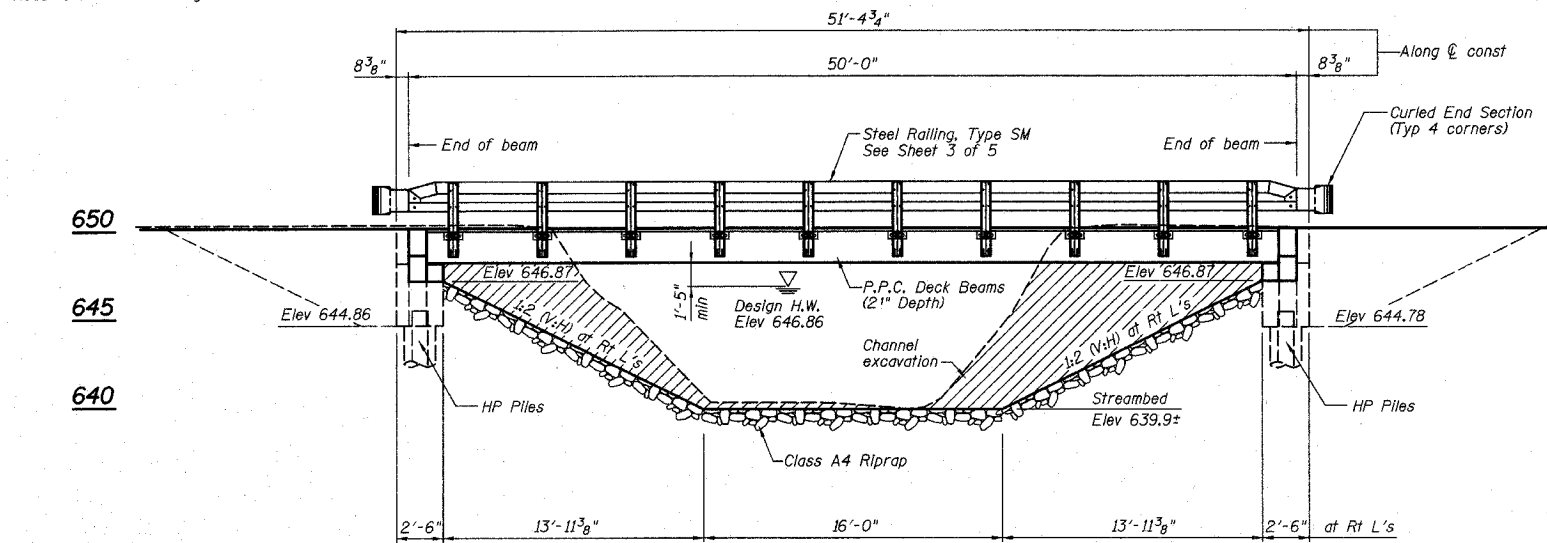


Bench Mark: BM 4817-1
Elev 658.00

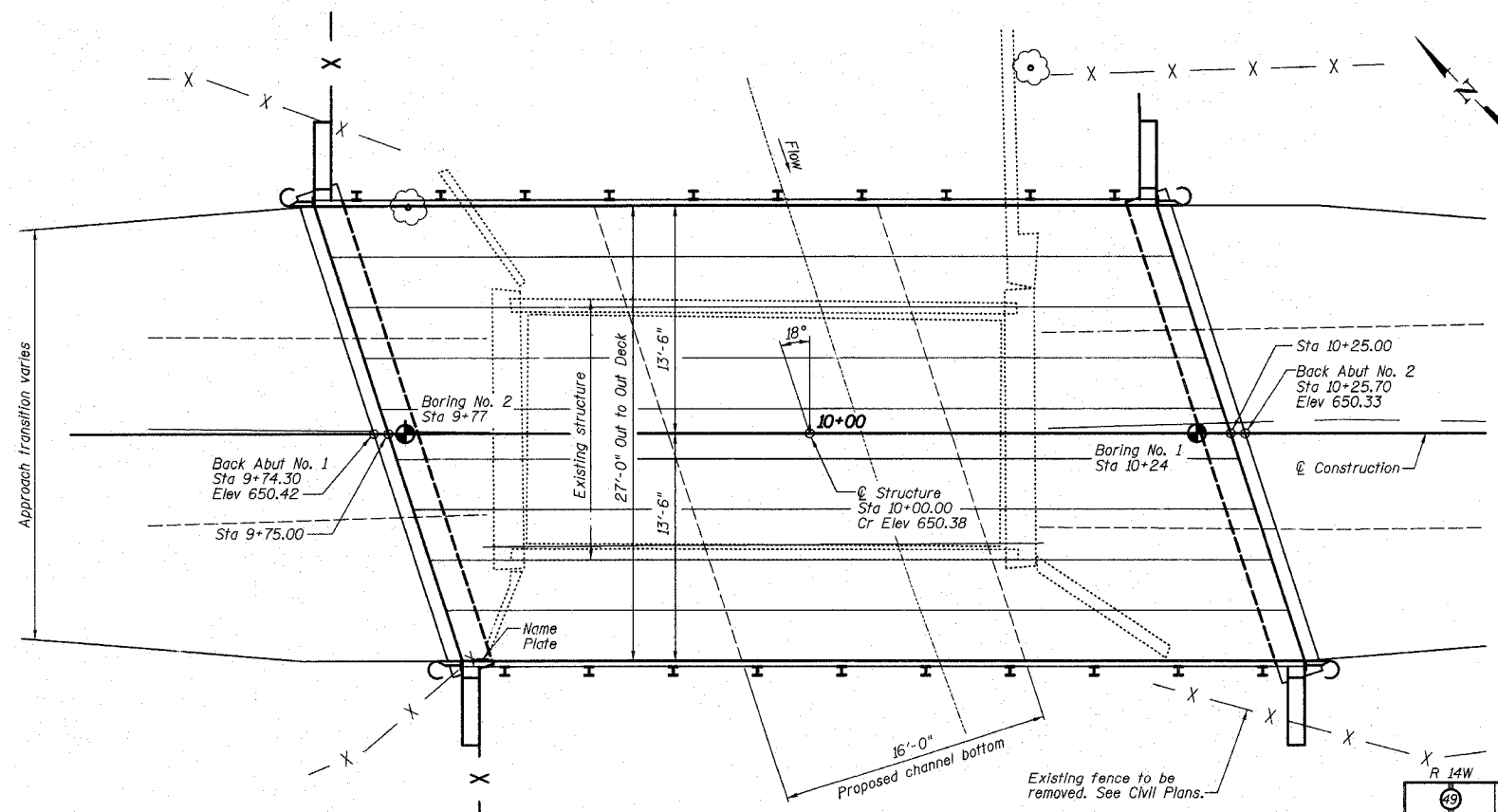
Existing Structure:
Two span steel stringer bridge with closed abutments
on spread footings. Remove and replace existing structure.
Road to be closed during construction.

Sheet No 1
of 5 Sheets

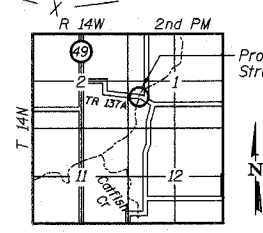
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 137A	*	EDGAR	18	6
FEDERAL DIST. NO.	LINKS	PROJECT		



ELEVATION



PLAN



LOCATION SKETCH

TRIBUTARY TO CATFISH CREEK
BUILT 20 BY
EMBARASS ROAD DISTRICT
EDGAR COUNTY
SECTION 89-05126-00-BR
STA. 10+00.00
STR. NO. 023-4424 LOADING HS20

NAME PLATE
See Std. 515001

DESIGN SPECIFICATIONS
2002 AASHTO 17th Edition

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

DESIGN STRESSES

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

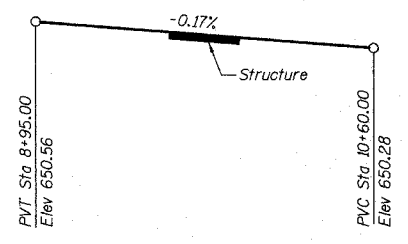
PRECAST PRESTRESSED UNITS
f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (1/2" φ stress relieved strands)
f'si = 202,000 psi (1/2" φ stress relieved strands)

SEISMIC DATA

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

GENERAL NOTES

For Boring Data see Special Provisions.
Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322 Grade 60.
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
See Roadway Plans for Riprap Details.
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 one (1) test pile in a permanent location at Abutment No. 1 as directed by the Engineer before ordering the remainder of piles.
All Construction joints shall be bonded.
See Roadway Plans for channel excavation limits and quantities.



CONSTRUCTION PROFILE

WATERWAY INFORMATION

Drainage Area = 8.0 sq mi Low Grade Elev. = 650.27 @ Sta 10+66

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	15	758	160.4	207.4	646.86	0.23	0.12	647.09	646.98	
Base	100	1156	186.9	244.7	647.71	0.45	0.20	648.16	647.91	
Max Calc	500	1462	201.3	263.6	648.17	0.66	0.29	648.83	648.46	

TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Removal of Existing Structures	Each	1
Structure Excavation	Cu Yd	111
Channel Excavation	Cu Yd	205
Concrete Structures	Cu Yd	26.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq Ft	1350
Reinforcement Bars, Epoxy Coated	Pound	2060
Steel Railing, Type SM	LIn Ft	100
Furnishing Steel HP 10x42 Piles	Foot	189
Driving Steel Piles	Foot	189
Test Pile Steel HP 10x42	Each	1
Name Plates	Each	1



Cory W. Chamberlain
DATE: 04/29/05
EXP 11/30/06

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 THE REQUIREMENTS OF THE CURRENT "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."

GENERAL PLAN AND ELEVATION

<table border="1"> <thead> <tr> <th>REVISIONS</th> <th>No.</th> <th>DATE</th> <th>INITIALS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS	No.	DATE	INITIALS																																													<p>TR 137A OVER TRIBUTARY OF CATFISH CREEK</p> <p>TR 137A SEC 89-05126-00-BR SN 023-4424</p> <p>EDGAR COUNTY</p> <p>HOMER L. CHASTAIN & ASSOCIATES, LLP CONSULTING ENGINEERS 184-001397</p>	<p>DRAWN BY DATE R King 11/04</p> <p>CHECKED BY DATE JME 11/04</p> <p>DATE BY DATE CWC 11/04</p> <p>BOOK NUMBER 469</p> <p>PROJECT NO. 4817</p> <p>SHEET NO.</p>
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