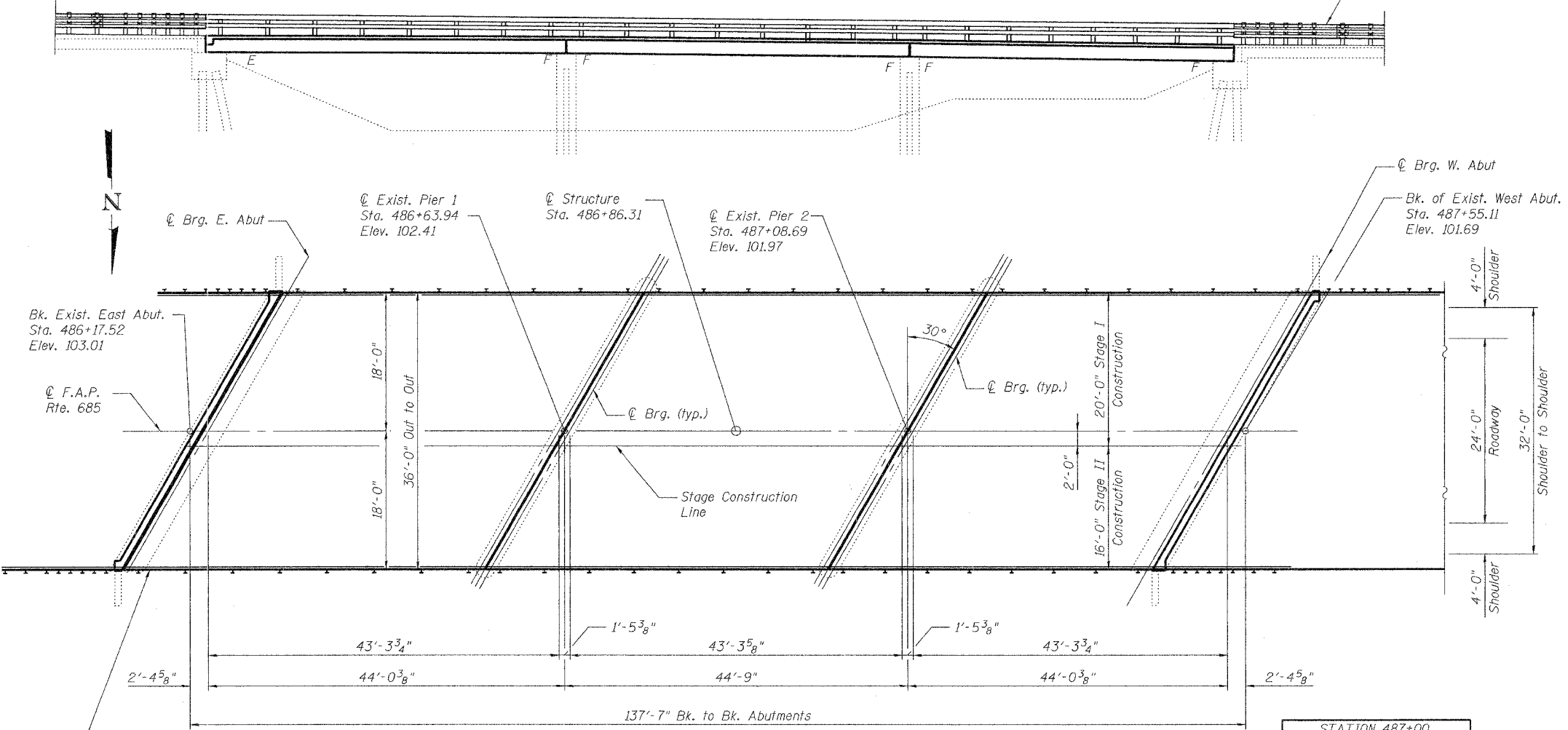


Existing Structure: S.N. 029-0052 was built in 1980 as F.A. 685, Section 39BR at Sta.487+00. The structure consists of 3 simple span PPC-deck beams on pile bent abutments and pile bent piers with solid encasement. The bk. to bk. abutment length is 137'-7" and the out to out bridge width is 36'-0". The existing superstructure is to be removed and replaced. Staged construction shall be used during construction.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 685	39BR1	FULTON	22	10
SHEET NO. 1 13 SHEETS				
Contract # 68497				



GENERAL NOTES

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

All construction joints shall be bonded.

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.

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

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractors 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.

No instream work will be allowed on this project.

Attach new Name Plate to back side of the 8" rail element.

STATION 487+00  
REBUILT 200 BY  
STATE OF ILLINOIS  
F.A.P. RT. 685  
SEC. (39BR)I  
LOADING HS20  
STR. NO. 029-0052

NAME PLATE  
See Std. 515001

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		4.8	4.8
Prefomed Joint Strip Seal	Foot	41.5		41.5
Concrete Structures	Cu. Yd.		6.1	6.1
Bridge Deck Grooving	Sq. Yd.	506		506
Protective Coat	Sq. Yd.	537		537
Concrete Wearing Surface, 5"	Sq. Yd.	537		537
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	4824		4824
Reinforcement Bars, Epoxy Coated	Pound	6930	1360	8290
Steel Bridge Rail, Type SM	Foot	269		269
Name Plates	Each	1		1
Bar Splicers	Each	139	12	151

- Index of Sheets
1. Plan and Elevation
  2. Stage Construction
  3. Temporary Concrete Barrier and Stage Construction Details
  4. Superstructure
  5. Superstructure Details
  6. Concrete Overlay Details
  7. Type SM Steel Bridge Rail Side Mounted
  8. Strip Seal Expansion Joint Assembly
  9. Concrete Removal
  10. East Abutment
  11. West Abutment
  12. Substructure Details
  13. Bar Splicer Assembly Details

LOADING HS20-44  
Allow 50#/sq. ft. for future wearing surface.  
DESIGN SPECIFICATIONS  
2002 AASHTO 17th Edition

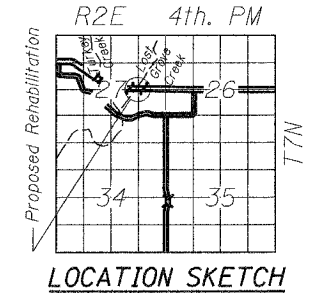
DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$  psi  
 $f'_c = 5,000$  psi (Concrete Wearing Surface)  
 $f_y = 60,000$  psi (reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$  psi  
 $f'_{ci} = 4,000$  psi  
 $f'_s = 270,000$  psi ( $\frac{1}{2}$ "  $\phi$  Low Relaxation Strands)  
 $f'_{si} = 201,960$  psi ( $\frac{1}{2}$ "  $\phi$  Low Relaxation Strands)



KERMIT P. CHRISTMAN  
LICENSED STRUCTURAL ENGINEER  
ILLINOIS  
EXP. 11/30/06

PLAN AND ELEVATION  
ILLINOIS ROUTE 9 OVER  
LOST GROVE CREEK  
F.A.P. ROUTE 685 SECTION (39BR)I  
FULTON COUNTY  
SN 029-0052

DESIGNED BWP	<b>THOUVENOT, WADE &amp; MOERCHEN, INC.</b> ENGINEERS • SURVEYORS • PLANNERS   CORPORATE OFFICE 8940 OLD COLLINGSVILLE RD. SWANSEA, ILLINOIS 62226 TEL. (618) 624-4688 FAX (618) 624-6888 E-MAIL: CORP@TWM-INC.COM
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CHECKED KPC	