

Sizing: All AES systems require adequate absorption area determined by dividing projected gallons per day flow rate by the pretreatment loading rate for the most restrictive soil type identified in the test holes. Within the absorption area there must be a minimum of 70 lineal feet of AES pipe for each of the first 3 bedrooms, and 25 lineal feet for each additional bedroom, in residential applications; or 1 lineal foot of AES pipe for each 2.14 gallons per day in non-residential applications.

- Gallons per day design flow: _____
- Loading rate: _____
- Total square footage: _____
- Lineal feet of AES pipe: _____

Table 4-20. Secondary loading rates	
Soil Type	Loading Rate
A-1	1.7
A-2a	1.2
A-2b	1.0
B-1	0.8
B-2	0.6
C-1	0.4
C-2	0.3

Table 4-19-Effective soil depths	
Limiting Layer	Effective Soil Depth
Impermeable Layer	2
Very porous layer	1
Normal high groundwater	1
Seasonal high groundwater	1

Layout: AES can be installed in trenches 3-6 feet wide and absorption beds under the following conditions:

- 0-8% Slope: Trenches up to 6 feet wide with six feet of undisturbed earth between trenches. Absorption beds allowed if no room for trenches.
- 9-20% Slope: Trenches up to 6 feet wide, 6 feet between trenches.
- 20-45% Slope: Trenches limited to 3 feet wide, 8 feet between trenches, 30" depth. (Note: On steep slopes, the reduced loading rate results in same lineal footage as gravelless products with reduction.)

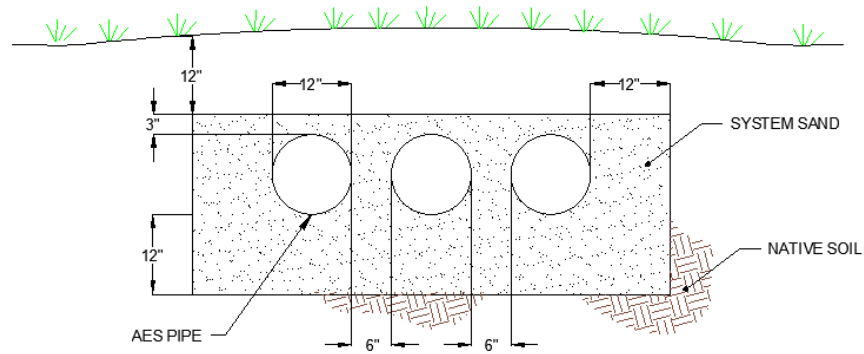
Presby Pipe Layout: Within each trench or bed, Presby Environmental requires the following spacing:

- 6 inches to 2 feet between AES pipe rows
- 1 to 3 feet between AES pipes and edge of trench or bed
- 1 foot of sand below AES pipe
- 1 foot of sand bedding AES pipe
- 3 inches of sand on top of AES pipes
- 1 foot of sand beyond end of AES pipes.

Unique requirements:

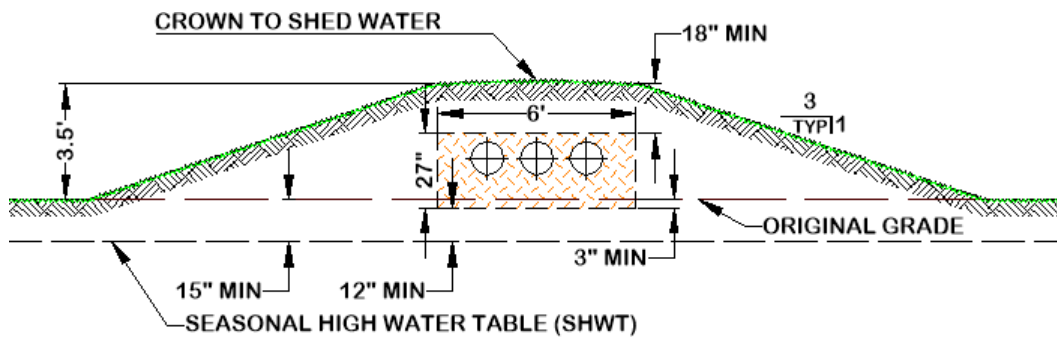
- Venting: Low and high vents required:
 - low vent at end of trench or bed;
 - High vent must be 10' higher than the low vent. Gravity systems can use venting through roof in structure. For pump systems, high vent at D-box.
- Pressurization **not** allowed. Size of drainfield limited to 1500 ft².
- Capping fill: Minimum install depth 3" of sand into native material. Capping fill requirements in the Technical Guidance Manual must be met on cap (12" minimum cap for below grade, 18" for above grade).
- 2" rule: outlet of septic tank must be 2" above highest inlet of AES pipe.
- Minimum sizing 150 gpd.

AES in 6-foot-wide Trench



Requirement	Minimum Spec
System sand below conduit	12"
System sand between conduit rows	6"
System sand adjacent to outside conduit rows	12"
System sand on top of conduit rows	3"
Cover	12"

AES in Above-Grade Capping Fill System



AES in Below-Grade Capping Fill System	
Requirement	Minimum Spec
Bottom of system sand into natural soil	$\geq 12''$ and $< 24''$
Overall AES system height	27"
<i>Cannot meet TGM requirements (must be completely below natural soil grade)</i>	

AES in Above-Grade Capping Fill System	
Requirement	Minimum Spec
Bottom of system sand into natural soil	$\geq 3''$ and $< 24''$
Cap material	Selected fill material (See TGM)
Maximum site slope	12%
Soil cap extension	$\geq 10'$ from edge of trench
Cover	18" from top of pipe