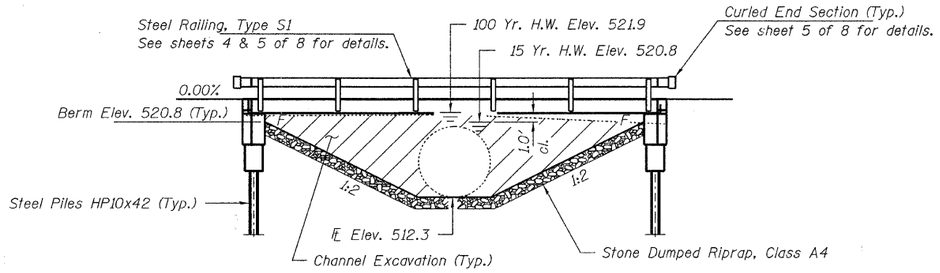
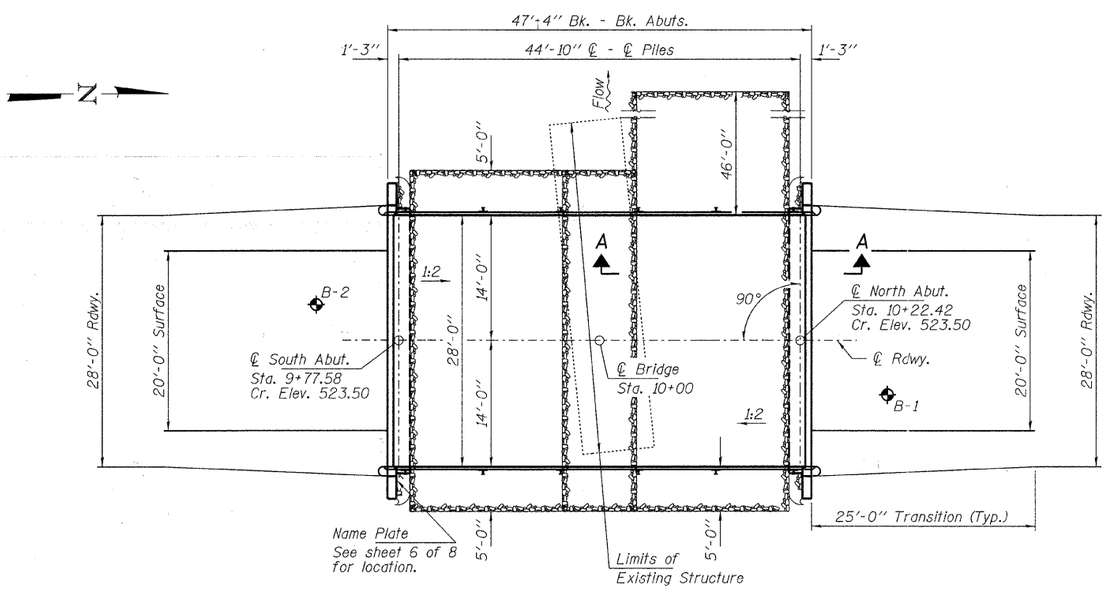
BENCHMARK: Chiseled "+" on pipe culvert. 23.0' Lt., Sta. 9+99, Elev. 519.87

EXISTING STRUCTURE: Sta. 10+00, 1 8'ϕ Railroad Tank Car. (37.3' long)
Structure closed to traffic.

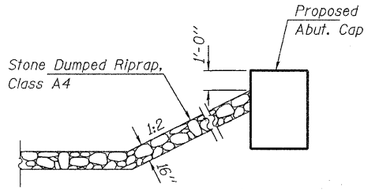
No Salvage



ELEVATION



PLAN



SECTION A-A

Note: See Special Provisions for
Stone Dumped Riprap, Class A4.

GENERAL NOTES

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

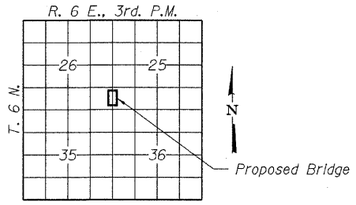
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at North Abutment or approved by the Engineer before ordering the remainder of piles.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

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.

INDEX OF STRUCTURE SHEETS



LOCATION SKETCH

LUCAS CREEK
BUILT 201_ BY
EFFINGHAM COUNTY
SEC. 10-13112-00-BR
UNION ROAD DISTRICT
STR. NO. 025-3323
LOADING HL-93

NAME PLATE

See Std. 515001

DESIGN STRESSES

FIELD UNITS

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

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (½"ϕ low lax. strands)
fpbt = 201,960 psi (½"ϕ low lax. strands)
fy = 60,000 psi (Reinf.)

LOADING HL-93

Design Specifications: 2010 AASHTO LRFD with all applicable interims.
50#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.166g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.420g
Soil Site Class = C

WATERWAY INFORMATION

Drainage Area = 7.01 Sq. Mi.
Existing Low Grade Elev. 519.0 @ Sta. 10+70
Proposed Low Grade Elev. 522.0 @ Sta. 12+05

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.
	10	1173	50	200	520.47	0.65	0.44	521.12	520.91
Design	15	1340	50	210	520.79	0.44	0.44	521.23	521.23
Base	100	2150	50	260	521.92	0.00	0.93	521.92	522.85
Overtop-Exist.	15	1340	50	210	520.79	0.44	0.44	521.23	521.23
Overtop-Prop.	100	2150	50	260	521.92	0.00	0.93	521.92	522.85
Max. Calc.	500	2870	50	260	522.66	0.00	0.84	522.66	523.50

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."

LICENSED STRUCTURAL ENGINEER
STEVEN W. MEGGINSON
081-6064
SPRINGFIELD, IL
STATE OF ILLINOIS

Steven W. Megginson 10/27/2011
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064 Expires 11-30-2012

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			335
Stone Dumped Riprap, Class A4	Ton			220
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		24.0	24.0
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,288		1,288
Reinforcement Bars	Pound		2,520	2,520
Steel Railing, Type S1	Foot	91		91
Furnishing Steel Piles HP10x42	Foot		175	175
Driving Piles	Foot		175	175
Test Pile Steel HP10x42	Each		1	1
Name Plates	Each		1	1

FILE NAME = 100098-sht-bridge.dgn | USER NAME =
HAMPTON, LENZINI AND RENWICK, INC.
3065 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
ILLINOIS PROFESSIONAL DESIGN FIRM
LB / PE / SE CORP. 184.000659
PLOT SCALE =
PLOT DATE = 10/27/2011

DESIGNED - A.S.L. | REVISED -
CHECKED - S.W.M. | REVISED -
DRAWN - D.A.B. | REVISED -
CHECKED - S.W.M. | REVISED -

STATE OF ILLINOIS
EFFINGHAM COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION
STRUCTURE NO. 025-3323
SHEET NO. 1 OF 8 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
266	10-13112-00-BR	EFFINGHAM	21	14
UNION ROAD DISTRICT		CONTRACT NO. 95669		
ILLINOIS	FED. AID PROJECT			