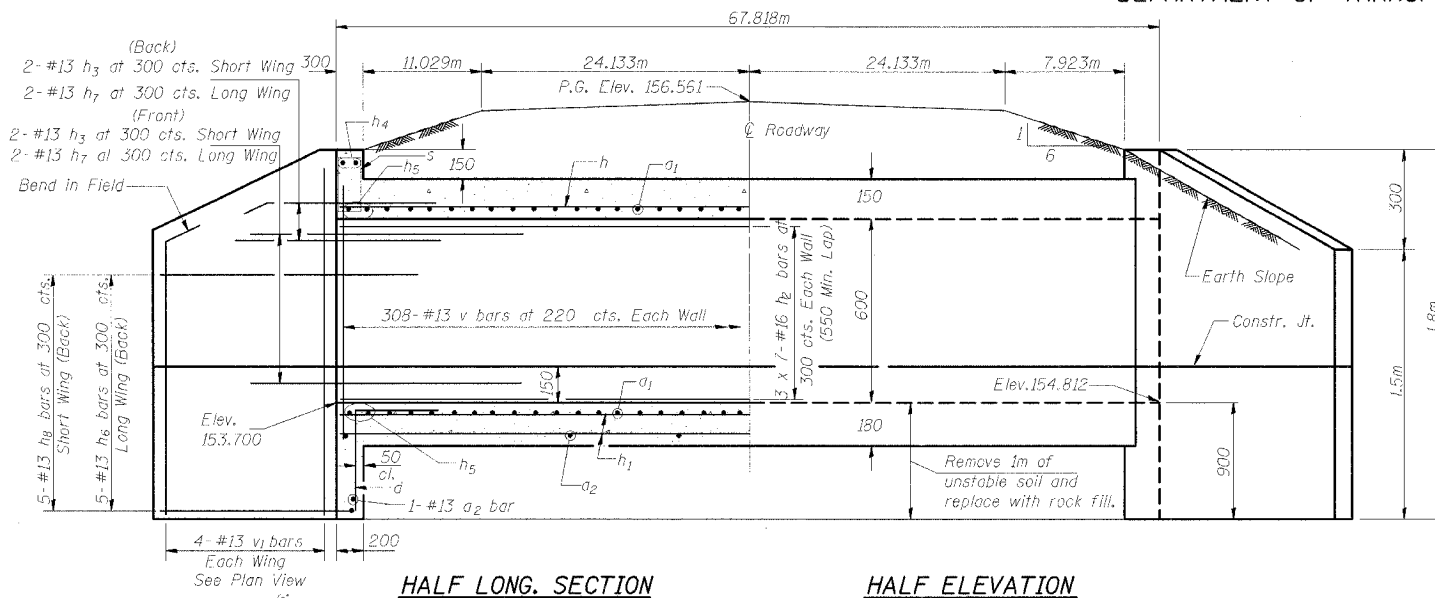


STATE OF ILLINOIS  
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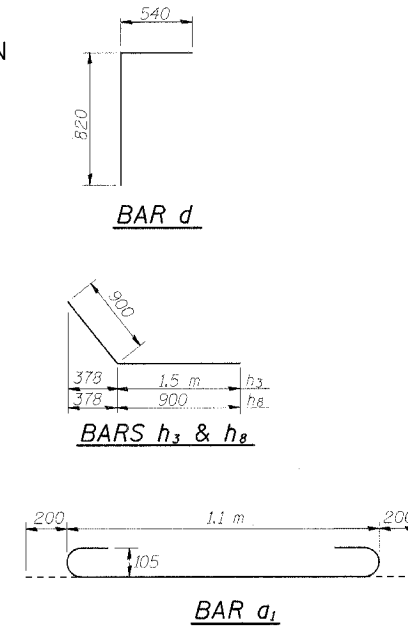
FIP NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	*	MADISON	452	151
STA. 33+449.968				
FED. ROAD DIST. NO. 8		ILLINOIS	FED. AID PROJECT-	

SECTION 60-14  
SECTION 60-14-1B  
CONTRACT NO. 76321

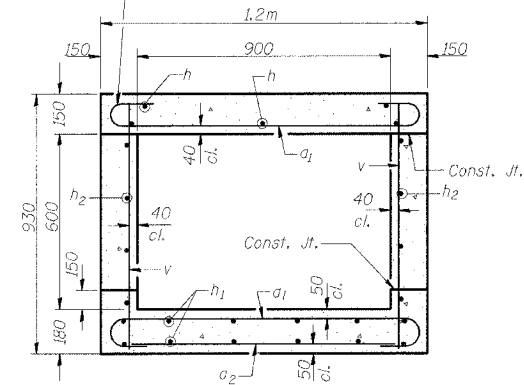


HALF LONG SECTION

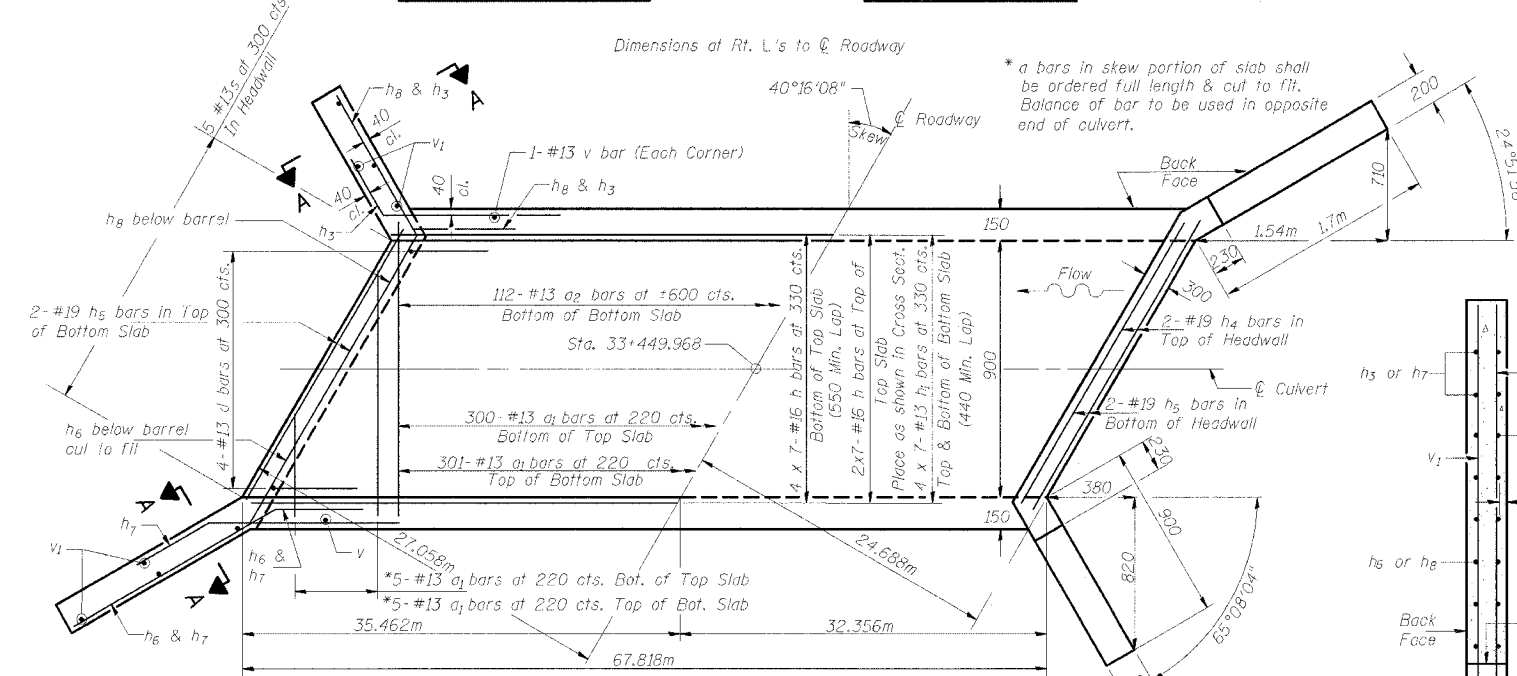
HALF ELEVATION



Tilt hook of a1 bars if necessary for 40 mm min. cl.



SECTION THRU BARREL



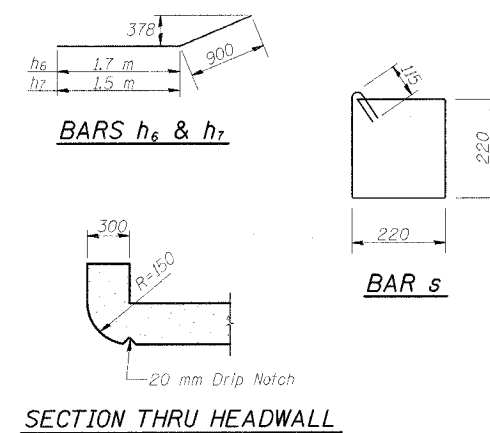
SHOWING REINFORCEMENT

SHOWING OUTLINES

PLAN

NOTES

A distance of half the length of the wingwall but not less than 2 m of the barrel shall be poured monolithically with the wingwalls.  
Reinforcement Bars shall conform to the requirements of AASHTO M-31M, M-42M or M-53M, Grade 420.  
Bars indicated thus 12 x 4-#16 etc. indicates 12 lines of bars with 4 lengths per line.  
All dimensions are in millimeters (mm) except as noted.  
All construction joints shall be bonded.



SECTION THRU HEADWALL (Up Stream End Only)

DESIGN STRESSES

$f_y = 420 \text{ MPa}$   
 $f'_c = 24 \text{ MPa}$

LOADING MS18 & ALT.

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
a1	611	#13	1.50	U
a2	114	#13	0.98	U
d	8	#13	1.36	L
h	42	#16	10.15	—
h1	56	#13	10.05	—
h2	42	#16	10.15	—
h3	8	#13	2.40	—
h4	4	#19	1.43	—
h5	8	#19	1.59	—
h6	10	#13	2.60	—
h7	8	#13	2.40	—
h8	10	#13	1.80	—
v	620	#13	0.85	—
v1	15	#13	1.72	—
s	10	#13	1.11	□
Concrete Box Culverts			m <sup>3</sup>	41.2
Reinforcement Bars			kg	3600
Rock Fill			m Ton	204

DESIGNED
CHECKED
DRAWN
CHECKED

SSB-H-R (M) 6-1-2000

SECTION A-A

PLANS PREPARED BY:  
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