| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|---|---|---|---|
| FAU 6758 | 7-BR | TAZEWELL | 21 | 8 |
| FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT- | | |

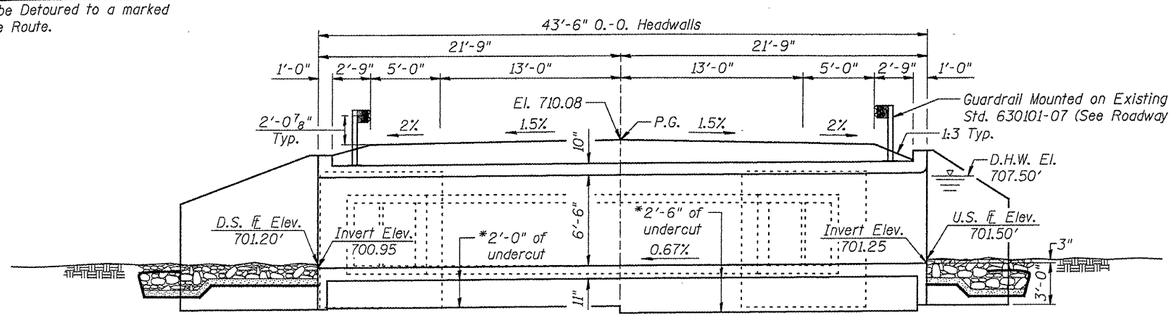
SHEET NO. 1
3 SHEETS

Contract # 68784

**EXISTING STRUCTURE:** S.N. 090-2501, Built in 1924 under S.B.I. Rte. 9, Section 7 as a double 9'x6' cast in place box culvert. The culvert is not on a skew, and the length of both barrels is 30'. The roadway at this location is on tangent, and the culvert is located in a sag vertical curve. Existing culvert to be removed and replaced. No Salvage.

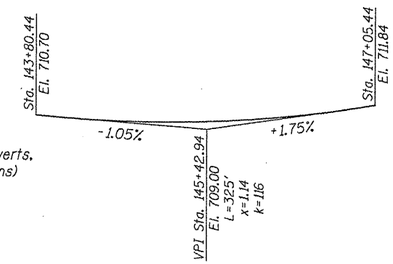
**BENCH MARK:** Set Chiseled "□" on N. Headwall of S.N. 090-2501. Elev.=710.08

**DURING CONSTRUCTION:** Traffic will be Detoured to a marked State Route.




## LONGITUDINAL SECTION

(Dimensions @ Rt. <'s to Roadway)
* See Structural Sheet 2 of 3 for Cross Section view of backfill limits.




## PROFILE GRADE

(Along ℄ Roadway)

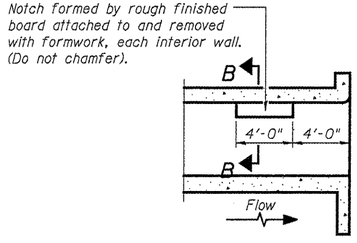
## WATERWAY INFORMATION

Drainage Area = 0.5 Sq. Mi. Low Grade Elev. = 710.24 (Exist.) @ Sta. 145+00
Low Grade Elev. = 710.73 (Prop.) @ Sta. 145+00

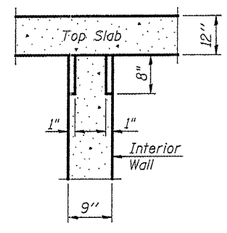
| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. Exist. | Opening Sq. Ft. Prop. | Nat. H.W.E. | Head - Ft. Exist. | Head - Ft. Prop. | Headwater El. Exist. | Headwater El. Prop. |
|---|---|---|---|---|---|---|---|---|---|
| | 10 | 467 | 88 | 116 | 706.80 | 1.30 | 1.00 | 708.10 | 707.80 |
| Design | 50 | 794 | 118 | 136 | 707.50 | 1.70 | 1.30 | 709.20 | 708.80 |
| Base | 100 | 916 | 118 | 146 | 707.80 | 2.00 | 1.40 | 709.80 | 709.20 |
| Overtopping | 200 | 900 | 118 | | 707.90 | 2.20 | | 710.10 | 707.90 |
| Max. Calc. | 500 | 1101 | | 160 | 708.30 | 2.50 | 1.70 | 710.80 | 710.00 |

## DESIGN SCOUR ELEVATION TABLE

| Design Scour Elevation (ft.) | U.S. Invert | D.S. Invert |
|---|---|---|
| | 698.25 | 697.95 |

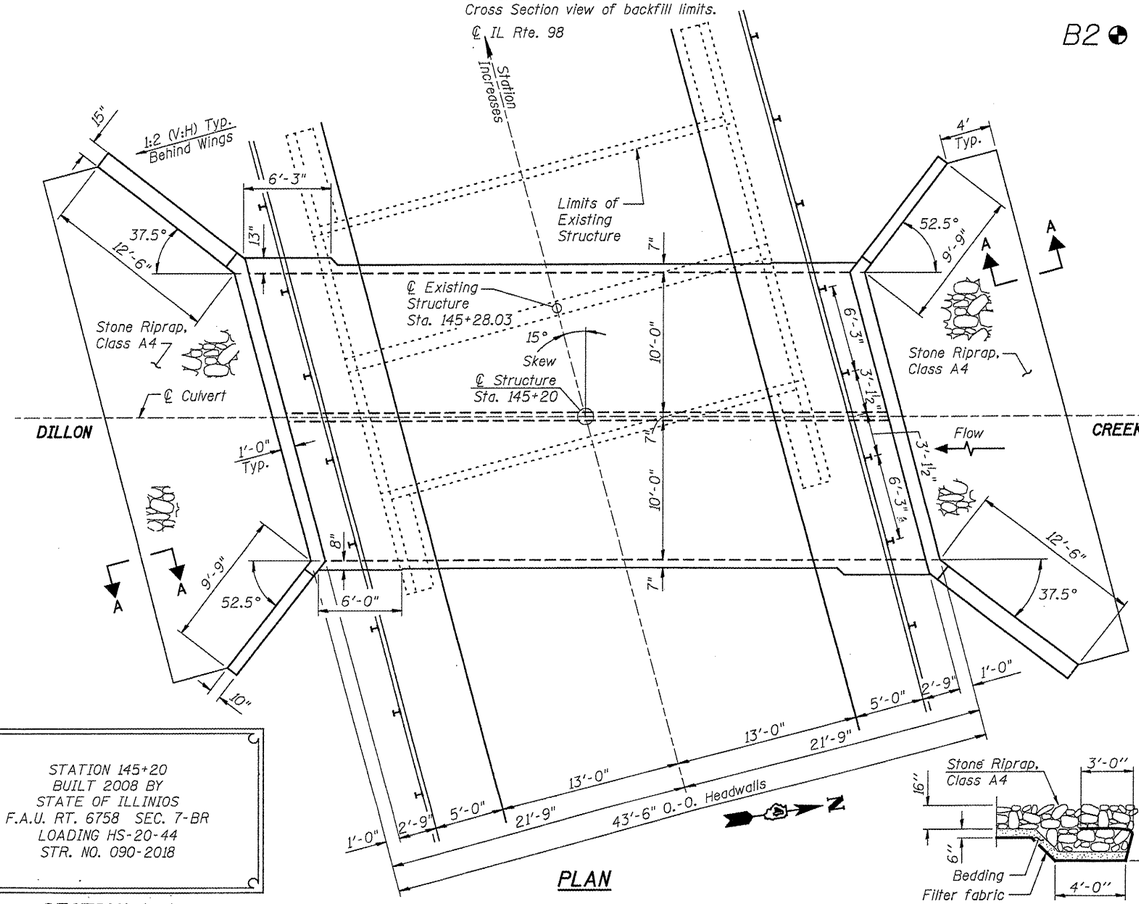



## LONGITUDINAL SECTION




## SECTION B-B

**APPROVED**
For Structural Adequacy Only
Ralph E. Anderson
Engineer of Bridges & Structures




## PLAN

STATION 145+20
BUILT 2008 BY
STATE OF ILLINOIS
F.A.U. RT. 6758 SEC. 7-BR
LOADING HS-20-44
STR. NO. 090-2018

## SECTION A-A

Refer to Sta. 2113




## SECTION A-A

## PHOEBE NESTING SITE DETAILS

(Downstream End Only)

## DESIGN SPECIFICATIONS

Design in Accordance with 2002 AASHTO Standard Specifications - 17th ed.

## DESIGN STRESSES

**FIELD UNITS**

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

## LOADING HS-20-44

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

## BILL OF MATERIAL - CULVERT

| ITEM | UNIT | TOTAL |
|---|---|---|
| Concrete Box Culverts | Cu. Yd. | 104.7 |
| Reinforcement Bars | Pound | 18,080 |
| Name Plates | Each | 1 |
| Stone Riprap, Class A4 | Sq. Yd. | 83 |
| Filter Fabric | Sq. Yd. | 83 |
| Removal of Existing Structures | Each | 1 |

## GENERAL NOTES:

Layout of Slope Protection System may be varied to suit ground conditions in the field as directed by the Engineer.

Reinforcement Bars shall conform to the requirements of ASTM A706 Gr. 60 (IL Modified). See Special Provisions.

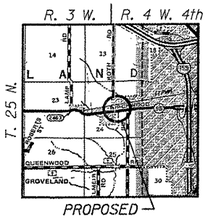
All exposed concrete edges shall be chamfered $\frac{3}{4}$" unless otherwise noted.

Undercut Excavation & Backfill for Undercut Excavation along with Porous Granular Backfill along sides of Culvert is included in Roadway Plans.

Precast Culvert Alternate is not allowed.

STATE OF ILLINOIS
LICENSED STRUCTURAL ENGINEER
BRIAN K. CONVERSE
081-005213
DIXON, ILL.

Brian K. Converse
DATE: 5/12/2008
EXPIRES 11/30/08




## LOCATION SKETCH

# GENERAL PLAN AND ELEVATION
# ILLINOIS ROUTE 98 OVER DILLON CREEK
# F.A.U. ROUTE 6758 - SEC. 7-BR
# TAZEWELL COUNTY
# STATION 145+20 STRUCTURE NO. 090-2018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www.willetthofmann.com


WHA # 1223D07

Designed By: B. K. Converse Date: 4/ 08
Checked By: M. A. Small Date: 4/ 08
Drawn By: R. D. Allen Date: 4/ 08