

Existing Structure: The existing structure is a ±50'-0" long reinforced cast-in-place concrete box culvert with a 2'-0" x 1'-6" opening. The original structure was constructed as S.B.I. Route 109 Construction Section 101-A at the original station of 291+00.

**GENERAL NOTES**

Plan dimensions and details relative to the existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of work, however, the Contractor will be paid for the quantity furnished at the unit price for the work.

The verification of allowable soil bearing pressure underlying the proposed box culvert shall be verified by a dynamic cone penetration (DCP) test or other acceptable measures as provided by the District Geotechnical and Field Engineers. The results of the test must exceed the calculated bearing pressures shown on the plans prior to placement of the Concrete Box Culvert. Tests failing to exceed the calculated bearing pressures as shown on the plans will require subsurface modification that must be coordinated with the District Geotechnical and Field Engineers.

Expansion bolts shall be according to Standard Specification Article 1006.09. Precast alternative not allowed at this site.

A distance half the length of the wingwall but not less than 6'-0" of the barrel shall be poured monolithically with the wingwalls.

Existing Block Drop Inlet to be removed shall be paid for as Removal of Existing Structures, see Roadway Plans.

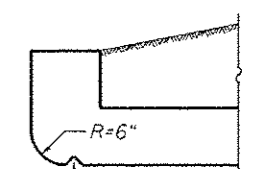
Calculated max. soil pressure under barrel = 1,966 psf.

For Riprap details and quantities see Roadway Plans.

For Total Bill of Material see sheet 3 of 3.

The minimum edge distance from the center of a hole to the free edge of a structural shape or plate shall be 1/2" unless noted otherwise.

The Contractor may install the thru bolts using drilling and grouting in lieu of providing a formed hole using steel pipe. Installation shall be in accordance with Article 509.06 using a method that results in the annulus surrounding the bolt being completely filled with adhesive. The method of drilling shall not result in spalled concrete at the exit face. Epoxy grouted thru bolts shall be snug tightened followed by an additional 1/3 turn on the interior nut at final installation. Cost included with Traversable Pipe Grate.



**HEADWALL DETAILS AT UPSTREAM END**

**DESIGN SPECIFICATIONS**

2002 AASHTO Standard Specifications for Highway Bridges

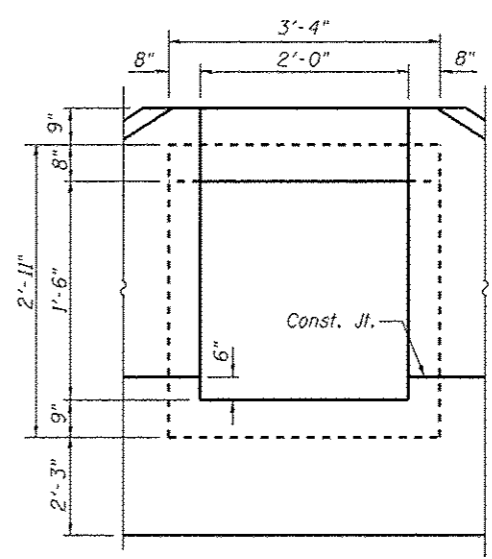
**LOADING HS 20-44**

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

**DESIGN STRESSES**

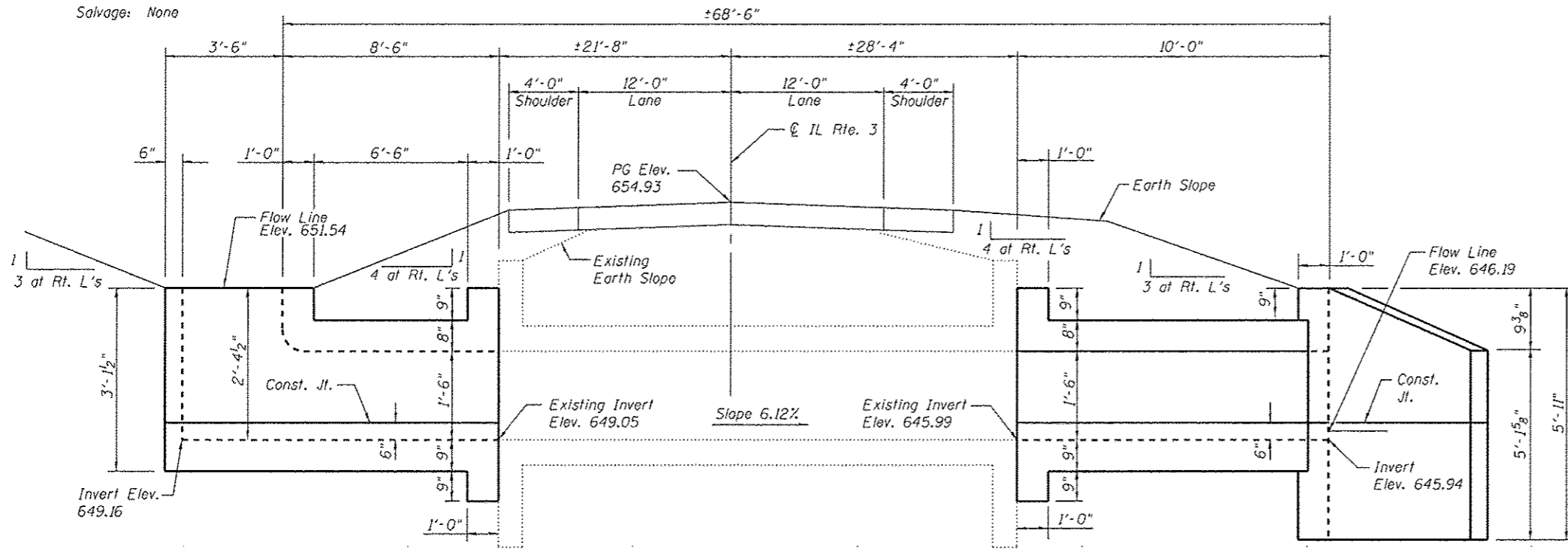
EXISTING CONSTRUCTION	NEW CONSTRUCTION
$f_y = 40,000 \text{ psi}$	$f_y = 60,000 \text{ psi}$
$f'_c = 3,000 \text{ psi}$	$f'_c = 3,500 \text{ psi}$

**GENERAL PLAN & ELEVATION  
ILLINOIS ROUTE 3  
F.A.S. RTE. 752 - SEC. 101-2RS-1  
JERSEY COUNTY  
STATION 290+69.78**



**BOX CULVERT  
SOUTH END ELEVATION  
(Dimensions Shown at Rt L's)**

Note:  
See Sheet 2 of 3 for Existing Block Drop Inlet Removal,  
See Sheet 3 of 3 for Detail A.

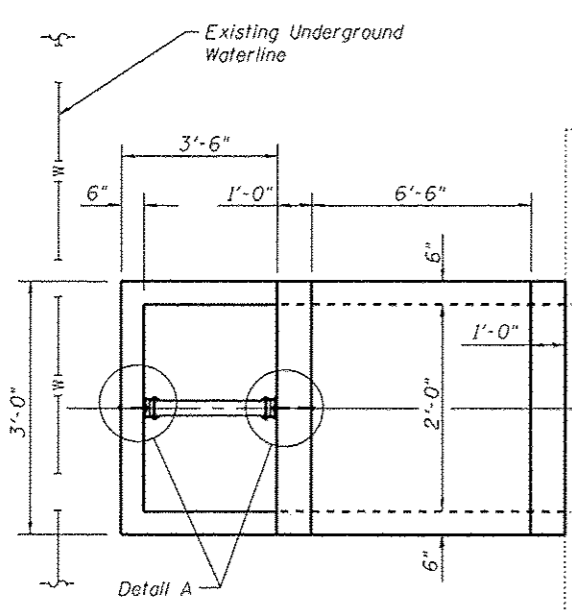
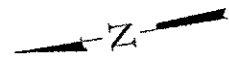


**LEFT EXTENSION**

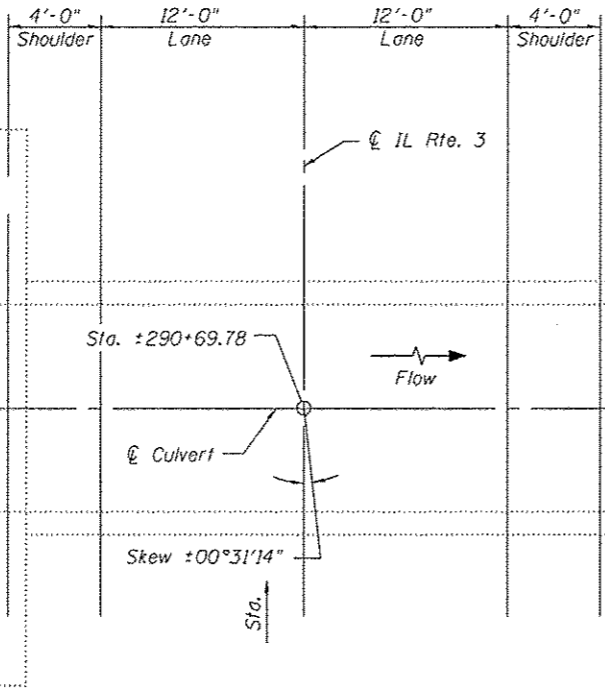
**ELEVATION**

(Existing Block Drop Inlet not shown for clarity)

**RIGHT EXTENSION**

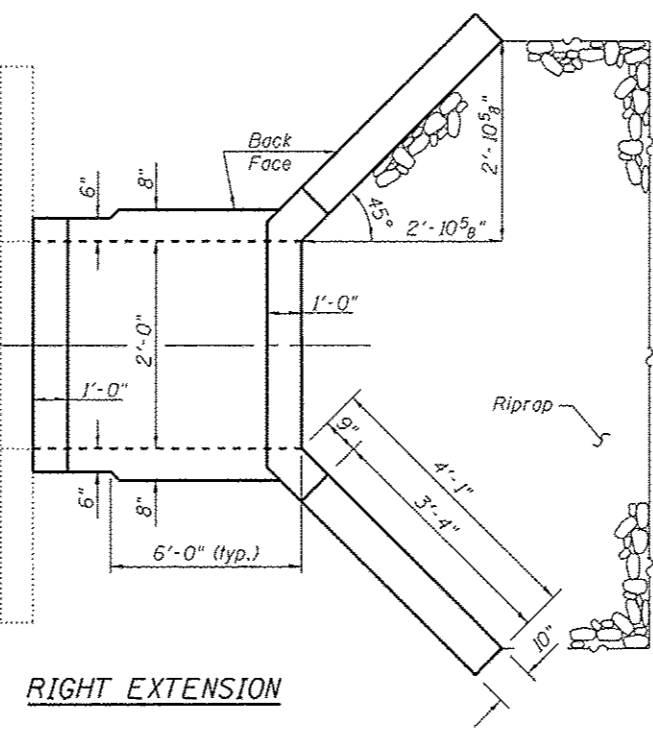


**LEFT EXTENSION**



**PLAN SHOWING OUTLINES**

(Existing Block Drop Inlet not shown for clarity)



**RIGHT EXTENSION**



*Chad Fuesting 8/18/14*

FILE NAME : 228-69-78-76789-081.dgn



USER NAME : jdkinkelmenn	DESIGNED - JD	REVISED -
Illinois Design Firm Number 184.001670	CHECKED - BB	REVISED -
PLOT SCALE :	DRAWN - WS	REVISED -
PLOT DATE : 8/8/2014	CHECKED - CJF	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
752	101-2RS-1	JERSEY	438	227
			CONTRACT NO. 76789	