

FOR SINGLE-FAMILY RESIDENTIAL USE ONLY WITH LESS THAN 5,000 SQUARE FEET OF NEW OR REPLACED IMPERVIOUS AREA

French Drain

A French drain consists of a shallow trench filled with stone and fitted with a perforated pipe. Stormwater from impervious areas including roofs, drive-ways, and pool decks is piped to the French drain and infiltrates into the surrounding soil. French drains must exit at a point that is lower than the inflow point and flow away from structures. French drains are usually covered with topsoil and sod so they blend in with landscaping while providing stormwater benefits.



Locate

- Install the French drain at least 10 feet away from building foundations.
- Avoid septic fields, utility easements, and public right-of-way
- Install in a landscaped area.
- Use a perforated pipe to receive roof drains pipes.
- The perforated pipe must have a positive slope away from the structure and must exit at a point that is lower than the inflow point. The exit location must be at least 10 feet from the property line and cannot channel flow onto a neighboring property.

Design

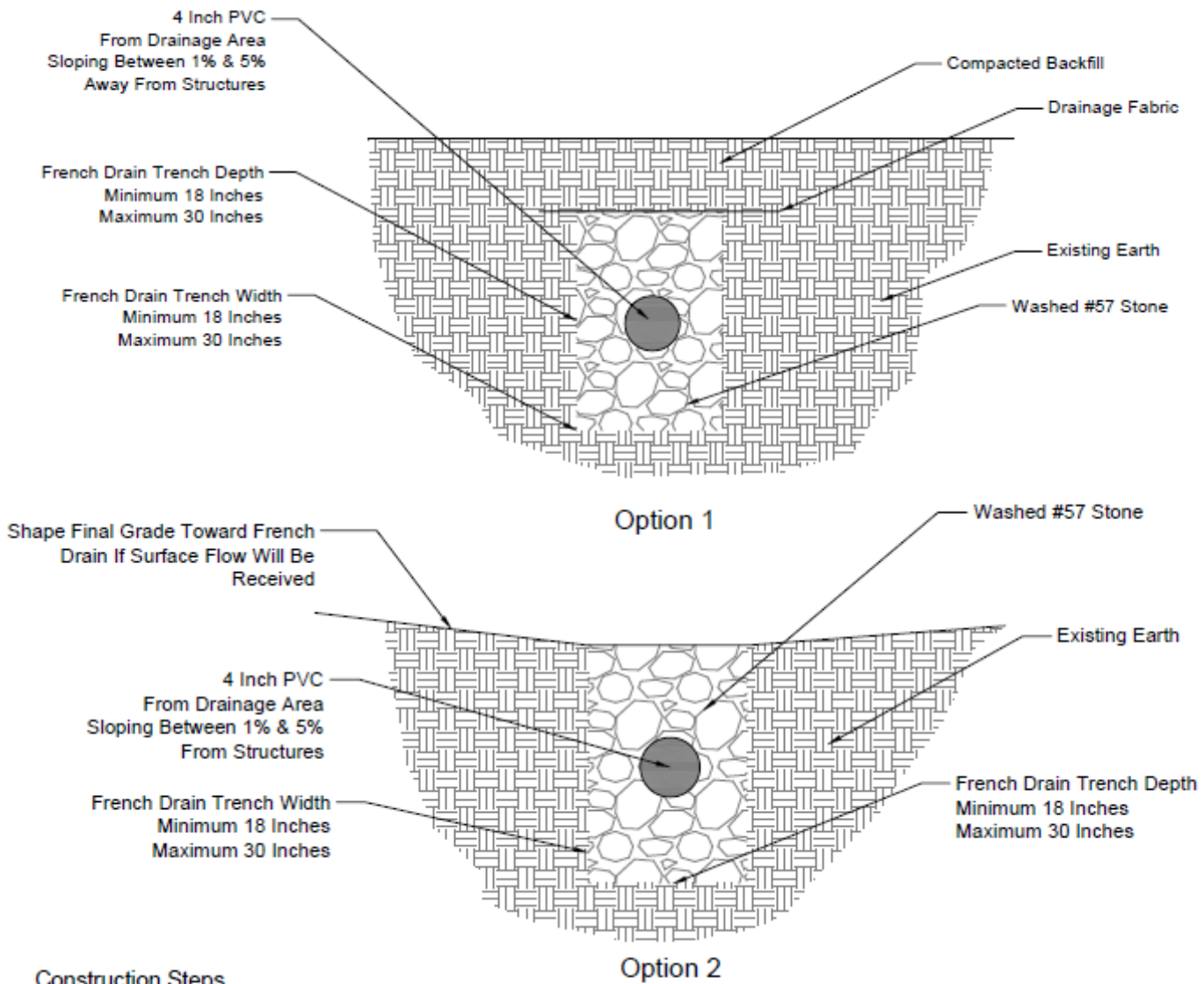
- Two options are available for this design; Option 1 and Option 2. Option 1 does not receive surface flow. Option 2 can receive surface flow.
- The minimum depth of a French drain is 18 inches. The maximum depth is 30 inches.
- To calculate the width and length, see the table below.
- See the next page for details.

| Area of Impervious Surface in Square Feet Which Can be Treated Per 10 Linear Feet of French Drain | | | |
|---------------------------------------------------------------------------------------------------|-----------------------|-----|-----|
| Trench Depth (inches) | Trench Width (inches) | | |
| | 18 | 24 | 30 |
| 18 | 100 | 150 | 250 |
| 24 | 150 | 200 | 300 |
| 30 | 250 | 300 | 350 |

Maintain

- Inspect gutters and downspouts for accumulated leaves.
- Inspect the trench following rain events. Removed accumulated leaves and debris.
- Monitor for and repair areas of erosion.

FOR SINGLE-FAMILY RESIDENTIAL USE ONLY WITH LESS THAN 5,000 SQUARE FEET OF NEW OR REPLACED IMPERVIOUS AREA



Construction Steps

1. Review potential areas for the French drain. French drains must slope between 1% and 5% away from structures. The pipe must exit at a point that is lower than the inflow point.
2. Avoid areas within 10 feet of a building foundation, near slopes, near septic lines or other utilities, or public right of way.
3. Note the pipe daylight point as designed. Confirm that this location will not channel flow onto a neighboring property, and that the location is at least 10 feet from the property line. Armoring the outfall surface with rock may be necessary to avoid erosion.
4. Call 811 for a utility locate before you dig.
5. Excavate the trench to the dimensions indicated by the table.
6. Confirm that the pipe slopes away from structures at a slope of 1% to 5%.
7. Roughen the bottom of the trench and avoid compacting the bottom of the trench. Install 6 inches to 12 inches of #57 gravel in to bottom of the trench. Compact the gravel. Install the perforated pipe on the compacted gravel. Install downspout connections.
8. Test the system with water to confirm gravity flow and stoutness of connections.
9. If the system is intended to received surface drainage, backfill the excavation with #57 gravel to the ground surface. If the French is not designed to receive surface drainage, backfill the excavation to within 6 inches of the ground surface and install drainage fabric over the top of the gravel.
10. Install topsoil and sod.

Name/Address:

CITY OF ROSWELL
COMMUNITY DEVELOPMENT
DEPARTMENT

FRENCH DRAIN DIAGRAM &
CONSTRUCTION STEPS