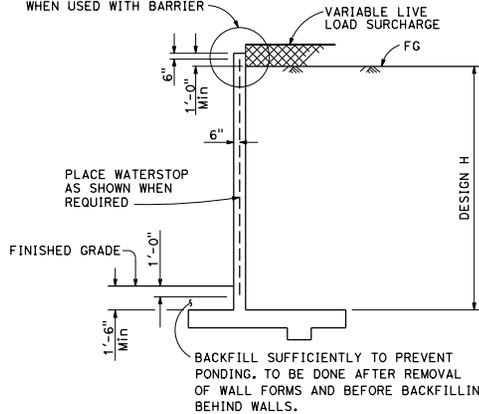


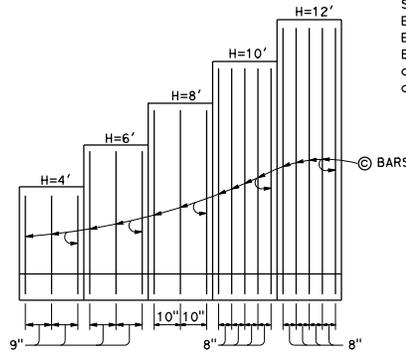
SPREAD FOOTING SECTION

Place concrete in toe against undisturbed material, except as permitted by the Engineer.

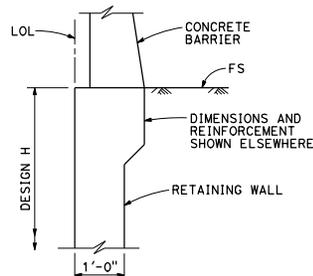
APPROPRIATE DETAILS AT TOP OF WALL ARE SHOWN ELSEWHERE, SEE "STEM HAUNCH DETAIL" WHEN USED WITH BARRIER



DESIGN SECTION



ELEVATION



STEM HAUNCH DETAIL

TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA						
DESIGN H	4'	6'	8'	10'	12'	
W	7'-0"	7'-0"	7'-3"	7'-5"	8'-2"	
C	2'-3"	2'-3"	2'-3"	2'-5"	2'-7"	
B	4'-9"	4'-9"	5'-0"	5'-0"	5'-7"	
⊙ BARS	#6 @ 9	#6 @ 9	#7 @ 10	#7 @ 8	#7 @ 8	
⊙ BARS	#5 @ 9	#5 @ 9	#6 @ 10	#7 @ 8	#7 @ 8	
Ser: B', q ₀	6.7, 0.9	6.7, 1.0	6.3, 1.3	5.8, 1.6	6.2, 1.9	
Str: B', q ₀	6.6, 1.6	5.2, 1.7	3.7, 2.2	2.8, 3.3	3.0, 3.9	
Ext I: B', q ₀	5.6, 0.9	4.8, 1.4	4.1, 2.0	3.1, 3.2	2.7, 4.5	
Ext II: B', q ₀	2.8, 1.9	2.7, 2.5	2.8, 3.0	2.6, 3.7	3.4, 3.6	

SYMBOLS:

- Ser - service limit state I
- Str - strength limit state I
- Ext I - extreme event limit state I
- Ext II - extreme event limit state II
- B' - effective footing width (ft)
- q₀ - net bearing stress (ksf), OG assumed to be FG at toe
- q_o - gross uniform bearing stress (ksf)

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

Gary Wong
REGISTERED CIVIL ENGINEER

October 30, 2015
PLANS APPROVAL DATE

NO. C58238
Exp. 6-30-16
CIVIL

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

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 the table.

DESIGN NOTES:

- DESIGN: AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments
- LS: Varied surcharge on level ground surface
- DC: Stem Architectural Treatment of thickness up to 6' of concrete (75 psf) considered
- CT: 54 kip transverse force applied at H_e = 32", distributed over 10 feet at the top of wall and 1 : 1 distribution down and outward. Distribution below footing taken no less than 40'.
- SEISMIC: K_h = 0.2
K_v = 0.0
- SOIL: φ = 34°
γ = 120 pcf
- REINFORCED CONCRETE: f'_c = 3,600 psi
f_y = 60,000 psi
- LOAD COMBINATIONS AND LIMIT STATES:
Service I Q = 1.00DC+1.00EV+1.00EH+1.00LS
Strength I Q = aDC+φEV+φEH+1.75LS
Extreme I Q = 1.00DC+1.00EV+1.00EH+1.00EOD+1.00EOE
Extreme II Q = 1.00DC+1.00EV+1.00EH+1.00CT
- Where:
Q: Force Effects
a: 1.25 or 0.90, Whichever Controls Design
φ: 1.35 or 1.00, Whichever Controls Design
φ: 1.50 or 0.90, Whichever Controls Design
DC: Dead Load of Structure Components
EH: Horizontal Earth Fill Pressure
EV: Vertical Earth Pressure from Earth Fill Weight
LS: Live Load Surcharge
EOE: Seismic Earth Pressure
EOD: Soil and Structural and Nonstructural Components Inertia
CT: Vehicular Collision Force

NOTES:

1. For details not shown and drainage notes see B3-5
2. For wall stem joint details see B0-3 and B0-3
3. At ⊙ 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.
4. Provide #6 @ 8" ⊙ bars in addition to tabulated ⊙ bars over a distance of 8'-0" measured from all expansion joints, begin wall and end wall location.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
RETAINING WALL TYPE 1A (CASE 1)

NO SCALE

B3-3A