

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP Rte 614	144(B-1)	Cass & Mason	351	137
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
86 SHEETS

Contract #72A76

BM TJM, #3 : Set a "60 d Spike Nail" in West face of P.P. set on East +/- side IL 78; North of North Levee of Sangamon, 1.14 miles North of Illini St. in Chandlerville. NAVD 88 Elev. = 457.05 Ft.

BM TJM, #4 : Set a chiseled "□" in top of N.W. Abut. Wing Wall of bridge #009-0006; on IL 78, 0.47 miles North of Illini St. in Chandlerville, Bridge over Sangamon River overflow, NAVD 88 Elev. = 464.94 Ft.

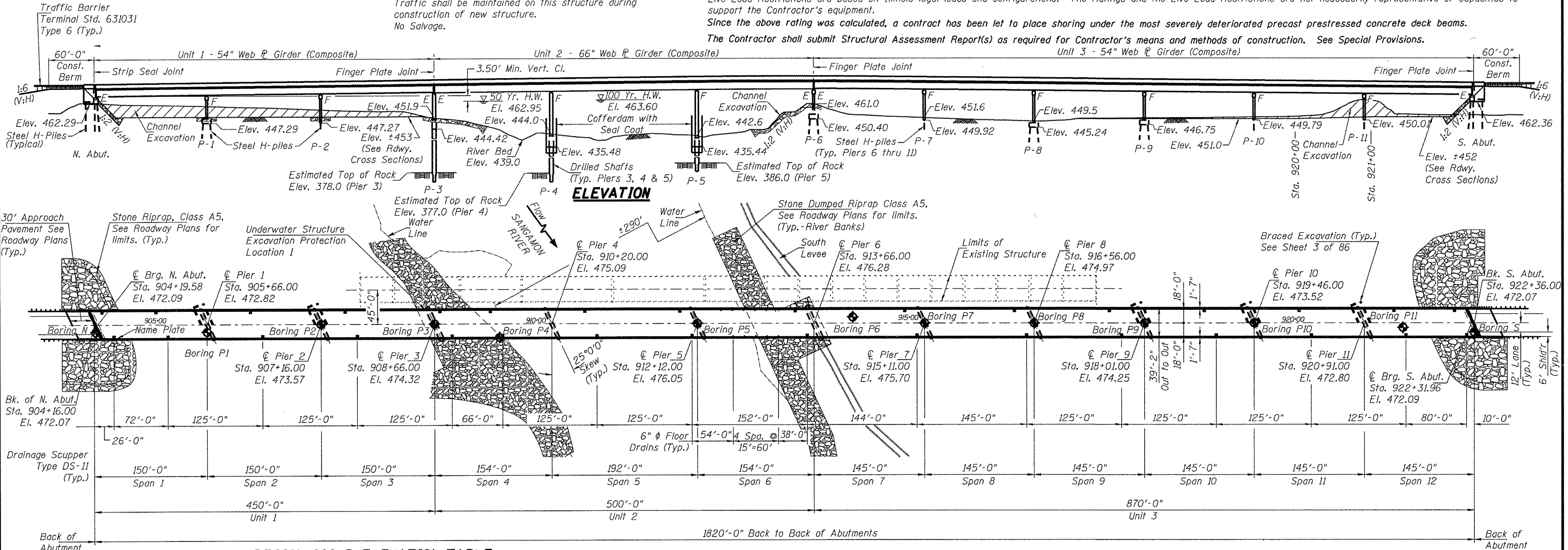
Existing Structure (No. 009-0005): Originally constructed in 1931 and re-constructed in 1981. The existing 17 span bridge consists of precast prestressed concrete (PPC) deck beams in 13 approach spans and steel girders in 4 main river spans. Approach spans are supported on pile bents with concrete piles and cap. Main spans are supported on solid concrete piers and footings with timber piles. Overall length of 972' back to back of abutments, and out to out deck width of 33' with 0° skew. Traffic shall be maintained on this structure during construction of new structure. No Salvage.

Current Ratings (9/22/08) on File for Existing Structure No. 009-0005
Inventory: HS 6
Operating: HS 10
Live Load Restrictions: No

Inventory and Operating Ratings are provided for information only. Inventory and Operating Ratings are based on HS loading and configuration using the load factor method. Live Load Restrictions are based on Illinois legal loads and configurations. The Ratings and the Live Load Restrictions are not necessarily representative of capacities to support the Contractor's equipment.

Since the above rating was calculated, a contract has been let to place shoring under the most severely deteriorated precast prestressed concrete deck beams.

The Contractor shall submit Structural Assessment Report(s) as required for Contractor's means and methods of construction. See Special Provisions.



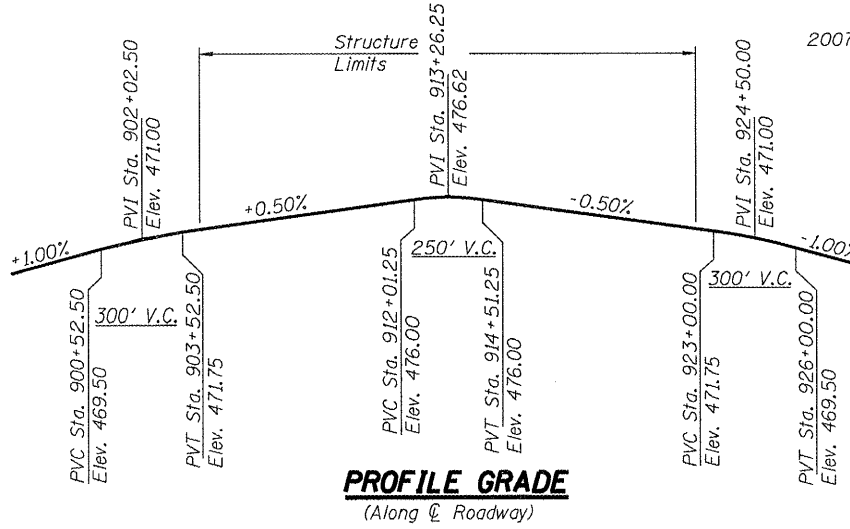
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Pier 6	Pier 7	Pier 8	Pier 9	Pier 10	Pier 11	S. Abut.
	462.0	447.5	447.5	435.7	423.4	423.4	450.4	449.1	446.2	447.7	447.7	447.8	462.0

PLAN

WATERWAY INFORMATION

Drainage Area = 5215 Sq. Miles		Ex. Low Grade Elev. 464.43 @ Sta. 906+25				Pr. Low Grade Elev. 466.50 @ Sta. 892+00				
Frequency Year	Structure	Discharge C.F.S.		Waterway Opening Sq. Ft.		Natural H.W.E.	Head - Ft.		Headwater El.	
		Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	Main Channel	29,477	49,283	7,908	20,162	460.90	0.32	0.13	461.22	461.03
	Relief Structure	19,990	197	6,927	100					
Total		49,467	49,480	14,834	20,262					
50	Main Channel	40,376	73,308	8,525	23,397	462.95	0.42	0.17	463.37	463.12
	Relief Structure	32,607	224	7,995	100					
Total		72,983	73,532	16,520	23,497					
100	Main Channel	49,162	82,911	8,635	24,424	463.60	0.40	0.16	464.00	463.76
	Relief Structure	33,797	254	8,332	100					
Total		82,959	83,165	16,967	24,524					
420 Overtopping	Main Channel	56,305	100,382	10,408	26,459	464.02	0.41	0.35	464.43	464.37
	Relief Structure	38,139	176	8,334	100					
Total		94,444	100,558	18,742	26,559					
500	Main Channel	58,091	104,750	8,663	26,968	464.14	0.42	0.40	464.56	464.54
	Relief Structure	39,224	157	8,335	100					
Total		97,315	104,907	16,999	27,068					



PROFILE GRADE
(Along Centerline of Roadway)

LOADING HL-93

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

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications
4th Edition

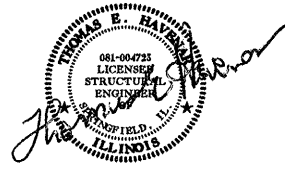
DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
 f_y = 60,000 psi (Reinforcement)
 f_y = 50,000 psi (Struct. Steel) (M270 Grade 50W)

SEISMIC DATA

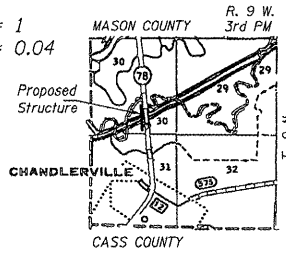
Seismic Performance Zone (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 0.04
Site Coefficient (S) = 1.0



APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

DATE SIGNED : 3/27/09
LIC. EXP. DATE : 11/30/2010



LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.P. 614 (IL 78) OVER SANGAMON RIVER
PUBLIC WATERS
CASS & MASON COUNTIES
SECTION 144 (B-1)
STA. 913+26.00
STRUCTURE NUMBER 009-0510

PROFESSIONAL DESIGN FIRM LICENSE #184-001084

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JOB NO. 0752026

DATE 03/27/09

03/27/09
 LAYOUT
 DRAWN
 REVIEWED