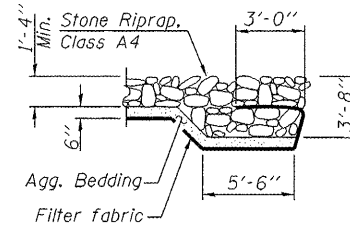
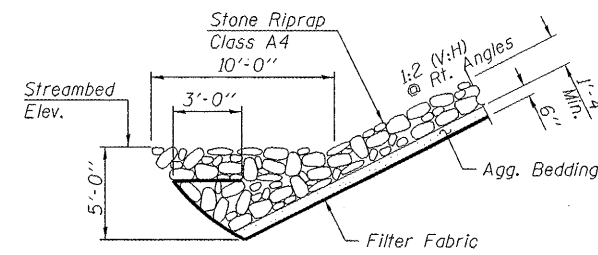
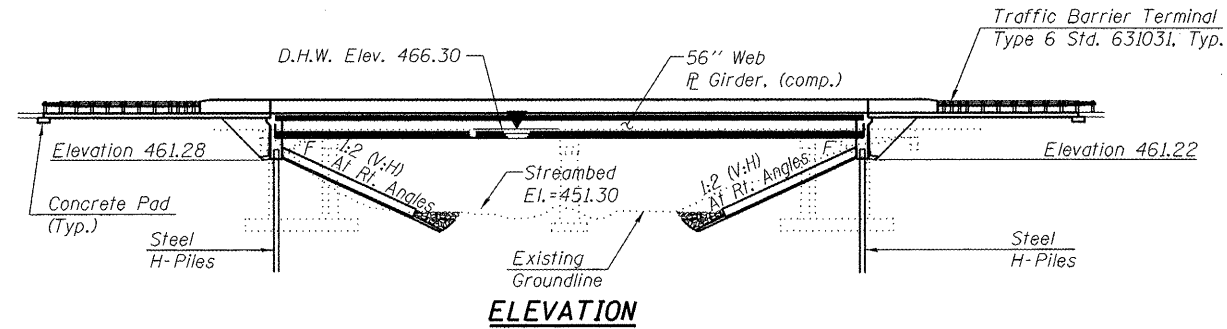


Bench Mark: Chisled "Square" in Northwest corner of North abutment. 18.6' RT. STA. 996+95. Elev = 446.04

Existing Structure: S.N. 009-0007 was built in 1931 as SBI 78, Section 144-B. In 1984 the abutments and pier were widened and the superstructure was reconstructed using 11 PPC deck beams. The superstructure consists of spill-through girders founded on timber piles, and a solid pier on timber piles. The back-to-back dimension measures 96'-5", while the out-to-out width measures 33'-0". The structure is to be replaced using stage construction.

No Salvage



INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 General notes / Bill of Materials
- 3 Stage Construction Details
- 4 Temporary Concrete Barrier
- 5-6 Top of Slab Elevations
- 7-8 Top of Approach Slab Elevations
- 9 Superstructure
- 10 Superstructure Details
- 11-12 Bridge Approach Slab Details
- 13 Diaphragm Details
- 14 Structural Steel
- 15 Cross Frame Details
- 16-17 Abutments
- 18 Pile Details
- 19 Bar Splicer Assembly Details
- 20 Soil Boring Logs

DESIGN SPECIFICATIONS

AASHTO LRFD Bridge Design Specifications, 5th Edition with 2010 Interims.

LOADING HL-93

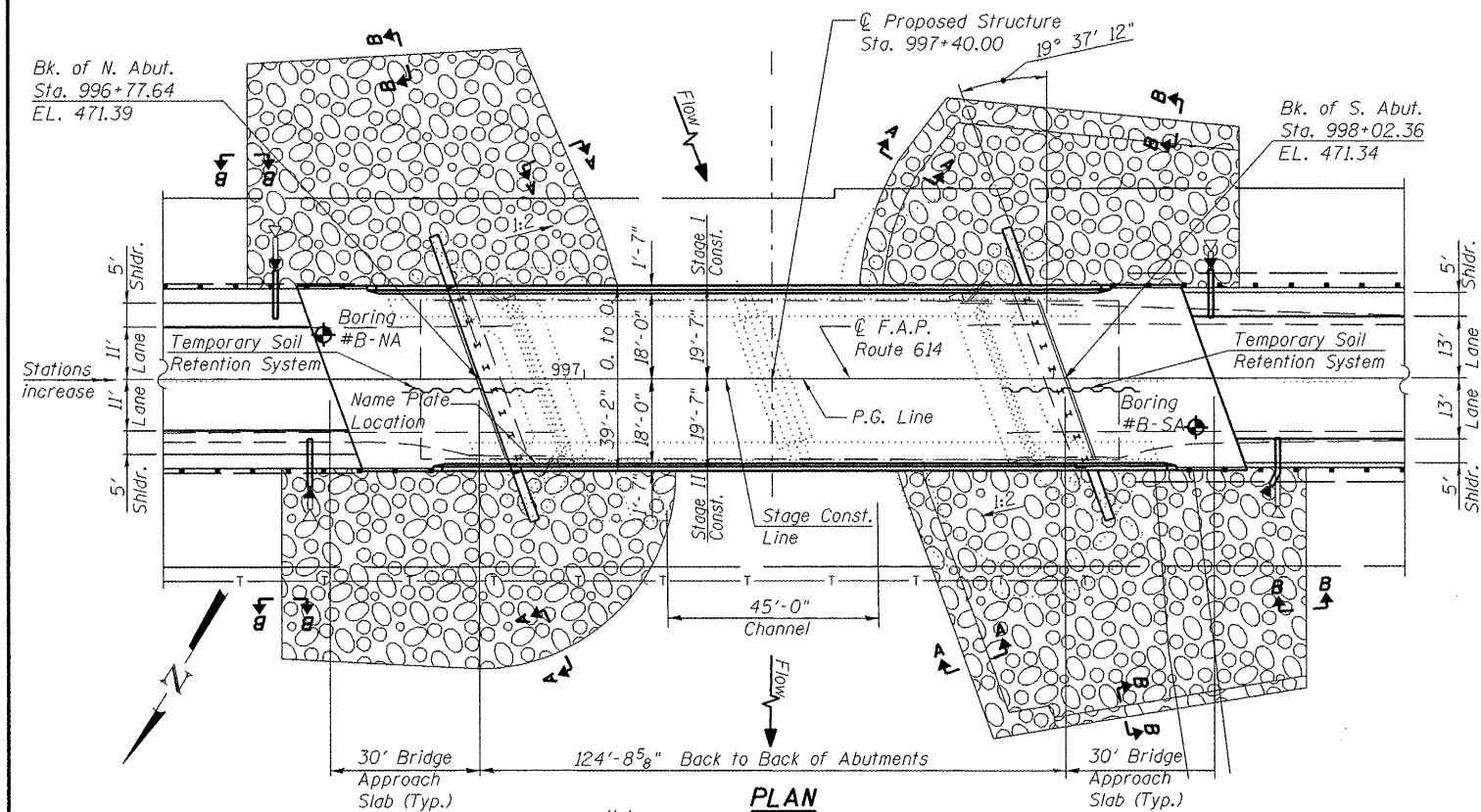
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi
 M270 Gr. 50W

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 0.2 sec. ($S_{0.2}$) = 0.220
 Design Spectral Acceleration at 1.0 sec. ($S_{1.0}$) = 0.132
 Soil Site Class = D

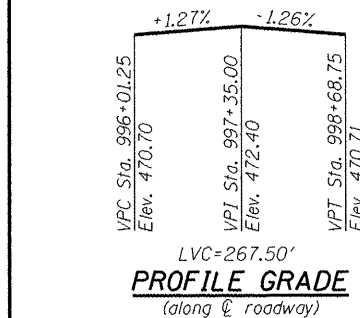


Bk. of N. Abut. Sta. 996+77.64 EL. 471.39

Bk. of S. Abut. Sta. 998+02.36 EL. 471.34

Stations increase

Note: Removal cost of existing slopewall shall be included with Removal of Existing Structures.



DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft)	N. Abut	S. Abut
	461.63	461.70

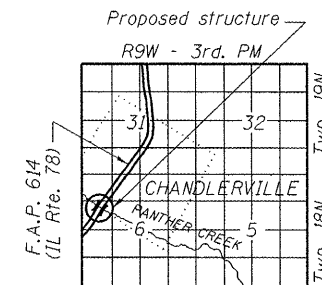
STATION 997+40.00
 BUILT 2011 BY
 STATE OF ILLINOIS
 F.A.P. RT. 614
 SEC. 144 (B-5)
 LOADING HL93
 STR. NO. 009-0512

NAME PLATE
 See Std. 515001

WATERWAY INFORMATION

		Existing Low Grade Elev. 468.1 @ Sta. 1002+50		Proposed Low Grade Elev. 468.1 @ Sta. 1004+00						
Drainage Area = 52 sq. mi.		Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	Main Channel	10	4290	1220	1310	464.6	0.0	0.0	464.6	464.6
	Overflow	50	620	160	140					
	Total		6920	1260	1520	466.3	0.5	0.3	466.8	466.6
Base	Main Channel	100	7045	1100	1380	466.9	0.8	0.5	467.7	467.4
	Overflow		1055	170	150					
	Total		8100	1270	1530	466.9	0.8	0.5	467.7	467.4
Maximum or Overflowing	Main Channel	300	6930	1100	1380	467.9	1.0	0.9	468.9	468.0
	Overflow		1170	170	150					
	Total		11000	1270	1550	467.9	1.0	0.9	468.9	468.0

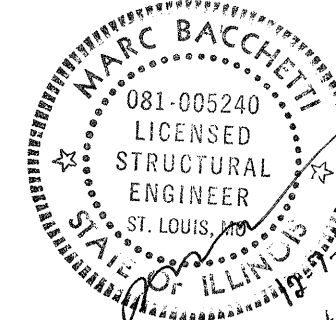
10 Year Velocity Through Existing Bridge = 4.17 ft/s
 10 Year Velocity Through Proposed Bridge = 3.37 ft/s



LOCATION SKETCH

APPROVED
 For Structural Adequacy Only

 Engineer of Bridges & Structures



GENERAL PLAN & ELEVATION
IL 78 OVER PANTHER CREEK
F.A.P. ROUTE 614 (IL 78)
SEC. 144 (B-5)
CASS COUNTY
STATION 997+40.00
STRUCTURE NO. 009-0512