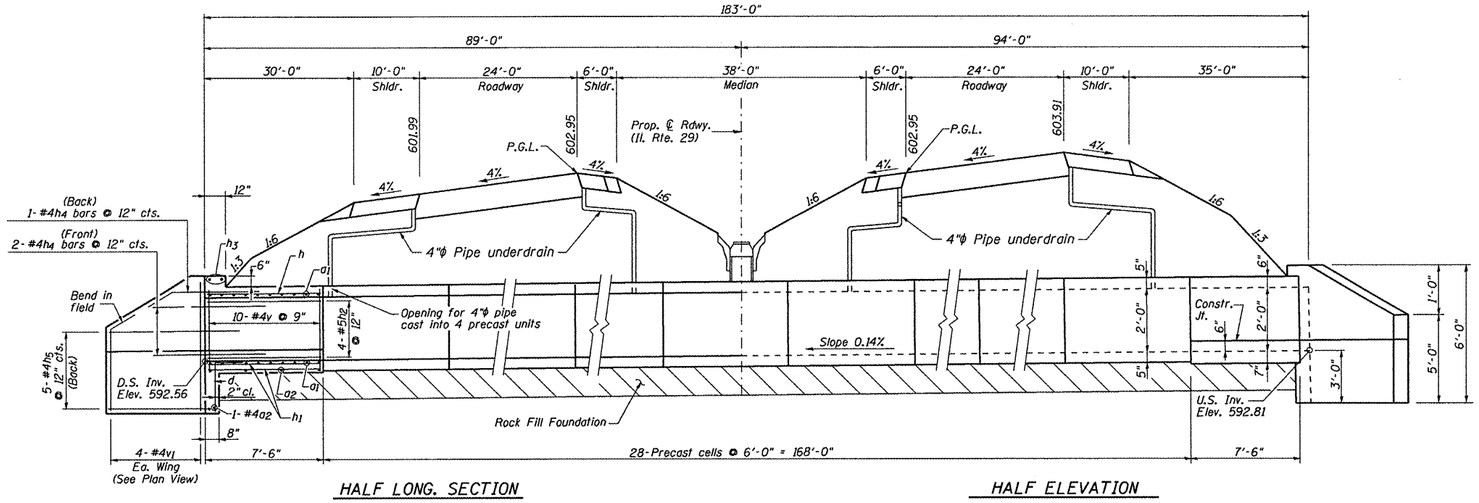
CONTRACT NO. 72829

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
75	84-12; 11-3	•	729	462
STA.	TO STA.			
FED. ROAD DIST. NO. 5	ILLINOIS	FED. AID PROJECT		

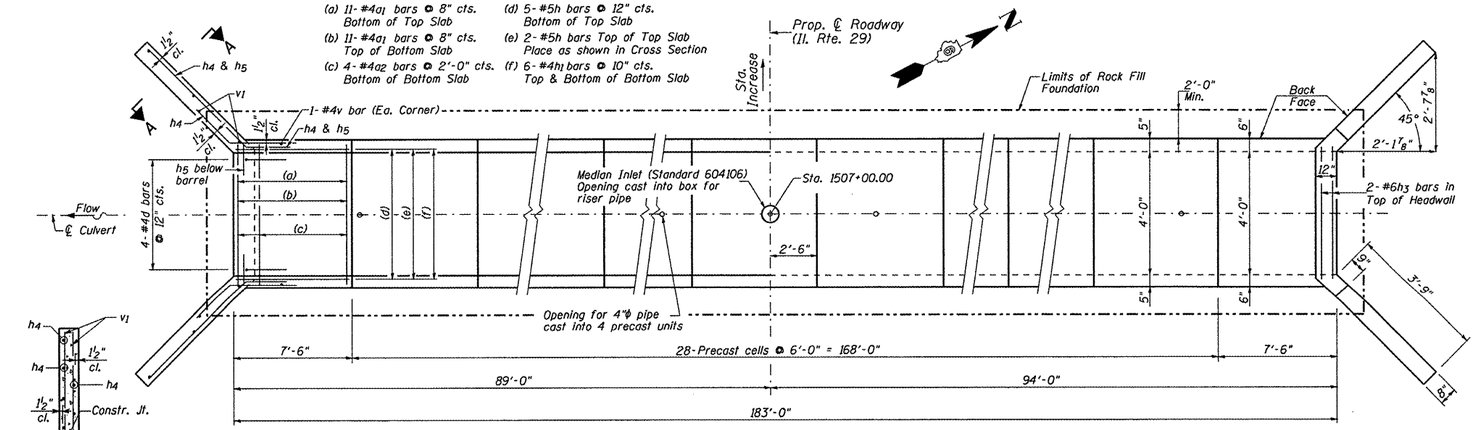
• SANGAMON AND CHRISTIAN



HALF LONG. SECTION

HALF ELEVATION

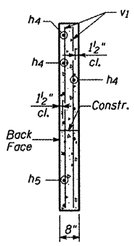
(a) 11-#4a1 bars @ 8" cts. Bottom of Top Slab
(b) 11-#4a1 bars @ 8" cts. Top of Bottom Slab
(c) 4-#4a2 bars @ 2'-0" cts. Bottom of Bottom Slab
(d) 5-#5h bars @ 12" cts. Bottom of Top Slab
(e) 2-#5h bars Top of Top Slab Place as shown in Cross Section
(f) 6-#4h1 bars @ 10" cts. Top & Bottom of Bottom Slab



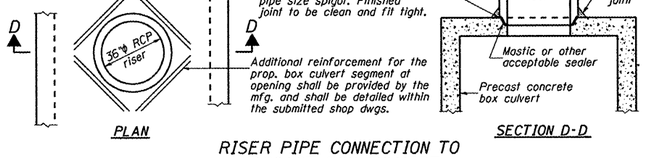
SHOWING REINFORCEMENT

PLAN

SHOWING OUTLINES



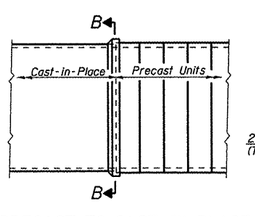
SECTION A-A



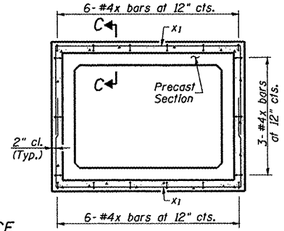
PLAN

SECTION D-D

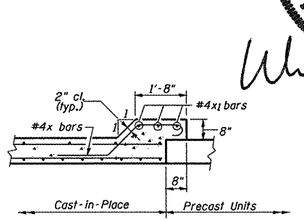
RISER PIPE CONNECTION TO PRECAST BOX CULVERT



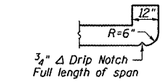
PRECAST TO CAST-IN-PLACE CONNECTION COLLAR



SECTION B-B

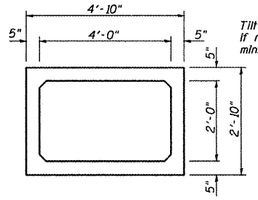


SECTION C-C



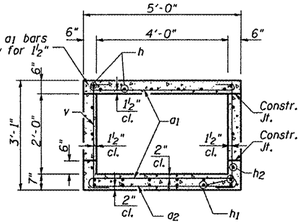
SECTION THRU HEADWALL

(Upstream End Only)



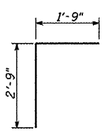
SECTION THRU PRECAST BARREL

Tilt hook of a1 bars if necessary for 1½" min. cl.

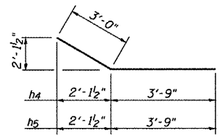


SECTION THRU BARREL

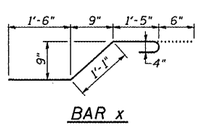
BAR a1



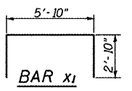
BAR d



BAR h4 & h5



BAR x



BAR x1

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1	44	#4	5'-8"	
a2	10	#4	4'-8"	
d	8	#4	4'-6"	
h	14	#5	7'-2"	
h1	24	#4	7'-2"	
h2	16	#5	7'-2"	
h3	4	#6	4'-8"	
h4	12	#4	6'-9"	
h5	20	#4	6'-9"	
v	44	#4	3'-9"	
v1	16	#4	5'-8"	
x	36	#4	4'-6"	
x1	12	#4	10'-8"	
Porous Granular Embankment		Cu. Yd.	76	
Filter Fabric		Sq. Yd.	459	
Precast Concrete Box Culverts 4'x2'		Foot	168	
Concrete Box Culverts		Cu. Yd.	8.6	
Reinforcement Bars		Pound	1,100	
Rock Fill Foundation		Ton	233	
Granular Culvert Backfill		Cu. Yd.	420	

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interim Revisions

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS	PRECAST UNITS
f'c = 3,500 psi	f'c = 5,000 psi
fy = 60,000 psi	fy = 65,000 psi(W.W.F.)

Exp. 11-30-2012

LICENSED STRUCTURAL ENGINEER
WILLIAM L. BAILEY, JR. 5087
STATE OF ILLINOIS

03-28-2012

NOTES:

1. The Precast Culvert shall be designed in accordance with ASTM C1577.
2. Reinforcement bars shall conform to the requirements of ASTM A706, Grade 60.
3. It shall be the responsibility of the contractor to divert the stream flow in order to keep the construction area free of water. The method of water diversion shall be subject to the approval of the Engineer and the cost shall be included in the item "Precast Concrete Box Culverts 4' x 2'."
4. Precast end sections will not be allowed.
5. All construction joints shall be bonded.
6. Limits of Removal and Replacement of weak soils with Rock Fill Foundation will be determined by the Engineer.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED BOX CULVERT
PLAN - ELEVATION - DETAILS
STA. 1507+00.00

SCALE: NONE
DRAWN BY:
DATE: 03/06/2012
CHECKED BY: WLB

Default
L:\001\020660\drow\sheets\Structures\STA 1507+00 - BOX Culvert.dgn
3/28/2012