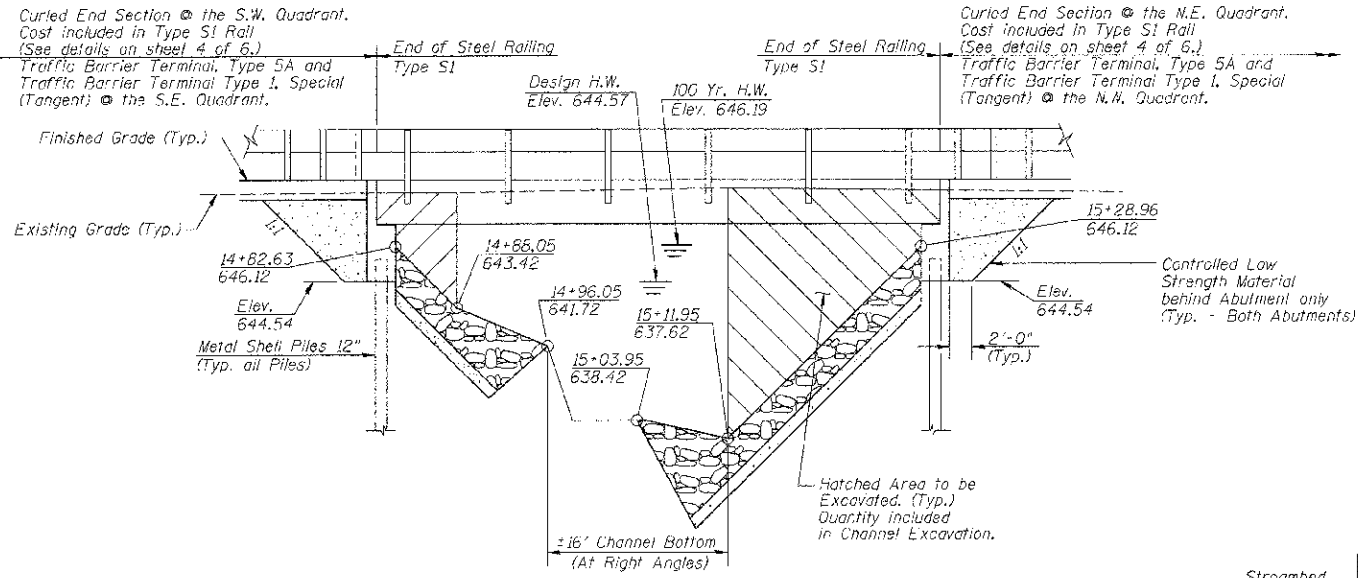


BENCHMARK:
RR Spike in Power Pole
Sta. 21+21.10, 34.4' RT.
Elevation = 652.41

EXISTING STRUCTURE
(SN 058-3118)

Single Span Concrete Slab Bridge on Closed Concrete Abutments with Concrete Wingwalls and Concrete Safety Railing.
26'-3" O.D. Deck.
26' 0" Bk. Abutments.
No Salvage.

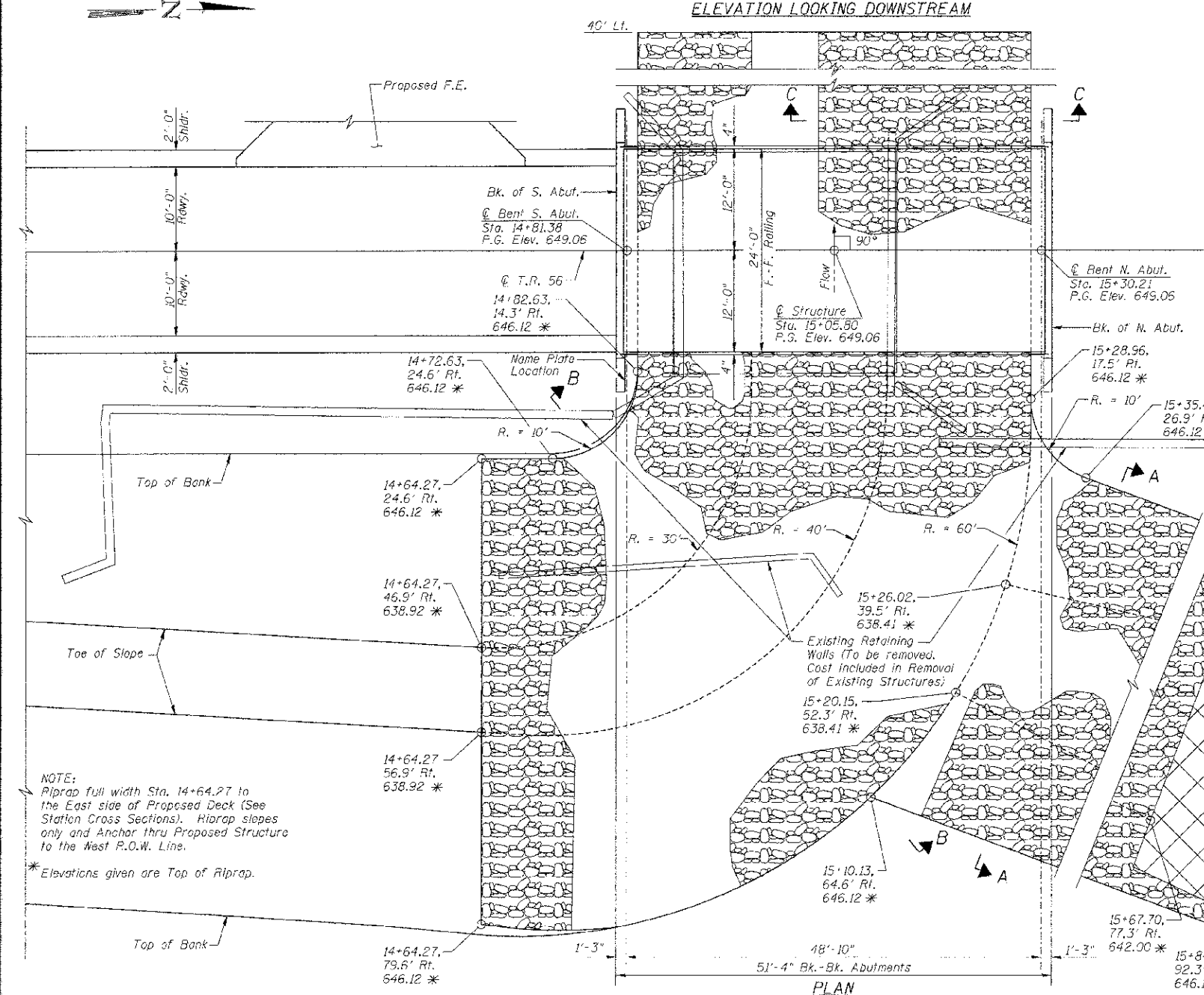
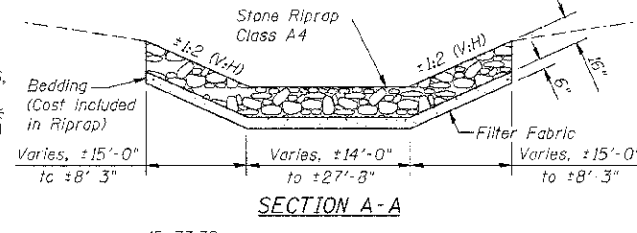
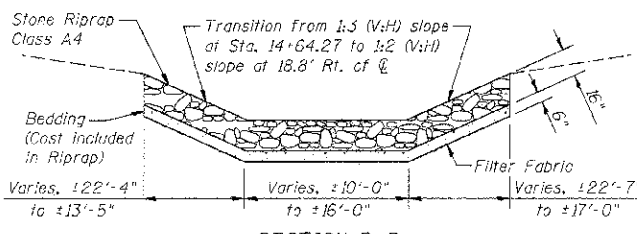
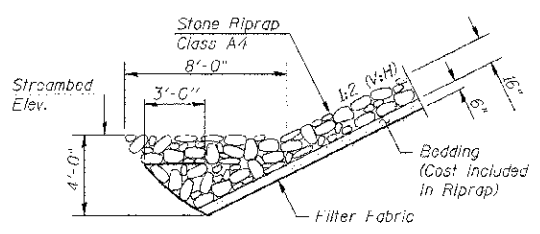
Notes:
Portions of Exist. S. Abut. Footing may require removal for pile placement.
No plans available for Existing Structure.



UNNAMED DRAINAGE DITCH
BUILT 2012, BY MACON COUNTY
PROJECT NO. BROS-015(068)
SECTION 05-07161-00-BR
T.R. 56 STA. 15+05.80
STR. NO. 058-3382 LOADING HL-93
ENGLAND BRIDGE

NAME PLATE
(See Sta. 515001)

PROFILE T.R. 56



NOTE:
Riprap full width Sta. 14+64.27 to the East side of Proposed Deck (See Station Cross Sections). Riprap slopes only and Anchor thru Proposed Structure to the West R.O.W. Line.
*Elevations given are Top of Riprap.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 56	05-07161-00-BR	MACON	16	11

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 Gr 60 (See Special Provisions).
The Contractor shall drive one 12" x 0.179" Metal Shell Test Pile in a permanent location of the North & South Abutments 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.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
P.P.C Deck Beams (21" Depth)	Sq. Ft.	1192		1192
Concrete Structures	Cu. Yd.		17.0	17.0
Reinforcement Bars, Epoxy Coated	Pound		2240	2240
Furnishing Metal Shell Piles 12" x 0.179"	Foot		376	376
Driving Piles	Foot		376	376
Test Pile Metal Shells	Each		2	2
Channel Excavation	Cu. Yd.		1589	1589
Stone Riprap, Class A4	Sq. Yd.		979	979
Filter Fabric	Sq. Yd.		979	979
Name Plates	Each		1	1
Steel Railing, Type S1	Foot	100		100
Controlled Low Strength Material	Cu. Yd.		26.1	26.1

DESIGN SPECIFICATIONS
2010 AASHTO LRFD - 5th Edition

LOADING HL-93

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

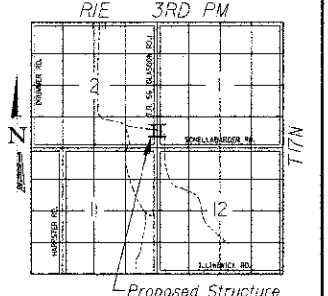
DESIGN STRESSES

FIELD UNITS
f'c = 3,500 p.s.i.
fy = 60,000 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.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (Sd1) = 0.147 g
Design Spectral Acceleration at 0.2 sec. (Sd5) = 0.260 g
Soil Site Class = D



WATERWAY INFORMATION

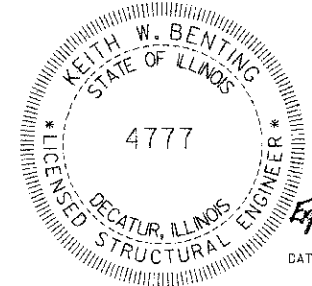
Drainage Area = 1.65 Sq. Mi. Existing Low Grade Elev. 648.18 @ Sta. 12+50.00
Proposed Low Grade Elev. 648.23 @ Sta. 12+00.00

Flood Yr.	Q C.F.S.	Opening Sq. Ft.	No.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.		
Design	15	682	112	161	644.57	0.00	0.00	644.51	644.53
Base	100	1237	148	225	646.19	0.00	0.00	646.03	646.02
Overtopping									
Max. Calc.	500	1739	174	---	647.14	0.00	---	647.14	---

Low Beam Elev. (Prop.) = 647.12

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	644.54	644.54



DATE: April 4, 2012
Keith W. Bunting
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 VJP	T.R. 56 OVER UNNAMED DRAINAGE DITCH SECTION 05-07161-00-BR MACON COUNTY STA. 15+05.80 PROP. STR. NO. 058-3382	Sheet No.
Revisions	Drawn BKN		1
	Checked KWB		of 6
	Approved KWB		JRS Job No. 36431683
Prepared by:	URS 345 East Ash Avenue Decatur, IL 62526		