

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	18	#5	6'-11"	
a1	12	#5	6'-4"	
a2	7	#4	5'-10"	
d	5	#4	4'-6"	
h	15	#5	6'-6"	
h1	12	#4	6'-3"	
h2	24	#5	6'-6"	
h3	11	#6	8'-0"	
h4	10	#6	6'-6"	
h5	4	#6	6'-7"	
h6	9	#7	17'-4"	
h7	10	#7	8'-0"	
h8	10	#6	10'-9"	
h9	16	#5	6'-0"	
s	13	#4	3'-9"	
s1	6	#4	3'-11"	
v	32	#4	6'-9"	
v1	4	#5	5'-0"	
v2	8	#4	9'-9"	
Reinforcement Bars				Lbs. 1850
Expansion Bolts 3/4"				Each 18
Concrete Box Culverts				Cu. Yds. 16.3

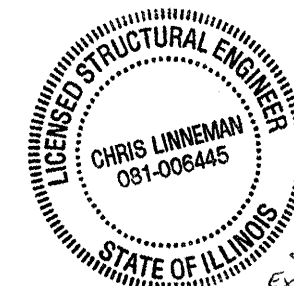
DESIGN STRESSES

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

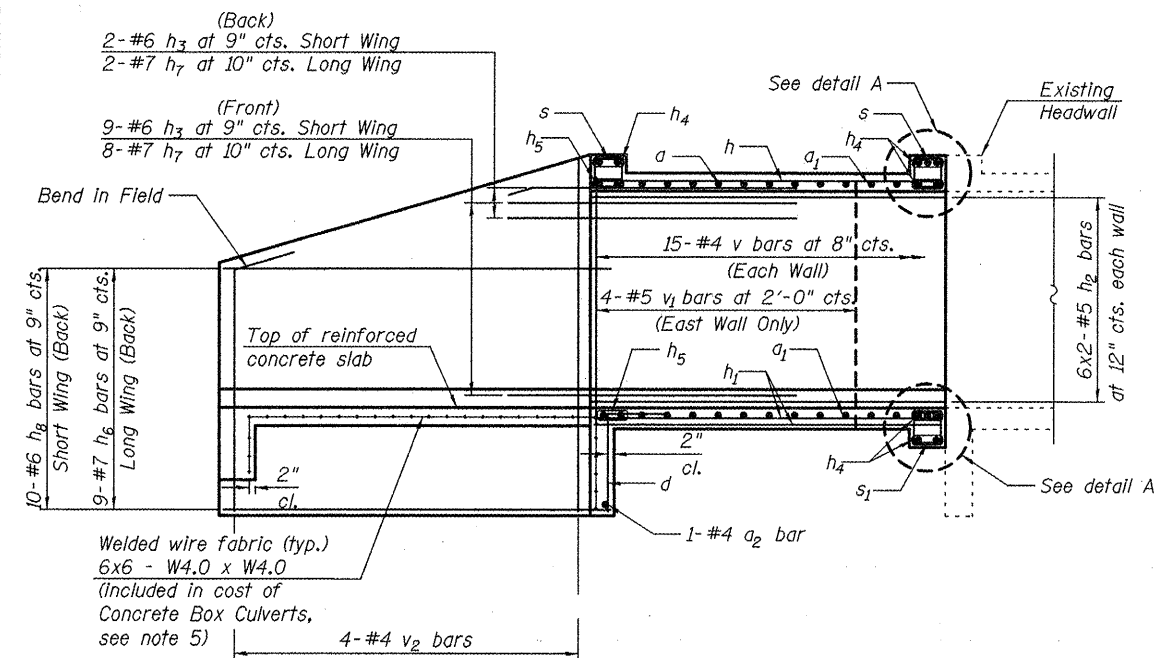
LOADING HS 20-44 & ALT.

NOTES

1. 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.
2. Reinforcement bars shall conform to the requirements of ASTM A 706. See Special Provisions.
3. Bars indicated thus 12 x 4 - #5, etc. indicates 12 lines of bars with 4 lengths per line.
4. Work this Sheet with Sheet 41.
5. When lapping sheets of welded wire fabric, the outermost cross wires of each fabric shall not be less than 8 inches.



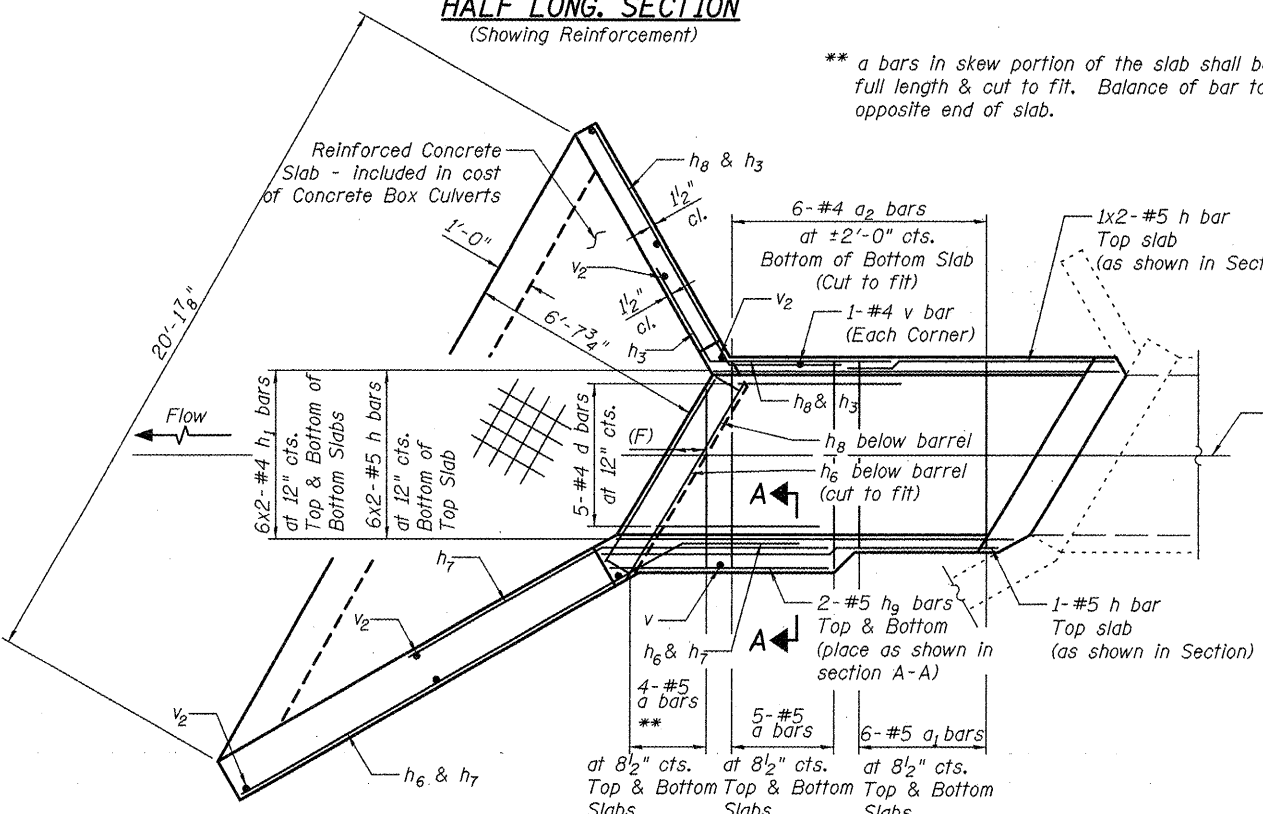
EFK Moen, LLC
Civil Engineering Design



HALF LONG SECTION
(Showing Reinforcement)

*Note: Dimensions at Rt. L's to ϕ Roadway

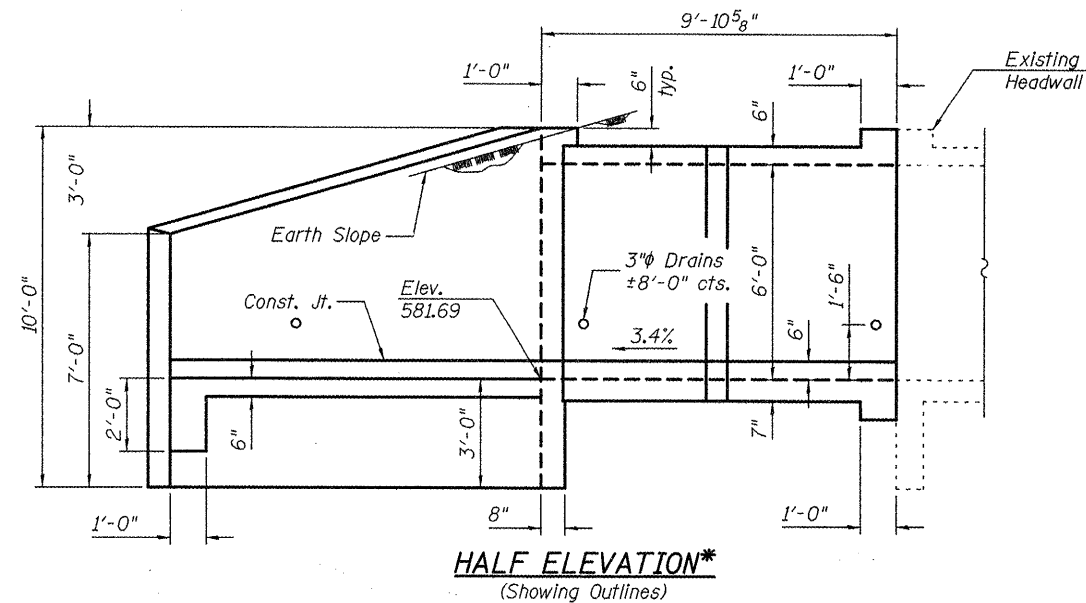
** a bars in skew portion of the slab shall be ordered full length & cut to fit. Balance of bar to be used in opposite end of slab.



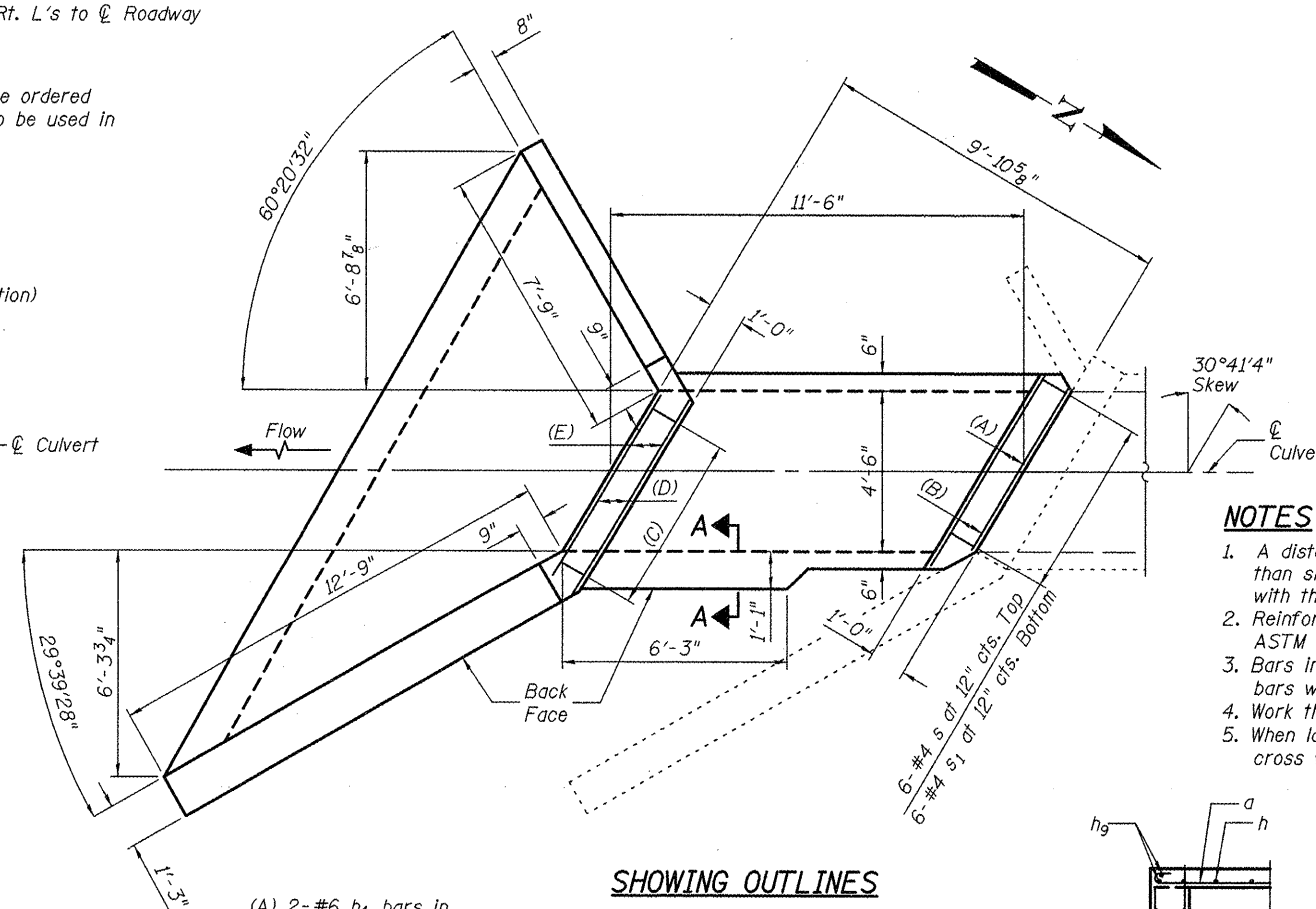
SHOWING REINFORCEMENT

MIN. LAPS

BAR SIZE	BOX EXT.
#4	1'-4"
#5	1'-8"

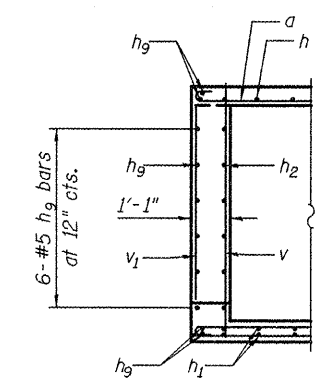


HALF ELEVATION*
(Showing Outlines)



SHOWING OUTLINES

- (A) 2-#6 h4 bars in Top of Top Edge Beam & Bottom of Bottom Edge Beam (Cut to fit)
- (B) 2-#6 h4 bars in Bottom of Top Edge Beam Top of Bottom Beam (Cut to fit)
- (C) 7-#4 s bars at 12" cts. Top
- (D) 2-#6 h4 bars in Top of Headwall
- (E) 2-#6 h5 bars in Bottom of Headwall
- (F) 2-#6 h5 bars in Top of Bottom Slab



SECTION A-A

FILE NAME =	USER NAME = SEC	DESIGNED - PMM	REVISED -
#FILE#		DRAWN - DP	REVISED -
		CHECKED -	REVISED -
		DATE - 9/23/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BOX CULVERT EXTENSION STA. 574 + 65.49
SOUTH END (DOWNSTREAM)

SCALE: N.T.S. SHEET NO. 1 OF 6 SHEETS STA. TO STA.

F.A.S. RTE. 685	SECTION 37BR-1	COUNTY MCDONOUGH	TOTAL SHEETS 138	SHEET NO. 39
				CONTRACT NO. 68352
ILLINOIS FED. AID PROJECT				