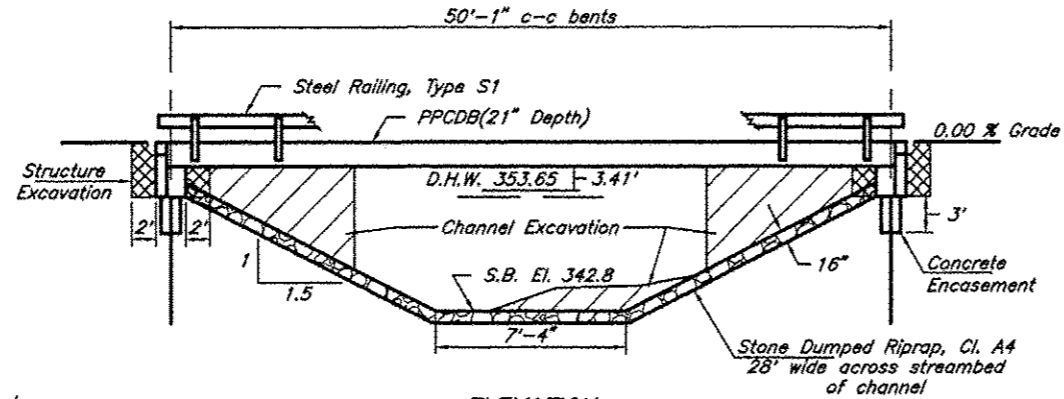


B.M. - RR Spike in Power Pole  
24' Lt. Station 14+29  
Assumed Elev. 356.00

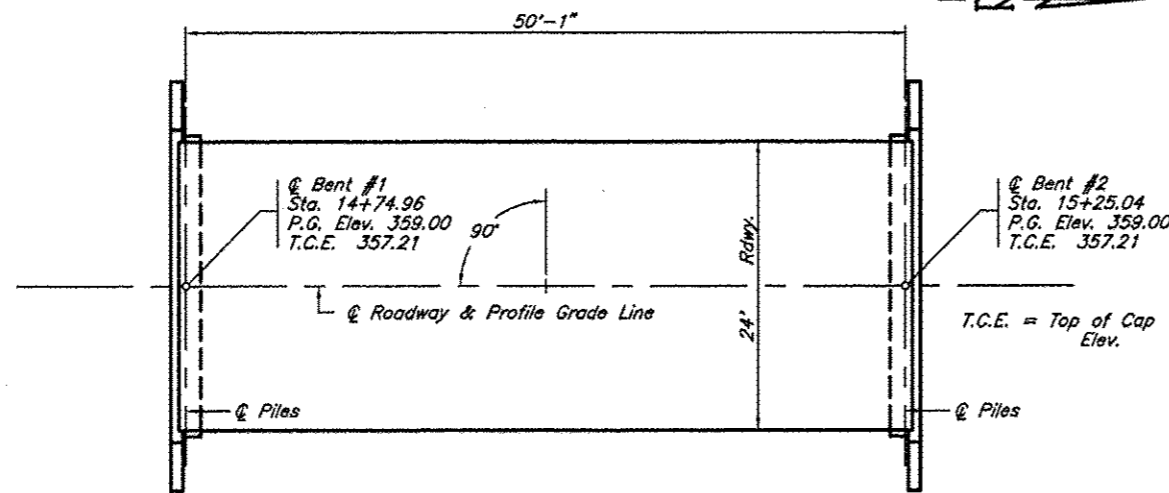
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 44	11-01164-00-BR	ALEXANDER	12	3
PROJECT NO. BROS-0003(126)			CONTRACT NO. 99461	



ELEVATION

Existing Structure - Precast reinforced concrete deck beams on closed timber pile bent abutments. 20.7' W x 29.0' L

Boring 1  
30' Lt. Sta. 14+63



PLAN

Boring 2  
7' Rt. Sta. 15+57

GENERAL NOTES

1. Metal Shell piles shall meet ASTM A 252 Grade 3 specifications.
2. Test Piles shall be driven to 110% of the Nominal Required Bearing indicated in the pile data.
3. The Contractor shall drive one test pile, as specified, in a permanent location as directed by the Engineer before ordering the remaining piles.
4. See special provisions for boring logs.
5. A Corrosion inhibitor, as covered in the Standard Specifications, shall be used in the precast prestressed concrete deck beams.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.		Total
			Piers	Abuts.	
Channel Excavation	Cu. Yds.			117	117
Stone Dumped Riprap, Cl. A4	Tons			164	164
Removal of Existing Structures	Each				1
Structure Excavation	Cu. Yds.			68	68
Concrete Structures	Cu. Yds.			16.8	16.8
Concrete Encasement	Cu. Yds.			2.1	2.1
P.P. Conc. Dk. Brm. 21" Dp.	Sq. Ft.	1224			1224
Reinforcement Bars	Pound			2254	2254
Steel Railing, Type S1	Foot	104			104
Furnishing Metal Shell Piles 12" x 0.250"	Foot			455	455
Driving Piles	Foot			455	455
Test Pile Metal Shells	Each			1	1
Name Plates	Each			1	1

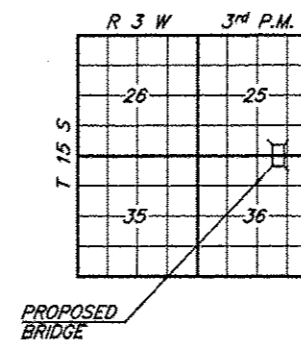
FILE DATA (2-ABUTS.)

Type & Size : Metal Shell 12" x 0.250"  
Nominal Required Bearing : 255 kips  
Factored Resistance Available : 140 kips  
Estimated Length : 69 Ft. Bent #1, 62 Ft. Bent #2  
Number Required : 8 (Includes 1 Test Pile located in Bent #1)

TRIBUTARY TO CIRCLE DITCH  
SEC. 11-01164-00-BR BUILT 20  
COUNTY UNIT ROAD DISTRICT  
ALEXANDER COUNTY  
LOADING HL-93  
STR. NO. 002-3110

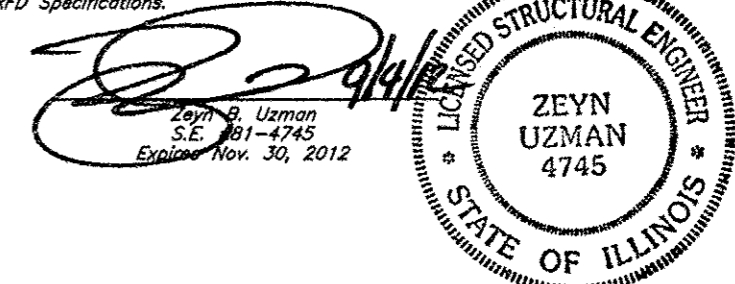
LETTERING FOR NAME PLATE

Locate Name Plate at Northeast Corner of Bridge (See Sheet 8)



LOCATION SKETCH

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 type of structure and comply with the requirements of the current AASHTO LRFD Specifications.



DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications and all applicable interims.

LOADING HL-93

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

SEISMIC DATA

Soil Site Class = E  
Design Spectral Acceleration at 0.2 sec. (S<sub>0.2</sub>) = 1.360  
Design Spectral Acceleration at 1.0 sec. (S<sub>1.0</sub>) = 0.969  
Seismic Performance Zone (SPZ) = 4

WATERWAY INFORMATION

Drainage Area = 1.73 Sq. Mi.		Low Grade Elev. = 354.54		At Sta. 8+50		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist. Prop.	Natural H.W.E.	Head-Ft. Exist. Prop.	Headwater El. Exist. Prop.
Design	20	1410	207.2 256.2	353.65	1.06 0.00	354.71 353.65
Base	100	2080	223.7 284.4	354.34	1.13 0.85	355.47 355.19
Overtopping	±19	1373	206.0	353.60	0.94	354.54
Max. Calc.	500	2830	305.3	354.83	2.91	357.74

Over Road Flow (Sq Ft): Exist. 18.5 326.1  
Note: No over road flow used with proposed structure to allow for future raising of the approaches.

GENERAL PLAN & ELEVATION  
TOWNSHIP ROUTE 44 (TWENTE CROSSING ROAD)  
TRIBUTARY TO CIRCLE DITCH  
SECTION 11-01164-00-BR  
ALEXANDER COUNTY  
STRUCTURE NO. 002-3110