

Benchmark: Chiseled square in west end of south wingwall of Existing S.N. 011-2008, Elev. 653.52.

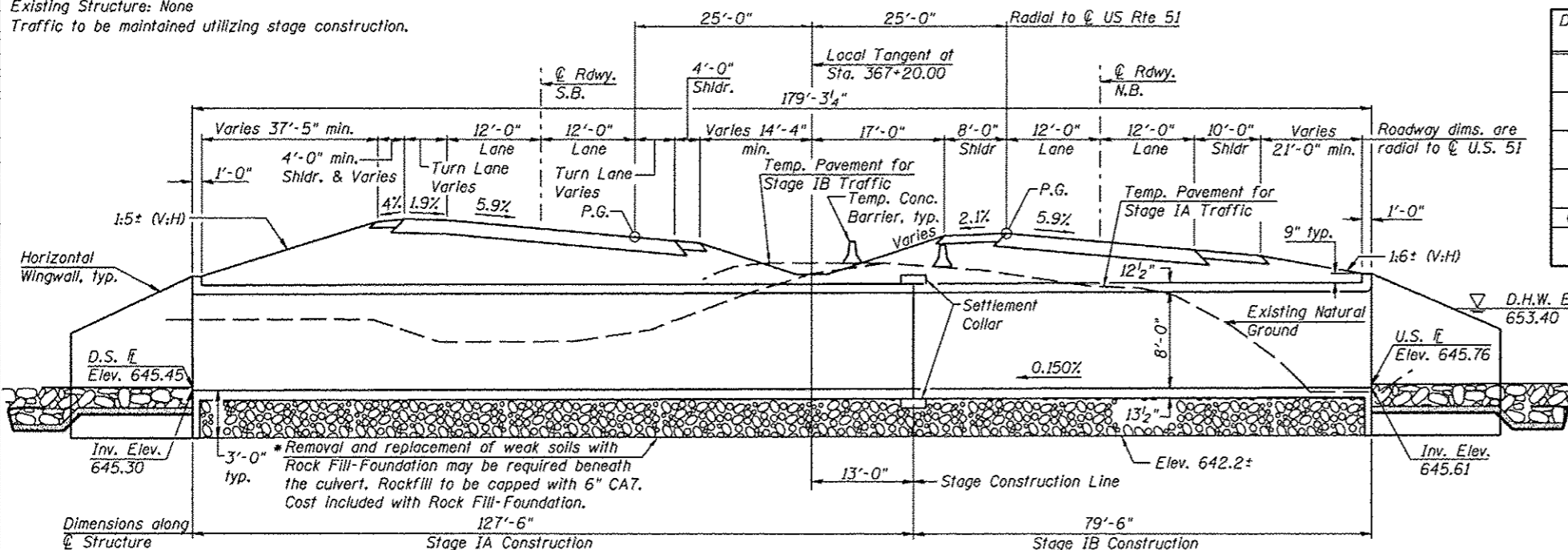
Existing Structure: None

Traffic to be maintained utilizing stage construction.

WATERWAY INFORMATION

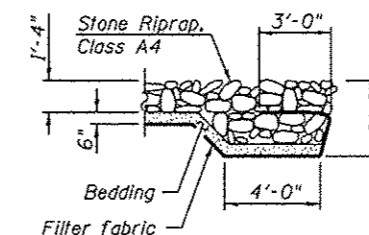
Drainage Area = 3.5 sq. mi. (SN 011-2504)		Exist. Low Grade Elev. 655.24 @ Sta. 1237+83										
3.6 sq. mi. (SN 011-3413)		Prop. Low Grade Elev. 658.20 @ Sta. 367+00										
Flood	Freq. Yr.	Q (C.F.S.)		Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater E.I.		
		Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
-	10	011-2504	490	460	150	130	652.41	652.31	0.1	0.4	652.53	652.71
		011-3413	40	490	40	150	652.30	652.13	0.1	0.3	652.43	652.45
Design	50	011-2504	770	730	160	150	653.41	653.40	0.5	1.1	653.90	654.45
		011-3413	60	780	40	160	653.27	653.23	0.2	0.8	653.50	654.05
Base	100	011-2504	900	850	160	160	653.65	653.65	0.7	1.4	654.32	655.03
		011-3413	70	900	40	160	653.49	653.45	0.3	1.0	653.78	654.49
Overtopping	-	-	-	-	-	-	-	-	-	-	-	
Max. Calc.	500	011-2504	1200	1140	160	160	654.06	654.09	0.9	2.4	654.99	656.49
		011-3413	100	1210	40	160	653.83	653.81	0.3	1.6	654.17	655.39

10 year velocity through existing Structure = 3.22 fps
 10 year velocity through proposed Structure = 3.39 fps (SN 011-2504), 3.23 fps (SN 011-3413)



LONGITUDINAL SECTION

(Dimensions at Rt L's to Local Tangent at Sta. 367+20.00, unless noted otherwise)
 (Looking North)



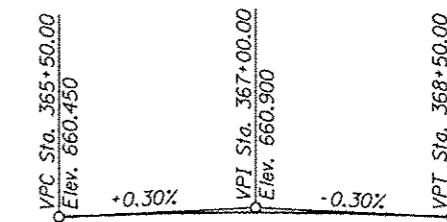
SECTION A-A

INDEX OF SHEETS

1. General Plan and Elevation
2. General Data
3. Stage Construction Details
4. Temporary Concrete Barrier for Stage Construction
- 5-6. Culvert Details
7. Soil Boring Logs

PROPOSED CURVE DATA

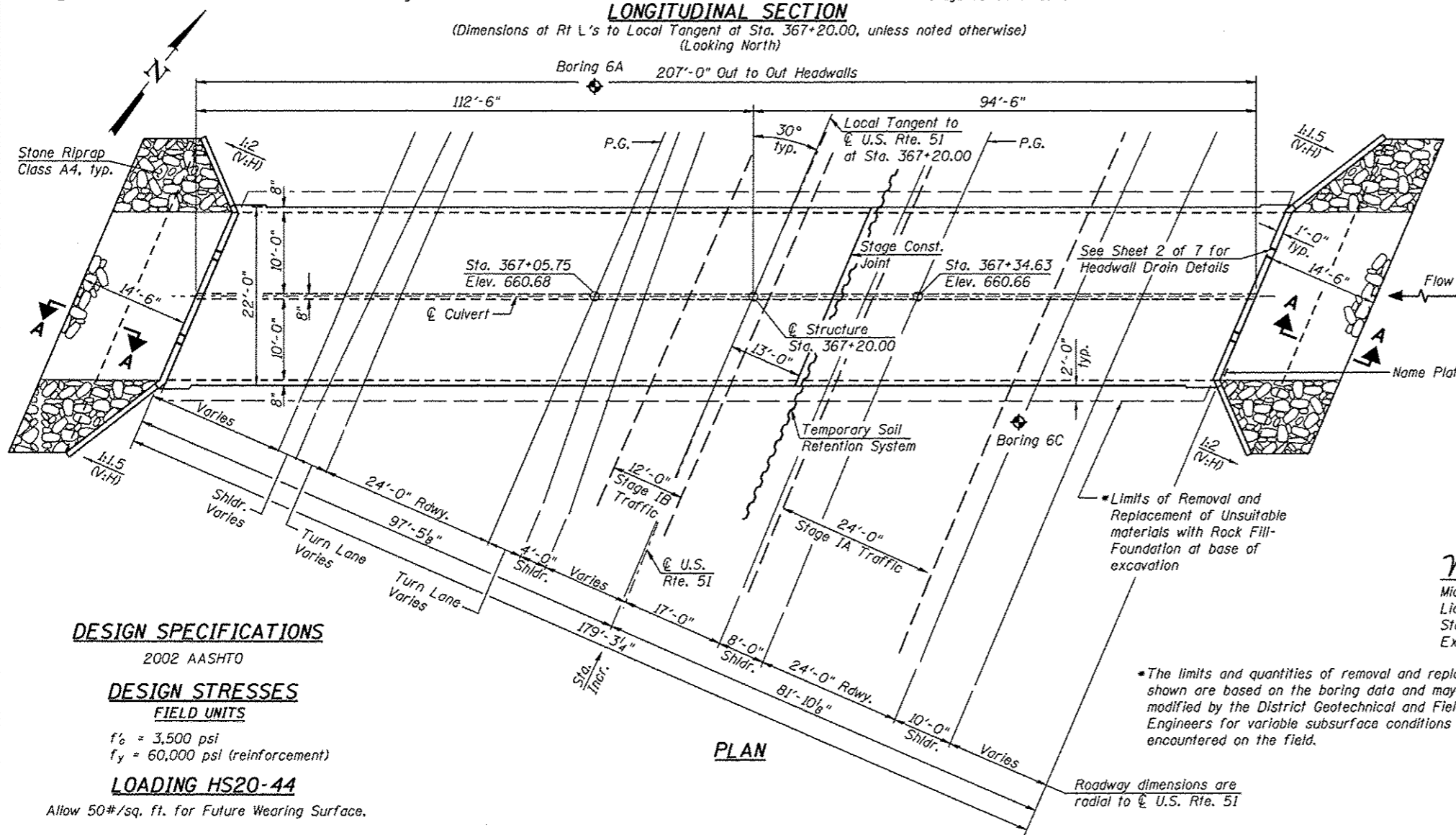
PI Sta. = 366+64.75
 $\Delta = 21^\circ 21' 09''$ (RT)
 $D = 02^\circ 36' 16''$
 $R = 2,200.00'$
 $T = 414.75'$
 $L = 819.87'$
 $E = 38.75'$
 P.C. Sta. = 362+50.01
 P.T. Sta. = 370+69.88
 Superelevation = 5.9%



PROPOSED PROFILE GRADE
 (Along U.S. Rte. 51)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	D.S. Invert	U.S. Invert
	642.20	642.51



PLAN

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

LOADING HS20-44

Allow 50#/sq. ft. for Future Wearing Surface.

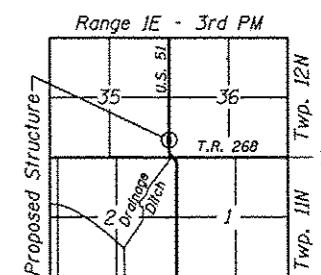


Michael T. Haley 8-10-12
 Date

Michael T. Haley
 Licensed Structural Engineer
 State of Illinois No. 81-5991
 Expires 11/30/2012

APPROVED
 For Structural Adequacy Only

Michael T. Haley
 Engineer of Bridges & Structures



LOCATION SKETCH

GENERAL PLAN & ELEVATION

U.S. ROUTE 51
OVER DRAINAGE DITCH
F.A.P. RTE 322 SECTION 11-13
CHRISTIAN COUNTY
STA. 367+20.00
S.N. 011-2504



USER NAME *	DESIGNED - MTH	REVISED -
FILE NAME *	CHECKED - TBP	REVISED -
PLOT SCALE *	DRAWN - AJF	REVISED -
PLOT DATE *	CHECKED - MTH	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
 STRUCTURE NO. 011-2504

SHEET NO. 1 OF 7 SHEETS

F.A.P. RTE. 322	SECTION 11-13	COUNTY CHRISTIAN	TOTAL SHEETS 437	SHEET NO. 251
				CONTRACT NO. 72961
ILLINOIS FED. AID PROJECT				