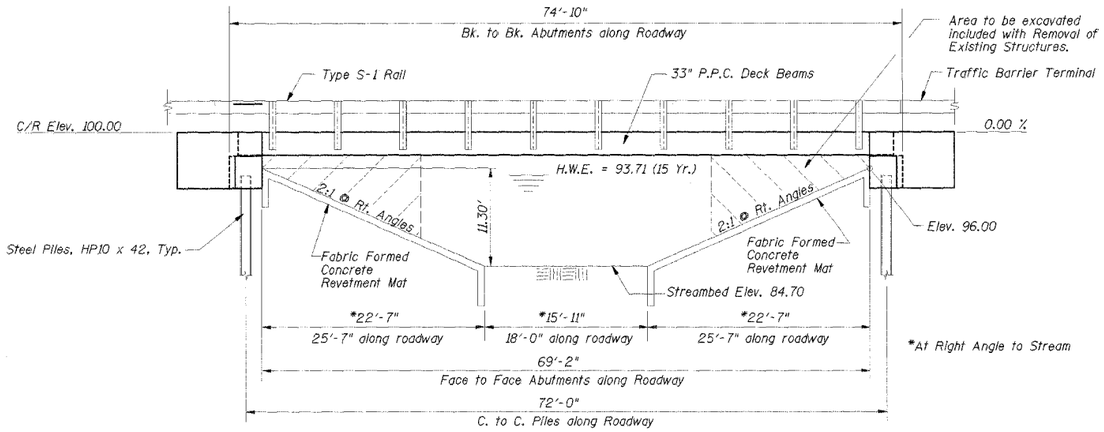
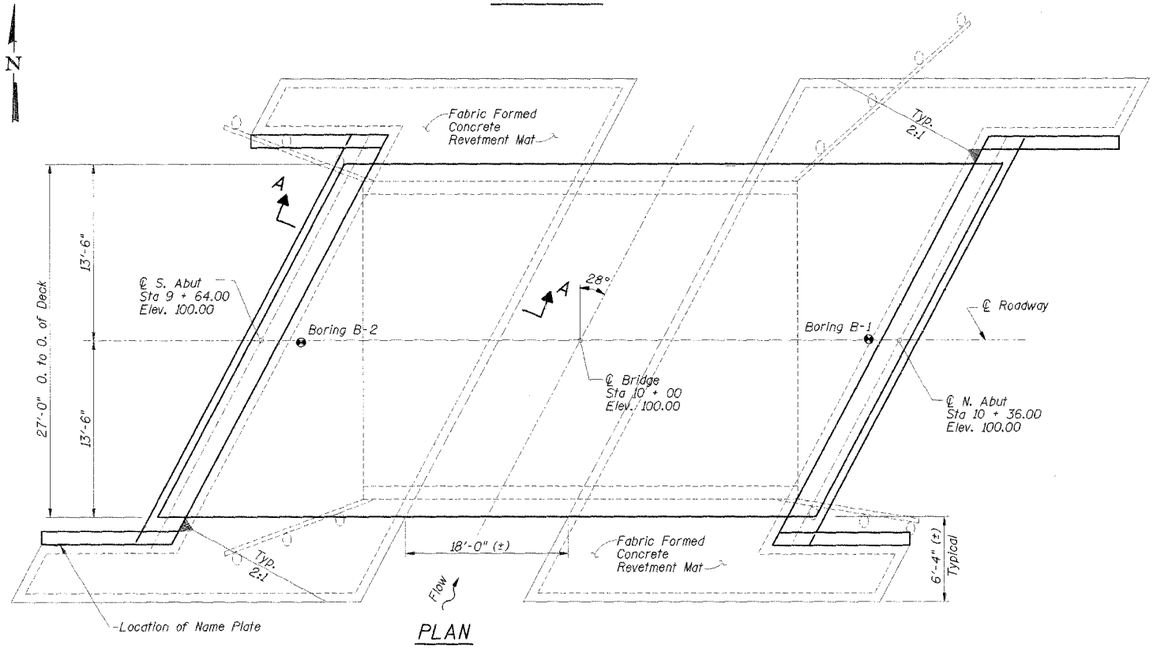
CONTRACT #91324

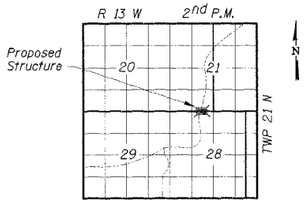
Existing Structure: One Span Prestressed Precast Concrete Deck Beams, 17" Dp. X 36" Wide, on Timber Pile Caps and Timber Piles, with Timber Backwalls and Wingwalls, 50' Span, 22'-4" clear between curbs, 24'-4" out to out, with Steel Guardrail.



ELEVATION



PLAN

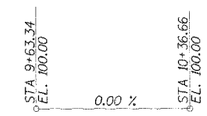


LOCATION SKETCH

STRUCTURE NO. 092-3483
SEC. 00-15132-00-BR BUILT 200
PILOT ROAD DISTRICT
VERMILION COUNTY
LOADING HS-20

NAME PLATE

See Standard 515001-01



PROFILE GRADE

DESIGN SPECIFICATIONS

AASHTO (2002) and applicable Interims

DESIGN LOADING

HS 20-44
25 P.S.F Future Wearing Surface

DESIGN STRESSES

f'_c = 3,500 psi (Cast in Place Concrete)
f'_c = 5,000 psi (P.P.C. Units)
f'_{ci} = 4,000 psi (P.P.C. Units)
f_y = 60,000 psi (Reinforcement)
f'_s = 270,000 psi (½" ϕ Strands)
f'_{si} = 189,000 psi (½" ϕ Strands)

WATERWAY DATA

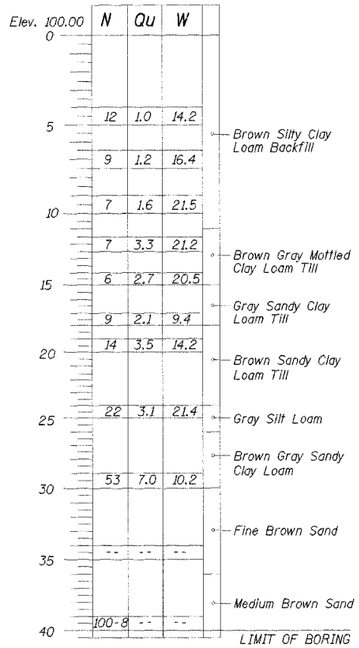
Drainage Area	8.54 Sq. Mi.
Existing Opening (15 Yr.)	294 Sq. Ft.
Required Opening (15 Yr.)	271 Sq. Ft.
Proposed Opening (15 Yr.)	305 Sq. Ft.
Design Discharge (15 Yr.)	1272 C.F.S.
Computed Discharge (100 Yr.)	2004 C.F.S.
15 Yr. Head	0.02 Ft.
100 Yr. Head	0.05 Ft.

BORING DATA

N - Standard Penetration Test - Blows per foot to drive 2" O.D. split spoon sampler 12" with 140 lb. hammer falling 30".
Qu - Unconfined Compressive Strength - Tons/Sq. Ft.
W - Water Content - Percentage of oven dry weight - %
B - Bulge Failure, S - Shear Failure, E - Estimated Value

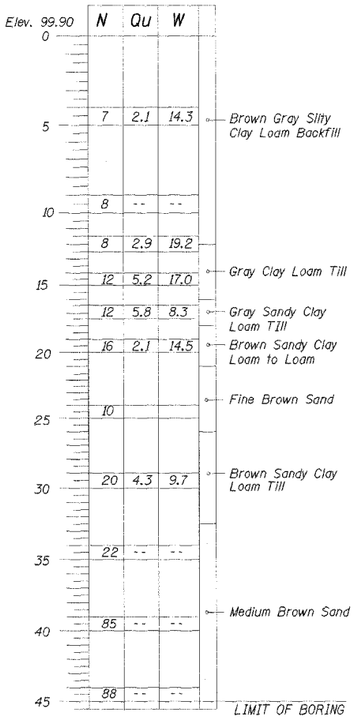
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 135	*	Vermilion	8	4
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

*00-15132-00-BR



BORING B-1

STA 10+32, 0' RT



BORING B-2

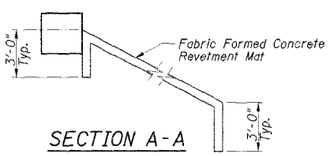
STA 9+69, 0' RT

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each	1		1
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	1980		1980
Steel Railing, Type S-1	Foot	147		147
Concrete Structures	Cu. Yds.		26.7	26.7
Furnishing Steel Piles, HP10x42	Foot		432	432
Driving Steel Piles	Foot		432	432
Test Piles, Steel HP10x42	Each		2	2
Metal Shoes	Each		12	12
Conc. Cut-off Wall	Cu. Yds.		6.8	6.8
Fabric Formed Concrete Revetment Mat	Sq. Yd.		242	242
Name Plate	Each		1	1
Reinforcement Bars	Pound		3070	3070
Structure Excavation	Cu. Yds.		147	147

GENERAL NOTES

1. The Contractor shall drive 1 steel test pile in a permanent location at each abutment as directed by the Engineer before ordering the remainder of piles.
2. Boring Data is shown only as a guide to bidders in estimating soil conditions which may be encountered during construction.
3. Class SI or MS Concrete shall be used in the abutments.



SECTION A-A

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."

LICENSED STRUCTURAL ENGINEER KEITH E. BRANDAU 81-4905 CHAMPAIGN STATE OF ILLINOIS

KEITH E. BRANDAU 10/15/04
KEITH E. BRANDAU DATE
Illinois Licensed Structural Engineer Number 4905
License Expires 11/30/04

DSGN	R.J. Wagner				
DR	R.J. Wagner				
CHK	K.E. Brandau				
APVD	K.E. Brandau	NO.	DATE	REVISION	BY APVD

FRAUENHOFFER
Frauenhoffer and Associates, P.C. Consulting Engineers
3002 Crossing Court Champaign, Il. 61822 217-351-6268

GENERAL PLAN AND ELEVATION
PILOT ROAD DISTRICT
SECTION 00-15132-00-BR
VERMILION COUNTY

SHEET 4
DWG NO. plt-gpe.dgn
DATE SEP 2004
PROJ NO. 20054