

Benchmarks: BM WS-2 - Chiseled "□" on center of West headwall of existing 6' x 3' box culvert. EL 621.558
 BM WS-3 - Chiseled "X" on top of 48"Ø C.M.P. underneath railroad, 49' Lt. Sta. 110+62 EL 618.928
 Existing Structure: Single Barrel 6'(W.) x 3'(H.) cast in place concrete culvert built in 1928, 8'-3" Length along ϕ Rdwy., 48'-9" Width Out.-Out. Headwalls parallel to traffic, 32° Skew Right Forward. Existing Structure No.: None
 No Salvage

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 714	*	CHRISTIAN	94	74
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* D-6 IL. 48 IMPROVEMENT 2006				

SHEET NO. 1 OF 8 SHEETS

TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Stone Riprap, Class A4	Sq. Yd.	176
Filter Fabric	Sq. Yd.	176
Removal of Existing Structures	Each	1
Reinforcement Bars	Pound	13505
Bar Splicers	Each	75
Steel Bridge Rail	Foot	80.86
Temporary Sheet Piling	Sq. Ft.	562
Concrete Box Culverts	Cu. Yd.	80.2
Granular Culvert Backfill	Cu. Yd.	107
Temporary Shoring	Each	1
Name Plates	Each	1

WATERWAY INFORMATION

Drainage Area = 0.67 Sq. Mi.		Ex. Low Grade Elev. 621.83 ft. @ Sta. 111+08							
		Pr. Low Grade Elev. 621.98 ft. @ Sta. 109+00							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural H.W.E.	Head - ft.	Headwater El.			
	10	128	15.94	27.72	616.88	3.98	2.54	620.86	619.42
Design	50	199	15.94	36.00	617.02	5.70	3.21	622.72	620.23
Base	100	229	15.94	36.00	617.07	6.67	3.49	623.74	620.56
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	301	15.94	36.00	617.18	9.58	4.21	626.76	621.39

DESIGN SPECIFICATIONS

2002 A.A.S.H.T.O. Specifications.

GENERAL NOTES

Excavation behind existing culvert walls shall be done before removing the existing top slab. The Contractor shall saw cut the existing culvert at the stage removal line before Stage I Removal.
 Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M-31 or M-322, Grade 60.
 Layout of the riprap may be varied in the field to suit ground conditions as directed by the Engineer.
 A precast culvert alternate is not be allowed.
 For backfilling and embankment, see Standard Specifications.
 All construction joints shall be bonded.
 Exposed edges shall have a standard 3/4" chamfer unless otherwise noted.

LOADING HS 20-44

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

DESIGN STRESSES

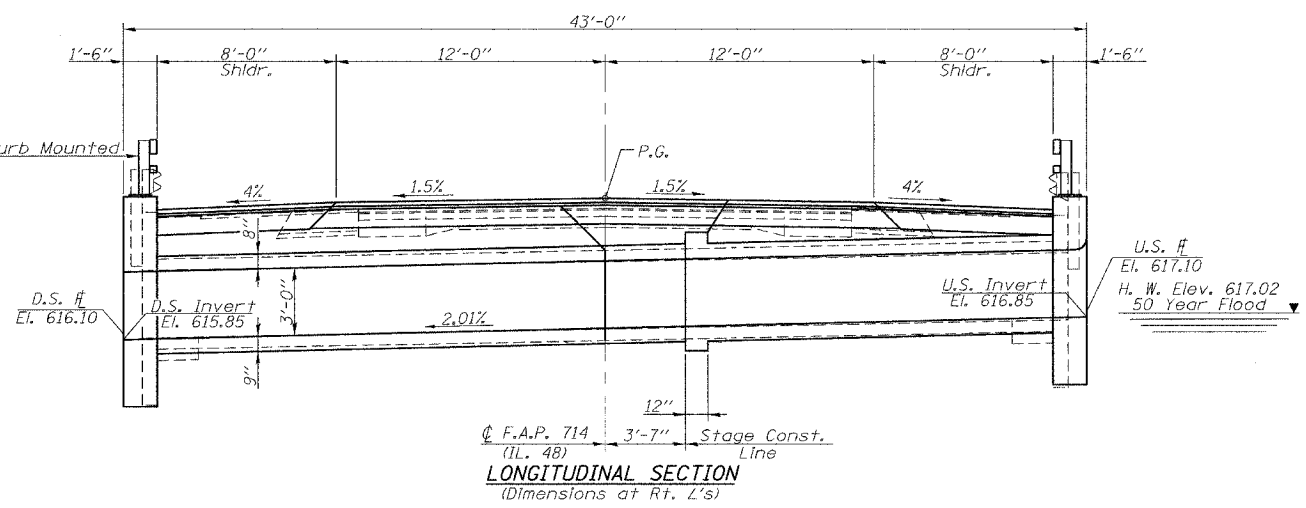
FIELD UNITS

f'c = 3,500 p.s.i.
 fy = 60,000 p.s.i. (Reinforcement)

INDEX OF SHEETS

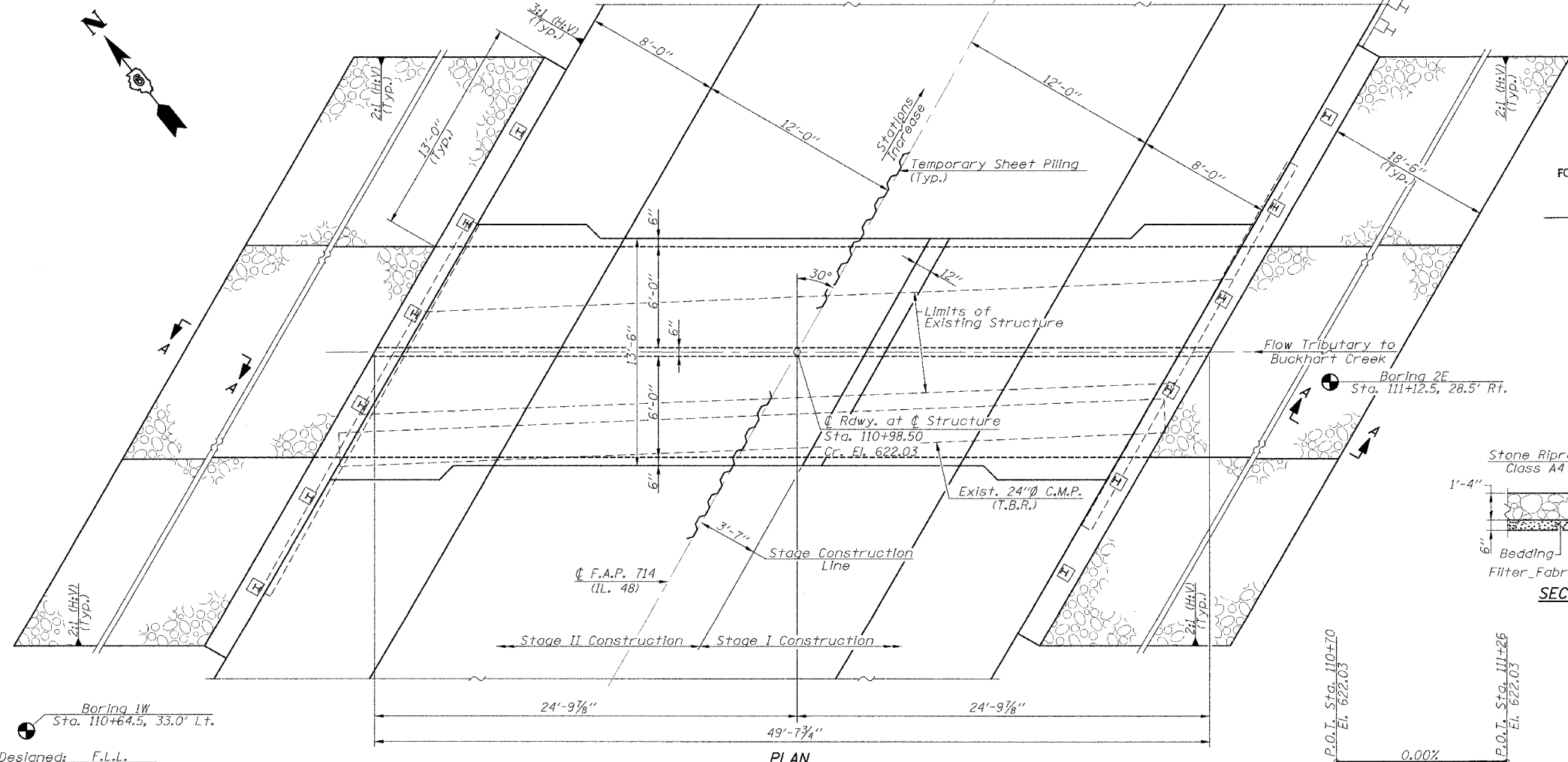
- 1 - GENERAL PLAN & ELEVATION
- 2 - STAGING DETAILS
- 3 - TEMPORARY CONCRETE BARRIER
- 4 & 5 - CULVERT DETAILS
- 6 - STEEL BRIDGE RAIL CURB MOUNTED
- 7 - BAR SPLICER ASSEMBLY DETAILS
- 8 - BORINGS

GENERAL PLAN & ELEVATION
IL. ROUTE 48 OVER
TRIBUTARY TO BUCKHART CREEK
F.A.P. ROUTE 714 - SECTION
D-6 IL. 48 IMPROVEMENT 2006
CHRISTIAN COUNTY
STA. 110+98.50
S.N. 011-7055



STA. 110+98.50
 BUILT 200 BY
 STATE OF ILLINOIS
 F.A.P. RTE. 714
 SECTION D-6 IL. 48 IMPROVEMENT 2006
 LOADING HS 20-44
 STR. NO. 011-7055

NAME PLATE
 (Standard 515001)



Designed: F.L.L.
 Checked: M.A.H.
 Drawn: J.R.P.
 Checked: F.L.L.

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (T.E.D.)
 Engineer of Bridges and Structures

