

REQUIREMENTS FOR ROCKFILL AS ENGINEERED FILL

In the context of this guide, rockfill is defined as coarse rock with particle sizes ranging from sand to coarse cobble. Rockfill is commonly referred to as ‘Blastrock’ or Shotrock’. For fill materials with a maximum particle size of 75mm, refer to *Coast Geotechnical: Requirements for Engineered Fill*.

Table 1: Requirements for Rockfill

Gradation	200mm (8") Minus ¹	300mm (12") Minus ¹
Min. Compaction Equipment²	1000-lb Plate Tamper	10 – 20-ton vibratory steel drum roller
Max. Lift Thickness	300mm (1 ft)	450mm (1.5 ft)
Min. # Passes	6 passes ²	6 passes ²
Engineering Reviews Required:	<ol style="list-style-type: none"> 1. During compaction of 1st lift to confirm minimum pass requirement 2. Every 1 meter of thickness thereafter. 3. Upon completion of fill pad to confirm suitable width/extents in relation to foundation layout. 	

1. ‘Minus’ means all particles must be less than the specified size. All fill must be well graded. Material must be clean, free of contaminants or organics, and have less than 8% fines (silt/clay) passing the No. 200 sieve. Rock must also be hard and non-brittle, no shales, no sandstone.
2. A method specification test can be completed which may reduce the number of passes required. Contact Coast Geotechnical to coordinate.

Recommendations:

- Stripping:** Prior to placement of any Engineered Fill, all topsoil, fill, weathered, or disturbed soils must be stripped from the proposed building area. We recommend the site be staked or pinned to identify the required extent/width. *Geotechnical Engineer to be contacted to review subgrade prior to placing Engineered Fill.*
- Pad Extent:** The Engineered Fill pad must be prepared to extend 0.6 m (2 ft) horizontally beyond the outside edge of proposed structure or road and have a maximum splay of 1H:1V down and away. Larger diameter particles can be screened and used to retain perimeter of fill pad.
- Lifts:** Engineered Fill to be compacted in lifts, using appropriate equipment for gradation. Lifts are to be prepared level prior to compaction. Larger particles which protrude must be removed. Track or bucket packing will not be accepted as a means of compaction. Track packing may be used as an initial step to grade fill level and eliminate high points.
- Compaction:** Rockfill to be compacted with minimum # of passes as specified/confirmed by the Engineer. Seams should no longer visible at the edge of compaction equipment’s path or track. For vibrating tampers and rollers, the compaction equipment should begin to bounce when adequate compaction has been achieved.
- Reviews:** The contractor/client is responsible to contact Geotechnical Engineer to obtain the engineering reviews as noted in Table 1 above. We should be notified a minimum of 24 hours in advance to schedule a review. Final signoff, and/or Schedules will be withheld if Coast Geotechnical is not provided opportunity to review engineered fill.