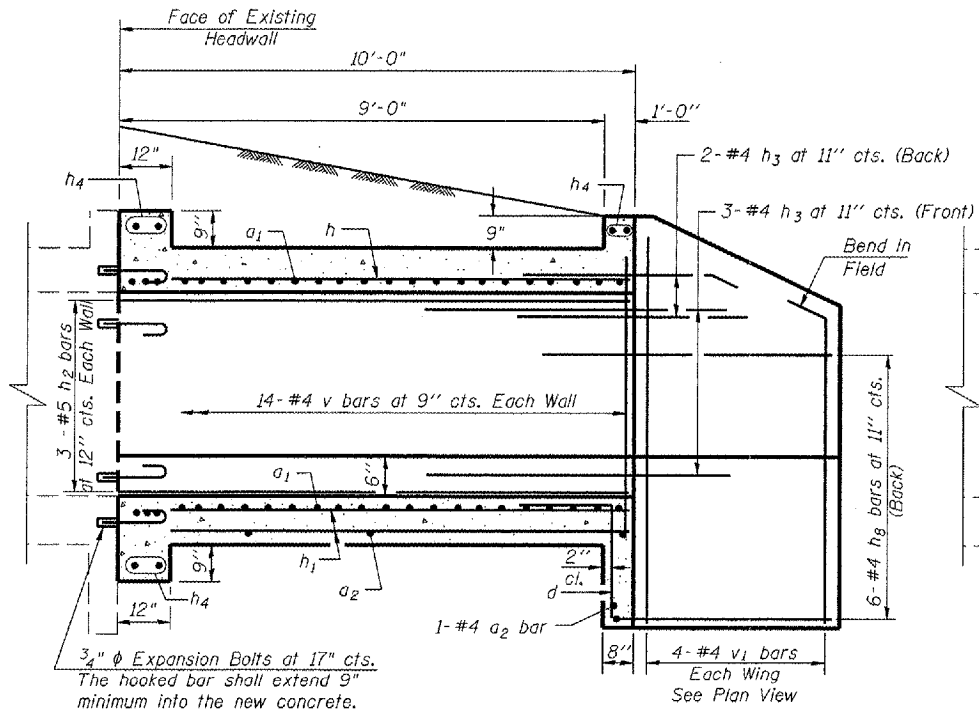


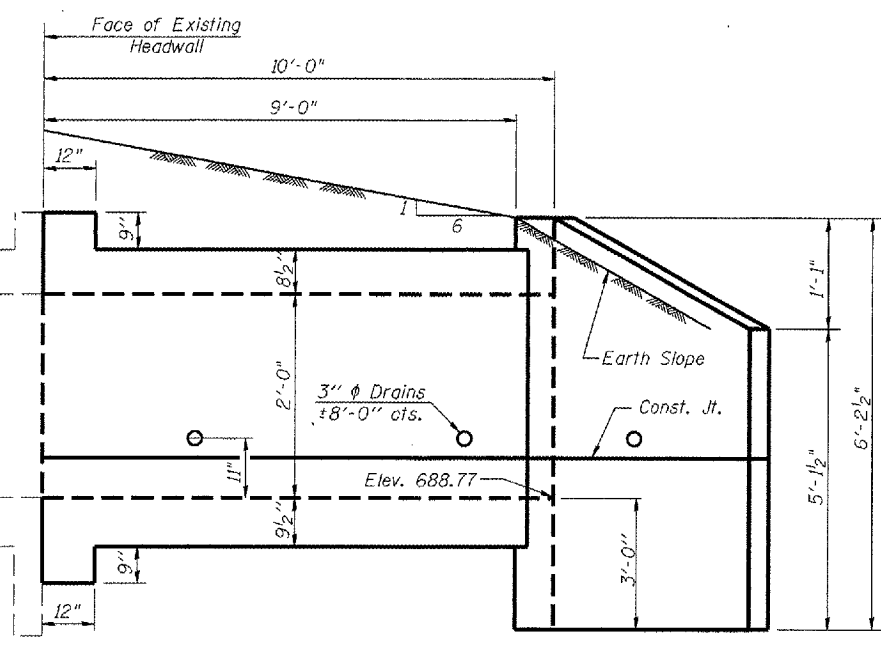
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57&74	*	**	151	42

\* D5 CABLE GUARD 2007-2  
 \*\* CHAMPAIGN, DEWITT & DOUGLAS

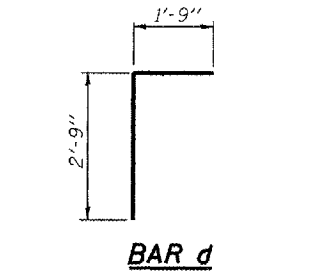
# DETAIL OF BOX CULVERT EXTENSION WITH CAST-IN-PLACE BOX CULVERT



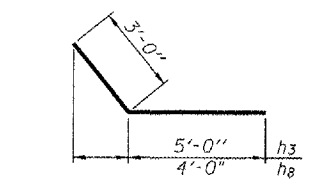
**HALF LONG. SECTION**



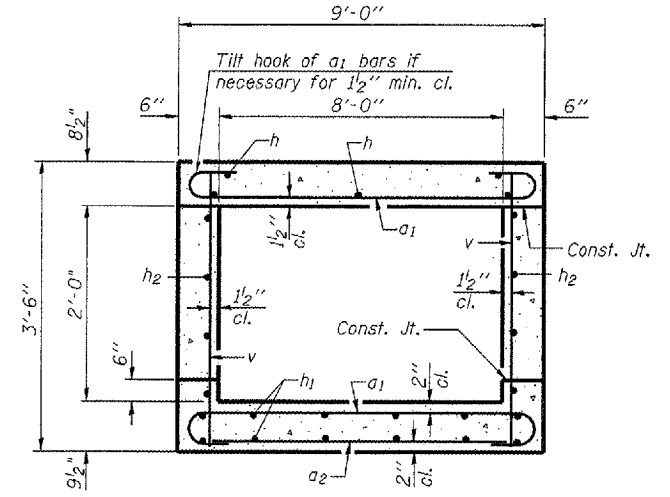
**HALF ELEVATION**



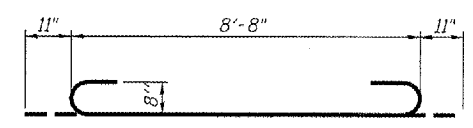
**BAR d**



**BARS h3 & h8**



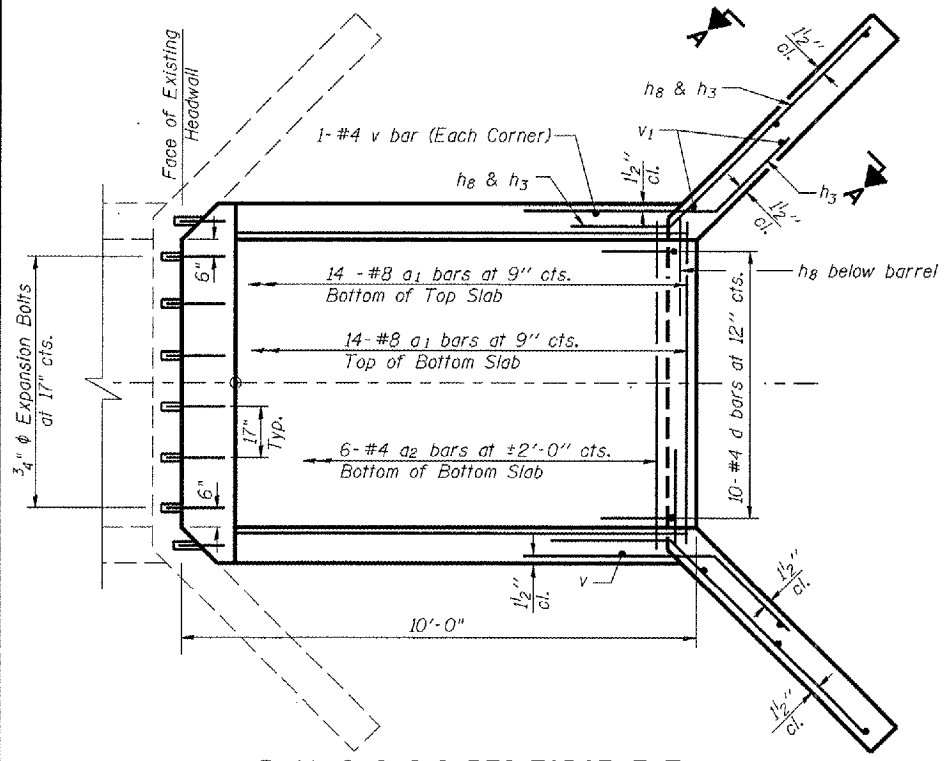
**SECTION THRU BARREL**



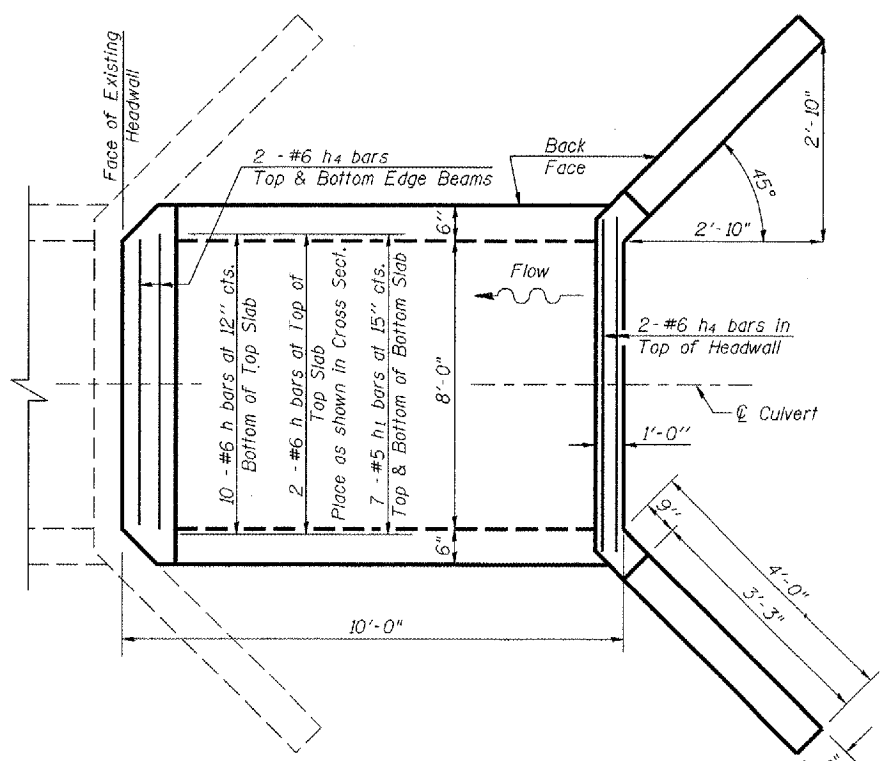
**BAR a1**

**BILL OF MATERIAL**

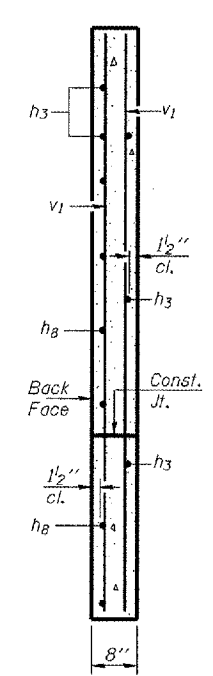
Bar	No.	Size	Length	Shape
a1	28	#8	10'-6"	
a2	7	#4	8'-3"	
d	10	#4	4'-6"	
h	12	#6	9'-8"	
h1	16	#5	9'-8"	
h2	6	#5	9'-8"	
h3	10	#4	8'-0"	
h4	6	#6	8'-8"	
h8	12	#4	7'-0"	
s	10	#4	4'-5"	
s1	20	#4	4'-7"	
v	30	#4	3'-2"	
v1	8	#4	5'-1"	
		Concrete Box Culverts	Cu. Yd.	8.9
		Reinforcement Bars	Pound	1620.0
		3/4 Inch Expansion Bolts	Each	16.0



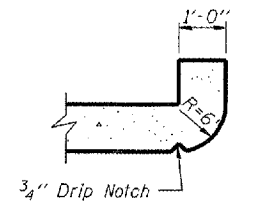
**PLAN SHOWING REINFORCEMENT**



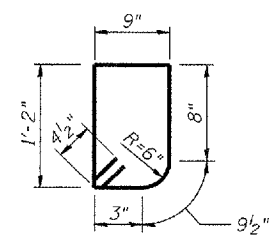
**PLAN SHOWING OUTLINES**



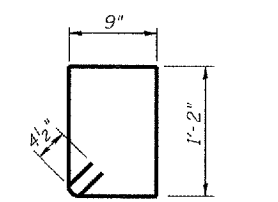
**SECTION A-A**



**SECTION THRU HEADWALL**  
(Up Stream End Only)



**BAR s**  
Headwall Stirrups @ 12" cts.



**BAR s1**  
Top & Bottom Edge Beams  
Stirrups @ 12" cts.

**NOTES**

A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.  
 Reinforcement Bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.  
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.  
 All construction joints shall be bonded.

**DESIGN STRESSES**

$f_y = 60,000$  psi  
 $f'_c = 3,500$  psi

**LOADING HS 20-44 & ALT.**

ILLINOIS DEPARTMENT OF TRANSPORTATION

**BOX CULVERT EXTENSION**  
**W/CAST-IN-PLACE BOX CULVERT**  
**LT. STA 225 + 00**

SCALE: NA  
 DATE: 08/30/06

DRAWN BY: CADD  
 CHECKED BY:

PLOT DATE: 11/2/2006  
 FILE NAME: c:\p\projects\70547\70547.dgn  
 PLOT SCALE: 1/8"=1'-0"  
 USER NAME: pdillman