

TBM 5-28-04"A" Railroad spike in telephone pole, 15' south of center of old bridge; 33' east of E Bluff Road. Elev. 404.84.
 TBM 5-28-04"B" Nail in east side of Telephone pedestal, 405' south of center of old bridge; 18' east of E Bluff Road. Elev. 400.71.
 TBM 5-28-04"C" Railroad spike in power pole, 23' east of E Bluff Road at E extended KK Road (West). Elev. 397.16.

Existing Structure: Single span bridge with concrete deck on steel stringers supported by concrete abutment caps on timber piles and timber wingwalls. 48.5'L x 25.0'W. 45° Ahead right skew. No Salvage.

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1857	03-00070-00-BR	MONROE	11	6
		ILLINOIS	FEDERAL AID PROJECT	
CONTRACT NO. 97285				

BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	SUB	SUPER	TOTAL
CHANNEL EXCAVATION	CU YD	800	-	800
STABILIZED SUB-BASE (VARIABLE DEPTH)	TON	40	-	40
REMOVAL OF EXISTING STRUCTURES	EACH	-	-	1
CONCRETE STRUCTURES	CU YD	52	-	52
PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	-	3360	3360
REINFORCEMENT BARS	POUND	5740	-	5740
STEEL RAILING, TYPE S1	FOOT	-	246	246
FURNISHING STEEL PILES HP 12x53	FOOT	1050	-	1050
DRIVING STEEL PILES	FOOT	1050	-	1050
TEST PILE STEEL HP12x53	EACH	1	-	1
CONCRETE ENCASEMENT	CU YD	22.6	-	22.6
NAME PLATES	EACH	1	-	1
WATERPROOFING MEMBRANE SYSTEM	SQ YD	-	375	375
PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	-	720	720
BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	-	63	63

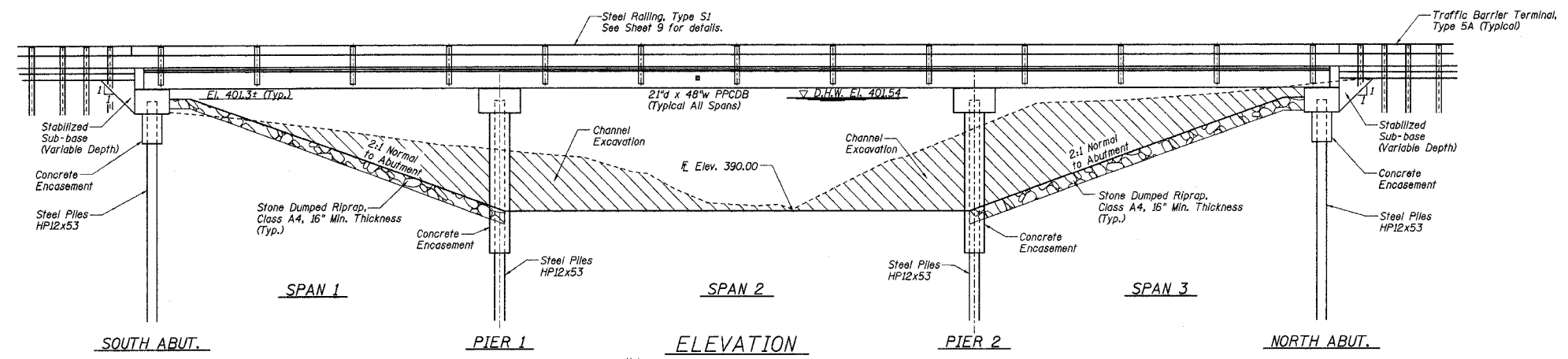
GENERAL NOTES

See Section 502 of the Standard Specifications for Structural Excavation.
 Existing gabion baskets and their contents shall be removed as directed by the Engineer.
 Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
 Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel at the ROW line. If the Engineer deems the material satisfactory, it may be used to construct the roadway embankment.
 The Contractor shall drive one (1) Steel HP12x53 Test Pile in a permanent location at the South 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, 1/8" 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.

**MONROE CITY CREEK
 BUILT 200 BY MONROE COUNTY
 PROJECT NO. BROS-0133(031)
 SEC. 03-00070-00-BR
 LOADING HS-20
 STRUCTURE NO. 067-3174**

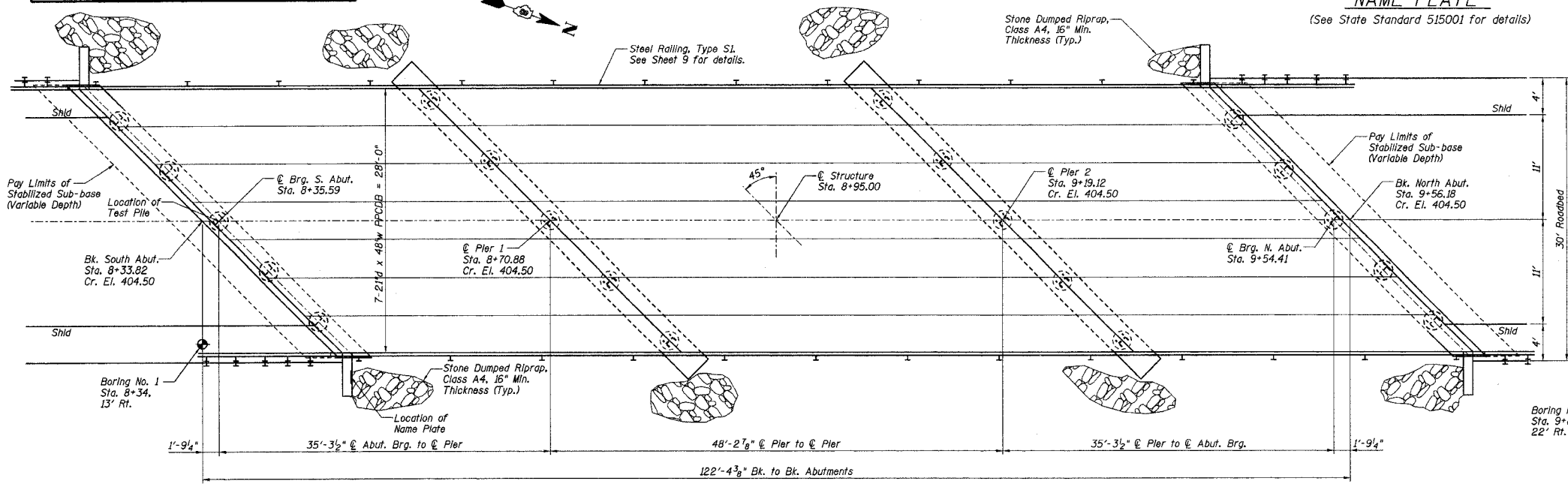
NAME PLATE
 (See State Standard 515001 for details)

See Sheet 3 for Limits of Riprap and Quantities.

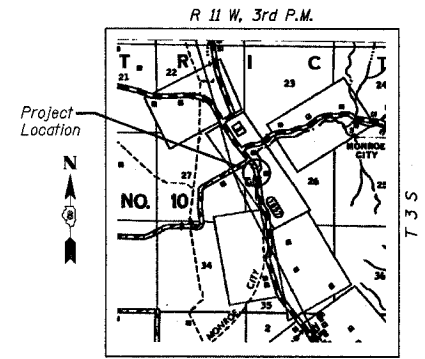


MIXTURE REQUIREMENTS

Location	Bridge Deck Overlay
Mixture Use:	BC Surf Cse, Super, Mix C, N50
AC/PG:	PG64-22
RAP % (Max.):	15
Design Air Voids:	4.0%, 50 Gyration Superpave Design
Mixture Composition: (Gradation Mixture)	
Friction Aggregate:	Mixture "C"



PLAN



LOCATION SKETCH

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
 CENTRALIA, ILLINOIS
 ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 81-4853
 EXPIRES NOV. 30, 2006

**GENERAL PLAN AND ELEVATION
 PROPOSED BRIDGE CARRYING
 FAS 1857 OVER MONROE CITY CREEK
 SECTION 03-00070-00-BR
 MONROE COUNTY, ILLINOIS**

Sheet 6 of 11
 Job No. 41604

WATERWAY DATA

Drainage Area = 7.22 Sq. Mi.		Low Grade Elev. 396.16 @ Sta. 16+08.00				
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural H.W.E.	Head - Ft.	Headwater El.
Design	<5	2260	408	401.54	0.19	401.73
Base			548	401.54	0.31	401.85
Max. Calc.						

SEISMIC
 Seismic Performance Category (SPC) = B
 Bedrock Acceleration Coefficient (A) = 0.12g
 Site Coefficient (S) = 1.5

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 (1/2" strands)
 $f_{si} = 189,000$ psi (1/2" strands)

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

Grade	Span 1	Span 2	Span 3
0.00%	0.00%	0.00%	0.00%

GRADE ON STRUCTURE

Crown Elevation shown is elevation at top of Bituminous Concrete Bridge Deck Overlay, 3" thick at end of Deck Beams.

05/31/2006