

Municipal Drainage Contractor FAQ

1. As a drainage contractor, you can expect to work on many different types of projects. The following is an outline of typical project scopes related to Drain Maintenance:

a. Cleaning an existing channel

The cleaning of a Petition Drain involves the excavation of sediment build-up, the clearing of debris and the removal of blockages within the drain.

b. Farm Culvert replacements

When the farm culverts along a Petition Drain are damaged, undersized or at the end of their life, they need to be replaced to maintain proper flow within the drain. Farm culverts typically do not require any bedding as they are used as crossings for farming equipment and vehicles on the same property.

c. Road Crossing culverts

Occasionally, road crossing culverts on a Petition Drain require replacement. Culvert replacements must meet municipal standards when crossing Municipally owned roads and Provincial standards when crossing highways.

d. Brushing – typically for access only

Many Petition Drains are lined by trees and bushes which can make maintenance difficult. In order to clean the drain, brushing is typically required in order to provide equipment access. It is important for the aquatic species and plants within the drain to maintain the amount shade that the brush provides, therefore, the removal of large trees is limited.

e. Reshaping banks

Often, the banks of a drain will erode or wash out, causing them to become unstable. Banks must be reshaped to their original (typically trapezoidal) profile as per the current Engineer's Report.

f. Erosion and Sediment Control

In order to meet environmental agency requirements, erosion and sediment control measures must be in place before drain maintenance can begin. Typical ESC measures include straw bale check dams to

trap debris and turbidity curtains to prevent sediment from travelling downstream.

g. Rip rap

In areas of high flow or unstable soils, rip rap is commonly installed to increase bank stability.

h. Culvert flushing

Culvert flushing consists of removing the built-up sediment and debris within an existing culvert. When a culvert does not need to be replaced, flushing should be considered.

i. Beaver dam removal

Beaver dams are a common occurrence in Petition Drains which create blockages that can cause property damage. The beaver dam removal process must be slow and methodical to avoid flooding.

2. As a drainage contractor, you will need a variety of equipment, crew, and tools to complete drainage projects. The following is a list of equipment frequently used in the drainage industry. All drainage contractors are required to have the minimum equipment (in red) available to complete drainage works.

a. Mini Excavator

A mini excavator can provide a more detailed cleaning and reshaping of the drain. Its small footprint is also helpful in areas with tight access.

b. 15-20 Ton Excavator

A mid sized excavator is the most common equipment needed to complete drain maintenance. It is necessary for cleaning an existing channel, stock piling spoil materials, replacing culvert and installing rip rap.

c. 30 Ton Excavator

A large excavator can be useful for long drains requiring excavation. However, its practicality depends on the project because it is not as precise and maneuverable as the smaller excavators.

d. Float equipment

Float Equipment can be helpful to transport heavy equipment to the jobsite.

e. Brushing equipment

Brushing equipment is necessary for the removal of trees and bushes obstructing the drain as well as creating access points for heavy equipment. Types of brushing equipment include:

- i. Chainsaw and crew
 - ii. Root Rake head
 - iii. Brusher head, or
 - iv. Drum brusher
- f. Basic grade verification is an asset (*Project Dependant)

Grade verification is considered an asset in drain restoration projects which require the contractor to match the grades specified in the original Engineer's Report. It is also helpful to have grade verification equipment on hand to ensure a proper slope for drainage. Types of grade verification equipment include:

 - i. Basic Level
 - ii. GPS units
 - iii. Equipment GPS
 - iv. Total Station
- g. Haul trucks (*Project Dependant)

Some projects require spoil material to be hauled off site instead of stockpiled next to drain, mainly when excavating next to a roadway. Some projects also need import material brought to the site such as rip rap, fill and gravel which require larger haul trucks.

 - i. Single Axle Truck
 - ii. Tandem Truck
 - iii. Tri-Axle Truck
- h. Remote fuel truck / operator transportation

Most drains are not easily accessible by road and can be quite far from town. It is important to have the right equipment available to transport fuel for heavy machinery and equipment. Some drains can span many kilometers in length and will require a method of transportation for operators and crew. Recommended vehicles for fuel and crew transportation include:

 - i. ATV
 - ii. UTV (side by side)
 - iii. Tractor & dump wagon
 - iv. Fuel Truck (pick-up)
- i. Bulldozer (*Project Dependant)
 - i. On occasion, landowners prefer to have the excavated spoil material spread across their land instead of being stockpiled next to the drain. A bulldozer can be an asset on projects requiring large quantities of spreading.

3. Drainage projects will be advertised in the following manner:

- a. The Municipality of South Dundas will advertise all available drainage projects in the Tenders section on their website (<https://southdundas.com/>).
- b. If you are interested in registering for drainage work with the Municipality of South Dundas please contact the municipality email: mail@southdundas.com to have your contact information placed on file. When work related to drainage is tendered, a notification will be sent to your company's attention.

4. The following is a list of steps involved in the tendering process:**a. Advertisement**

The tender is advertised for 2 to 3 weeks.

b. Tender documents

- i. Tender documents must be filled out with all the appropriate information.
- ii. Every contractor filling out a tender application should register their email and phone number with the Municipality. Registration ensures that the Municipality can track the number of applicants and send out additional information if necessary.
- iii. The Municipality of South Dundas requires bonding 10% of the project bid total prior to taxes.
- iv. The tender includes a schedule of items with estimated quantities that the contractor must populate with unit prices.
- v. The contractor is required to have the following coverage:
 1. \$5,000,000 in Commercial General Liability
 2. \$1,000,000 in Environmental Impairment Liability
 3. \$2,000,000 in Automobile Liability Insurance
- vi. The contractor must have a valid WSIB certificate, AODA declaration, and 3 references.

c. Addendums

Some projects might require addendums. Addendum are changes or clarifications made to the original tender document after it has been posted. Addendums are made available on the Municipality of South Dundas website and they are also circulated to bidders who have registered with the Municipality.

d. Submission

Bidders must populate the tender documents and submit them to the Municipality in a sealed envelope before the deadline. The closing date and time for a submission is usually identified on the tender and in the advertisement. Contractors must ensure that they have followed all requirements outlined in the tender for submission to be considered valid.

e. Opening

The opening date of the bids is usually identified on the tender. Municipal staff will open and examine each valid bid. They will discuss prices and contractor experience with their Consultants. The Consultants will provide their recommendation to Council.

f. Award

A Council Meeting will be held on the day of the Award identified on the tender. At the meeting, Council will award the contract to the successful bidder based on recommendations from municipal staff and their Consultants. The successful bidder is then notified.

g. Contract

Once the contract is awarded, the contractor must submit all necessary documents and proof of insurance. If all documents provided satisfy the conditions imposed by the Municipality, the contractor and municipal staff will both sign the contract.

h. Preconstruction

Before construction begins, the contractor will meet with municipal staff to discuss the project in greater detail. Meetings can occur at the Township Office or on the jobsite.

5. Important points to consider for drain construction:

a. Erosion and Sediment Control

Before construction can begin, all erosion and sediment control measures must first be installed.

b. Permits

The drainage superintendent is responsible for obtaining all the necessary permits. Copies of all permits must be kept on site at all times. The contractor is responsible for following all directives issued on the permits.

c. Inspections

The drainage superintendent will periodically inspect workmanship during construction.

d. Change orders / Extras

Change orders and extras are administered as necessary. All change orders and extras must be communicated clearly and approved by all parties before executing.

e. Grades

Throughout the project, the contractor should use proper equipment to verify the grading of the drain where possible. The drainage superintendent can also verify grades if necessary.