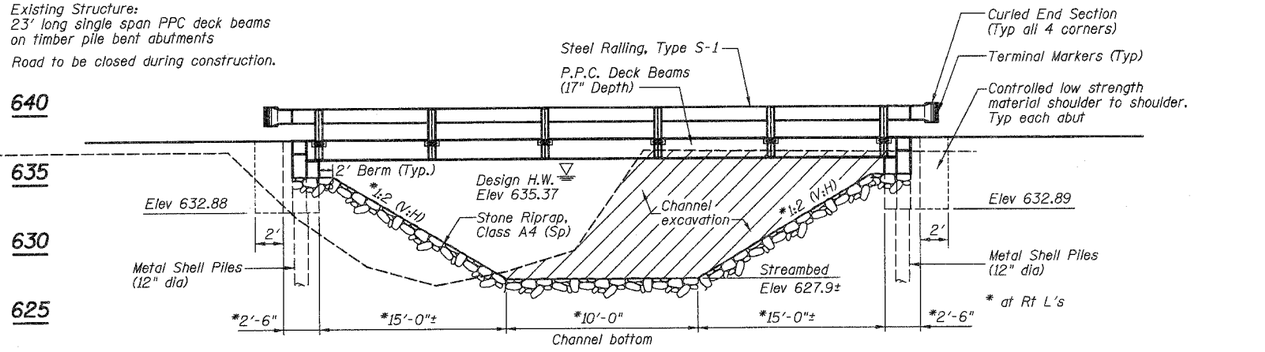
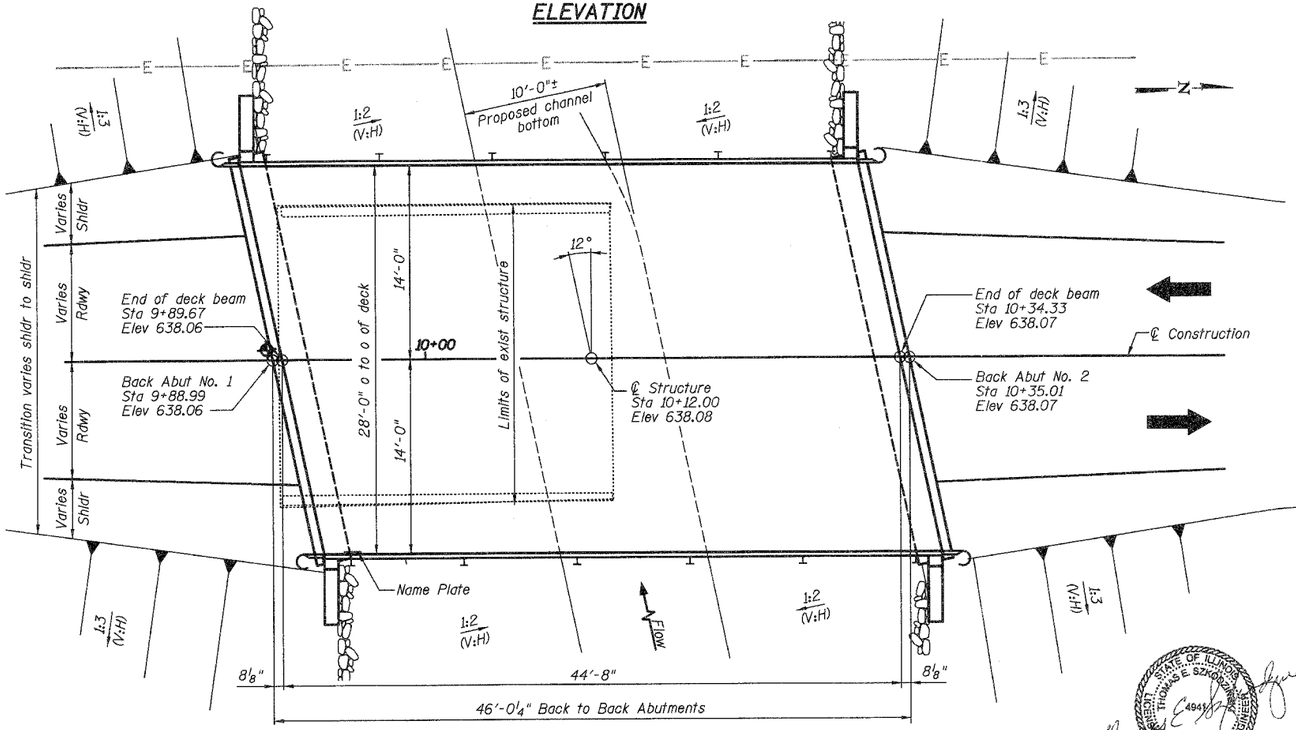
Benchmark 5137-1
RR spike in east side of 2nd powerpole south of bridge
Elev 637.54

Existing Structure:
23' long single span PPC deck beams on timber pile bent abutments

Road to be closed during construction.



ELEVATION



PLAN

◆ Indicates soil boring location

WATERWAY INFORMATION

Drainage Area = 1.78 sq mi Low Grade Elev 636.53 @ Sta 6+75

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	15	610	187	188.3	635.37	0.00	0.00	635.23	635.28
Base	100	1039	184	206.9	635.83	0.49	0.43	636.32	636.26
Max. Calc.	500	1410	189	218.7	636.13	1.04	0.99	637.17	637.12

UNNAMED TRIBUTARY
BUILT 20 BY
DEWITT COUNTY
SECTION 01-10118-00-BR
STA 10+12.00
STR. NO. 020-3189 LOADING HS20

NAME PLATE
See Std. 515001

LOADING HS20
Allow 50 lb/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2002 AASHTO 17th Edition

DESIGN STRESSES

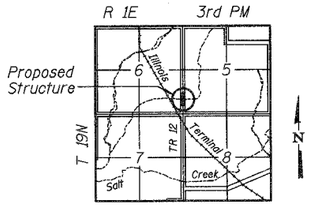
FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)

PRECAST PRESTRESSED UNITS
f'c = 6,000 psi
f'ci = 5,000 psi
f's = 270,000 psi (1/2" ϕ low relaxation strands)
f'si = 202,000 psi (1/2" ϕ low relaxation strands)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = .048
Site Coefficient (S) = 1.5

DATE: 11/15/06
EXP 11/30/08

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 THE REQUIREMENTS OF THE CURRENT "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."



LOCATION SKETCH

Sheet No. 1 of 6 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 12	*	DEWITT	24	7
FED.ROAD DIST.NO.		ILLINOIS	PROJECT	

* 01-10118-00-BR Contract # 91360

GENERAL NOTES:

For Soil Boring Data see Special Provisions.

Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60 (IL Modified). See Special Provisions.

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

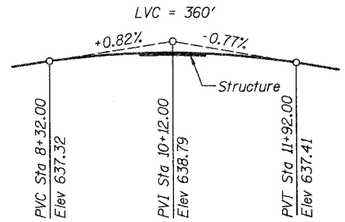
The top surface of the beams shall be finished according to Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".

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

All Construction joints shall be bonded.

See Roadway Plans for channel excavation limits and quantities.

See Roadway Plans for additional riprap limits and quantities.



CONSTRUCTION PROFILE

TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Removal of Existing Structures	Each	1
Channel Excavation	Cu Yd	296
Structure Excavation	Cu Yd	108
Stone Riprap, Class A4 (Special)	Ton	245
Concrete Structures	Cu Yd	25
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq Ft	1251
Reinforcement Bars, Epoxy Coated	Pound	2230
Steel Railing, Type S1	Foot	89
Furnishing Metal Shell Piles 12"	Foot	405
Driving Piles	Foot	405
Test Pile Metal Shells	Each	1
Name Plates	Each	1
Terminal Marker - Direct Applied	Each	4
Controlled Low Strength Material	Cu Yd	16

GENERAL PLAN AND ELEVATION

REVISIONS

No.	DATE	INITIALS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

SECTION 01-10118-00-BR TR 12 OVER UNNAMED CREEK
DEWITT COUNTY

HOMER L. CHASTAIN & ASSOCIATES, LLP
CONSULTING ENGINEERS
184-001397
DECATUR (217) 422-8544 CHICAGO (773) 714-0050
ROCKFORD (815) 489-0050

DRAWN BY R KING DATE 5/06
CHECKED BY JMB DATE 5/06
BOOK NUMBER 480
PROJECT No. 5137
SHEET No.

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