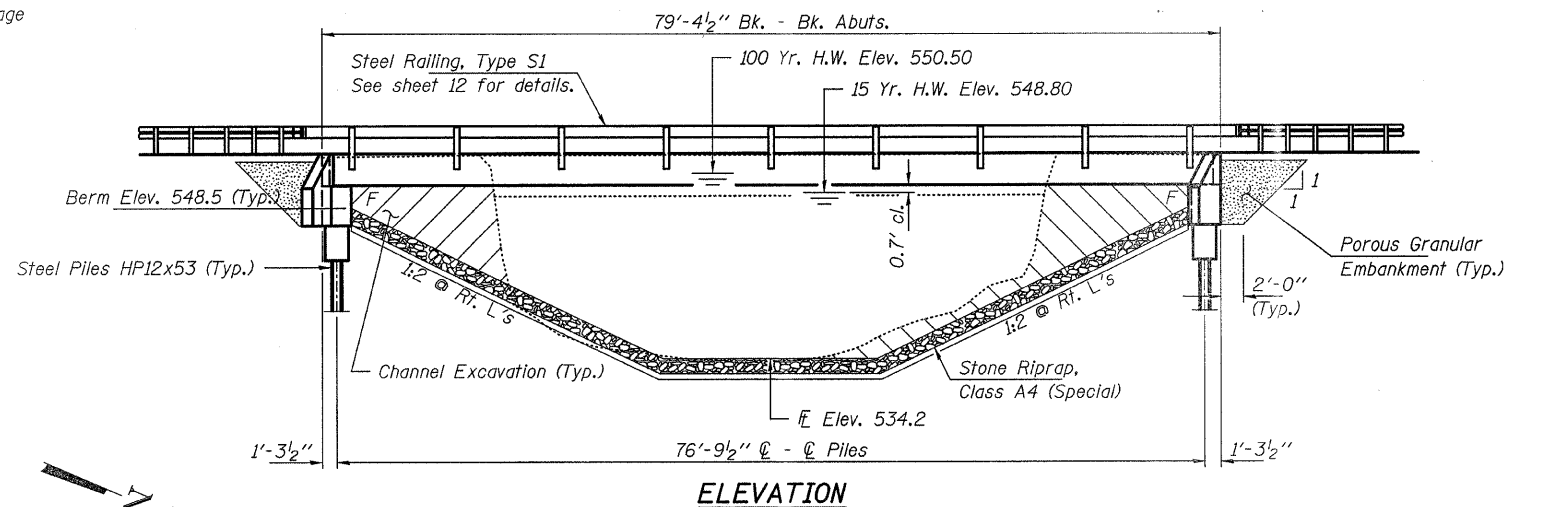


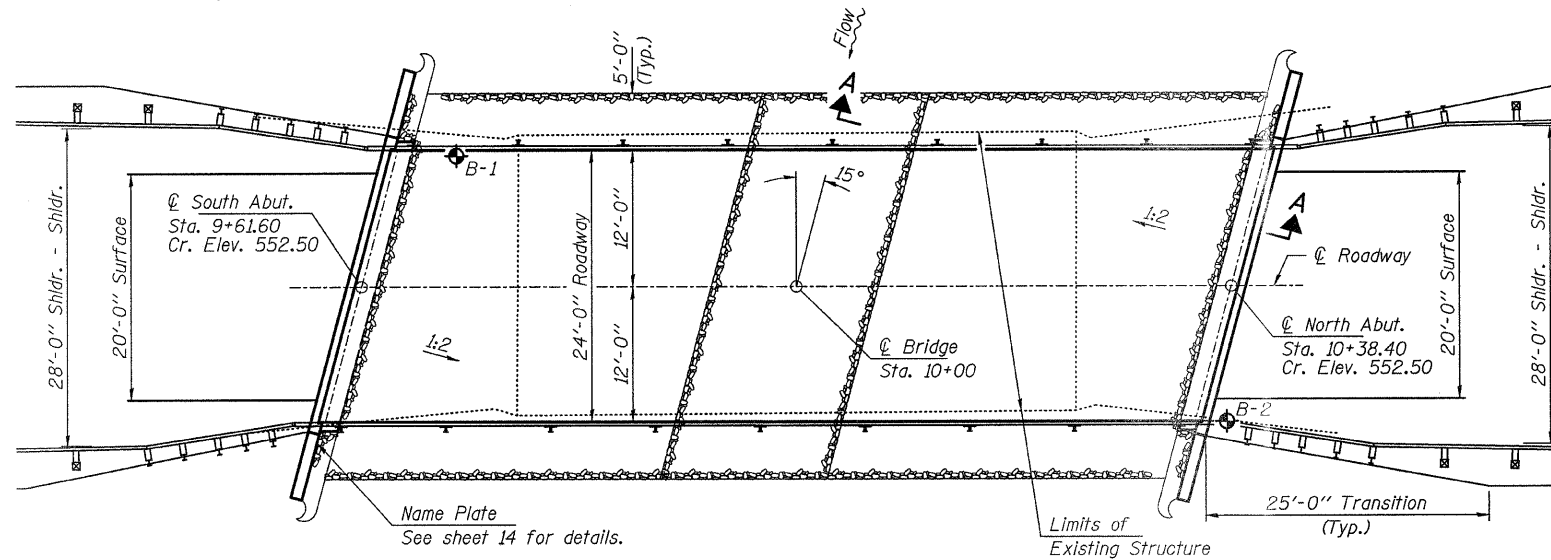
BENCHMARK: Sangamon County Highway Department Aluminum BM. 11' Rt., Sta. 9+77; Elev. 552.83

EXISTING STRUCTURE: Single span precast prestressed concrete deck beam bridge on concrete abutment caps with timber piles & closed timber abutments and wingwalls. 45.7' fc-abuts.; 24.7' o.-o. deck. Structure closed to traffic.

No Salvage



ELEVATION



PLAN

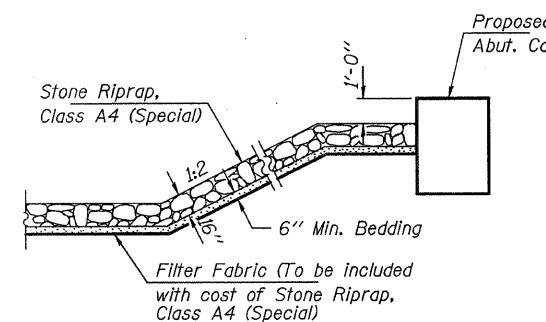
GENERAL NOTES

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.  
The Contractor shall drive test piles to 100% of the nominal required bearing specified in production location at South 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 16 for Borings.

BRUSH CREEK  
BUILT 200\_ BY  
SANGAMON COUNTY  
SEC. 07-09101-02-BR  
COTTON HILL ROAD DISTRICT  
STR. NO. 084-3556  
LOADING HL-93

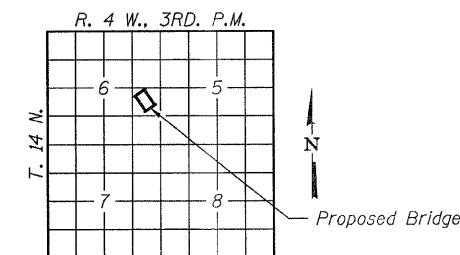
NAME PLATE

See Std. 515001



SECTION A-A

Note: See Special Provisions for Stone Riprap, Class A4 (Special)



LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			345
Porous Granular Embankment	Ton			130
Stone Riprap, Class A4 (Special)	Ton			240
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		26.2	26.2
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	1,872		1,872
Reinforcement Bars	Pound		2,860	2,860
Steel Railing, Type S1	Foot	165		165
Furnishing Steel Piles HP12x53	Foot		280	280
Driving Piles	Foot		280	280
Test Pile Steel HP12x53	Each		1	1
Name Plates	Each		1	1

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

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

LOADING HL-93

Design Specifications: 2007 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) = 0.232g  
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.460g  
Soil Site Class = E

WATERWAY INFORMATION

Drainage Area = 48.3 Sq. Mi. Low Grade Elev. 551.6 @ Sta. 8+00

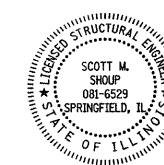
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
Design	10	3,442	520	660	548.42	1.59	0.75	550.01	549.17
Overtopping	15	3,922	540	690	548.81	1.48	0.85	550.29	549.66
Max. Calc.	100	6,310	550	750	550.46	1.98	1.53	552.44	551.99
	500	8,417	550	750	551.71	1.46	1.26	553.17	552.97

10 Year Velocity through Existing Bridge = 6.4 fps  
10 Year Velocity through Proposed Bridge = 5.1 fps

Construction Permits: This project has been approved for construction under Statewide Permit No. 12, as issued by the Department of Natural Resources' Office of Water Resources.

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".

2-5-2004  
ILLINOIS STRUCTURAL NO. 081-6529



Expires 11-30-10

GENERAL PLAN AND ELEVATION  
STRUCTURE NO. 084-3556

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

**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS  
**HLR**  
3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
(217) 546-3400  
PROJECT NUMBER: 08.0042.130 DATE: 10/03/08

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	07-09101-02-BR	SANGAMON	16	9
COTTON HILL ROAD DISTRICT		CONTRACT NO. 93507		
ILLINOIS FED. AID PROJECT				