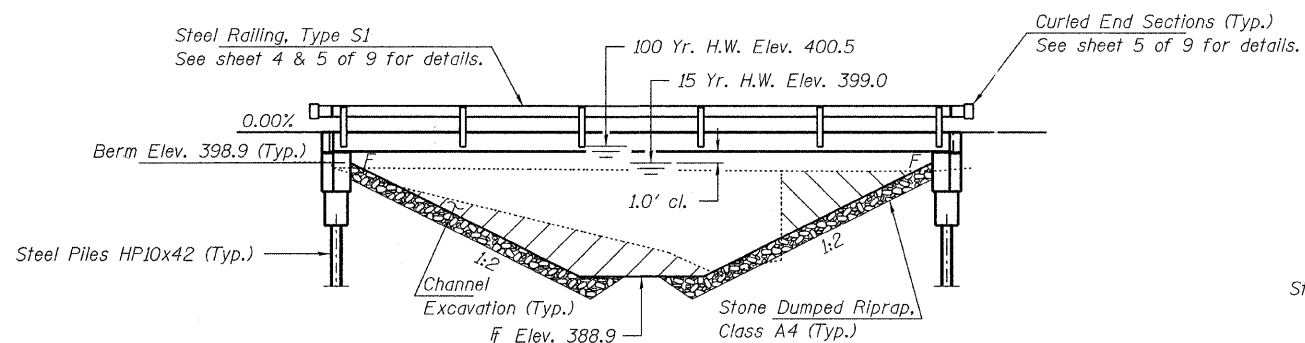
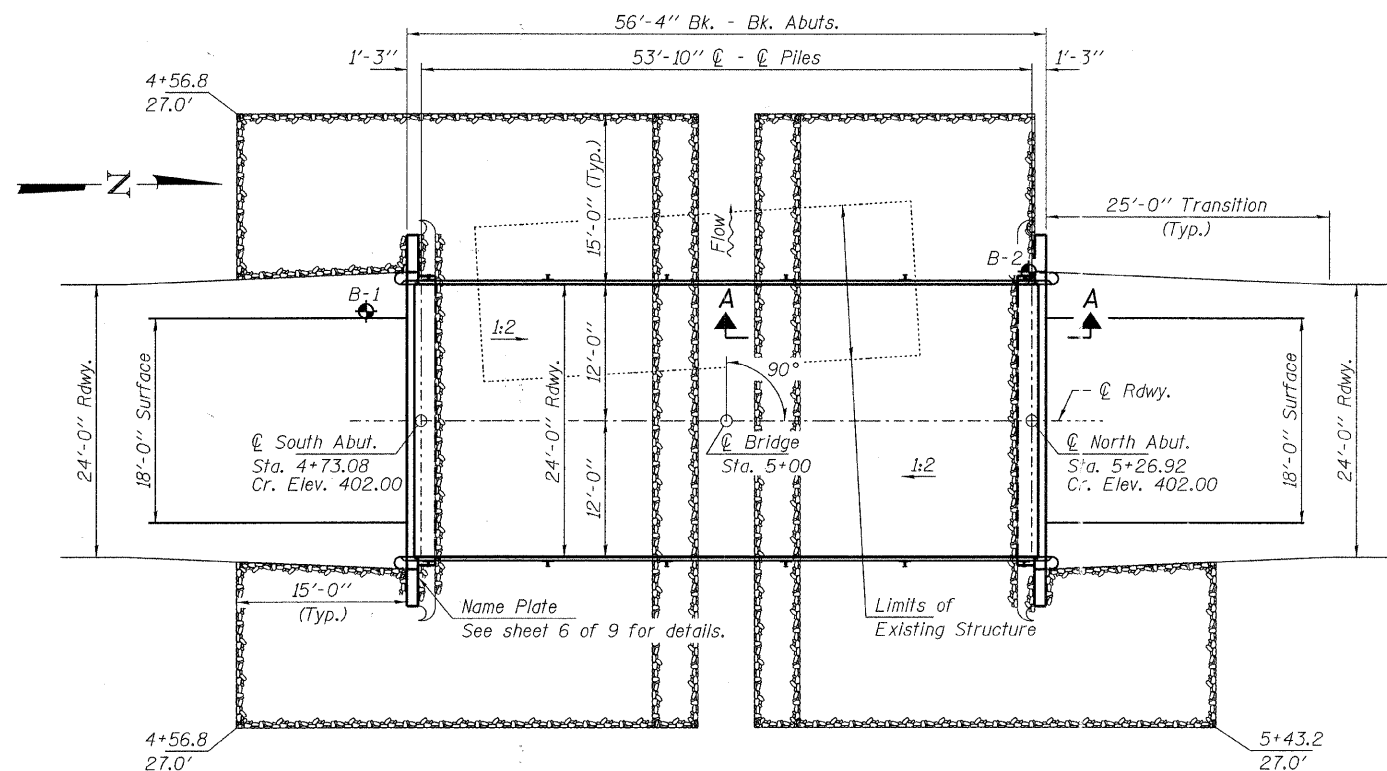


BENCHMARK: Iron Pin, Sta. 0+24.30, 7.39' Rt., Elev. 398.27

EXISTING STRUCTURE NO. 093-3031: 40' long single span I-beam bridge on steel pipe pile and concrete wingwalls and mud walls. Structure closed to traffic.



ELEVATION



PLAN

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf.)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
 $f_y = 60,000$ 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.

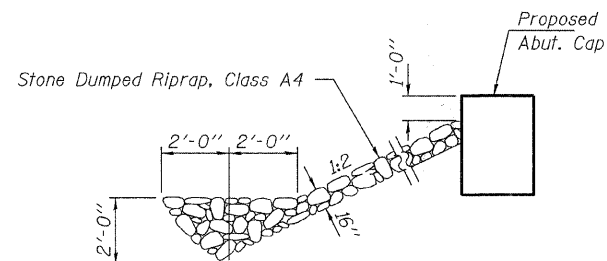
SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.257g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.613g
Soil Site Class = D

WATERWAY INFORMATION

Drainage Area = 3.7 Sq. Mi.		Existing Low Grade Elev. 398.7 @ Sta. 8+00		Proposed Low Grade Elev. 398.8 @ Sta. 2+50		
Flood	Freq. Yr.	Q C.F.S.	Opening Exist. Prop.	Sq. Ft. H.W.E. Exist. Prop.	Natural Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.
Design	15	1257	195 313	399.0	0.61 0	399.6 399.0
Base	100	2180	195 366	400.5	1.03 0.39	401.5 400.9

① Approach opening = 535 sq. ft. to remain in place.



SECTION A-A

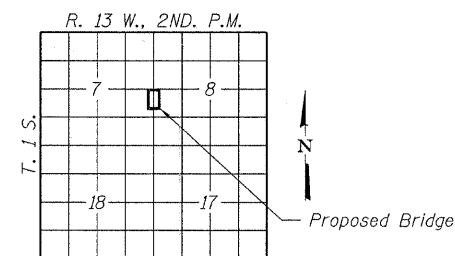
Note: See Special Provisions for Stone Dumped Riprap, Class A4.

GENERAL NOTES

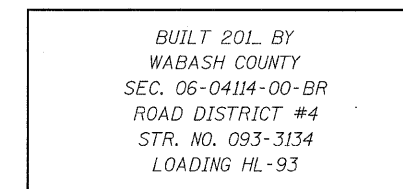
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at South Abutment or approved by the Engineer before ordering the remainder of piles. 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.

INDEX OF STRUCTURE SHEETS

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



LOCATION SKETCH



NAME PLATE
See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			147
Stone Dumped Riprap, Class A4	Ton			380
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		22.0	22.0
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,320		1,320
Reinforcement Bars	Pound		2,420	2,420
Steel Railing, Type S1	Foot	109		109
Furnishing Steel Piles HP10x42	Foot		385	385
Driving Piles	Foot		385	385
Test Pile Steel HP10x42	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 LRFD Specifications."

Steven W. Megginson 4/12/2011
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064 Expires 11-30-2012



FILE NAME = 100258-sht-bridge.dgn	USER NAME =	DESIGNED - V.J.H.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3008 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184-00069	PLOT DATE = 4/12/2011	DRAWN - D.A.B.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
WABASH COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION
STRUCTURE NO. 093-3134

SHEET NO. 1 OF 9 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
52	06-04114-00-BR	WABASH	13	5
ROAD DISTRICT #4			CONTRACT NO. 95653	
ILLINOIS FED. AID PROJECT				