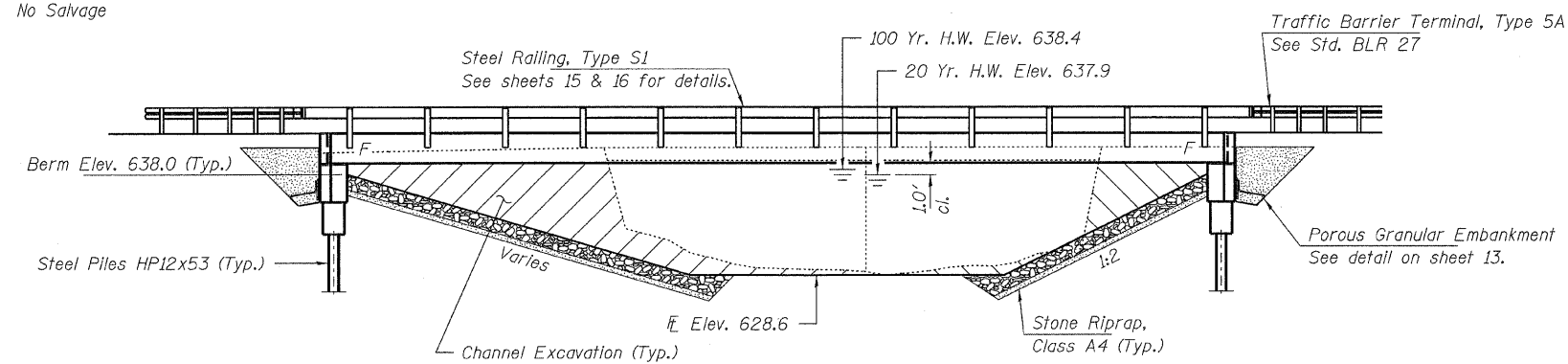


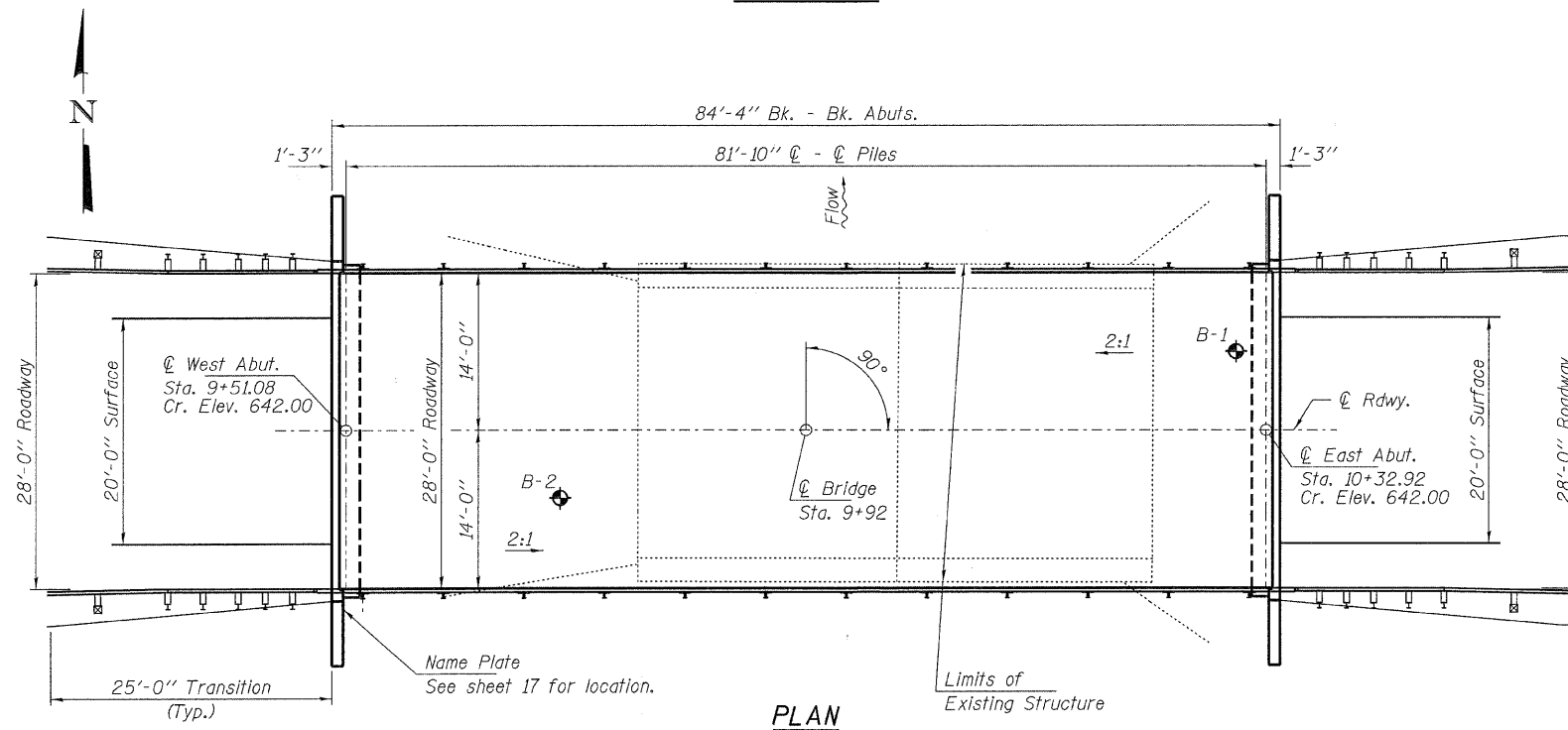
BENCHMARK: Chiseled "□" on NE wingwall. Sta. 10+22, 15' Lt., Elev. 664.98

EXISTING STRUCTURE: Two span cast in place concrete bridge with concrete parapets on closed timber and concrete abutments and wingwalls. 40.85' fc.-fc. abuts.; 28.30' o.-o. deck Structure closed to traffic.

No Salvage



ELEVATION



PLAN

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi  
fy = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi  
f'cl = 5,000 psi  
fpu = 270,000 psi (1/2" low lax. strands)  
fpbt = 201,960 psi (1/2" low lax. strands)  
fy = 60,000 psi (Reinf.)

LOADING HL-93

Design Specifications: 2007 AASHTO LRFD with all applicable Interims. 50#/Sq. Ft. included in dead load for future wearing surface.

DESIGNED	- M.G.B.
CHECKED	- S.W.M.
DRAWN	- D.A.B.
CHECKED	- S.W.M.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.109g  
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.176g  
Soil Site Class = D

WATERWAY INFORMATION

Flood		Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural H.W.E.	Head - Ft.	Headwater El.
		10	240	470	637.49	0.47	637.96
Design	20	1920	250	490	637.80	0.57	638.37
Base	100	2860	260	530	638.37	0.52	638.89
Exist. Overtop	20	1920	250	-	637.80	0.57	638.37
Prop. Overtop	20	1920	-	530	637.80	-	638.27
Max. Calc.	500	3800	280	560	638.82	0.47	639.29

Drainage Area = 13.5 Sq. Mi. Existing Low Grade Elev. 637.8 @ Sta. 7+00  
Proposed Low Grade Elev. 637.8 @ Sta. 7+00

10 Year Velocity through Existing Bridge = 6.4 Fps 10 Year Velocity through Proposed Bridge = 3.3 Fps

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.  
The Contractor shall drive test pile to 110% of the nominal required bearing specified in production locations at West Abutment or approved by the Engineer before 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.  
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.  
All bars shall be epoxy coated.  
Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.  
All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.

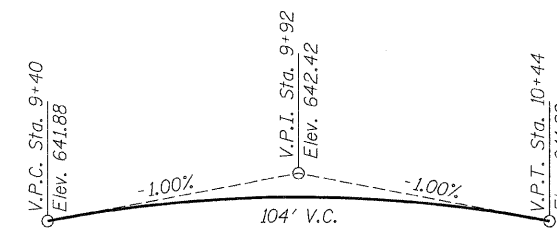
MOREHOUSE CREEK  
BUILT 20\_\_ BY  
ROOKS CREEK ROAD DISTRICT  
LIVINGSTON COUNTY  
SEC. 09-24104-01-BR  
STR. NO. 053-4199  
LOADING HL-93

NAME PLATE

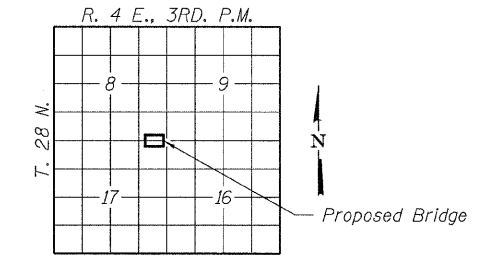
See Std. 515001

INDEX OF STRUCTURE SHEETS

11. General Plan & Elevation
12. Riprap Details
13. Superstructure
- 14.-15. Superstructure Details
16. Steel Railing, Type S-1
17. Strip Seal Expansion Joint
18. Abutments
19. HP Pile Details
20. Borings



PROFILE GRADE



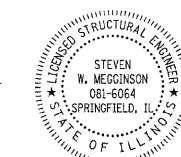
LOCATION SKETCH

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			355
Stone Riprap, Class A4	Sq. Yd.			360
Porous Granular Embankment	Ton			170
Filter Fabric	Sq. Yd.			360
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		28.4	28.4
Concrete Encasement	Cu. Yd.		3.4	3.4
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	2,324		2,324
Reinforcement Bars, Epoxy Coated	Pound		2,840	2,840
Steel Railing, Type S1	Foot	174		174
Furnishing Steel Piles HP12x53	Foot		405	405
Driving Piles	Foot		405	405
Test Pile Steel HP12x53	Each		1	1
Name Plates	Each		1	1
Pipe Underdrains for Structures, 4"	Foot			140

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 Specifications."

Steven W. McGinnison 3/25/2010  
ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-2010

GENERAL PLAN AND ELEVATION  
STRUCTURE NO. 053-4199

**HAMPTON, LENZINI AND RENWICK, INC.**  
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3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
217.546.3400 www.hlrengineering.com

184.000959  
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
119	09-24104-01-BR	LIVINGSTON	20	11
ROOKS CREEK ROAD DISTRICT		CONTRACT NO. 87453		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT BROS-0105(049)		

PROJECT NUMBER: 09.0126.130 DATE: 03/25/10