

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

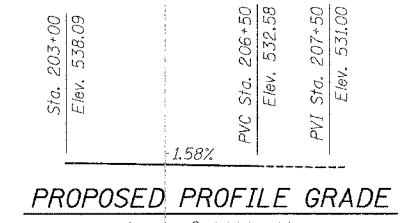
ROUTE NO.	SECTION	COUNTY	SHEETS	DATE	SHEET NO. 1
FAP 774	107B-2	EFFINGHAM	27	20	8 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 74131		

Bench Mark : Chiseled "□" above bridge name plate on SNO25-0077 (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

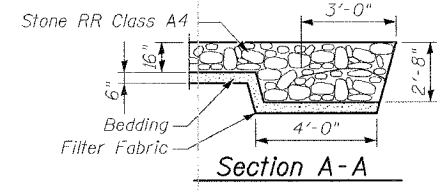
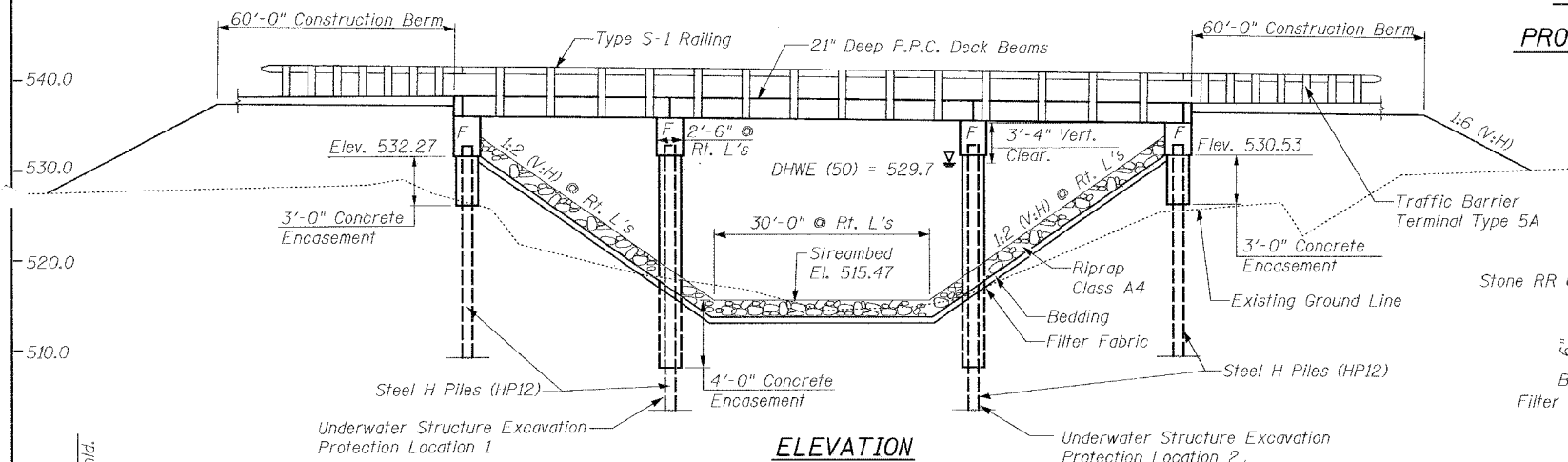
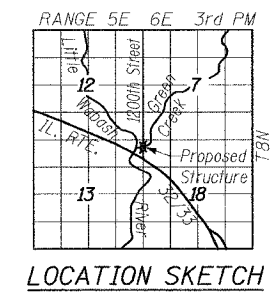
STATION 204+33.91  
BUILT 200 BY  
STATE OF ILLINOIS  
TR 160  
SECTION 107B-2  
LOADING HS20  
STR. NO. 025-3309

GENERAL NOTES

- The Contractor shall drive 2 HP12 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 S1 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.



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



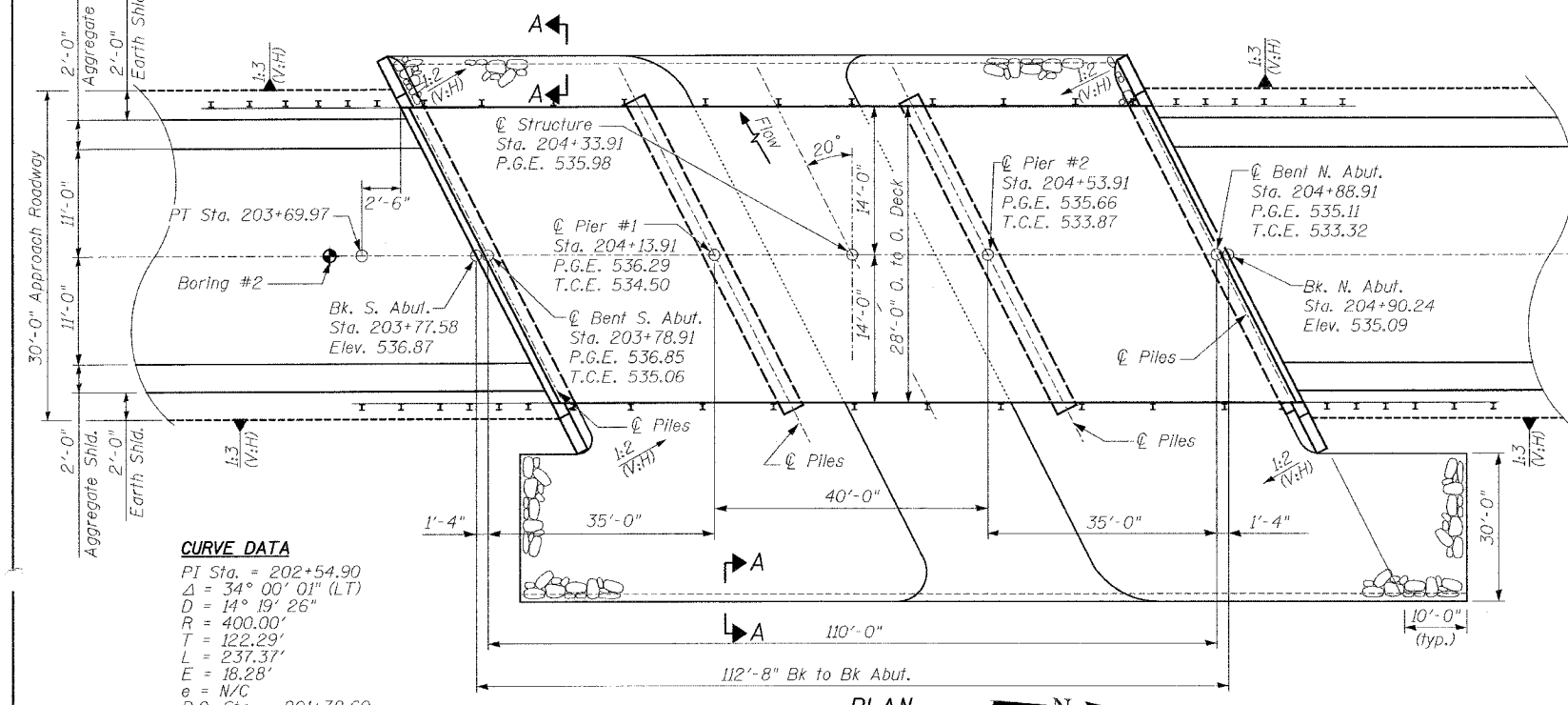
WATERWAY INFORMATION

(Without Little Wabash River Backwater Effects)

Drainage Area = 41.80 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	530.4
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 = 7.62fps  
10 Year Velocity through Proposed Bridge = 5.33fps



CURVE DATA  
PT Sta. = 202+54.90  
Δ = 34° 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	--	--	3101.0
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	Sq. Yd.	--	--	--	1088
Structure Excavation	Cu. Yd.	--	--	63	63
Porous Granular Embankment, (Special)	Cu. Yd.	--	--	39	39
Geocomposite Wall Drain	Sq. Yd.	--	--	31	31
Pipe Underdrains for Structures 4"	Foot	--	--	78	78
Underwater Structure Excavation Protection Location 1	Each	--	1	--	1
Underwater Structure Excavation Protection Location 2	Each	--	1	--	1

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

DESIGN STRESSES

FIELD UNITS  
f<sub>c</sub> = 3,500 psi  
f<sub>y</sub> = 60,000 psi (reinforcement)

PRECAST PRESTRESSED UNITS

f<sub>c</sub> = 5,000 psi  
f<sub>ci</sub> = 4,000 psi  
f<sub>s</sub> = 270 ksi (1/2" Dia. stress relieved strands)  
f<sub>si</sub> = 189 ksi (1/2" Dia. stress relieved strands)

DESIGNED	TMM
CHECKED	KCM
DRAWN	CAR
CHECKED	TMM

APPROVED  
Toni M. McDonough  
Licensed Structural Engineer  
State of Illinois No. 81-5025  
License Expires 11/30/06  
Date 4-26-06



APPROVED  
FOR STRUCTURAL ADEQUACY ONLY  
Relax E. Anderson (TSO)  
ENGINEER OF BRIDGES AND STRUCTURES

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