

**BENCH MARK #1:**

Railroad spike in power pole, North side of Il Rte. 9, sta. 50+03, 31.97 ft. left, Elev. 747.163.

**BENCH MARK #2:**

Railroad spike in power pole, North side of Il Rte. 9, sta. 47+91, 30.40 ft. left, Elev. 747.183.

**EXISTING STRUCTURE:**

The existing structure number 027-2536, originally built in 1923, section 14(1) in Ford County to carry a drainage ditch under Il Rte. 9 approximately 1.3 miles east of Il Rte. 115. The existing structure is an 8 ft wide by 4 ft high single box culvert. The existing structure will be removed and replaced, in stages, with a single 14 ft wide by 6 ft high cast in place box culvert.

**STAGING:**

Traffic shall be maintained at all times utilizing stage construction.

**SALVAGE:**

No Salvage

**GENERAL NOTES:**

1. Reinforcement bars shall conform to the requirements of ASTM A 706, Grade 60. See special provisions.
2. Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
3. The material used to replace the unsuitable material removed below the bottom of the proposed cast-in-place reinforced concrete box culvert and wingwalls shall be clean crushed CA-7 and shall be paid for as "Porous Granular Embankment, Special".
4. If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
5. Precast concrete culvert alternate will not be allowed.

**LOADING HS20-44**

Allow 50 #/sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**

2002 AASHTO Standard Specs. for Highway Bridges

**DESIGN STRESSES**

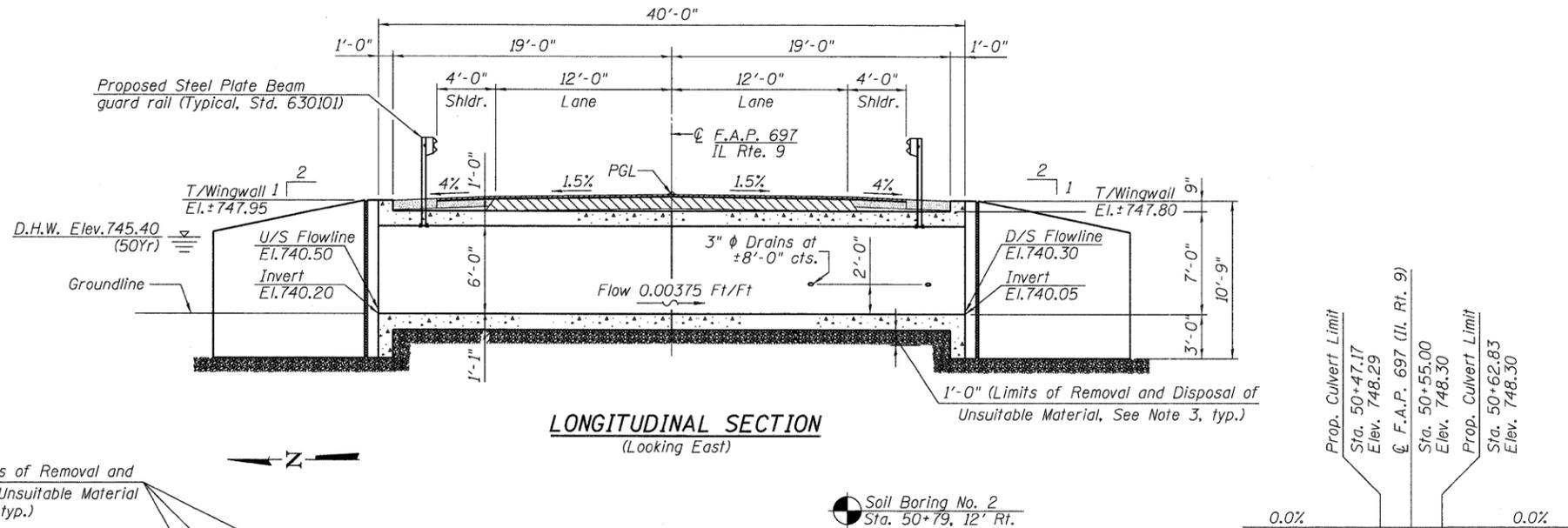
Field units  
 f'c = 3,500 psi (Concrete)  
 fy = 60,000 psi (Reinforcement)

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	U.S.	D.S.
	737.20	737.05

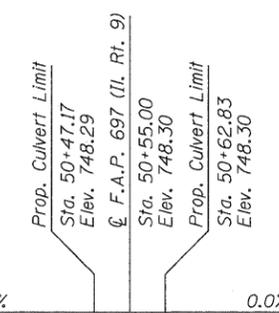
DESIGNED - GBC/GMK
CHECKED - GBC/GMK/SMK
DRAWN - RR
CHECKED - GBC/GMK/SMK

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

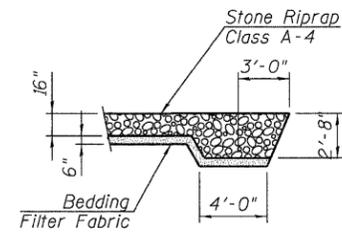


2'-0" (Limits of Removal and Disposal of Unsuitable Material See Note 3, typ.)

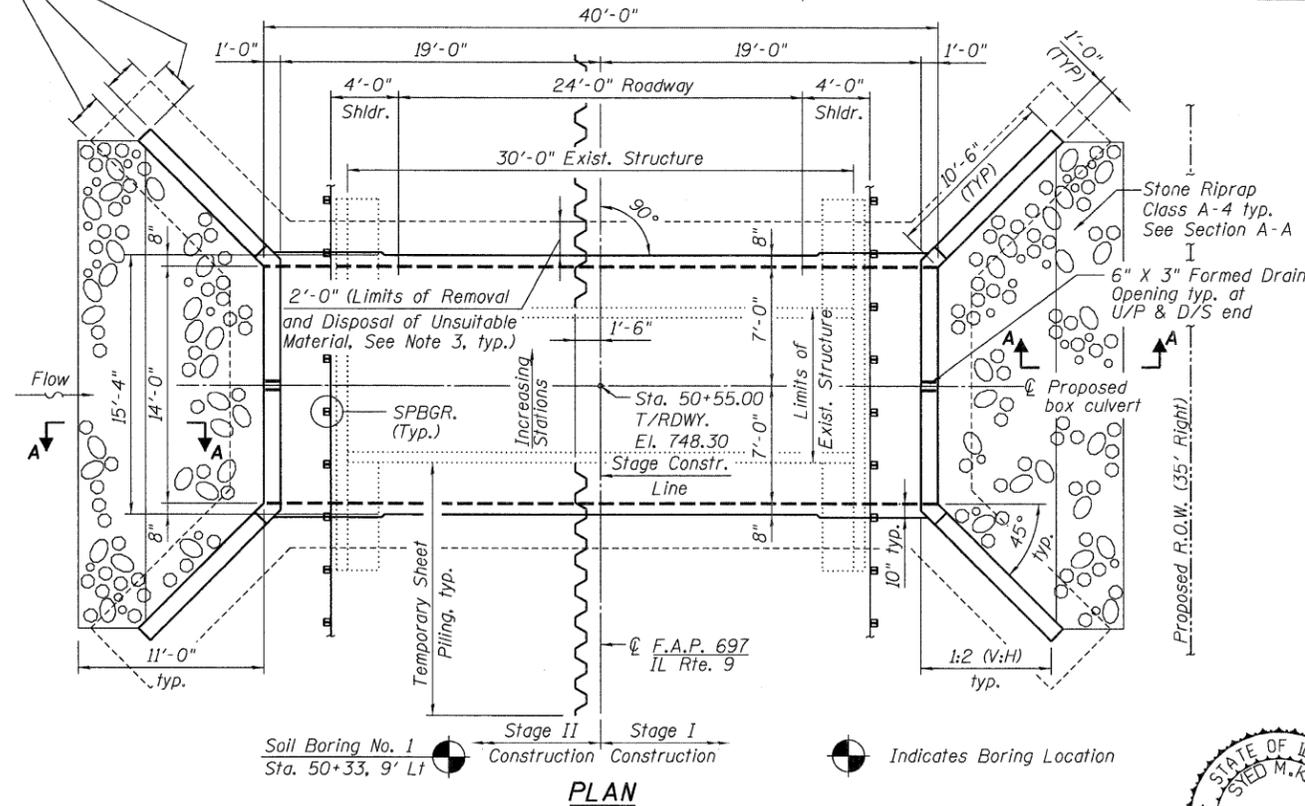
Soil Boring No. 2  
 Sta. 50+79, 12' Rt.



**PROFILE GRADE**  
 (Along C.F.A.P. 697)



**SECTION A-A**  
 Note: For quantities, see roadway plans



**WATERWAY INFORMATION**

Drainage Area = 1.06 sq. mi. Low Grade Elev. = 747.72 Exist./Prop. @ Sta. 47+50.00

Flood Yr.	Freq.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft.	Headwater El.
			Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
Design	10	361	21 65	744.9	3.0 0.1	747.9 744.9
Base	50	599	25 73	745.4	2.7 1.1	748.1 746.5
Overtopping	100	706	28 76	745.7	2.6 1.8	748.2 747.4
Max. Calc.	500	969	31 82	746.0	2.4 2.0	748.4 748.0

Max. H.W.E.: 747.9± (ft.)  
 Exist. 10 Year Velocity: 8.74 (ft./sec.)  
 Prop. 10 Year Velocity: 5.89 (ft./sec.)  
 Max. H.W.E. Date: 4/21/1994



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 State of Illinois  
 Lic. No. 081-004047  
 Expires: 11-30-2010



**INDEX OF SHEETS**

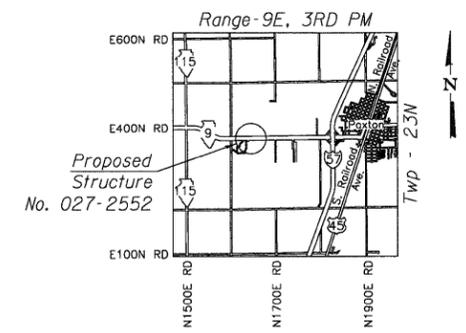
Sht No.	Description
S1	General Plan and Elevation
S2	Stage Construction
S3	Culvert and Wingwall Sections and Details
S4	Bar Splicer (Coupler) Details
S5	Soil Boring Logs

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Removal and Disposal of Unsuitable Material	Cu. Yd.	43
Porous Granular Embankment	Cu. Yd.	559
Porous Granular Embankment, Special	Cu. Yd.	47
Removal of Existing Structures	Each	1
Structure Excavation	Cu. Yd.	652
Reinforcement Bars	Pound	15,530
Bar Splicers	Each	72
Temporary Sheet Piling	Sq. Ft.	952
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	65.1

STATION 50+55.00  
 BUILT 200 BY  
 STATE OF ILLINOIS  
 F.A.P. RT. 697 SEC. 17(1)  
 LOADING HS20-44  
 STR. NO. 027-2552

**NAME PLATE**  
 See Std. 515001



**GENERAL PLAN AND ELEVATION  
 ILLINOIS ROUTE 9 OVER DRAINAGE DITCH  
 F.A.P. ROUTE 697 - SECTION 17(1)**

**FORD COUNTY  
 STATION 50+55.00  
 SN 027-2552**  
 Scale: None March 2009

SHEET NO. S1	F.A.P. RTE. 697	SECTION 17(1)	COUNTY FORD	TOTAL SHEETS 29	SHEET NO. 17
S5 SHEETS	CONTRACT NO. 66874			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT	