

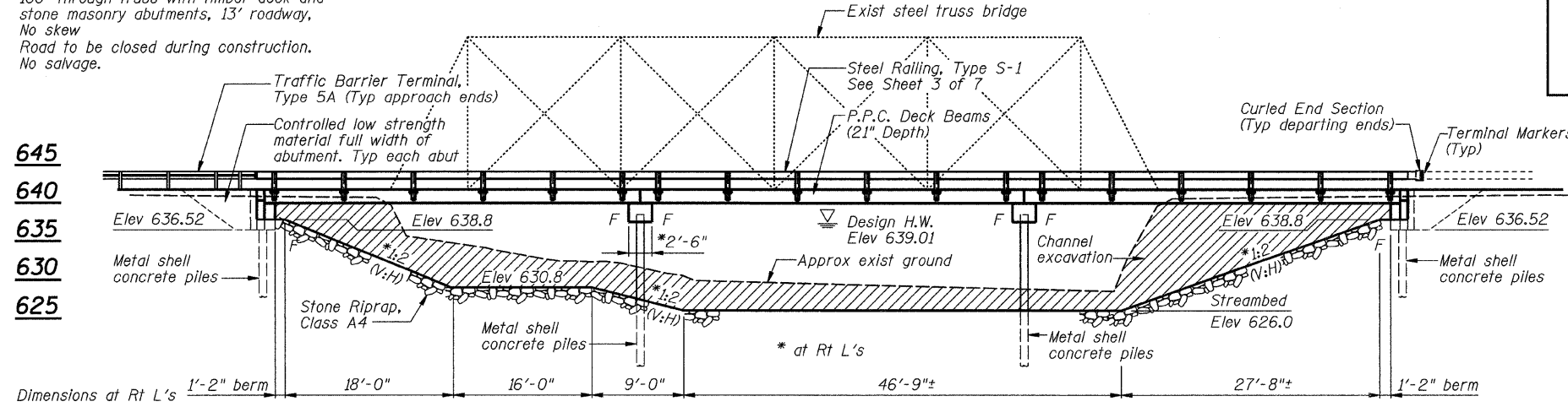
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 23		MACON	22	6
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	
			05-04163-00-BR	

Bench Mark 5129-1:

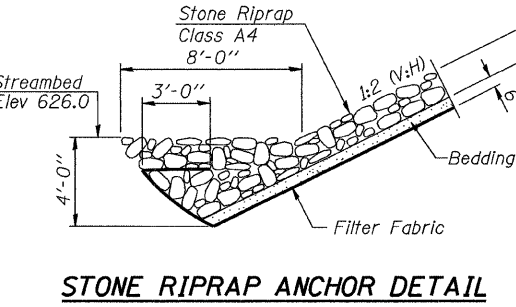
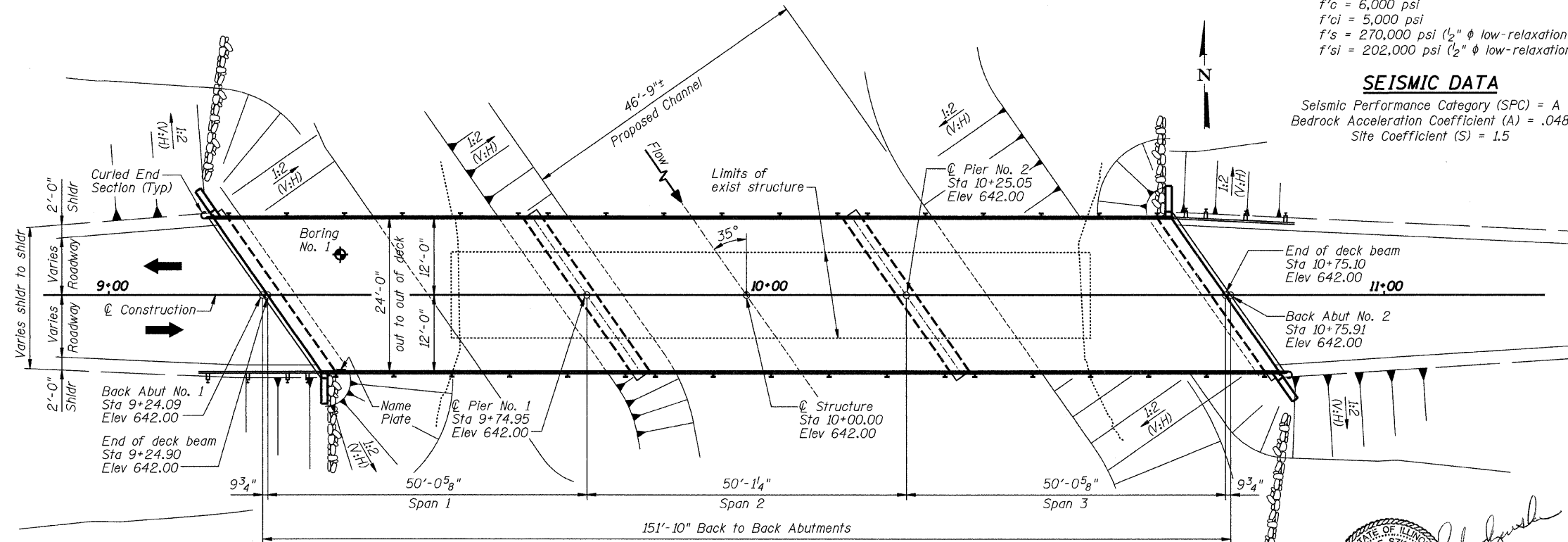
Railroad spike set in S. face of powerpole, 75' E. of centerline of Friends Creek north side of TR 23 Elev 642.40

Existing Structure:

100' through truss with timber deck and stone masonry abutments, 13' roadway. No skew. Road to be closed during construction. No salvage.



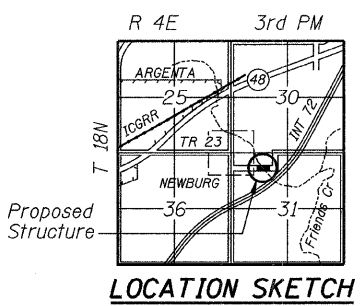
ELEVATION



WATERWAY INFORMATION

Drainage Area = 114.1 sq mi Low Grade Elev. 642.00 - Sta. 10+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.	Exist.	Prop.
Design	30	5730	945	1054	639.01	0.13	0.05	639.14	639.06	
Base	100	7699	990	1165	640.01	0.37	0.13	640.38	640.14	
Max. Calc.	500	10083	990	1194	640.92	0.86	0.42	641.78	641.34	



**FRIENDS CREEK
BUILT 20 BY
FRIENDS CREEK ROAD DISTRICT
MACON COUNTY
SECTION 05-04163-00-BR
STA 10+00.00
STR. NO. 058-3383 LOADING HS20**

NAME PLATE
See Std. 515001

LOADING HS20
Allow 50 lb/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2002 AASHTO 17th Edition

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)

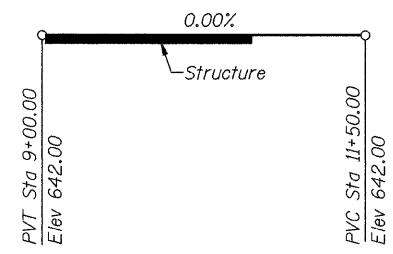
PRECAST PRESTRESSED UNITS
f'c = 6,000 psi
f'ci = 5,000 psi
f's = 270,000 psi (1/2" φ low-relaxation strands)
f'si = 202,000 psi (1/2" φ low-relaxation strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = .048
Site Coefficient (S) = 1.5

GENERAL NOTES:

For Soil Boring Data see Special Provisions.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See BDE Special Provisions
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
The top surface of the beams shall be finished according to Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
All construction joints shall be bonded.
See Roadway Plans for channel excavation limits and quantities.
See Roadway Plans for additional riprap limits and quantities.



CONSTRUCTION PROFILE

TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Removal of Existing Structures	Each	1
Structure Excavation	Cu Yd	70
Concrete Structures	Cu Yd	39.9
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq Ft	3600
Reinforcement Bars, Epoxy Coated	Pound	3710
Steel Railing, Type S-1	Foot	300
Furnishing Metal Pile Shells 14"	Foot	585
Driving Piles	Foot	585
Test Pile Metal Shells	Each	2
Name Plates	Each	1
Terminal Marker - Direct Applied	Each	4
Controlled Low-Strength Material	Cu Yd	48

Professional Engineer Seal for Thomas E. Sabrowski, No. 4941, State of Illinois, Structural Engineering.

DATE: 2/20/08
EXP 11/30/08

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 ECONOMIC ONE FOR THE STYLE OF STRUCTURE AND COMPLIES WITH THE REQUIREMENTS OF THE CURRENT "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."

GENERAL PLAN AND ELEVATION

SECTION 05-04163-00-BR		FRIENDS CREEK ROAD DISTRICT	
MACON		SN 058-3383 COUNTY	
REVISIONS	NO.	DATE	INITIALS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DRAWN BY	DATE
R KING	11/07
CHECKED BY	DATE
JMB	11/07
BOOK NUMBER	314
PROJECT NO.	5129
SHEET NO.	

HOMER L. CHASTAIN & ASSOCIATES, LLP
CONSULTING ENGINEERS
184-001997

DECATUR CHICAGO
(317) 422-8544 (773) 714-0050
ROCKFORD
(815) 489-0050