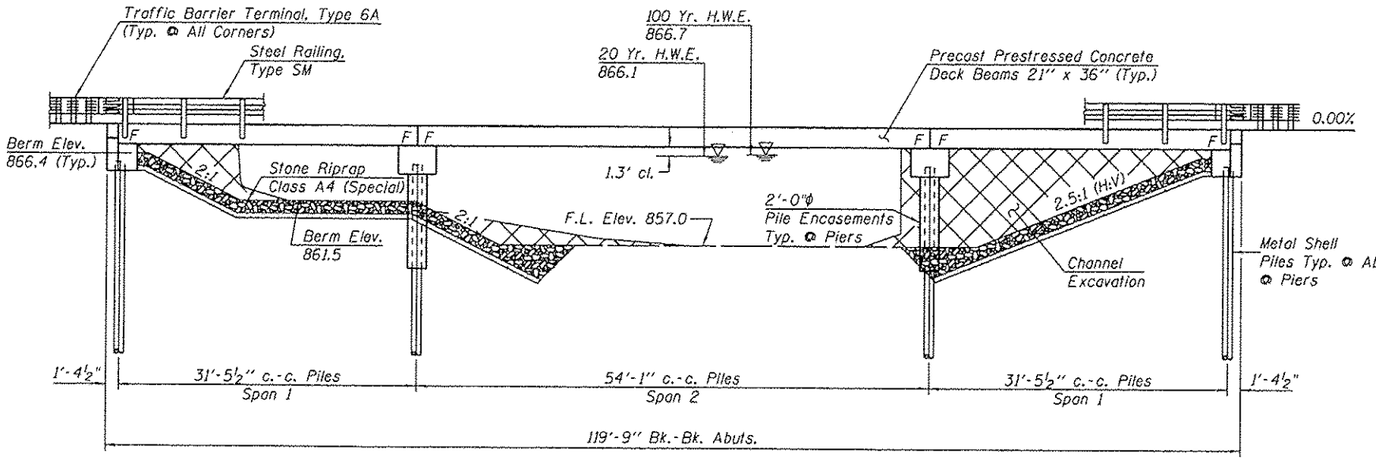
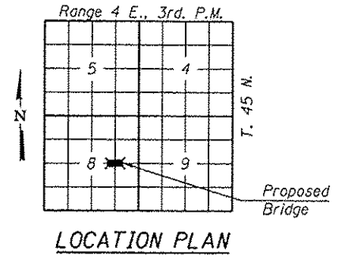


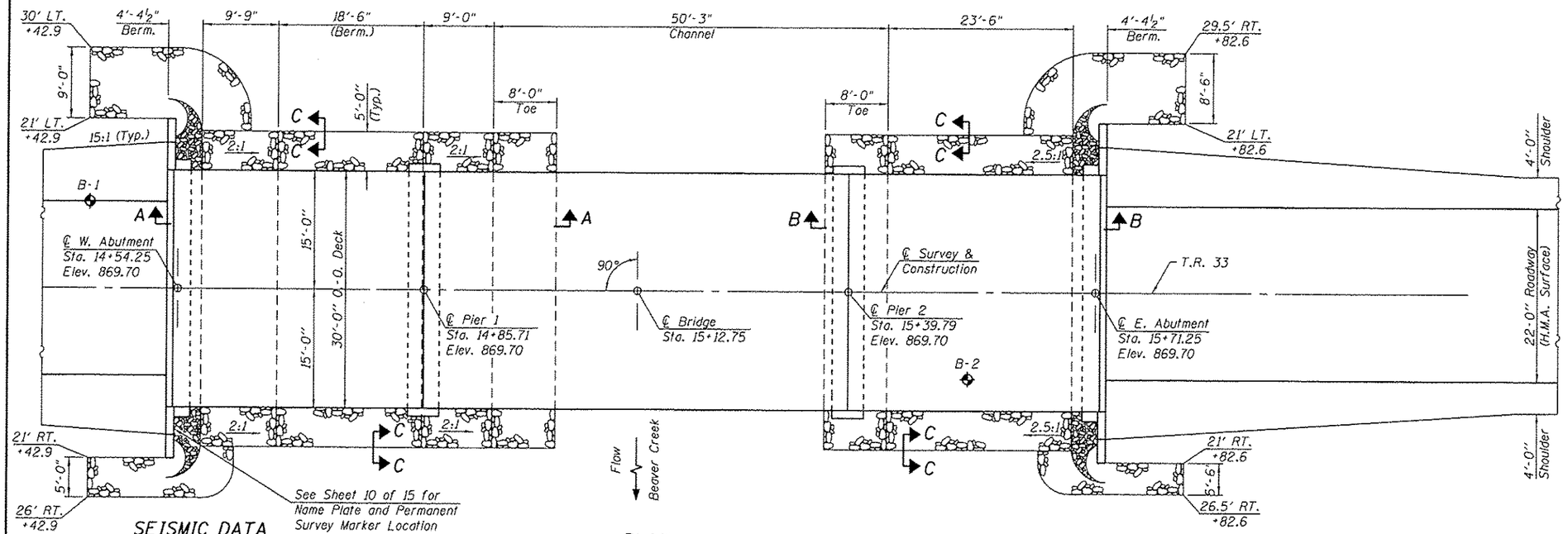
ELEVATION



LOCATION PLAN

INDEX OF SHEETS

1.	General Plan & Elevation
2.	General Notes and Details
3.	Superstructure
4.	PPC Deck Beam - Span 1 & 3
5.	PPC Deck Beam Details - Span 1 & 3
6.	PPC Deck Beam - Span 2
7.	PPC Deck Beam Details - Span 2
8-9.	Steel Railing, Type SM
10.	Abutments
11.	Piers
12.	Metal Shell Pile Details
13-15.	Soil Boring Logs



PLAN

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.111
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.199
Soil Site Class = E

WATERWAY INFORMATION

Drainage Area	26.27 Sq. Mi.
Existing Opening (20 Yr.)	463 Sq. Ft.
Required Opening (20 Yr.)	698 Sq. Ft.
Proposed Opening (20 Yr.)	698 Sq. Ft.
Design Discharge (20 Yr.)	1,574 C.F.S.
Created Head (20 Yr.)	0.2 Ft.
100 Year Discharge	2,210 C.F.S.
100 Yr. Created Head	0.4 Ft.

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	864.6	844.0	844.0	864.6

DESIGN STRESSES

f'_c = 6,000 p.s.i. (Prestressed Beams)
f'_{ci} = 5,000 p.s.i. (Prestressed Beams)
f'_s = 270,000 p.s.i. (Prestressed Strands)
f_{si} = 201,960 p.s.i. (Prestressed Strands)
f'_c = 3,500 p.s.i. (Concrete -- Field Units)
f_y = 60,000 p.s.i. (Reinf. Bars)
LOADING HL-93
Design Specifications: 2012 AASHTO LRFD
50#/Sq. Ft. included in dead load for future wearing surface.

"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 requirements of the specified 'AASHTO LRFD Bridge Design Specifications'".

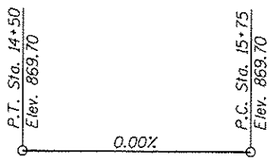
John A. Morris 3-27-13
ILLINOIS STRUCTURAL NO. 4277 (Expires 11/30/14)

LICENSED STRUCTURAL ENGINEER * JOHN A. MORRIS NO. 81-4277 * STATE OF ILLINOIS

BEAVER CREEK
BUILT 20__ BY
POPLAR GROVE ROAD DIST.
BOONE COUNTY
SEC. 12-08120-00-BR
COUNTY HIGHWAY 48
STR. NO. 004-3096 LOADING HL-93

LETTERING FOR NAME PLATE

See Std. 515001



PROPOSED PROFILE GRADE

(T.R. 33 - Top of H.M.A. Surface)

GENERAL PLAN & ELEVATION
T.R. 33 (CENTERVILLE ROAD)
SECTION 12-08120-00-BR
BOONE COUNTY
STATION 15+12.75
S.N. 004-3096

FILE NAME = 12-540.GPE.dgn	USER NAME = rfritzenko	DESIGNED - J.A.M.	REVISED -	
		CHECKED - A.R.K.	REVISED -	
	PLOT SCALE = #SCALE1#	DRAWN - A.D.S.	REVISED -	
	PLOT DATE = 3/23/2013	CHECKED -	REVISED -	

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003585
FREEPORT, IL ROCKFORD, IL
ROCHELLE, IL SPRINGFIELD, IL
MONROE, WI

GENERAL PLAN & ELEVATION
S.N. 004-3096
SHEET NO. 1 OF 15 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
33	12-08120-00-BR	BOONE	26	7
		CONTRACT NO. 85589		
	ILLINOIS FED. AID PROJECT			

*12-540