

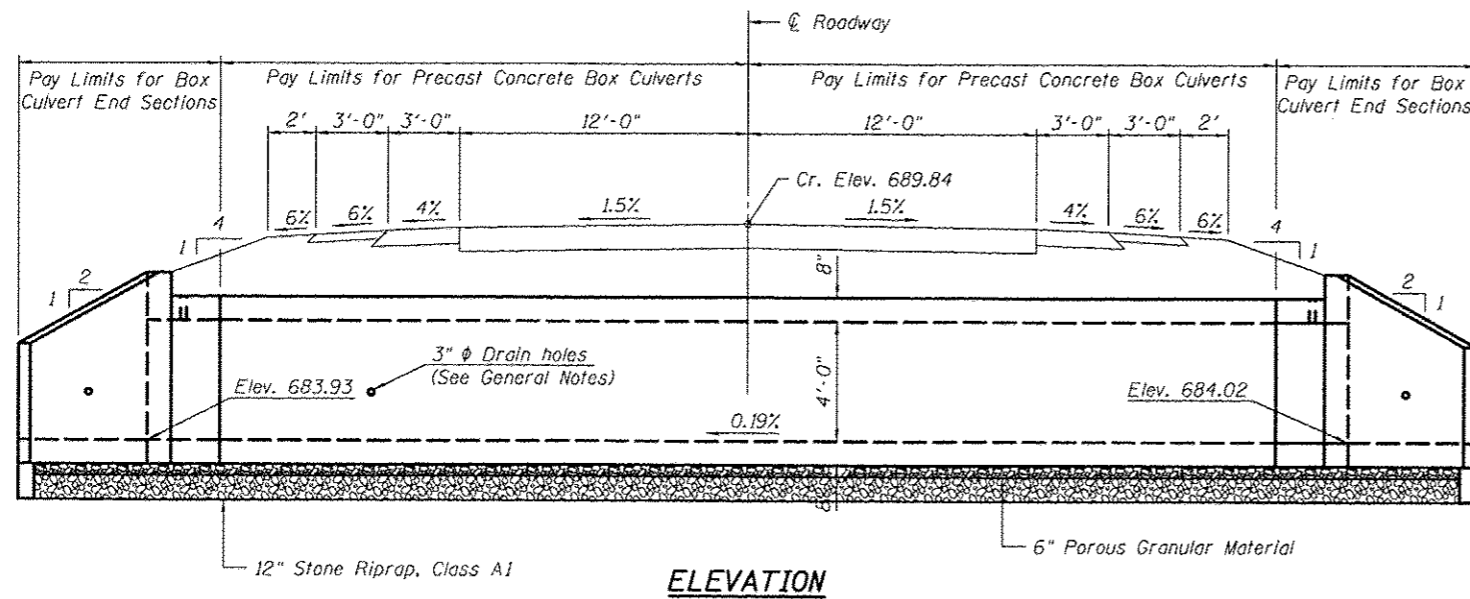
Benchmark: 687.296, Chiseled square on top of headwall of existing structure NE QUAD of Cottonwood Rd.

**INDEX OF SHEETS**

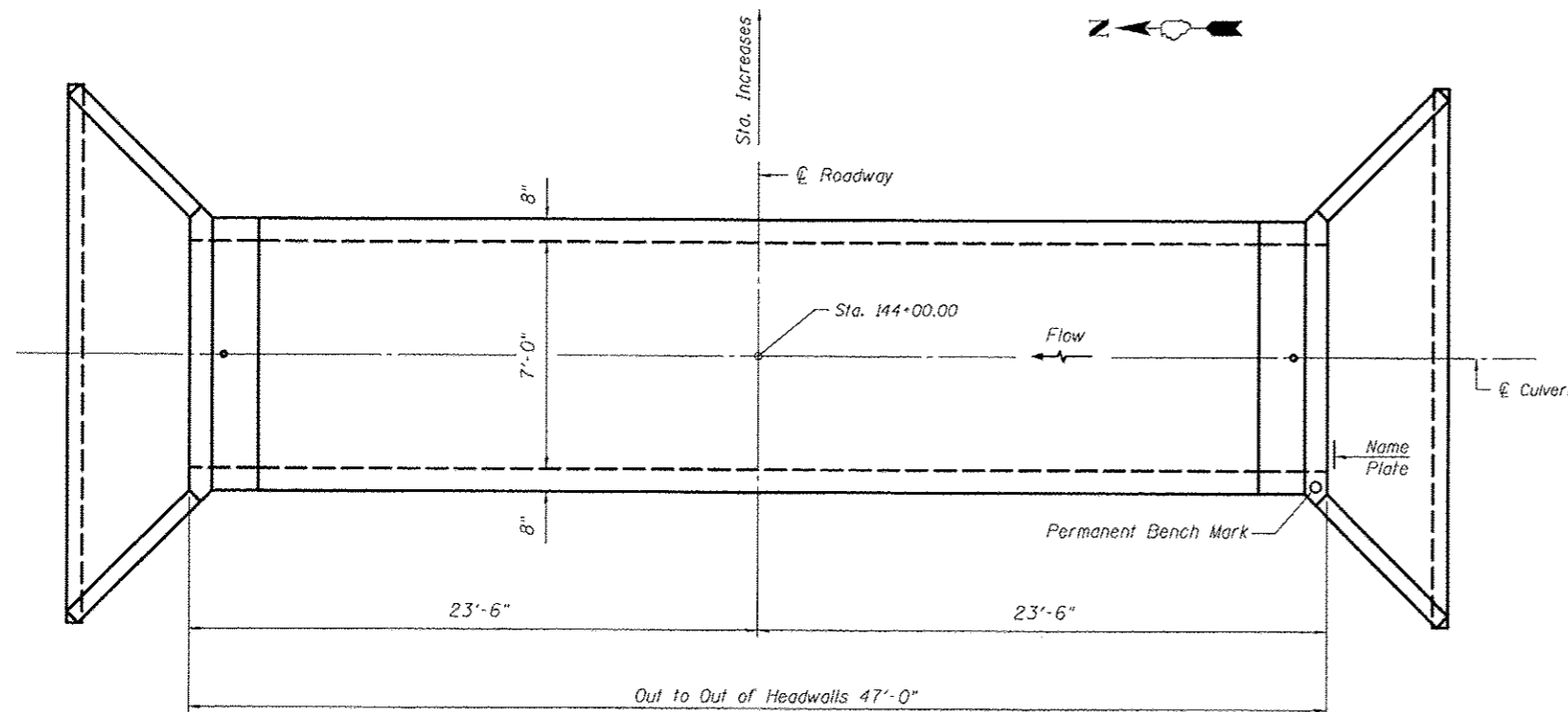
1. Plan & Profile Sheet
2. General Plan and Elevation
- 3-4. Precast Concrete Box Culvert Apron End Section Details

**GENERAL NOTES**

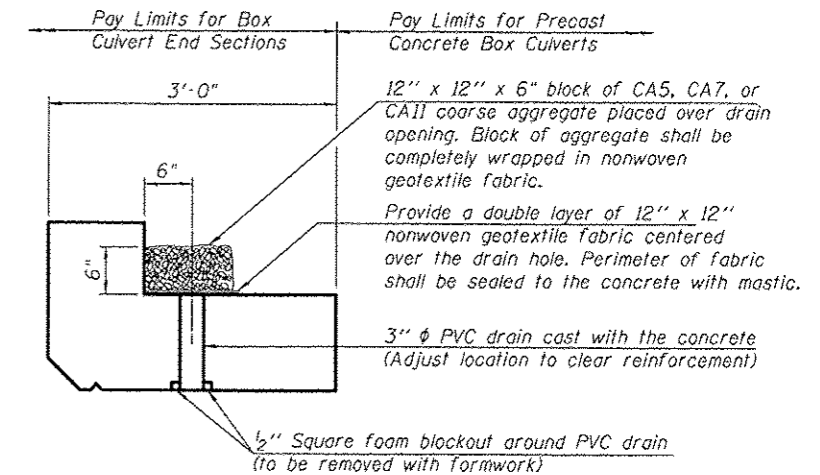
The design fill height for this box is < 2 feet. The precast box culvert sections shall conform to the requirements of AASHTO C 1577.  
 Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specification.  
 The 6 in. thick layer of porous granular material required for the precast concrete box culvert per Art. 540.06 of the Standard Specifications shall also apply to the end sections. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.  
 Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.  
 All exposed edges shall be chamfered 3/4" per article 503.06 of the Standard Specifications.



**ELEVATION**

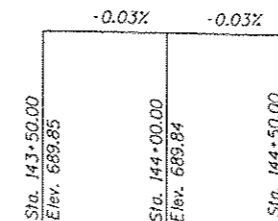


**PLAN**



**DRAIN DETAIL**

(All costs associated with furnishing and constructing the above drain details will not be measured for payment but shall be included in the contract unit price for the end section.)



**PROFILE GRADE**

**DESIGN SPECIFICATIONS**  
 2012 AASHTO LRFD Bridge Design Specifications  
 6th Edition

**LOADING HL-93**

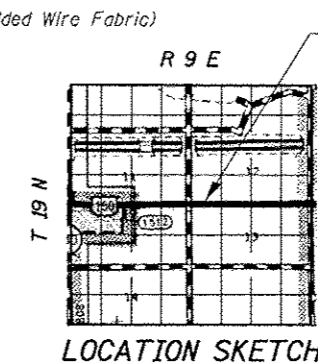
**DESIGN STRESSES**

**PRECAST UNITS**

f'c = 5,000 psi  
 fy = 65,000 psi (Welded Wire Fabric)

STATION 144+00.00  
 BUILT 2014 BY  
 STATE OF ILLINOIS  
 F.A.S. 1512 RT. US 150  
 SEC. (2X,3)RS-3 & 2RS-4  
 LOADING HL-93  
 STR. NO. 010-8158

**NAME PLATE**  
 See Std. 515001



**LOCATION SKETCH**

**TOTAL BILL OF MATERIAL**

| ITEM                                    | UNIT    | TOTAL |
|---|---------|-------|
| Name Plates                             | Each    | 1.0   |
| Box Culvert End Sections, Culvert No. 3 | Each    | 2.0   |
| Precast Concrete Box Culverts, 7x4      | Foot    | 41.0  |
| Permanent Bench Marks                   | Each    | 1.0   |
| Stone Riprap, Class A1                  | Sq. Yd. | 95.7  |
| Porous Granular Embankment              | Cu. Yd. | 40.1  |

**WATERWAY INFORMATION**

Drainage Area = 0.2 sq. mi. Low Grade Elev. 689.74 @ Sta. 15+00.00

| Flood Yr.   | Freq. C.F.S. | Opening Sq. Ft. |       | Nat. H.W.E. | Head - Ft. |       | Headwater El. |       |
|-------------|--------------|-----------------|-------|-------------|------------|-------|---------------|-------|
|             |              | Exist.          | Prop. |             | Exist.     | Prop. | Exist.        | Prop. |
| 10          | 63           | 7               | 19    | 686.6       | N/A        | 0.2   | over          | 686.7 |
| Design      | 50           | 103             | 21    | 686.9       | N/A        | 0.4   | over          | 687.4 |
| Base        | 100          | 121             | 22    | 687.0       | N/A        | 0.6   | over          | 687.6 |
| Overtopping |              | 164             | 24    | 687.3       | N/A        | 0.9   | over          | 688.3 |

**DESIGN SCOUR ELEVATION TABLE**

| Design Scour Elevation (ft.) | Upstream | Downstream |
|------------------------------|----------|------------|
|                              | 681.02   | 680.93     |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**STA. 144+00.00 PROPOSED S.N. 010-8158**  
**BOX CULVERT NO. 3**

SHEET NO. 7 OF 11 SHEETS

**GENERAL PLAN AND ELEVATION**  
**SINGLE 7'x4' PRECAST BOX CULVERT**  
**F.A.S. ROUTE 1512 (US 150)**  
**SECTION (2X,3)RS-3 & 2RS-4**  
**CHAMPAIGN COUNTY**  
**STATION 144+00.00, S.N. 010-8158**  
**CULVERT NO. 3**

| F.A.U. RTE. | SECTION                   | COUNTY    | TOTAL SHEETS | SHEET NO.          |
|-------------|---------------------------|-----------|--------------|--------------------|
| •           | (2X,3)RS-3 & 2RS-4        | Champaign | 551          | 182                |
| •           | F.A.U. 7152 & F.A.S. 1512 |           |              | CONTRACT NO. 70663 |

ILLINOIS FED. AID PROJECT

| FILE NAME  | USER NAME  | DESIGNED | REVISED |
|--|------------|----------|---------|
| c:\pwork\pwork\dot\cearlock\dot\0120316\0570663-sht-structures.dgn | cearlockjd | CHECKED  | REVISED |
|  |            | DRAWN    | REVISED |
|  |            | CHECKED  | REVISED |