

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
X	X	X	X	X	X

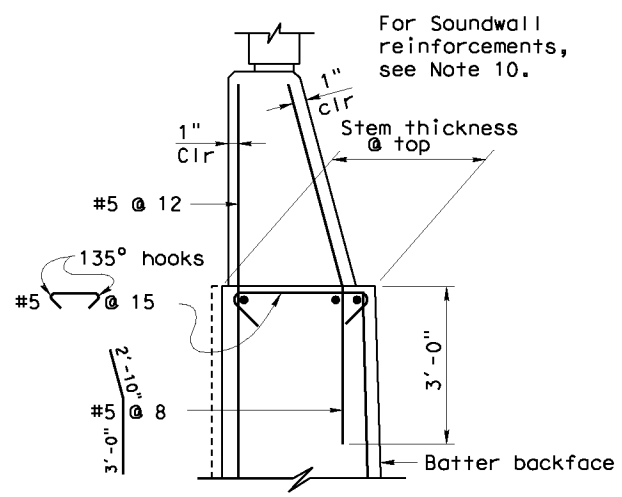
REGISTERED CIVIL ENGINEER	DATE
X	

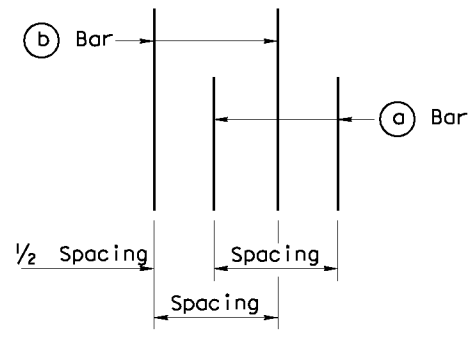
PLANS APPROVAL DATE
X

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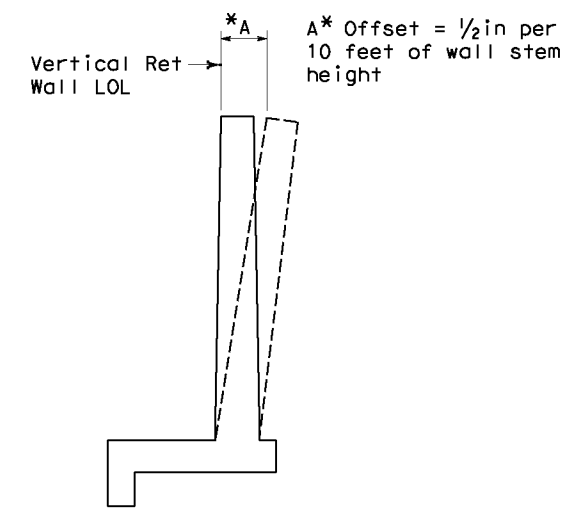
**DETAIL A**  
**WITHOUT HAUNCH**



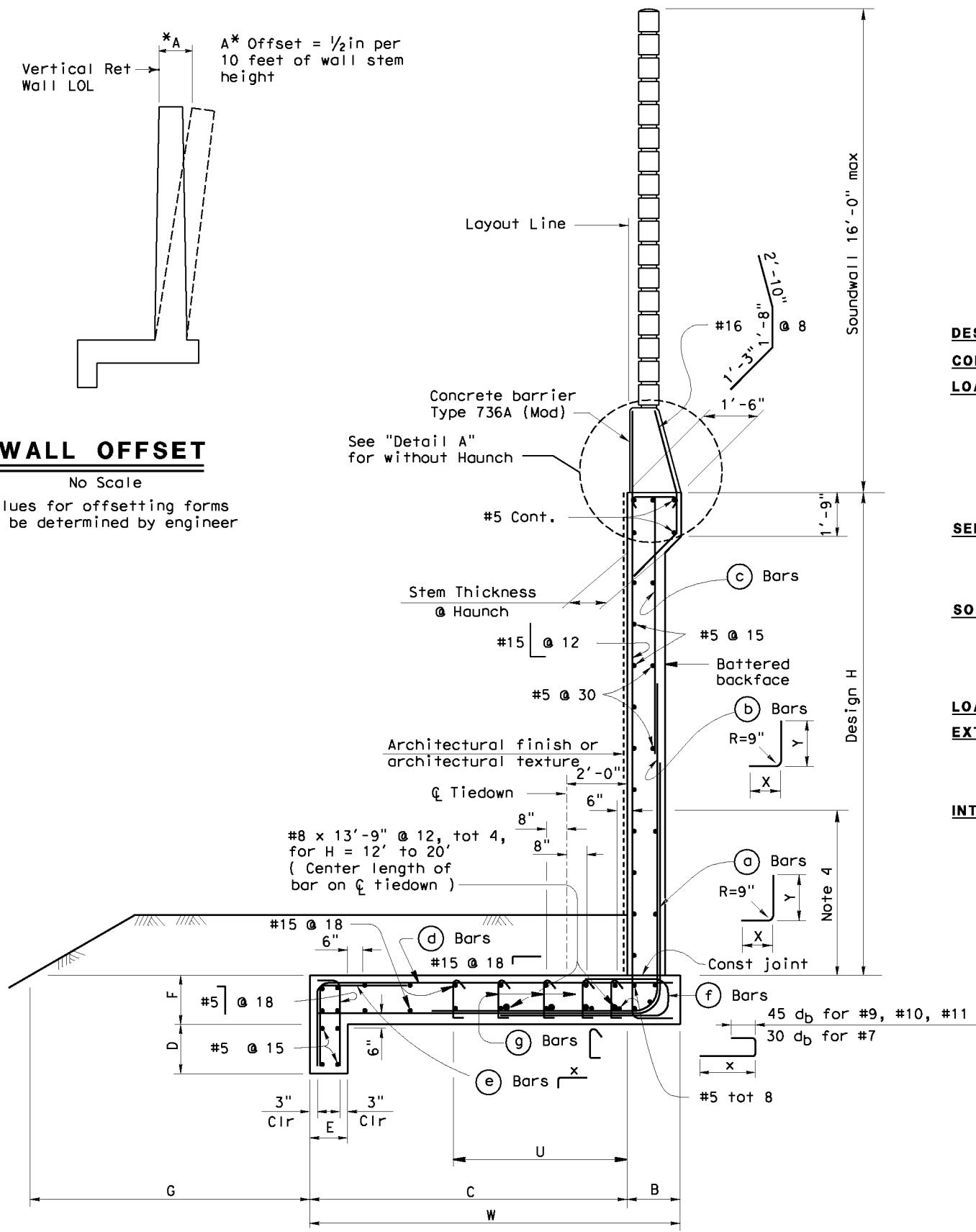
**REBAR SPACING**  
No Scale

**GENERAL NOTES**

1. For soundwall and retaining wall architectural finish or texture, see details elsewhere in project plans.
2. For details not shown and drainage notes, see B3-8
3. Footing coverage, 2'-0" minimum.
4. Limit of no splicing rebars = H/3 .
5. Increasing stem thickness not permitted.
6. Place footing key concrete against undisturbed material.
7. Shift (a) bars, (b) bars, and (c) bars as required to clear formed hole for tiedown.
8. No reinforcements in footing key for H= 8' to H=12'.
9. Maximum distance from  $\phi$  tiedown to edge of footing = 0.4(S).
10. For Soundwall & Barrier reinforcements see "Soundwall Masonry Block" Sheets in Standard Plans.



**WALL OFFSET**  
No Scale  
Values for offsetting forms to be determined by engineer



**SPREAD FOOTING SECTION**  
No Scale

**DESIGN DATA**

**DESIGN:** Load Factor Design (LFD)

**CONCRETE:** Reinforced Concrete, f'c = 3600 psi  
fy = 60,000 psi

**LOADING CASE:**  
Level ground with 240 psf live load surcharge and 16' Soundwall

Seismic Load = 0.3 Dead Load  
Wind Load = 30 psf  
Dead Load of Soundwall = 1414 lb/Lf  
Dead Load of Barrier = 372 lb/Lf

**SEISMIC LOAD: SOIL**  
Kh = 0.3g  
Kv = 0.0  
Kae : Mononobe-Okabe Method

**SOIL:**  $\phi = 34^\circ$   $\gamma = 120$  pcf  
Equivalent fluid pressure:  
STATIC = 36 pcf for determination of toe pressure  
SEISMIC = Coulomb's Theory

**LOAD COMBINATIONS:**

**EXTERNAL STABILITY:**  
Group 1 : D + E + SC + 0.75T (F.S. Sliding > 1.5)  
Group 2 : D + E + SC + W + 0.75T (F.S. Sliding > 1.2)  
Group 3 : D + PYM + P<sub>av</sub> + V + 1.0 T (F.S. Sliding > 1.0)

**INTERNAL STABILITY: (LFD)**  
Group A :  $\beta D + 1.7 E + 1.7 SC + 0.75 T$   
Group B :  $\beta D + 1.7 E + 1.3 W + 0.75 T$   
Group C : (Stem) 1.0 D + 1.0 E + 1.0 EOD + 1.0 EQE  
Group C : (Footing) D + PYM + P<sub>av</sub> + V + 1.0 T

Where :  $\beta = 1.0$  or  $1.3$  whichever controls design

D = Dead Load  
E = Lateral Earth Pressure  
P<sub>av</sub> = Vertical Earth Pressure  
SC = Live Load Surcharge  
W = Wind Load  
EOD = Seismic Dead Load  
EQE = Seismic Lateral Earth Pressure  
PYM = Probable Yield Moment (1.3 x Nominal Yield Moment of Stem)  
V = Possible Shear at Base of Stem associated with Probable Yield Moment  
T = Design Force for Vertical Tiedown

STANDARD DRAWING
FILE NO. <b>xs14-390-1x</b>
APPROVAL DATE July 2011

STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES
DEPARTMENT OF TRANSPORTATION	BRIDGE NO. X
	POST MILE X

RETAINING WALL TYPE 7SWB - DETAILS NO. 1	
REVISION DATES	SHEET OF
	X X