

SECTION 5.2 – NEW GRINDER PUMP CONNECTION

For Genoa and Oceola Township Municipal Systems that are Operated by the MHOG Utility Department

This procedure has been developed to assist property owners with the various steps associated with completing a new service connection to the municipal sanitary sewer system via a grinder pump. Grinder pumps typically service single family residences where the municipal sewer is a low pressure force main. Sometimes grinder pumps are connected to gravity main when the parcel in question cannot be served by gravity.

To connect a building to the sanitary sewer collection system, a lead must be present. A lead is defined as the connection between the low pressure force main and the shut off valve on the property to be served with sanitary sewer.

Installing a grinder pump on your property will fall under one of the following 3 scenarios:

- 1) Connect to An Existing Curb Stop**
-A lead was installed previously by a Developer or the Township
- 2) MHOG Installs Curb Stop**
- No lead has been installed, and MHOG installs the new lead
- 3) Connect to Gravity Sanitary System**
- Unique situation, property owner must document gravity service not feasible

1. Determine Availability of Municipal Sanitary Sewer with Township

The property owner shall contact the Township in which the potential connection is requested in to determine availability of municipal sanitary sewer for a new service connection. The Township is responsible for maintaining records on existing leads installed as part of previous projects. The lead sheet for the property will outline the location and size of the existing shut off valve (curb stop) for low pressure force mains. For gravity sanitary sewers the lead sheet will show the location and elevation of the existing lead.

Note: The MHOG Utility Department can assist in this planning step by providing any plans for the sanitary sewer, but the lead sheet is typically stored at the Township.

Ultimately, the Township needs to approve all new sanitary sewer service connections before the property owner works with the MHOG Utility Department. The Township should notify the MHOG billing department of the proposed connection. The property owner should provide the Township with a signed easement for recording that allows the Township access to the components of the grinder pump for maintenance. A sample easement document is included in **Attachment B**.

If a lead exists, proceed to Step #2: Field Connection – Existing Curb Stop

If no lead exists, MHOG will install a new lead to the property, proceed to Step #3: Field Connection – MHOG Installs Curb Stop.

If a grinder pump is proposed due to inability to serve the site with gravity sanitary sewer proceed to Step #4: Field Connection – Connect to Gravity Sewer.

2. Field Connection – Existing Curb Stop

A MISS DIG should be called in prior to field work, and MHOG will mark the location of sanitary sewer system components for which as built records are available. The property owner is responsible for installation of the force main from the grinder pump to the shut off valve. The MHOG Utility department will inspect this force main. MHOG is not responsible for any site restoration.

The property owner is responsible for installation of multiple components associated with the grinder pump. Proceed to Step #5: Grinder Pump Installation Requirements

3. Field Connection – MHOG Installs Curb Stop

If it is has been determined that no lead has been installed for the site, MHOG will retain a contractor to install the lead. As MHOG utilizes sub-contractors, the timing of the lead installation will vary. The contractor cost for lead installation is typically paid by the property owner or through the tap in fees paid to the Township. The property owner should submit to MHOG staff a sketch showing the requested location of the new service lead.

MHOG will use the sketch provided by the property owner to locate the new curb stop as near this location as possible. However, MHOG may modify this location based on site conditions including utility conflicts. MHOG will prepare a lead sheet for use by the property owner for connecting to the newly installed service.

A MISS DIG should be called in prior to field work, and MHOG will mark the location of sanitary sewer system components for which as built records are available. MHOG is not responsible for any site restoration.

The property owner is responsible for installation of multiple components associated with the grinder pump. Proceed to Step #5: Grinder Pump Installation Requirements.

4. *Field Connection – Connect to Gravity Sewer*

A grinder pump may be installed to serve a site that is lower in elevation than the municipal gravity sewer system or when tying into a private gravity lead, but this is a unique condition, and the property owner and Township shall work closely with MHOG to identify the proper connection techniques. When tying into a gravity lead, MHOG may require the grinder to be privately owned. MHOG may approve public ownership if it is unfeasible to serve the site by gravity due to:

- A significant risk of back flow is present
- The site elevation prevents main floor gravity discharge without adding fill to the site that would prohibit the natural drainage patterns on the site
- Other site conditions make the operation of a grinder system the most feasible solution

For sites that meet the above conditions that will have multiple buildings will be required to service the site with a single grinder pump with gravity flow to the grinder pump rather than multiple individual pumps.

The property owner must document gravity service is not feasible before a grinder pump connection to a gravity system is allowed. It is up to the property owner to notify MHOG and/or the Township the elevation and location of the proposed sanitary lead. The property owner should submit to MHOG staff a sketch showing the requested location of the new service lead. The sketch should show the upstream and downstream manholes and elevations.

MHOG will inspect the new force main lead and connection to the gravity system. MHOG will require that the manhole the force main discharges to be coated per MHOG Design Standards.

A MISS DIG request should be called in prior to field work, and MHOG will mark the location of sanitary sewer system components for which as built records are available. MHOG is not responsible for any site restoration.

Tap in fees paid to the Township typically cover the cost of a grinder pump for the property. The property owner is responsible for installation of multiple components associated with the grinder pump. Proceed to Step #5: Grinder Pump Installation Requirements

5. *Grinder Pump Installation Requirements*

The current cost of the grinder pump package and parts is included in Appendix C. The property owner should work with the Township to determine what portion of the grinder pump package is included with tap in fees. The property owner is responsible for installation of the following components associated with the grinder pump:

- Installation of the force main from the grinder pump to the shut off valve
 - The MHOG Utility Department will inspect this force main after installation
- Installation of the grinder pump chamber (basin to be provided by MHOG). The location of the grinder pump must be approved by MHOG prior to installation. The grinder pump must be serviceable (accessible by truck) and free from obstruction
- Installation of the gravity lead from the house to the grinder pump. This portion is under the jurisdiction of the Livingston County Building Department, and the permissible materials for the pipe and fittings should be approved by them.
- MHOG will provide the control panel as part of the grinder pump, but the property owner is responsible for installation of the control panel and all electrical components of the grinder pump. Note that the grinder panel comes with 32-feet of electrical cord, but up to 100-feet of electrical cord can be purchased for an additional cost. Therefore, the pump must not exceed 100-feet of electrical cable between the control panel and the pump.
- Refer to the Engineering Standard Detail for specifications on the electrical and piping components of the grinder pump.
- See Appendix D – Grinder Pump Installation Guide
- MHOG will deliver and start up the grinder pump once the basin and electrical have been installed by the property owner.
- Grinder pump must be serviceable (assessable by a boom truck) and free from obstruction.

6. *Permits*

All other applicable permits are the responsibility of the property owner, including, but not limited to land use permits, road right-of-way permits, building department permits, and health department permits.

7. *Fees*

The potential fees that may be required for this procedure are listed below:

Description of Fee	Further Info on Amount Can be Found
Township Fees (including tap fees)	The Township in which the site resides
Single Live Tap, Sewer or Water	Section 4 of this Manual
Grinder Pump Fee Table	Appendix C
Plumbing Department Inspection Fees	Contact Livingston County Building Dept.
Contractor Fees (Excavation, Plumbing, Grinder Pump Installation)	To be hired by Property Owner
Septic Tank Abandonment	Livingston County Environmental Health Department (Contractor Hired by Property Owner)
Road Right of Way	Livingston County Road Commission or MDOT