

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 28	*	**	24	6

PROJECT BRS-1741(103)  
 \* 03-00085-00-BR & 03-00126-00-BR  
 \*\* MACOUPIN COUNTY & MONTGOMERY COUNTY  
 Sheet 2 of 17

**TOTAL BILL OF MATERIAL**

Item	Super	Sub	Total
Channel Excavation		600	600
Stone Dumped Riprap, Class A4		693	693
Filter Fabric		863	863
Removal of Existing Structures			1
Structure Excavation		143	143
Concrete Superstructure	165.8		165.8
Concrete Structures		169.9	169.9
Furnishing and Erecting Precast Prestressed Concrete "I" Beams (36" Depth)	822.5		822.5
Reinforcement Bars, Epoxy Coated	30960	14800	45760
Steel Railing, Type S1		240	240
Furnishing Steel Piles HP 10x42		682	682
Driving Piles		682	682
Test Pile, Steel HP 10x42		2	2
Name Plates		1	1
Bridge Deck Grooving	507		507
Protective Coat	534		534
Underwater Structure Excavation Protection - Location 1		1	1
Underwater Structure Excavation Protection - Location 2		1	1

IDNR/DWR Permit D52005003 issued for the construction of this project

**WATERWAY INFORMATION**

Drainage Area = 26.7 Sq. Miles		Low Grade Elev. = 97.47		@ Sta. 7+00		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head-Fl.	Headwater El.
			Exist.	Prop.	Exist.	Prop.
Design	15	2225	516	760	92.8	93.5
Base	100	3422	596	848	93.6	94.4
Exist. Overtop, Greater than 500 Years						
Prop. Overtop, Greater than 500 Years						
Max. Calc.	500	4369	647	904	94.1	95.2

**DESIGN STRESSES**

**FIELD UNITS**

f'c = 3500 psi  
 fy = 60000 psi (Reinf.)

**PRECAST PRESTRESSED UNITS**

f'c = 6000 psi  
 f'ci = 5000 psi  
 f's = 270000 psi (1/2" low lax strands)  
 f'si = 201960 psi (1/2" low lax strands)

**GENERAL NOTES**

Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M-31 or M322, Grade 60.

The layout of the riprap slopedwall may be varied to suit conditions in the field as determined by the engineer.

The Contractor shall drive two (2) Steel HP 10x42 test piles in permanent locations. One at the East Abutment and one at Pier #1 as directed by the Engineer before ordering the remainder of piles.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

All construction joints shall be bonded.

**DESIGN SPECIFICATIONS**

2002 A.A.S.H.T.O. Specifications.

**LOADING HS 20-44**

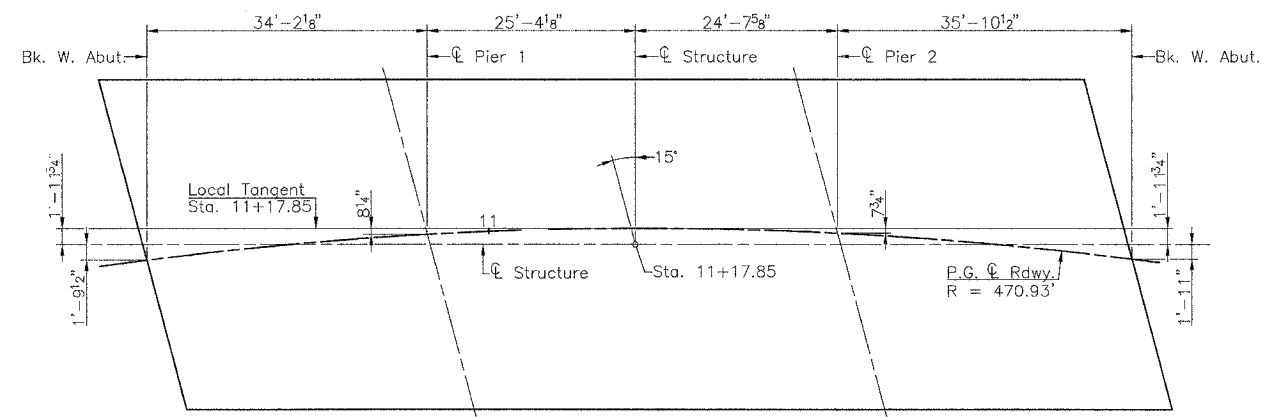
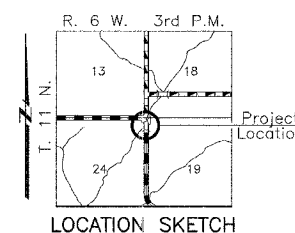
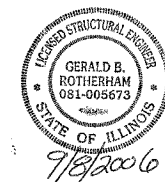
Allow 50#/sq. ft. for future wearing surface.

**SEISMIC DATA**

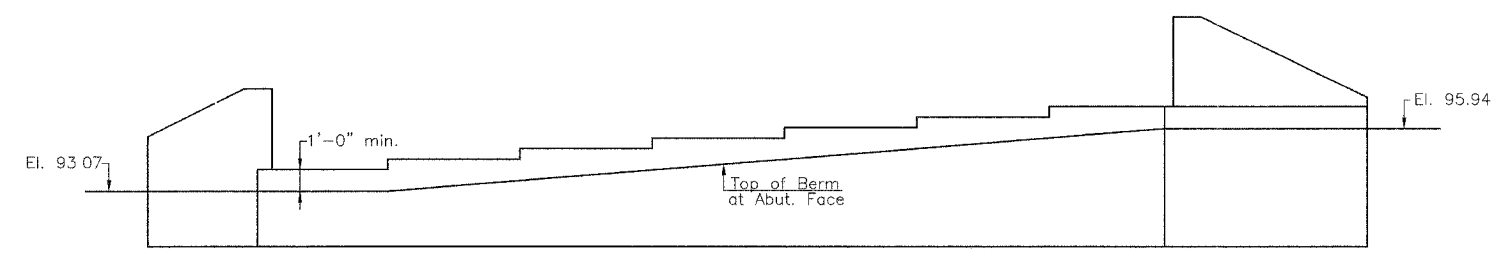
Seismic Performance Category (SPC) = A  
 Bedrock Acceleration Coefficient (A) = 0.065 g  
 Site Coefficient (s) = 1.5

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 "A.A.S.H.T.O. Standard Specifications for Highway Bridges".

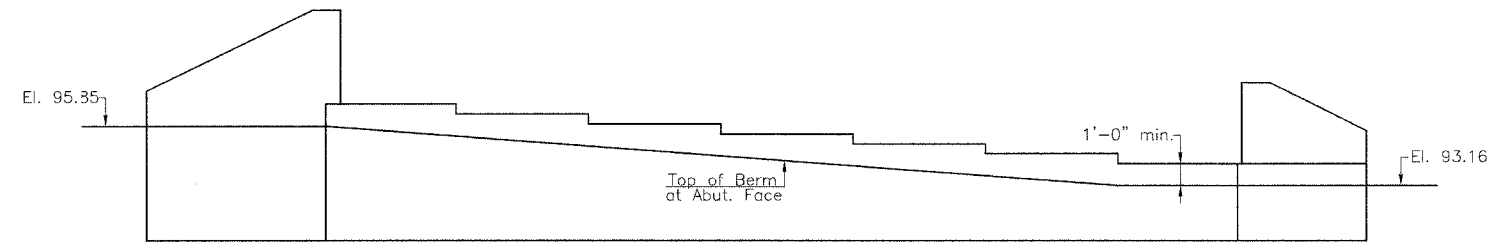
*Gerald B. Rotherham*  
 Expiration Date 11/30/2006



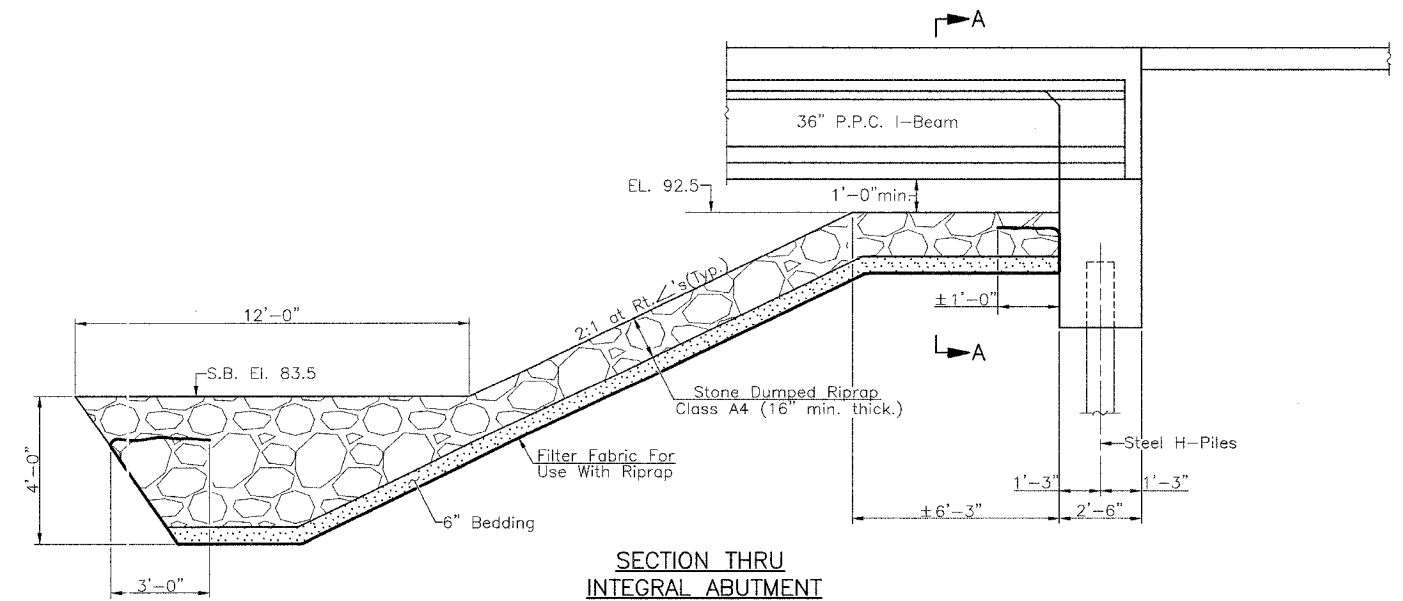
OFFSET SKETCH  
 (Dimensions Along Local Tangent)



SECTION A-A  
 (West Abutment, Looking West)



SECTION A-A  
 (East Abutment, Looking East)



SECTION THRU  
 INTEGRAL ABUTMENT

MACOUPIN CREEK  
 BUILT 200 BY  
 MACOUPIN COUNTY  
 SECTION 03-00085-00-BR  
 STA. 11+17.85  
 STR. NO. 059-3327 LOADING HS20  
**NAME PLATE**  
 (Standard 515001)