

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 1
FAP 17		CARROLL	27	11	4 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

GENERAL NOTES

If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on the bridge, 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 PPC Deck Beams. Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall 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 work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and actual beam camber.

All construction joints shall be bonded.

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.

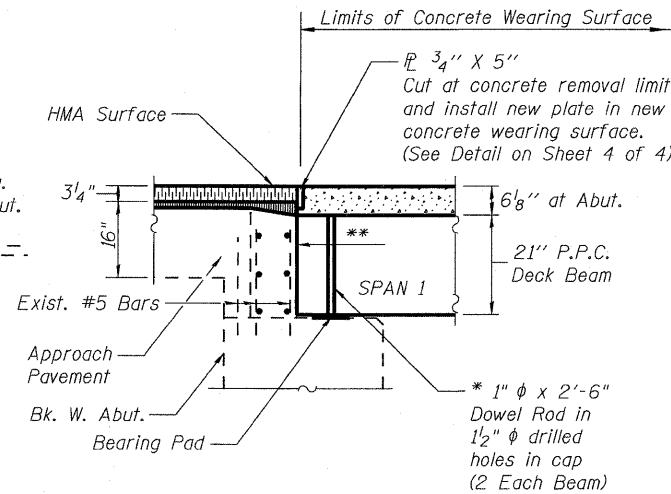
The top surface of the beams shall be finished according to the IDOT Manual of Fabrication of Precast Prestressed Concrete Products.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

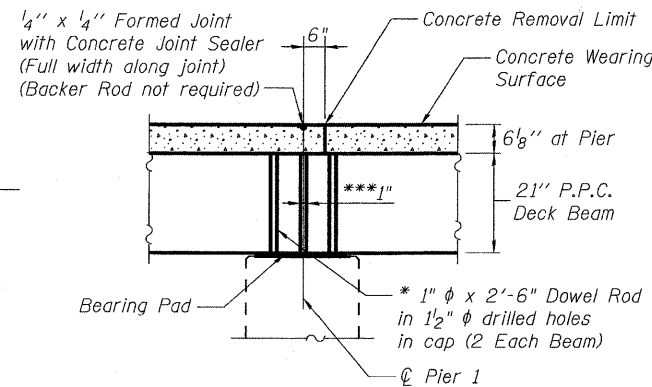
TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	258
Removal of Existing PPC Deck Beams	SQ FT	258
Reinforcement Bars, Epoxy Coated	POUND	672
Concrete Superstructure	CU.YD.	2.7
Concrete Wearing Surface, 5"	SQ.YD.	26.9
Concrete Removal	CU.YD.	3.0 - 2.7
Mechanical Splice	EACH	33
Protective Coat	SQ.YD.	36.3
Bridge Deck Grooving	SQ.YD.	26.9



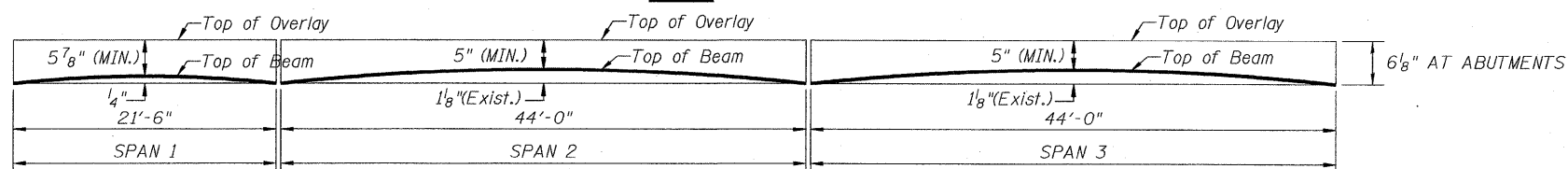
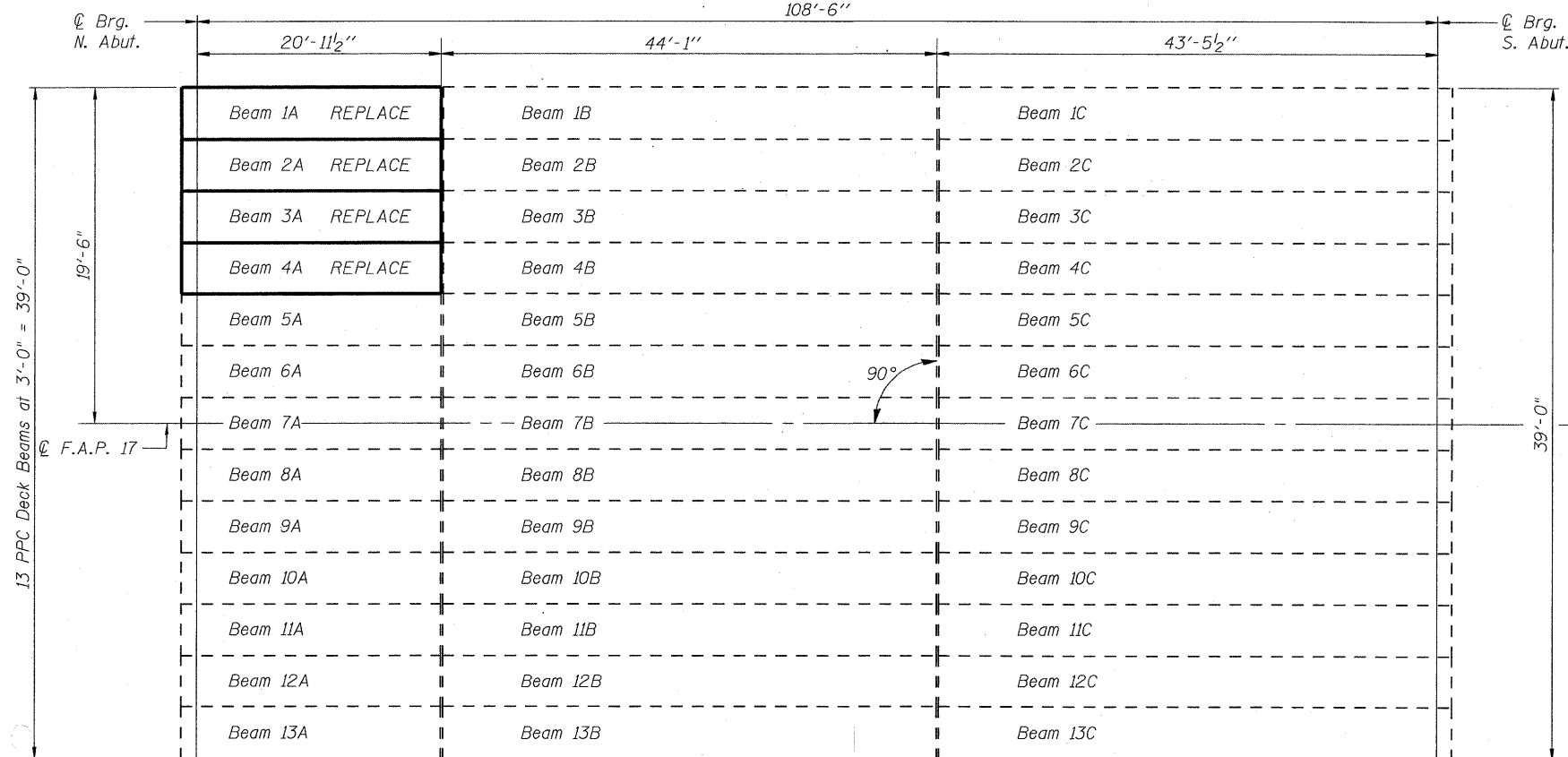
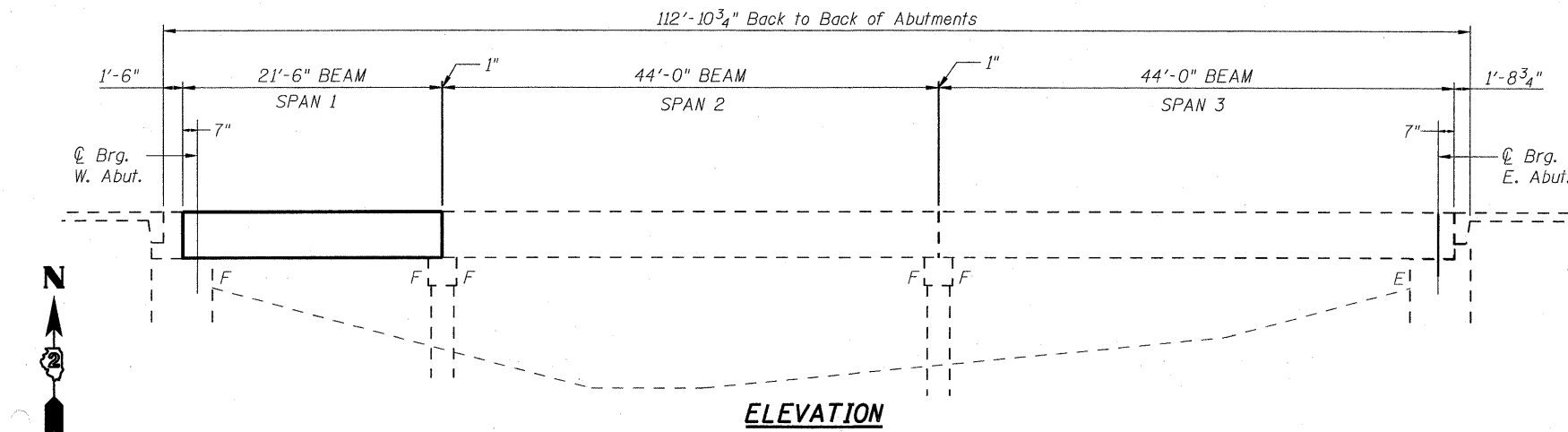
TYPICAL SECTION WEST ABUT.

** If necessary, new beam may be fabricated 1/2" shorter than shown to ease placement of beam. Fill space with Preformed Joint Filler.



SECTION AT PIER 1

*** 1" Joint to be filled with Non-shrink grout. 1" dimension may vary to accommodate tolerance in beam length.



DESIGN STRESSES

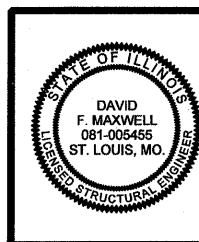
CAST IN PLACE

$f'_c = 5,000$ psi (CWS)
 $f'_c = 4,000$ psi (Parapet)
 $f_y = 60,000$ psi (Reinforcement)

PRECAST UNITS

$f'_c = 5,000$ psi
 $f'_ci = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ low lax strands)
 $f'_si = 201,960$ psi (1/2" ϕ low lax strands)

DESIGNED - DFM
CHECKED - RB
DRAWN - EBS
CHECKED - DFM



David F. Maxwell, S.E.
Reg. No. 081-005455
Date: 12/21/07
My registration expires November 30, 2008.

PLAN AND ELEVATION
F.A.P. 17 (US RTE 52 & IL RTE 64)
CARROLL COUNTY
STRUCTURE NO. 008-0029