

Benchmark: 688.583, Chiseled square on top of South headwall of existing structure

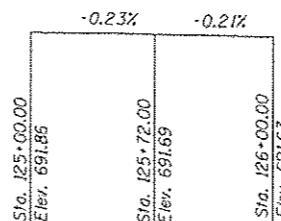
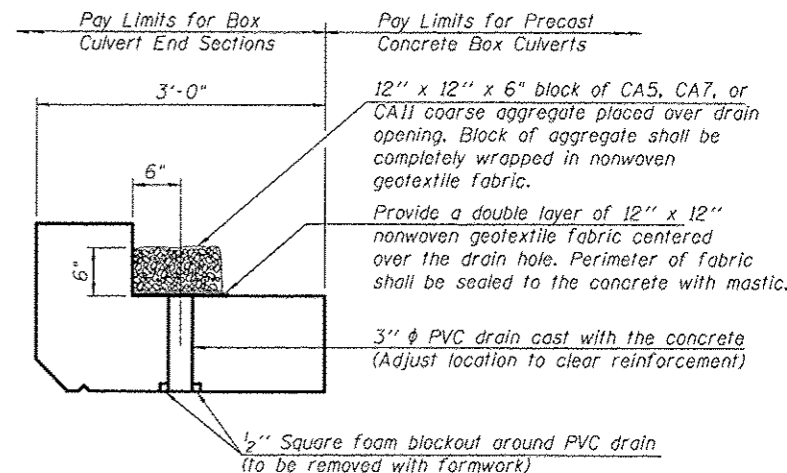
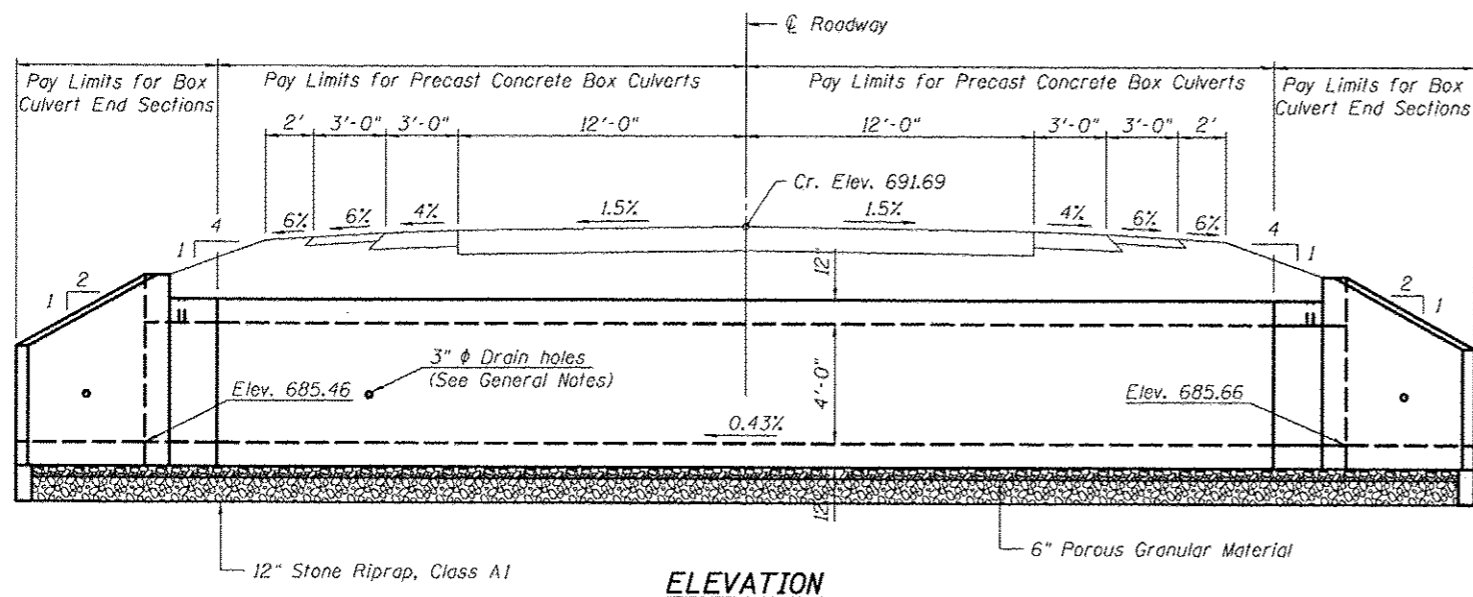
Existing Structure: Sta. 126+23.50, 3'x2' cast-in-place box culvert with concrete headwalls to be capped and filled with CLSM

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.



DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications
 6th Edition

LOADING HL-93

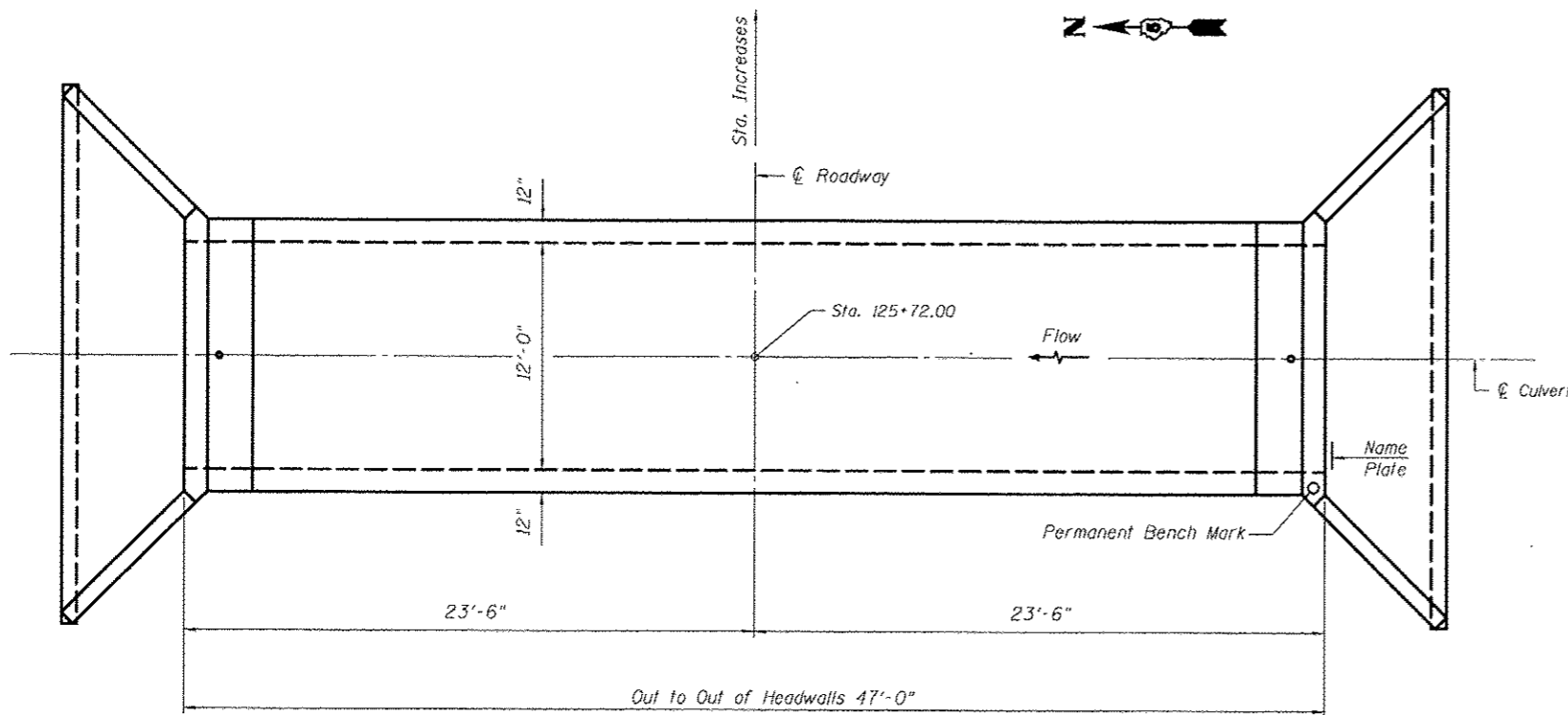
DESIGN STRESSES

PRECAST UNITS

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

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Name Plates	Each	1.0
Box Culvert End Sections, Culvert No. 1	Each	2.0
Precast Concrete Box Culverts, 12x4	Foot	39.0
Permanent Bench Marks	Each	1.0
Stone Riprap, Class A1	Sq. Yd.	128.2
Porous Granular Embankment	Cu. Yd.	45.7



WATERWAY INFORMATION

Drainage Area = 1.4 sq. mi. Low Grade Elev. 689.90 @ Sta. 142+00.00

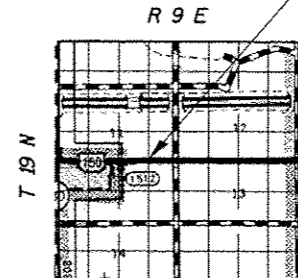
Flood	Freq.	Q	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
	Yr.	C.F.S.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	61	6	37	688.5	N/A	0.1	over	688.6	
Base	50	231	6	44	689.1	N/A	0.7	over	689.8	
Overflopping	100	293	6	46	689.3	N/A	0.7	over	690.1	
	55	239	6	45	689.2	N/A	0.7	over	689.9	

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	682.66	682.46

STATION 125+72.00
 BUILT 2014 BY
 STATE OF ILLINOIS
 F.A.U. RT. 7152 US 150
 SEC. (2X,3)RS-3 & 2RS-4
 LOADING HL-93
 STR. NO. 010-8156

NAME PLATE
 See Std. 515001



PROP. S.N. 010-8156
 STA. 125+72.00

**GENERAL PLAN AND ELEVATION
 SINGLE 12'x4' PRECAST BOX CULVERT
 F.A.U. ROUTE 7152 (US 150)
 SECTION (2X,3)RS-3 & 2RS-4
 CHAMPAIGN COUNTY
 STATION 125+72.00, S.N. 010-8156
 CULVERT NO. 1**