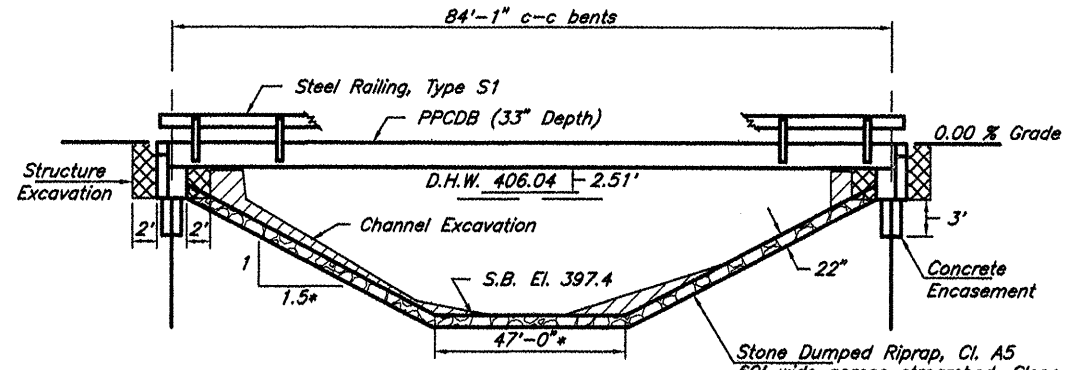


B.M. - Dbl. nail in PP
21' Rt. Sta. 14+49
Assumed Elev. 412.00

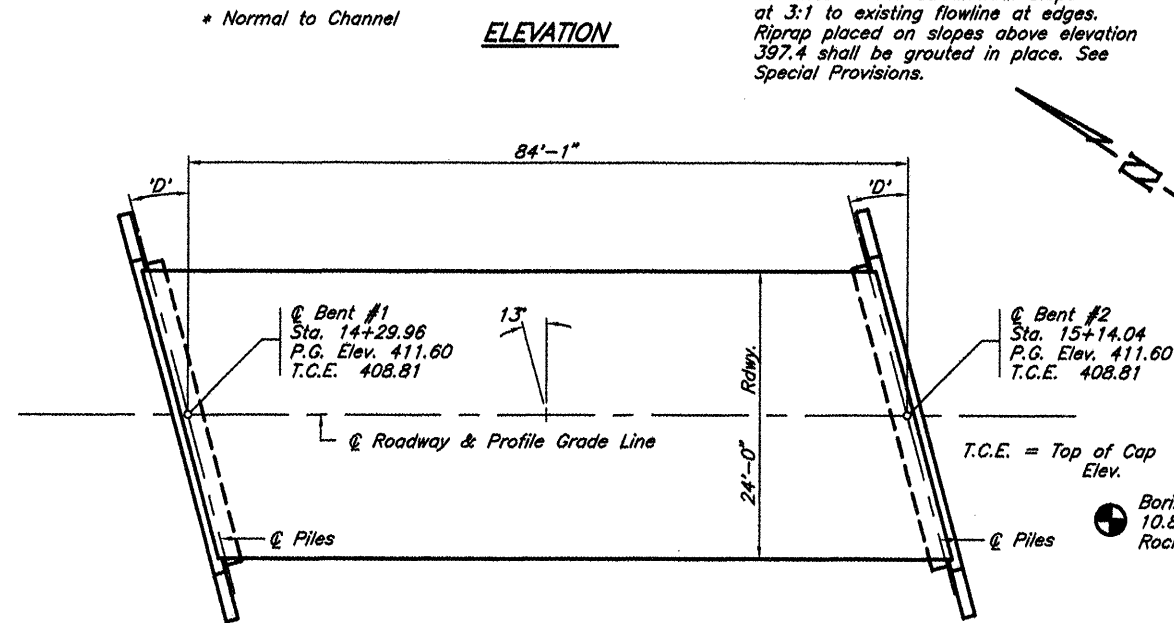
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 209	09-01194-00-BR	UNION	12	3
PROJECT NO. BROS-181(50)			CONTRACT NO. 99466	



GENERAL NOTES

- Steel H piles shall meet AASHTO M270 Grade 50 specifications.
- Test Piles shall be driven to 110% of the Nominal Required Bearing indicated in the pile data.
- The Contractor shall drive one test pile, as specified, in a permanent location as directed by the Engineer before ordering the remaining piles.
- See special provisions for boring logs.
- A Corrosion inhibitor, as covered in the Standard Specifications, shall be used in the precast prestressed concrete deck beams.

Existing Structure - Timber deck on steel stringers with closed timber and concrete abutments. 16'W x 51'L (Structure collapsed into creek)



TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.		Total
			Piers	Abuts.	
Channel Excavation	Cu. Yds.			197	197
Stone Dumped Riprap, Cl. A5	Tons			976	976
Removal of Existing Structures	Each				1
Structure Excavation	Cu. Yds.			50	50
Concrete Structures	Cu. Yds.			20.4	20.4
Concrete Encasement	Cu. Yds.			3.4	3.4
P.P. Conc. Dk. Brn. 33" Dp.	Sq. Ft.	2040			2040
Reinforcement Bars	Pound			2444	2444
Steel Railing, Type S1	Foot	172			172
Furnishing Steel Piles HP10X57	Foot			574	574
Driving Piles	Foot			574	574
Test Pile Steel HP10X57	Each			1	1
Pile Shoes	Each			10	10
Name Plates	Each			1	1

PLAN

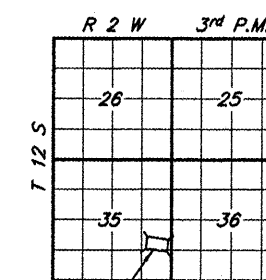
Skew Angle "D" = 13' Right Forward

Boring 1
32.0' Rt. Sta. 14+30.7
Rock Elev. 367.1

DUTCH CREEK
SEC. 09-01194-00-BR BUILT 20
COUNTY UNIT ROAD DISTRICT
UNION COUNTY
LOADING HL-93
STR. NO. 091-3235

LETTERING FOR NAME PLATE

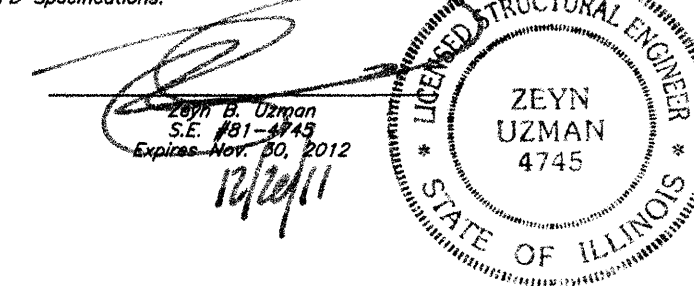
Locate Name Plate at Northwest Corner of Bridge (See Sheet 8)



PROPOSED BRIDGE

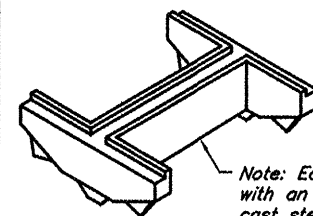
LOCATION SKETCH

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.



PILE DATA (2-ABUTS.)

Type & Size : HP10X57
Nominal Required Bearing : 330 kips
Factored Resistance Available : 155 kips
Estimated Length : 42 Feet Bent 1, 91 Feet Bent 2
Number Required : 10 (Includes 1 Test Pile located in Bent #2)



Note: Each pile shall be provided with an "APF HardBite" point or cast steel alternate, of the proper size, subject to approval of the Engineer.

PILE SHOES

DESIGN SPECIFICATIONS

2007 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 = D
Design Spectral Acceleration at 0.2 sec. (S_{ps}) = 1.154
Design Spectral Acceleration at 1.0 sec. (S_{p1}) = 0.507
Seismic Performance Zone (SPZ) = 5

WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural H.W.E.	Head-Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	15	5030	422.2	518.3	406.04	1.40	0.17	407.44	406.21
Base	100	7870	539.0	693.2	408.33	2.46	0.43	410.79	408.76
Overtopping	±130	8315		710.7	408.64		1.56		410.20
Max. Calc.	500								

Over Road Flow (Sq Ft): Exist. 226.7

GENERAL PLAN & ELEVATION
TOWNSHIP ROUTE 209 (AIRPORT ROAD)
DUTCH CREEK
SECTION 09-01194-00-BR
UNION COUNTY
STRUCTURE NO. 091-3235