



NOT TO SCALE

**NOTES**

1. This figure is not for construction. It should only be used for information pertaining to potential design concepts. Final design should be based on site-specific conditions and accomplished by a geotechnical engineer licensed as a professional engineer.
2. Crib retaining wall to be designed by a licensed structural engineer and reviewed by the geotechnical engineer.
3. Drainage sand and gravel and granular backfill should be placed into layers not exceeding 6 inches loose thickness and compacted to at least 95 percent of its Modified Proctor maximum density (ASTM: D 1557), except within the cribs where it should be compacted to at least 92 percent. Crib units, drainage sand and gravel, and granular backfill should be built up together.
4. An alternative would be to use excavated granular soil as backfill inside cribs.
5. Perforated or slotted pipe; tight joints; sloped to drain (6"/100' min. slope); provide clean-outs; min. diameter: 4 inches.
6. Perforated pipe holes (1/8-in. to 3/8-in. dia.) to be in lower half of pipe with lower quarter segment unperforated for water flow.

**MATERIALS**

1. Drainage Sand and Gravel should meet the following gradation (Modified City of Seattle Mineral Aggregate Type 26):
 

Sieve Size	% Passing by Weight
1-inch	100
3/4-inch	85 to 95
1/4-inch	30 to 60
No. 8	20 to 50
No. 50	3 to 12
No. 200	0 to 1

(by wet sieving) (non-plastic fines)

An alternative to drainage sand and gravel is a 50-50 mixture of washed pea gravel and washed sand (Mineral Aggregate Type 6).
2. Washed 3/8" Pea Gravel to Meet City of Seattle Mineral Aggregate Type 9.

Seattle Landslide Study  
Seattle Public Utilities  
Seattle, Washington

**TYPICAL CRIB WALL WITH  
SUBDRAINAGE AND BACKFILLING**

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**FIG. 2-13**