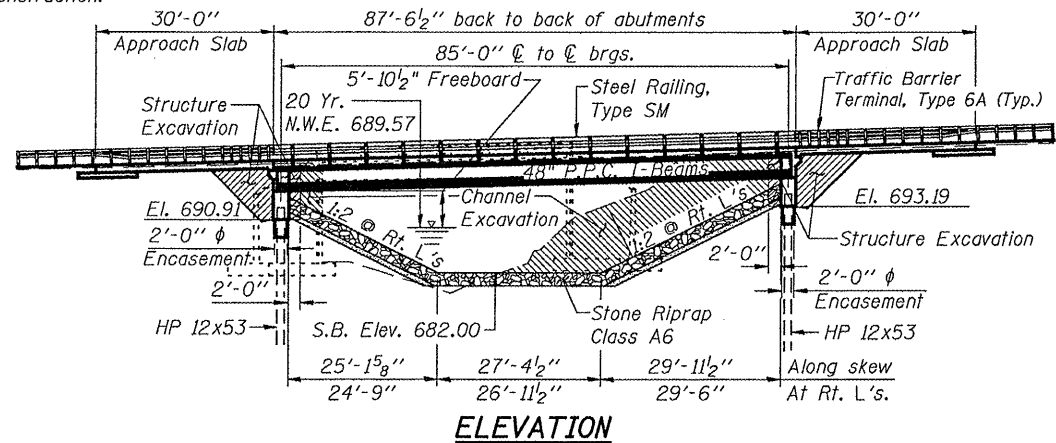


EXISTING STRUCTURE: S.N. 043-3009
Originally built in 1958 as F.A.S. Route 72, Section 71B. The existing structure is a single span (1 @ 42'-0") concrete T-beam bridge on closed abutments. 43'-0" back to back of abutments and 28'-4" out to out of deck. Superstructure has been removed by others and the substructure remains. Road shall be closed to traffic during construction.

No salvage.



BENCH MARK: Railroad spike in 2nd power pole west of existing bridge, ±38.4' Lt. of Sta. 16+88, Elev. 695.31

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 Riprap & Pile Layout
- 3 Top of Slab Elevations
- 4-5 Top of West & East Bridge Approach Slab Elevations
- 6 Framing Plan
- 7 Superstructure Details
- 8 Integral Abutment Diaphragm Details
- 9 Bridge Approach Slab Details
- 10 48" PPC I-Beam
- 11 48" PPC I-Beam Details
- 12 West Abutment Details
- 13 East Abutment Details
- 14 Steel Railing, Type SM Details
- 15 Bar Splicer Assembly and Mechanical Splicer Details
- 16 HP Pile Details
- 17 Boring Logs

BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu Yd	—	1,217	1,217
Stone Riprap, Class A6	Sq Yd	—	2,239	2,239
Filter Fabric	Sq Yd	—	2,239	2,239
* Removal of Existing Structures	Each	—	—	1
Structure Excavation	Cu Yd	—	335	335
Concrete Structures	Cu Yd	9.4	38.7	48.1
Concrete Superstructure	Cu Yd	191.7	—	191.7
Bridge Deck Grooving	Sq Yd	459	—	459
Concrete Encasement	Cu Yd	—	3.4	3.4
** Protective Coat	Sq Yd	492	—	492
Furnishing And Erecting Precast Prestressed Concrete I-Beams, 48"	Foot	430	—	430
Reinforcement Bars, Epoxy Coated	Pound	40,700	5,430	46,130
Bar Splicers	Each	62	—	62
Steel Railing, Type SM	Foot	175	—	175
Furnishing Steel Piles HP12x53	Foot	—	156	156
Driving Piles	Foot	—	156	156
Test Pile Steel HP12x53	Each	—	2	2
Name Plates	Each	—	1	1
Geocomposite Wall Drain	Sq Yd	—	93	93
* Porous Granular Embankment, Special	Cu Yd	—	192	192
* Pipe Underdrains For Structures 4"	Foot	—	182	182

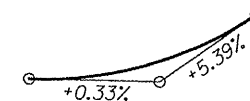
* See Special Provisions.
** Includes Deck & Approach Pavement.

GENERAL NOTES

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.



VERTICAL CURVE

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications, 5th Ed.

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 7,000 psi
f'ci = 6,000 psi
fpu = 270,000 psi (1/2" φ Low Relaxation Strands)
fpbt = 201,960 psi (1/2" φ Low Relaxation Strands)

LOADING HL-93

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.052g
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.080g
Soil Site Class = C

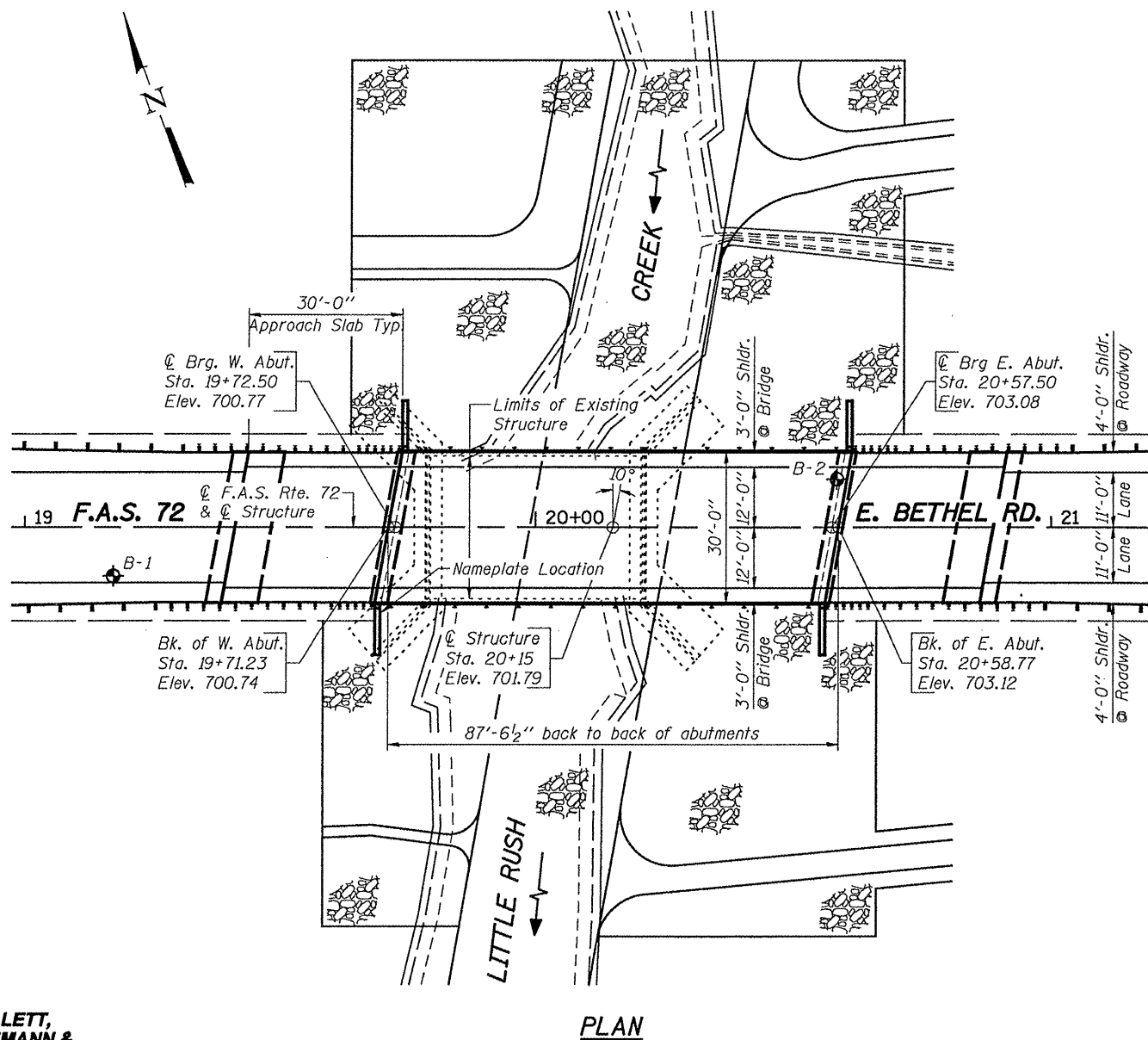
WATERWAY INFORMATION

Drainage Area = 6.63 sq. mi. Low Grade Elev. 699.20 @ Sta. 18+50

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	20	1,800	311	318	689.57	0	0	689.49	689.43
Base	100	2,750	353	380	690.60	0.22	0.38	690.82	690.98

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	690.91	693.19



PLAN

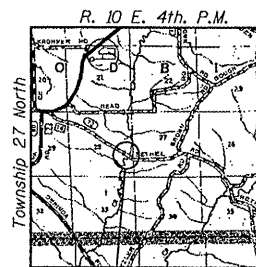
LITTLE RUSH CREEK
BUILT 2011 BY
JODAVIESS COUNTY
SECTION 10-00134-00-BR
FAS RTE 72 STATION 20+15
STR. NO. 043-3277 LOADING HL-93

NAME PLATE LETTERING

Refer To Std. 515001-03



Brian K. Converse
DATE: 2/14/2011
EXPIRES 11/30/12



Bridge Location LOCATION SKETCH

"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 Bridge Design Specifications."

FILE NAME = S:\PROJECTS\2010\1183010\JodavieSS_County_Bethel_Road\DESIGN\STRUCT\Drawings\1183010DPE.dgn

WILLETT, HOFMANN & ASSOCIATES, INC.
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Environmental - Architecture
809 East Second Street Dixon, Illinois 61021
Phone 815.294.5391 Fax 815.294.2558
Design Firm #184-000918
www.willett-hofmann.com

USER NAME =	DESIGNED - M. C. WAGNER	REVISED -
	CHECKED - B. K. CONVERSE	REVISED -
PLOT SCALE =	DRAWN - F. D. LACHAT	REVISED -
PLOT DATE =	CHECKED - M. A. CACKLEY	REVISED -

JODAVIESS COUNTY
F.A.S. 72 (E. BETHEL RD.) OVER LITTLE RUSH CREEK
STATION 20+15

GENERAL PLAN & ELEVATION
STRUCTURE NO. 043-3277

STRUCTURAL SHEET NO. 1 OF 17 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	10-00134-00-BR	JODAVIESS	34	11
WHA* 1083D10		CONTRACT NO. 85536		
ILLINOIS FED. AID PROJECT ER-00721003				