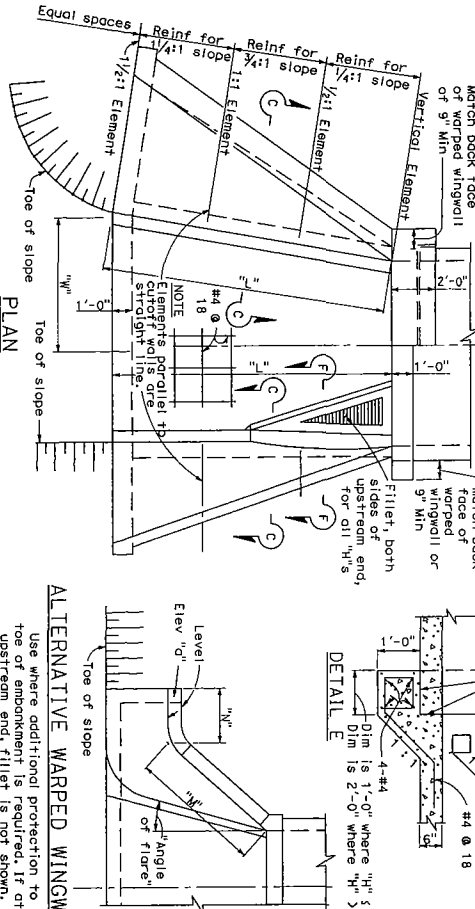
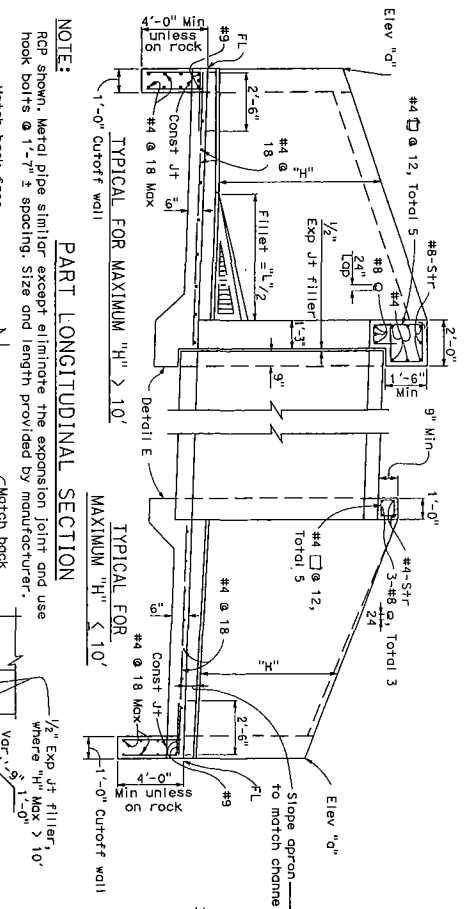


**REGISTERED CIVIL ENGINEER**  
 MAY 1, 2006  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA  
 No. 12-31-05  
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To get to the Collins web site, go to <http://www.dwg.com>

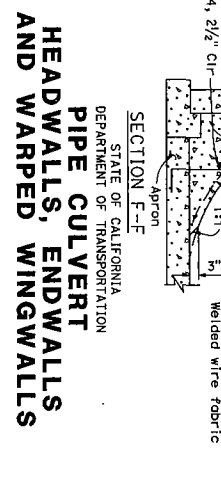
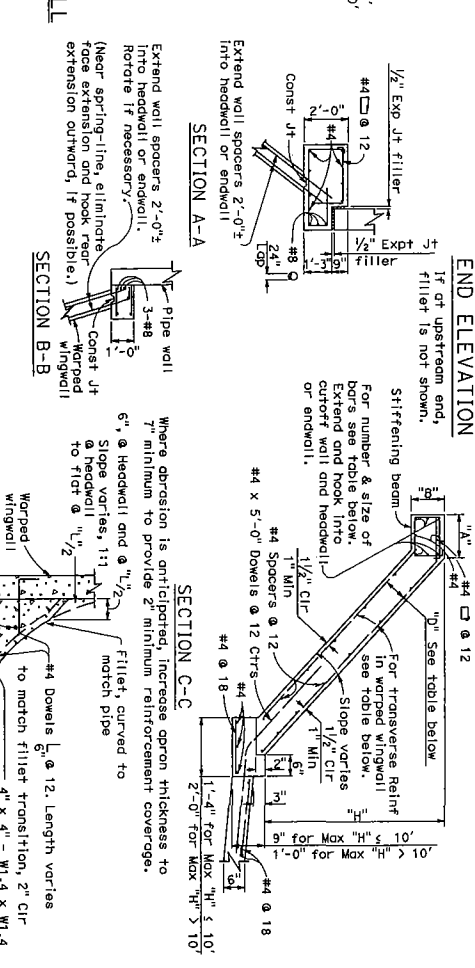
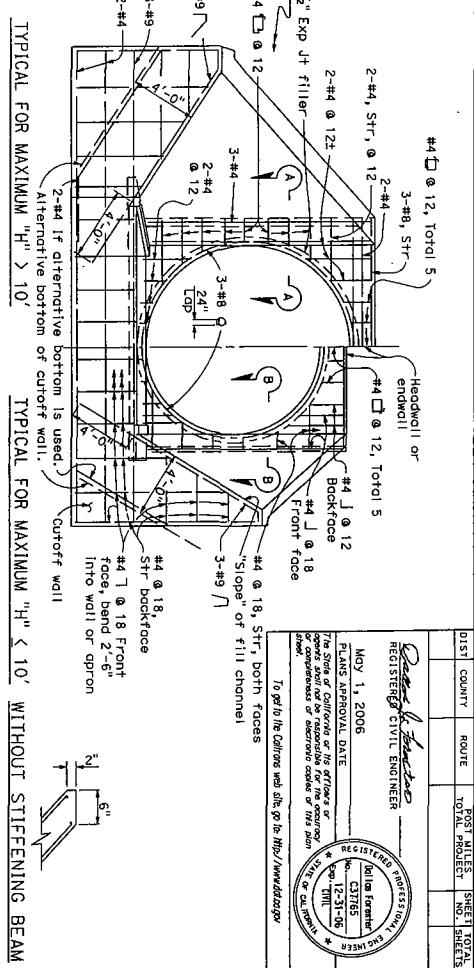
2006 STANDARD PLAN D86B



Element Slope	"H"	8'	10'	12'	14'	16'	18'	20'
Front Face Reinf	1/4:1	#4 @ 12	#4 @ 7	#5 @ 5	#5 @ 5	#6 @ 6	#7 @ 7	#7 @ 6
Rear Face Reinf	1/4:1	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12
Front Face Reinf	3/4:1	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 10	#4 @ 8	#4 @ 6	#5 @ 6
Rear Face Reinf	3/4:1	#4 @ 12	#4 @ 12	#4 @ 10	#4 @ 7	#4 @ 6	#4 @ 5	#4 @ 5
Front Face Reinf	1/4:1	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12
Rear Face Reinf	1/4:1	#4 @ 8	#4 @ 8	#4 @ 5	#5 @ 5	#6 @ 7	#7 @ 6	#7 @ 6
"D" of Cutoff Wall		6"	6"	7 1/2"	8"	9 1/2"	11"	11"
"D" of Culvert		6"	6"	8"	8"	9 1/2"	11"	20"

Element Slope	"H"	8'	10'	12'	14'	16'	18'	20'
Front Face Reinf	1/4:1	#4 @ 12	#4 @ 7	#5 @ 5	#5 @ 5	#6 @ 6	#7 @ 7	#7 @ 6
Rear Face Reinf	1/4:1	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12
Front Face Reinf	3/4:1	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 10	#4 @ 8	#4 @ 6	#5 @ 6
Rear Face Reinf	3/4:1	#4 @ 12	#4 @ 12	#4 @ 10	#4 @ 7	#4 @ 6	#4 @ 5	#4 @ 5
Front Face Reinf	1/4:1	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12
Rear Face Reinf	1/4:1	#4 @ 8	#4 @ 8	#4 @ 5	#5 @ 5	#6 @ 7	#7 @ 6	#7 @ 6
"D" of Cutoff Wall		6"	6"	7 1/2"	8"	9 1/2"	11"	11"
"D" of Culvert		6"	6"	8"	8"	9 1/2"	11"	20"

NOTES: Walls designed for 2'-0" surcharges earth density = 120 LB/CF; equivalent fluid pressure = 36 LB/CF.  
 Vary "D" of warped wall uniformly from that of cutoff wall to that of headwall or endwall, for maximum "H" > 12'-0".  
 Dimensions "L", "W", "H", "M", "N", Elevation "D", Angle of flare, and end "Slope" (as apply) are shown on the plans.



NO SCALE  
**D86B**