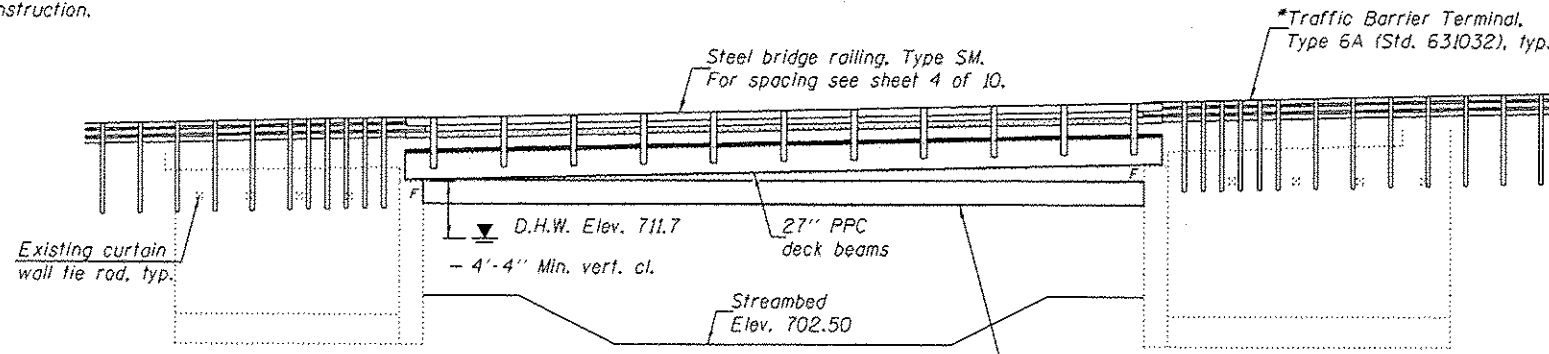


Benchmark: Chiseled "a" on top of SE wingwall of S.N. 020-0047; Sta. 1437+21.63, 14.79' Lt., Elev. 718.78

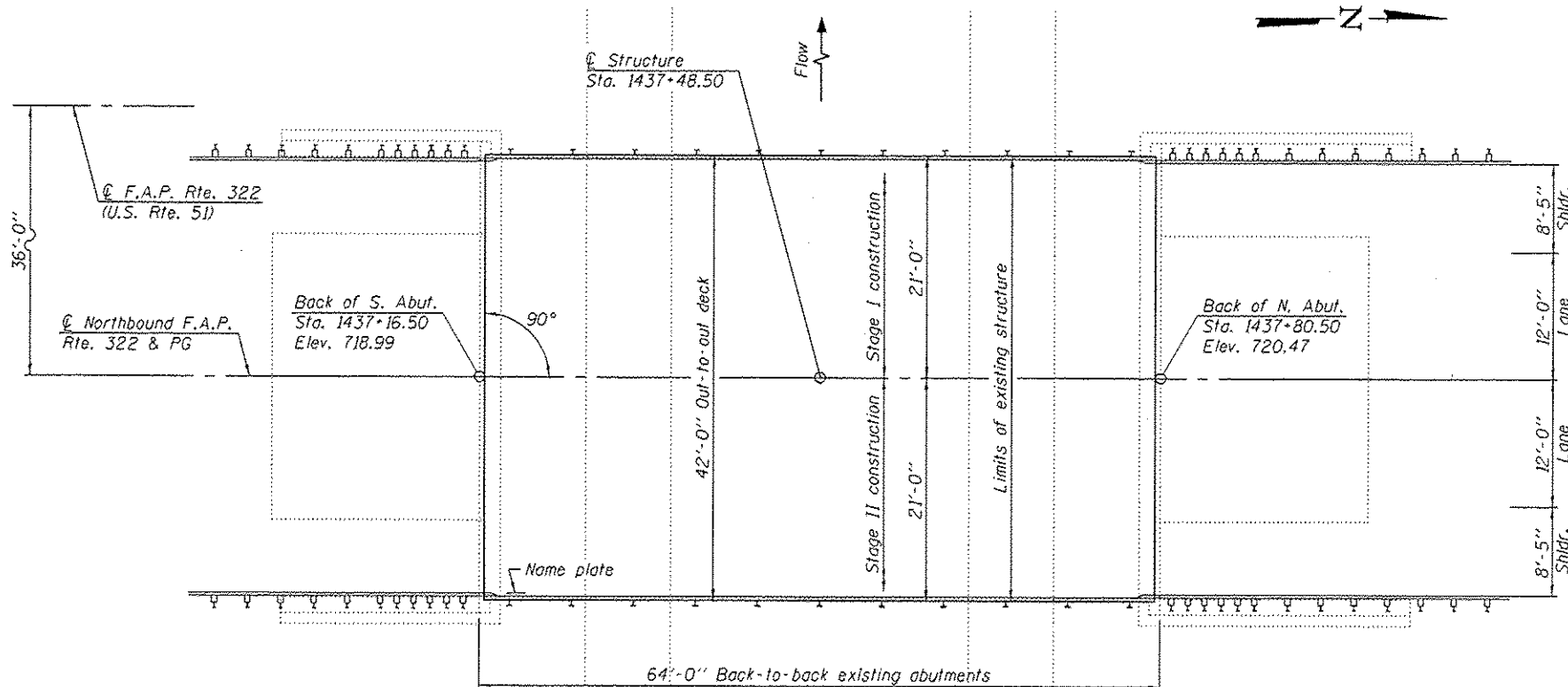
Existing Structure: S.N. 020-0046 built in 1980 as F.A. Route 52, Section 54BR-1 at Sta. 1423+20.60. The existing structure consists of a single span prestressed concrete deck beam superstructure supported on closed abutments with metal shell piles. Back-to-back of abutment length is 64'-0" and out-to-out width of deck is 42'-0". The existing superstructure is to be removed and replaced. Traffic is to be maintained using stage construction.

No Salvage.

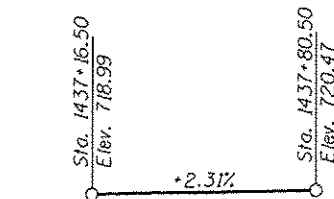


ELEVATION

*The terminal posts shall be spaced to miss the existing curtain wall tie rods and shall be verified by the Contractor, and as directed by the Engineer.



PLAN



PROFILE GRADE

(Along @ Northbound F.A.P. Rte. 322)



EXPIRES 11-30-2014

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	N. Abut.
	702.91	702.89

WATERWAY INFORMATION

Drainage Area = 8.30 mi.²

		Existing Low Grade Elev. 717.49 @ Sta. 1435+37		Proposed Low Grade Elev. 717.49 @ Sta. 1435+37					
Flood	Freq. Yr.	0 C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.	
	10								
Design	50	1680	425	425	711.7	0.7	0.8	712.4	712.5
Base	100	1930	456	456	712.1	0.8	0.8	712.9	712.9
Max. Calc.	500	2504	534	534	713.1	1.0	1.0	714.1	714.1

Information per 1985 as-built construction plans. Elevations adjusted from NGVD29 (assumed) to NAVD88.

SEISMIC DATA

1500 Year return per AASHTO Standard Specifications)
 Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.046g
 Site Coefficient (S) = 1.5

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims
 1995 Seismic Retrofitting Manual for Highway Bridges FHWA-RD-94/052

DESIGN STRESSES

FIELD & EXISTING UNITS

f'c = 3,500 psi
 fy = 60,000 psi (reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
 f'ci = 5,000 psi
 fpu = 270,000 psi (1/2" φ low lax strands)
 fpbt = 201,960 psi (1/2" φ low lax strands)

INDEX OF SHEETS

- 1 General Plan & Elevation
- 2 Stage Construction Details
- 3 Temporary Concrete Barrier for Stage Construction
- 4 Superstructure
- 5 Superstructure Details
- 6 Steel Railing, Type SM with Hot-Mix Asphalt Wearing Surface
- 7 27"x 36" PPC Deck Beam
- 8 27"x 36" PPC Deck Beam Details
- 9 Concrete Removal
- 10 Structural Repair of Concrete

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.
 Plan dimensions and details relative to existing plans are subject to nominal construction 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 at the unit price bid for the work.
 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.

TOTAL BILL OF MATERIAL

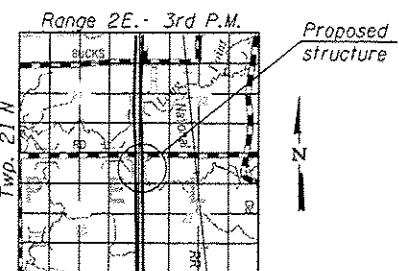
ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		0.7	0.7
Concrete Structures	Cu. Yd.		0.7	0.7
Hot-Mix Asphalt Surface Course, Mix "D", N90	Ton	34.5		34.5
Portland Cement Mortar Fairing Course	Foot	815		815
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	2632		2632
Reinforcement Bars, Epoxy Coated	Pound	20		20
Steel Railing, Type SM	Foot	126		126
Name Plates	Each	1		1
Waterproofing Membrane System	Sq. Yd.	298		298
Temporary Wall Bracing System	L. Sum		0.5	0.5
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.		72	72

STATION 1437+48.50
 REBUILT 20 BY
 STATE OF ILLINOIS
 F.A.P. RTE. 322 SEC. 54B-2
 LOADING HL-93
 STRUCTURE NO. 020-0046

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost Included with Name Plates.



LOCATION SKETCH

GENERAL PLAN & ELEVATION
NORTHBOUND U.S. ROUTE 51 OVER
TRIBUTARY OF LONG POINT CREEK
F.A.P. RTE. 322 - SEC. 54B-2

DEWITT COUNTY
STATION 1437+48.50
STRUCTURE NO. 020-0046

DESIGNED - [Signature]	EXAMINED - [Signature]	DATE - MARCH 24, 2014
CHECKED - [Signature]	PASSED - [Signature]	REVISED -
DRAWN - H.T. duong		REVISED -
CHECKED - [Signature]		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	54B-3, 54B-2	DEWITT	89	45
			CONTRACT NO. 70606	
[ILLINOIS] FED. AID PROJECT				