ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 10	*	IROQUOIS	31	7
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT	BRS-329(105)	

*07-00216-01-BR CONTRACT *87401

SHEET NO. 1 OF 15 SHEETS

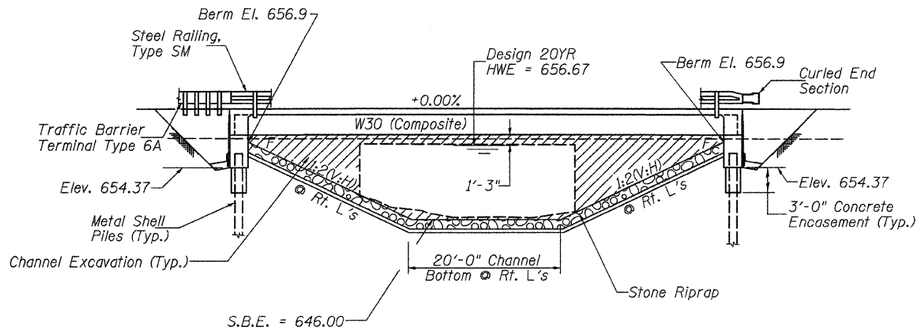
B.M.: RR Spike in Power Pole
Sta. 16+99, 29' Lt.
Elev. 663.69

RR Spike in Power Pole
Sta. 22+76, 28' Lt.
Elev. 658.37

Existing Structure:
Single span reinforced concrete slab with curb mounted steel rail on concrete closed abutments on timber pile supported concrete footings. The structure is 32'-6" back to back of abutments, 33'-6" out to out of deck with a 30'-0" driving surface, no skew. Existing Structure to be removed and replaced by Contractor.
Str. No. 038-0069

Salvage: None

Road to be closed to traffic during construction.

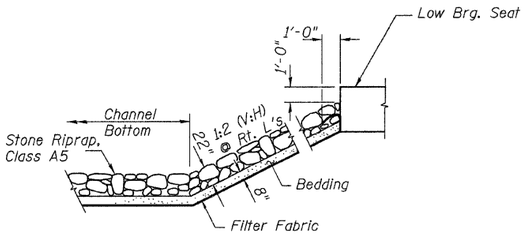


ELEVATION

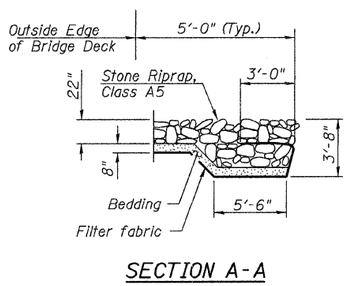
NOTE:
For Bill of Material and General Notes, See Sheet 2 of 15.

DESIGN SCOUR TABLE

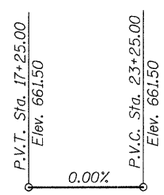
Location	W. Abut	E. Abut
Design Scour Elevation	654.37	654.37



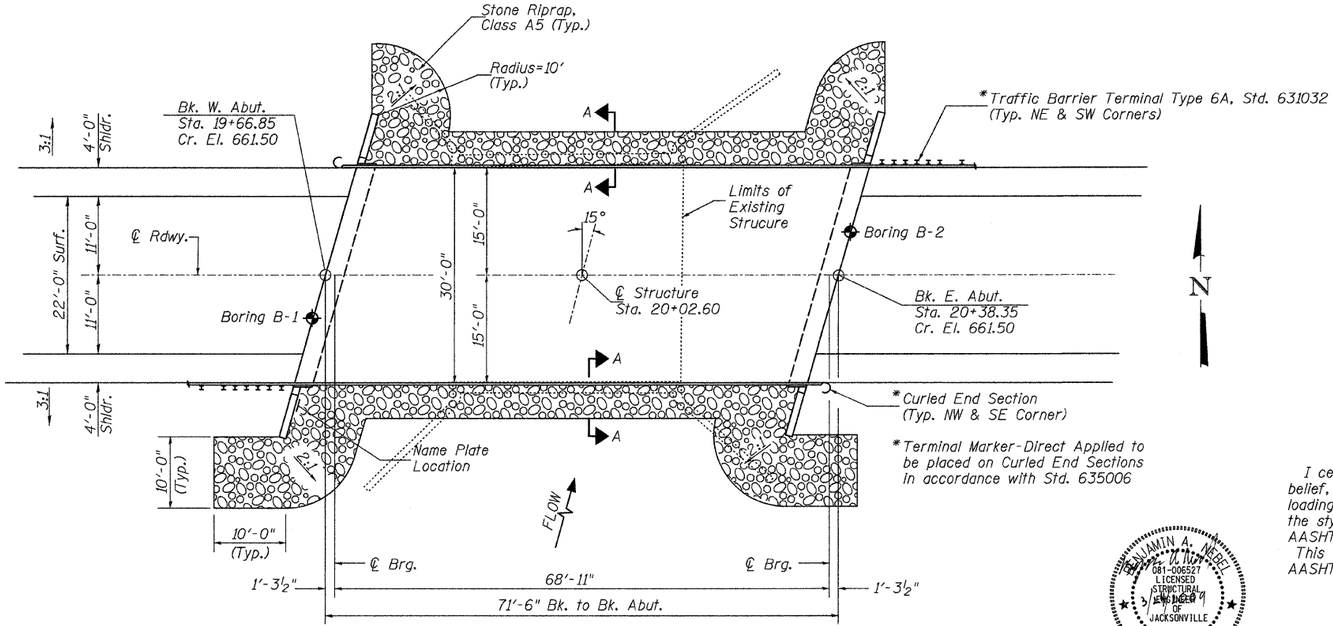
STONE RIPRAP DETAIL



SECTION A-A



PROFILE GRADE



PLAN

FOUNTAIN CREEK TRIBUTARY
BUILT 20 BY
IROQUOIS COUNTY
SEC. 07-00216-01-BR
C.H. 10 STATION 20+02.60
F.A. PROJ. BRS-329(101)
STR. NO. 038-4404 LOADING HL-93

NAME PLATE

Locate Name Plate at S.W. Wingwall Corner of Bridge (See Std. 515001)

WATERWAY INFORMATION

Drainage Area = 16.69 Sq. Mi. Low Grade Elev. = 661.50 @ Sta. 20+02.60

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	20	1,935	288	441	656.67	0.77	0.15	657.44	656.82
Base	100	2,850	288	493	657.48	1.71	0.29	659.19	657.77

Construction of this project complies with IDNR, Office of Water Resources Statewide Permit No. 2

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications, 4th Edition with Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50W)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

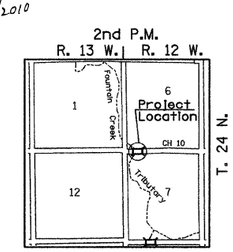
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.05g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.11g
Soil Site Class = D

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 Bridge Design Specifications.
This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

Benjamin A. Nebel 3/24/2009
Illinois Structural No. 6527
Expires 11/30/2010

BENJAMIN A. NEBEL
081-006527
LICENSED STRUCTURAL ENGINEER
OF JACKSONVILLE
ILLINOIS
Lic. Exp. 11/30/2010

DESIGNED	B.A.N.
CHECKED	J.O.H.
DRAWN	T.A.C.
CHECKED	B.A.N.



LOCATION SKETCH

GENERAL PLAN & ELEVATION
COUNTY HIGHWAY 10 OVER FOUNTAIN CREEK TRIBUTARY
SEC. 07-00216-01-BR
IROQUOIS COUNTY
STATION 20+02.60
STRUCTURE NO. 038-4404

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