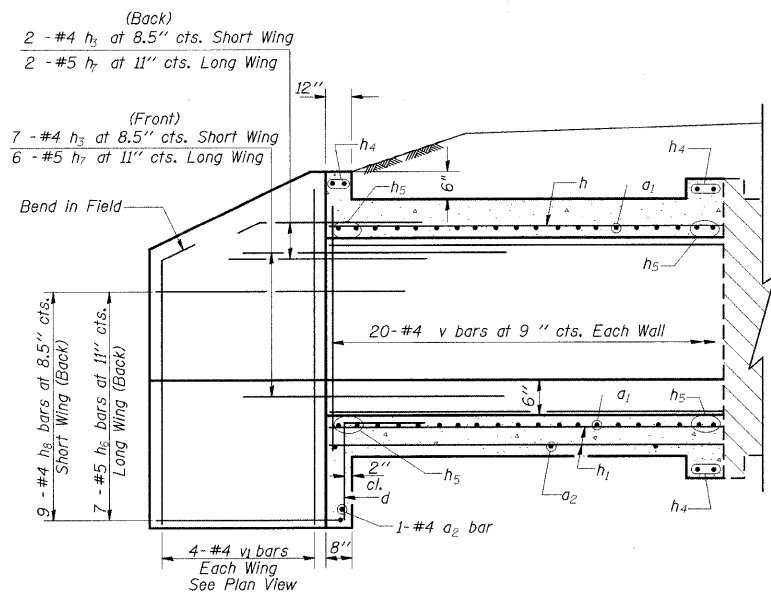
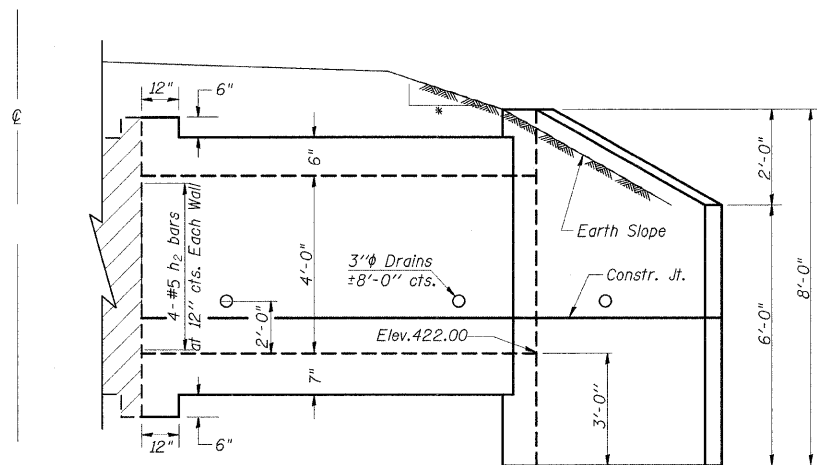


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.S. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
932	(8,9,11)W,RS-1	*	401	169
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
* JOHNSON/POPE				

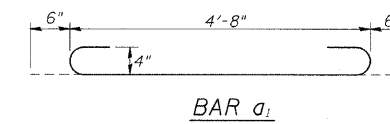
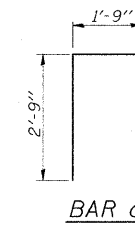
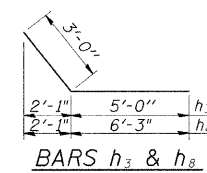


HALF LONG SECTION



HALF ELEVATION

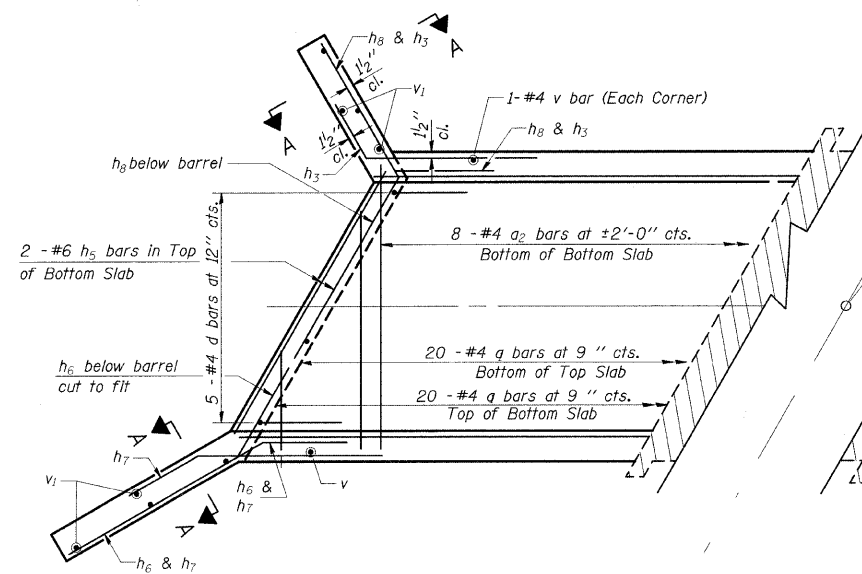
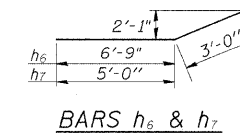
- 4:1 TO CLEAR ZONE
- 3:1 AFTER CLEAR ZONE



DESIGN STRESSES

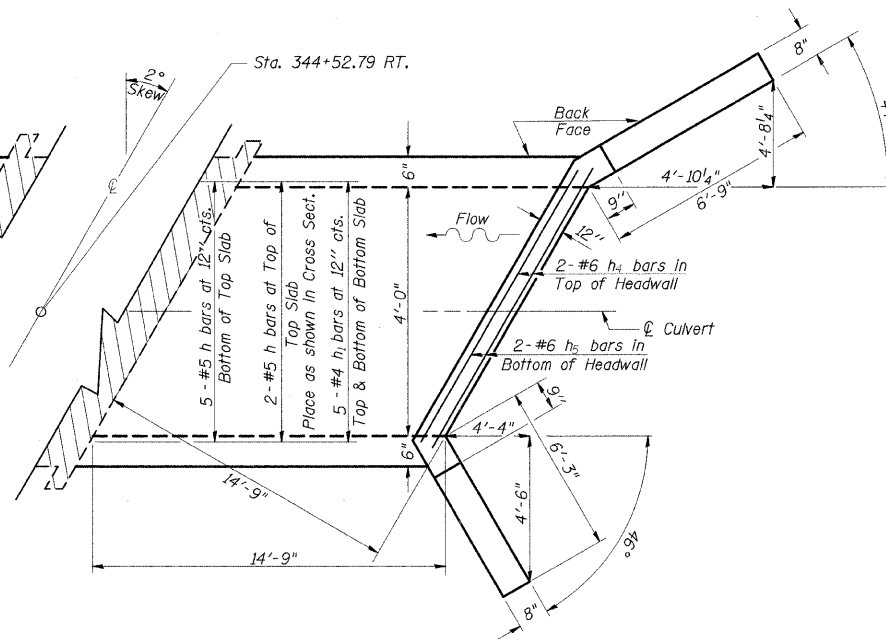
$f_y = 60,000$ psi
 $f'_c = 3,500$ psi

LOADING HS 20-44 & ALT.



SHOWING REINFORCEMENT

PLAN

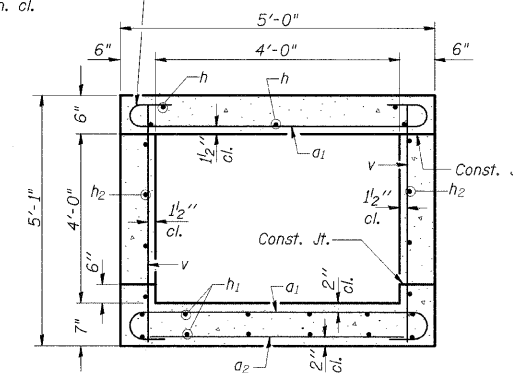


SHOWING OUTLINES

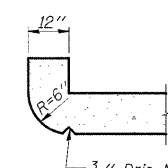
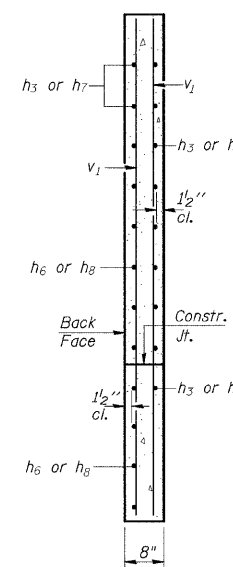
NOTES

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.

Tilt hook of a_1 bars if necessary for $1\frac{1}{2}$ " min. cl.



SECTION THRU BARREL



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_1	40	#4	5'-8"	C
a_2	9	#4	4'-3"	—
d	5	#4	4'-6"	—
h	7	#5	14'-6"	—
h_1	10	#4	14'-6"	—
h_2	8	#5	14'-6"	—
h_3	9	#4	8'-0"	—
h_4	6	#6	4'-4"	—
h_5	8	#6	4'-8"	—
h_6	7	#5	9'-9"	—
h_7	8	#5	8'-0"	—
h_8	9	#4	9'-3"	—
v	42	#4	4'-9"	—
v_1	8	#4	7'-7"	—
Expansion Bolts $\frac{3}{4}$ "				Each 12
Concrete Box Culverts				Cu. Yd. 7.8
Reinforcement Bars				Pound 1030

PRECAST OPTION NOT ALLOWED

ILLINOIS DEPARTMENT OF TRANSPORTATION

BOX CULVERT EXTENSION

STATION 344+52.79 RT.

4' X 4', SKEW 2° RT. AH.

EXTEND 14'-9"