

Benchmark: 685.10 Iron pin with cap on the right side of US 150

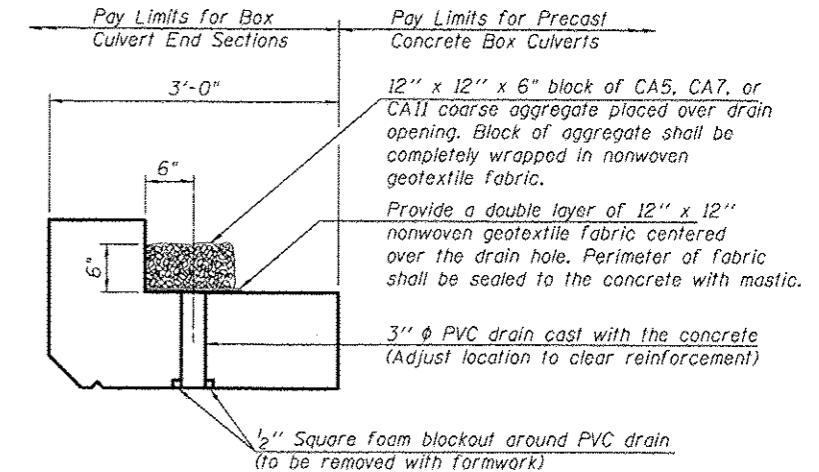
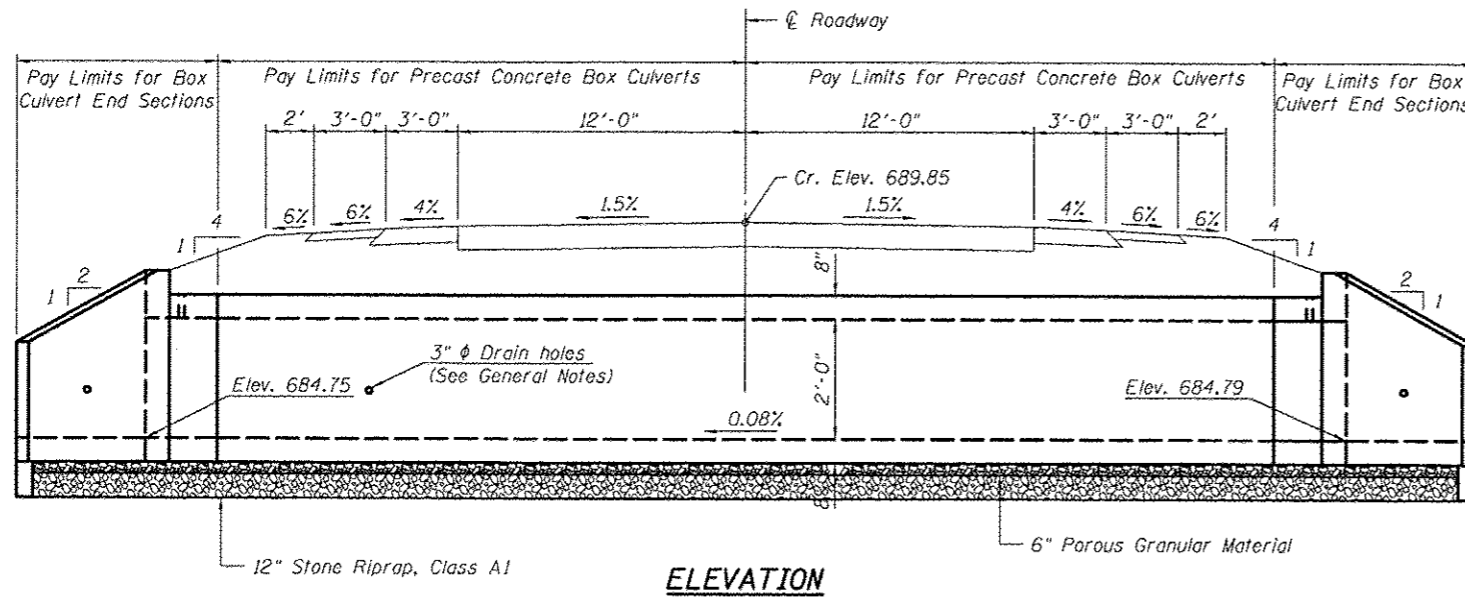
Existing Structure: 2'x2' cast-in-place box culvert with concrete headwalls at Sta. 164+10.36 to be capped and filled with CLSM.

INDEX OF SHEETS

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

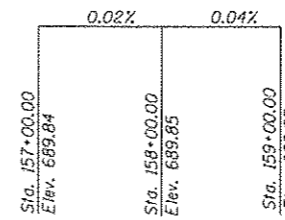
GENERAL NOTES

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.



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

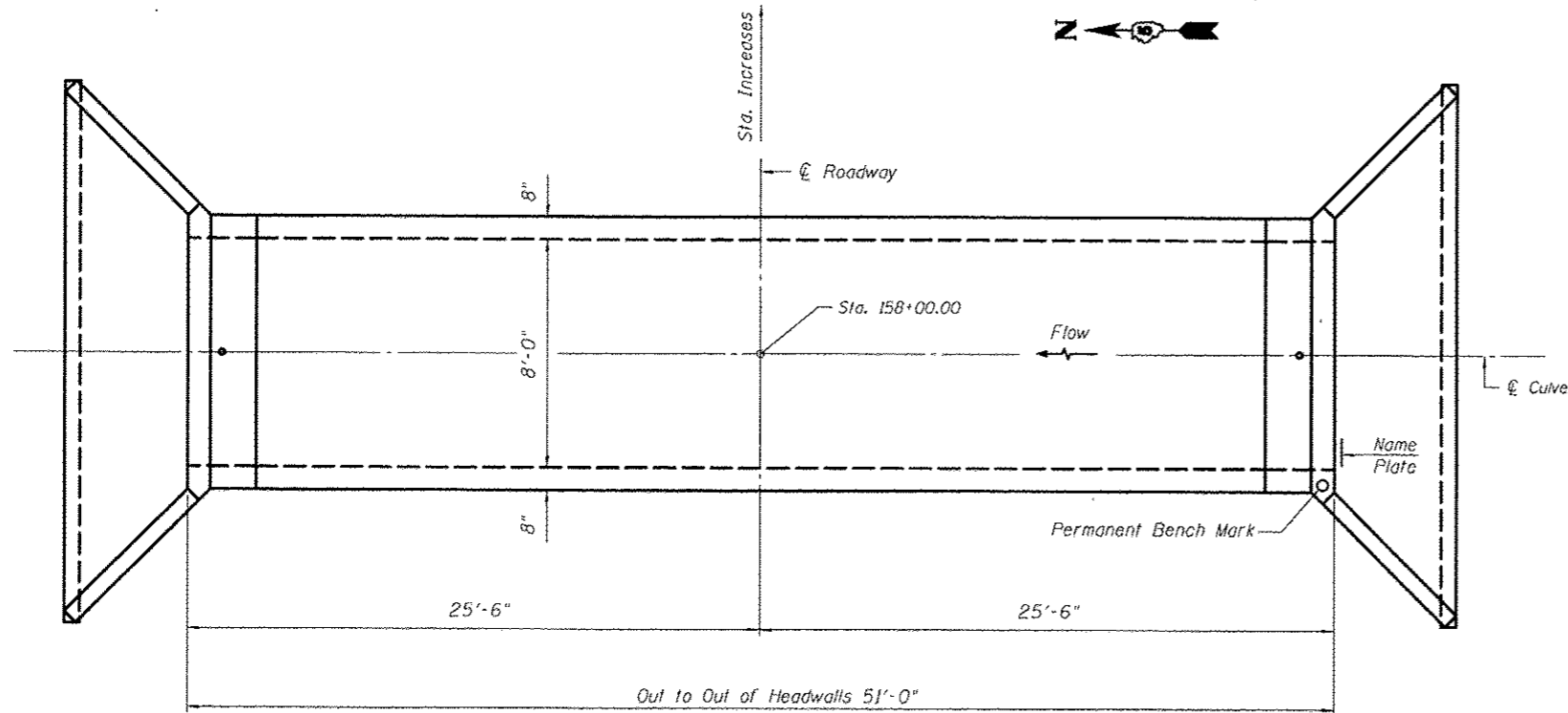
LOADING HL-93

DESIGN STRESSES

PRECAST UNITS

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

PROP. S.N. 010-8159
 STA. 158+00.00



WATERWAY INFORMATION

Drainage Area = 0.081 sq. mi. Low Grade Elev. 689.80 @ Sta. 156+00.00

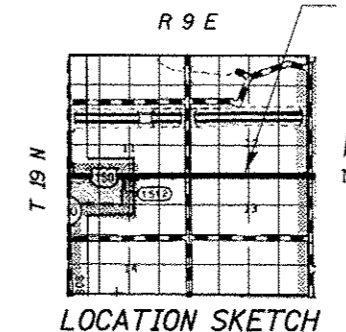
Flood Yr.	Freq.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
	10	33.3	4	14	686.9	N/A	0.0	Over	687.0
Design	50	54.5	4	16	687.2	N/A	0.2	Over	687.4
Base	100	64	4	16	687.4	N/A	0.3	Over	687.7
Overtopping									
Max. Calc.	500	87.1	4	16	687.6	N/A	0.6	Over	688.2

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	681.75	681.79

STATION 158+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. 010-8159

NAME PLATE
 See Std. 515001



**GENERAL PLAN AND ELEVATION
 SINGLE 8'x2' PRECAST BOX CULVERT
 F.A.S. ROUTE 1512 (US 150)
 SECTION (2X,3)RS-3 & 2RS-4
 CHAMPAIGN COUNTY
 STATION 158+00.00, S.N. 010-8159
 CULVERT NO. 5**

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Name Plates	Each	1.0
Box Culvert End Sections, Culvert No. 5	Each	2.0
Precast Concrete Box Culverts, 8x2	Foot	15.0
Permanent Bench Marks	Each	1.0
Stone Riprap, Class A1	Sq. Yd.	102.3
Porous Granular Embankment	Cu. Yd.	52.1