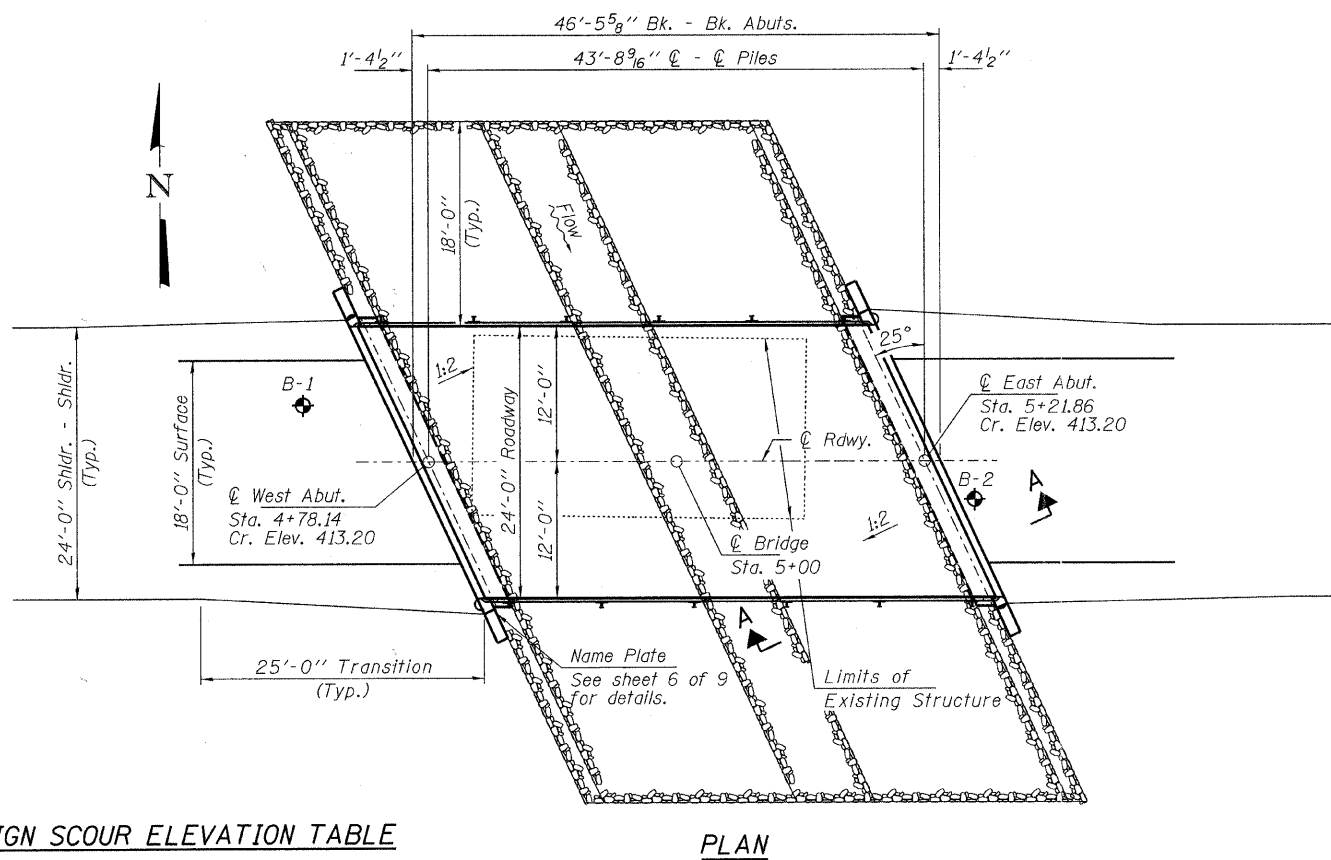
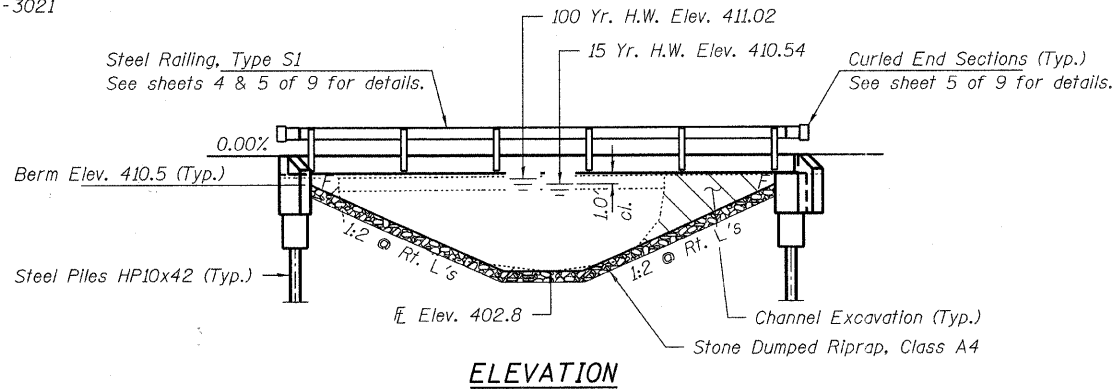


EXISTING STRUCTURE: Single span I-beam bridge on concrete abutments and wingwalls. 31.0' bk.-bk. abuts. Str. No. 024-3021 Structure closed to traffic.

No Salvage



**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	407.9	407.9

**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: 2010 AASHTO LRFD with all applicable Interims. 50#/Sq. Ft. included in dead load for future wearing surface.

**SEISMIC DATA**

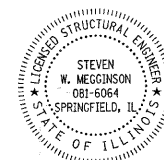
Seismic Performance Zone (SPZ) = 2  
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.259g  
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.622g  
Soil Site Class = D

**WATERWAY INFORMATION**

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	15	854	160	171	410.54	-	0.15	-	410.69
Base	100	1460	160	189	411.02	1.21	0.56	412.23	411.58
Max. Calc.									

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."

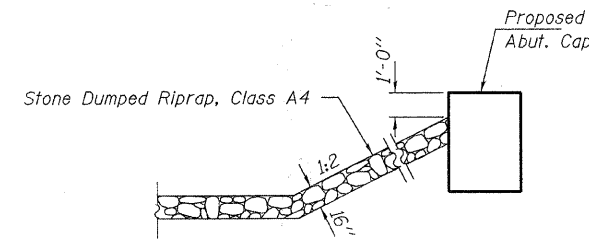
Steven W. Megginson 5/22/2011  
ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-2012

**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 West 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.

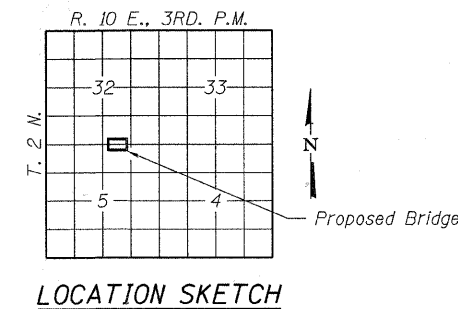


**SECTION A-A**

Note: See Special Provisions for Stone Dumped Riprap, Class A4.

**INDEX OF STRUCTURE SHEETS**

1. General Plan & Elevation
2. 17"x48" PPC Deck Beam
3. 17"x48" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. Abutments
7. HP Pile Details
- 8-9. Borings



SUGAR CREEK  
BUILT 201\_ BY  
EDWARDS COUNTY  
SEC. 09-02117-00-BR  
ROAD DISTRICT #2  
STR. NO. 024-3139  
LOADING HL-93

**NAME PLATE**

See Std. 515001

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			63
Stone Dumped Riprap, Class A4	Ton			240
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		23.2	23.2
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,080		1,080
Reinforcement Bars	Pound		2,470	2,470
Steel Railing, Type S1	Foot	86		86
Furnishing Steel Piles HP10x42	Foot		315	315
Driving Piles	Foot		315	315
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1

FILE NAME = 102059-ah+bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62779	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / SE CORP. 104.000569	PLOT DATE = 5/23/2011	DRAWN - D.A.B.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS  
EDWARDS COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION  
STRUCTURE NO. 024-3139

SHEET NO. 1 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	09-02117-00-BR	EDWARDS	13	5
	ROAD DISTRICT #2		CONTRACT NO. 95661	
			ILLINOIS FED. AID PROJECT	