

**BENCHMARK:**

Railroad Spike in Power Pole Sta. 19+64.72, 30.7' Rt. Elevation = 701.63

**EXISTING STRUCTURE (SN 058-500):**

Triple 9'x6' Cast In Place Concrete Box Culvert with Concrete Headwalls, 32'-0" O.-O. Headwalls

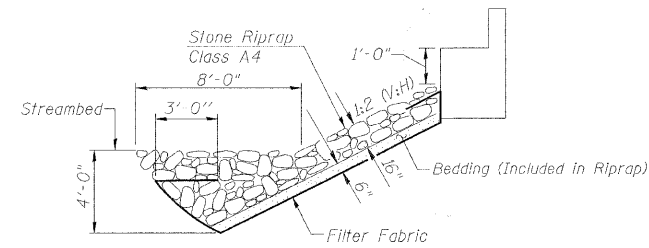
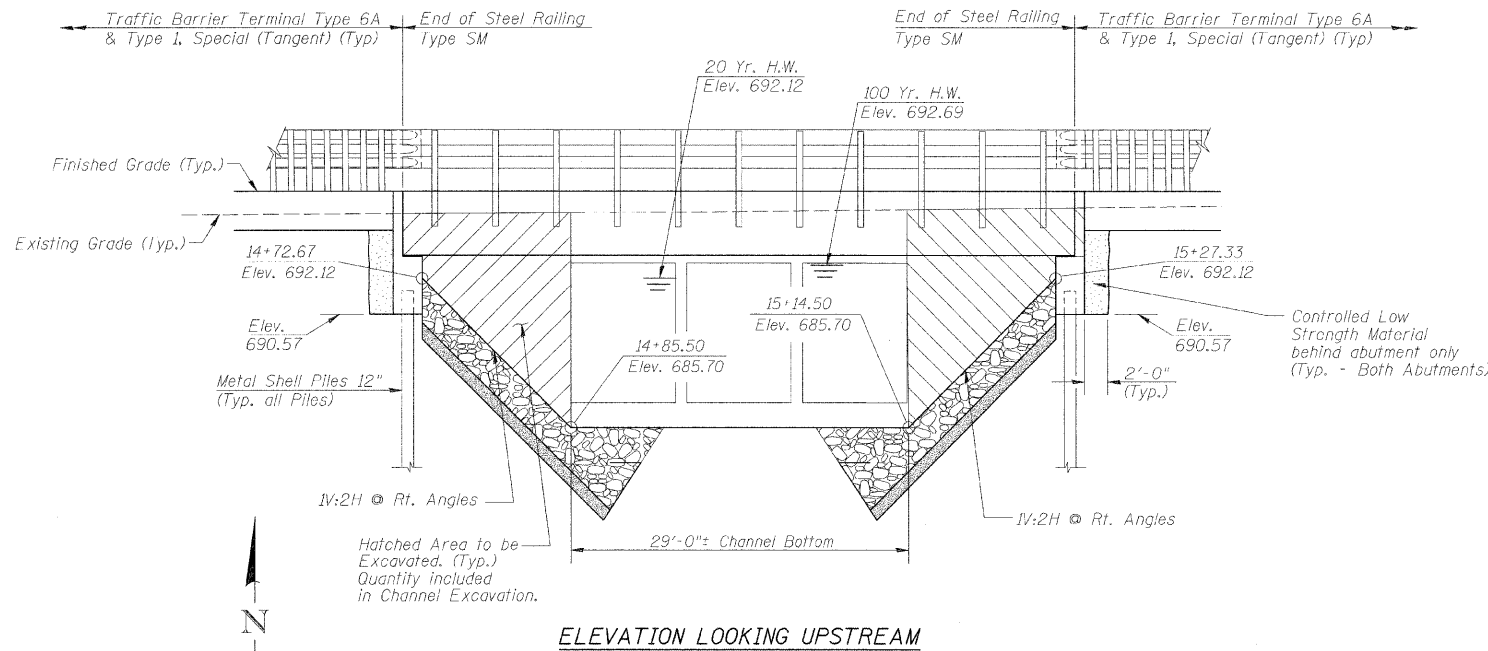
Traffic is to be detoured during construction. No Salvage.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S 548	05-00196-00-BR	MACON	17	2
FED. ROAD DIST. NO.	ILLINOIS PROJECT: ARA-0548(113)			

CONTRACT NO. 95599

**GENERAL NOTES**

Layout of Riprap Slopes may be varied in the field to suit ground conditions as directed by the Engineer.  
See Proposal for Boring Data.  
Reinforcement Bars shall conform to the requirements of ASTM A 706, Grade 60. See Special Provisions.  
The Contractor shall drive one Metal Shell Test Pile in a permanent location at the East Abutment as directed by the Engineer before ordering the remainder of piles.  
Excavation required for abutment construction shall be included in Concrete Structures. No additional compensation will be provided for Structure Excavation.



**STONE RIPRAP DETAIL**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
P.P.C Deck Beams (27" Depth)	Sq. Ft.	1740		1740
Concrete Structures	Cu. Yd.		22.6	22.6
Reinforcement Bars, Epoxy Coated	Pound		2740	2740
Furnishing Metal Shell Piles 12"x0.250"	Foot		459	459
Driving Piles	Foot		459	459
Test Pile Metal Shells	Each		1	1
Pile Shoes	Each		12	12
Channel Excavation	Cu. Yd.		183	183
Stone Riprap, Class A4	Sq. Yd.		497	497
Filter Fabric	Sq. Yd.		497	497
Name Plates	Each		1	1
Steel Railing, Type SM	Foot	116		116
Portland Cement Mortar Fairing Course	Foot	522		522
Waterproofing Membrane System	Sq. Yd.	193		193
Hot-Mix Asphalt Surface Course, Mixture C, N50	Ton	27		27
Controlled Low-Strength Material	Cu. Yd.		16	16

LAKE FORK CREEK  
BUILT 20\_\_, BY  
MACON COUNTY  
SECTION 05-00196-00-BR  
F.A.S. 548 STA. 15+00.00  
STR. NO. 058-3378 LOADING HL-93  
WYKOFF BRIDGE

**NAME PLATE**

(See Std. 515001)

**DESIGN SPECIFICATIONS**

2007 AASHTO LRFD with 2008 Interim

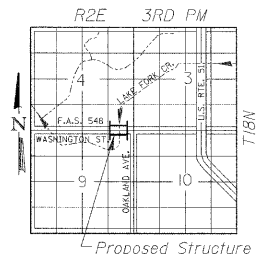
**LOADING HL-93**

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

**DESIGN STRESSES**

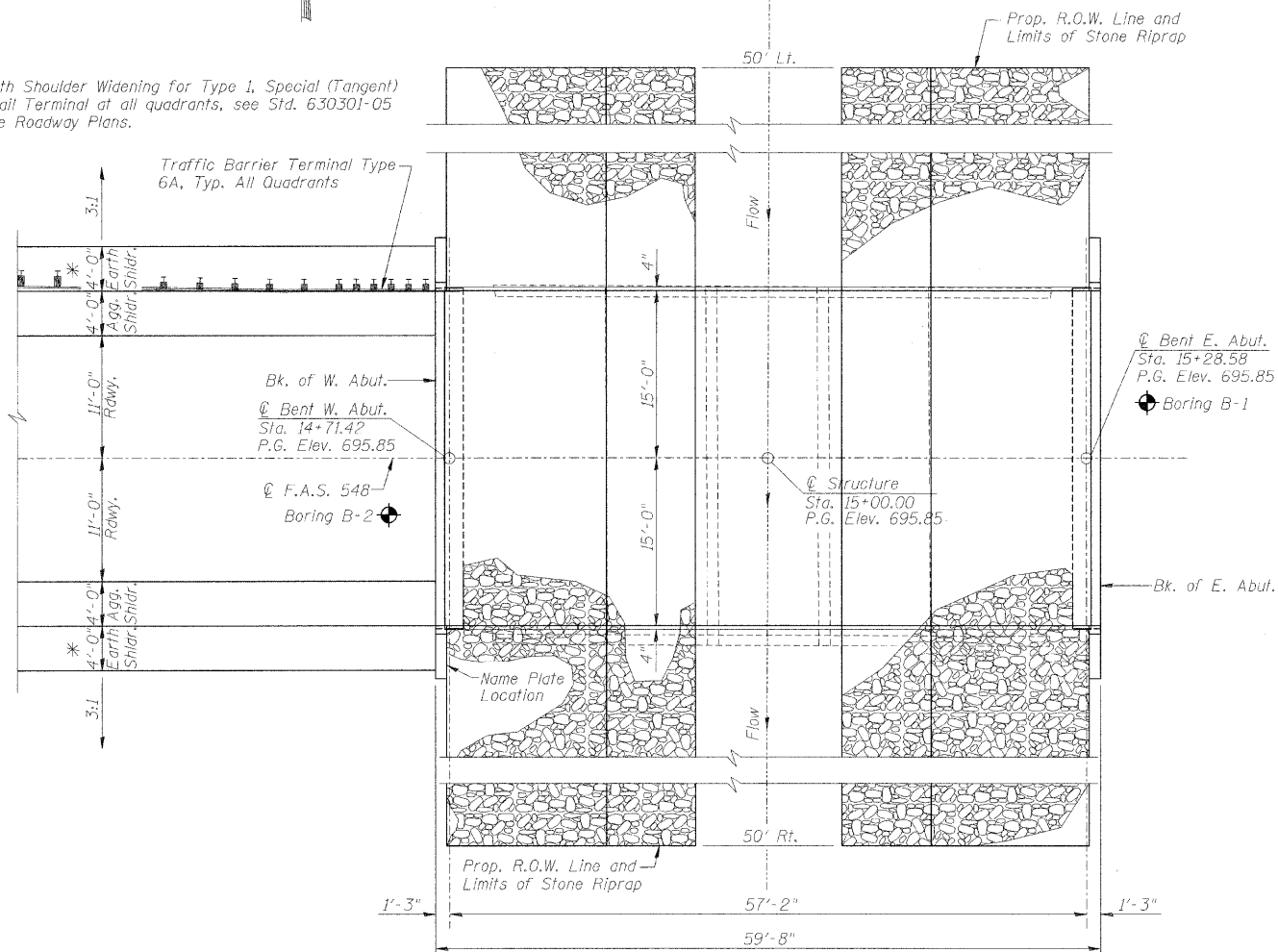
FIELD UNITS  
f'c = 3,500 p.s.i.  
f'ci = 6,000 p.s.i.  
n = 9

PPC UNITS  
f'ci = 5,000 p.s.i.  
f'c = 6,000 p.s.i.  
f's = 270,000 p.s.i.  
f'si = 201,960 p.s.i.

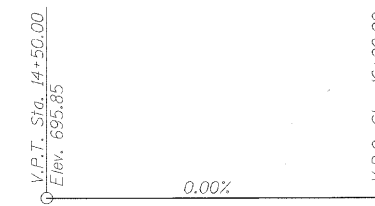


**LOCATION SKETCH**

\* 4' Earth Shoulder Widening for Type 1, Special (Tangent) Guardrail Terminal at all quadrants, see Std. 630301-05 and the Roadway Plans.



**PLAN**



**@ PROFILE F.A.S. 548**

**WATERWAY INFORMATION**

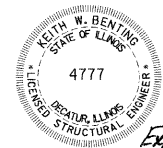
Drainage Area = 9.8 Sq. Mi. Existing Low Grade Elev. 694.65 @ Sta. 13+00.00 Proposed Low Grade Elev. 694.82 @ Sta. 10+50.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. Head-Ft.		Headwater El.		
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	20	936	162	274	692.12	1.40	0.11	693.52	692.22
Base	100	1408	162	313	692.69	*2.19	0.25	694.88	692.94
Overtopping									
Max. Calc.	500	1871	162	323	693.13	*2.08	0.77	695.21	693.89

Low Beam Elev. (Prop.) = 693.12

\* Over-the-Road Flow Occurs  
EXISTING  
20 Yr.: None  
100 Yr.: 30.7 Sq. Ft. over roadway  
500 Yr.: 137.8 Sq. Ft. over roadway

PROPOSED  
20 Yr.: None  
100 Yr.: None  
500 Yr.: None



Exp 11/30/2010

DATE: August 14, 2009  
Keith W. Benting  
KEITH W. BENTING  
ILL. STRUCTURAL NO. 4777

"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 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."

**GENERAL PLAN AND ELEVATION**

Date	Designed MJJ	F.A.S. 548 OVER LAKE FORK CREEK SECTION 05-00196-00-BR MACON COUNTY STA. 15+00.00 PROP. STR. NO. 058-3378	Sheet No.
Revisions	Drawn BKN		1
	Checked KWB		
	Approved KWB		
Prepared by:	<b>URS</b> 345 East Ash Avenue Decatur, IL 62526		of 6 URS Job No. 36431681