

BENCHMARK:
RR Spike in Power Pole Sta. 21+80.2, 22.5' Rt.
Elevation = 100.00

EXISTING STRUCTURE:

Single Span Precast Concrete Channel Beam Bridge with Concrete Curbs on Timber Abutments on Timber Piles with Timber Backwalls and Timber Wingwalls. 26'-0" O.-O. Deck. 30'-3" Bk.-Bk. Abuts. No Salvage. (SN 058-3053)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 54	05-00197-00-BR	MACON	11	8
FED. ROAD DIST. NO.		ILLINOIS PROJECT		

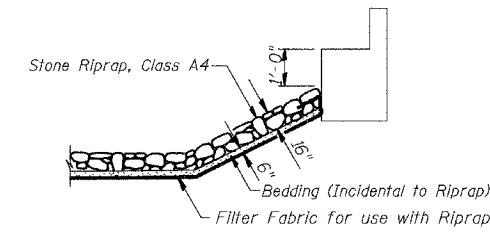
CONTRACT NO. 91344

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 AASHTO M-31 or M-322, Grade 60.
The Contractor shall drive one Steel Test Pile in a permanent location at the West Abutment as directed by the Engineer before ordering the remainder of piles.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
P.P.C Deck Beams (33" Depth)	Sq. Ft.	1732		1732
Concrete Structures	Cu. Yd.		21.3	21.3
Reinforcement Bars, Epoxy Coated	Pound		2540	2540
Furnishing Steel Piles HP10x42	Foot		319	319
Driving Steel Piles	Foot		319	319
Test Pile Steel HP10x42	Each		1	1
Channel Excavation	Cu. Yd.		194	194
Stone Riprap, Class A4	Sq. Yd.		843	843
Filter Fabric for use with Riprap	Sq. Yd.		843	843
Name Plates	Each		1	1
Steel Railing Type S1	Foot	145		145
Portland Cement Mortar Fairing Course	Foot	506		506
Waterproofing Membrane System	Sq. Yd.	192		192
Bituminous Concrete Surface Course, Superpave, Mixture C, N50	Ton	21.6		21.6
Controlled Low Strength Material	Cu. Yd.		16	16
Concrete Encasement	Cu. Yd.		3.4	3.4



STONE RIPRAP DETAIL

TRIBUTARY TO SOUTH FORK CREEK
BUILT 200., BY
MACON COUNTY
SECTION 05-00197-00-BR
C.H. 54 STA. 15+61.42
STR. NO. 058-3379 LOADING HS-20
AQUILLA TOLAND BRIDGE

NAME PLATE
(See Std. 515001)

DESIGN SPECIFICATIONS
2002 AASHTO

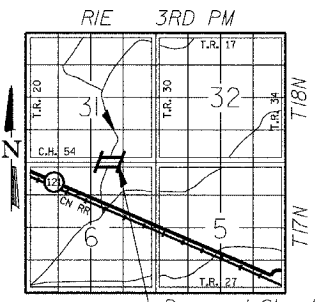
LOADING HS-20-44

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 = 4,000 p.s.i.
f'c = 5,000 p.s.i.
f's = 270,000 p.s.i.
f'si = 201,960 p.s.i.



LOCATION SKETCH

WATERWAY INFORMATION

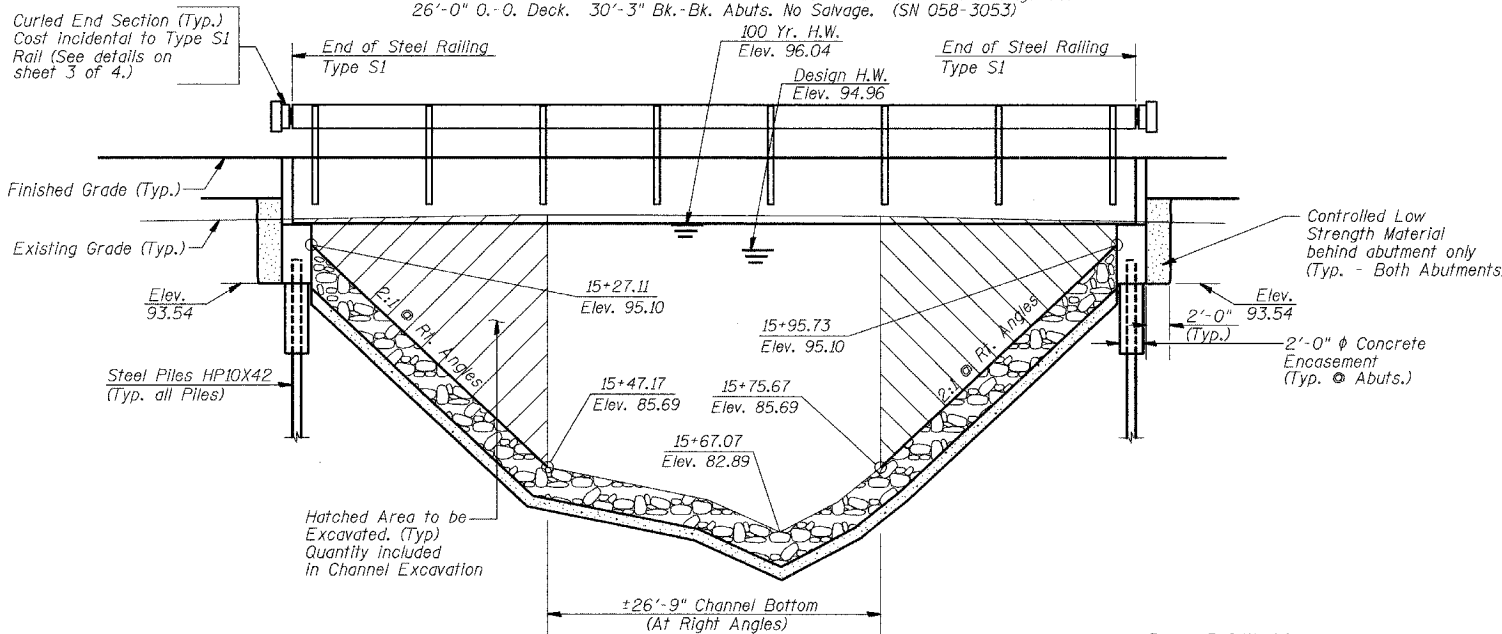
Drainage Area = 15.6 Sq. Mi. Existing Low Grade Elev. 94.79 @ Sta. 17+50.00
Proposed Low Grade Elev. 95.77 @ Sta. 18+50.00

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head-Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	15	1548	270	456	94.96	0.50*	0.03	95.46	94.99
Base	100	2523	270	528	96.04	0.19*	0.23*	96.23	96.27
Overtopping									
Max. Calc.	500	3328	---	528	96.81	---	0.31*	---	97.12

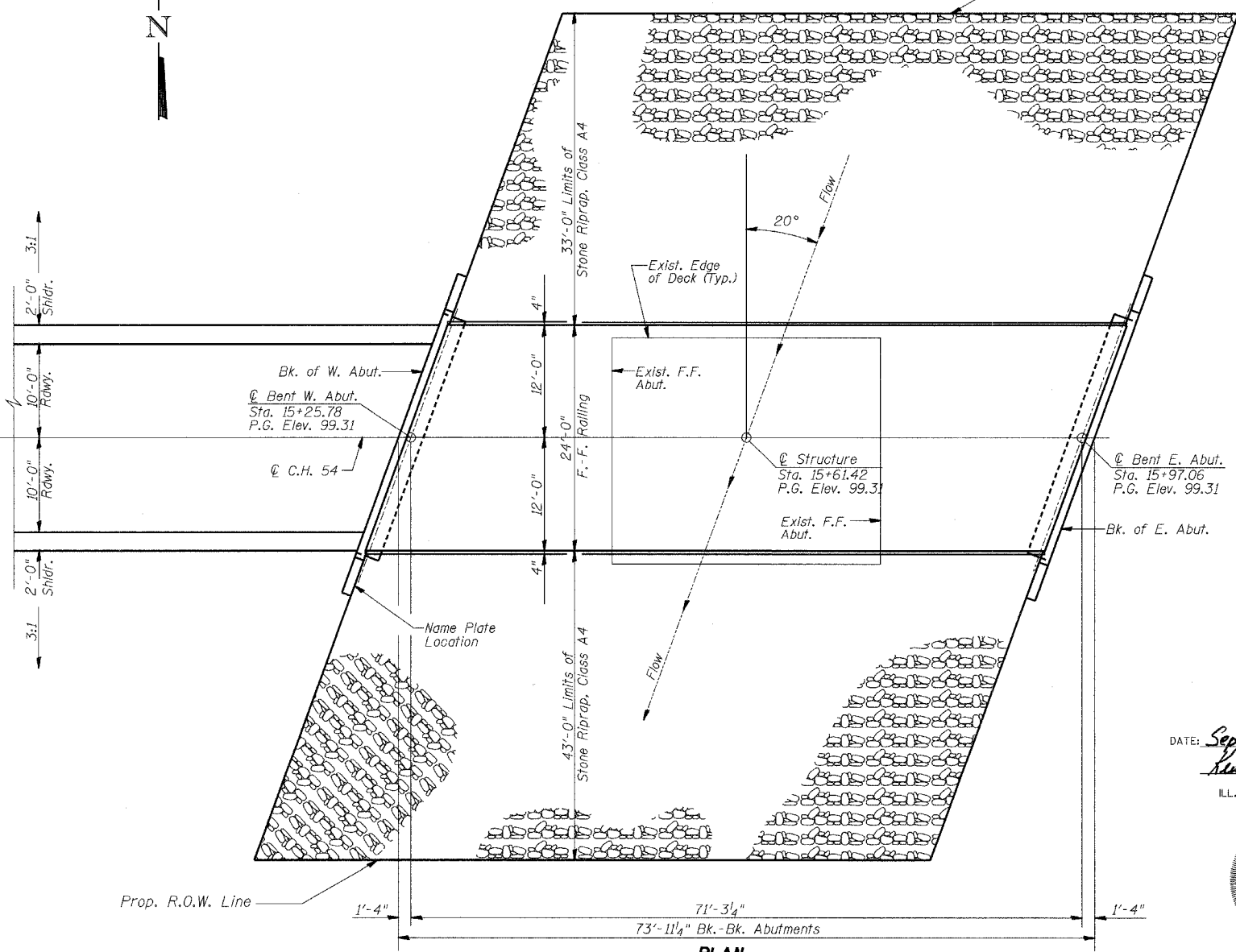
Low Beam Elev. (Prop.) = 96.10

* Over-the-Road Flow Occurs

EXISTING	15 Yr.: 78.8 Sq. Ft. over roadway	PROPOSED	15 Yr.: None
	100 Yr.: 412.5 Sq. Ft. over roadway		100 Yr.: 59.3 Sq. Ft. over roadway
			500 Yr.: 268.1 Sq. Ft. over roadway



ELEVATION



PLAN

DATE: Sept. 6, 2005
Keith W. Benting
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."



Exp 11/30/2006

GENERAL PLAN AND ELEVATION

Date	Designed MJP	C.H. 54 OVER DRAINAGE DITCH SECTION 05-00197-00-BR MACON COUNTY STA. 15+61.42 PROP. STR. NO. 058-3379	Sheet No.
Revisions	Drawn BKN		1
	Checked KWB		
	Approved KWB		
Prepared by:	URS 3040 North University Avenue Decatur, IL 62526		of 4 URS Job No. 36431470