

BENCHMARK:

R.R. Spike In power pole. Sta. 13+70.24, 28.2' Rt. Elev. 100.00

EXISTING STRUCTURE:

Single Span Steel Pony Truss Bridge with Concrete Deck on Closed Concrete Abutments.
18'-0" O.-O. of Deck. 101'-0" Bk.-Bk. Abutments

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 54	03-00177-00-BR	MACON	16	9
FED. ROAD DIST. NO.		ILLINOIS PROJECT	CONTRACT NO. 91317	

GENERAL NOTES

Layout of Riprap Slopes may be varied in the field to suit ground conditions as directed by the Engineer.

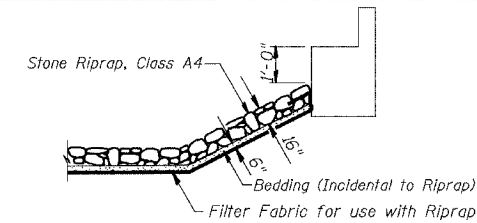
See Proposal for Boring Data.

Reinforcement Bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

The Contractor shall drive one Metal Shell Test Pile in a permanent location at the East Abutment, West Abutment and at Pier 1 as directed by the Engineer before ordering the remainder of piles.

The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number DS2004150 which was issued for the permanent construction.

The area between the bottom of the beams and the top of the caps shall be filled with non-shrink grout to prevent the beams from rocking.



STONE RIPRAP DETAIL

Controlled Low Strength Material behind abutment only (Typ. - Both Abutments)

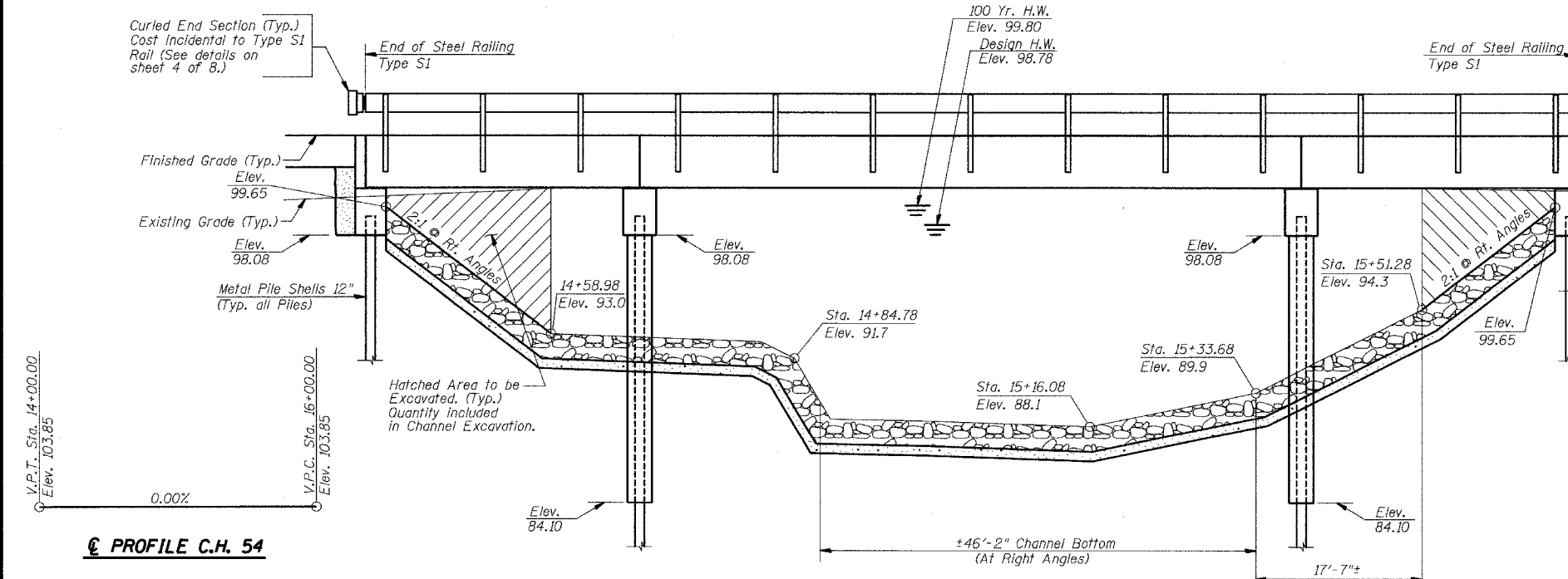
**SOUTH FORK CREEK
BUILT 200_, BY
MACON COUNTY
SECTION 03-00177-00-BR
C.H. 54 STA. 15+03.44
STR. NO. 058-3365 LOADING HS-20
GREEN BRIDGE**

NAME PLATE

(See Std. 515001)

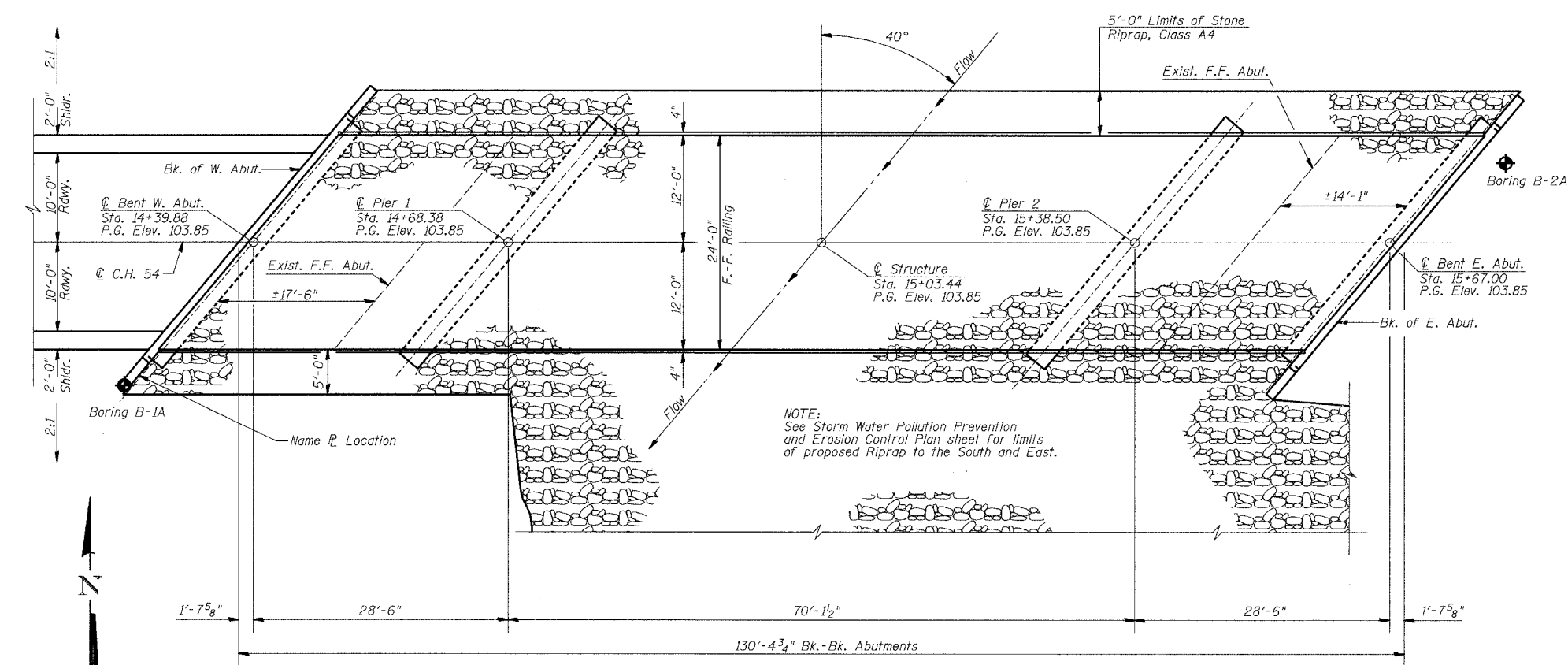
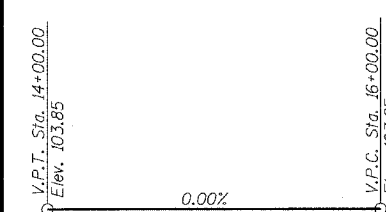
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.		534	534
Stone Riprap, Class A4	Sq. Yd.		1404	1404
Filter Fabric for use with Riprap	Sq. Yd.		1404	1404
Removal of Existing Structures	Each		1	1
Concrete Structures	Cu. Yd.		44.4	44.4
P.P.C. Deck Beams (33" Depth)	Sq. Ft.	3072		3072
Reinforcement Bars, Epoxy Coated	Pound		4760	4760
Steel Railing, Type S1	Foot	256		256
Furnishing Metal Pile Shells 12"	Foot		709	709
Driving and Filling Shells	Foot		709	709
Test Pile Metal Shells	Each		3	3
Concrete Encasement	Cu. Yd.		19.6	19.6
Name Plates	Each		1	1
Waterproofing Membrane System	Sq. Yd.	341		341
Portland Cement Mortar Fairing Course	Foot		896	896
Bituminous Concrete Surface Course, Superpave, Mixture "C", N50	Ton	49		49
Underwater Structure Excavation Protection - Location 1	Each		1	1
Underwater Structure Excavation Protection - Location 2	Each		1	1
Controlled Low Strength Material	Cu. Yd.		19	19



ELEVATION

PROFILE C.H. 54



PLAN

DESIGN SPECIFICATIONS

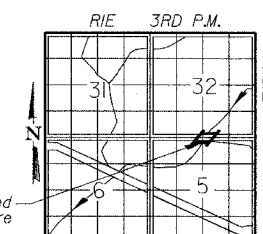
2002 AASHTO

LOADING HS20-44

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

DESIGN STRESSES

FIELD UNITS	PPC UNITS
f'c = 3,500 p.s.i.	f'ci = 4,000 p.s.i.
f'y = 60,000 p.s.i.	f'c = 5,000 p.s.i.
n = 9	f's = 270,000 p.s.i.
	f'si = 189,000 p.s.i.



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 25.6 Sq. Mi. Existing Low Grade Elev. 99.28 @ Sta. 11+00.00
Proposed Low Grade Elev. 99.28 @ Sta. 11+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E.	Head-Ft. Exist.	Prop.	Headwater El. Exist.	Prop.
Design	15	2588	587	641	98.78	0.22	0.20	99.00	98.98
Base	100	4238	660	736	99.80	0.63*	0.52*	100.42	100.31
Overtopping									
Max. Calc.	500	5625	698	788	100.35	0.73*	0.68*	101.08	101.02

Low Beam Elev. (Prop.) = 100.65

* Over-the-Road Flow Occurs
EXISTING
100 Yr.: 231.6 Sq. Ft. over roadway
500 Yr.: 456.5 Sq. Ft. over roadway
PROPOSED
100 Yr.: 165.0 Sq. Ft. over roadway
500 Yr.: 326.7 Sq. Ft. over roadway

THE ILLINOIS DEPARTMENT OF NATURAL RESOURCES - OFFICE OF WATER RESOURCES HAS ISSUED INFORMAL PERMIT #DS2004150 FOR THE CONSTRUCTION OF THE PROJECT.

DATE: December 10, 2004

George A. Conway
GEORGE A. CONWAY
ILL. STRUCTURAL NO. 4191

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 MJP	C.H. 54 OVER SOUTH FORK CREEK SECTION 03-00177-00-BR MACON COUNTY STA. 15+03.44 PROP. STR. NO. 058-3365	Sheet No.
Revisions	Drawn BKN		1
	Checked GAC		
	Approved KWB		
Prepared by:	URS 3040 North University Avenue Decatur, IL 62526		of 8 URS Job No. 36431205