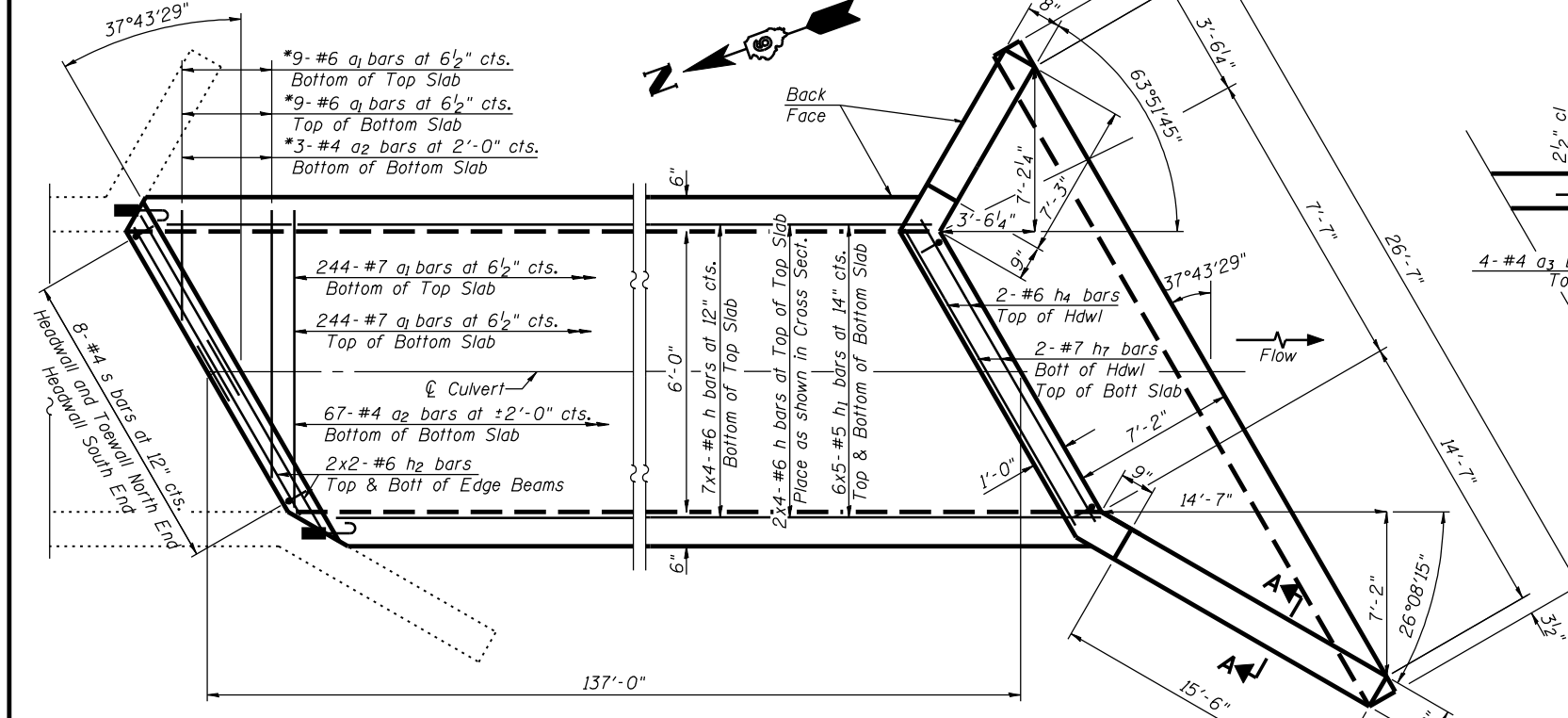


*a₁ and a₂ bars in skew portion of slab shall be ordered full length and cut to fit. Balance of bar to be used in opposite end of culvert.

ELEVATION



NOTES

Reinforcement Bars shall conform to the requirements of AASHTO M31 or M322, Grade 60.
 Bars indicated thus 7x4-#6 etc. indicates 7 lines of bars with 4 lengths per line.
 All construction joints shall be bonded.
 Expansion Bolts Shall be 3/4" Diameter Hooked Bolts and Shall Conform to the Requirements of Article 1006.09 of the Standard Specifications.
 Hooked Bolts Shall Extend a Minimum of 9" into New Concrete.

PLAN

7-#4 h₃ bars at 12" cts. Short Wing (Back)
 7-#4 h₆ bars at 12" cts. Long Wing (Back)

BAR a₁

BAR h₃

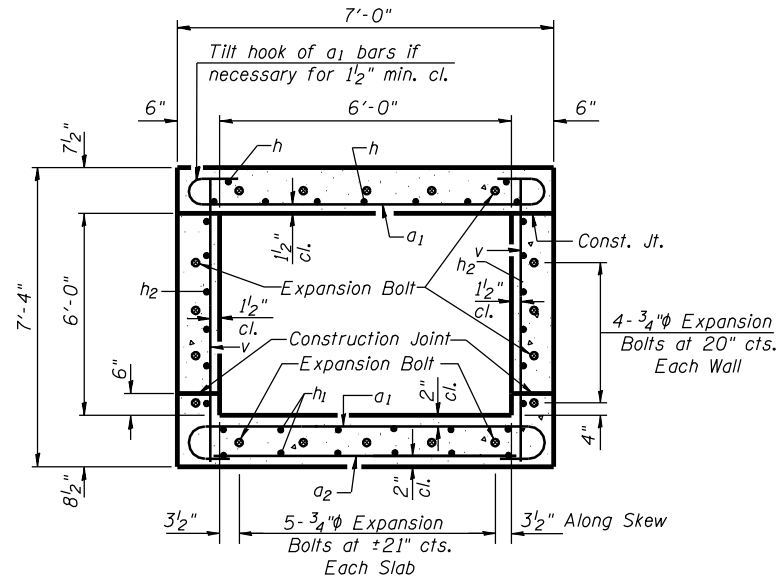
BAR d

BAR v₁

BAR a₃

BAR s

BAR h₆



SECTION THRU BARREL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁	506	#7	8'-4"	C
a ₂	70	#4	6'-8"	—
a ₃	4	#4	8'-8"	—
b ₁	16	#4	13'-11"	—
b ₂	12	#4	10'-11"	—
b ₃	8	#4	7'-2"	—
d	27	#4	5'-4"	L
h	84	#6	35'-8"	—
h ₁	60	#5	28'-8"	—
h ₂	16	#6	5'-6"	—
h ₃	7	#4	11'-0"	—
h ₄	2	#6	7'-4"	—
h ₆	7	#4	19'-3"	—
h ₇	4	#7	7'-4"	—
s	24	#4	4'-6"	D
v	440	#6	7'-0"	—
v ₁	25	#5	9'-11"	L
Concrete Box Culverts			Cu. Yd.	86.8
Reinforcement Bars			Pound	20930
Expansion Bolts 3/4"			Each	18

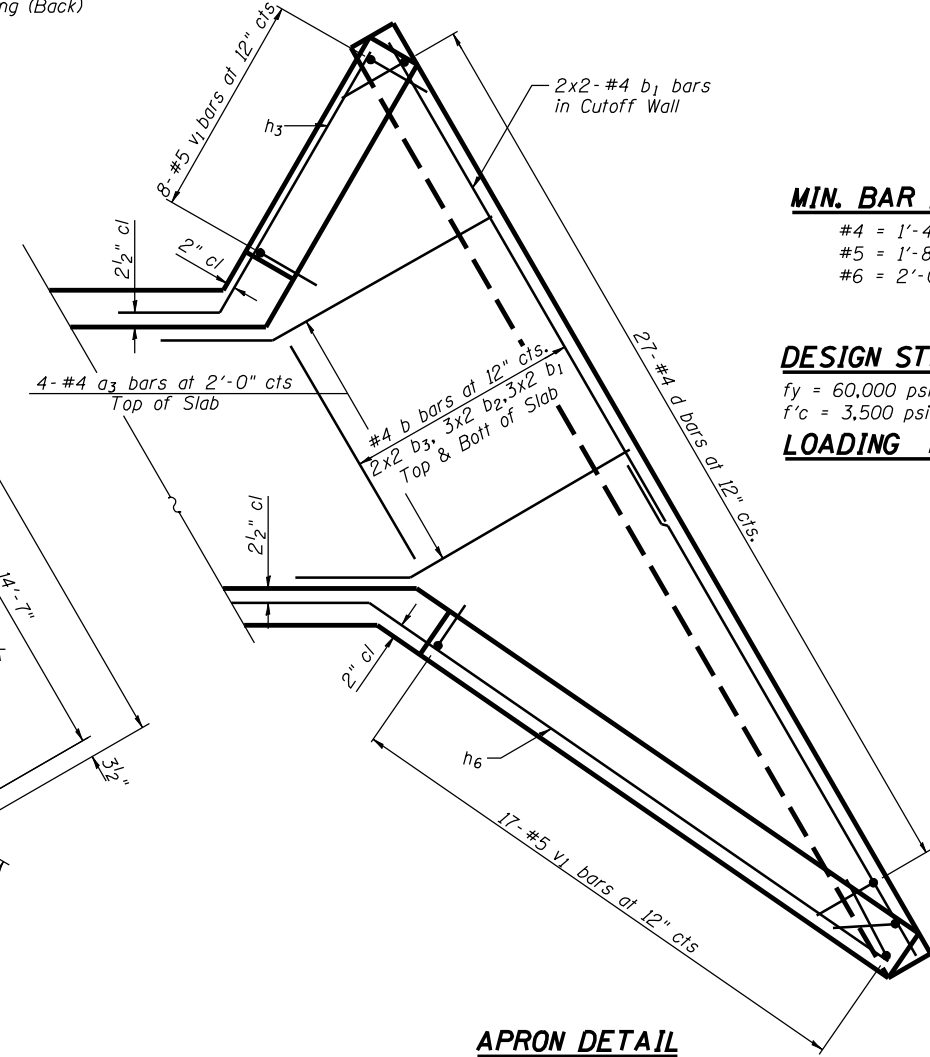
MIN. BAR LAPS

- #4 = 1'-4"
- #5 = 1'-8"
- #6 = 2'-0"

DESIGN STRESSES

f_y = 60,000 psi
 f'c = 3,500 psi

LOADING HS 20-44



APRON DETAIL

ILLINOIS DEPARTMENT OF TRANSPORTATION

SHEET TITLE		PROJECT NO.	
CULVERT EXTENSION DETAILS		02076	
PROJECT	FAP 315 (IL 336/US 136)	DATE	03/08/06
SECTION	34-5(5B)	DRAWN BY	TFG
COUNTY	HANCOCK COUNTY	CHECKED BY	AJB/MCB
STATION	1268+62.62	DRAWING NO.	
COOMBE-BLOXDORF P.C.		1	
Engineers/Land Surveyors Springfield, Illinois		OF 1 SHTS	
Design Firm License No. 184-002708			

DATE: 03/08/06
 FILE NAME: 34-5(5B) 270.dwg
 PLOT SCALE: 1/8"=1'-0"
 USER NAME: MCB