

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
627	(I-1) BR & I	LA SALLE	106	35
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SHEET NO. F1  
OF 14 SHEETS

Benchmarks: 1.) Top of guardrail post on the South side of IL Rte. 71 @ back center of 10th post East from the West end of the rail @ Station 414+12.06/14.26' RT., Elevation = 579.06.  
2.) Bolt on backside of wood end post of guardrail on the North side of IL Rte. 71 approximately 8' West from end of guardrail @ Station 417+35.07/13.66' LT., Elevation = 570.33.

Existing Structure: Existing Culvert #10, built 1922. Section I-1 At Station 416+44.62 and carries F.A.P. 627 (IL 71) over tributary to Illinois River. Consists of a single barrel 12'x6' reinforced concrete box culvert with wingwalls parallel to the roadway and the out to out of headwall length = 74'-4". Traffic will be maintained during construction via detour routes.

No Salvage.

**DESIGN SPECIFICATIONS**

AASHTO 2002

**LOADING HS20-44**

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

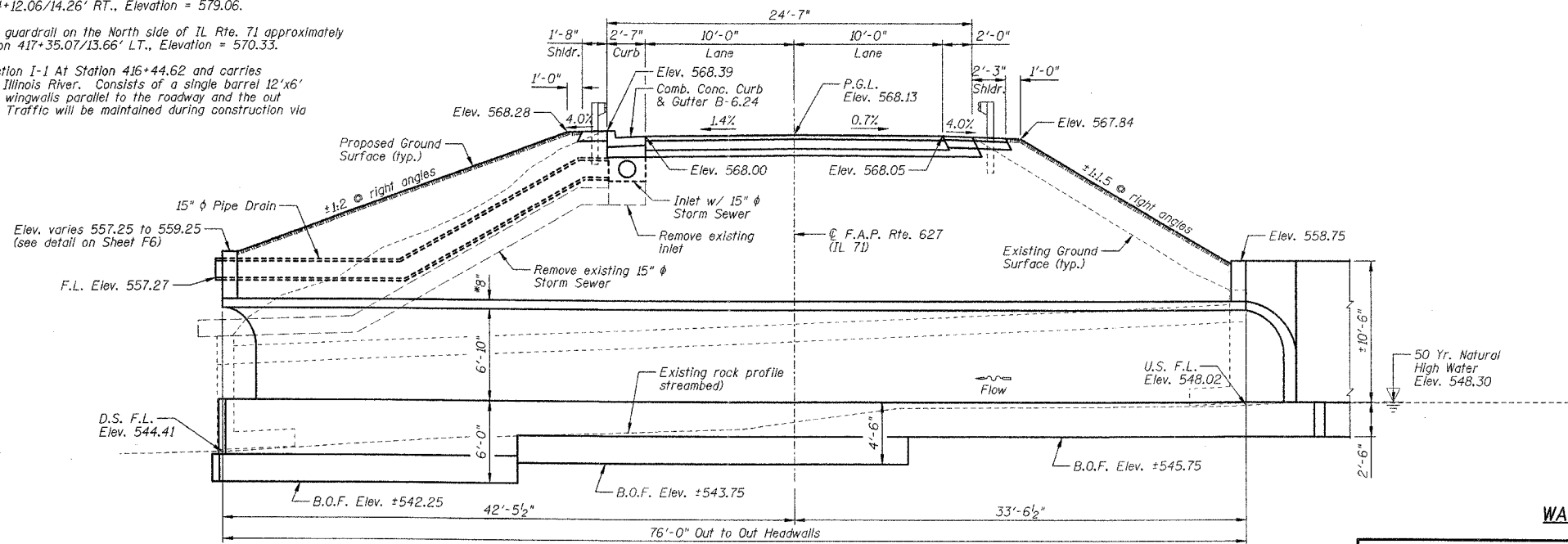
**DESIGN STRESSES**

**FIELD UNITS**

f'c = 3,500 psi (Cast-in-Place)  
fy = 60,000 psi (Reinforcement)

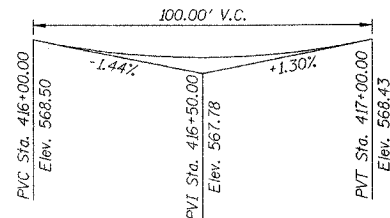
**PRECAST UNITS**

f'c = 4,000 psi (Precast Concrete)  
fy = 60,000 psi (Reinforcement)  
fy = 65,000 psi (Welded Wire Fabric)



**LONGITUDINAL SECTION**

(Looking East @ C. of Culvert, roadway dimensions @ right angles to roadway)



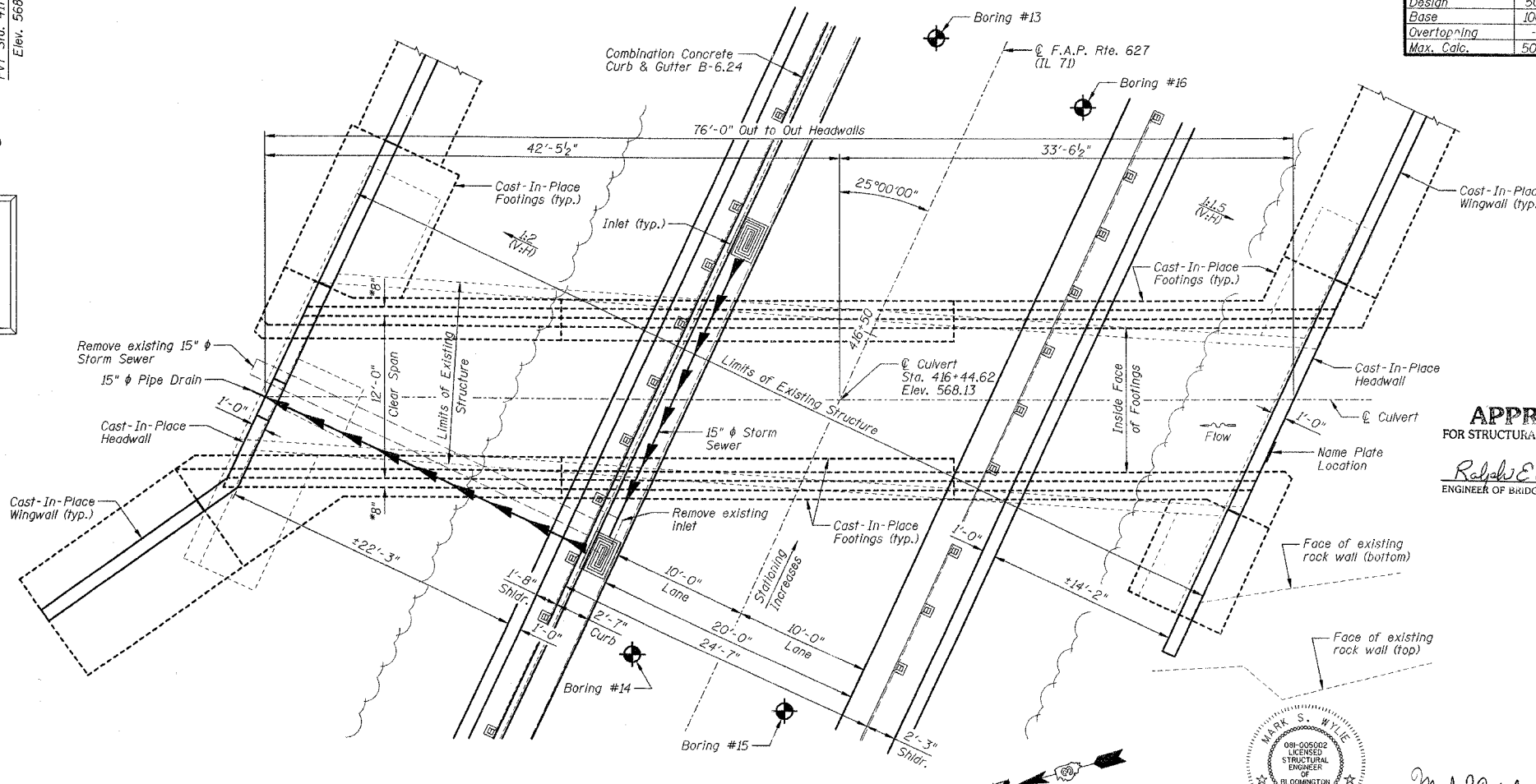
**PROFILE GRADE**

F.A.P. Rte. 627 (IL 71) (Along C. Roadway)

STATION 416+44.62  
BUILT 200\_ BY  
STATE OF ILLINOIS  
F.A.P. RTE. 627 SECTION (I-1) BR & I  
LOADING HS20  
STR. NO. 050-C804

**NAME PLATE DETAIL**

See Standard 515001

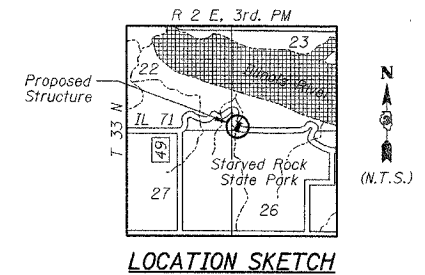


**PLAN**

**WATERWAY INFORMATION**

Drainage Area (Sq. Mi.) = 1.04 Existing Low Grade Elevation = 567.97 ft. @ Sta. 416+44.62  
Proposed Low Grade Elevation = 568.13 ft. @ Sta. 416+51.97

Flood Year	Freq.	0 C.F.S.	Opening (Sq. Ft.)	Ex. Nat. Pr. Nat.	Ex. H.W.E.	Pr. H.W.E.	Head-Ft. Ex. Prop.	Headwater El. Ex. Prop.
Design	50	665	72	84	548.30	548.30	7.69	7.19
Base	100	768	72	84	548.30	548.30	8.84	8.25
Overtopping	-	-	-	-	-	-	-	-
Max. Calc.	500	1015	72	84	548.30	548.30	12.02	11.00



**LOCATION SKETCH**

**INDEX TO SHEETS**

SHEET NO.	TITLE
F1	GENERAL PLAN AND ELEVATION
F2	FOOTING LAYOUT PLAN, SECTION THRU PRECAST STRUCTURE, GENERAL NOTES AND BILL OF MATERIALS
F3	TEMPORARY SOIL RETENTION SYSTEM PLAN & ELEVATION, TYPICAL SECTION AND DETAIL
F4	EAST FOOTING REINFORCEMENT PLAN, ELEVATION, SECTIONS AND DETAILS
F5	WEST FOOTING REINFORCEMENT PLAN, ELEVATION, SECTIONS AND DETAILS
F6	CORNER DETAILS
F7	NORTH WINGWALLS
F8	NORTH HEADWALL
F9	SOUTH WINGWALLS
F10	SOUTH HEADWALL
F11	POROUS GRANULAR EMBANKMENT (SPECIAL) AND GEOCOMPOSITE WALL DRAIN
F12-F13	SOIL BORING LOGS
F14	EXISTING PLANS

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY  
*Robert E. Anderson (SE)*  
ENGINEER OF BRIDGES AND STRUCTURES

- NOTES:**
- 1.) Work this sheet with Sheets F2 thru F10.
  - 2.) Confirm slab and wall thickness with Precaster.
  - 3.) B.O.F. denotes Bottom Of Footing.
  - 4.) P.G.L. denotes Profile Grade Line.
  - 5.) See Roadway Plans for the new drainage inlets, storm sewer and pipe drain.

**GENERAL PLAN AND ELEVATION**  
IL ROUTE 71  
OVER TRIBUTARY TO ILLINOIS RIVER  
F.A.P. ROUTE 627 - SEC. (I-1) BR & I  
LA SALLE COUNTY  
STATION 416+44.62  
STRUCTURE NO. 050-C804

DESIGNED BY: J.M.L.  
DRAWN BY: D.J.M.  
CHECKED BY: M.S.W.

**Farnsworth GROUP**  
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FILE NO. 24-6772  
DATE 05-12-06  
SHEET NO. 35 of 106



*Mark S. Wylie* Date 5/15/06  
MARK S. WYLIE  
ILLINOIS STRUCTURAL ENGINEER  
NO. 081-005002  
Exp. Date 11/30/06