ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 631	(111N-1 B)	WILL	32	16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
14 SHEETS

Contract # 60D85

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

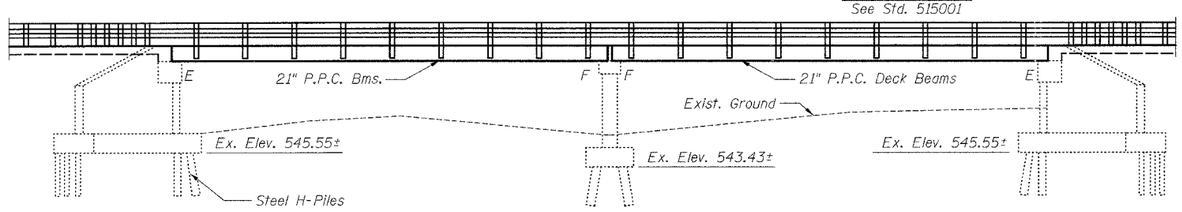
STATION 821+12.20
REBUILT 20 BY
STATE OF ILLINOIS
FAP 631 SEC. 111 N-1 B
LOADING HL93
STR. NO. 099-0169

Benchmark: Chiseled "X" S-E Wingwall, Offset 19'-7" RT. Sta. 820+59 Elev. 557.86

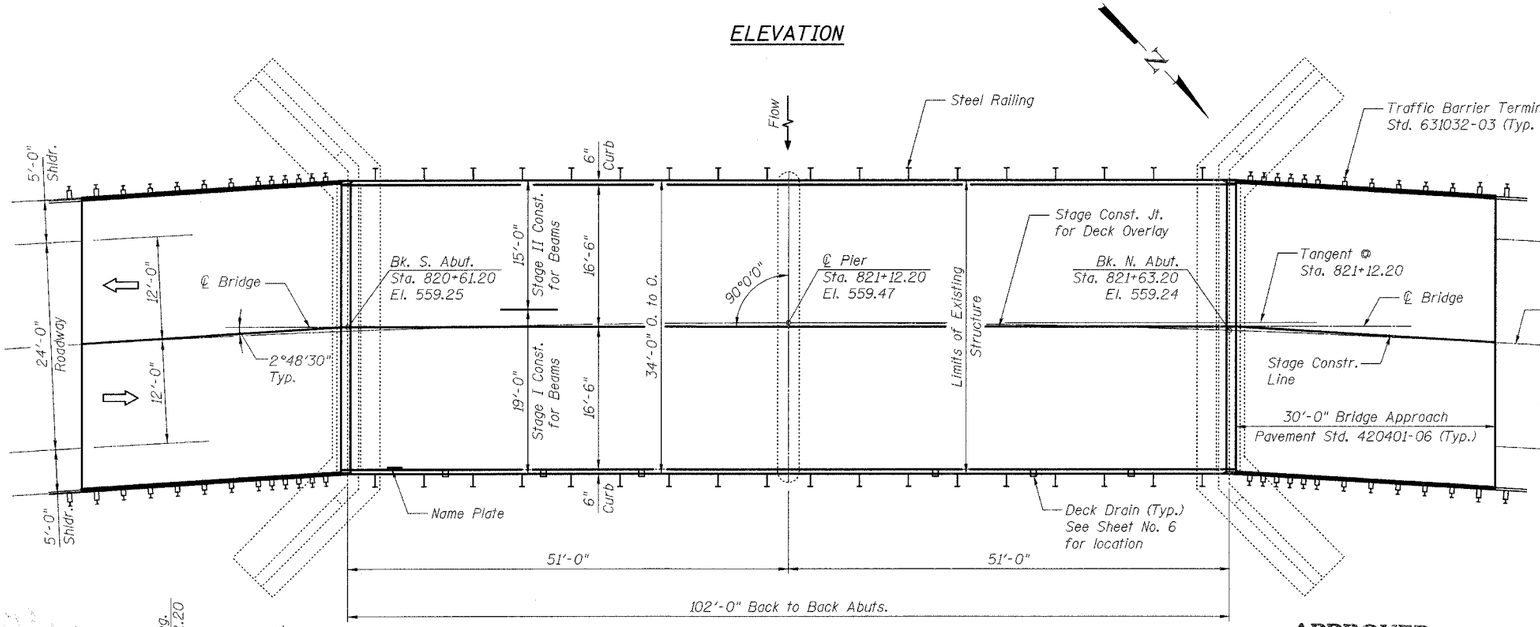
Existing Strucrure: Rebuilt in 1971 as a 2 span 21" x 36" and 21" x 48" PPC Deck Beam Bridge with 3" bituminous wearing surface on closed abutments and a pier. The substructure is supported on H piles. The structure measures 102'-0" Bk. to Bk. Abutments and 34'-0" Out to Out Deck. Bridge was rehabilitated in 2000 with one 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.

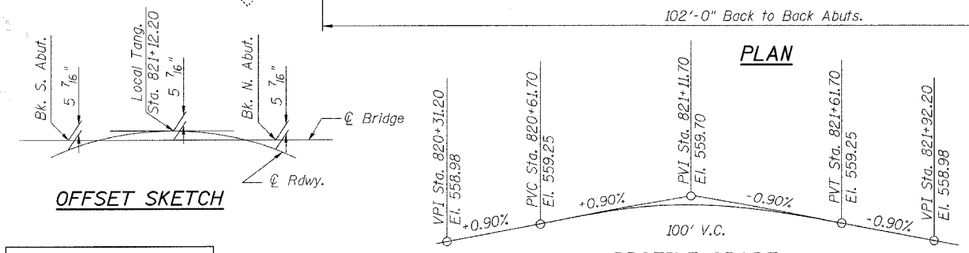
NAME PLATE
See Std. 515001



ELEVATION



PLAN



OFFSET SKETCH

PROFILE GRADE

SCOPE OF WORK

1. Total Superstructure Removal and Replacement
2. Substructure Repairs
3. Approach Slab Removal and Replacement

INDEX OF SHEETS

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 steel rail as shown. Existing name plate is to be left in place.

Reinforcement Bars designated (E) shall be epoxy coated.

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

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.

After the removal of the existing beams for stage I removal, the Contractor shall re-connect or re-engage the transverse ties in the existing beams for stage I traffic.

Burn or cut the existing dowel rods flush with existing bearing seat. Grind the existing dowel rods smooth and seal with epoxy. The cost of this work shall be included with "Removal of Existing Superstructures".

LOADING HL-93
Allow 25 psf for future wearing surface

DESIGN SPECIFICATIONS
AASHTO LRFD Bridge Design Specifications
(4th Edition, 2007)

HORIZONTAL CURVE DATA

P.C.	818+02.03
P.I.	822+99.23
P.T.	827+60.13
SE =	7.4%
Δ =	37°-47'19"
D =	3°-56'39"
R =	1452.69
T =	497.20'
L =	958.10'

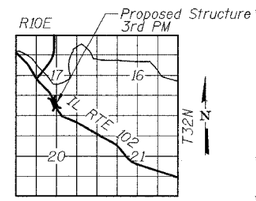
DESIGN STRESSES

FIELD UNITS	PRESTRESSED UNITS
f'c = 3,500 psi	f'c = 6,000 psi
fy = 60,000 psi	f'ci = 5,000 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) = .04g
Site Coefficient (S) = 1.2

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (for)
ENGINEER OF BRIDGES AND STRUCTURES



LOCATION SKETCH

TOTAL BILL OF MATERIAL

	ITEM	UNIT	QUANTITY
	Removal of Existing Superstructures	Each	1
	Concrete Removal	Cu. Yd.	4.5
	Concrete Superstructure	Cu.Yd.	6.4
	Bridge Deck Grooving	Sq.Yd.	353
	Protective Coat	Sq.Yd.	383
	Concrete Wearing Surface (5")	Sq.Yd.	383
	Precast Prestressed Concrete Deck Beams (21" Depth)	Sq.Ft.	3,443
	Reinforcement Bars, Epoxy Coated	Pound	5,850
	Bar Splicers	Each	116
	Steel Railing, Type SM	Foot	204
	Name Plates	Each	1
	Preformed Joint Strip Seal	Foot	68
*	Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq.Ft.	71
*	Asbestos Bearing Pad Removal	Each	24

* Special Provision

STATE OF ILLINOIS
EWA K. MROCZEK
081-006067
LICENSED STRUCTURAL ENGINEER
DATE: 5/15/2008
SEAL EXPIRES: 11/30/2008

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

Ciorba Group, Inc.
CONSULTING ENGINEERS
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GENERAL PLAN AND ELEVATION
FAP 631 (ILL. RTE. 102)
OVER FORKED CREEK OVERFLOW
SECTION 111 N-1 B
WILL COUNTY
STA. 821+12.20
S.N. 099-0169

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