

Table 3-3. Drainfield aggregate allowable particle size percent composition.

Sieve Size	Passing (%)
2.5 inch	100
0.5 inch	≤2
200	<2

3.2.8.1.2 Medium Sand

To determine if a construction media is medium sand, the sand is passed through a sieve to ensure that it conforms to the gradation requirements of ASTM C-33 for size, and less than 2% passes through a #200 sieve for cleanliness (Table 3-4).

Table 3-4. Medium sand (modified ASTM C-33) allowable particle size percent composition.

Sieve Size	Passing (%)
4	95–100
8	80–100
16	50–85
30	25–60
50	10–30
100	2–10
200	<2

3.2.8.1.3 Pea Gravel

To determine if a construction media is pea gravel, the media is passed through a sieve to ensure that it conforms to the gradation requirements: 100% passes through a 3/8-inch sieve; <2% passes through a #7 sieve; and <1% passes through a #50 sieve for size and cleanliness (Table 3-5). Additionally, the media must have a uniformity coefficient of <2.

Table 3-5. Pea gravel allowable particle size percent composition.

Sieve Size	Passing (%)
3/8 inch	100
7	<2
50	<1

3.2.8.1.4 Pit Run

Pit run construction media is composed of clean cobble, gravel, and sand. To determine if a construction media is suitable pit run, it shall be passed through a sieve to ensure that it conforms to the gradation requirements: 100% passes through a 6-inch sieve; 15%–60% passes through a #4 sieve; ≥ 5% passes through a #50 sieve; and 0%–12% passes through a #200 sieve for size (Table 3-6).

Table 3-6. Pit run allowable particle size percent composition.

Sieve Size	Passing (%)
6 inch	100
4	15–60
50	≥5
200	0–12

3.2.8.2 Substantiating Drainfield Aggregate and Construction Media Installation

After delivery of the drainfield aggregate or construction media to a subsurface sewage disposal system installation site, the health district shall verify that the aggregate and/or media was obtained from an approved source as described in section 3.2.8.1. The permitted installer, property owner, or licensed public works contractor under the direction of a PE licensed in Idaho performing the subsurface sewage disposal system installation shall provide drainfield aggregate or construction media receipts to the health district upon request to verify source and volume (IDAPA 58.01.03.011.04). The health district shall record the volume of drainfield aggregate or construction media on the final inspection form for the installation permit. The volume of drainfield aggregate and construction media may also be used to verify the excavation depth of drainfield trenches.

Example (verification of excavation depth of an in-trench sand filter drainfield trench):

The drainfield covers a disposal area of 420 ft² and was installed with two 6-foot wide trenches that are 35 feet long each. The excavation depth of the system was required to be 7 feet with a maximum installation depth of 4 feet. To meet the excavation depth and install the drainfield no deeper than 4 feet, approximately 47 cubic yards (yd³) of medium sand must be installed below the drainfield aggregate. Another 15.6 yd³ of drainfield aggregate should be installed to ensure that a minimum of 12 inches of aggregate is in place and that it is installed no deeper than 4 feet. This is determined by the following:

Medium Sand Volume:

$$(420 \text{ ft}^2 \text{ of disposal area}) \times (3 \text{ ft of medium sand}) = 1,260 \text{ ft}^3 \text{ of medium sand}$$

$$(1,260 \text{ ft}^3 \text{ of medium sand}) / (27 \text{ ft}^3/\text{yd}^3) = 46.67 \text{ yd}^3 \text{ of medium sand}$$

Drainfield Aggregate:

$$(420 \text{ ft}^2 \text{ of disposal area}) \times (1 \text{ ft of drainfield aggregate}) = 420 \text{ ft}^3 \text{ of drainfield aggregate}$$

$$(420 \text{ ft}^3 \text{ of drainfield aggregate}) / (27 \text{ ft}^3/\text{yd}^3) = 15.56 \text{ yd}^3 \text{ of drainfield aggregate}$$