



TYPICAL CONCRETE SLEEPER WALL SECTION

1:40

DESIGN 5: DOUBLE TIERED CONCRETE SLEEPER RETAINING WALL (TOP TIER)

DESIGN
LOADS:

Dead load, $g = \text{nil}$
Live load, $q = 5 \text{ kPa}$
Wind pressure to 1.8m high fence = 0.73 kPa
Pier diameter = 450mm (uno)

SOIL PARAMETERS: Characteristic retained internal friction angle, $\Phi_i = 28 \text{ degrees}$
Retained soil density, $\gamma^*i = 18 \text{ kN/m}^3$
Characteristic foundation internal friction angle, $\Phi_f = 28 \text{ degrees}$
Characteristic cohesion (for foundation), $c = 2 \text{ kPa}$
Foundation soil density, $\gamma^*f = 18 \text{ kN/m}^3$

Design Height 'H' (mm)	Crest Slope (maximum)	2400 SLEEPER LENGTH			2000 SLEEPER LENGTH			Minimum Corner Post Detail~
		Sleeper designation* (qty @ thickness in mm)	Steel Post Required	Pier Depth (mm)	Sleeper designation* (qty @ thickness in mm)	Steel Post Required	Pier Depth (mm)	
400	Level	2 @ 80	B-2900	3100	2 @ 80	B-2900	3000	100PFC
600	Level	3 @ 80	C-3500	3300	3 @ 80	B-3200	3100	100PFC
800	Level	4 @ 80	C-3900	3500	4 @ 80	C-3500	3300	100PFC
1000	Level	5 @ 80	C-4400	3700	5 @ 80	C-3900	3500	100PFC
1200	Level	6 @ 80	C-4400	4000	6 @ 80	C-4400	3800	100PFC
1400	Level	7 @ 80	D-4900	4200	7 @ 80	D-4900	4000	100PFC
1600	Level	top 7 @ 80, 1 @ 100 btm	D-5500	4500	8 @ 80	D-5500	4300	100PFC

DESIGN 6: DOUBLE TIERED CONCRETE SLEEPER RETAINING WALL (BOTTOM TIER)

Design Height 'H' (mm)	Crest Slope (maximum)	2400 SLEEPER LENGTH			2000 SLEEPER LENGTH			Minimum Corner Post Detail~
		Sleeper designation* (qty @ thickness in mm)	Steel Post Required	Pier Depth (mm)	Sleeper designation* (qty @ thickness in mm)	Steel Post Required	Pier Depth (mm)	
400	Level	2 @ 80	B-2000^	1300	2 @ 80	B-2000^	1200	100PFC
600	Level	3 @ 80	B-2000	1400	3 @ 80	B-2000	1300	100PFC
800	Level	4 @ 80	B-2600	1700	4 @ 80	B-2600^	1500	100PFC
1000	Level	5 @ 80	B-2900	2000	5 @ 80	B-2600	1900	100PFC
1200	Level	top 5 @ 80, 1 @ 100 btm	C-3500 =	2400	6 @ 80	B-3200	2100	100PFC
1400	Level	top 4 @ 80, 3 @ 100 btm	C-3900	2800	top 5 @ 80, 2 @ 100 btm	C-3500	2500	125PFC
1600	Level	top 3 @ 80, 5 @ 100 btm	C-4400	3100	top 5 @ 80, 3 @ 100 btm	C-3900	2800	125PFC
1800	Level	top 3 @ 80, 6 @ 100 btm	D-4900	3500	top 4 @ 80, 5 @ 100 btm	C-4400	3100	150PFC
2000	Level	top 2 @ 80, 8 @ 100 btm	D-5500	3800	top 4 @ 80, 6 @ 100 btm	D-4900	3400	150PFC

* THICKER SLEEPERS TO BE INSTALLED AT BOTTOM OF WALL PANEL.

Sleeper thickness designation in table refers to quantity of sleepers @ thickness (mm).

~ CORNER POST DETAIL TO BE 2 PFC POSTS AS DESIGNATED OR 1 PFC NESTED IN DESIGNATED UC

= denotes steel assembly upgraded due to sleeper thickness. Post may be reduced if sleeper thickness reduced, double sleeper used and grout pack void between

^ denotes steel reinforcement at base of post assembly will need to be trimmed to fit bored pier depth.

'' denotes steel assembly upgraded due to overall length and may be adjusted if reo extensions used instead

REFER TO SHEET 001 FOR ALL SPECIFICATION NOTES

-			DESIGNED BY	AA	<div><p>Adbri Masonry Pty Ltd ABN: 31 009 687 521</p><p>P.O. Box 623 Beenleigh, QLD 4207</p><p>Phone: (07) 3382 4100 Fax: (07) 3382 4185 Web: www.adbrimasonry.com.au</p></div>	<div><p>Fishwick (ACT): (02) 6239 1255 Coffs Harbour (NSW): (02) 6655 9972 Moorebank (NSW): (02) 9822 6822 Newcastle (NSW): (02) 4967 3611 Nowra (NSW): (02) 4421 3500 Brisbane (QLD): (07) 3382 4100 Cairns (QLD): (07) 4051 6944 Gladstone (QLD): (07) 4979 3355 Mackay (QLD): (07) 4955 6966 Maroochydore (QLD): (07) 5477 3300 Toowoomba (QLD): (07) 4688 9600 Townsville (QLD): (07) 4774 5155 Ottaway (SA): (08) 8304 2323 Bendigo (VIC): (03) 5447 8866 Carnellfield (VIC): (03) 9305 0900 Essendon (VIC): (03) 9375 8500 Hobart (TAS): (03) 6244 3822 Ulverstone (TAS): (03) 6425 1899</p></div>	<div><p>PROJECT TITLE</p><p>SUNVALE CALAMVALE RECONFIGURE LOT 3 ON SP186470</p><p>148 ALGESTER ROAD CALAMVALE QLD 4116</p><p>DRAWING SCALE</p><p>1:40</p></div>	<div><p>SHEET TITLE</p><p>CONCRETE SLEEPER RETAINING WALLS LOWER TIER WALL WITH 2M IN HEIGHT</p><p>CLIENT</p><p>DAC CONSTRUCTIONS</p><p>DRAWING No.</p><p>CIV-3043-005</p></div>	<div><p>ISSUE</p><p>B</p></div>
-			DRAWN BY	AA					
-			APPROVED BY						
B	04/11/22	DESIGNS UPDATED TO ASCT SOIL REPORT	QUALIFICATIONS	RPEQ 08869					
A	28/09/22	ISSUED FOR CONSTRUCTION							
No.	DATE	AMENDMENT							