

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	DATE
FAP 774	107B-2	EFFINGHAM	344	322
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

SHEET NO. 1
6 SHEETS

Bench Mark : Chiseled "a" above bridge name plate on SN025-0077 (IL 32/33 overflow structure) Elev. 543.66
Existing Structure : SN 025-3161, built in 1982 as TR-160 SEC. 80-03109-00-BR at Sta. 50+12.
Single span precast reinforced concrete deck beam bridge abutments on steel H-piling, 80'-0" back to back of abutments, 25'-0" overall width. The existing structure shall remain open to traffic until the proposed structure and relocated road are open to traffic; the existing structure and roadway shall then be removed.
No staging is required.
Proposed Structure: Three span PPC Deck Beam Structure on pile bent abutments and pile bent piers.
Salvage : Deck beams and railing to be salvaged and delivered to a location (within 15 miles travel distance) designated by the Douglas Township Commissioner, Mr. Clem Kaufman Maintenance Building: (217) 347-5734 Cell Phone: (217) 254-5734

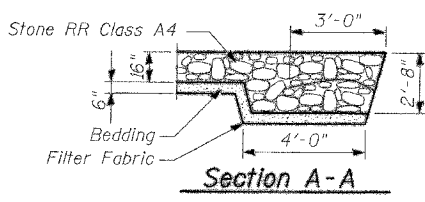
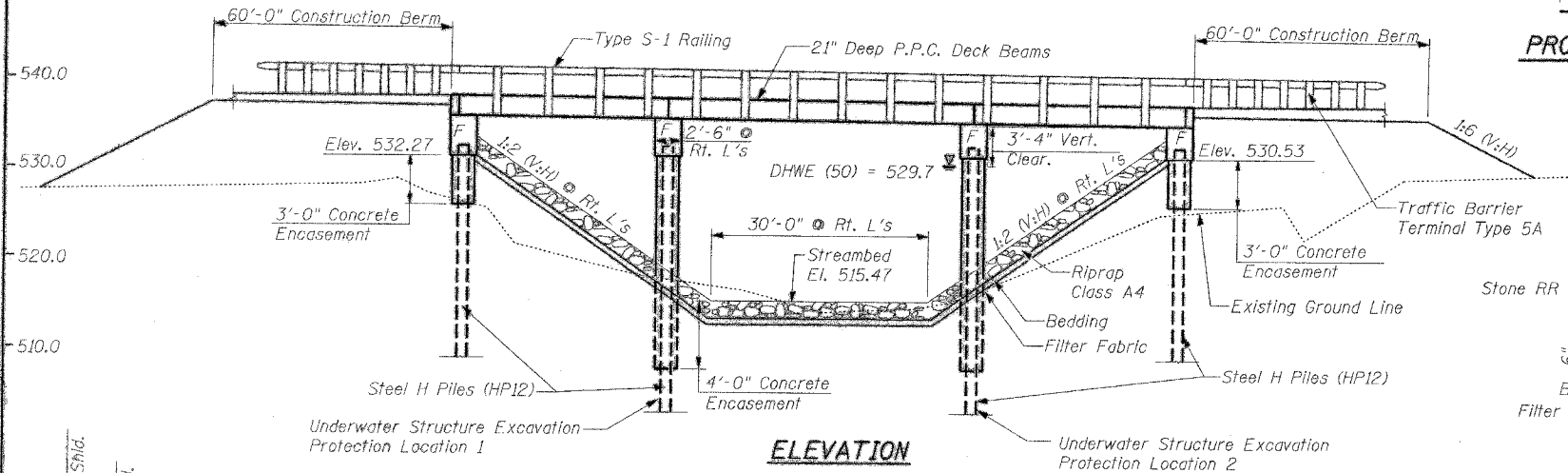
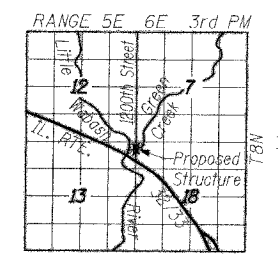
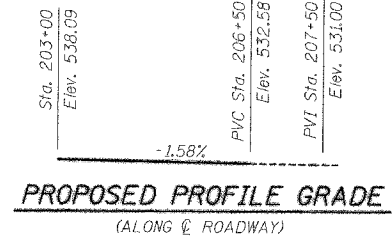
STATION 204+33.91
BUILT 200 BY
STATE OF ILLINOIS
TR 160
SECTION 107B-2
LOADING HS20
STR. NO. 025-3309

NAME PLATE

Locate Name Plate at Southeast Corner of Bridge (See Std. CN)

GENERAL NOTES

- The Contractor shall drive 2 HPI2 test piles, as specified, in a permanent location, one at the North Abutment and one at Pier #1, as directed by the Engineer before ordering the remaining piles.
- Class SI Concrete shall be used throughout except in the deck beams.
- Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of abutments.
- All construction joints shall be bonded.

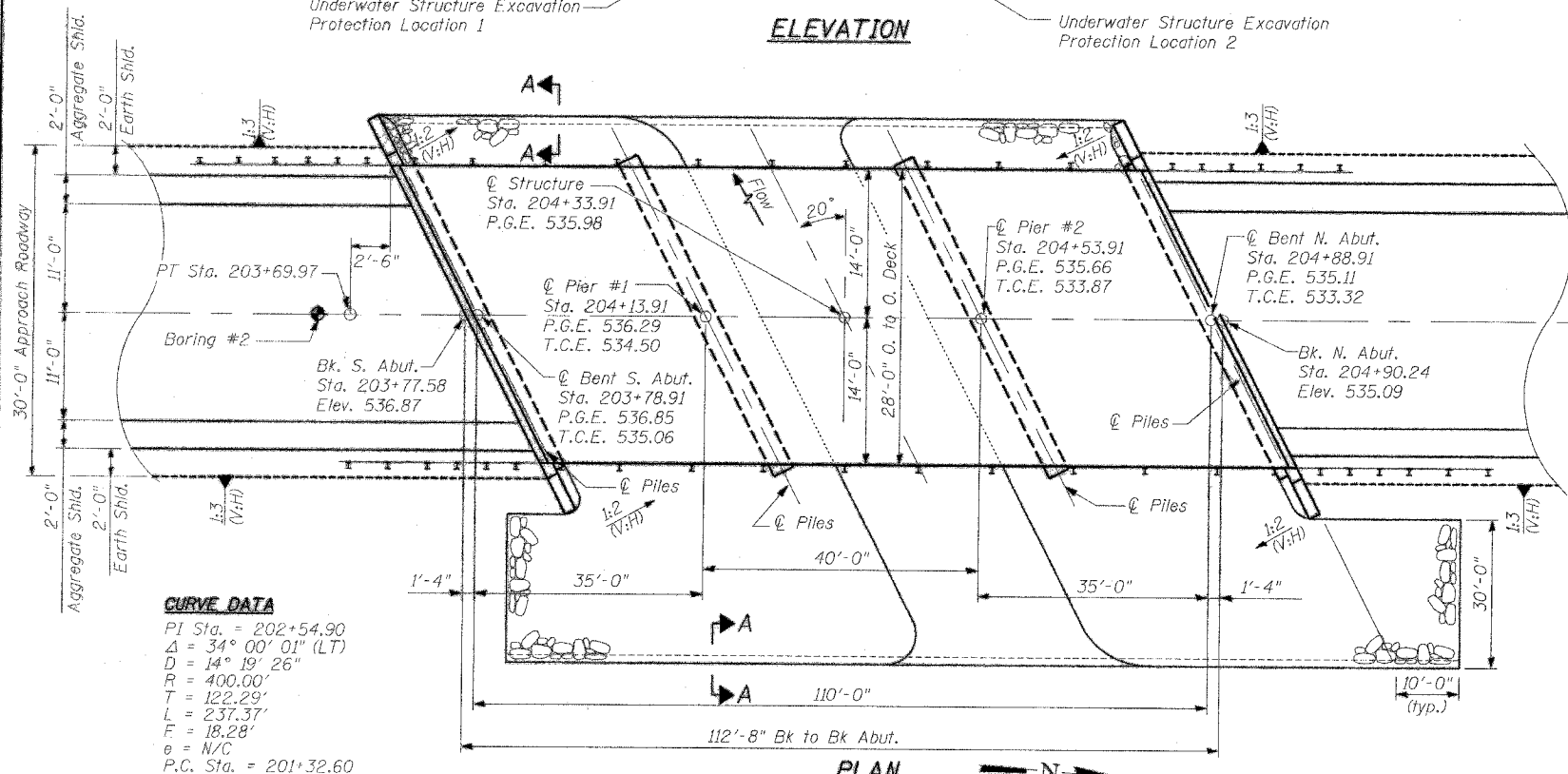


WATERWAY INFORMATION
(Without Little Wabash River Backwater Effects)

Drainage Area = 4180 Sq. Miles Existing Low Grade Elev. = 529.70 ft. @ Sta. 147+82 (Existing 1200th Street)
Proposed Low Grade Elev. = 531.00 ft. @ Sta. 208+50 (Realigned 1200th Street)

Flood	Freq. Yr.	Discharge C.F.S.	Opening Sq. Ft.		Ex. Nat. H.W.E.	Pr. Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.			Exist.	Prop.	Exist.	Prop.
Design	50	5636	625	845	528.7	529.7	0.1	0.7	528.8	528.3
Base	100	6428	688	904	529.6	530.4	0.2	0.7	529.8	531.1
Ex. Overtop	5+	3000	431	-	525.9	-	0.3	-	526.2	-
Pr. Overtop	5+	3050	-	624	-	527.0	0.0	-	527.0	-

10 Year Velocity through Existing Bridge = 7.52fps
10 Year Velocity through Proposed Bridge = 5.33fps



CURVE DATA
PI Sta. = 202+54.90
 $\Delta = 34^\circ 00' 01''$ (LT)
D = 14° 19' 26"
R = 400.00'
T = 122.29'
L = 237.37'
E = 18.28'
e = N/C
P.C. Sta. = 201+32.60
P.T. Sta. = 203+69.97

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.		Total
			Piers	Abuts.	
Removal of Existing Structures	Each	--	--	--	1
Concrete Structures	Cu. Yd.	--	15.4	22.0	37.4
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	3101.0	--	--	3101
Steel Railing, Type S1	Foot	222	--	--	222
Reinforcement Bars, Epoxy Coated	Pound	--	1784	2762	4546
Furnishing Steel Piles HP12x53	Foot	--	374	306	680
Driving Steel Piles	Foot	--	374	306	680
Test Pile Steel HP12x53	Each	--	1	1	2
Name Plates	Each	--	--	--	1
Concrete Encasement	Cu. Yd.	--	27.9	3.5	31.4
Stone Riprap, Class A4	Sq. Yd.	--	--	--	1088
Filter Fabric For Use With Riprap	Sq. Yd.	--	--	--	1088
Structure Excavation	Cu. Yd.	--	--	71	71
Porous Granular Embankment	Cu. Yd.	--	--	53	53
Underwater Structure Excavation Protection Location 1	Each	--	1	--	1
Underwater Structure Excavation Protection Location 2	Each	--	1	--	1

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



Toni M. McDonough 9-12-03
Date
Toni M. McDonough
Licensed Structural Engineer
State of Illinois No. 01-5025
License Expires 11/30/04

GENERAL PLAN & ELEVATION
1200th STREET OVER GREEN CREEK
FAP RTE. 774, SECTION 107B-2
EFFINGHAM COUNTY
STATION 204+33.91
S.N. 025-3309

DESIGNED	TMM
CHECKED	KCM
DRAWN	CAR
CHECKED	TMM

DESIGN STRESSES
FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
PRECAST PRESTRESSED UNITS
 $f'_c = 5,000$ psi
 $f_{ci} = 4,000$ psi
 $f'_s = 270$ ksi (1/2" Dia. stress relieved strands)
 $f_{si} = 189$ ksi (1/2" Dia. stress relieved strands)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.070g
Site Coefficient (S) = 1.5

LOADING HS20-44
Allow 50#/#sq. Ft. for future wearing surface.

DESIGN SPECIFICATIONS
2002 AASHTO