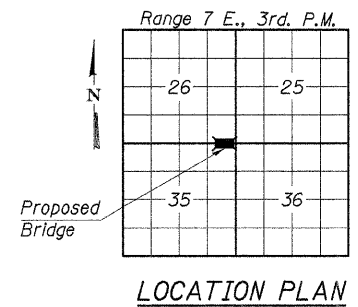


ELEVATION

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	653.3	634.0	634.0	653.3



GENERAL NOTES

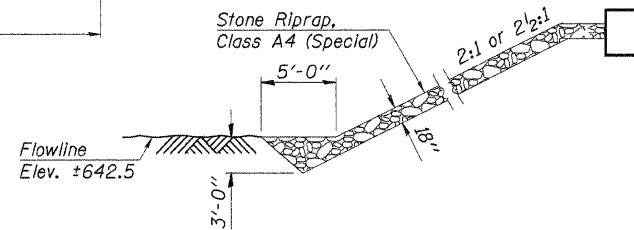
See Proposal Booklet for Boring data.

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60.

The Contractor shall drive one steel HP12x53 test pile in a permanent location at the west abutment and one steel HP12x53 test pile in a permanent location at each pier as directed by the Engineer, before ordering the remainder of piles.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

Structure Excavation will not be measured for payment but shall be included in the unit price bid for "Concrete Structures" or "Concrete Encasement."



Note: Excavation will not be paid for as a separate item and shall be considered as included in "Stone Riprap, Class A4 (Special)".

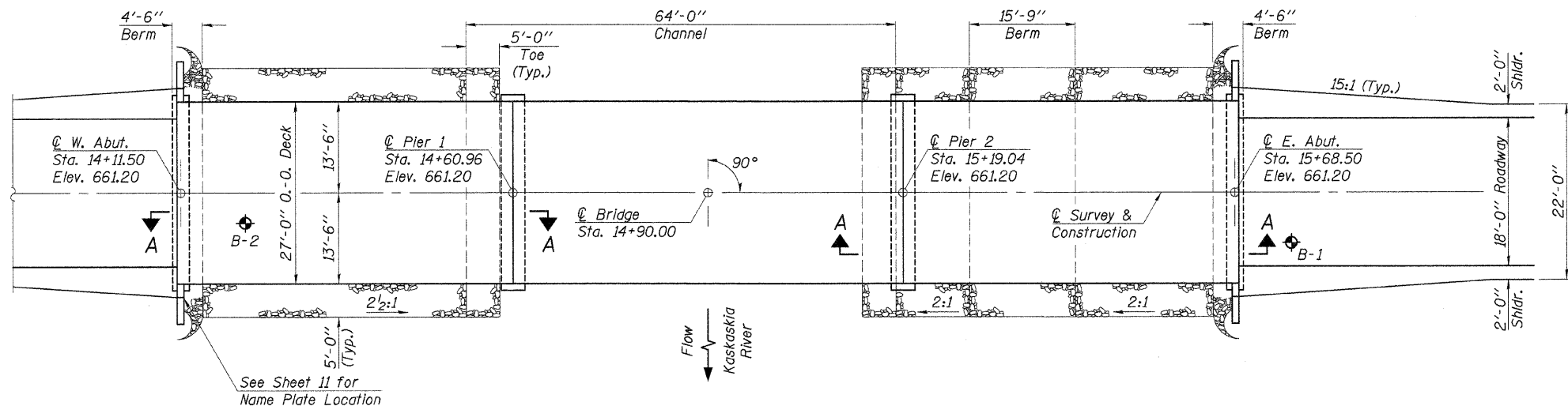
KASKASKIA RIVER  
BUILT 20\_\_ BY  
GARRETT ROAD DISTRICT  
DOUGLAS COUNTY  
SEC. 09-05123-01-BR  
STR. NO. 021-4307  
LOADING HL-93

LETTERING FOR NAME PLATE

See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	4,266		4,266
Concrete Structures	Cu. Yd.		42.4	42.4
Reinforcement Bars	Pound		5,560	5,560
Steel Railing, Type S1	Foot	317		317
Name Plates	Each		1	1
Furnishing Steel Piles HP12x53	Foot		699	699
Driving Piles	Foot		699	699
Test Pile Steel HP12x53	Each		3	3
Stone Riprap, Class A4 (Special)	Ton		377	377
Concrete Encasement	Cu. Yd.		43.7	43.7
Underwater Structure Excavation Protection - Location 1	Each		1	1
Underwater Structure Excavation Protection - Location 2	Each		1	1



PLAN

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2  
Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.155  
Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.288  
Soil Site Class = D

WATERWAY INFORMATION

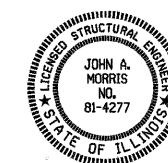
Drainage Area	127 Sq. Mi.
Existing Opening (15 Yr.)	889 Sq. Ft.
Required Opening (15 Yr.)	2,223 Sq. Ft.
Proposed Bridge Opening (15 Yr.)	1,644 Sq. Ft.
Over-The-Road Flow (15 Yr.)	579 Sq. Ft.
Design Discharge (15 Yr.)	4,870 C.F.S.
Created Head (15 Yr.)	0.0 Ft.
Over-The-Road Flow (100 Yr.)	2,240 Sq. Ft.
100 Year Discharge	7,840 C.F.S.
100 Yr. Created Head	0.0 Ft.

DESIGN STRESSES

$f_c$  = 6,000 p.s.i. (Prestressed Beams)  
 $f_{ci}$  = 5,000 p.s.i. (Prestressed Beams)  
 $f_s$  = 270,000 p.s.i. (Prestressed Strands)  
 $f_{sl}$  = 201,960 p.s.i. (Prestressed Strands)  
 $f_c$  = 3,500 p.s.i. (Concrete -- Field Units)  
 $f_y$  = 60,000 p.s.i. (Reinf. Bars)  
LOADING HL-93  
Design Specifications: 2010 AASHTO LRFD & Interims  
50#/Sq. Ft. Included in dead load 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 'AASHTO LRFD Bridge Design Specifications'."

John A. Morris  
ILLINOIS STRUCTURAL NO. 4277 (Expires 11/30/12)



GENERAL PLAN & ELEVATION

SECTION 09-05123-01-BR  
GARRETT ROAD DISTRICT  
DOUGLAS COUNTY  
STATION 14+90.00  
S.N. 021-4307

DESIGNED	A.L.S.
CHECKED	A.R.K.
DRAWN	S.A.P.
CHECKED	A.L.S. & A.R.K.

**FEHR-GRAHAM & ASSOCIATES, LLC**  
ENGINEERING AND SCIENCE CONSULTANTS  
PREP. RT. IL ROCKFORD, IL ROCHELLE, IL MONROE, WI SPRINGFIELD, IL  
4440 ASH GROVE SPRINGFIELD, IL 62711 (217)-792-8600 www.fehr-graham.com

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
56	09-05123-01-BR	DOUGLAS	19	4
GARRETT ROAD DIST. ILLINOIS			CONTRACT NO. 91433	