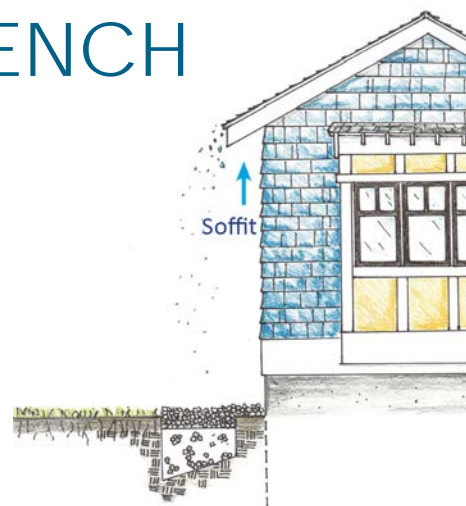


DRIPLINE INFILTRATION TRENCH

A stone-filled trench under the roof dripline to collect water from a roof allowing it to soak into the ground. It helps reduce stormwater runoff.



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SIZING AND DESIGN

STEP 1 – Soffit depth. A soffit is the underside of a roof overhang. Measure the depth of the soffit by aligning your body under the edge of your roof and measuring the distance from your body to the house. This is the reference line.

STEP 2 – Reference line. Mark the reference line on the ground along the perimeter of your house where you will be installing the dripline trench.

STEP 3 – Outside boundary. Measure and mark 12 inches from the reference line away from your house. This the outside boundary line for excavation.

STEP 4 – Inside boundary. Measure and mark six inches from the reference line toward your house. This is the inside boundary line for excavation.

STEP 5 – Determine materials needed.

Washed stone. Calculate the volume of the trench in cubic feet by using the calculation below. If needed, convert cubic feet to cubic yards by multiplying cubic feet by 0.037.

$$\text{TRENCH LENGTH (ft)} \times \text{TRENCH WIDTH (ft)} \times \text{TRENCH DEPTH (ft)} = \text{TRENCH VOLUME (ft}^3\text{)}$$

Landscape fabric. Purchase enough landscape fabric to extend twice the length of the trench.

Perforated pipe. Purchase enough perforated pipe to extend the length of the trench.

INSTALLATION

STEP 1 – Dig a trench at least eight inches deep between the outside and inside boundary lines marked along the perimeter of your house. Slope the bottom of the trench away from the house so that water will drain away from the foundation (Figure 1).

STEP 2 – Line the sides with a non-woven geotextile fabric to extend the life of the trench.

EQUIPMENT & MATERIALS

- ✂ Measuring tape
- ✂ Shovel
- ✂ 1/2" to 1 1/2" washed stone
- ✂ Non-woven geotextile or landscape fabric

OPTIONAL

- ✂ Perforated plastic pipe
- ✂ String or spray paint

STEP 3 – Fill with stone.

For Well Drained Soils: Fill the trench with stone. Fill the trench with 1/2- to 1 1/2-inch washed stone until it is about three inches below the ground level. Place a piece of non-woven geotextile fabric over the stone layer and fill the remaining three inches with additional stone (Figure 1).

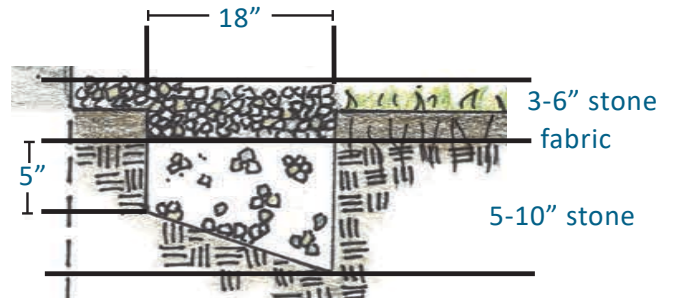


Figure 1 – Profile for well drained soils.

For Slowly Draining Soils: Fill the bottom one to two inches of the trench with washed stone. Lay a four-inch perforated pipe with the holes facing up along the trench. The end of the pipe should either outlet to a vegetated area with a splash guard to prevent erosion or to another treatment practice such as a dry well or a rain garden. The pipe should be sloped toward the outlet so the water easily flows out of the pipe. Consider screening or adding another type of rodent guard on the exposed end of the pipe to prevent animals from nesting and clogging the pipe. Fill the trench with 1/2- to 1 1/2-inch washed stone until it is about three inches below the ground level. Place a piece of non-woven geotextile fabric over the stone layer and fill the remaining three inches with additional stone (Figure 2).

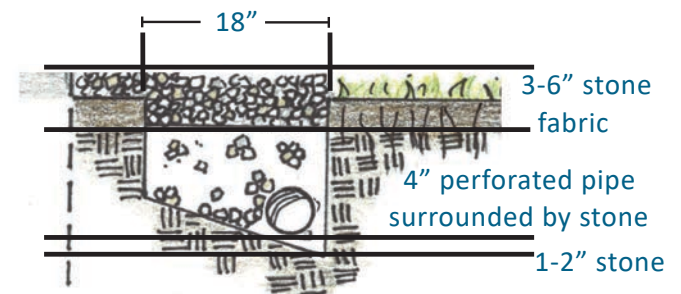


Figure 2 – Profile for slowly draining soils.

STEP 4 – OPTIONAL Extend stone to foundation. As material allows, spread a layer of stone all the way to the edge of your foundation. This creates a cleaner appearance and reduces the need for vegetation between the trench and your foundation.

MAINTENANCE

INSPECT: Periodically and after rain events, inspect the practice for any obvious signs of stress or potential failure. Remove accumulated debris and sediment as needed. Check for ponding or poorly draining water – this can be a sign of clogging.

OTHER MATERIALS: Trenches lined with non-woven geotextile fabric will require less frequent maintenance, but will still clog over time. Ponding or slowly draining water can be a sign of clogging. The stone and fabric, if used, will need to be washed or replaced to remove the accumulated sediment and debris.

DESIGN REFERENCE

Maine Department of Environmental Protection. *Conservation Practices for Homeowners*. Fact Sheet Series. May 2006.