

CONTRACT NO. 95528			
T.R. NO.	SECTION	COUNTY	TOTAL SHEETS
437	04-07120-00-BR	SHELBY	17
STA. 51+00		TO STA. 63+50	
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			1726
Stone Riprap, Class A4	Ton			540
Filter Fabric	Sq. Yd.			670
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.			14
Concrete Structures	Cu. Yd.		122.6	122.6
Concrete Encasement	Cu. Yd.		18.6	18.6
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	4324		4324
Reinforcement Bars	Pound		9190	9190
Steel Railing, Type S-1	Foot	364		364
Furnishing Steel Piles HP 10x42	Foot		532	532
Setting Piles in Rock	Each		20	20
Name Plates	Each	1		1
Underwater Structure Excavation Protection - Location 1 (Pier 1)	Each			1
Underwater Structure Excavation Protection - Location 2 (Pier 2)	Each			1

WATERWAY INFORMATION

Drainage Area = 91.3 Sq. Mi.		Low Grade Elev. = 540.46		@ Sta. 63+00					
Flood	Freq. Yr.	0 C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	15	7982	1112	1622	542.2	0.3	0.6	542.5	542.8
Base	100	12652	1112	1725	542.8	0.4	0.7	543.2	543.5
Exist. Overtop.									
Prop. Overtop.									
Max. Calc.	500	16482	1112	1796	543.3	0.4	0.8	543.7	544.1

DESIGN STRESSES

FIELD UNITS	PRECAST PRESTRESSED UNITS
$f_c = 1400$ psi	$f'_c = 5000$ psi
$f_s = 24000$ psi	$f'_{ci} = 4000$ psi
	$f'_s = 270000$ psi
	$f'_{si} = 201960$ psi

1/2" Strands

GENERAL NOTES

See Proposal for Boring Data.
 Reinforcement bars shall conform to the requirements of ASTM A 706, GR 60 (IL Modified). See Special Provisions.
 The layout of the riprap sloped wall may be varied to suit conditions in the field as determined by the Engineer.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications.
LOADING HS 20-44
 Allow 50#/sq. ft. for future wearing surface.

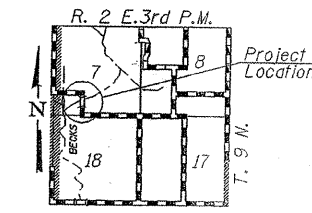
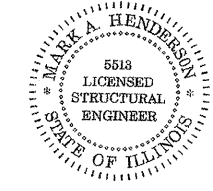
I certify that to the best of my knowledge, information and belief, this bridge is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "A.A.S.H.T.O. Standard Specifications For Highway Bridges".

Mark A. Henderson 10/23/07
 Expiration Date 11/30/2008

GENERAL PLAN & ELEVATION
T.R. 437 OVER BECKS CREEK
SECTION 04-07120-00-BR
SHELBY COUNTY

BECKS CREEK
 BUILT 200 BY
 SHELBY COUNTY
 SECTION 04-07120-00-BR
 STA. 55+57.94
 PROJECT BR05-173(112)
 STR. NO. 087-3546 LOADING HS20

NAME PLATE
 (Standard 515001)



LOCATION SKETCH

PLOT DATE * DATES
 FILE NAME * FILE#