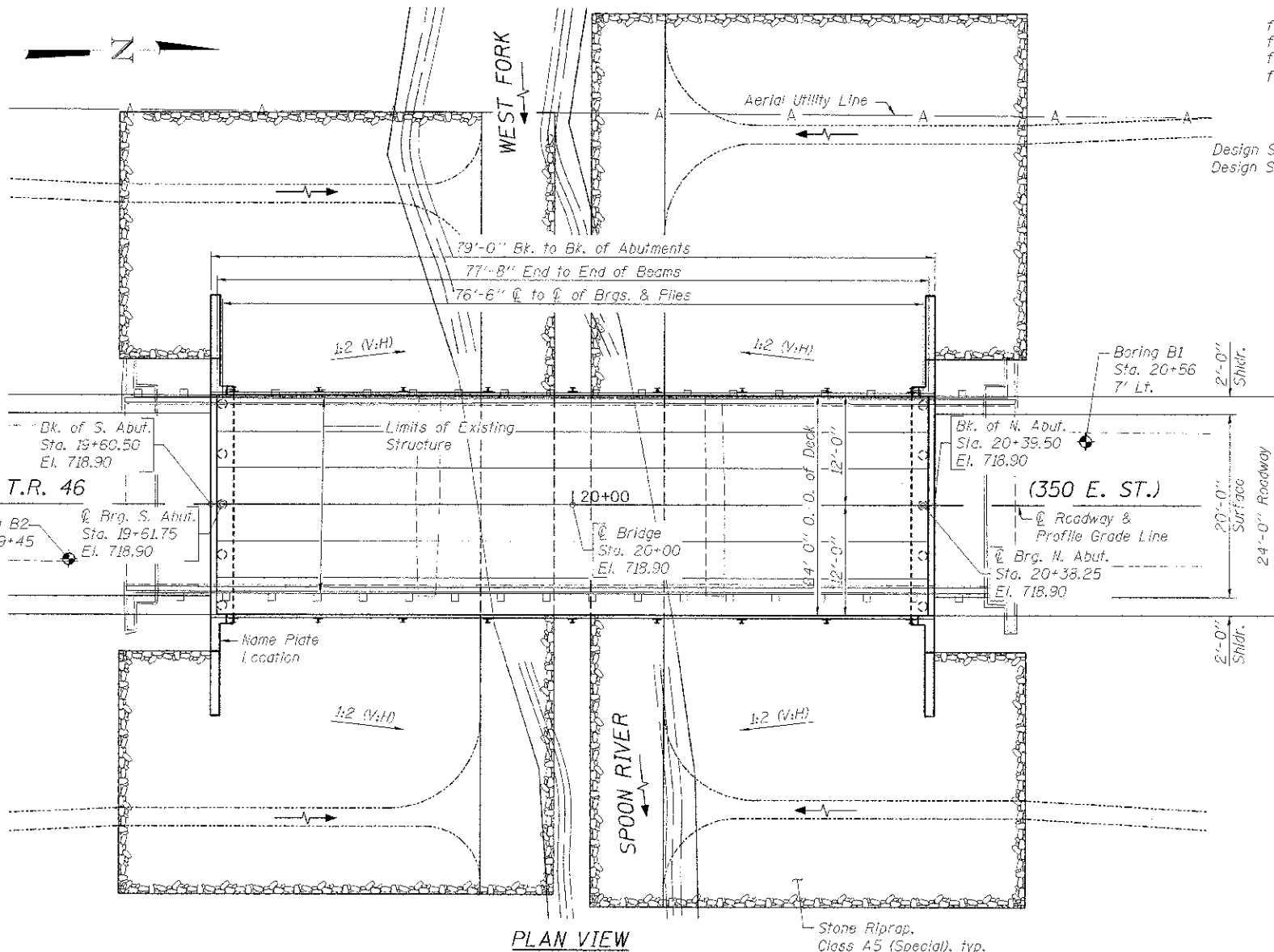
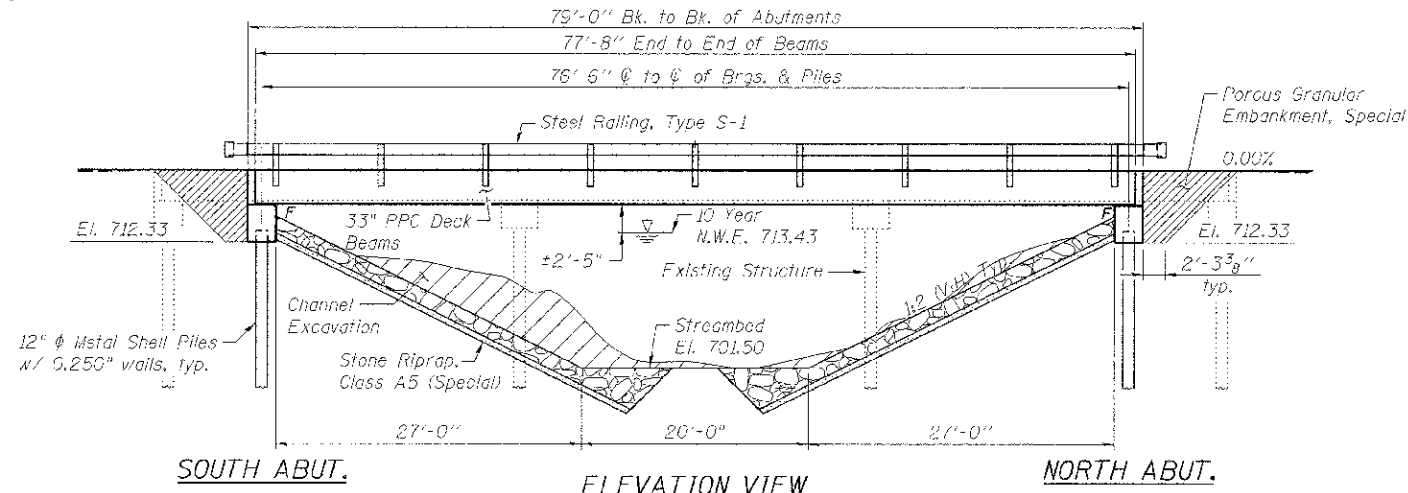
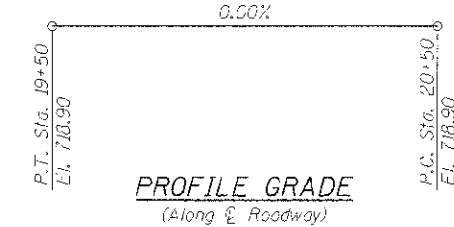


**EXISTING STRUCTURE NO. 006-4259**

The existing structure was originally built in 1940. The existing structure is a three span (30'-6"; 32'-0"; 30'-6") steel girder bridge on spill thru abutments, 97'-0" back to back of abutments and 21'-0" out to out of deck. Structure to be removed and replaced. Road shall be closed to traffic during construction. No salvage.



**BENCH MARK:** Chiseled "□" on the Southeast Wingwall of structure, 10' Rt. of Sta. 19+51, El. 719.35



**LOADING HL-93**  
Allow 50#/sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications, 6th. Edition

**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

**PRECAST PRESTRESSED UNITS**

$f'_c = 5,000$  psi  
 $f'_ci = 5,000$  psi  
 $f_{pu} = 270,000$  psi (1/2" φ Low Lax Strands)  
 $f_{pbt} = 201,960$  psi (1/2" φ Low Lax Strands)

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.097g  
Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.152g  
Soil Site Class = D

**BILL OF MATERIAL - BRIDGE**

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.		210	210
Removal of Existing Structures	Foot			1
Concrete Structures	Cu. Yd.		28.8	28.8
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	1,864		1,864
Reinforcement Bars	Pound		3,660	3,660
Steel Railing, Type S1	Foot	158		158
Furnishing Metal Shell Piles 12" x 0.250"	Foot		412	412
Driving Piles	Foot		412	412
Cast Pile Metal Shells	Each		2	2
Name Plates	Each		1	1
Porous Granular Embankment, Special	Ton		150	150
Stone Riprap, Class A5 (Special)	Ton		1,068	1,068

**GENERAL NOTES**

\* See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

**INDEX OF SHEETS**

- 1.) General Plan and Elevation
- 2.) Riprap and Pile Layout
- 3.) 33" x 48" PPC Deck Beam
- 4.) 33" x 48" PPC Deck Beam Details
- 5.) South Abutment Details
- 6.) North Abutment Details
- 7.) Steel Railing, Type S-1 Details
- 8.) Metal Shell Pile Details
- 9.) Boring Logs

**WATERWAY INFORMATION**

Drainage Area = 22.1 sq. mi. Low Grade El. 713.57 @ Sta. 14+50

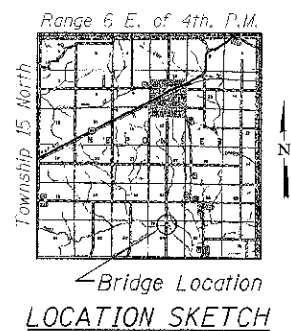
Flood Yr.	Freq. C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
		Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design & Overtopping	10	2,600	432 527	713.43	0.76 0.50	714.19	713.93	
Base	100	4,710	539 618	714.71	0.79 0.52	715.50	715.23	
Max. Cdo	500	6,290	615 673	715.47	0.75 0.96	716.22	716.43	

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	S. Abut.	N. Abut.
	712.33	712.33

WEST FORK OF SPOON RIVER  
BUILT 2013 BY  
BUREAU COUNTY  
SECTION 11-18103-00 BR  
TWP. RTE. 46 STATION 20+00  
STR. NO. 006-4263 LOADING HL-93

**NAME PLATE LETTERING**  
Refer To Std. 515001



Brian K. Conner  
DATE: 3/28/2013  
EXPIRES 11/30/14

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans, the design is an economical one for the style of structure and complies with requirements of the current AASHTO Bridge Design Specifications."

**GENERAL PLAN AND ELEVATION**  
T.R. 46 (350 E. ST.) OVER WEST FORK OF SPOON RIVER

SECTION 11-18103-00-BR

BUREAU COUNTY

STATION 20+00

STRUCTURE NO. 006-4263



DESIGNED - IPN	REVISED -
CHECKED - BKC	REVISED -
DRAWN - FDL	REVISED -
CHECKED - BKC	REVISED -

**BUREAU COUNTY**  
T.R. 46 (350 E. ST.) OVER W. FORK SPOON RIVER  
STATION 20+00

**GENERAL PLAN AND ELEVATION**  
STRUCTURE NO. 006-4263

STRUCTURAL SHEET NO. 1 OF 9

TWP. RTE.	SECTION	CO. JNTY	TOTAL SHEETS	SHEET NO.
46	11-18103-00-BR	BUREAU	19	7
WHA* 1003D12			CONTRACT NO. 87531	
[ILLINOIS] FED. AID PROJECT BRGS-00110901				