# BENCHMARKS

BM #1556-3: YELLOW SPIKE NAIL IN POWER POLE, EAST SIDE OF FARMER ROAD, 100 (+/-) FEET SOUTH OF BRIDGE. EL 579.87

BM #1556-4: YELLOW SPIKE NAIL IN POWER POLE, EAST SIDE OF FARMER ROAD, 500 FEET (+/-) NORTH OF BRIDGE. FI 605.47

#### EXISTING STRUCTURE DISCRIPTION

Existing Structure No. 069-3127 Three span bridge with 8" concrete deck with steel guardrail on four steel beams 16" deep. Abutments and piers consists of five 12" diameter timber piles with a 2.5'x2.5'

concrete cap and wingwalls. Structure Length = 64.6 Ft. Structure Width = 21.2 Ft. Out to Out Structure and appurtenances shall be removed. No Salvage



# DESIGN SPECIFICATIONS

AASHTO 2002

# LOADING HS20-44

Future Wearing Surface = 50 p.s.f. 25 p.s.f. Wearing Surface Seismic Performance Category = A

# DESIGN STRESSES

# FIELD UNITS

 $f_c' = 3,500 \text{ psi}$  $f_V = 60,000 \text{ psi (Reinforcement)}$ 

# PRECAST PRESTRESSED UNITS

 $f'_{C} = 5,000 \text{ psi}$   $f'_{Ci} = 4,000 \text{ psi}$ 

 $f_s' = 270,000 \text{ psi } (l_2'' \phi \text{ strands})$ 

f'si = 201,960 psi

INDIAN CREEK BUILT 20\_\_ BY MORGAN COUNTY/ROAD DISTRICT #1 SECTION 05-01117-00-BR F.A. PROJ. BROS-137 (25) STA 5+00 STR. NO. 069-3259 LOADING HS20

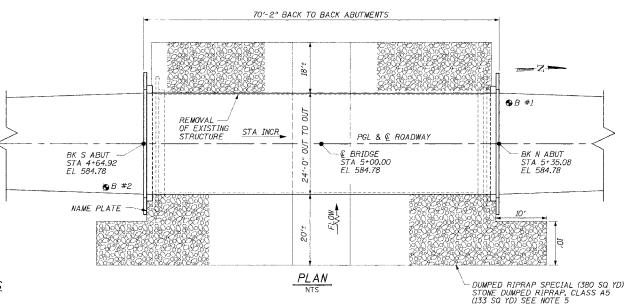
#### LETTERING FOR NAME PLATE

See Std. 515001 (Locate at S.E. Wing)

# STEEL RAILING, TYPE SI EXIST & PROP PGL □ 15-YR H.W.E. 578.74 STRUCTURE --12" DIA METAL SHELL PILE ('4" WALL) STONE DUMPED RIPRAP, CLASS A5 CHANNEL EXIST STRUCTURE EXCAVATION TO BE REMOVED LEGEND CHANNEL EXCAVATION

ELEVATION

VZZZZ STRUCTURE EXCAVATION



# Low Brg. Seat El 580.5 El 567.9

of Natural Resources' / Office of

# STONE RIPRAP DETAIL N.T.S.

#### WATERWAY INFORMATION

DRAINAGE AREA = 15.20 SQ MI				PROPOSED LOW GRADE ELEVATION = 584,78						
EXISTING LOW S	STEEL ELE	VATION =	582.40	PR	OPOSED LO	W BEAM	ELEVATIO	ON = 581.7	<b>7</b> 8	
	FREQ.	a	OPENING SQ FT		NATURAL	HEAD - FT		HEADWATER EL		
FLOOD	YR	C.F.S.	EXIST	PR0P	H.W.E.	EXIST	PROP	EXIST	PR0P	
DESIGN	15	2672	361.0	381.4	578.65	0.73	0.09	579.39	578.74	
BASE	100	4292	462.3	484.4	579.50	1.59	0.95	581.10	580.45	

LEPPER RD --24-INDIAN CREEK 9 N CONSTRUCTION PERMITS This project has been approved for construction under Statewide Permit No. 12 as issued by the Department LOCATION SKETCH

R. 9 W. 3RD P.M.

Keymald H Dinh 2/21/2006 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 the structure and compiles with requirements of the current "AASHTO Standard

EXP 11/30/06

Specifications for Highway Bridges".

TR-324	*	MOR	GAN	10	4		
FED. PO. DIST.	NO.	ILLINGIS	FED. ALD P	ROJECT			
	* 05	-01117-	00-BR				

# GENERAL NOTES

- 1. The Contractor shall drive a test pile as specified in a permanent location in the North abutment as directed by the Engineer prior to ordering the remainder of the piles.
- 2. See Special Provisions for Boring Logs.
- 3. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- 4. A Corrosion Inhibitor, as covered in the Special Provisions shall be used in the concrete for Precast Prestressed Concrete Deck Beams.
- No bedding material and no filter fabric material are required under the Stone Dumped Riprap.
- 6. Road shall be closed to traffic at all times during construction.

#### TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Dumped Riprap, Class A5	Ton		194	194
Dumped Riprap, Special	Sq Yd		380	380
Removal of Existing Structures	Each			1
Channel Excavation	Cu Yd		100	100
Structure Excavation	Cu Yd		100	100
Concrete Structures	Cu Yd		20.6	20.6
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq Ft	1,646.0		1,646.0
Reinforcement Bars	Pound		2,760	2,760
Steel Railing, Type S1	Foot	140.0		140.0
Furnishing Metal Pile Shells 12"	Foot		430	430
Driving and Filling Shells	Foot		430	430
Test Pile Metal Shells	Each		1	1
Name Plates	Each		1	1
Bituminous Concrete Surface Course, Superpave, Mix "C", N50	Ton	28		28

\* See Special Provisions

GENERAL PLAN AND ELEVATION S.N. 069-3259 DRAWN BY LEL CHECKED BY LEL FARMER ROAD (TR-324) APPROVED BY REG DATE FEBRUARY, 2006 OVER INDIAN CREEK REVISIONS MORGAN COUNTY. ILLINOIS

**BENTON & ASSOCIATES, INC.** Consulting Engineers / Land Surveyors

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