

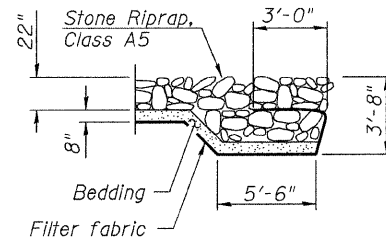
B.M.: Mag-nail in top of 42" CMP  
Sta. 25+42, 24' Rt.  
Elev. 688.97

**Existing Structure:**

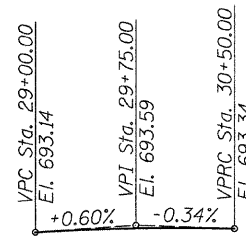
Single span reinforced concrete slab with steel rail on concrete closed abutments with concrete footings. The structure is 32'-5 3/4" back to back of abutments, 22'-2" out to out of deck, and is skewed 30° Rt. Ahd.  
Str. No. 038-4800

Salvage: None

Road to be closed to traffic during construction.



**SECTION A-A**

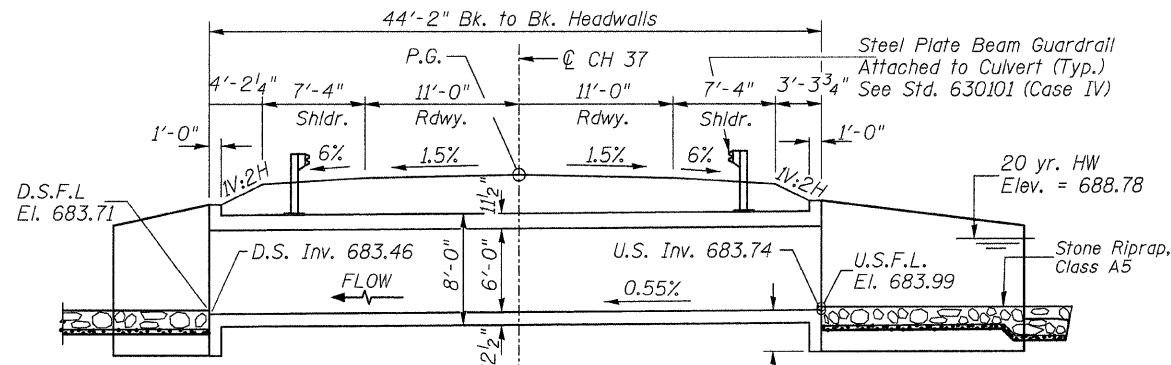


**PROFILE GRADE**

WEST BRANCH OF HORSE CREEK  
BUILT 20 BY  
IROQUOIS COUNTY  
SEC. 07-00222-01-BR  
C.H. 37 STATION 29+95.21  
F.A. PROJ. BRS-1322(124)  
STR. NO. 038-4809 LOADING HS20-44

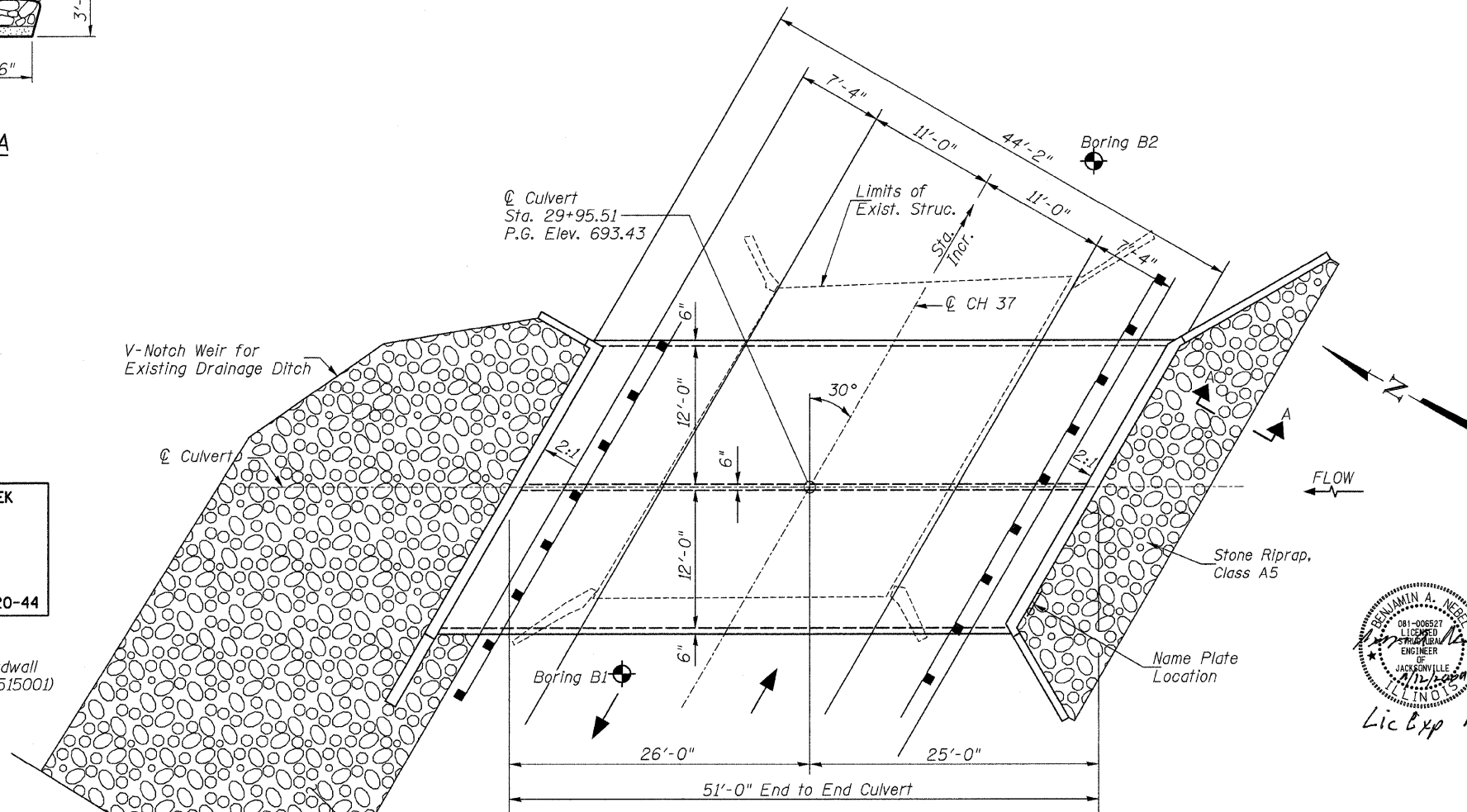
**NAME PLATE**

Locate Name Plate at South Headwall  
S.W. Corner of Culvert (See Std. 515001)



**ELEVATION**

Dimensions are at Rt.L's to  $\perp$  Roadway



**PLAN**

**WATERWAY INFORMATION**

Drainage Area = 1.00 Sq. Mi.		Low Grade Elev. = 691.45 @ Sta. 25+50.00							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	20	190	100	124	688.78	0.00	0.00	688.78	688.78
Base	100	271	115	138	689.37	0.00	0.00	689.37	689.37

**DESIGN SPECIFICATIONS**

2002 AASHTO & Interims

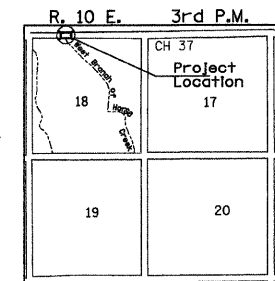
**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

**LOADING HS20-44**

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



**LOCATION SKETCH**

**GENERAL NOTES**

The existing abutment footings shall be removed completely within 2' of the limits of the proposed structure. Porous granular embankment shall be used to backfill the area. Cost included with Removal of Existing Structures.  
Reinforcement Bars shall conform to the requirements of ASTM A 706 Grade 60.  
For backfilling and embankment see Standard Specifications.  
Precast culvert option will not be allowed.  
All construction joints shall be bonded.  
Exposed concrete edges shall have a 3/4" chamfer unless otherwise noted.  
Layout of stone riprap/slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.  
A distance of half the length of the wingwall, but not less than 6 feet of the barrel shall be poured monolithically with the wingwall.  
Areas of excavation required for removal of the existing structure or construction of the new culvert shall be backfilled with Porous Granular Embankment up to the top of slab elevation. See Special Provisions for more detailed information.  
Excavation behind existing abutment walls shall be performed to balance front and back soil pressures before removing the existing superstructure.  
All excavation required for construction of the culvert as shown in these plans and in accordance with the Standard Specifications shall be included in the cost of Concrete Box Culverts.

**TOTAL BILL OF MATERIAL**

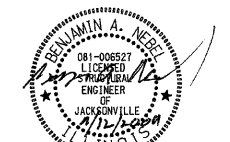
ITEM	UNIT	TOTAL
Concrete Box Culverts	CU YD	131.2
① Reinforcement Bars	POUND	29,400
① Removal of Existing Structures	EACH	1
Name Plates	EACH	1
Stone Riprap, Class A5	TON	715
① Filter Fabric	SQ YD	700
① Porous Granular Embankment	CU YD	180
Steel Plate Beam Guardrail, Attached to Structures	FOOT	59

① See Special Provisions

**DESIGN SCOUR TABLE**

Location	Upstream	Downstream
Design Scour Elevation	683.74	683.46

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 Standard Specification for Highway Bridges.  
This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.



Lic Exp 11/30/2010

*Benjamin A. Neebe*  
11/14/2009  
Illinois Structural No. 6527  
Expires 11/30/2010

**GENERAL PLAN & ELEVATION**  
**COUNTY HIGHWAY 37 OVER**  
**WEST BRANCH OF HORSE CREEK**  
**SECTION 07-00222-01-BR**  
**IROQUOIS COUNTY**  
**STATION 29+95.51**  
**STRUCTURE NO. 038-4809**

DESIGNED	BAN/CTM
CHECKED	BAN
DRAWN	TC/CTM
CHECKED	BAN

SHEET NO. 1  7 SHEETS	ROUTE No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 37	07-00222-01-BR	IROQUOIS	19	7
	S.N. 038-4809		CONTRACT NO. 87431		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BRS-1322(124)			