

(Back)
2-#6h₃ at 11" cts. Short Wing
2-#6h₇ at 11" cts. Long Wing

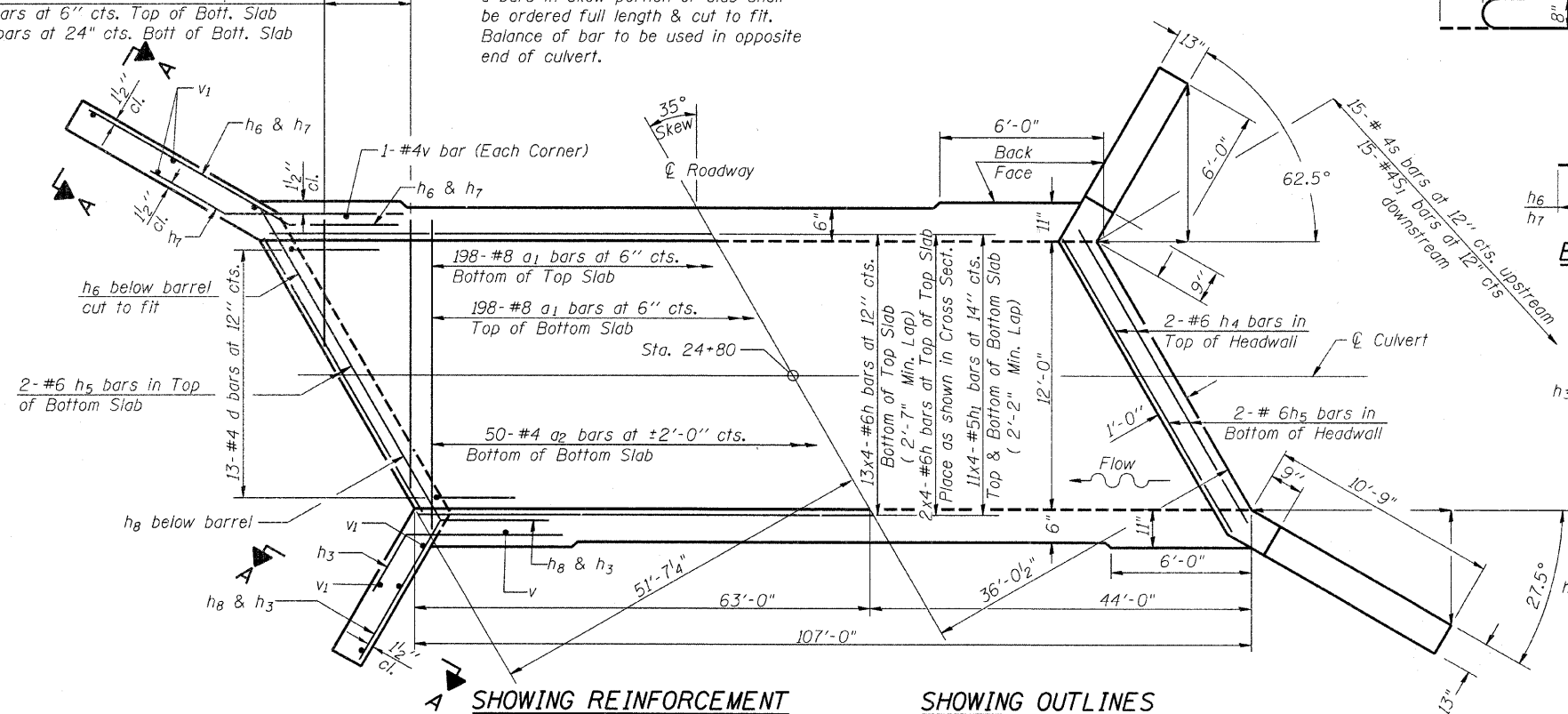
(Front)
5-#6h₃ at 11" cts. Short Wing
5-#6h₇ at 11" cts. Long Wing

HALF LONG SECTION **HALF ELEVATION**

Dimensions at Rt. L's to ϕ Roadway

*17-#8a₁ bars at 6" cts. Bott. of Top Slab
*17-#8a₁ bars at 6" cts. Top of Bott. Slab
*4-#4a₂ bars at 24" cts. Bott of Bott. Slab

* a bars in skew portion of slab shall be ordered full length & cut to fit. Balance of bar to be used in opposite end of culvert.

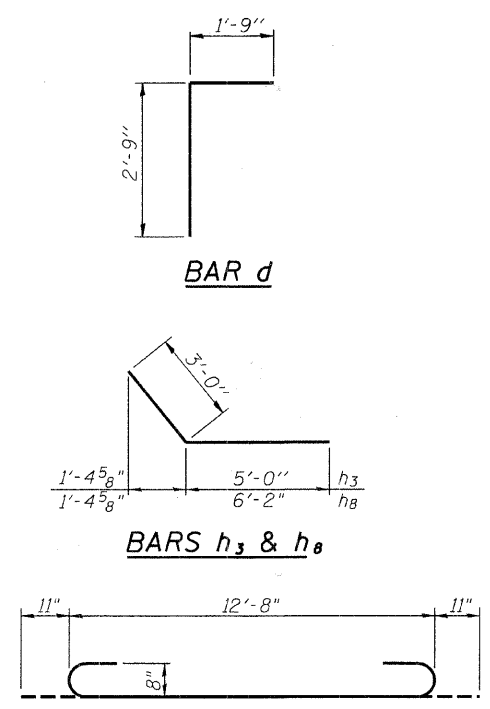


SHOWING REINFORCEMENT **SHOWING OUTLINES**

PLAN

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.
Precast Alternate is not allowed.



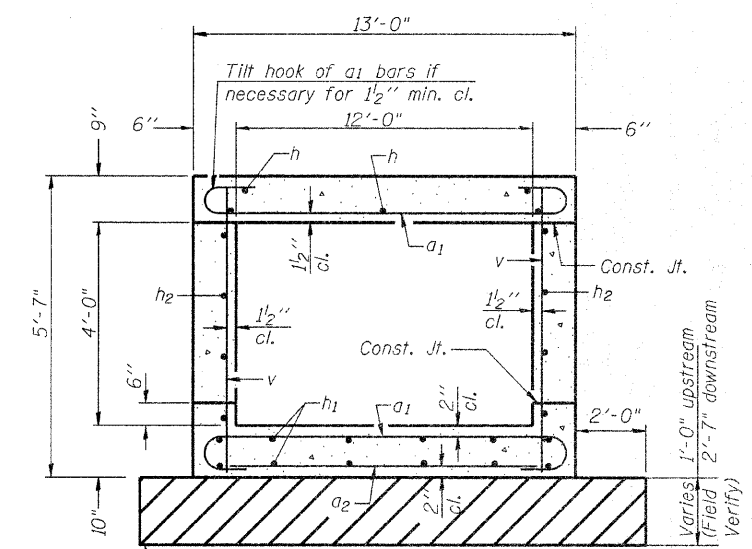
BAR d

BARS h₃ & h₆

BAR a₁

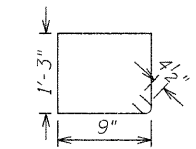
BARS h₆ & h₇

SECTION A-A

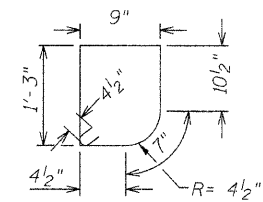


SECTION THRU BARREL

Remove weak soil down to 1500 psf strength soil and replace with compacted rockfill foundation. Paid for as Removal and Disposal of Unsuitable Material and Course Aggregate CA-6.



BARS S₁
(DOWNSTREAM)



BARS S
(UPSTREAM)

SECTION THRU HEADWALL
(Up Stream End Only)

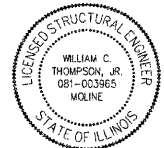
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁	430	#8	14'-6"	
a ₂	56	#4	12'-8"	
d	26	#4	4'-6"	
h	60	#6	28'-8"	
h ₁	88	#5	28'-4"	
h ₂	40	#5	28'-4"	
h ₃	14	#6	8'-0"	
h ₄	4	#6	15'-8"	
h ₅	8	#6	15'-8"	
h ₆	14	#6	15'-0"	
h ₇	14	#6	8'-0"	
h ₈	14	#6	9'-2"	
v	290	#4	5'-2"	
v ₁	16	#4	8'-1"	
S	15	#4	4'-7"	
S ₁	15	#4	4'-9"	
Concrete Box Culverts	Cu. Yd.			112
Reinforcement Bars	Pound			25,870
Removal and Disposal of Unsuitable Material	Cu. Yd.			119
Coarse Aggregate CA-6	Ton			244

DESIGN STRESSES

f_y = 60,000 psi
f'_c = 3,500 psi
MAX. SOIL PRESSURE UNDER FOOTING = 1500 PSF

LOADING HS 20-44



Signature: *William C. Thompson, Jr.*
Date: 3/10/2009
Exp. Date: 11/30/2010

CULVERT DETAILS
LATHROP STREET
OVER ANNAWAN DITCH
STA. 24+80.00

DESIGNED	JDA
CHECKED	
DRAWN	MAC
CHECKED	JDA

EXAMINED	200
PASSED	

ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES