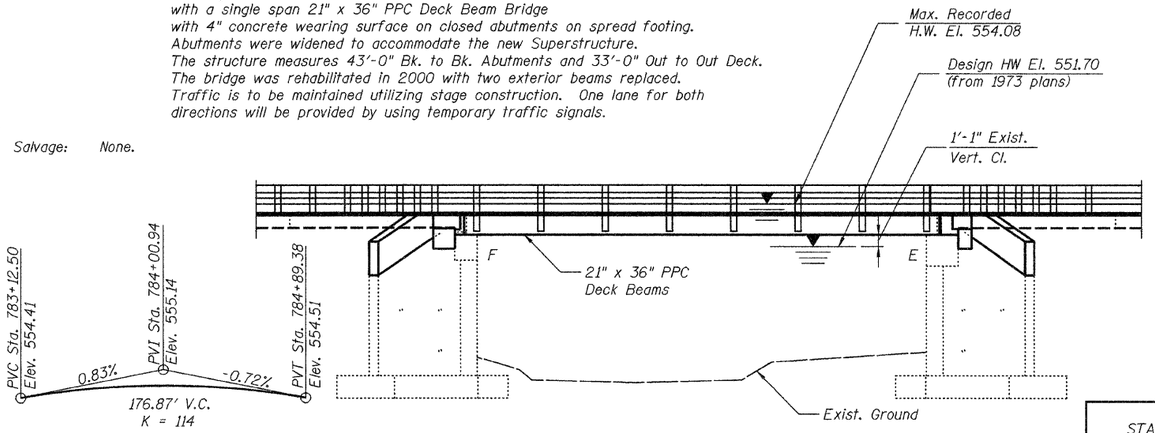
Benchmark: Pipe in NW Shoulder Sta. 784+74.54 Offset 13ft Lt El. 554.29

Existing Strucrure: SN 099-0172, @ Sta. 784+13 built in 1927 as S.B.I. RT. 113 Section 111.
Existing R.C. Deck Girder was removed and replaced in 1973
with a single span 21" x 36" PPC Deck Beam Bridge
with 4" concrete wearing surface on closed abutments on spread footing.
Abutments were widened to accommodate the new Superstructure.
The structure measures 43'-0" Bk. to Bk. Abutments and 33'-0" Out to Out Deck.
The bridge was rehabilitated in 2000 with two exterior beams replaced.
Traffic is to be maintained utilizing stage construction. One lane for both
directions will be provided by using temporary traffic signals.

Salvage: None.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



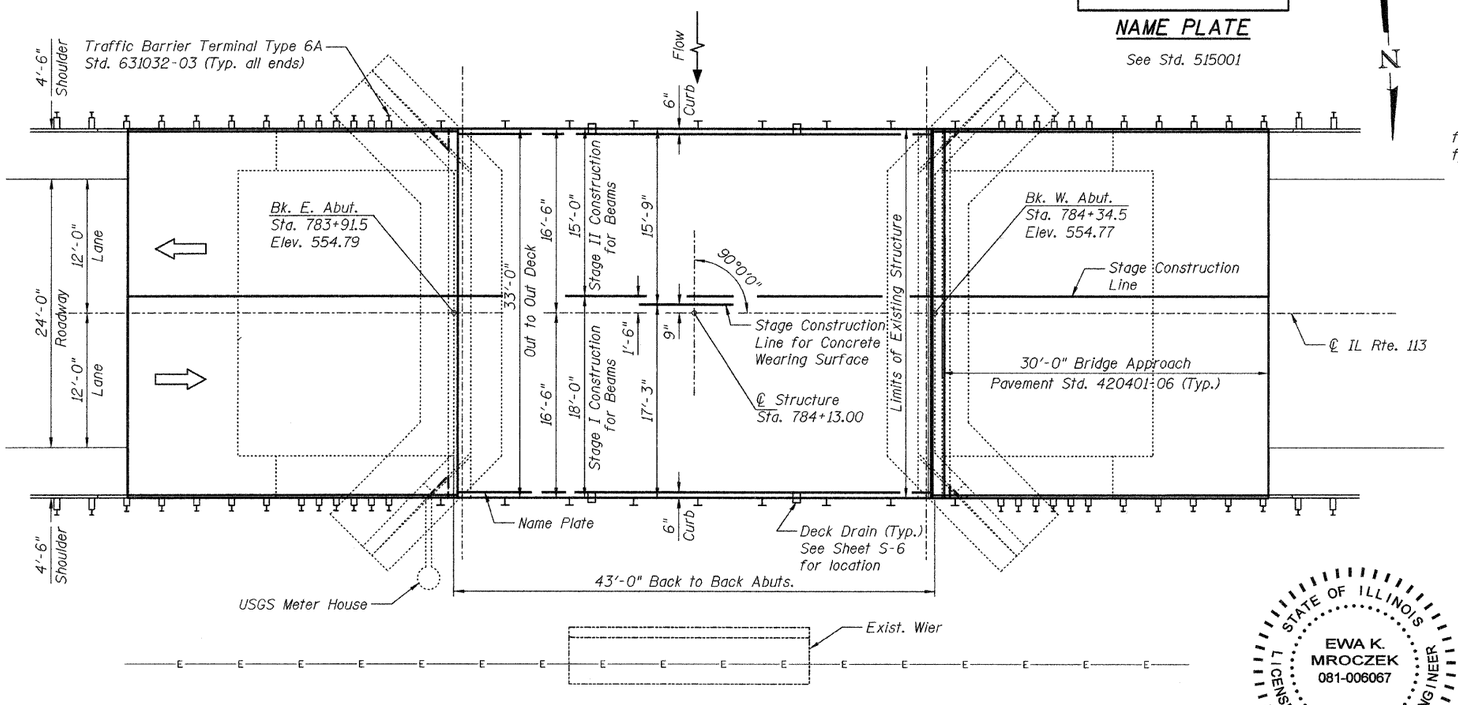
PROPOSED PROFILE

ELEVATION

STATION 784+13.00
REBUILT 20 BY
STATE OF ILLINOIS
IL RT. 113 SEC. 111-B-2
LOADING HL 93
STR. NO. 099-0172

NAME PLATE

See Std. 515001



PLAN

INDEX OF SHEETS

SCOPE OF WORK

1. Total superstructure removal and replacement.
2. Substructure repairs.
3. Approach slab removal and replacement. See Roadway sheets for details.

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.

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"

Attach new Name Plate to the inside face of steel rail 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.

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.

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)

LOADING HL-93

No future wearing surface allowed

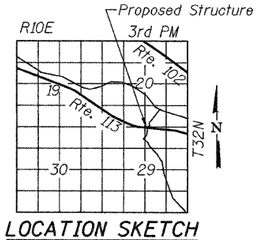
DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specfications (4th Edition, 2007)

TOTAL BILL OF MATERIAL

	ITEM	UNIT	QUANTITY
	Removal of Existing Superstructures	Each	1
	Concrete Removal	Cu. Yd.	4.0
	Concrete Structures	Cu.Yd.	5.0
	Concrete Superstructure	Cu.Yd.	5
	Bridge Deck Grooving	Sq.Yd.	139
	Protective Coat	Sq.Yd.	155
*	Concrete Wearing Surface	Sq.Yd.	155
	Precast Prestressed Concrete Deck Beams (21" Depth)	Sq.Ft.	1,397
	Reinforcement Bars, Epoxy Coated	Pound	3,090
	Bar Splicers	Each	55
	Steel Railing, Type SM	Foot	92
	Name Plates	Each	1
	Preformed Joint Strip Seal	Foot	33
*	Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq.Ft.	50
*	Asbestos Bearing Pad Removal	Each	24

* Special Provision



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
FAS 1317 (IL RTE 113)
OVER TERRY CREEK
STA. 784+13.00
S.N. 099-0172

B. Sauter	
E. Mroczek	
R. Danley	
B. Sauter	

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APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
EWA K. MROCZEK
081-006067
LICENSED STRUCTURAL ENGINEER
DATE: 7/18/2008
SEAL EXPIRES: 11/30/2008

SHEET NO. S-1 S-13 SHEETS	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1317	111 B-2	WILL	32	16
			CONTRACT NO. 60D86		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

rdanley
7/18/2008
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