

**GENERAL**

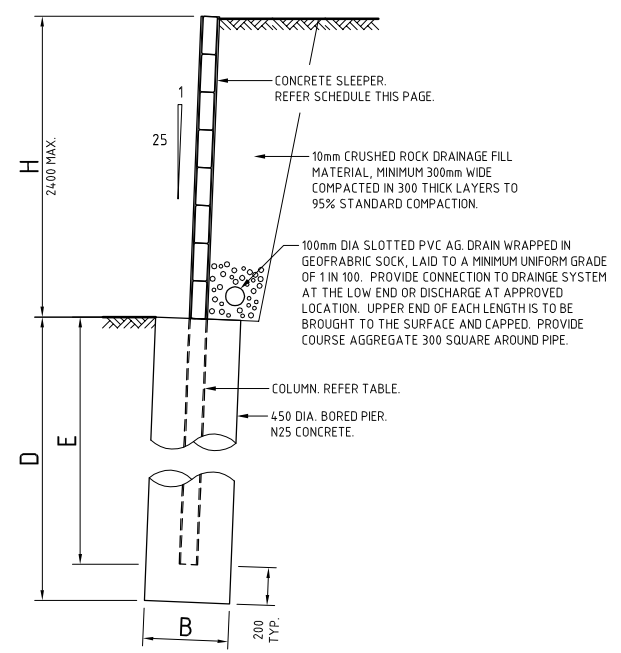
- G1 Concrete to be grade N40
- G2 Maximum slump to be 80 ± 15mm.
- G3 Steel column to be hot-dip galvanised.
- G4 Foundation material to be firm natural material or approved compacted material with minimum allowable bearing capacity of 100 kPa.
- G5 Foundations to be engineer inspected prior to installation of columns to confirm stability of founding material.
- G6 Builder to ensure construction does not adversely affect existing structures or services. Retaining wall not to be surcharge by any permanent structures nor surcharge any other structure.

**CONCRETE**

- C1 All workmanship and materials shall be in accordance with current relevant codes, in particular AS 3600 CONCRETE STRUCTURES CODE.
- C2 UNLESS SHOWN OTHERWISE Concrete used in the works shall have the following properties:-

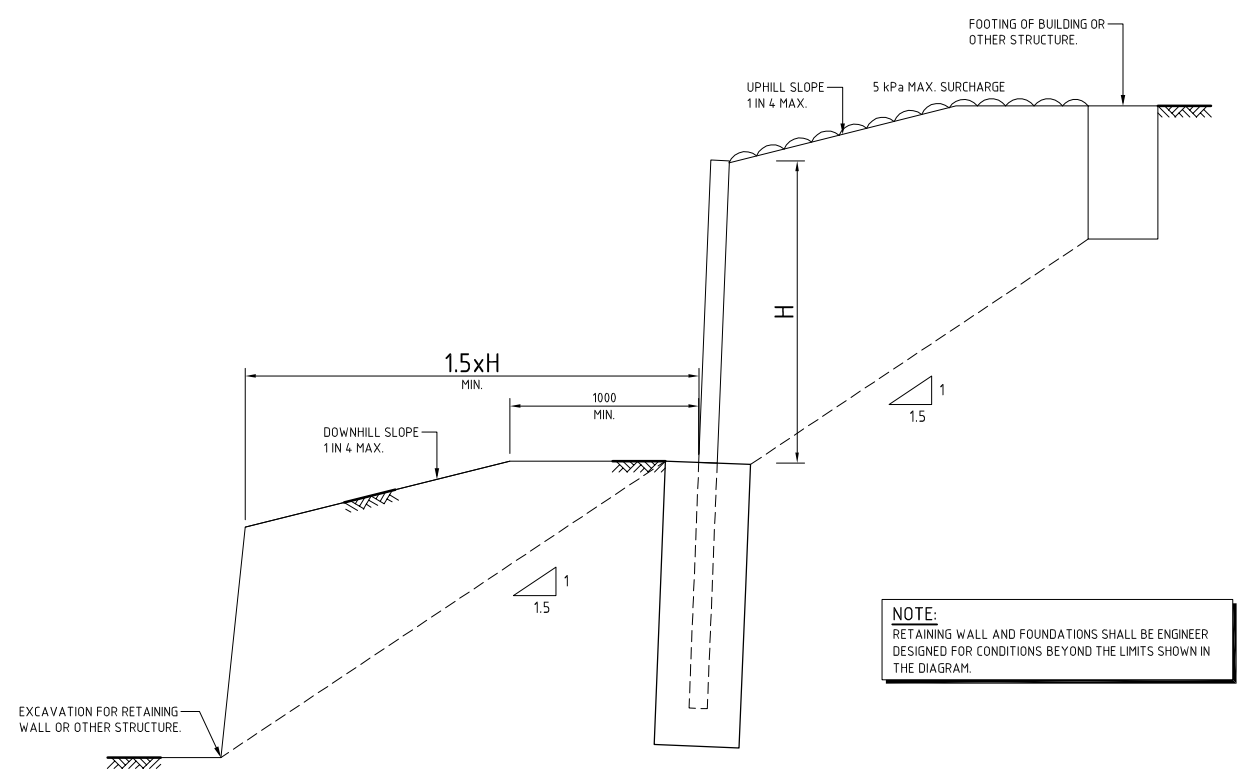
STRUCTURAL ELEMENT	f'c AT 28 DAYS (MPa) TO AS3600	MAXIMUM AGGREGATE SIZE (mm)	MAXIMUM SLUMP (mm)
Blinding	15	20	100
Elsewhere	as noted	20	80

- All concrete shall be vibrated.
- C3 Concrete cover to be maintained by the use of approved chairs and/or concrete blocks spread at approximately 600mm cross centres.
- C4 Formwork to be placed, maintained and stripped in accordance with AS 3610.
- C5 All concrete surfaces are to be cured by an approved method for seven days immediately after concrete is placed.
- C6 Reinforcement is shown diagrammatically; it is not necessarily shown in true projection.
- C7 Reinforcement to AS 4671.
- N denotes 500N grade deformed bar.
- R denotes structural grade plain round bars.
- The number immediately following the bar grade symbol represents the nominal bar diameter in millimetres.

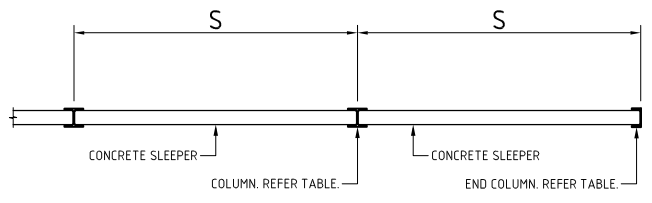


**DESIGN BASIS:**  
 MAX UPHILL SLOPE = 1 IN 4 (14°)  
 FILL SOIL FRICTION ANGLE = 30° (REFER TO GEOTECH)  
 FILL DENSITY = 20kN/m<sup>3</sup>  
 GROUND BEARING CAPACITY = 100kPa  
 ASSUMED LATERAL BEARING CAPACITY = 100kPa  
 SURCHARGE = 5kPa  
 HYDROSTATIC PRESSURE HEIGHT = 1/3 RETAINING WALL HEIGHT  
 ALL PARAMETERS TBC BY GEOTECHNICAL ENGINEER

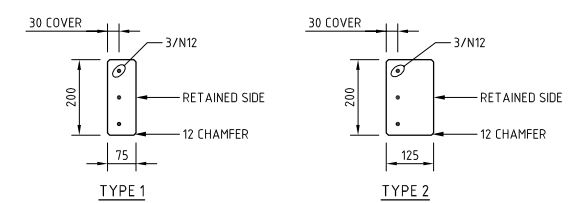
**TYPICAL SECTION  
TYPE 1 RETAINING WALL**



**TYPICAL CONFIGURATION DIAGRAM FOR WALL  
ADJACENT TO OTHER STRUCTURES OR EXCAVATIONS.**



**PART PLAN  
TYPE 1 RETAINING WALL**



**CONCRETE SLEEPER DETAILS**

WALL HEIGHT H	PIER DEPTH D	PIER DIA B	SPACING S	EMBEDMENT LENGTH E	TYPE 1 - STEEL		CONCRETE SLEEPER
					COLUMN SIZE	END COLUMN SIZE	
800	1200	450	2000	1000	100UC15	100PFC	TYPE 1
1000	1400	450	2000	1200	100UC15	100PFC	TYPE 1
1200	1600	450	2000	1400	100UC15	100PFC	TYPE 1
1400	1800	450	2000	1600	100UC15	125PFC	TYPE 1
1600	2000	450	2000	1800	100UC15	125PFC	TYPE 1
1800	2200	450	2000	2000	100UC15	125PFC	TYPE 1
2000	2500	600	2000	2300	150UC30	150PFC	TYPE 1
2200	2600	600	2000	2400	150UC30	150PFC	TYPE 1
2400	2800	600	2000	2600	150UC30	150PFC	TYPE 1
2600	3200	600	2000	3000	150UC30	200PFC	TYPE 1
2800	3600	600	2000	3400	200UC46	250PFC	TYPE 2
3000	3800	600	2000	3600	200UC46	250PFC	TYPE 2
3200	4000	600	2000	3800	200UC52	250PFC	TYPE 2

**GUIDE ONLY**

Design	BH	Client	LK CONSTRUCTION AUSTRALIA	
Drawn	AC	Project	SAVANNAH WOODS - STAGE 09	
Checked	BH	Title	DIAMANTINA BLVD, BRASSALL	Job No. 14223.2
Original		Date	13/08/2015	Dwg No. S01
Approved By:		Rev.	C	FOR CONSTRUCTION

Shop 1, 59 Bowen Rd, Brisbane  
 P.O. Box 816 Hyde Park, QLD 4812  
 Phone: 4740 4586

**FORTISEM**  
 consultant engineers + managers  
 email: info@fortisem.com.au  
 www.fortisem.com.au

**Nationwide precast**

**JAS-ANZ**  
 Australian Institute of Professional Engineers

**CONSULT AUSTRALIA**  
 Professional Engineering Services