

BENCHMARK:
Spike Nail found in Power Pole
Sta. 21+84, 24' Rt., Elev. 652.81

EXISTING STRUCTURE (SN 058-3000):
Two Span Concrete Deck on WF Beam Superstructure on Closed Timber Abutments with Timber Wingwalls and Timber Pier. 25'-2" O.-O. Deck. 64'-6" Bk.-Bk. Abuts. Timber Abutment repairs were made in 2003, see General Notes. No Salvage.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 25	06-00213-00-BR	MACON	19	13
FED. ROAD DIST. NO.	ILLINOIS PROJECT:	BRS-0544(104)		

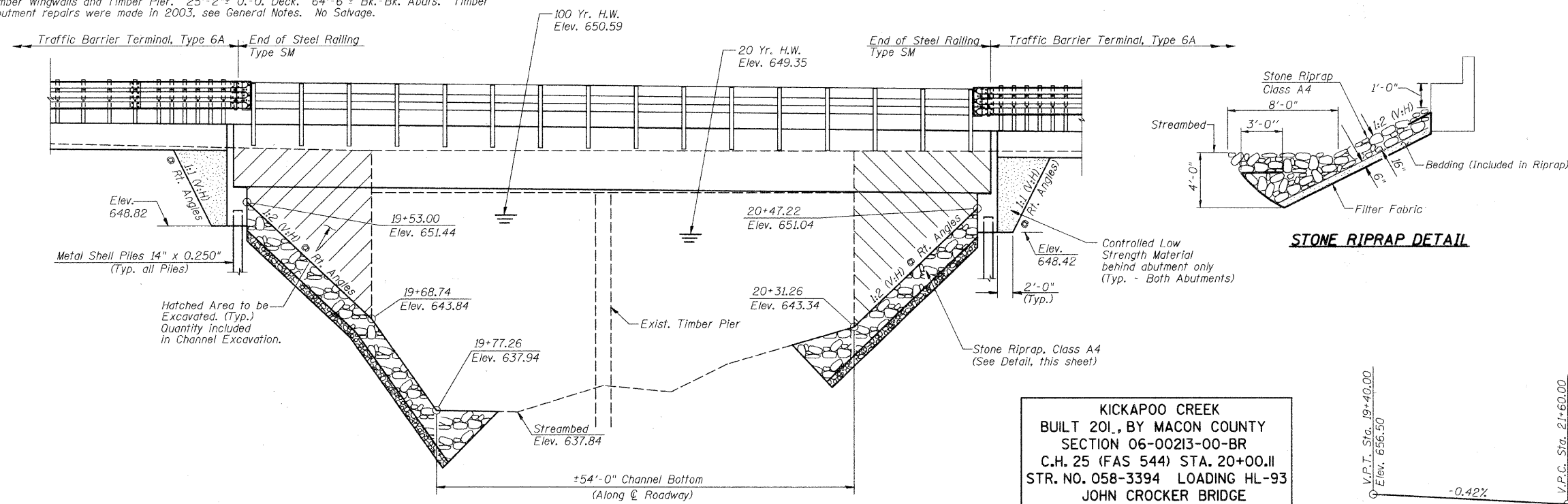
CONTRACT NO. 95680

GENERAL NOTES

Layout of Stone Riprap, Class A4 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 North Abutment and South 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.
Repairs were made to the existing timber abutments in 2003. Repairs consisted of excavating behind each abutment and installing 4'-25 ft. long HP8x36, 3"x10" timber planking and a 1'x2'-7" concrete cap. The excavation was backfilled with CA-6 and capped with 10" of HMA. Removal of the 2003 timber abutment repair shall be included in Removal of Existing Structures and no additional compensation will be provided.

TOTAL BILL OF MATERIAL

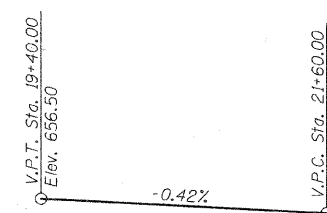
ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
P.F.C Deck Beams (42" Depth)	Sq. Ft.	2735		2735
Concrete Structures	Cu. Yd.		33.5	33.5
Reinforcement Bars, Epoxy Coated	Pound		4400	4400
Furnishing Metal Shell Piles 14" X 0.250"	Foot		395	395
Driving Piles	Foot		395	395
Test Pile Metal Shells	Each		2	2
Channel Excavation	Cu. Yd.		230	230
Name Plates	Each		1	1
Steel Railing, Type SM	Foot	196		196
Stone Riprap, Class A4	Sq. Yd.		898	898
Filter Fabric	Sq. Yd.		898	898
Waterproofing Membrane System	Sq. Yd.	304		304
Portland Cement Mortar Fairing Course	Foot	586		586
Hot-Mix Asphalt Surface Course, Mixture C, N50	Ton		37.8	37.8
Controlled Low Strength Material	Cu. Yd.		63.7	63.7



**KICKAPOO CREEK
BUILT 2011, BY MACON COUNTY
SECTION 06-00213-00-BR
C.H. 25 (FAS 544) STA. 20+00.11
STR. NO. 058-3394 LOADING HL-93
JOHN CROCKER BRIDGE**

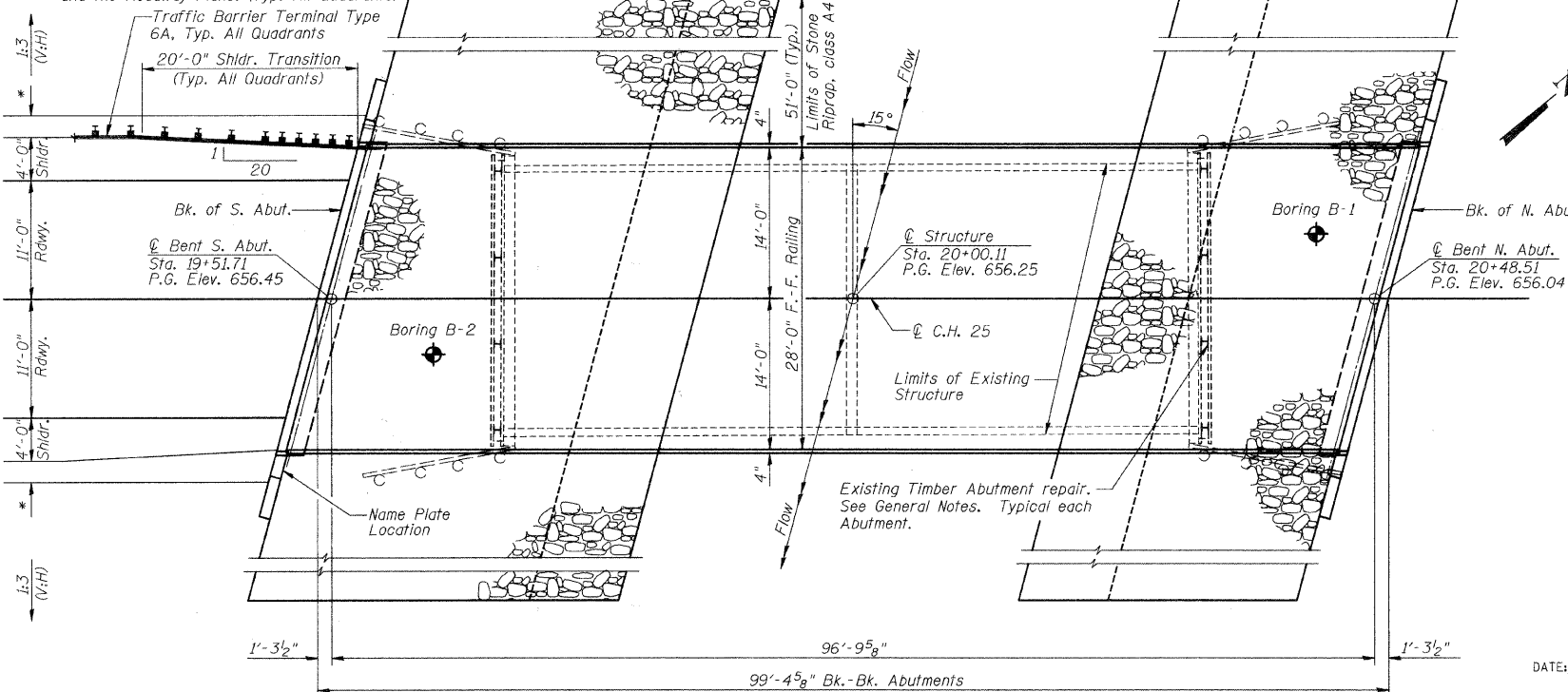
NAME PLATE
(See Std. 515001)

C PROFILE C.H. 25



ELEVATION
(See Std. 515001)

* Earth Shoulder Widening for Type I, Special (Tangent) Guardrail Terminal at all quadrants, see Std. 630301-05 and the Roadway Plans. (Typ. All Quadrants)



PLAN

DESIGN SPECIFICATIONS

2010 AASHTO LRFD - 5th Edition

LOADING HL-93

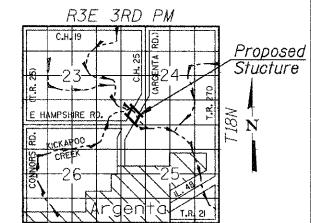
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS	PPC UNITS
f'c = 3,500 psi	f'ci = 5,000 p.s.i.
f'y = 60,000 psi (Reinforcement)	f'c = 6,000 p.s.i.
n = 9	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. (S₁) = 0.144 g
Design Spectral Acceleration at 0.2 sec. (S_s) = 0.253 g
Soil Site Class = D



WATERWAY INFORMATION

Drainage Area = 43.8 Sq. Mi. Existing Low Grade Elev. 654.67 @ Sta. 20+00.00
Proposed Low Grade Elev. 655.49 @ Sta. 22+00.00

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	3333	602	647	649.35	0.28	0.19	649.63	649.54
Base	100	5010	707	767	650.59	0.74	0.33	651.32	650.92
Overtopping									
Max. Calc.	500	6670	752	886	651.53	2.38	0.84	653.91	652.36

Low Beam Elev. (Prop.) = 652.04

DESIGN SCOUR ELEVATION TABLE

Design Scour Elev. (ft.)	South Abut.	North Abut.
	648.82	648.42



DATE: March 1, 2012
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 MJP	C.H. 25 OVER KICKAPOO CREEK SECTION 06-00213-00-BR MACON COUNTY STA. 20+00.11 PROP. STR. NO. 058-3394	Sheet No.
Revisions	Drawn REZ		1
	Checked GAC		of 7
	Approved KWB		URS Job No.
Prepared by: URS	345 East Ash Avenue Decatur, IL 62526		36431926