Existing Structure: Three (3) span bridge with Precast Concrete deck slabs on concrete abutment caps with steel H-pile bents. Piers are footing supported concrete columns. 110'L x 26.25'W. 45° Ahead left skew. Salvage name plate for County. See Special Provisions.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 175A	07-03123-00-BR	CRAWFORD	11	6
	ILLINOIS	FEDERAL AID PROJECT		
		CONTRACT NO. 95556		

LAMOTTE CREEK
BUILT 200_ BY
CRAWFORD COUNTY
PROJECT NO. BROS-033(049)
SEC. 07-03123-00-BR
LOADING HS-20
STRUCTURE NO. 017-3325

NAME PLATE
(See State Standard 515001 for details)

GENERAL NOTES

See Section 502 of the Standard Specifications for Structural Excavation.

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

The existing Name Plate attached to the steel bridge rail shall be salvaged and shall become the property of the Local Agency.

Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel at the ROW line. See Special Provisions.

The steel H-piles shall be according to AASHTO M270, Grade 50.

The Contractor shall drive one (1) Steel HP12x53 Test Pile in a permanent location at the North Abutment as directed by the Engineer before ordering the remainder of the piles.

In addition to all other requirements of Section 512 of the Standard Specifications, splices for Steel H-piles shall develop the full capacity of the steel's cross sectional area of the pile for tension, shear and bending forces. One approved method of achieving this requirement is full penetration butt welding of the entire cross section. Other types of splices meeting the full capacity requirement may be allowed subject to the approval of the Engineer. Any proposal by the Contractor to use an alternate splice method must include adequate documentation demonstrating that the full tension, shear and bending capacities will be met. Appropriate welder certifications will be required for the positions and processes used in splicing all piles. Nondestructive testing of completed welds will be limited to visual inspection.

A Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for Precast Prestressed Concrete Deck Beams.

The abutment and pier bearing seat surfaces for the precast prestressed concrete deck beams shall be adjusted by shimming to assure firm and even bearing. As required, ⅛" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

See Specifications for Soil Borings.

Do not scale these drawings.

BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	SUB	SUPER	TOTAL
CHANNEL EXCAVATION	CU YD	570	-	570
POROUS GRANULAR EMBANKMENT	TON	84	-	84
STONE DUMPED RIPRAP, CLASS A4	TON	760	-	760
REMOVAL OF EXISTING STRUCTURES	EACH	-	-	1
CONCRETE STRUCTURES	CU YD	65.2	-	65.2
CONCRETE ENCASEMENT	CU YD	37.4	-	37.4
PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	-	4340	4340
REINFORCEMENT BARS	POUND	8160	-	8160
STEEL RAILING, TYPE SM	FOOT	-	315	315
FURNISHING STEEL PILES HP 12x53	FOOT	642	-	642
DRIVING STEEL PILES	FOOT	234	-	234
SETTING PILES IN ROCK	EACH	12	-	12
TEST PILE STEEL HP12X53	EACH	1	-	1
NAME PLATES	EACH	1	-	1
UNDERWATER STRUCTURE EXCAVATION PROTECTION-LOC. 1	EACH	1	-	1
UNDERWATER STRUCTURE EXCAVATION PROTECTION-LOC. 2	EACH	1	-	1

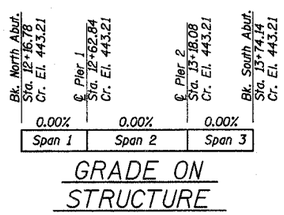
SEISMIC
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.08g
Site Coefficient (S) = 1.0

DESIGN SPECIFICATIONS
AASHTO - 2002 17th Edition

LOADING HS 20-44
Allow 25#/sq. ft. for future wearing surface.

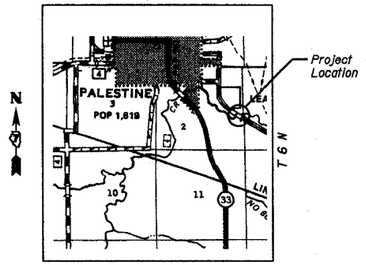
DESIGN STRESSES
FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi

PRECAST PRESTRESSED UNITS
f'_c = 5,000 psi
f'_{ci} = 4,000 psi
f'_s = 270,000 psi (½"ϕ strands-Low relaxation)
f'_{si} = 201,960 psi (½"ϕ strands-Low relaxation)



GRADE ON STRUCTURE

R 11 W. 2nd P.M.



LOCATION SKETCH

WATERWAY DATA

Drainage Area = 28.16 Sq. Mi. Low Grade Elev. 443.21 ℄ Sta. 12+90

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	20	3110	990	1043	433.0				
Backwater	100	-	1570	1788	438.5				
Max. Calc.									

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

GARY L. HAHN
81-4853
LICENSED
STRUCTURAL
ENGINEER
STATE OF ILLINOIS

Gary L. Hahn 04.09.08

GARY L. HAHN
CENTRALIA, ILLINOIS
ILLINOIS LICENSED STRUCTURAL
ENGINEER NO. 81-4853
EXPIRES NOV. 30, 2008

GENERAL PLAN AND ELEVATION DATA
PROPOSED BRIDGE OVER
LAMOTTE CREEK
TR 175A
SECTION 07-03123-00-BR
CRAWFORD COUNTY, ILLINOIS

Sheet 6 of 11
Job No. 51107

04/09/2008

RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS FREEBURG, ILLINOIS