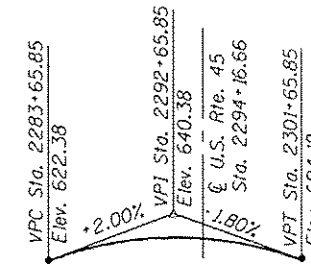


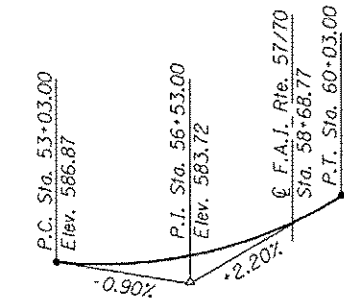
Bench Marks: Chiseled square on raised concrete median at center of U.S. 45 approximately 140'-0" North of F.A.I. 57/70 centerline. U.S. Route 45 Sta. 60+10.00 Elev. 592.07.

Existing Structure: SN 025-8648 is a Y-Shaped single cell box culvert. The West branch carries U.S. 45 over unnamed branch. The North & South branch carries F.A.I. 57/70 over unnamed branch. The original structures were constructed in 1959. The West and North branches consist of Cast-In-Place construction and the South branch consists of a voided bottom slab and T-Beams for the top slab. In 1992 the North and South branches were extended. The North branch extension consisted of Cast-In-Place construction and the South branch consisted of Cast-In-Place side walls and bottom slab with a top slab consisting of 17"x36" prestressed concrete deck beams. Traffic will be maintained at all times during construction.

No Salvage.



PROFILE GRADE
(F.A.I. Route 57/70 EB & WB)



EXISTING PROFILE GRADE
(U.S. Route 45)

INDEX OF SHEETS

SHEET NO.	TITLE
1.	General Plan
2.	General Elevation
3.	Temporary Soil Retention System
4.-5.	North Extension Details
6.-8.	South Extension Details
9.-12.	Boring Logs

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	240.5
Concrete Removal	Cu. Yd.	72.5
Reinforcement Bars	Pound	38470
Reinforcement Bars, Epoxy Coated	Pound	2680
Expansion Bolts 3/4 Inch	Each	52
Concrete Box Culverts	Cu. Yd.	176.9
Rock Fill-Replacement	Ton	169.7
Temporary Soil Retention System	Sq. Ft.	1383
Rock Fill-Foundation	Ton	154.7

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2012 Interims

LOADING HL-93

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

DESIGN STRESSES

Existing: 1992 Construction
 $f'_c = 3,500$ psi
 $f'_c = 4,000$ psi (Precast)
 $f_y = 60,000$ psi (Reinforcement)

New Construction (Field Units)
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

WATERWAY INFORMATION

Drainage Area = 1.21 miles
 Existing Low Grade Elev. 587.05 @ Sta. 57+00
 Proposed Low Grade Elev. 587.05 @ Sta. 57+00

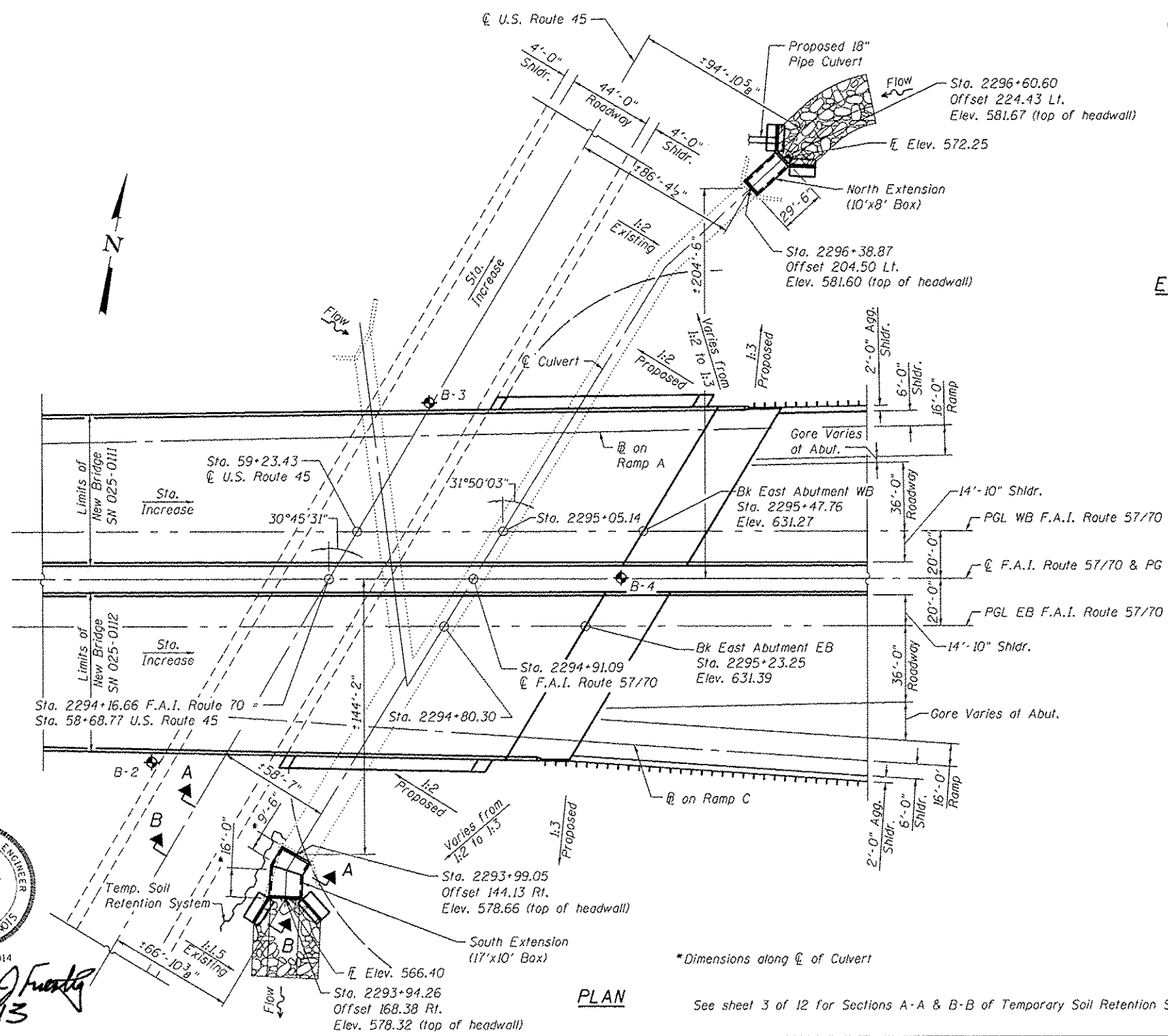
Flood Year	Frequency Year	Discharge C.F.S.	Headwater El.	
			Exist.	Prop.
Ten-Year	10	344	578.32	578.35
Design	50	550	580.21	580.26
Base	100	642	581.06	581.09

10-Year Velocity through Existing Culvert = 4.90 fps
 10-Year Velocity through Proposed Culvert = 4.90 fps

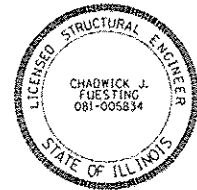
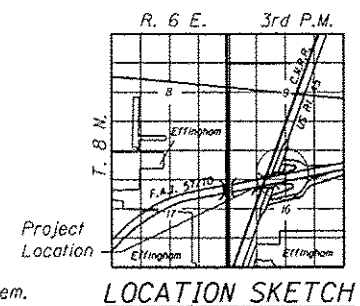
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Extension	S. Extension
	568.00	562.15

GENERAL PLAN
F.A.I. ROUTE 57/70 & U.S. RTE. 45
OVER EXISTING Y-SHAPED CULVERT
SECTION (25-4HVB-1)BY
EFFINGHAM COUNTY
STATION 2294+91.09
SN 025-8648



APPROVED
 For Structural Adequacy Only
Chadwick J. Fuesting
 Engineer of Bridges & Structures



Chadwick J. Fuesting
 6/14/13

*Dimensions along \hat{c} of Culvert
 See sheet 3 of 12 for Sections A-A & B-B of Temporary Soil Retention System.

FILE NAME: 0258648-74295-001-GPE.dgn	USER NAME: Illinois Design Firm Number 184.001670	DESIGNED: ACS	REVISIONS:	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. 1 OF 12 SHEETS	F.A.I. RTE. 57/70	SECTION 125-4HVB-1)BY	COUNTY EFFINGHAM	TOTAL SHEETS 1160	SHEET NO. 520
DESIGNED: ACS	CHECKED: BB	DRAWN: WJS	REVISIONS:							CONTRACT NO. 74295
PLOT SCALE: 1"=40'-0"	PLOT DATE: 4:04:37 PM 8/14/2013	CHECKED: CJF	REVISIONS:							ILLINOIS FED. AID PROJECT