

NO CONSTRUCTION LOADS ALLOWED WITHIN 1.5 x HEIGHT OF WALL OR 2m, WHICHEVER IS GREATER.  
HAND COMPACTION EQUIPMENT TO BE USED ONLY

MAXIMUM ACCEPTABLE DEFLECTION OF RETAINING WALL SLEEPERS IS 8mm UNDER NORMAL LOADING CONDITIONS

THIS DRAWING IS A SAMPLE ONLY AND IS NOT FOR CONSTRUCTION PURPOSES. A SITE SPECIFIC DESIGN AND GEOTECHNICAL TESTING IS REQUIRED FOR ALL SITES. THIS RETAINING WALL SYSTEM IS REQUIRED TO BE DESIGNED BY A SUITABLY EXPERIENCED AND REGISTERED ENGINEER (RPEQ).

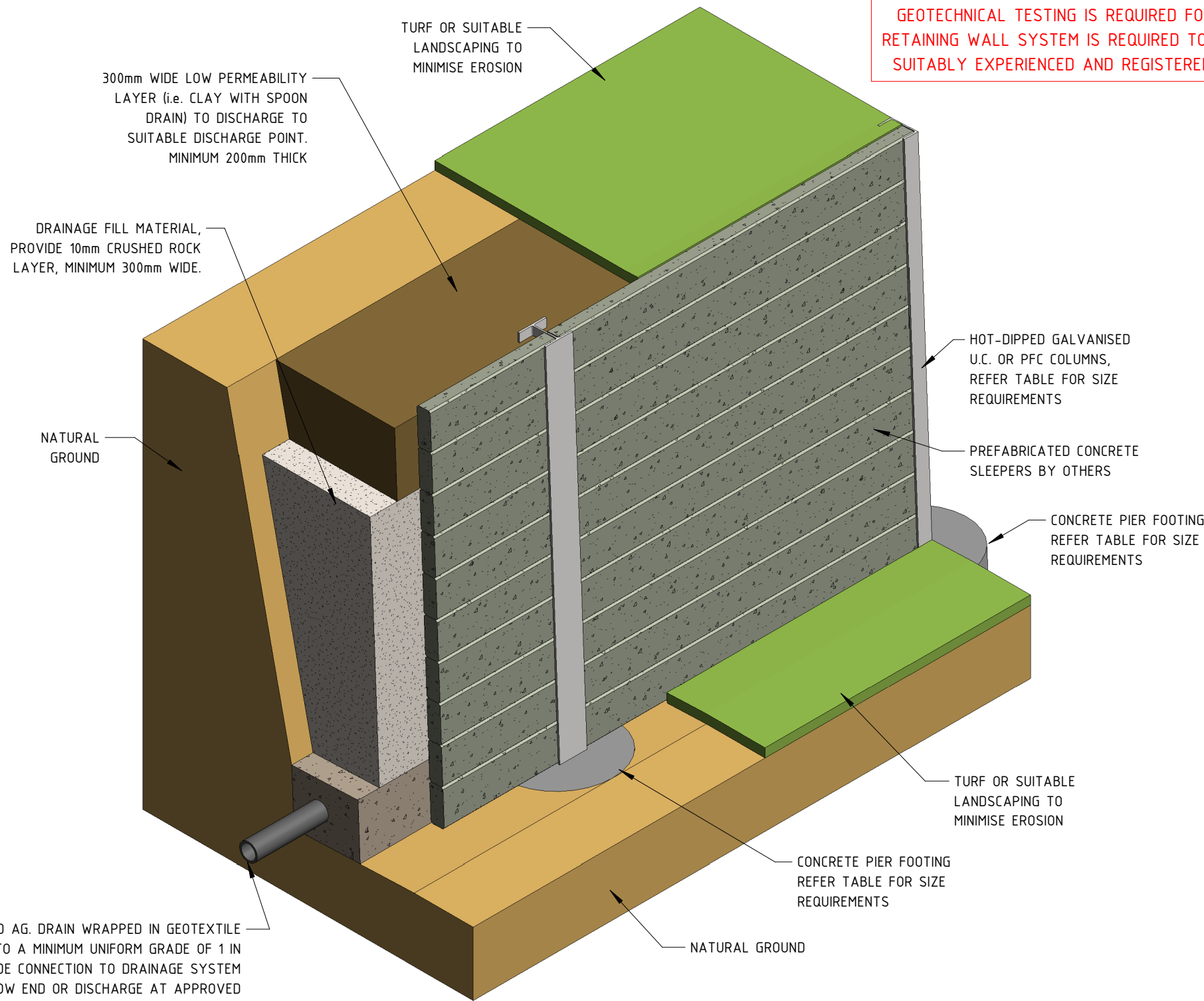
**DESIGN BASIS**

- DESIGN LIFE **60 YEARS**
- MAX. UPHILL SLOPE **1 in 4 (14°)**
- FILL SOIL FRICTION ANGLE **30° (REFER TO GEOTECH)**
- FILL DENSITY **18 kN/m<sup>3</sup>**
- GROUND BEARING CAPACITY **100 kPa**
- SURCHARGE **5 kPa**
- HYDROSTATIC PRESSURE HEIGHT **1/2 RETAINING WALL HEIGHT**
- ALL PARAMETERS TO BE CONFIRMED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER

**GENERAL NOTES:**

- ALL WORK TO COMPLY WITH THE BUILDING CODE OF AUSTRALIA, THE BUILDING ACT, LOCAL AUTHORITY BY-LAWS AND AS 3600 CONCRETE STRUCTURES.
- STEEL POSTS TO BE HOT-DIP GALVANISED
- FOUNDATIONS TO BE ENGINEER INSPECTED PRIOR TO INSTALLATION OF POSTS TO CONFIRM STABILITY OF FOUNDING MATERIAL
- BUILDER TO ENSURE CONSTRUCTION DOES NOT ADVERSELY EFFECT EXISTING STRUCTURES OR SERVICES. SURCHARGE LOADS NOT TO BE IMPOSED ON THE RETAINING WALL BY ANY PERMANENT STRUCTURE NOR SHALL THE RETAINING WALL CAUSE A SURCHARGE LOAD ON ANY OTHER STRUCTURE
- IF CONCRETE SLEEPERS ARE CUT, PAINT EXPOSED ENDS WITH AT LEAST 2 COATS OF BITUMASTIC PAINT IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
- GLOBAL STABILITY CHECK OF EARTHWORKS AND RETAINING WALL BY GEOTECHNICAL ENGINEER OR SUBDIVISION ENGINEER
- A TYPICAL DOMESTIC FENCE MAY BE CONSTRUCTED ABOVE THIS RETAINING WALL, FENCE HEIGHT NOT TO EXCEED 1.8m
- BACKFILL BEHIND RETAINING WALLS WITH FREE DRAINING GRANULAR MATERIAL AND INSTALL 6mm F.C. PACKING AT 600 CENTRES BETWEEN PANELS, 400mm FROM BASE OF WALL TO FORM A CONTINUOUS WEEP HOLE DRAINAGE SLOT.
- PROVIDE GEOTEXTILE BETWEEN GRANULAR MATERIAL AND EMBANKMENT/TOP COVER MATERIAL AND LAP GEOTEXTILE MATERIAL 200mm MINIMUM. GEOTEXTILE TO BE OF STRENGTH CLASS B AND FILTRATION CLASS 2 FOR GRANULAR SOILS OR CLASS 3 FOR COHESIVE SOILS IN ACCORDANCE WITH DEPARTMENT OF TRANSPORT AND MAIN ROADS SPECIFICATION MRTS27
- ENSURE A MINIMUM 200mm THICKNESS OF GRANULAR MATERIAL FOR ALL SITES.
- WHERE RETAINING WALLS ARE GREATER THAN 2m HIGH, INCREASE THE WIDTH OF FREE DRAINING GRANULAR MATERIAL TO AVERAGE AN ADDITIONAL ONE EIGHTH (1/8) OF THE WALL HEIGHT WHERE THE RETAINED MATERIAL IS OF REACTIVITY CLASS 'H1' OR GREATER.
- FOR SITES WITH WALLS IN EXPANSIVE SOIL, CONSTRUCT THE FACE OF THE WALL TO LEAN INTO THE RETAINED MATERIAL WITH A FACE SLOPE OF 1 HORIZONTAL TO 25 VERTICAL
- UNLESS SHOWN OTHERWISE, CONCRETE USED IN THE WORKS SHALL HAVE THE FOLLOWING PROPERTIES:

ELEMENT	f'c AT 28 DAYS (MPa)	MAX. AGGREGATE SIZE (mm)	MAX. SLUMP (mm)	CONCRETE GRADE
FOOTINGS	AS NOTED	20	80	N40
BLINDING	15	20	100	N40



100Ø SLOTTED AG. DRAIN WRAPPED IN GEOTEXTILE SOCK, LAID TO A MINIMUM UNIFORM GRADE OF 1 IN 100. PROVIDE CONNECTION TO DRAINAGE SYSTEM AT THE LOW END OR DISCHARGE AT APPROVED LOCATION. UPPER END OF EACH LENGTH IS TO BE BROUGHT TO THE SURFACE AND CAPPED. PROVIDE COARSE AGGREGATE AROUND PIPE.

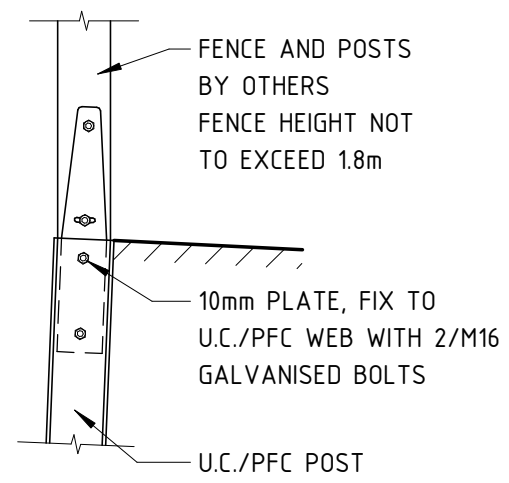
**NOT FOR CONSTRUCTION**

				Client		NATIONWIDE PRECAST				
				Project		CONCRETE SLEEPER RETAINING WALLS				
				Designed	-	Approved by	Title	Job No.	Drawing No.	Rev
				Drawn	-	CONCRETE SLEEPER RETAINING WALL - GENERAL			S01	A
A	SAMPLE ISSUE	-	14/09/2017	Checked	-			SAMPLE		
Rev	Amendments	By	Date	RPEQ	-					

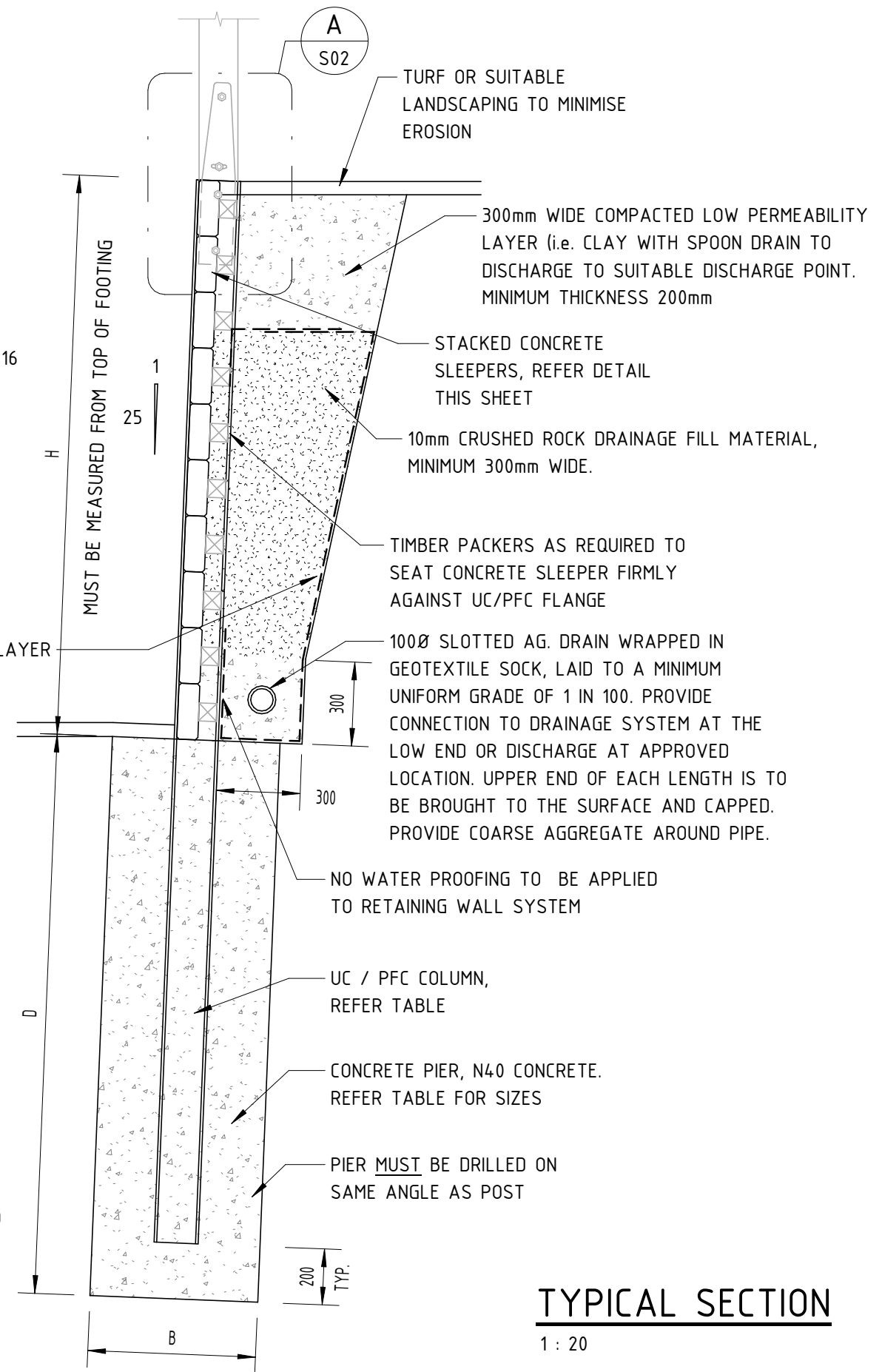
**TYPICAL PARAMETERS:**

WALL HEIGHT H	PIER DEPTH D	PIER DIAMETER B	INTERMEDIATE POST	END POST	HEIGHT OF DOUBLE SLEEPER	HEIGHT OF SINGLE SLEEPER
600	800	450	100UC14.8	100PFC	-	600
800	1000	450	100UC14.8	100PFC	-	800
1000	1200	450	100UC14.8	100PFC	-	1000
1200	1400	450	100UC14.8	100PFC	-	1200
1400	1600	450	100UC14.8	100PFC	-	1400
1600	1600	600	150UC23.4	150PFC	-	1600
1800	1800	600	150UC23.4	150PFC	-	1800
2000	2000	600	150UC23.4	150PFC	-	2000
2200	2300	600	150UC30.0	150PFC	200	2000
2400	2600	600	150UC30.0	150PFC	400	2000
2600	3000	600	150UC37.2	200PFC	600	2000
2800	3300	600	200UC46.2	200PFC	800	2000
3000	3700	600	200UC46.2	200PFC	1000	2000
3200	4200	600	200UC46.2	200PFC	1200	2000

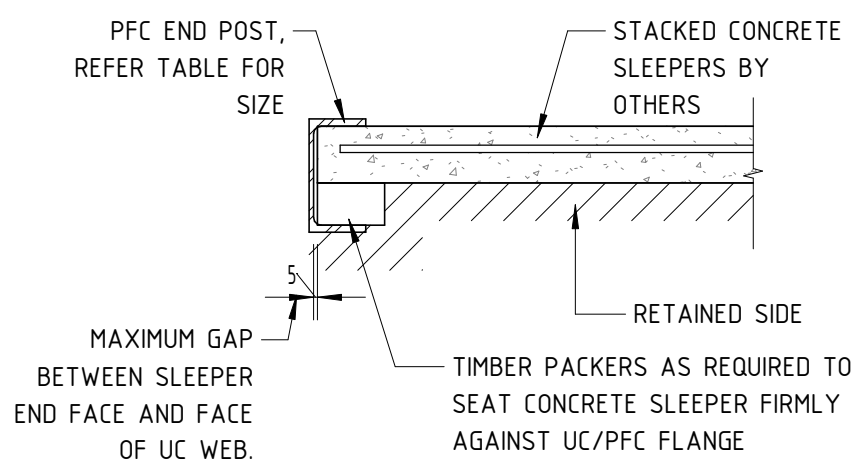
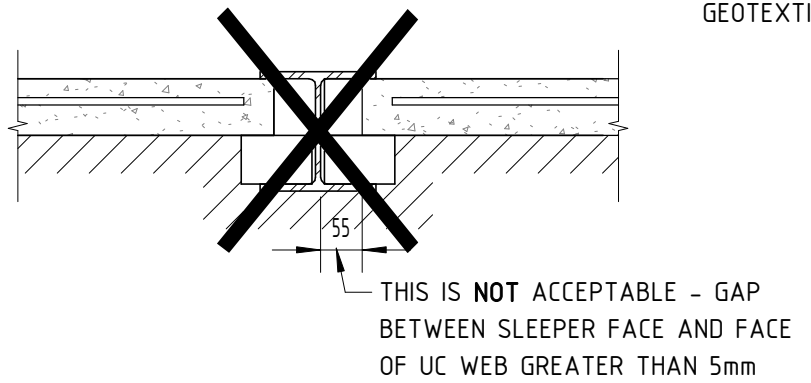
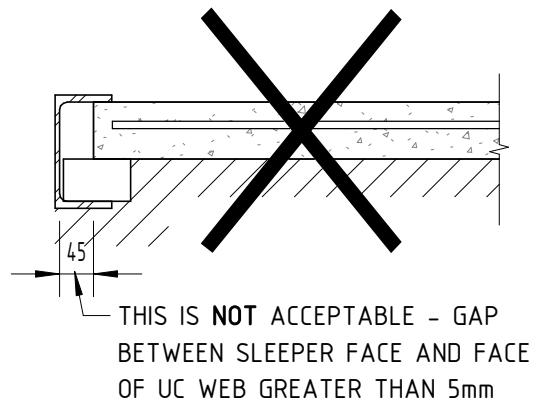
TYPICAL RETAINING WALL PROPERTIES FOR CONCRETE SLEEPER LENGTHS 1480mm, 1780mm, 1980mm, 2100mm, AND 2380mm. THIS TABLE IS AN SAMPLE ONLY AND IS NOT FOR PRICING OR CONSTRUCTION PURPOSES. A SITE SPECIFIC WALL DESIGN AND GEOTECHNICAL TESTING IS REQUIRED FOR ALL PROJECTS



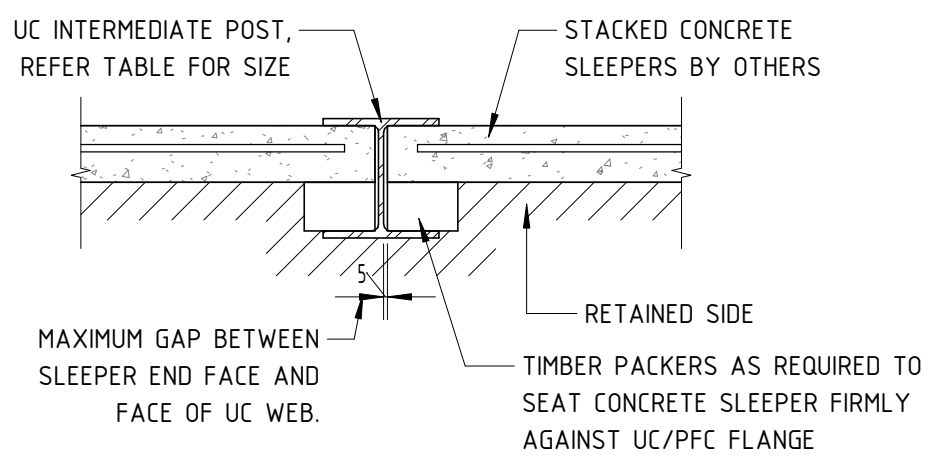
**DETAIL**  
1 : 20



**TYPICAL SECTION**  
1 : 20



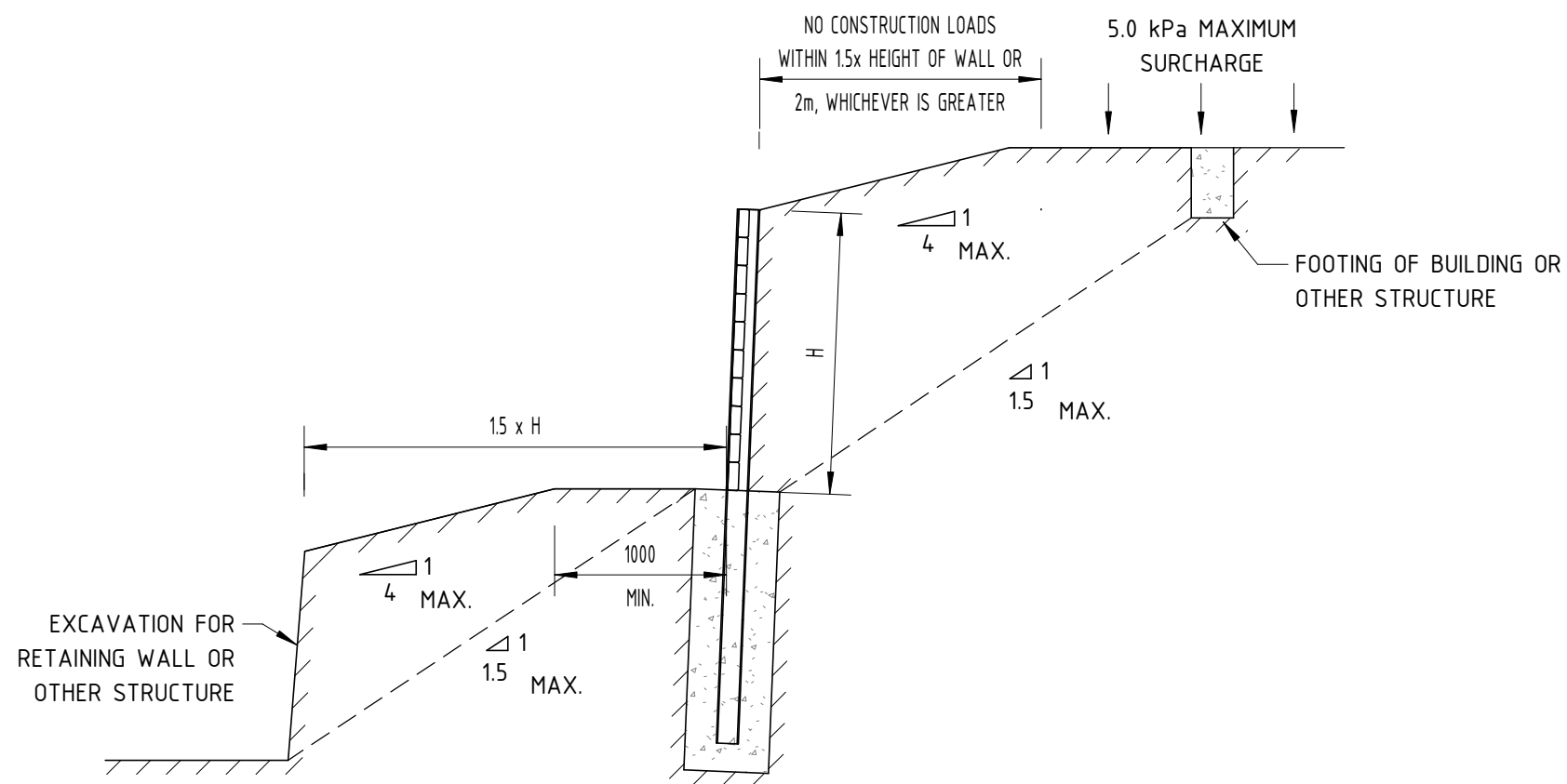
**TYPICAL END DETAIL**  
1 : 10



**TYPICAL INTERMEDIATE DETAIL**  
1 : 10

**NOT FOR CONSTRUCTION**

				Client			NATIONWIDE PRECAST			
				Project			CONCRETE SLEEPER RETAINING WALLS			
				Designed	-	Approved by	Title	Job No.	Drawing No.	Rev
				Drawn	-		CONC. SLEEPER RETAINING WALLS - DETAILS		S02	A
				Checked	-					
				RPEQ	-					
Rev	Amendments	By	Date							
A	SAMPLE ISSUE		14/09/2017							
SAMPLE										



**RETAINING WALL - TYPICAL SECTION**

1 : 50

**NOT FOR CONSTRUCTION**

				Client		NATIONWIDE PRECAST				
				Project		CONCRETE SLEEPER RETAINING WALLS				
				Designed	-	Approved by	Title	Job No.	Drawing No.	Rev
				Drawn	-		CONC. SLEEPER RETAINING WALLS - TYPICAL SECTION		S03	A
A	SAMPLE ISSUE	-	14/09/2017	Checked	-				SAMPLE	
Rev	Amendments	By	Date	RPEQ	-					