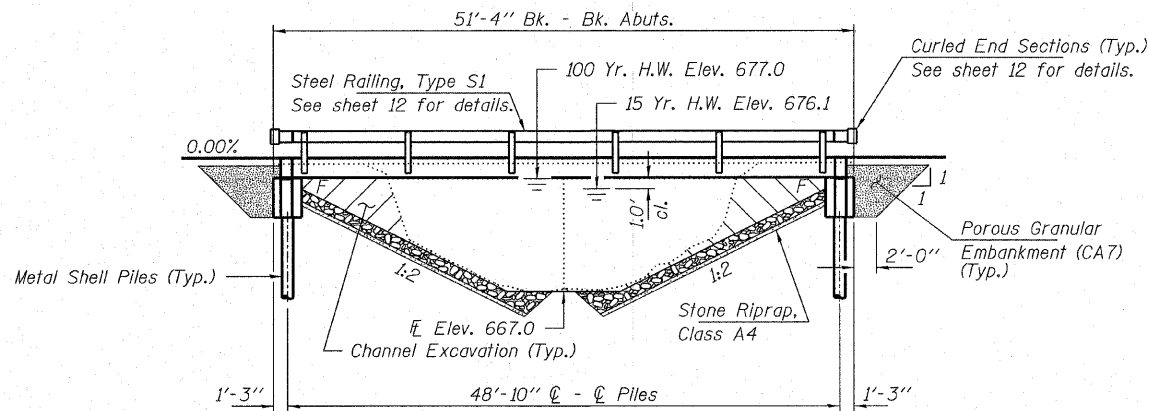


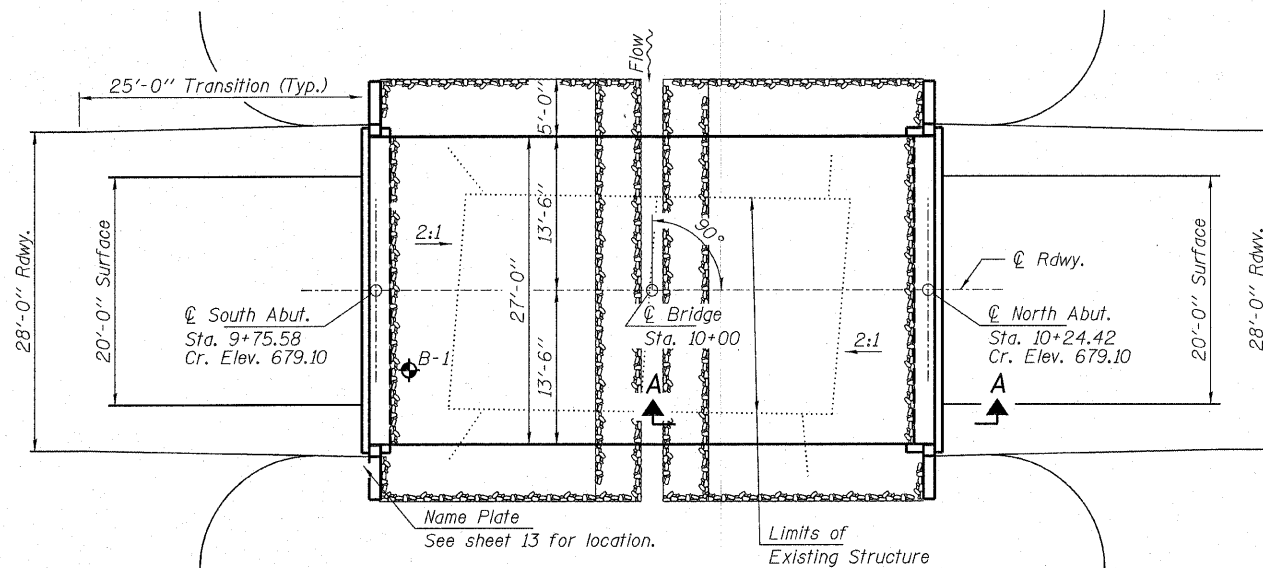
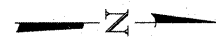
BENCHMARK: Chiseled "□" on I-Beam. 10' Lt., Sta. 9+84, Elev. 677.98

EXISTING STRUCTURE: Two span I-Beam bridge with timber deck on closed timber abutments and wingwalls. Timber pier & piles. Structure closed to traffic.

No Salvage



ELEVATION



PLAN

**DESIGN STRESSES**

**FIELD UNITS**

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

**PRECAST PRESTRESSED UNITS**

f'c = 6,000 psi  
f'cl = 5,000 psi  
f's = 270,000 psi (1/2" low lax. strands)  
f'sl = 201,960 psi (1/2" low lax. strands)  
fy = 60,000 psi (Reinf.)

**LOADING HL 93**

Design Specifications: 2008 AASHTO LRFD with all applicable interims.  
50#/Sq. Ft. Included in dead load for future wearing surface.

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 2  
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.234g  
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.478g  
Soil Site Class = E

**WATERWAY INFORMATION**

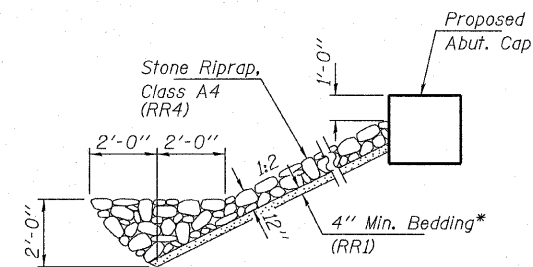
Drainage Area = 4.1 Sq. Mi.		Exist. Low Grade Elev. 677.2 @ Sta. 5+50		Prop. Low Grade Elev. 677.2 @ Sta. 5+50		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural Head - Ft.	Headwater El.	
			Exist. Prop.	Exist. Prop.	Exist. Prop.	
Design	15	702	170 230	675.5 0.2	0.1 675.7 675.6	
Base	100	1160	200 300	677.0 0.6	0.7 677.6 677.7	
Overtopping	100	1160	200 300	677.0 0.6	0.7 677.6 677.7	
Max. Calc.	500	1571	200 310	677.4 0.7	0.6 678.1 678.0	
			10 Year Velocity through Existing Bridge = 4.5 fps		10 Year Velocity through Proposed Bridge = 4.2 fps	

**GENERAL NOTES**

Layout of riprap may be varied in the field to suit ground conditions as directed by the Engineer.  
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at North Abutment or approved by the Engineer before ordering the remainder of piles. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.  
Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.  
All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions. See Sheet 15 for Borling.

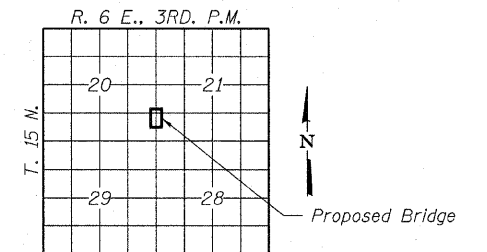
JONATHAN CREEK  
BUILT 200\_ BY  
LOWE ROAD DISTRICT  
MOULTRIE COUNTY  
SEC. 08-05125-00-BR  
STR. NO. 070-4535  
LOADING HL 93

**NAME PLATE**  
See Std. 515001



SECTION A-A

\* Estimated Bedding quantity = 50 Tons  
Cost Included in Stone Riprap, Class A4



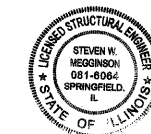
LOCATION SKETCH

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			65
Porous Granular Embankment	Ton			100
Stone Riprap, Class A4	Ton			130
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		21.8	21.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,350		1,350
Reinforcement Bars	Pound		2,650	2,650
Steel Railing, Type S1	Foot	94		94
Metal Shell Piles 12"x0.250"	Foot		405	405
Driving Piles	Foot		405	405
Test Pile Metal Shells	Each		1	1
Name Plates	Each		1	1

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 Standard Specifications for Highway Bridges".

Steven W. Meigs  
ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-10

**GENERAL PLAN AND ELEVATION**  
**STRUCTURE NO. 070-4535**

DESIGNED - S.M.S.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - D.T.M.

<b>HAMPTON, LENZINI &amp; RENWICK, INC.</b> CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400	SHEET NO. 1  8 SHEETS	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		146	08-05125-00-BR	MOULTRIE	15	8
PROJECT NUMBER: 08.0094.130 DATE: 10/29/08		LOWE ROAD DISTRICT		CONTRACT NO. 95565		
		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		