

4.11 Gravelless Trench System

Revision: January 30, 2013

Installer registration permit: Property owner or standard and basic

Licensed professional engineer required: No

4.11.1 Description

A gravelless trench system meets all the requirements of a standard trench system except that the drainrock is replaced by an approved gravelless trench component (section 5.7). Typical components include gravelless chambers, large diameter nylon fabric wrapped piping of varying dimensions, and drainrock substitution systems. Approved gravelless products are granted a reduction in disposal area square footage. Reduction is only allowed in trench designs up to 36 inches in width. No reduction is allowed for installation widths greater than 36 inches, or for installation in sand mound designs.

4.11.2 Approval Conditions

1. Unless otherwise noted, the system must be installed according to the gravelless trench component manufacturer's recommendations.
2. Reduction in square footage cannot be in addition to other allowable disposal area reductions (i.e., drainfield reductions due to increased application rates for treatment).
3. The measured width of the installed product should be at least 90% of the excavated trench width (section 5.7, Table 5-8).

4.11.3 Design Requirements

1. Length of gravelless trench product needed should be calculated on the following basis:
 - a. Disposal trench length is determined by the application rating for each product (section 5.7, Table 5-7, rating column)

Example (large diameter pipe):

- 1) Product selected has a rating (square feet of application area per linear foot) of 1.33 ft²/ft
- 2) 3-bedroom home (250 GPD) in soil design subgroup B-1 soils (application rate of 0.6 GPD/square foot [ft²])
- 3) $([250 \text{ GPD}]/[0.6 \text{ GPD}/\text{ft}^2])/(1.33 \text{ ft}^2/\text{ft}) = 314$ linear feet of gravelless trench product

Example (gravelless chamber):

- 1) Product selected has a rating (square feet of application area per linear foot) of 4.0 ft²/ft
- 2) 3-bedroom home (250 GPD) in soil design subgroup B-1 soils (application rate of 0.6 GPD/ft²)
- 3) $([250 \text{ GPD}]/[0.6 \text{ GPD}/\text{ft}^2])/(4.0 \text{ ft}^2/\text{ft}) = 105$ linear feet of gravelless trench product