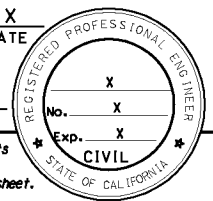


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
X	X	X	X	X	X

REGISTERED CIVIL ENGINEER DATE X

PLANS APPROVAL DATE _____

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DESIGN H	STEM WITH HAUNCH				STEM WITHOUT HAUNCH								
	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	28'	30'	32'
W	6'-9"	7'-6"	7'-0"	7'-6"	8'-6"	9'-3"	10'-3"	11'-3"	12'-3"	13'-0"	14'-3"	15'-3"	16'-3"
C	5'-6"	6'-3"	5'-6"	6'-0"	6'-9"	7'-3"	8'-0"	8'-6"	9'-6"	10'-0"	10'-10"	11'-6"	12'-5"
B	1'-3"	1'-3"	1'-6"	1'-6"	1'-9"	2'-0"	2'-3"	2'-9"	2'-9"	3'-0"	3'-5"	3'-9"	3'-10"
F	1'-6"	2'-0"	2'-4"	2'-4"	2'-6"	2'-6"	2'-9"	2'-9"	3'-0"	3'-3"	3'-6"	3'-9"	4'-0"
STEM THICKNESS AT TOP					1'-7"	1'-9"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-3"	2'-3"
STEM THICKNESS AT HAUNCH	1'-0"	1'-0"	1'-3"	1'-3"									
BATTER	0	0	0	0	0	0	0	1/4:12	1/4:12	1/4:12	1/2:12	1/2:12	1/2:12
⊙ BARS					#5 @ 14	#6 @ 13	#6 @ 13	#6 @ 13	#6 @ 11	#7 @ 12	#7 @ 11	#7 @ 10	#8 @ 11
⊕ BARS	#5 @ 6	#5 @ 5.5	#6 @ 5	#6 @ 5	#8 @ 7	#8 @ 6.5	#9 @ 6.5	#9 @ 6.5	#9 @ 5.5	#10 @ 6	#10 @ 11	#10 @ 10	#11 @ 11
ha	7'-10"	9'-10"	5'-3"	6'-0"	6'-9"	7'-6"	7'-3"	9'-0"	9'-9"	9'-3"	11'-3"	13'-0"	13'-0"
hb					13'-0"	13'-0"	13'-0"	14'-6"	15'-6"	18'-6"	20'-6"	21'-6"	23'-0"
hx	5'-3"	6'-0"	5'-3"	5'-9"	6'-6"	7'-0"	7'-9"	7'-6"	8'-3"	9'-9"	10'-0"	11'-0"	12'-2"
⊙ BARS	#5 @ 12	#5 @ 11	#5 @ 10	#5 @ 10	#5 @ 14	#5 @ 13	#5 @ 13	#5 @ 13	#5 @ 11	#5 @ 12	#5 @ 11	#5 @ 10	#5 @ 11
⊕ BAR LENGTH	3'-6"	3'-6"	3'-6"	3'-6"	4'-6"	7'-0"	7'-6"	10'-9"	11'-9"	12'-6"	13'-9"	14'-9"	15'-9"
⊙ BARS								#4 @ 13	#4 @ 11	#4 @ 12	#4 @ 11	#4 @ 10	#4 @ 11
⊕ Bars	#4 @ 12	#4 @ 12	#5 @ 15	#5 @ 15	#5 @ 12	#5 @ 12	#6 @ 12	#6 @ 12	#6 @ 12	#6 @ 12	#6 @ 12	#7 @ 12	#7 @ 12
⊕ Bars	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 18	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#5 @ 12	#5 @ 12	#5 @ 12	#5 @ 12
Td (KIPS/FT)	0	0	5.25	7.5	9.0	11.25	12.75	15.0	16.5	21.0	21.75	24.75	27.75
To (KIPS/FT)	0	0	*	*	*	*	*	*	*	*	*	*	*
Tp= Larger of 1.33 Td & 1.25 To (KIPS/FT)	0	0	*	*	*	*	*	*	*	*	*	*	*
Max ANCHOR SPACING			10'-6"	9'-6"	7'-9"	6'-3"	7'-9"	6'-6"	8'-0"	6'-3"	6'-0"	5'-3"	4'-9"
SER I: B'(ft), q ₀ (ksf)	6.3, 0.6	6.9, 0.7	5.7, 2.1	6.1, 2.4	7.4, 2.4	8.1, 2.7	9.1, 2.8	9.8, 3.0	10.9, 3.0	11.4, 3.5	12.6, 3.5	13.6, 3.7	14.7, 3.8
STR Ia: B'(ft), q ₀ (ksf)	6.5, 1.3	6.7, 1.6	5.4, 3.3	5.7, 3.7	6.7, 3.8	7.4, 4.2	8.2, 4.3	8.9, 4.8	9.8, 4.9	10.1, 5.5	11.2, 5.6	12.1, 5.9	12.8, 6.2
STR, Ib: B'(ft), q ₀ (ksf)	5.7, 1.2	5.7, 1.5	4.6, 3.3	5.0, 3.7	5.9, 3.8	6.6, 4.0	7.3, 4.2	7.9, 4.6	8.7, 4.7	9.1, 5.3	10.0, 5.4	10.8, 5.7	11.5, 6.0
STR, IIa: B'(ft), q ₀ (ksf)	5.0, 1.9	5.7, 2.6	4.9, 4.0	5.4, 4.4	6.4, 4.0	7.2, 4.5	8.2, 4.6	9.0, 4.9	10.0, 4.9	10.4, 5.4	11.6, 5.4	12.6, 5.7	13.4, 5.8
STR, IIb: B'(ft), q ₀ (ksf)	3.7, 2.3	4.2, 2.8	4.0, 4.2	4.5, 4.5	5.6, 4.2	6.3, 4.5	7.2, 4.5	8.0, 4.8	8.9, 4.7	9.4, 5.3	10.4, 5.3	11.3, 5.3	12.1, 5.6
STR, Va: B'(ft), q ₀ (ksf)	6.0, 1.4	6.4, 1.7	5.2, 3.4	5.5, 3.8	6.6, 3.9	7.3, 4.3	8.2, 4.5	8.8, 4.8	9.8, 4.9	10.2, 5.6	11.2, 5.5	12.2, 5.9	12.9, 6.1
STR, Vb: B'(ft), q ₀ (ksf)	5.0, 1.3	5.2, 1.6	4.4, 3.4	4.8, 3.8	5.7, 3.8	6.4, 4.2	7.2, 4.4	7.8, 4.7	8.7, 4.8	9.1, 5.5	10.0, 5.4	10.9, 5.8	11.6, 6.0
Ext I: B'(ft), q ₀ (ksf)	3.4, 2.0	3.1, 3.6	2.4, 6.5	2.6, 8.1	3.0, 7.7	3.3, 9.0	3.5, 9.4	3.9, 10.1	4.3, 10.4	4.4, 11.9	4.9, 11.9	5.3, 12.7	5.5, 13.4
Ext II: B'(ft), q ₀ (ksf)	2.0, 3.1	3.5, 2.6	4.1, 3.7	4.9, 3.6	6.4, 3.3	7.4, 3.6	8.6, 3.4	9.6, 3.7	10.8, 3.6	11.5, 4.1	12.8, 4.0	13.9, 4.2	15.0, 4.4

NOTE:
 ⊕ Bar spacing shown is along the length of the retaining wall.
 * denotes values to be determined by designer, and this note is removed afterwards.

SYMBOLS:
 SER: service limit state
 STR: strength limit state
 EXT: extreme event limit state
 B': effective footing width (ft)
 q₀: net bearing stress (ksf)
 q_g: gross uniform bearing stress (ksf)
 ⊕: 2 bar bundle
 To: Anchor Lockoff Load
 Tp: Anchor Factored Test Load

STANDARD DRAWING		STATE OF CALIFORNIA		DIVISION OF ENGINEERING SERVICES		BRIDGE NO. X		X	
FILE NO. xs14-390-2	APPROVAL DATE <u>January 2012</u>	DEPARTMENT OF TRANSPORTATION		PROJECT NUMBER & PHASE: X		POST MILE X		RETAINING WALL TYPE 7SWB - DETAILS NO.2	
DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. [02-02-11])		ORIGINAL SCALE IN INCHES FOR REDUCED PLANS		UNIT: X		CONTRACT NO.: X		DISREGARD PRINTS BEARING EARLIER REVISION DATES	
		0 1 2 3		REVISION DATES		SHEET X		OF X	

USERNAME => #USER DATE PLOTTED => #DATE TIME PLOTTED => #TIME