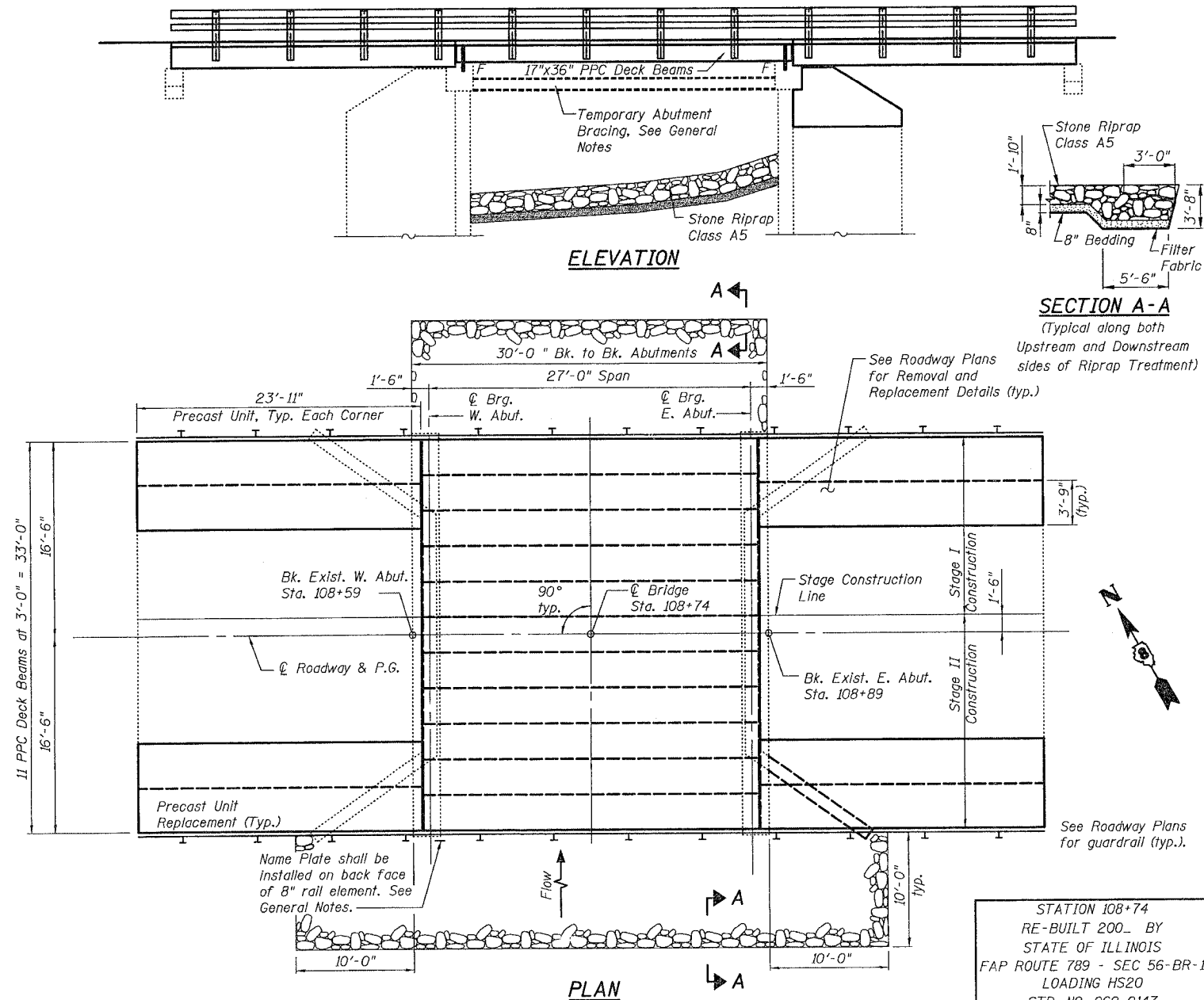
Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of Removal of Existing Superstructures. The minimum thickness of bituminous overlay shall be 1/2" and varies as required to adjust for the new profile grade and camber.

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

The Contractor is advised that due to the lack of vertical reinforcement in the back of the abutment walls a temporary bracing system must be provided prior to the removal of the existing PPC deck beams in order to ensure stability of the abutments. The bracing system shall provide lateral support along the top of the existing abutment walls and be in place until all beams are set, dowel bars are installed and shear key grout is allowed to cure a minimum of seven days. The details must be submitted to the Engineer for approval. Cost to be included with Removal of Existing Superstructures.

The top surface of the beams shall be finished according to Article 504.06 of the Standard Specification except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".

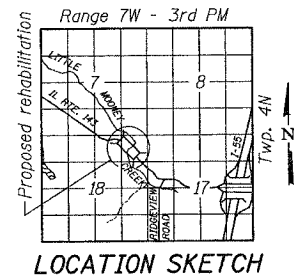
All construction joints shall be bonded.



SECTION A-A
(Typical along both
Upstream and Downstream
sides of Riprap Treatment)

STATION 108+74
RE-BUILT 200_ BY
STATE OF ILLINOIS
FAP ROUTE 789 - SEC 56-BR-1
LOADING HS20
STR. NO. 060-0147

NAME PLATE
See Std. 515001



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.	—	180	180
Filter Fabric	Sq. Yd.	—	180	180
Removal of Existing Superstructures	L. Sum	1	—	1
Concrete Removal	Cu. Yd.	—	0.2	0.2
Concrete Structures	Cu. Yd.	—	0.5	0.5
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	—	2	2
Precast Concrete Bridge Slab	Sq. Ft.	359	—	359
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	930	—	930
Reinforcement Bars, Epoxy Coated	Pound	—	30	30
Steel Bridge Rail, Type SM	Foot	153	—	153
Name Plates	Each	1	—	1
Waterproofing Membrane System	Sq. Yd.	110	—	110
Portland Cement Mortar Fairing Course	Foot	282	—	282
Removal of Existing Precast Unit	Sq. Ft.	359	—	359
Bituminous Concrete Surface Course	Ton	11	—	11
Superpave, Mix "C" N50				

LOADING HS20-44
No allowance for future wearing surface.
DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES

FIELD UNITS
f_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS
f_c = 5,000 psi
f_{ci} = 4,000 psi
f_s = 270,000 psi (1/2" low lax. strands)
f_{ei} = 201,960 psi (1/2" low lax. strands)

PRECAST UNITS
f_c = 4,500 psi
f_c = 1,800 psi
f_s = 20,000 psi
n = 8

WATERWAY INFORMATION

Drainage Area = 1.33 Sq. Mi. Low Grade Elev. 506.8 @ Sta. 115+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	1,310	95		502.1	1.5		503.6	
Base	100	1,530	104		502.5	1.9		504.4	
Overtopping									
Max. Calc.	500	1,760	123		503.3	1.7		505.0	

Plans Prepared By:
Oates Associates, Inc.

Professional Engineer Seal: BRUCE P. SCHOPP, 081-005158, COLLINGSVILLE, ILLINOIS, STATE OF ILLINOIS. Date: 06/29/06. Expires: 11/30/06.

GENERAL PLAN & ELEVATION
IL ROUTE 143 OVER LITTLE MOONEY CREEK
F.A.P. ROUTE 789 - SECTION 56-BR-1
MADISON COUNTY
STA. 108+74
STRUCTURE NO. 060-0147

PLOT DATE = \$DATE\$
FILE NAME = \$FILEL\$
PLOT SCALE = \$SCALE\$
USER NAME = \$USER\$