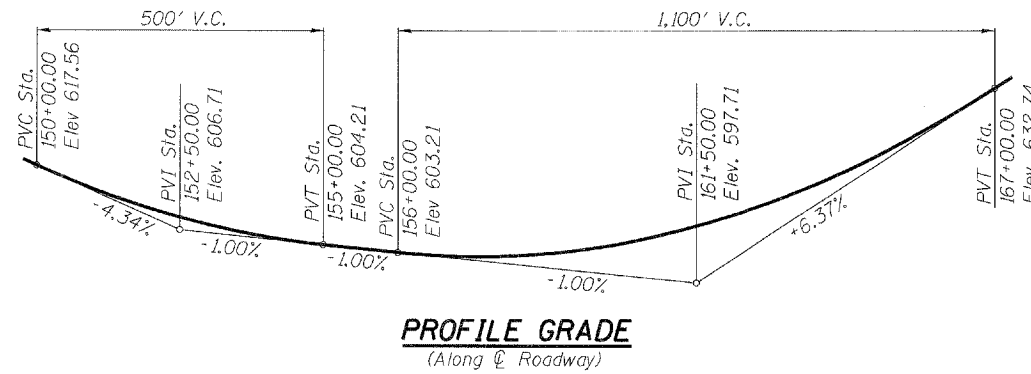


Bench Mark: Chiseled square on N.E. wingwall Sta. 156+53.86, 18.23' LT. Elev. 597.43

Existing Structure: S.M. 015-0019 built in 1924 as FAP Route 91, Section 5-B; widened in 1956; superstructure replaced in 1984. Existing superstructure consists of five simple spans of precast prestressed concrete deck beams. The superstructure is supported by one concrete closed abutment on a pile supported spread footing, one solid wall reinforced concrete pier on a pile supported spread footing, three solid wall reinforced concrete piers supported on spread footings bearing on rock, and one concrete closed abutment supported on a spread footing bearing on rock. Steel WF beams were placed under deficient precast beams in 2008 (not shown below). The back-to-back abutment dimension is 289'-7 1/2" while the out-to-out width measures 34'-0". Structure to be removed and replaced.

Traffic Control: Staged construction will be utilized by maintaining one lane of traffic during construction.

Salvage: The steel WF beams supporting deficient PPC deck beams shall be salvaged in accordance with Section 501.02 of the Standard Specifications for reuse by IDOT. The beams shall be removed, delivered to the IDOT Mattoon Maintenance Yard, and unloaded at the yard by the Contractor. Cost included with Removal of Existing Structures.



INDEX OF SHEETS

1. General Plan & Elevation
- 2.-3. General Data & Stage Construction Details
4. Temporary Concrete Barrier
- 5.-7. Top of Slab Elevations
8. Approach Slab Elevations
9. Superstructure
10. Superstructure Details
11. Diaphragm Details
- 12.-13. Approach Slab Details
- 14.-15. Plate Girder
16. Bearing Details
17. West Abutment
18. East Abutment
19. West Pier
20. East Pier
21. Pile Details
22. Mechanical Splicers & Bar Splicers
- 23.-24. Boring Logs

STATION 155+50.0
BUILT 2011 BY
STATE OF ILLINOIS
F.A.P. RT. 91 SEC. (5BR)B-1
LOADING HL-93
STRUCTURE NO. 015-0075

NAME PLATE
See Std. 515001

LOADING HL-93

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

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (AASHTO M 270 Grade 50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.12g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.26g
Soil Site Class = C

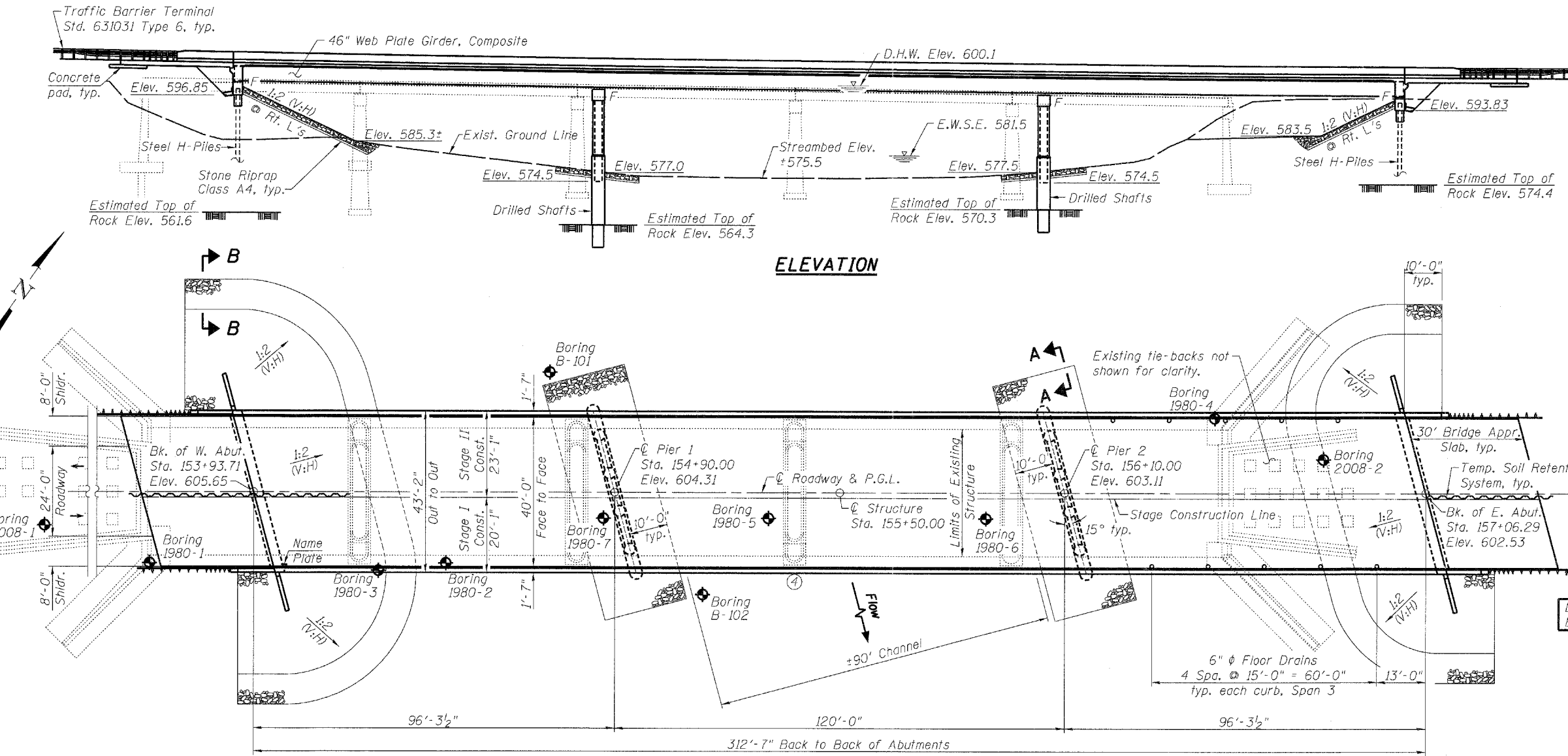
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	596.9	564.3	570.3	593.8



Daniel Feuerborn
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License Expires 11-30-2012
Date: 10/12/2011

GENERAL PLAN & ELEVATION
ILLINOIS ROUTE 16 OVER EMBARRAS RIVER
F.A.P. RTE. 91 - SEC. (5BR)B-1
STATION 155+50.00
STRUCTURE NO. 015-0075



ELEVATION

PLAN

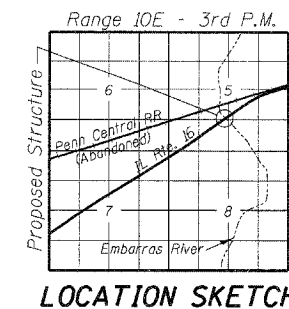
WATERWAY INFORMATION

Drainage Area = 728.0 sq. mi. Prop. Low Grade Elev. 602.5 @ Sta. 157+50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater E. Exist.	Headwater E. Prop.
Overtop	<10	14,800	3,506	4,732	597.5	0.1	0.1	596.0	597.6
Design	50	21,200	3,506	5,191	600.1	0.2	0.1	600.3	600.2
Base	100	23,900	3,506	5,214	601.0	0.1	0.1	601.1	601.1
Overtopping	400	28,700	3,506	5,214	602.3	0.2	0.2	602.5	602.5
Max. Calc.	500	30,200	3,506	5,214	602.7	0.1	0.2	602.8	602.9

Notes:

1. Portions of the existing abutments which are to be removed shall be removed during Stage II Removal only. The Contractor shall retain an Illinois Licensed Structural Engineer to design and detail the method for any partial removal of the existing abutment. The design shall be submitted to Engineer for review and approval.
2. See sheet 2 of 24 for Section A-A and Section B-B.
3. The gate station located on the existing pier shall be removed and relocated as directed by the Engineer. Cost included with Removal of Existing Structures.



APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Daniel Feuerborn
DANIEL FEUERBORN
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 01 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
91	(5BR)B-1	COLES	91	36

CONTRACT NO. 74244

FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT

PRINTED DATE: 10/11/2011
 FILE NAME: N:\PROJECTS\IDOT\148_148_148 - D7 Various Design\Work Order - 07\LOADING SHEETS\015-0075.dgn



DESIGNED	DF	REVISIONS
CHECKED	ADG, SA	REVISIONS
DRAWN	ADG	REVISIONS
CHECKED	DF	REVISIONS

PLOT DATE = 10/11/2011