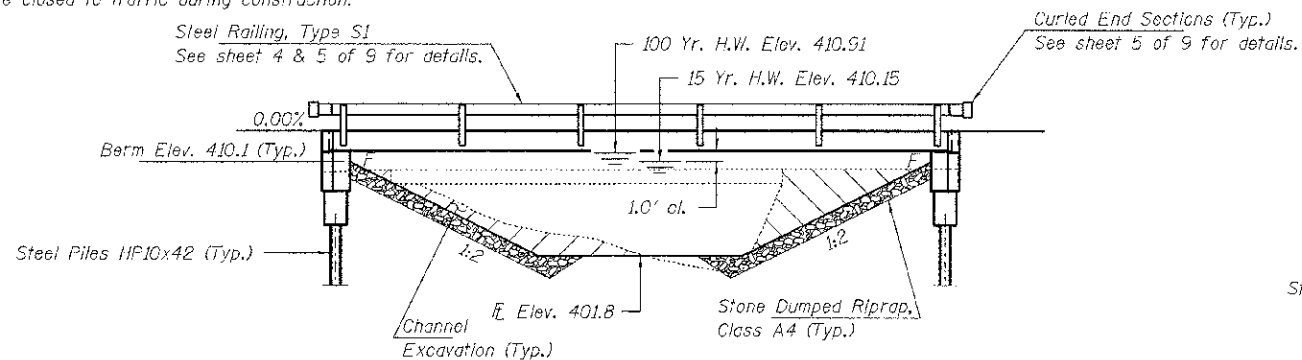
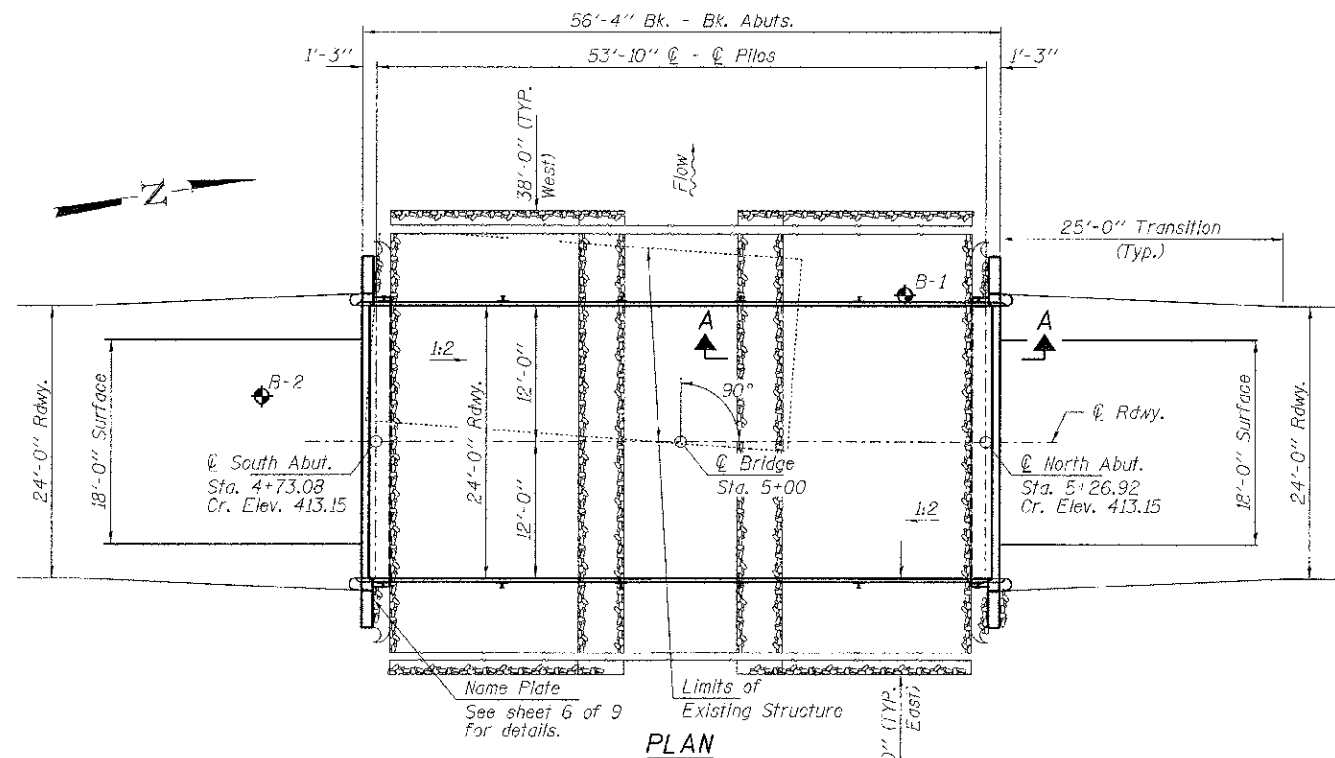


**BENCHMARK:**

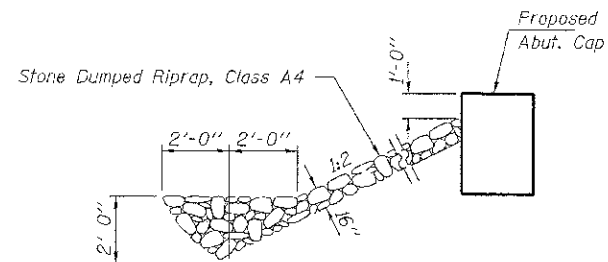
EXISTING STRUCTURE NO. 024-3033: A 35' long single span bridge with 2" wood runners on 3" wood deck with 2-10" C-Channels, 3-10" I-Beams and 3-12" I-Beams on 5" I-Beam cap and 12" I-Beam on South Abutment and the North Abutment of 12" I-Beam cap and 6-6" pipe pile with husted concrete and wood mudwalls. Structure closed to traffic during construction.



**ELEVATION**



**PLAN**



**SECTION A-A**

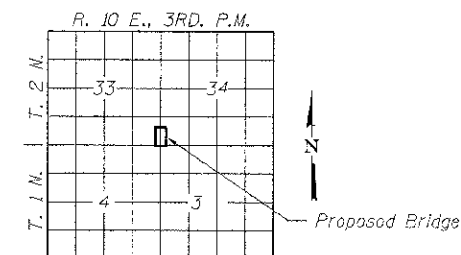
Note: See Special Provisions for Stone Dumped Riprap, Class A4.

**GENERAL NOTES**

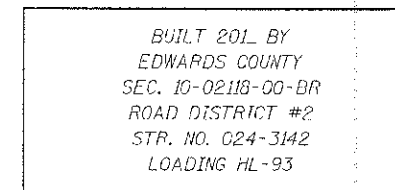
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions. Excavation required to construct the Abutments shall be included in the cost of Concrete 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. 21"x48" PPC Deck Beam
3. 21"x48" PPC Deck Beam Details
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

**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)  
fpbl = 201,960 psi (1/2" low lax. strands)  
fy = 60,000 psi (Reinf.)

**LOADING HL-93**

Design Specifications: 2012 AASHTO LRFD  
50#/Sq. Ft. included in dead load for future wearing surface.

**SEISMIC DATA**

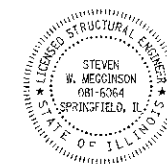
Seismic Performance Zone (SPZ) = 2  
Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = 0.259g  
Design Spectral Acceleration at 0.2 sec. (S<sub>Cs</sub>) = 0.620g  
Soil Site Class = D

**WATERWAY INFORMATION**

		Existing Low Grade Elev.		Proposed Low Grade Elev.		Sta.	
Drainage Area = 11.6 Sq. Mi.							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Natural H.W.E. Exist.	Prop.	Headwater El. Exist. Prop.
Design	15	3067	163	289	410.15	-	-
Base	100	5290	163	328	410.91	0.17	0.52
Max. Calc.	500	-	-	-	-	-	411.08
							411.43

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. Magrison 10/02/2012  
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



Expires 11-30-2012

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			163
Stone Dumped Riprap, Class A4	Ton			420
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		400	400
Driving Piles	Foot		400	400
Name Plates	Each		1	1

FILE NAME = 102399-ah+bridge.dgn	USER NAME =	DESIGNED - D.W.T.	REVISED -	STATE OF ILLINOIS EDWARDS COUNTY HIGHWAY DEPARTMENT	GENERAL PLAN & ELEVATION STRUCTURE NO. 024-3142	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3000 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLD1 SCALE =	CHECKED - S.W.M.	REVISED -			52	10-02118-00-BR	EDWARDS	13	5
ILLINOIS PROFESSIONAL DESIGN FIRM 15/FE/06/04P 181.000009	PLD1 DATE = 10/2/2012	DRAWN - D.A.B.	REVISED -			ROAD DISTRICT #2				CONTRACT NO. 95683
		CHECKED - S.W.M.	REVISED -							ILLINOIS FED. AID PROJECT BROS-0470373

SHEET NO. 1 OF 9 SHEETS