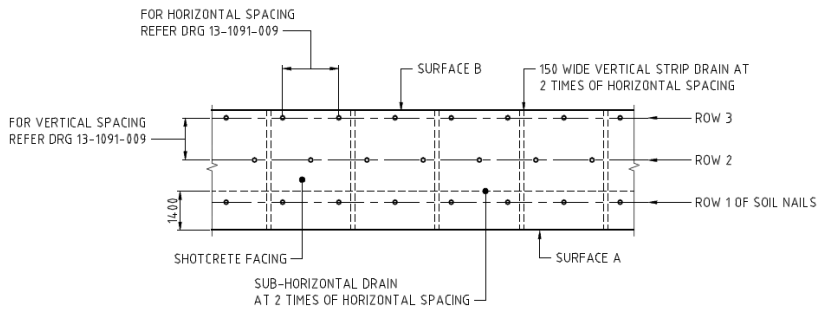
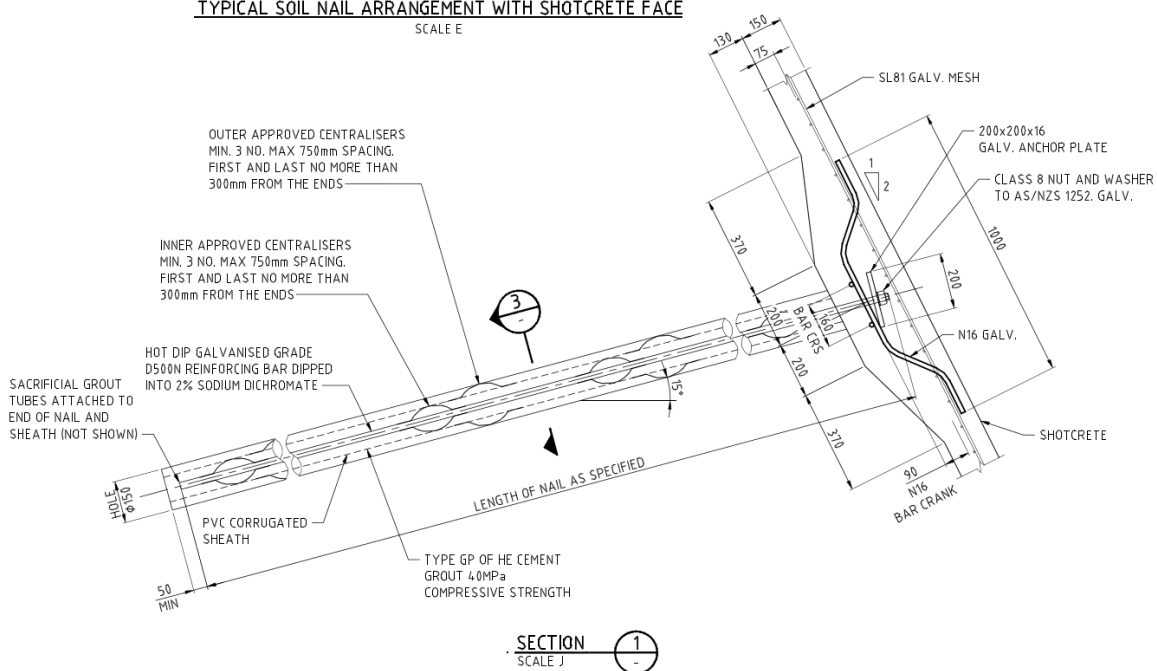


## TYPICAL SOIL NAIL DETAIL



**TYPICAL SOIL NAIL ARRANGEMENT WITH SHOTCRETE FACE**

SCALE B



SECTION 1  
SCALE J

The purpose of a soil nail is to hold the concrete retaining walls on the slopes in position.

The process for installing a soil nail is as follows:

- A 150 mm diameter hole is drilled into the slope. The depth of the holes on this project is approx. 8m.
- A high strength steel bar is inserted into the 150 mm dia. hole.
- Grout is pumped into the bottom of the hole (via a long tube) until the grout comes out of the top of the hole.
- The grout is allowed to harden around the steel bar for several days until the grout reaches its design strength.
- A shotcrete wall is sprayed onto the face of the slope around the soil nail.
- Once the concrete (grout) forming the soil nail and the shotcrete wall has hardened, the locking nut at the end of the steel bar is tightened so that the wall is secured in position by the soil nail.