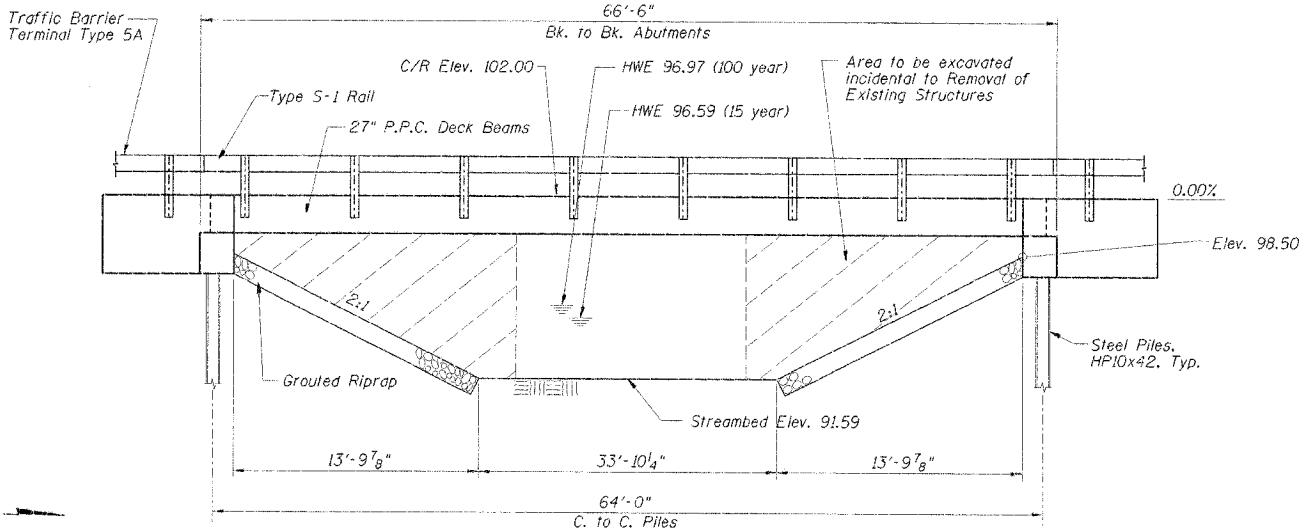
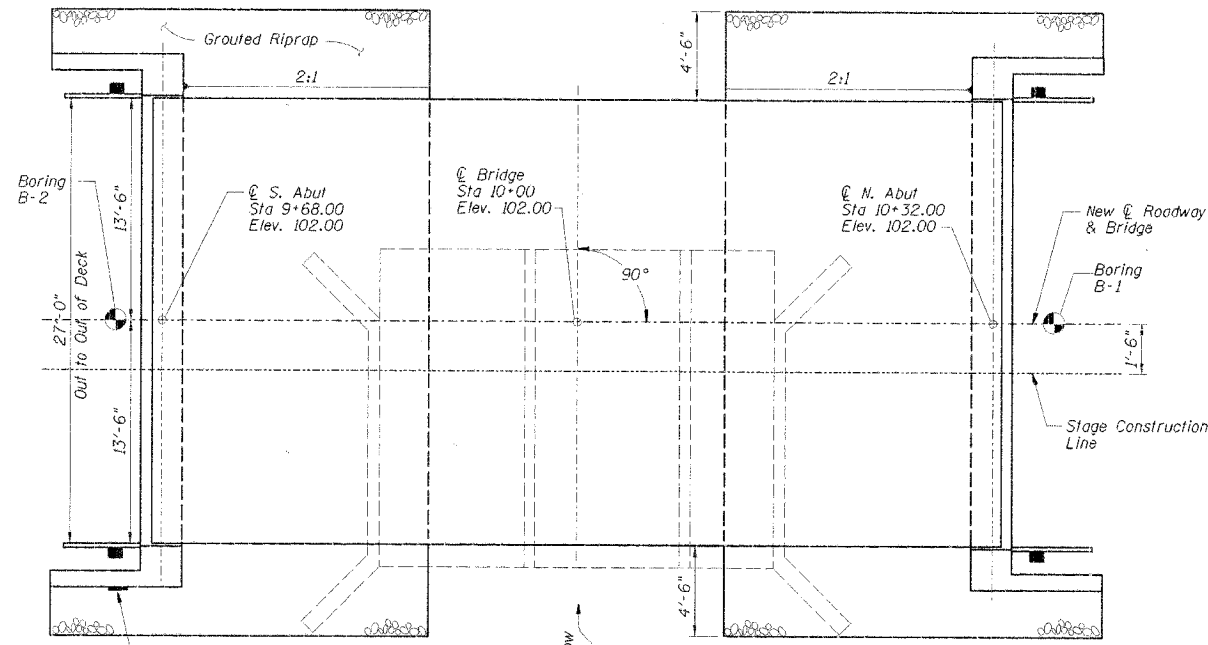


EXISTING STRUCTURE Description: Three span 7'-12'-12' conc. slab on conc. piers & closed conc. abutments with conc. wing, 30' F/F Abut, 19'-3" 0-0 deck.



ELEVATION

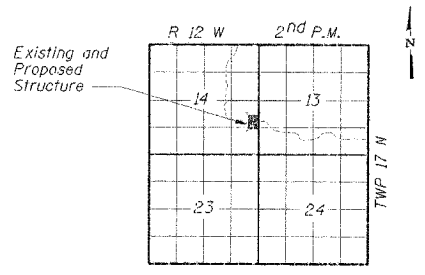


PLAN

GENERAL NOTES

- 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. Test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.
- Boring Data is shown only as a guide to bidders in estimating soil conditions which may be encountered during construction.
- Class SI or MS Concrete shall be used in the abutments.
- Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53 Grade 60.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

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

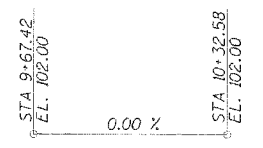


LOCATION SKETCH

STRUCTURE NO. 092-3479
SEC. 00-06121-00-BR BUILT 200
ELWOOD 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 ($\frac{1}{2}$ " ϕ Strands)
- $f'_{si} = 201,960$ psi ($\frac{1}{2}$ " ϕ Strands)

WATERWAY DATA

Drainage Area	4.99 Sq. Mi.
Existing Opening (15 Yr.)	98.5 Sq. Ft.
Required Opening (15 Yr.)	212.6 Sq. Ft.
Proposed Opening (15 Yr.)	219.3 Sq. Ft.
Design Discharge (15 Yr.)	637 C.F.S.
Computed Discharge (100 Yr.)	985 C.F.S.
15 Yr. Head	0.03 Ft.
100 Yr. Head	0.10 Ft.



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."

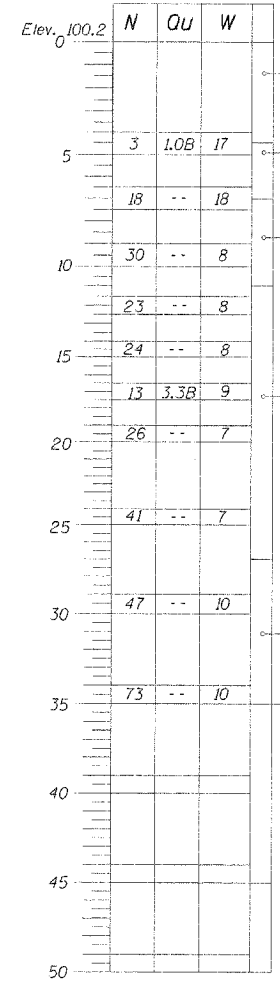
JOHN A. FRAUENHOFFER
Illinois Licensed Structural Engineer Number 4192
License Expires 11/30/06

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

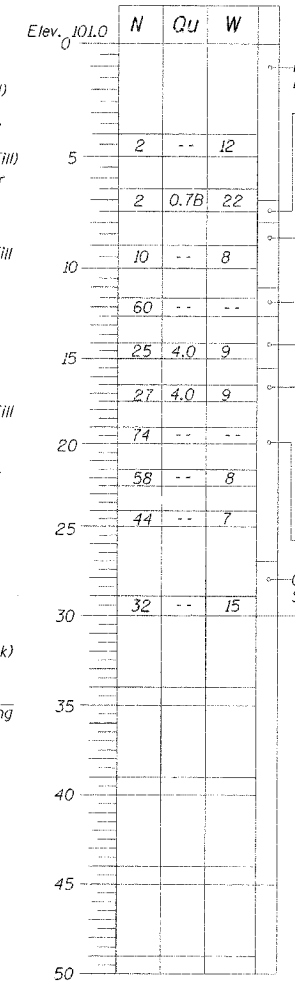
ROUTE NO.	SECTION	COUNTY	TOWNSHIP	SHEET NO.
TR 318A	*	Vermilion	12	4

*00-06121-00-BR



BORING B-1

STA 10+36.5, Along ϕ of Roadway



BORING B-2

STA 9+64.4, Along ϕ of Roadway

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each	1		1
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	1760		1760
Steel Railing, Type S-1	Foot	132		132
Concrete Structures	Cu. Yds.		23.6	23.6
Furnishing Steel Piles, HP10x42	Foot		318	318
Driving Piles	Foot		318	318
Test Piles, Steel HP10x42	Each		2	2
Pile Shoes	Each		14	14
Conc. Cut-off Wall	Cu. Yds.		6.0	6.0
Grouted Riprap	Sq. Yds.		132	132
Name Plate	Each		1	1
Reinforcement Bars	Pound		2670	2670
Bar Splicers	Each		14	14
Structure Excavation	Cu. Yds.		104	104
Temporary Sheet Piling	Sq. Ft.		1591	1591

FRAUENHOFFER

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

GENERAL PLAN AND ELEVATION

ELWOOD ROAD DISTRICT
SECTION 00-06121-00-BR
VERMILION COUNTY

SHEET	4
DWG NO.	elwd-gpe.dgn
DATE	JAN 2005
PROJ NO.	20053