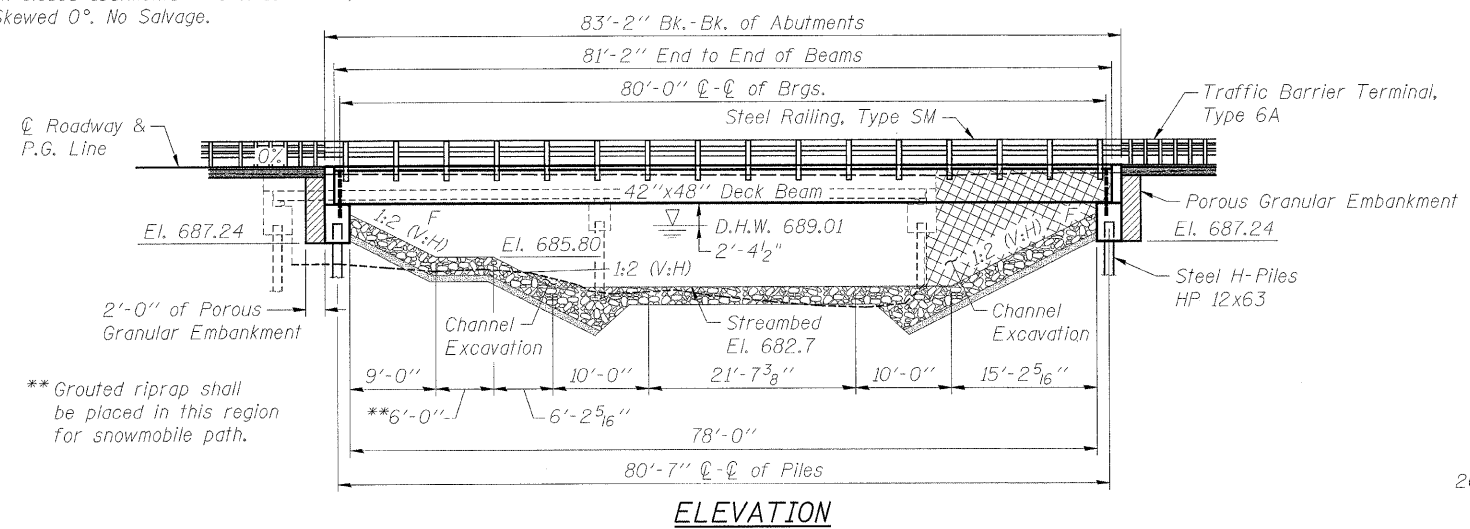


EXISTING STRUCTURE: S.N. 043-3014
 A two span (2 @ 33'-0") steel girder bridge
 on closed abutments @ Sta. 13+47.09, 9.03' Lt.
 Skewed 0°. No Salvage.

BENCH MARK: Chis. "□" on the northwest wingwall
 of existing structure 23.64' Lt. @
 Sta. 13+79.39, El. 696.66

BILL OF MATERIAL - BRIDGE

Item	Unit	Sub	Super	Total
Channel Excavation	Cu. Yd.	551	—	551
* Porous Granular Embankment	Cu. Yd.	62	—	62
Stone Riprap, Class A5	Sq. Yd.	1,247	—	1,247
Filter Fabric	Sq. Yd.	1,066	—	1,066
Removal of Existing Structures	Each	—	—	1
Structure Excavation	Cu. Yd.	85	—	85
Concrete Structures	Cu. Yd.	57.6	—	57.6
Bridge Deck Grooving	Sq. Yd.	—	309	309
Concrete Encasement	Cu. Yd.	4.2	—	4.2
Protective Coat	Sq. Yd.	—	327	327
* Precast Prestressed Concrete Deck Beams (42" Depth)	Sq. Ft.	—	2,922	2,922
Reinforcement Bars, Epoxy Coated	Pound	8,500	4,020	12,520
Steel Railing, Type SM	Foot	—	167	167
Furnishing Steel Piles HP 12x63	Foot	260	—	260
* Driving Piles	Foot	260	—	260
Test Pile Steel HP 12x63	Each	2	—	2
Name Plates	Each	1	—	1
* Concrete Wearing Surface, 5"	Sq. Yd.	—	324.7	324.7
* Grouted Riprap	Sq. Yd.	71	—	71



INDEX OF SHEETS

- 1.) General Plan & Elevation
- 2.) Riprap & Pile Layout
- 3.) Superstructure
- 4.) Superstructure Details
- 5.) 42"x48" PPC Deck Beam
- 6.) 42"x48" PPC Deck Beam Details
- 7.) Steel Railing, Type SM
- 8.) South Abutment
- 9.) North Abutment
- 10.) HP Pile Details
- 11-12.) Boring Logs

LOADING HL-93

Allow 50#/sq. ft. future wearing surface.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

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" φ Low Lax Strands)
 fpbt = 201,960 psi (1/2" φ Low Lax Strands)

SEISMIC DATA

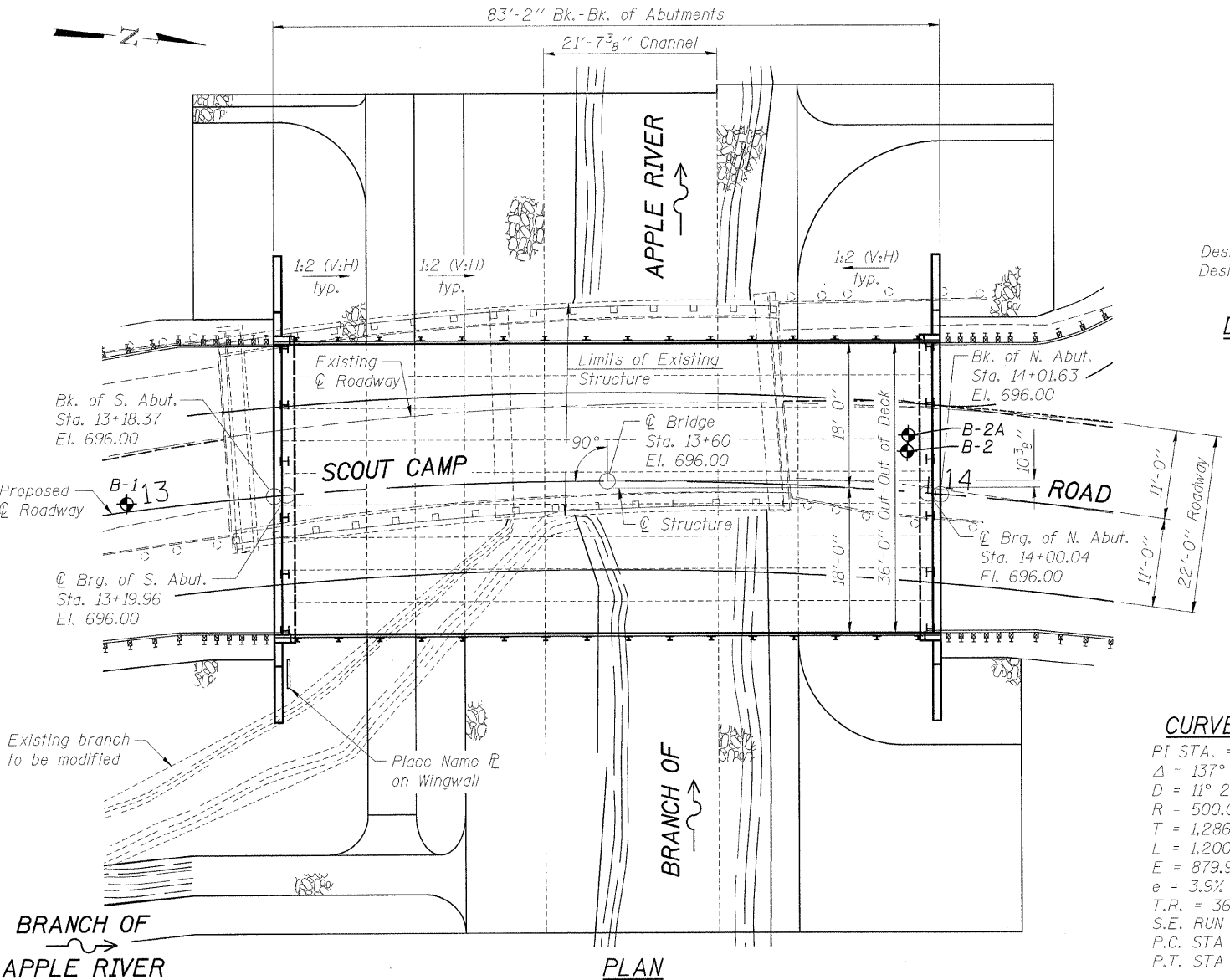
Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.033 g
 Design Spectral Acceleration at 0.2 sec. (S_{Ds}) = 0.075 g
 Soil Site Class = B

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut. Sta. 14+01.63 El. 696.00	E. Abut. Sta. 13+58.37 El. 696.00
	687.24	687.24

GENERAL NOTES

- * See Special Provisions.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- Channel to be transitioned to fit proposed structure inside Right of Way. Cost shall be included in price per Cubic Yard for Channel Excavation.
- Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.

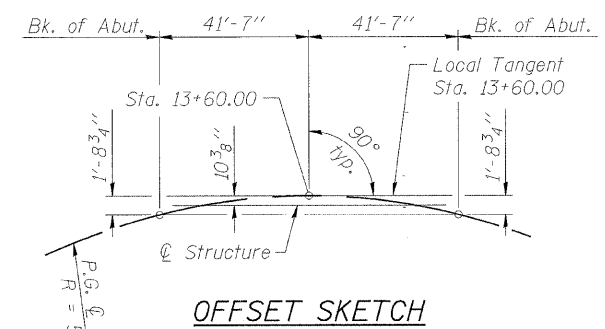


BRANCH OF APPLE RIVER
 BUILT 2010 BY
 JO DAVIESS COUNTY
 SECTION 09-00133-00-BR
 F.A.S. RTE. 73 STA. 13+60
 STR. NO. 043-3276 LOADING HL-93

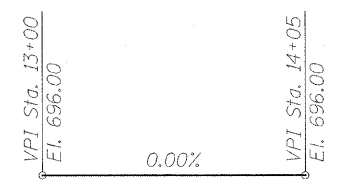
NAME PLATE LETTERING
 Refer To Std. 515001-03

CURVE DATA

PI STA. = 24+44.69
 Δ = 137° 30' 50" (Rt.)
 D = 11° 27' 33"
 R = 500.00'
 T = 1,286.21'
 L = 1,200.03'
 E = 879.98'
 e = 3.9%
 T.R. = 36'
 S.E. RUN = 69'
 P.C. STA = 11+58.48
 P.T. STA = 23+58.52



PROFILE GRADE
 Along C Roadway



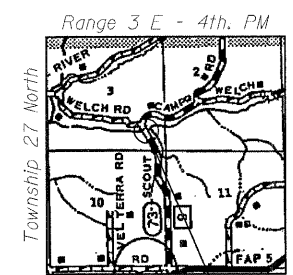
WATERWAY INFORMATION

Drainage Area = 7.77 sq. mi. Low Grade Elev. 695.64 @ Sta. 15+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	1,580	-	-	688.48	-0.25	-0.04	688.23	688.44
	20	2,000	348	360	689.01	-0.26	0.03	688.75	689.04
Base	100	3,100	417	438	690.05	-0.15	0.38	689.90	690.43



Brian K. Converse
 DATE: MAY 13th, 2010
 EXPIRES 11/30/10



LOCATION SKETCH

GENERAL PLAN & ELEVATION
 SCOUT CAMP ROAD OVER BR. OF APPLE RIVER
 STATION 13+60 (S.N. 043-3276)
 SECTION 09-00133-00-BR
 JO DAVIESS COUNTY

WHA JOB NUMBER 1169D09	WILLET, HOFMANN & ASSOCIATES, INC. CONSULTING ENGINEERS Land Surveying - Transportation - Structural Environmental - Architecture 800 East Second Street Dixon, Illinois 61021 Phone 815.284.3381 Fax 815.284.3385 Design Firm #184-000918 www.willett-hofmann.com	Designed By: M. C. Wagner Date: 3/10 Checked By: B. K. Converse Date: 3/10 Drawn By: R. D. Allen Date: 3/10
STRUCTURAL SHEET NO. 1 OF 12 SHEETS	ROUTE NO. 73 SECTION 09-00133-00-BR COUNTY Jo Daviess TOTAL SHEETS 48 SHEET NO. 21	

"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 Complies With Requirements Of The Current 'AASHTO Standard Specifications For Highway Bridges'."