

**EXISTING STRUCTURE:** S.N. 089-3009  
A Three Span (54'-3"; 63'-6"; 54'-3") Steel  
Girder Structure on Spill Thru Abutments  
at Sta. 383+92.73. No Skew. To be  
Removed. Existing Beams to be Salvaged.

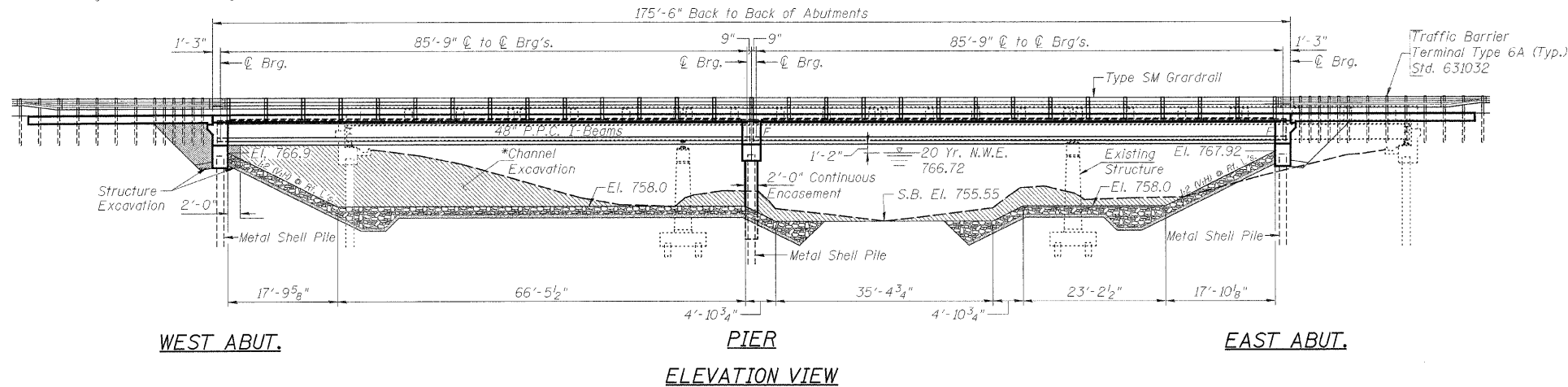
**BENCH MARK:** RR Spk. in 3rd Big PP West of  
Bridge, 39' Lt. of Sta. ±379+27  
Elev.=763.71

**BENCH MARK:** Chiseled "□" on the NE Wingwall of  
Exist. Bridge over Cedarville Rd.  
Elev.=772.41

**BENCH MARK:** RR Spk. in PP, 1st PP East  
of Bridge, Sta. 385+85  
Elev.=764.51

PROJECT	SECTION	COUNTY	SHEETS	SHEET
60	07-00172-00-BR	STEPHENSON	31	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	BRS-601(2)	

Structural Sheet 1 of 14



**BILL OF MATERIAL - BRIDGE**

ITEM	UNIT	SUB	SUPER	TOTAL
Channel Excavation	Cu Yd	1,844		1,844
Porous Granular Embankment, (Special)	Cu Yd	122		122
Stone Riprap, Class A4	Sq Yd	1,232		1,232
Filter Fabric	Sq Yd	1,232		1,232
Removal of Existing Structures	Each			1
Structure Excavation	Cu Yd	103		103
Concrete Structures	Cu Yd	60.2		60.2
Concrete Superstructures	Cu Yd		179.4	179.4
Bridge Deck Grooving	Sq Yd		546	546
Protective Coat	Sq Yd		585	585
Furnishing And Erecting Precast Prestressed Concrete I-Beams, 48"	Foot		867.5	867.5
Reinforcement Bars, Epoxy Coated	Pound	7,130	34,100	41,230
Bar Splicers	Each		62	62
Steel Railing, Type SM	Foot		351	351
Furnishing Metal Shell Piles 14" x 0.250"	Foot	464		464
Driving Piles	Foot	464		464
Test Pile Metal Shells	Each	3		3
Name Plates	Each		1	1
Concrete Headwalls for Pipe Drains	Each	4		4
Geocomposite Wall Drain	Sq Yd	48		48
Pipe Underdrains For Structures 4"	Foot	134		134
Underwater Structure Excavation Protection	L Sum	1		1

**GENERAL NOTES:**

- See Proposal for boring data.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of 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 substructures specified or approved by the Engineer before ordering the remainder of piles.
- \*Channel shall be transitioned from edge of deck to Proposed Right of Way.
- \*\*Quantity is for the Deck only.
- Filling Metal Shell Piles shall be included in cost of Driving Piles.

**DESIGN SPECIFICATIONS**

2004 AASHTO LRFD Bridge Design Specifications with 2005 and 2006 Interims

**DESIGN STRESSES**

**FIELD UNITS**

f'c = 3,500 psi

f'y = 60,000 psi (Reinforcement)

**PRECAST PRESTRESSED UNITS**

f'c = 7,000 psi

f'ci = 6,000 psi

f's = 270,000 psi (1/2" φ Low Lax Strands)

f'si = 201,960 psi (1/2" φ Low Lax Strands)

**LOADING HL-93**

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

**SEISMIC DATA**

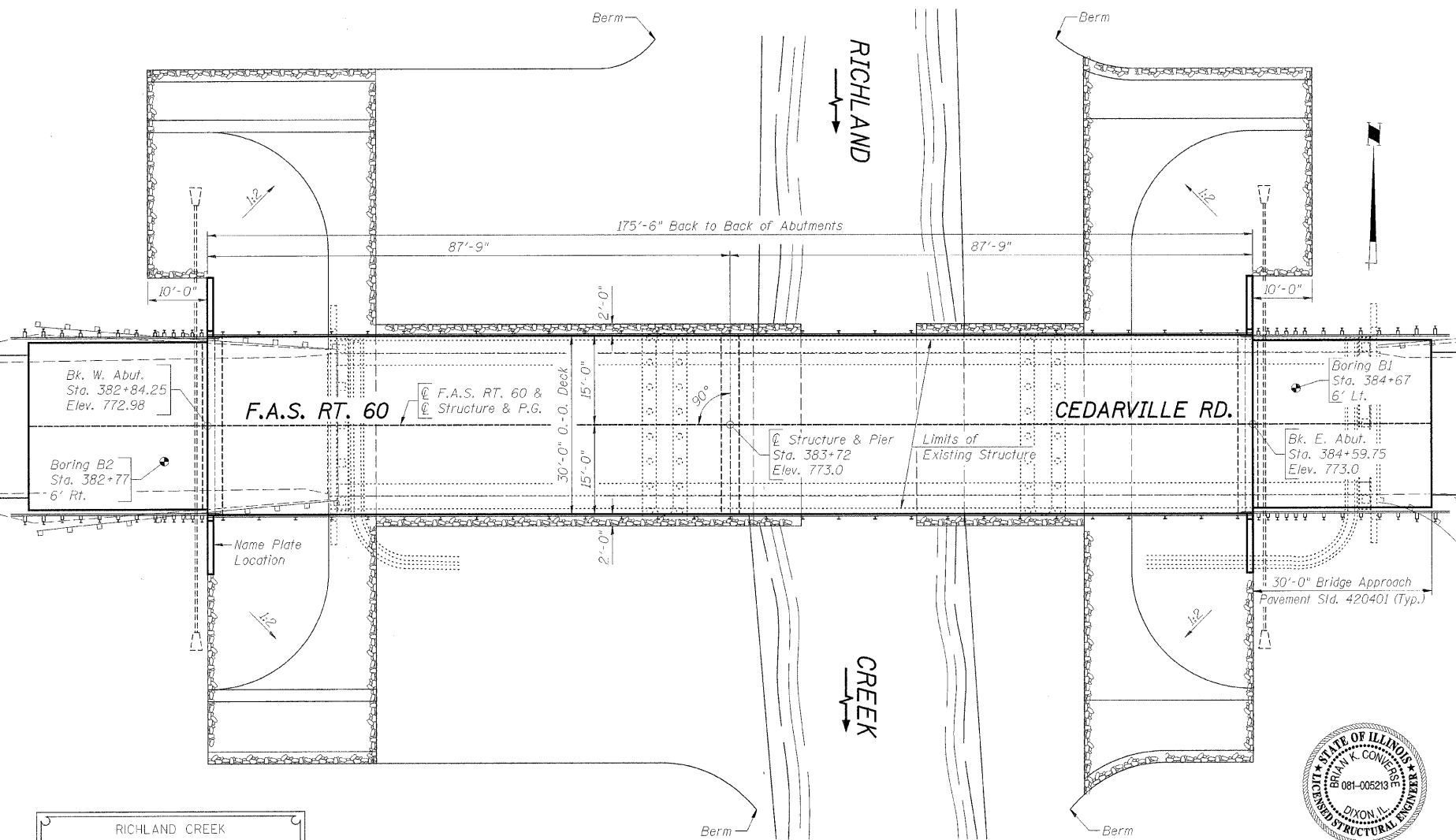
Seismic Performance Zone (SPZ) = 1

Bedrock Acceleration Coefficient (A) = 0.04g

Site Coefficient (S) = 1.0

**WATERWAY INFORMATION**

DRAINAGE AREA	91.50 Sq. Mi.
DESIGN DISCHARGE (20 YR.)	5,950 C.F.S.
EXISTING OPENING	1,173 Sq. Ft.
REQUIRED OPENING	1,338 Sq. Ft.
PROPOSED OPENING	1,338 Sq. Ft.
CREATED HEAD (20 YR.)	< 0.5'
100 YR. DISCHARGE	8,587 C.F.S.
CREATED HEAD (100 YR.)	< 1.0'
HIGH WATER ELEV. (100 YR.)	767.88 Ft.



**PLAN VIEW**

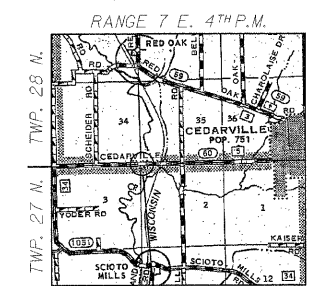
RICHLAND CREEK  
BUILT 2008 BY  
STEPHENSON COUNTY  
SECTION 07-00172-00-BR  
F.A.S. RT. 60 STATION 383+72  
STR. NO. 089-3282 LOADING HL93

**NAME PLATE LETTERING**  
Refer To Std. 515001-02



Brian K. Converse  
DATE: MAY 8<sup>th</sup>, 2008  
EXPIRES 11/30/08

"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'."



**BRIDGE SITE LOCATION SKETCH**

**GENERAL PLAN AND ELEVATION**  
**FAS 60 (CEDARVILLE ROAD) OVER RICHLAND CREEK**  
**STA. 383+72 (S.N. 089-3282)**  
**SECTION 07-00172-00-BR**  
**STEPHENSON COUNTY**



Designed by:  
B. K. Converse  
DATE: 6/07  
Checked by:  
M. A. Small  
DATE: 12/07  
Drawn by:  
F. D. Lachat  
DATE: 12/07

WHA #1106D07