



Concrete Sleepers

Engineering Certificate (1500mm Long)

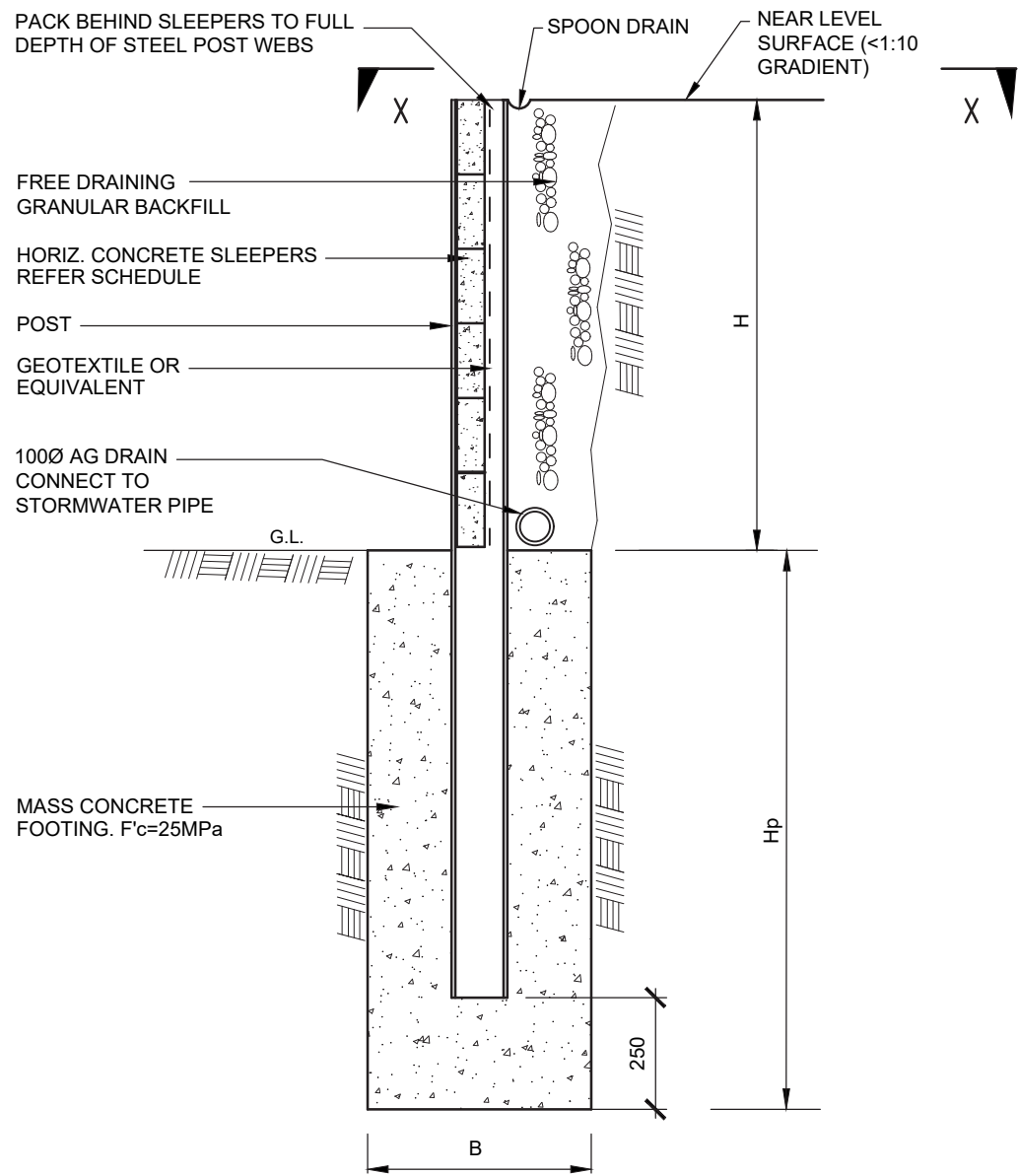
ABN 23 646 746 027

72 Officer S Rd,
Officer VIC 3809

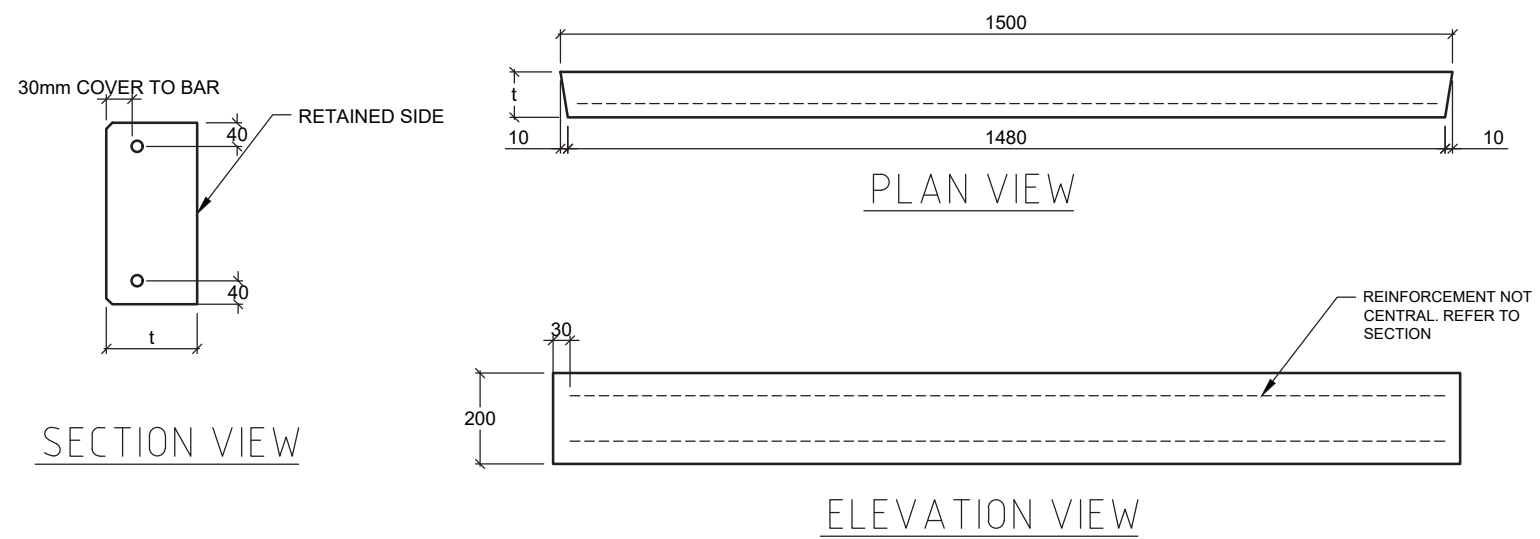
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TYPICAL SLEEPER RETAINING WALL DETAIL



ASSUMED SOIL PROPERTIES

MAXIMUM SURCHARGE	5kPa
FRICTION ANGLE	30 DEGREE
SOIL DENSITY (kN/m ³)	18

REINFORCEMENT TYPES

TYPE A	EITHER: 2/N12, 3N10, 2/12mm GFRP (60GPa) OR ALSO 2/N10 USING 60MPa CONCRETE
TYPE B	EITHER: 2/N10, 2/10mm GFRP (60GPa)

SLEEPER SIZE = 1500m LONG X 200mm DEEP

WALL TYPE	THICKNESS (t)	REINFORCEMENT	SOIL RETAINED (H) 5KPa	SOIL RETAINED (H) 10KPa
1500-80-A	80mm	TYPE A	3.4 m	3.0 m
1500-100-A	100mm	TYPE A	5.6 m	5.2 m
1500-120-A	120mm	TYPE A	6.8 m	6.4 m
1500-80-B	80mm	TYPE B	2.5 m	2.2 m
1500-100-B	100mm	TYPE B	4.6 m	4.0 m
1500-120-B	120mm	TYPE B	6.0 m	5.4 m

NOTE
 DESIGN IS BASED ON THE STRENGTH REQUIREMENTS ONLY, THE SERVICEABILITY REQUIREMENTS SUCH AS DEFLECTION LIMITS TO BE CHECKED BY THE PROJECT ENGINEER BASED ON THE SITE CONDITIONS & PROJECT REQUIREMENTS.

- SPECIFICATIONS:**
- SLEEPER CONCRETE GRADE TO BE N40. RIGID FORMWORK AND INTENSE CONCRETE COMPACTION IN ACCORDANCE WITH AS3600 IS REQUIRED FOR CASTING EACH SLEEPER
 - THESE SLEEPER WALLS SPECIFICATIONS ARE ONLY SUITABLE FOR USE WITH RETAINING WALLS WHICH SATISFY THE FOLLOWING CONDITIONS:
 - THE WALL IS NOT SUBJECT TO HEAVY SURCHARGE LOADS, THE SURCHARGE LOADS THAT INCLUDED IN THIS CALCULATION IS 5kPa
 - THE FINAL SURFACE GRADIENT ABOVE THE WALL IS LEVEL OR ONLY SLIGHT (LESS THAN 1 VERTICAL RISE IN 10 HORIZONTAL)
 - THE WALLS 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 AND ERECTION
 - SLEEPER MINIMUM END BEARING LENGTH SHALL NOT BE LESS THAN 25mm EACH END

For more information visit
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