ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 555 C.H. 19	03-00181-00-BR	MACON	13	10
FED. ROAD DIST. NO.		ILLINOIS	PROJECT: BRS 555(205)	

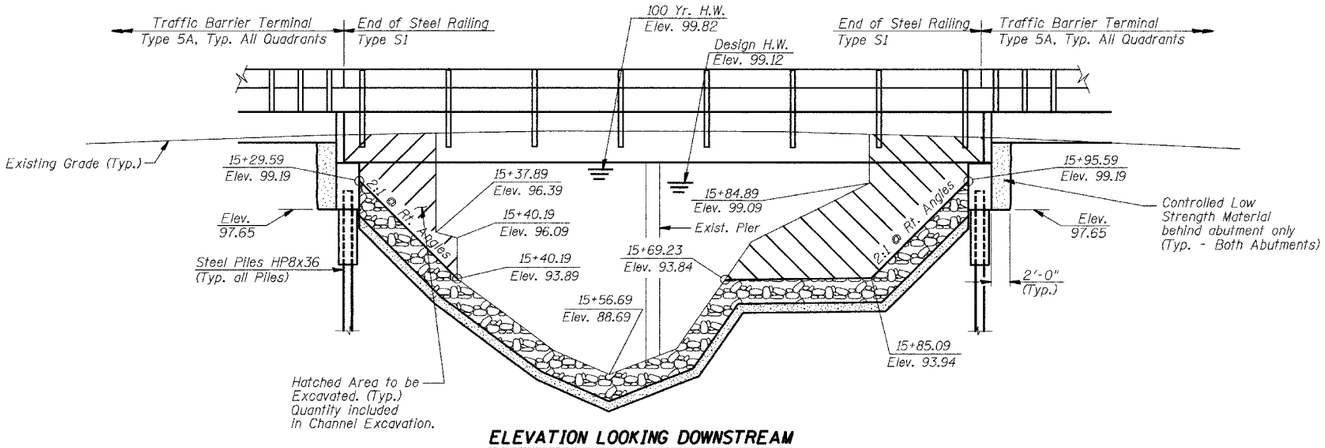
CONTRACT NO. 91342

BENCHMARK:

RR Spike In Power Pole Sta. 11+13.41, 27.9' Rt.
Elevation = 100.00

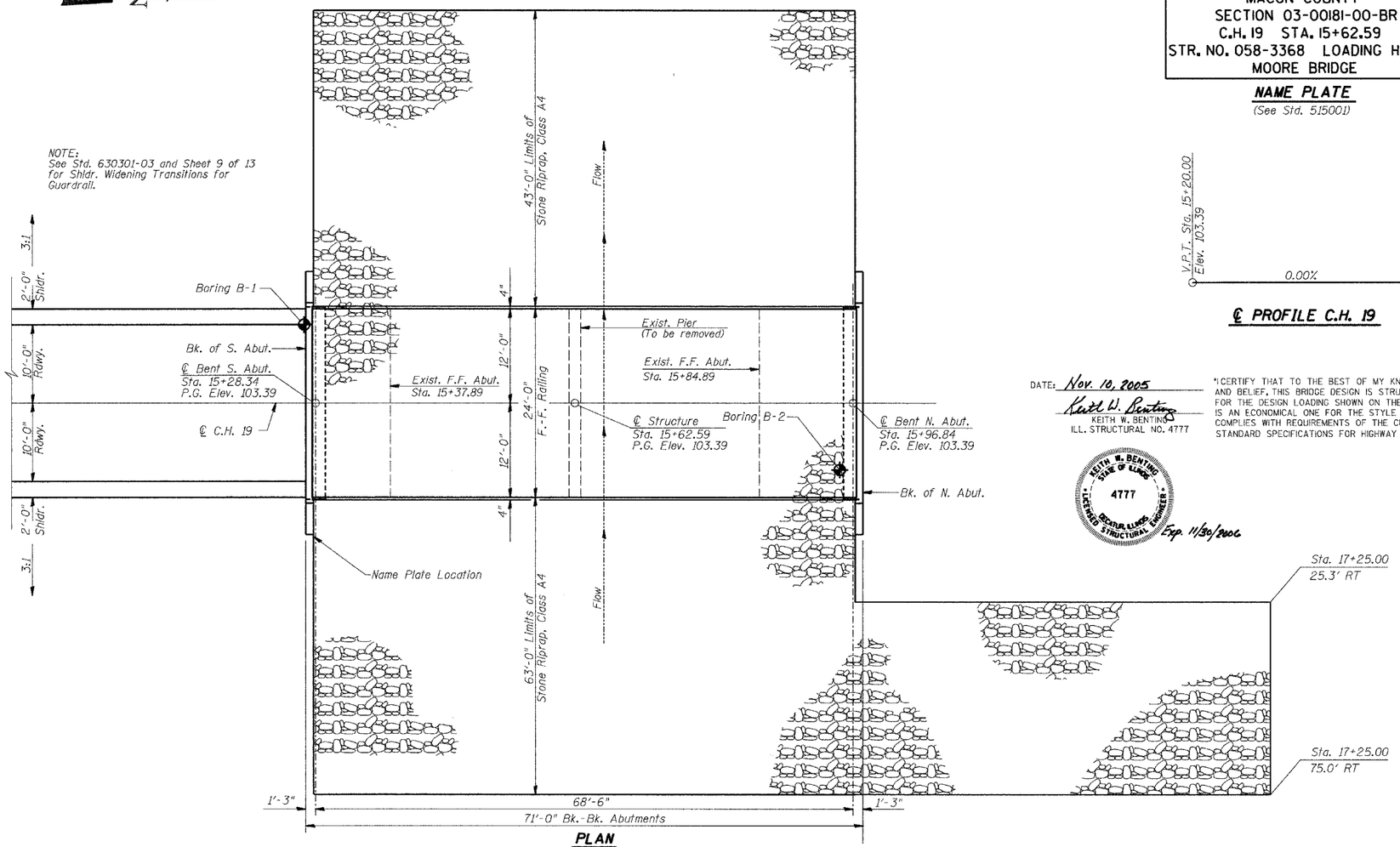
EXISTING STRUCTURE (SN 058-3026):

Two Span Prestressed Box Beam Superstructure on Closed Stone Abutments with Timber Wingwalls and Timber Pier.
21'-2" O.-O. Deck. 50'-0" Bk.-Bk. Abuts. No Salvage.



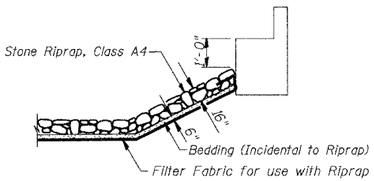
ELEVATION LOOKING DOWNSTREAM

NOTE:
See Std. 630301-03 and Sheet 9 of 13 for Shldr. Widening Transitions for Guardrail.



PLAN

℄ PROFILE C.H. 19



STONE RIPRAP DETAIL

WILLOW BRANCH
BUILT 200_. BY
MACON COUNTY
SECTION 03-00181-00-BR
C.H. 19 STA. 15+62.59
STR. NO. 058-3368 LOADING HS-20
MOORE BRIDGE

NAME PLATE

(See Std. 515001)

DATE: Nov. 10, 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'."

KEITH W. BENTING STATE OF ILLINOIS 4777 DECATUR, ILLINOIS LICENSED STRUCTURAL ENGINEER
Exp. 11/30/2006

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 South Abutment as directed by the Engineer before ordering the remainder of piles.

Excavation required for abutment construction shall be incidental to 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 (33" Depth)	Sq. Ft.	1664		1664
Concrete Structures	Cu. Yd.		19.6	19.6
Reinforcement Bars, Epoxy Coated	Pound		2320	2320
Furnishing Steel Piles HP8x36	Foot		247	247
Driving Steel Piles	Foot		247	247
Test Pile Steel HP8x36	Each		1	1
Channel Excavation	Cu. Yd.		484	484
Stone Riprap, Class A4	Sq. Yd.		1727	1727
Filter Fabric for use with Riprap	Sq. Yd.		1727	1727
Name Plates	Each		1	1
Steel Railing Type S1	Foot	139		139
Portland Cement Mortar Fairing Course	Foot	485		485
Waterproofing Membrane System	Sq. Yd.	185		185
Bituminous Concrete Surface Course, Superpave, Mixture C, N50	Ton	23		23
Controlled Low Strength Material	Cu. Yd.		14.5	14.5
Concrete Encasement	Cu. Yd.		3.4	3.4

DESIGN SPECIFICATIONS

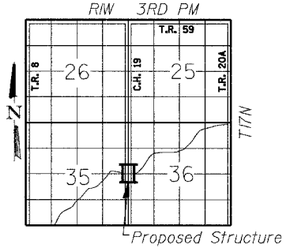
2002 AASHTO

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.
fy = 60,000 p.s.i.	f'c = 5,000 p.s.i.
n = 9	f's = 270,000 p.s.i.
	f'si = 201,960 p.s.i.



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 14.5 Sq. Mi. Existing Low Grade Elev. 98.62 @ Sta. 19+50.00
Proposed Low Grade Elev. 98.88 @ Sta. 20+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	20	1732	298	396	99.12	*0.34	*0.24	99.46	99.37
Base	100	2603	326	450	99.82	*0.23	*0.45	100.05	100.26
Overtopping									
Max. Calc.	500	3444	333	450	100.37	*0.09	*0.36	100.46	100.73

Low Beam Elev. (Prop.) = 100.19

* Over-the-Road Flow Occurs

EXISTING
20 Yr.: 209.2 Sq. Ft. over roadway
100 Yr.: 368.3 Sq. Ft. over roadway
500 Yr.: 539.9 Sq. Ft. over roadway

PROPOSED
20 Yr.: 53.0 Sq. Ft. over roadway
100 Yr.: 202.6 Sq. Ft. over roadway
500 Yr.: 313.3 Sq. Ft. over roadway

GENERAL PLAN AND ELEVATION

Date	Designed MJP	C.H. 19 OVER WILLOW BRANCH SECTION 03-00181-00-BR MACON COUNTY STA. 15+62.59 PROP. STR. NO. 058-3368	Sheet No. 1 of 4
Revisions	Drawn MJP		
	Checked KWB		
	Approved KWB		

Prepared by: URS 3040 North University Avenue Decatur, Il. 62526

URS Job No. 36431468