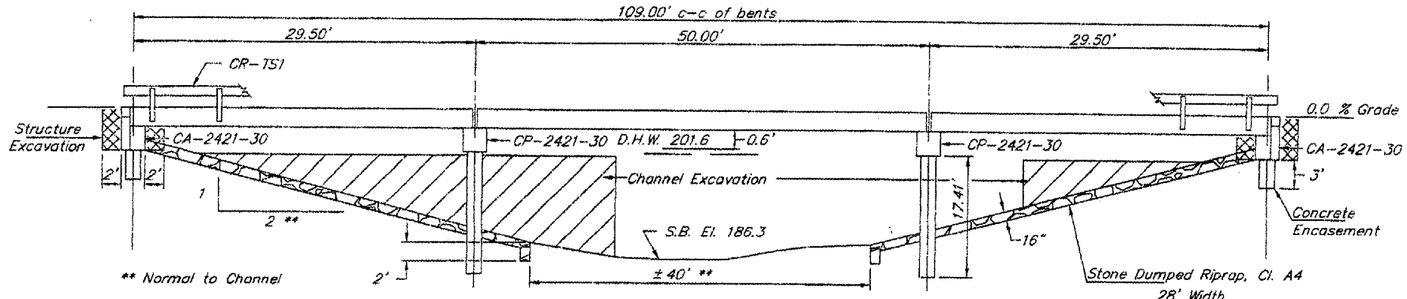
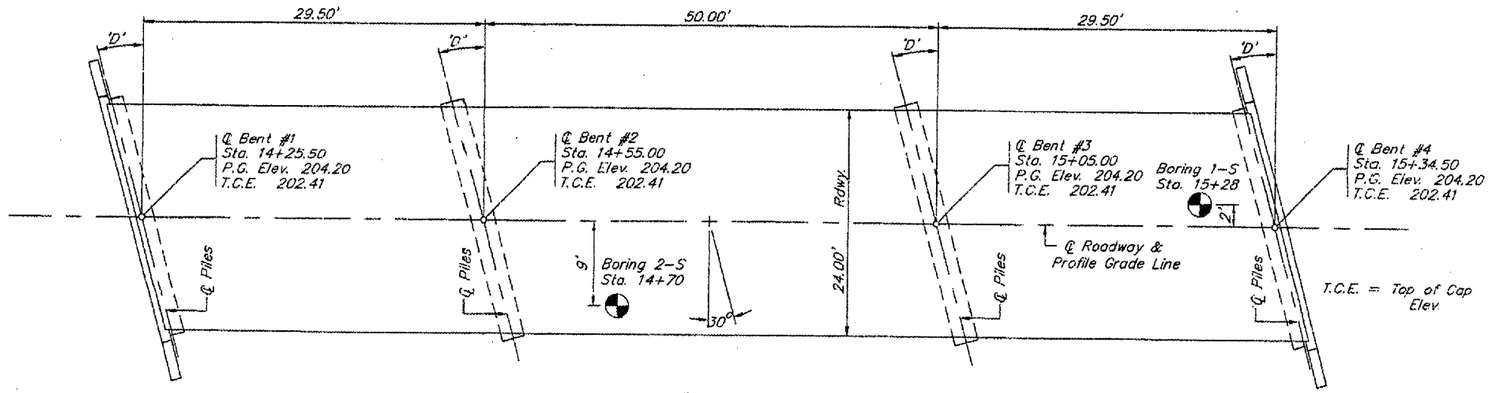
B.M. – Top of NW wingwall
10' Lt. Station 15+16
Assumed Elev. 199.46

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 110	83-01171-00-BR	MASSAC	15	4
PROJECT NO. BR-OS-127(12)		CONTRACT NO. 99282		



ELEVATION

Existing Structure – Concrete thru girder with closed concrete abutments.
20.2' W x 42.8' L



PLAN

Skew Angle 'D' = 30° Right Forward

PILE DATA (2-PIERS)

Type & Size : Metal Shell – 12 in. dia. x 0.25 in. walls
Nominal Required Bearing : 270 kips
Allowable Resistance Available : 90 kips
Estimated Length : 42 Feet
Number Required : 10 (Includes 1 Test Pile located in Bent #3)

PILE DATA (2-ABUTS.)

Type & Size : Metal Shell – 12 in. dia. x 0.25 in. walls
Nominal Required Bearing : 162 kips
Allowable Resistance Available : 54 kips
Estimated Length : 40 Feet
Number Required : 8 (Includes 1 Test Pile located in Bent #1)

SEVENMILE CREEK
SEC. 83-01171-00-BR BUILT 20__
COUNTY UNIT ROAD DISTRICT
MASSAC COUNTY
LOADING HS20
STR. NO. 064-3119

LETTERING FOR NAME PLATE

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

DESIGN SPECIFICATIONS

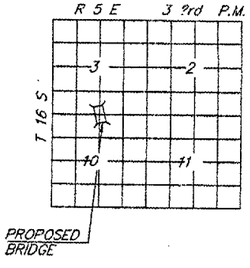
2002 AASHTO Standard Specifications – 17th ed.

LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface

SEISMIC DATA

Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 15.0%
Site Coefficient (S) = 1.2



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 14.45 Sq. Mi. Low Grade Elev. = 199.52 At Sta. 10+80

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Natural H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	15	3040	480	840*	201.6		<0.5		
Base	100	4710			202.8		<1.0		
Overtopping									
Max. Calc.	500	6130			203.5				

*Plus over the road flow of 1900 Sq. Ft.

GENERAL NOTES

1. Metal Shell piles shall meet ASTM A 252 Grade 3 specifications
2. Test Piles shall be driven to 110% of the Nominal Required Bearing indicated in the pile data.
3. The Contractor shall drive two test piles, as specified, in a permanent location as directed by the Engineer before ordering the remaining piles.
4. See special provisions for boring logs.
5. A Corrosion inhibitor, as covered in the Standard Specifications, shall be used in the precast prestressed concrete deck beams.
6. Layout of the slope protection may be varied in the field to suit ground conditions as directed by the Engineer.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub. Piers	Sub. Abuts.	Total
Removal of Existing Structures	Each				1
Concrete Structures	Cu. Yds.		17.4	20.2	37.6
P.P. Conc. Dk. Bm. 21" Dp.	Sq. Ft.	2640			2640
Steel Railing, Type S1	Foot	220			220
Reinforcement Bars	Pound		1780	2560	4340
Furnishing Metal Shell Piles 12"	Foot		378	280	658
Driving Piles	Foot		378	280	658
Test Pile Metal Shells	Each		1	1	2
Concrete Encasement	Cu. Yds.		15.2	2.1	17.3
Name Plates	Each				1
Structure Excavation	Cu. Yds.				7
Channel Excavation	Cu. Yds.				769
Stone Dumped Riprap, Class A4	Tons				205

STATE OF ILLINOIS
WAYNE E. ANDERSON
061-004625
LICENSED STRUCTURAL ENGINEER

Expires 11-30-2008

GENERAL PLAN & ELEVATION
TOWNSHIP ROUTE 110
SEVENMILE CREEK
SECTION 83-01171-00-BR
MASSAC COUNTY
STATION 14+80