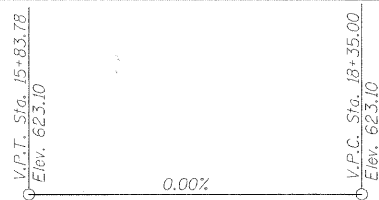


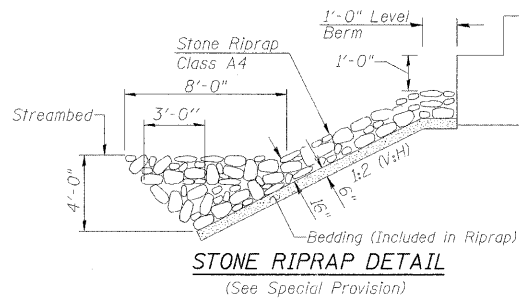
BENCHMARK:
 Top of Survey Point No. 3 (Iron Pin)
 Sta. 14+54.4, 193.3' Lt.
 Elev. = 615.87

EXISTING STRUCTURE (SN 058-6007):

Three Span Concrete Deck Beam Bridge on Pile Bent Abutments and Piers.
 28'-0" O.-O. Deck, 117'-6" Bk.-Bk. Abutments.



PROFILE C.H. 7



STONE RIPRAP DETAIL
(See Special Provision)

BIG CREEK BRIDGE
 BUILT 20L BY
 MACON COUNTY
 SECTION 05-00204-00-BR
 STA. 17+00.00
 STR. NO. 058-6024 LOADING HL-93

NAME PLATE
(See Std. 515001)

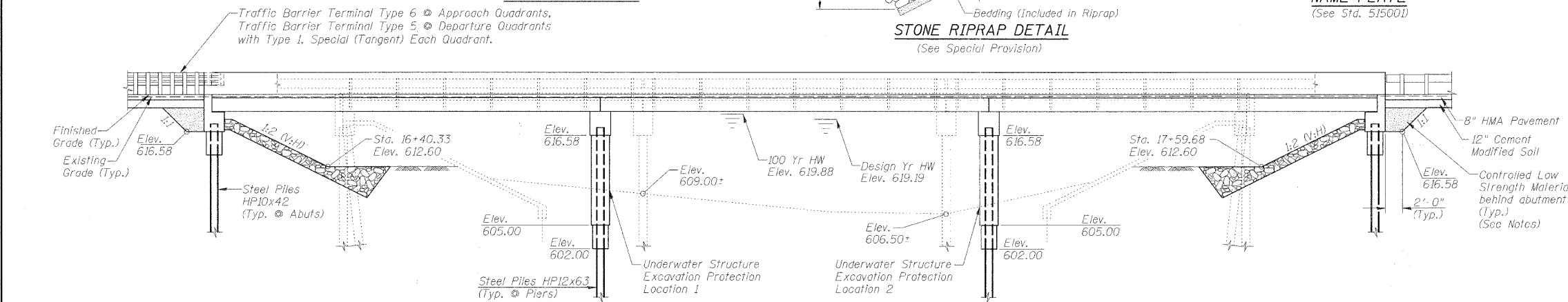
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 7	05-00204-00-BR	MACON	21	12
FED. ROAD DIST. NO.		ILLINOIS PROJECT:	CONTRACT NO. 95658	

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 Steel Test Pile to 110% of the Nominal Required Bearing in a permanent location at the South Abutment and at Pier 2, as directed by the Engineer before ordering the remainder of piles.
- Footings for bicycle railing at each end of bridge are to be set in same location as Controlled Low-Strength Material for abutment backfill. See Note on Sheet 17 of 21.

BILL OF MATERIAL

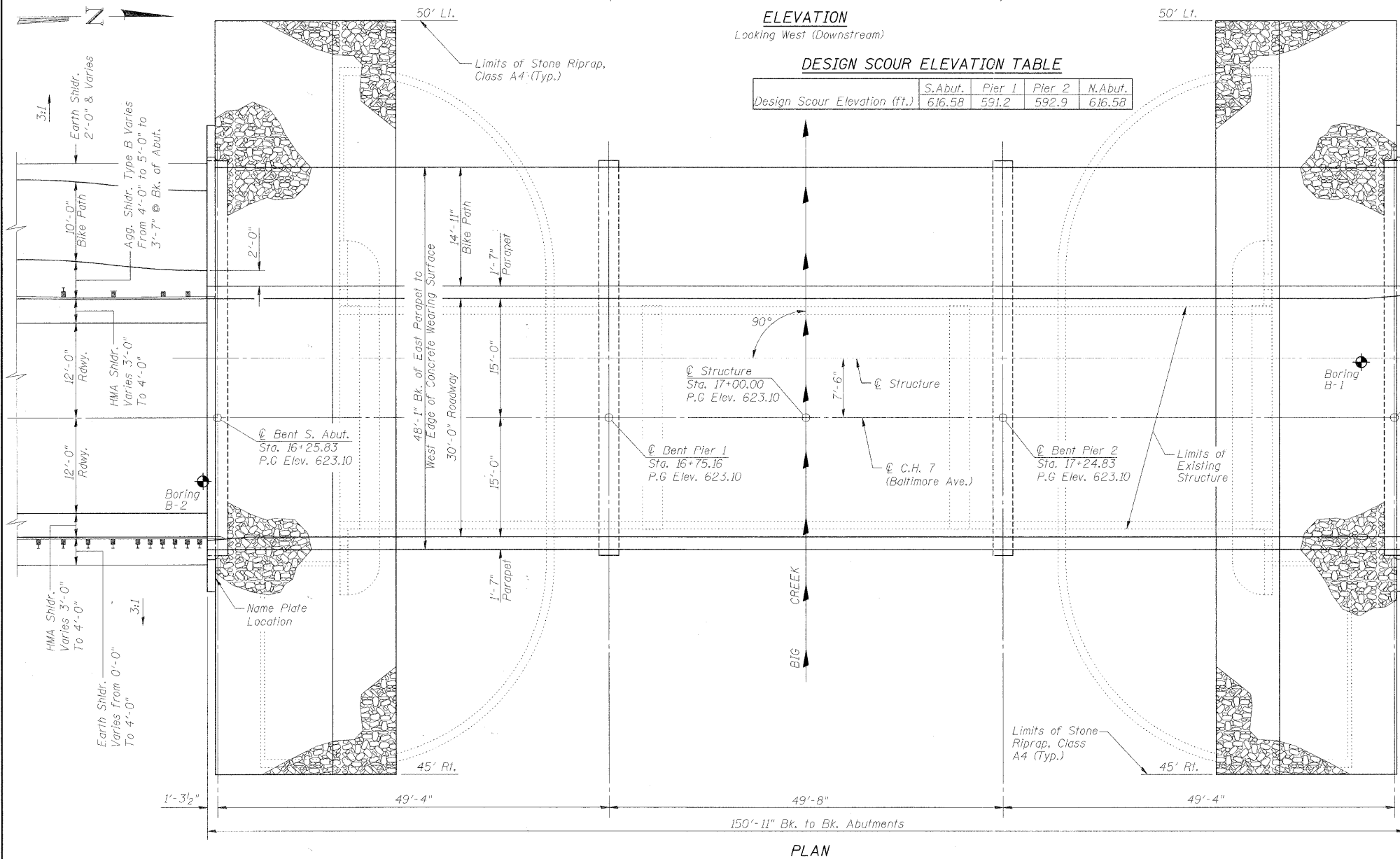
ITEM	UNIT	SUPP	SUB	TOTAL
Channel Excavation	Cu. Yd.		408	408
Stone Riprap, Class A4	Sq. Yd.		480	480
Removal of Existing Structures	Each		1	1
Slope Wall Removal	Sq. Yd.		561	561
Structure Excavation	Cu. Yd.		103.5	103.5
Concrete Structures	Cu. Yd.		199.6	199.6
Concrete Superstructure	Cu. Yd.	34.6		34.6
Bridge Deck Grooving	Sq. Yd.	728		728
Concrete Encasement	Cu. Yd.		12.0	12.0
Protective Coat	Sq. Yd.	984		984
P.P.C Deck Beams (21" Depth)	Sq. Ft.	7140		7140
Reinforcement Bars, Epoxy Coated	Pound	18160	13960	32120
Bicycle Railing, Special	Foot	169		169
Parapet Railing	Foot	149		149
Furnishing Steel Piles HP10x42	Foot		368	368
Furnishing Steel Piles HP12x63	Foot		655	655
Driving Piles	Foot		1023	1023
Test Pile Steel HP10x42	Each		1	1
Test Pile Steel HP12x63	Each		1	1
Name Plates	Each		1	1
Portland Cement Mortar Fairing Course	Foot	2234		2234
Underwater Structure Excavation Protection - Location 1	Each		1	1
Underwater Structure Excavation Protection - Location 2	Each		1	1
Concrete Wearing Surface, 5"	Sq. Yd.	794		794
Controlled Low-Strength Material	Cu. Yd.		72.0	72.0



ELEVATION
Looking West (Downstream)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S.Abut.	Pier 1	Pier 2	N.Abut.
	616.58	591.2	592.9	616.58



PLAN

DESIGN SPECIFICATIONS

2007 AASHTO LRFD with 2008 Interims
 LOADING HL-93
 Allowed 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

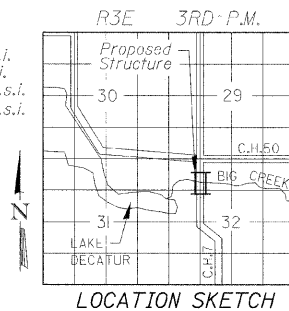
FIELD UNITS
 $f'_c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i.
 $n = 9$

PPC UNITS
 $f'_c = 5,000$ p.s.i.
 $f'_c = 6,000$ p.s.i.
 $f'_s = 270,000$ p.s.i.
 $f'_s = 201,960$ p.s.i.

CONCRETE WEARING SURFACE
 $f'_c = 5,000$ p.s.i.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.156g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.288g
 Soil Site Class = D



WATERWAY INFORMATION

Drainage Area = 51.4 Sq. Mi. Existing Low Grade Elev. 618.81 @ Sta. 22+00.00
 Proposed Low Grade Elev. 619.12 @ Sta. 22+79.84

Flood	Freq. Yr.	0 C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E.	Head-Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	30	7,298	1,007	1,230	619.19	1.60	1.40	620.79	620.59
Base	100	9,517	1,007	1,234	619.88	1.85	1.80	621.73	621.68
Overtopping Max. Calc.	500	12,650	1,007	1,234	620.71	1.74	2.09	622.45	622.80

Low Beam Elev. (Prop.) = 620.19

* Over-the-Road Flow Occurs

EXISTING

30 Yr.: 281 Sq. Ft. over roadway
 100 Yr.: 821 Sq. Ft. over roadway
 500 Yr.: 2,267 Sq. Ft. over roadway

PROPOSED

30 Yr.: 0 Sq. Ft. over roadway
 100 Yr.: 298 Sq. Ft. over roadway
 500 Yr.: 834 Sq. Ft. over roadway



DATE: April 13, 2011

Keith W. Benting

ILL. STRUCTURAL NO. 4777

"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 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."

GENERAL PLAN AND ELEVATION

Date	Designed DCS	C.H. 7 (BALTIMORE AVE.) OVER BIG CREEK SECTION 05-00204-00-BR MACON COUNTY STA. 17+00.00 PROP. STR. NO. 058-6024	Sheet No.
Revisions	Drawn BKN		1
	Checked KWB		
	Approved KWB		
Prepared by:	URS	345 East Ash Avenue Decatur, IL 62526	of 10 URS Job No. 36431685