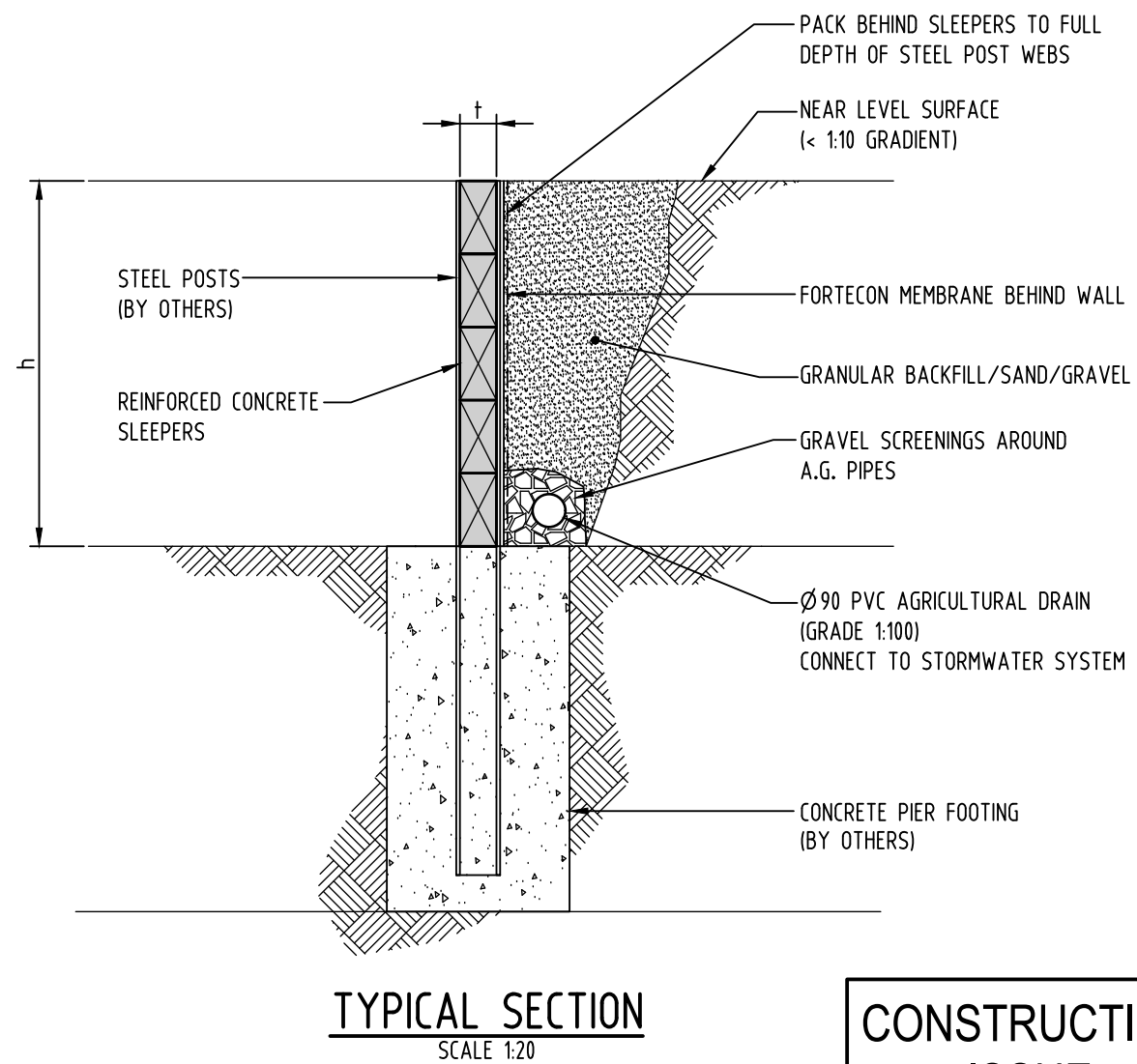


**NOTE:**  
PATTERN FACE SHALL NOT ENCR OACH INTO SLEEPER MIN. THICKNESS 't'



**CONSTRUCTION ISSUE**

**SPECIFICATIONS**

- SLEEPER CONCRETE GRADE TO BE N40. RIGID FORMWORK & INTENSE CONCRETE COMPACTION IN ACCORDANCE WITH AS 3600 IS REQUIRED FOR CASTING EACH SLEEPER.
- HAND COMPACTING EQUIPMENT ONLY IS PERMITTED TO BE USED ADJACENT SLEEPERS (WITHIN DISTANCE = 0.75H)
- THESE SLEEPER SPECIFICATIONS ARE ONLY SUITABLE FOR USE WITH RETAINING WALLS WHICH SATISFY THE FOLLOWING CONDITIONS/LIMITATIONS.
  - THE WALL IS NOT SUBJECT TO HEAVY SURCHARGE LOADS. FOR EXAMPLE, NEARBY EXISTING RETAINING WALLS, STRUCTURES OR BUILDINGS WITHIN A DISTANCE EQUAL TO TWO TIMES THE WALL HEIGHT.
  - THE FINAL SURFACE GRADIENT ABOVE THE WALL IS LEVEL OR ONLY SLIGHT - ie. LESS THAN 1 VERTICAL RISE IN 10 HORIZONTAL.
  - THE WALL BACKFILL IS FREE DRAINING, CONSISTING OF SAND &/OR GRAVEL.
  - ALL SUB-SURFACE WATER IS DRAINED BY MEANS OF AN AGRICULTURAL DRAIN, OR OTHER SUITABLE METHOD.
  - SLEEPERS ARE HANDLED WITH DUE CARE DURING TRANSPORTATION & ERECTION.
- SLEEPER MINIMUM END BEARING LENGTH SHALL NOT BE LESS THAN 25mm EACH END.
- FOR DETERMINATION OF THE APPROPRIATE SLEEPER TYPE, THE HEIGHT IS MEASURED FROM THE TOP OF THE WALL TO THE APPLICABLE SLEEPER. A WALL FACE CROSS SECTION MAY CONSIST OF VARIOUS SLEEPER TYPES.

ASSUMED SOIL PROPERTIES	
$\gamma_s$	= 18kN/m <sup>3</sup>
$\phi$	= 30°
ASSUMED MAX. SURCHARGE	
Q	= 5kPa

SLEEPER LENGTH (l) = 2000mm			
WALL TYPE	WALL HEIGHT (h)	THICKNESS t (mm)	REINFORCEMENT
2m STD (GREEN)	≤ 1.6	75	2-N10
2m HEAVY DUTY (BLUE)	1.6m < h ≤ 3.0m	100	2-N10
2m EXTRA HEAVY DUTY (RED)	3.0m < h ≤ 4.0m	120	2-N12

**NOTE:**  
1. PANELS & SLEEPERS MAY BE USED TOGETHER. FOR PANEL TYPES REFER DRAWING WAD150933-S10.

REV.	DATE	DESCRIPTION	DRAFT	ENG.	CHK.
Ø	24.11.17	CONSTRUCTION ISSUE	RB	NM	CL

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**CONCRETE SLEEPERS**  
OUTBACK SLEEPERS AUSTRALIA P/L  
**2000mm LONG SLEEPER**  
A3  
DRAWING NUMBER  
ADL171037 S01