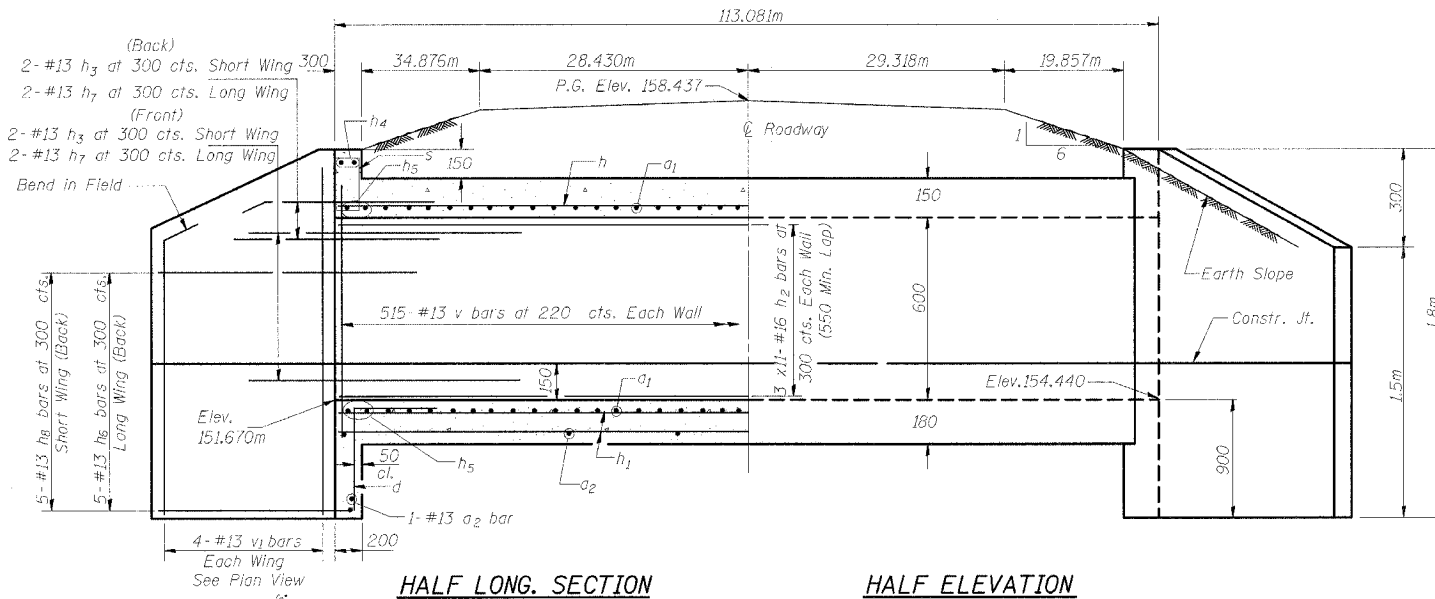


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

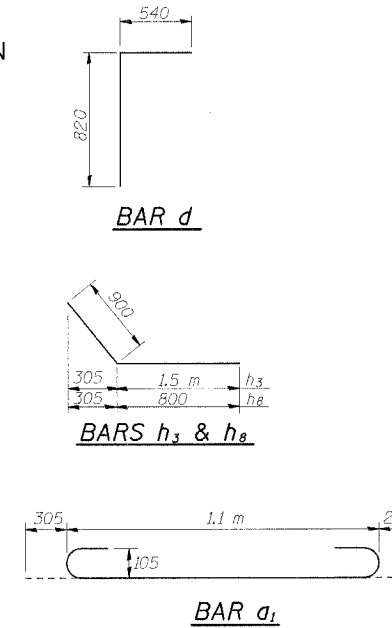
FAP NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	*	MADISON	452	148
STA. 31+723.901				
FED. ROAD DIST. NO. #		ILLINOIS	FED. AID PROJECT	

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



HALF LONG SECTION

HALF ELEVATION

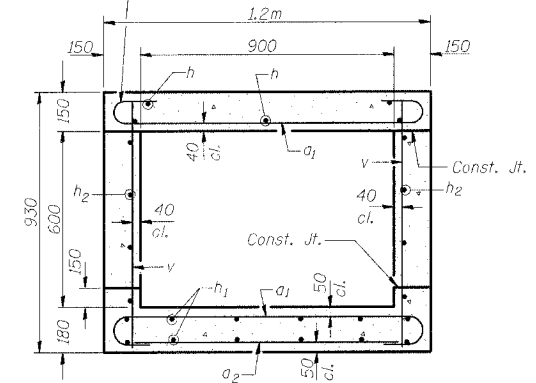


BAR d

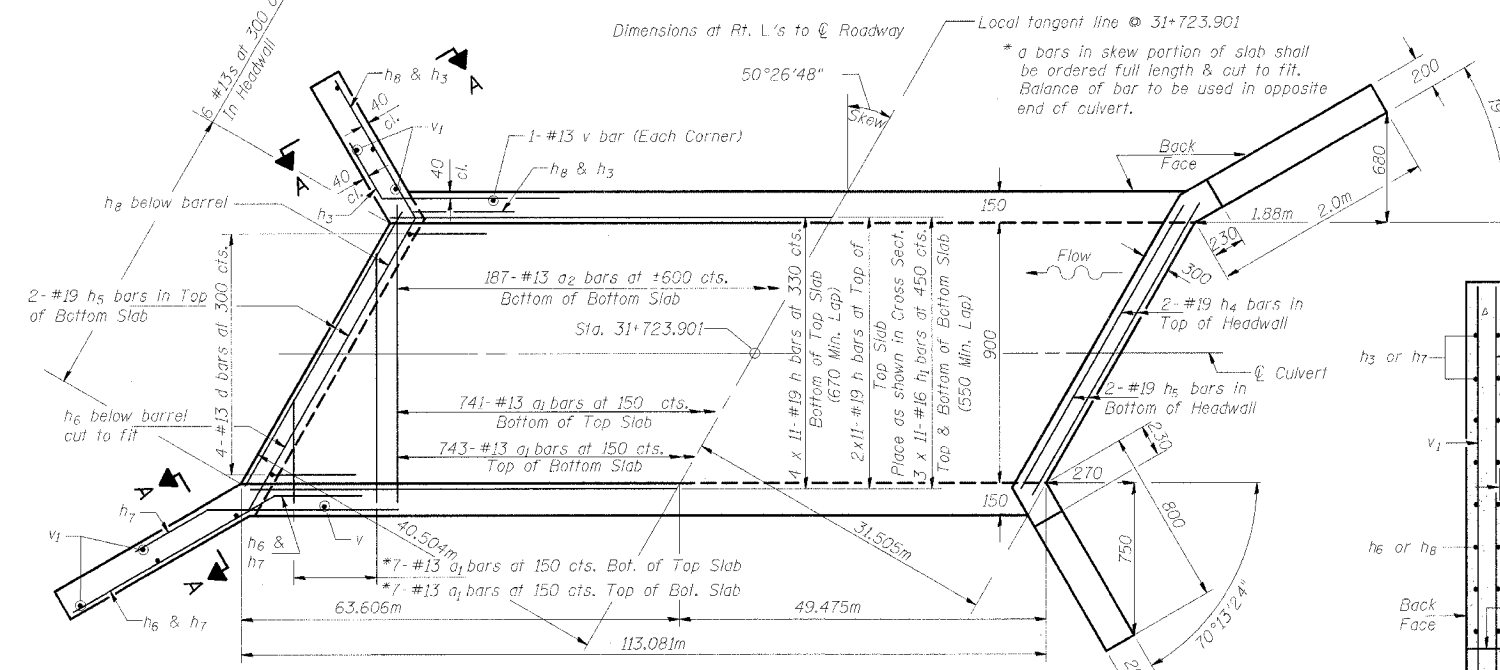
BARS h<sub>3</sub> & h<sub>8</sub>

BAR a<sub>1</sub>

Tilt hook of a<sub>1</sub> bars if necessary for 40 mm min. cl.



SECTION THRU BARREL



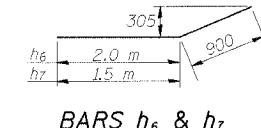
SHOWING REINFORCEMENT

SHOWING OUTLINES

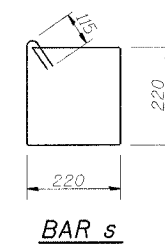
PLAN

NOTES

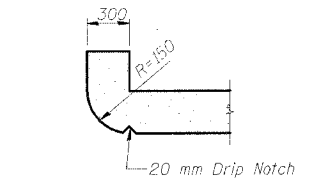
A distance of half the length of the wingwall but not less than 2 m of the barrel shall be poured monolithically with the wingwalls.  
Reinforcement Bars shall conform to the requirements of AASHTO M-31M, M-42M or M-53M, Grade 420.  
Bars indicated thus 12 x 4-#16 etc. indicates 12 lines of bars with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



BARS h<sub>6</sub> & h<sub>7</sub>



BAR s



SECTION THRU HEADWALL  
(Up Stream End Only)

DESIGN STRESSES

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

LOADING MSIB & ALT.

SECTION A-A

PLANS PREPARED BY:  
WOOLPERT LLP  
4315 North Illinois Street, Suite 1 C  
Belleville, IL  
62226-1045  
618.277.7004  
FAX: 618.277.6114

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

FA 310  
SECTION 60-14  
MADISON COUNTY  
STATION 31+723.901

BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
a <sub>1</sub>	1498	#13	1.50	U
a <sub>2</sub>	189	#13	0.98	U
d	8	#13	1.36	L
h	66	#19	10.88	—
h <sub>1</sub>	66	#16	10.77	—
h <sub>2</sub>	66	#16	10.77	—
h <sub>3</sub>	8	#13	2.40	—
h <sub>4</sub>	4	#19	1.66	—
h <sub>5</sub>	8	#19	1.82	—
h <sub>6</sub>	10	#13	2.90	—
h <sub>7</sub>	8	#13	2.40	—
h <sub>8</sub>	10	#13	1.70	—
v	1034	#13	0.85	—
v <sub>1</sub>	16	#13	1.72	—
s	12	#13	1.11	□
Concrete Box Culverts			m <sup>3</sup>	67.5
Reinforcement Bars			kg	7290

DESIGNED
CHECKED
DRAWN
CHECKED

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