

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 330	105B-1R	WILL	33	10
SHEET NO. 1 9 SHEETS				

Benchmark: Disc in corner of NE Wingwall Elev. 734.36

Existing Structure: S.N. 099-0118, built in 1978 as a single span 21"x36" PPC Deck Beam Bridge with 2" Bituminous wearing surface on closed abutments on spread footings. The structure measures 44'-6" Back to Back abutments and 42'-0" out to out deck. Bridge was rehabilitated in 2005 with partial beam replacement. Traffic is to be maintained utilizing stage construction. One lane for both directions will be provided by using temporary traffic signals.

Salvage: None

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to routine 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 based upon the unit price bid for the work.

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60 (IL Modified). See Special Provisions.

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.

Attach new Name Plate to the inside face of parapet as shown. Existing name plate is to be removed, cleaned and relocated adjacent to new name plate. Cost included in the cost of Name Plates.

Reinforcement Bars designated (E) shall be epoxy coated.

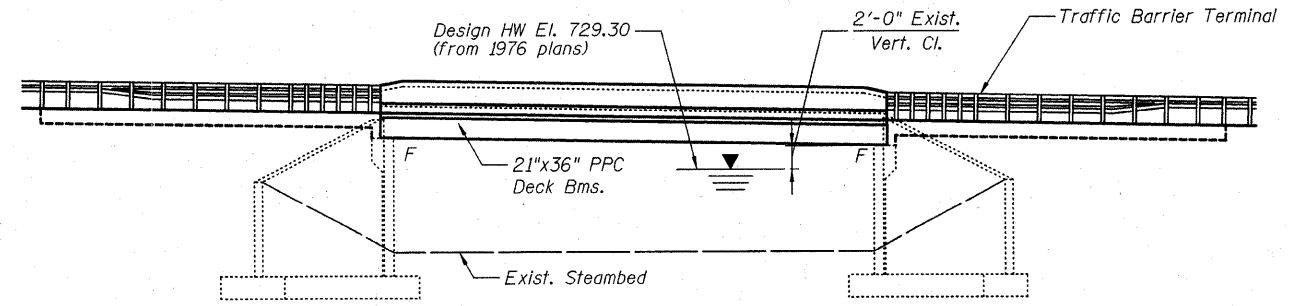
No in-stream work will be allowed on this project.

Slip forming of the parapets is not allowed.

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

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

- INDEX OF SHEETS**
1. General Plan & Elevation
 2. Stage Construction Details
 3. Temporary Concrete Barrier
 4. Beam Details (21"x36")
 5. Superstructure Details
 6. Parapet Details
 7. Concrete Removal and Substructure Repair
 8. North & South Abutments
 9. Bar Splicer Details



SCOPE OF WORK

1. Total superstructure removal and replacement.
2. Substructure repairs.
3. Approach slab removal and replacement. See Roadway sheets for details.
4. Caution should be exercised when working in the vicinity of Overhead Electric Lines on the North-West side of bridge.

ELEVATION

STATION 259+37.00
REBUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 330 SEC. 105B-1R
LOADING HS20-44
STR. NO. 099-0118

NAME PLATE
See Std. 515001

LOADING HS-20-44
Allow 50 psf for future wearing surface

DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications
2003 IDOT Prestressed Concrete Manual

DESIGN STRESSES

FIELD UNITS	PRESTRESSED UNITS
f'c = 3,500 psi	f'c = 5000 psi
f'y = 60,000 psi	f'ci = 4000 psi
	f's = 270,000 psi (1/2" ϕ low lax. strands)
	f'si = 201,900 psi (1/2" ϕ low lax. strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock acceleration coefficient (A) = .04
Site Coefficient (S) = 1.2

WATERWAY INFORMATION

Drainage Area = 1510 Acres

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	500	283	283	729.30	0	0		
Base	100	630			729.80	0	0		
Overtopping									
Max. Calc.	500								

All time H.W. Elev. 731.10
Information taken from 1976 plans and adjusted to project datum.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing Superstructures	Each	1
Concrete Superstructures	Cu.Yd.	13.6
Bridge Deck Grooving	Sq.Yd.	183
Protective Coat	Sq.Yd.	230
Concrete Wearing Surface (5")	Sq.Yd.	209
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq.Ft.	1,883
Reinforcement Bars, Epoxy Coated	Pound	5,070
Bar Splicers	Each	55
Name Plates	Each	1
Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq.Ft.	313

* Special Provision

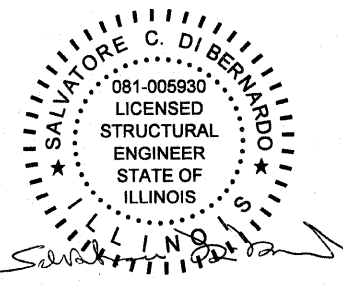
GENERAL PLAN AND ELEVATION

US RTE 45 OVER NORTH
BRANCH OF PRAIRIE CREEK

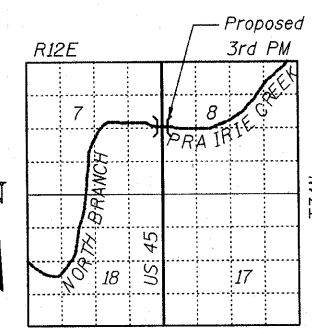
F.A.P. RT. 330
SECTION 105B-1R
WILL COUNTY
STA. 259+37.00
S.N. 099-0118

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

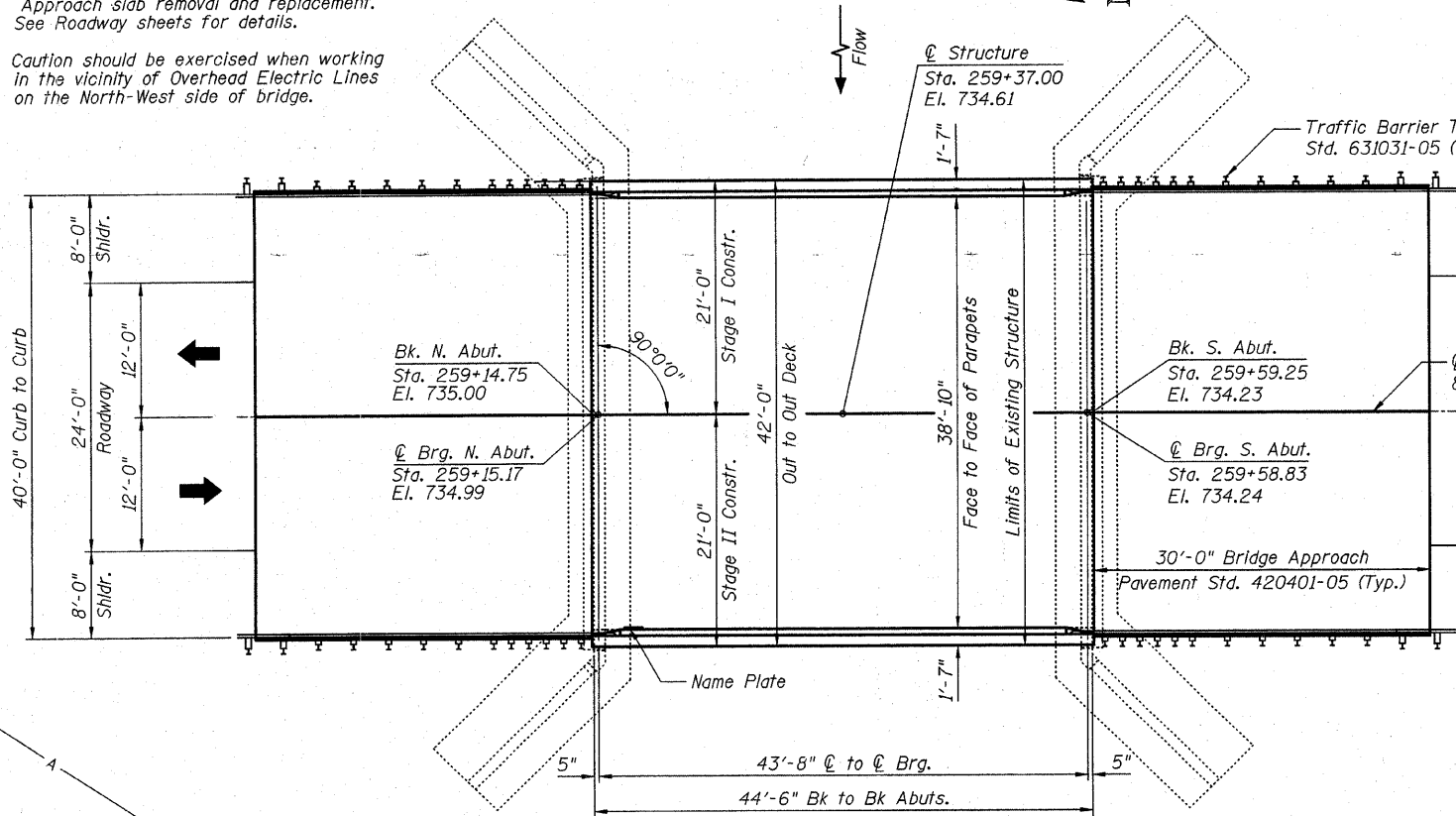
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



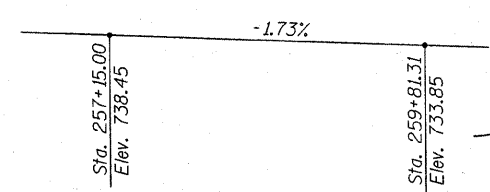
DATE: 10/17/2007
SEAL EXPIRES: 11/30/2008



LOCATION SKETCH



PLAN



PROFILE GRADE

DESIGNED	B. Sauter
CHECKED	E. Mroczek
DRAWN	R. Danley
CHECKED	B. Sauter

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