

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			396
Stone Dumped Riprap, Class A4	Ton		569	569
Filter Fabric	Sq. Yd.		871	871
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		106	106
Concrete Structures	Cu. Yd.		48.2	48.2
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1970		1970
Reinforcement Bars	Pound		6160	6160
Steel Railing, Type S-1	Foot	144		144
Furnishing Metal Shell Piles 12"x0.250"	Foot		456	456
Furnishing Metal Shell Piles 14"x0.250"	Foot		526	526
Driving Piles	Foot		982	982
Test Pile Metal Shells	Each			2
Name Plates	Each		1	1

WATERWAY INFORMATION

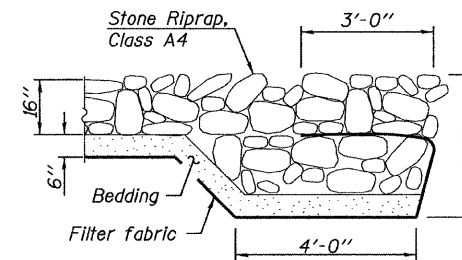
Drainage Area = 29.52 Sq. Mi. Pr. Low Grade Elev. 516.20 Sta. 6+35

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.	Head - ft.		Headwater EL.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	20	2603	314	425	516.0	1.2	0.5	517.2	516.5
Base	100	3831	329	449	516.4	0.9	0.7	517.3	517.1
Exist. Overtop.	12	2340							
Prop. Overtop.	16.4	2540							
Max. Calc.	500	5043	340	467	516.7	0.8	0.7	517.5	517.4

Construction Permits: The Requirements of the IDNR - Office of Water Resources have been fulfilled in accordance with Statewide Permit No. 2.

Design Scour Elevation Table

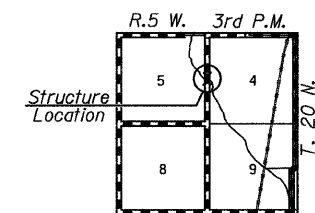
N. Abutment	S. Abutment	Pier 1	Pier 2
512.9	512.9	502.1	502.1



SECTION A-A

PIKE CREEK
BUILT 20 BY
ROAD DISTRICT NO. 10
MENARD COUNTY
SECTION 08-10110-00-BR
STR. NO. 065-3122 LOADING HL-93

NAME PLATE
(Standard 51500)



LOCATION SKETCH

DESIGN STRESSES

FIELD UNITS

$f'_c = 3500$ psi
 $f_y = 60000$ psi
(Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 6000$ psi
 $f'_ci = 5000$ psi
 $f_{pu} = 270000$ psi ($\frac{1}{2}$ " low lax strands)
 $f_{pbt} = 201960$ psi ($\frac{1}{2}$ " low lax strands)

GENERAL NOTES

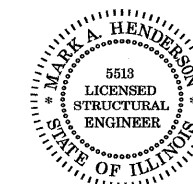
See Proposal for Boring Data.
Reinforcement bars shall conform to the requirements of ASTM A706, Grade 60. See Special Provisions.
The layout of the riprap slopewall may be varied to suit conditions in the field as determined by the Engineer.
The contractor shall drive one test pile in a permanent location at the South Abutment and at Pier 2 as directed by the Engineer in the field prior to ordering the remainder of piles.
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications, 4th Edition with 2008 Interims.

LOADING HL-93

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



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".

Mark A. Henderson 10/29/09
Expiration Date 11/30/2010

FILE NAME =	USER NAME = #USER#	DESIGNED - MAH	REVISED -	<p>Allen Henderson & Associates, Inc. Civil and Structural Engineers Springfield, IL 62703 Phone: (217)544-8033 IL Design Firm No. 184-001907</p>	<p>GENERAL PLAN & ELEVATION</p> <p>SCALE: NONE SHEET NO. 5 OF 17 SHEETS</p>			T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#	DRAWN - MJS	REVISED -	166					08-10110-00-BR	MENARD	17	5	
PLOT SCALE = #SCALE#	CHECKED -	REVISED -	CONTRACT NO. 93510			FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT				
PLOT DATE = #DATE#	DATE -	REVISED -										