REGISTERED CIVIL ENGINEER

Gary Wang

May 20, 2011
PLANS APPROVAL DATE

No. C58298
Exp. 6-30-12
CIVIL

TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA

DESIGN H		32'	34'	36'
W		21'-0"	23'-0"	25'-0"
C		7'-0"	7'-4"	8'-0"
B		14'-0"	15'-8"	17'-0"
F SPREAD FOOTING		3'-3"	3'-6"	3'-9"
BATTER		1:12	1:12	1:12
ⓐ BARS		#6 @ 16	#6 @ 16	#6 @ 14
ⓑ BARS		#9 @ 8	#9 @ 8	#9 @ 7
ⓒ BARS		#11 @ 8 ४	#11 @ 8 ४	#11 @ 7 ४
ⓓ BARS		#9 @ 8 ४	#9 @ 8 ४	#9 @ 7 ४
LOAD CASE I	Ser: B', q'o	18.0, 3.4	20.2, 3.6	22.4, 3.6
	Str: B', qo	17.0, 5.6	19.3, 5.9	21.4, 6.0
LOAD CASE II	Ser: B', q'o	18.2, 4.5	20.2, 4.8	22.4, 4.9
	Str: B', qo	17.3, 7.2	19.3, 7.7	21.4, 7.9
LOAD CASE III	Ser: B', q'o	14.4, 4.5	16.8, 4.6	19.2, 4.5
	Str: B', qo	13.2, 7.6	15.8, 7.5	18.2, 7.5

SYMBOLS:

Ser - service limit state 1
Str - strength limit state 1
B' - effective footing width (ft)
q'_o - net bearing stress (ksf)
q_o - gross uniform bearing stress (ksf)
४ Denotes a bundle of 2 bars
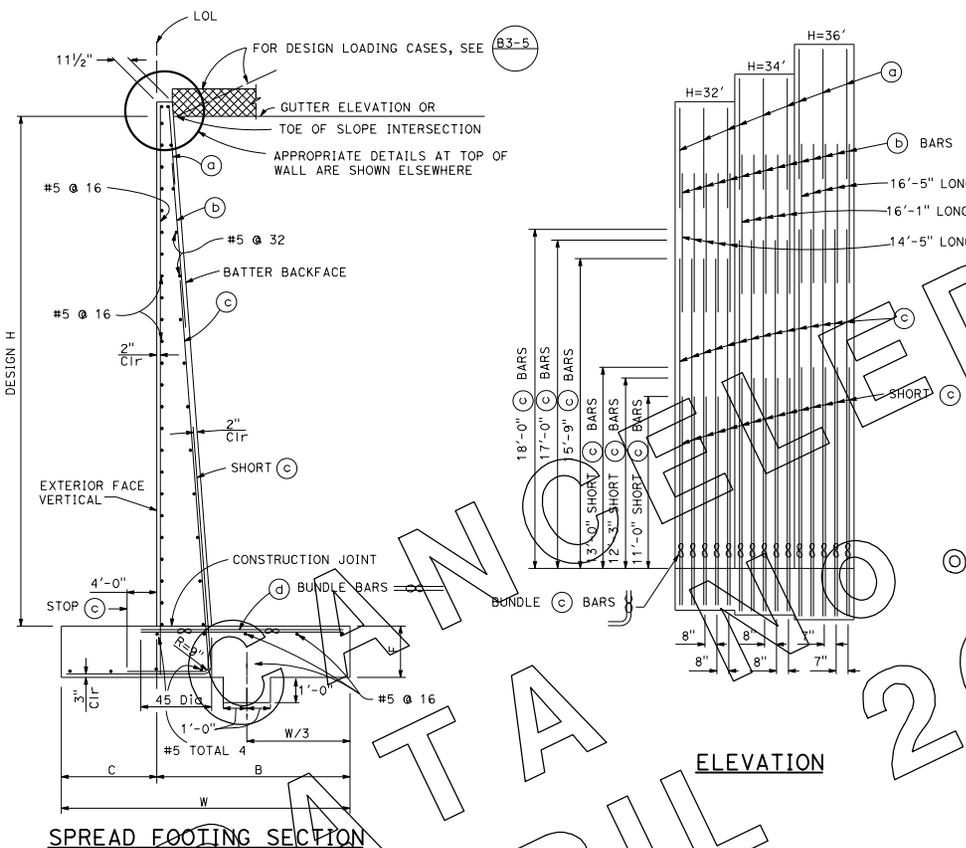
DESIGN CONDITIONS:

Design H may be exceeded by 6" before going to the next size. Special footing design is required where foundation material is incapable of supporting bearing stress listed in table.

DESIGN NOTES:

DESIGN: AASHTO LRFD Bridge Design Specifications, 4th edition with California Amendments

LIVE LOAD: Surcharge on level ground surface

SOIL: ϕ = 34°
γ = 120 pcf

REINFORCED CONCRETE:
fy = 60,000 psi
fc' = 3,600 psi
n = 8

Section labels

LOL
11½"
FOR DESIGN LOADING CASES, SEE B3-5
GUTTER ELEVATION OR TOE OF SLOPE INTERSECTION
APPROPRIATE DETAILS AT TOP OF WALL ARE SHOWN ELSEWHERE
#5 @ 16
ⓐ
ⓑ
#5 @ 32
BATTER BACKFACE
#5 @ 16
2" Clr
ⓒ
2" Clr
SHORT ⓒ
EXTERIOR FACE VERTICAL
DESIGN H
CONSTRUCTION JOINT
ⓓ BUNDLE BARS
4'-0"
STOP ⓒ
#5 @ 16
3" Clr
45 Dia
1'-0"
1'-0"
W/3
#5 TOTAL 4
C
B
W

SPREAD FOOTING SECTION

H=32' H=34' H=36'
ⓐ
ⓑ BARS
16'-5" LONG
16'-1" LONG
14'-5" LONG
18'-0" ⓒ BARS
17'-0" ⓒ BARS
15'-9" ⓒ BARS
3'-0" SHORT ⓒ BARS
12" SHORT ⓒ BARS
11'-0" SHORT ⓒ BARS
ⓒ
SHORT ⓒ
BUNDLE ⓒ BARS
8" 8" 8" 7"
8" 8" 8"

ELEVATION

NOTES:

1. For details not shown and drainage notes see B3-5

2. For wall stem joint details see B0-3 3-3 and B0-3 3-4

3. At ⓒ and Short ⓒ bars:
   H ≤ 6', no splices are allowed within 1'-8" above the top of footing.
   H > 6', no splices are allowed within H/4 above the top of footing.

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2010 STANDARD PLAN B3-2

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

RETAINING WALL TYPE 1 H=32' THROUGH 36'

NO SCALE

B3-2

6-15-10