DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER

May 1, 2006
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Overcomer Y. Hor No. C45803 Exp. 12-31-06 CIVIL STATE OF CALIFORNIA

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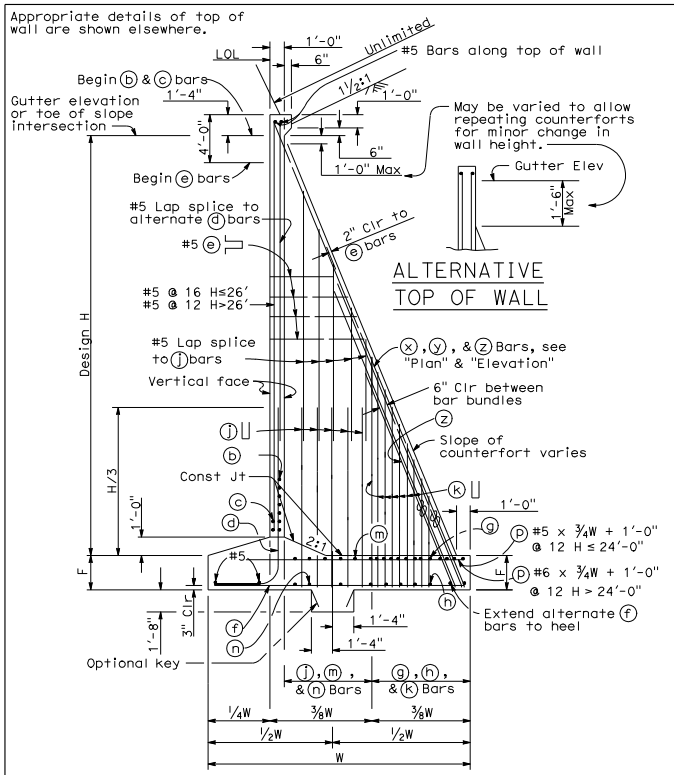
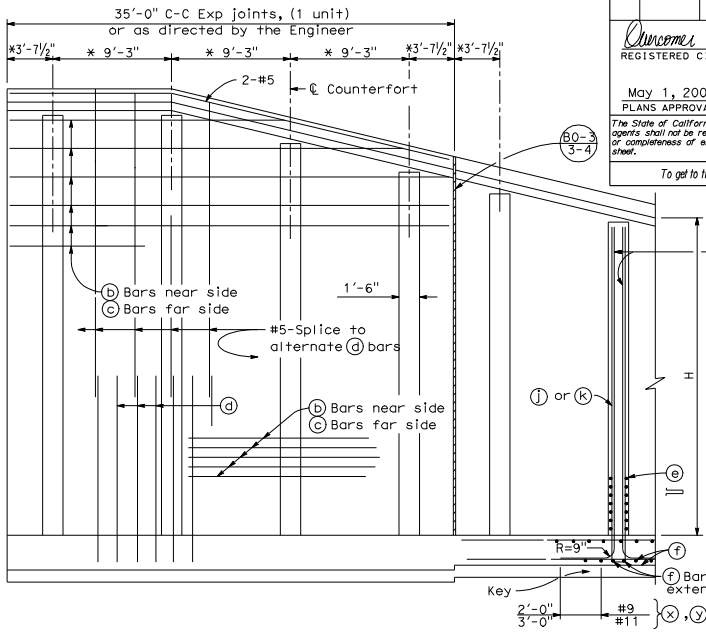


SPREAD FOOTING SECTION

TABLE FOR SPACING FOR ⓑ, ⓒ & ⓔ BARS			
Top of wall	ⓑ	ⓒ	ⓔ
2'-0"	24"	18"	
4'-0"	24"	18"	
6'-0"	24"	18"	24"
8'-0"	18"	18"	24"
10'-0"	18"	18"	24"
12'-0"	12"	18"	18"
14'-0"	12"	18"	18"
16'-0"	12"	18"	18"
18'-0"	12"	18"	12"
20'-0"	12"	18"	12"
22'-0"	12"	18"	12"
24'-0"	12"	18"	12"
26'-0"	12"	18"	9"
28'-0"	12"	18"	9"
30'-0"	12"	18"	9"

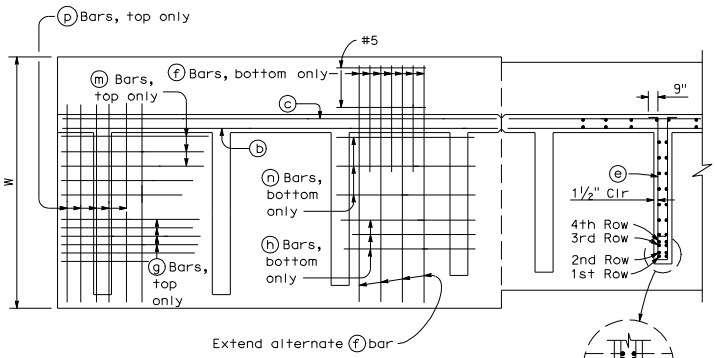
Distance below top of wall



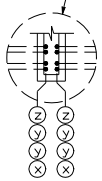
ELEVATION

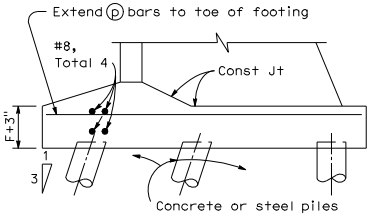
* Dimensions 9'-3" and 3'-7½" may be decreased proportionally but not increased without a special design.

Use footing dimensions and reinforcing and stem reinforcing in any unit as determined by maximum Design "H" in that unit. Use counterfort x, y and z bars as determined by "H" at ℄ counterfort. See Typical Layout Example on B3-5.



PLAN





90 KIP PILE FOOTING SECTION

Reinforcement detailed is to be placed in addition to that shown for spread footing. Provide 6" clear to ⓕ bars. All piles not shown, see Pile Layout on other sheets.

TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA							
Design H	18'	20'	22'	24'	26'	28'	30'
W	12'-10"	14'-1"	15'-6"	16'-10"	18'-3"	19'-6"	21'-0"
F	1'-9"	2'-0"	2'-0"	2'-0"	2'-3"	2'-3"	2'-6"
ⓧ Bars, edge counterfort	2-#9	2-#9	2-#9	2-#11	2-#11	2-#11	2-#11
ⓧ Bars, length	20'-8"	22'-8"	24'-9"	26'-11"	29'-0"	31'-4"	33'-6"
ⓨ Bars, edge counterfort	4-#9	4-#9	4-#9	4-#11	4-#11	4-#11	4-#11
ⓨ Bars, length	13'-1"	15'-9"	17'-9"	21'-0"	22'-0"	22'-8"	25'-11"
ⓩ Bars, edge counterfort	-	-	2-#9	2-#11	2-#11	2-#11	2-#11
ⓩ Bars, length	-	-	10'-6"	12'-2"	13'-5"	13'-9"	16'-5"
ⓑ Bars, back face wall	#5	See Table for spacing					
ⓒ Bars, front face wall	#5	See Table for spacing					
ⓓ Bars, wall face	#5 @ 8	#5 @ 7	#5 @ 7	#6 @ 7	#6 @ 6	#8 @ 8	#8 @ 8
ⓔ Stirrups, counterfort	#5	See Table for spacing					
ⓕ Bars, toe	#5 @ 8	#5 @ 7	#5 @ 7	#5 @ 7	#5 @ 6	#6 @ 8	#6 @ 8
ⓕ Bars, length	6'-3"	7'-3"	7'-10"	8'-6"	9'-2"	9'-10"	10'-6"
ⓙ Bars, counterfort heel	#5 @ 12	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 12	#6 @ 12	#6 @ 12
ⓚ Bars counterfort heel	#5 @ 6	#5 @ 6	#5 @ 6	#6 @ 6	#6 @ 6	#6 @ 6	#6 @ 6
ⓜ Bars, top of heel	#6 @ 16	←					→
ⓖ Bars, top of heel	#6 @ 8	←					→
ⓝ Bars, bottom of heel	#5 @ 16	←					→
ⓗ Bars, bottom of heel	#5 @ 8	←					→
Toe Pressure, ksf	6.5	7.4	8.0	8.7	9.5	10.1	10.9

NOTES:

For Design and Drainage notes and other details see B3-8.

Length of ⓧ, ⓨ and ⓩ bars indicates distance from top of footing to upper end of bar.

No other lap splices are allowed except as shown in the plans.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

COUNTERFORT RETAINING WALL TYPE 4

NO SCALE

B3-6

2-8-06