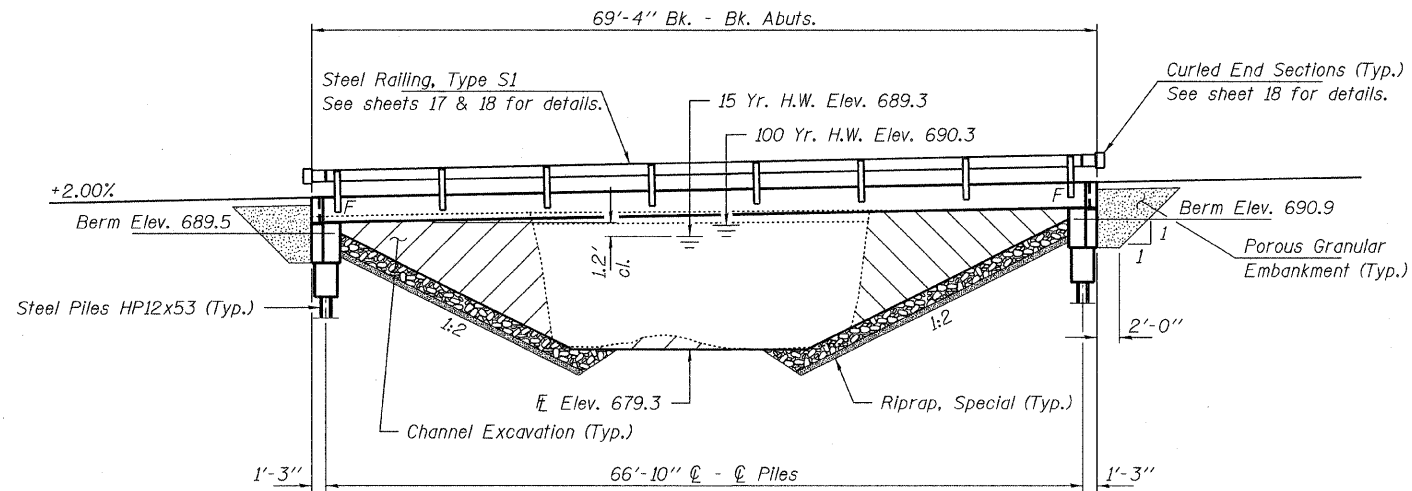


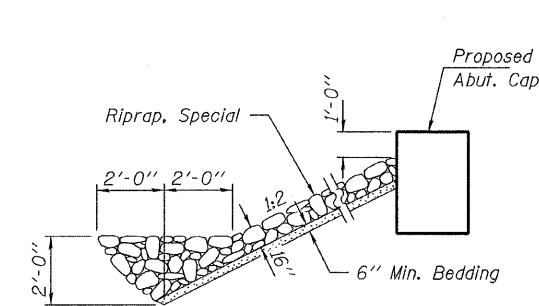
BENCHMARK: Chiseled "□" on bridge curb. 9' Lt., Sta. 136+15, Elev. 692.32

EXISTING STRUCTURE: Single span precast prestressed concrete deck beam bridge on closed timber abutments and wingwalls. 27.4' bk.-bk. abuts.; 26.0' o.-o. deck. Structure closed to traffic.

No Salvage



ELEVATION

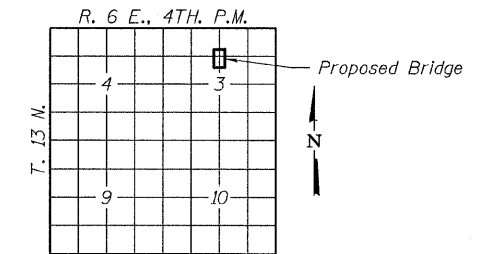


SECTION A-A

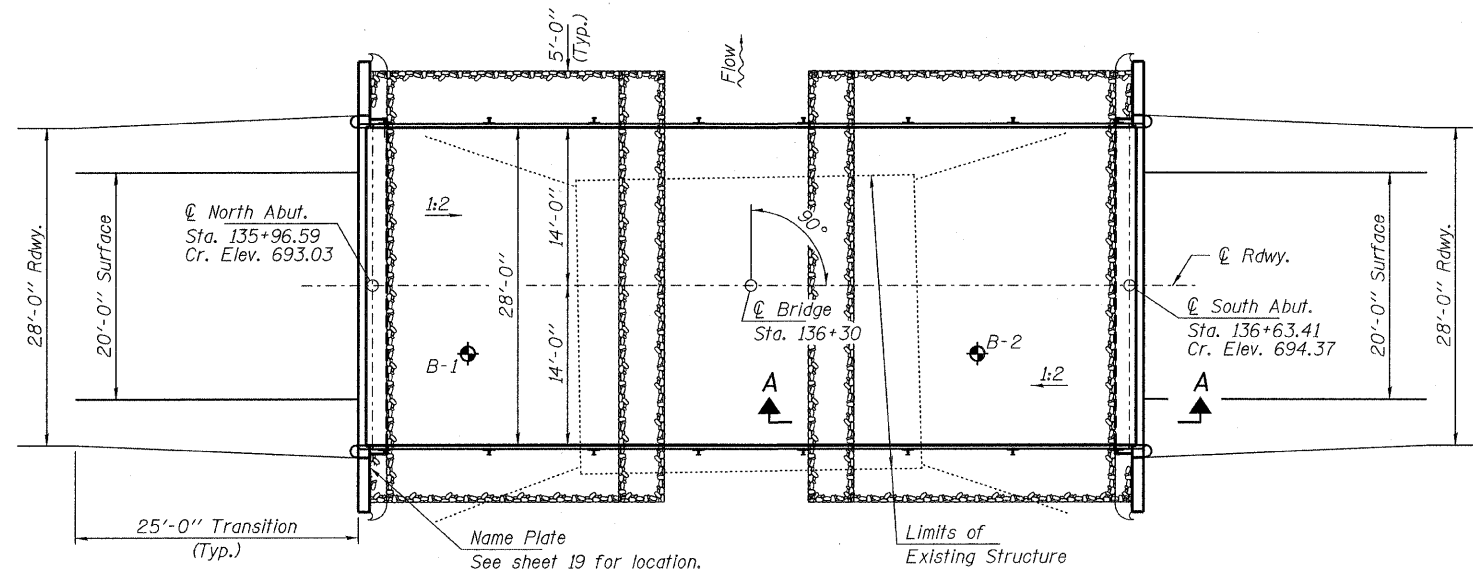
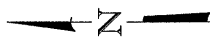
Note: See Special Provisions for Riprap, Special.

JACK CREEK
BUILT 200_ BY
STARK COUNTY
SEC. 08-00158-00-BR
C.H. 23
STR. NO. 088-3223
LOADING HL-93

NAME PLATE
See Std. 515001



LOCATION SKETCH



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			315
Porous Granular Embankment	Ton			120
Riprap, Special	Ton			190
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		27.0	27.0
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1,904		1,904
Reinforcement Bars	Pound		2,820	2,820
Steel Railing, Type S1	Foot	134		134
Furnishing Steel Piles HP12x53	Foot		175	175
Driving Piles	Foot		175	175
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) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.099g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.154g
Soil Site Class = D

WATERWAY INFORMATION

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	20	2,080	260	370	688.70	1.06	0.47	689.76	689.17
Base	100	3,830	300	470	690.30	1.23	0.86	691.53	691.16
Overtopping Ex. 10	2,080	260			688.70	1.06		689.76	
Overtopping Pr. 100	3,830				690.30		0.86		691.16
Max. Calc.	500	5,160	300	480	691.23	1.21	1.34	692.44	692.57

Existing Low Grade Elev. 689.3 @ Sta. 134+60
Drainage Area = 14.0 Sq. Mi. Proposed Low Grade Elev. 690.2 @ Sta. 134+20

10 Year Velocity through Existing Bridge = 8.9 Tps
10 Year Velocity through Proposed Bridge = 5.9 Tps

GENERAL NOTES

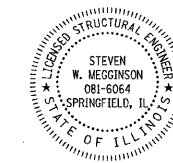
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at South Abutment or approved by the Engineer before ordering the remainder of piles.
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). 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 sheets 22 & 23 for Borings.

SECTION A-A

Note: See Special Provisions for Riprap, Special.

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 LRFD Specifications."

Steven W. Megginson 5/12/2009
ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-2010

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 088-3223

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

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
23	08-00158-00-BR	STARK	23	14
CONTRACT NO. 89509			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	