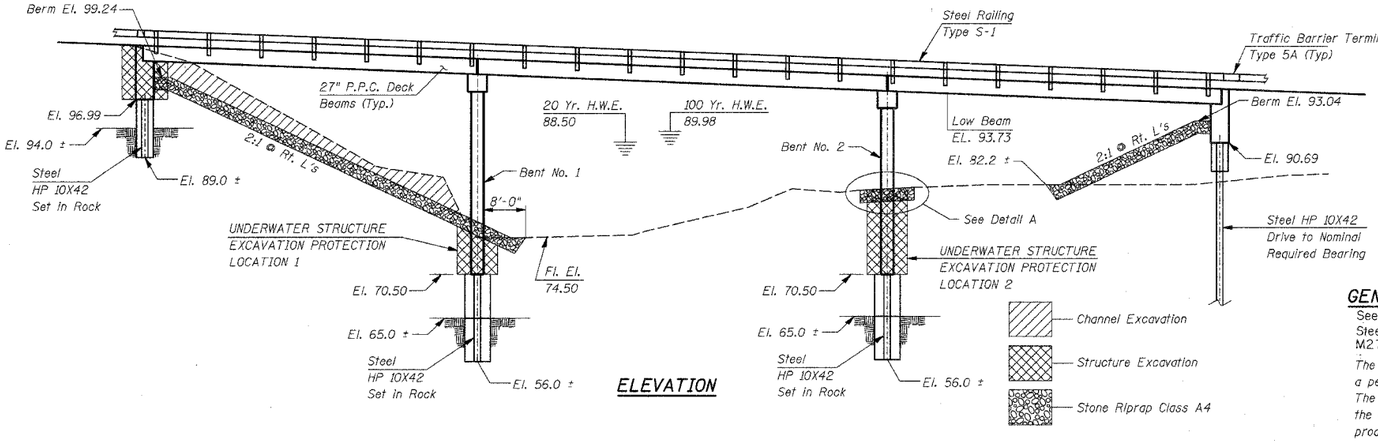
CONTRACT NO. 95498

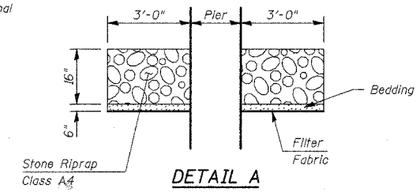
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 7	05-00259-00-BR	SHELBY	19	12
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	
			SHEET 1 of 8	

EXISTING STRUCTURE : S.N. 087-3339, Three Span Bridge with Asphalt Deck supported by Steel I-Beams with Steel Railings, Timber Piers, Timber Abutment with Timber Wingwalls on the east end, and Concrete Abutment on the west end. Length = 138', Width = 19'

BM #2 - Chiseled "□" in iron beam at northwest corner of existing bridge



ELEVATION



DETAIL A

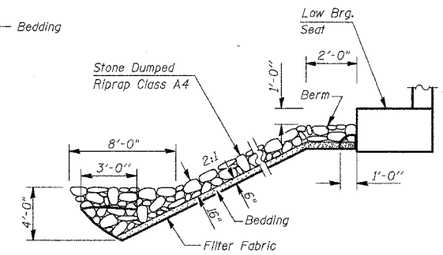
GENERAL NOTES

See Proposal for Boring Data

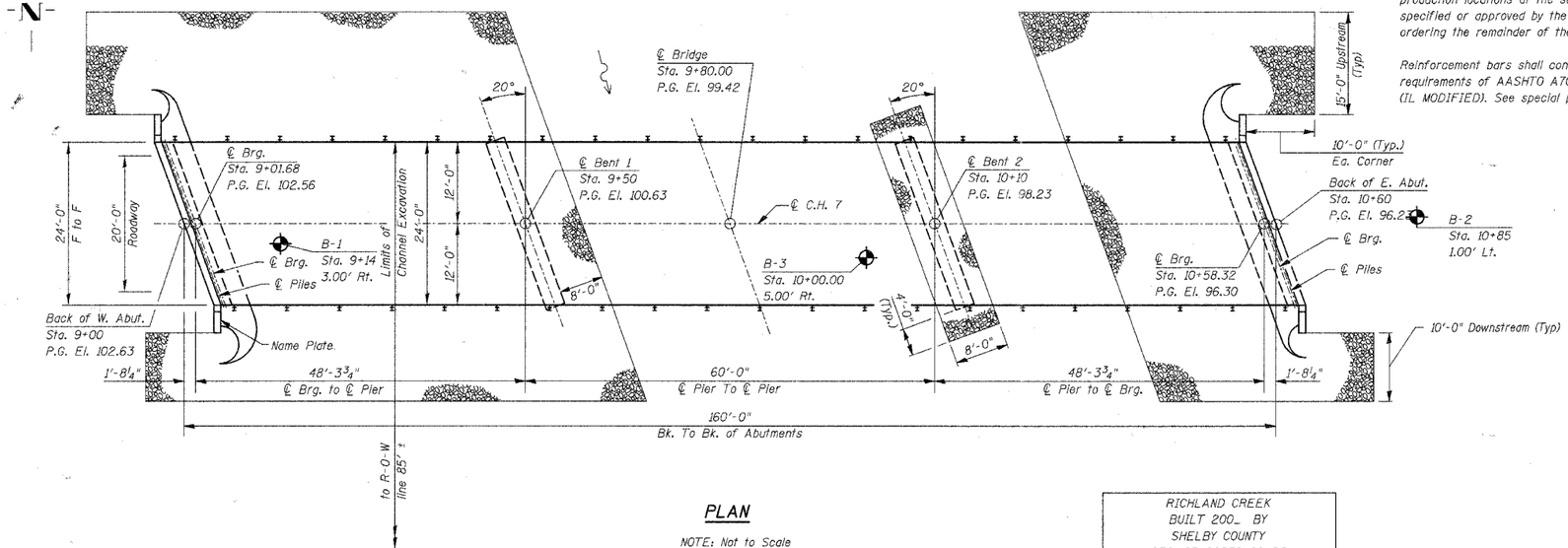
Steel H-Piles shall be according to AASHTO M270. **Grade 50**.

The Contractor shall drive one Test Pile at a permanent location in the East Abutment. The Test Pile shall be driven to 110% of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of the piles.

Reinforcement bars shall conform to the requirements of AASHTO A706 Grade 60 (IL MODIFIED). See special provisions



STONE RIPRAP ANCHOR DETAIL



PLAN

NOTE: Not to Scale

RICHLAND CREEK
BUILT 200_ BY
SHELBY COUNTY
SEC. 05-00259-00-BR
PROJECT NO. BROS-173 ( )
C.H. 7 STA. 9+80.00
STR. NO. 087-3550 LOADING HS 20

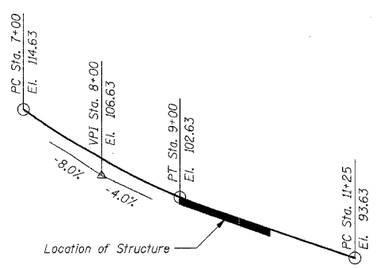
NAME PLATE

(See Std. 515001)

BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.		185	185
Stone Riprap, Class A4	Ton		465	465
Filter Fabric	Sq. Yd.		609	609
Removal Of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		151	151
Concrete Structures	Cu. Yd.		124.7	124.7
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	3,785		3,785
Reinforcement Bars	Pound		9,650	9,650
Steel Railing, Type S1	Foot	320		320
Furnishing Steel Piles HP 10X42	Foot		647	647
Driving Piles	Foot		72	72
Pile Shoes	Each		4	4
Test Pile Steel HP 10x42	Each		1	1
Pipe Underdrain for Structures, 6"	Foot		95	95
Setting Piles In Rock	Each		18	18
Concrete Encasement	Cu. Yd.		11.9	11.8
Name Plates	Each	1		1
Underwater Structure Excavation Protection, Location 1	Each		1	1
Underwater Structure Excavation Protection, Location 2	Each		1	1

Revised 6-1-07



PROFILE GRADE

DESIGN STRESSES

Precast Unit	Cast-in-Place Unit
f'c = 5,000 psi	f'c = 3500 psi
f'ci = 4000 psi	f's = 60,000 psi
f's = 270,000 psi	n = 9
f'si = 189,000 psi	

LOADING HS 20

DESIGN SPECIFICATION:
AASHTO 2002 Standard Specifications for Highway Bridges.

FUTURE WEARING SURFACE: 50 lb/Sq. Ft.

WATERWAY INFORMATION

Drainage Area	30.35	Sq.Mi.
Required Opening (20yr.)	1148	Sq.Ft.
Provided Opening	1148	Sq.Ft.
Present Opening	1022	Sq.Ft.
20yr. Discharge	3981	cfs
100yr. Discharge	5804	cfs
Created Head at Bridge (100yr.)	<1.0	Ft.
Created Head 1000' Upstream (100yr.)	<0.5	Ft.
20yr. H.W.E.	88.50	Ft.
100yr. H.W.E.	89.98	Ft.

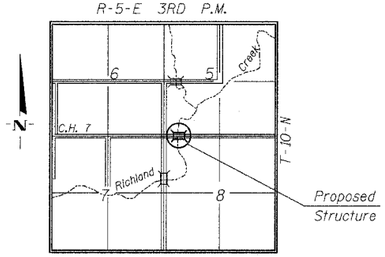
STATE OF ILLINOIS
DAVID BOOHER 4775
SPRINGFIELD, ILL.
LICENSED STRUCTURAL ENGINEER

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.

1-30-07

David Booher, Illinois S.E. 080-04775 — Date

Expires 11-30-2008



LOCATION SKETCH

GENERAL PLAN & ELEVATION
C.H. 7 OVER RICHLAND CREEK
SEC. 05-00259-00-BR
SHELBY COUNTY
S.N. 087-3550
STA. 9+80

ie consultants

DESIGNED: C.M.V. CHECKED: D.R.B.

DRAWN: T.H.W. DATE: DECEMBER 2006