

# **WATER AND SEWER DEPARTMENT**

## **Section 1**

### **USE OF SERVICE**

#### Permits

All work of any kind or nature performed on any piping, fixtures, or other appurtenances in any way connected with or served by the water or sanitary sewer systems of the BPU shall be performed in accordance with applicable codes and these rules and regulations. The owner, or their properly Licensed Master Plumber, is responsible for securing all permits and applications, submitting all reports and the payment of all fees in conjunction with the given work.

All such work is subject to inspection and approval by the State Plumbing Inspector and/or City Building Inspector and by the Inspector of the Hillsdale Board of Public Utilities.

No work or plumbing shall be started until all required permits have been obtained. Whenever work is to be performed from the water meter to the street, the applicant shall submit written application to the BPU, in advance, so that appropriate inspections can be scheduled.

Regulations governing the issuance of permits for tapping and connecting of house service piping and house drains will be found elsewhere herein.

#### Number of Services to One Property

No more than one water or house sewer service connection may be extended to serve a single property except by special permission to do so, and then only when such services are maintained entirely free of any and all interconnections that may, at any time, by-pass any water main valve or otherwise result in disturbance to the normal operation of the water and/or sewer systems. The water service line must be run to each property or building independently from its own shut-off at the street to allow for control by the BPU.

Residences may have a second water service to supply a metered sprinkling service.

### Connection of Flowing and Automatic Devices

Commercial and industrial customer connections for supplying water to fountains, irrigation systems, and area sprinkling systems, or to any type of continuous flowing, or automatically controlled device, shall be made only on premises where the entire supply of water is furnished through water meters.

### Abandonment of Water Service

Any water service permanently disconnected from a property will require disconnection from the water main. The property owner will be responsible for an abandoned line fee set forth in "Schedule A – Fees and Charges." The property owner will also be responsible for any road repairs, including concrete resulting from the disconnection.

# WATER DEPARTMENT

## Section 1

### CONSTRUCTION PROVISIONS

#### General

These construction provisions apply equally to new installations and to repair and replacement work and are deemed to be cooperative with and accessory to that ordinances or codes currently in effect and as the same may from time to time be amended. Prior to the construction or repair of any pipe from the water meter to the street being started, the contractor/plumber must complete an application with the BPU. There is no fee associated with this application, and the inspection will be performed free of charge during normal working hours. If an inspection is needed after normal working hours, the minimum charge set forth in Appendix II, "Schedule A -Fees and Charges," will be applicable.

#### Joint Construction

All jointly laid piping shall be so installed that it is in accordance with the plumbing code. Where separate trenches are required, a horizontal separation shall be maintained which is in accord with the plumbing code.

#### Excavation and Backfill

No excavation shall be started until all applications, permits, including street opening permits, have been obtained and the general layout of the work has been carefully planned and agreed upon.

All unusable paving material, large rocks, masonry, roots and other debris, removed during excavation, shall be segregated from the clean earth, usable sod and paving materials, and removed from the site. No such materials shall be used in the backfill.

The trench shall be carefully brought to grade with a minimum of excess excavation and a suitable bed for the pipe or pipes prepared from clean sand and gravel from which all large stones and debris has been removed.

After the pipe has been laid and inspected by BPU personnel, it shall be covered with carefully selected material solidly compacted for a distance of not less than one foot above its top, extreme care being exercised to prevent its disturbance and/or injury.

The balance of the trench may then be filled and compacted for its entire depth by wetting, by tamping, or by combined wetting and tamping, suitable allowance being made for final settlement. The sod shall then be replaced and or top soil and grass seed used to restore the grassed areas as near as possible to their original condition. Paved areas shall be treated with a temporary surfacing or otherwise, as directed by the City Department of Public Services pending final repaving by that department. The BPU may deny any utility service for failure to adhere to the above requirements.

#### Protection to Work and Others

Ample protection shall be provided for all persons having access to the working area. Protection during construction and protection against possible damage due to settlement or disturbance after construction shall be provided. Protection shall be provided for all adjacent piping, trees, shrubs, walks, curbs, buildings, and other structures.

#### Construction of Pits and Manholes Under Special Circumstances

Due to State and Federal regulations regarding confined spaces, the construction of pits and manholes is not allowed, unless the Director gives special written permission, for the installation of water and sewer meters, backflow devices, bypasses, etc.

Pits and manholes installed for use in connection with water and house sewer service lines shall be substantially constructed of masonry, with sidewalls not less than 6 inches in thickness, with suitable conical or reinforced concrete top slabs of ample strength to suit the greatest load to which they may be subjected, and with round cast iron manhole rings and covers of equivalent strength.

Manhole rings and covers shall have clear access openings of not less than 19 inches.

When required to do so, and in addition to the access opening above described, a similarly constructed round cast iron lamp hole ring and cover, with a clear opening of not less than 8 inches, shall be provided and placed as directed. Such openings to be installed for the purpose of meter reading, hand valve operation, etc.

Pits or manholes may be round, oval, square, or rectangular, with a minimum clear inside dimension of 4 feet or more.

All equipment installed within each pit or manhole shall comply with BPU requirements.

## Section 2

### WATER SUPPLY TAPS AND SERVICES

#### Applications

Applications for installing, replacement, or repair of water taps and services shall be purchased by the property owner, or by a licensed master plumber representing the property owner at the BPU Main Office.

The size and location of water taps and service pipes, the size and location of water meters that are to be used in connection therewith, and the time that such installations are to be made will all be determined by the BPU in conference with the property owner and/or their plumber.

No such installation shall be made during freezing weather or when there is frost in the ground except upon prepayment of a sum estimated as being necessary to defray the extra expense, which may be incurred on account of such freezing weather or frost. Extra expense may be incurred for difficult excavation, dewatering, boring. All additional expenses will be discussed with the Customer.

Water services for corner lots shall be tapped to the nearest water main. By special request, and upon prepayment to the BPU of an amount estimated to represent the extra expense involved on account of the increased distance, permission may be granted for tapping to the farther water main.

#### Fees for Water Taps and Services

All fees for the installation of new water taps and services will be paid in full prior to the scheduling of the job as per Appendix II, "Schedule A – Fees and Charges."

#### Enlarging or Relocating Water Taps and Services

The fee for replacing a smaller water tap and service pipe with a larger one, or for the purpose of relocating the water service, shall be the same as the fee for a new tap and service, plus the cost of removing the tap and service being replaced. No credit will be allowed for any materials, which may be recovered from the replaced service. This fee shall be borne by the Customer.

### New Residential Water Services

All newly constructed single or two-family residences shall be required to be metered. The BPU will furnish a meter or setting device to be installed by the owner and/or the contractor to BPU specifications. Water will not be turned on until the meter and reading device is properly set and inspected by the BPU.

### Meter Setting Device Installation

The BPU will provide a meter setting device for any BPU customer requesting it. A shut off valve will also be installed on the Customer's side and street side of the device. The BPU reserves the right to refuse any installation because of inadequate piping to support the device.

### Construction of Water Services and Metering

For the fee or fees stated in Appendix II, "Schedule A – Fees and Charges," the BPU will install a suitable main connection, a service pipe, and a curb stop or gate valve with an access box located at a point which would normally be placed between the sidewalk and curb or shoulder. From this point the plumber shall install the house service pipe. Water service connections must be made only to water mains maintained by the BPU. Water connections for domestic use are prohibited from private fire protection systems. This requirement is necessary to provide the highest quality water for domestic use.

The Customer's service pipe shall be equal in size or not exceed one size larger than the pipe from the main, and shall be carefully installed in accordance with the best water works practice, with not less than 5 feet of earth cover for its entire buried length. If warranted, the Customer's service pipe can be smaller than the service from the main upon prior approval of the BPU.

Water service pipes shall be terminated with an approved valve in approved frost proof basements, cellars, pits or manholes, into which they are to be carried continuously at a depth of not less than 5 feet.

In houses and other buildings that are constructed without basements or cellars, and where adequate provision can be made for protection against freezing even should the building be unheated for extended periods of time, the following alternate method of terminated house water service pipes is permissible:

The house service pipe shall be run in under the floor slab of the building, at a depth of not less than 5 feet. It shall then be brought up through the floor slab, with a long bend, and terminated with an approved valve located not less than 6" or more than 10" above the floor. All required frost protective measures shall be

installed at the time the service pipe is placed and before the work is finally approved for use.

Each new or rebuilt water service shall be provided with metering connections adjacent to the valve. Provisions shall be made for a meter placement for each unit of building occupancy and each such meter placement shall be provided with its own valve in addition to the main valve.

Meter bars or horns will be furnished by the BPU for installation with all new and rebuilt water services. Meter or meter bar installations must have one valve before and one valve after the meter or meter bar. Such services will not be turned on until the meter bar is installed properly.

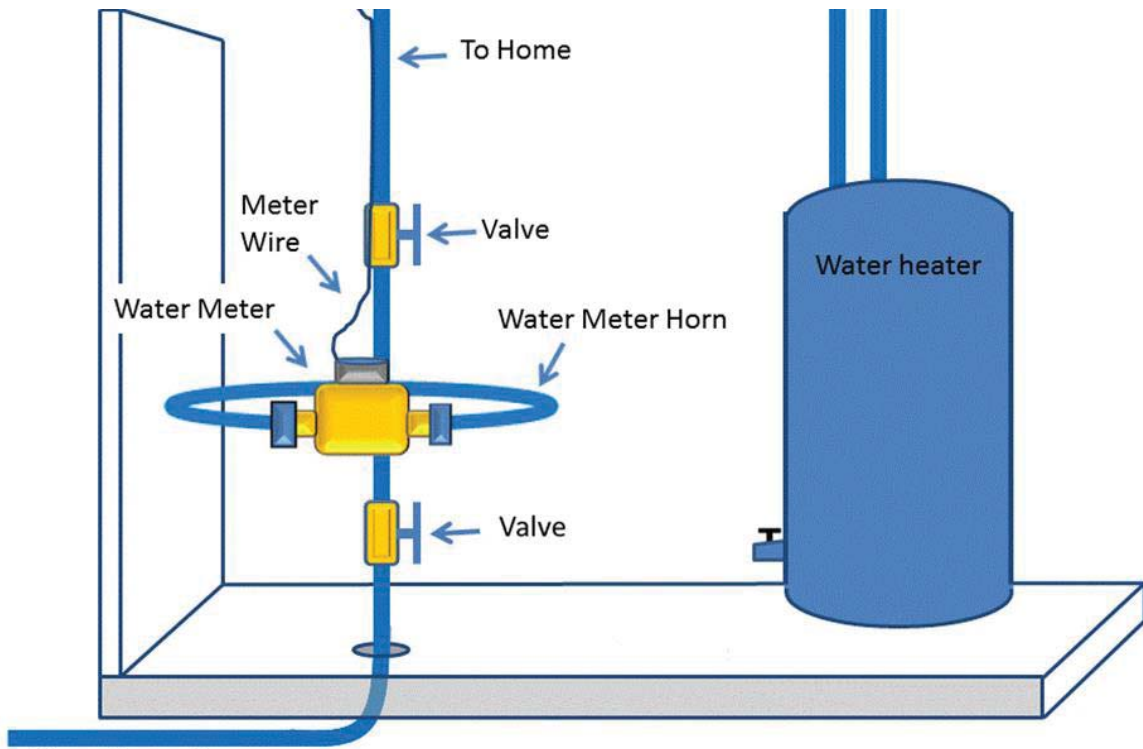
All entrance and meter piping shall be carefully installed in a neat, workmanlike manner and shall be adequately supported so that no undue strains may be placed upon the pipes, valves and/or meters.

Minimum clearances must be maintained between the back wall and wall side edge of the meter being installed. There must also be a minimum clearance of 6" from the bottom of each meter to the floor and a maximum height of 48" from the floor.

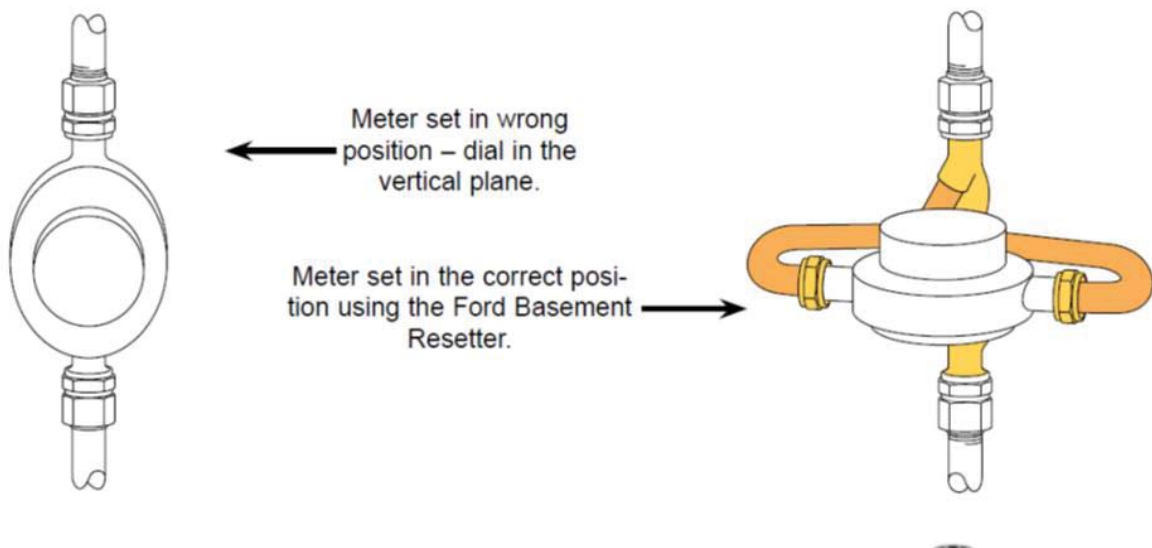
The following clearances must be maintained for proper installation of water meters and meter bars:

Meter Size	Wall Clearance	Floor Clearance	Floor Clearance
	Minimum	Minimum	Maximum
5/8 x 3/4	4"	6"	48"
3/4"	5"	6"	48"
1"	6"	6"	48"
1.5"	7"	6"	48"
2"	8"	6"	48"
4"	10"	6"	24"
6"	12"	6"	24"
8"	14"	6"	24"

When a meter by-pass is installed, the following drawing must be followed. There must also be a 16" clearance maintained over the meter, if a by-pass is installed above the meter. No by-pass can be installed on the front side of the meter. The area below or behind the meter is the preferred location for a by-pass.



*Shown above is a typical residential water meter installation. This illustration shows the proper way to install the meter horn or meter setter, as it is also called, in a typical basement or crawl space environment.*



*This illustration shows the improper vertical installation and the proper horizontal installation of the meter horn.*



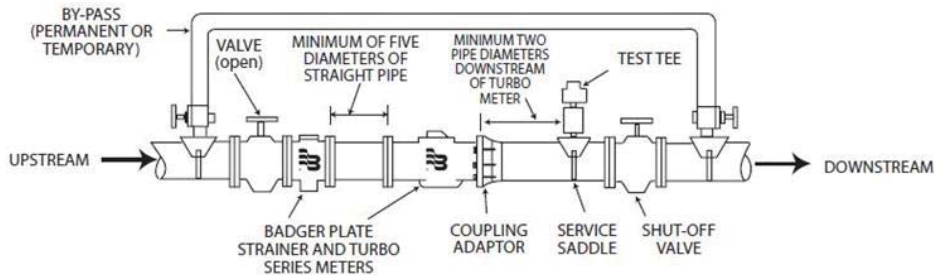


Figure 1: Recommended meter installation

Shown above is the installation for a turbo meter used in large industrial applications with a constant high flow water demand.

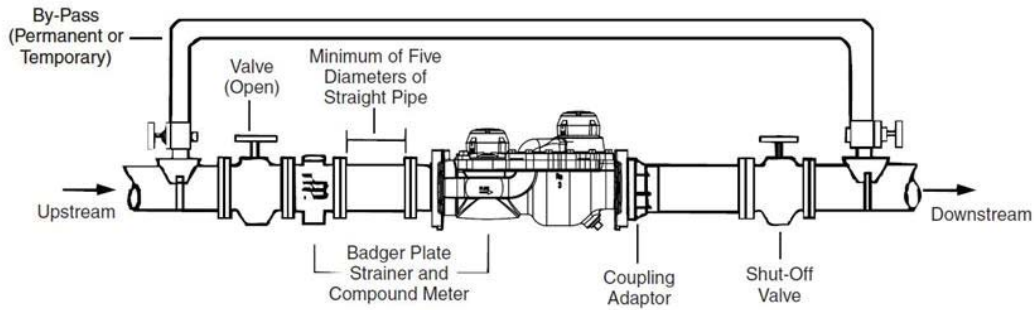


Figure 1: Recommended meter installation

Shown above is the installation for a compound meter used in commercial, industrial, and large environments like apartment complexes, medical facilities, dormitories, and schools.

No water meters shall be installed in basements, cellars, or pits that are not equipped with approved access ladders or stairs, nor in any manner that the meter reader will be required to lift excessively heavy manhole covers or other equipment or to climb into and out of difficult places. Also, the area in front of the meters must be kept clear at all times in order to gain access to them.

Where a water service pipe enters through a basement, cellar, pit or manhole wall, or through a masonry floor, it shall be provided with an approved sleeve, properly joined and pointed with the masonry and thoroughly caulked with a suitable caulking mixture to form a good workmanlike protection for the pipe. Where the pipe enters through the floor the sleeve shall extend above the finished surface of the floor for a distance of not less than 4 inches.

The point of entrance of the water service pipe into the basement, cellar, pit or manhole shall be carefully selected as to suitability and shall at all times be kept free and clear of

objectionable storage such as coal, wood, oils, waste materials, and similar items detrimental to the water service equipment and/or limiting access thereto.

### Water Materials

Materials for the construction of new and the replacement of old water supply services and private water systems are limited to the following, with full preference being given to a material selection harmonious with the BPU's material selection for such construction from the main to the curb stop or gate:

- A. Cold drawn, soft annealed seamless copper service pipe, in 3/4", 1", 1 1/2" and 2" sizes only, of proper bending temper, u.s. Government Type K, specification WW-T -799, with approved flanged, flared or soldered type bronze connections (minimum Schedule 80 PVC is also acceptable). Each run of pipe shall be, so far as practicable, in one continuous length free from joints and splices.
- B. For 2" size and larger -copper service pipe of the type specified in (A) above, or American Water Works Association specification bell and spigot, mechanical, or push-on type joint ductile iron water main, designed for not less than 150 pounds water working pressure.

### Driving Pipes

In the installation of water services no pipe shall be driven or pulled for a distance of more than 50 feet. Any pipe so installed shall be in one continuous length with all coupling and connections left exposed for inspection and such tests that the BPU may order to guarantee a satisfactory job. When a tunnel or pipe of a larger size must first be installed, then the water carrying pipe may be pulled inside of such tunnel or larger pipe and subjected to inspection and test as guarantee of a satisfactory job.

### Taps and Services Under Paving

Before any paving is laid or re-laid in the City of Hillsdale, the BPU may, at its option, extend a suitable water service pipe to the property line in front of each abutting property not then so provided. The owner of the property will be charged with the tap fee that is applicable to such an installation.

The BPU shall in no way be held liable for failure to extend any water supply service in this manner proceeding paving or repaving.

## Section 3

### WATER REGULATIONS

#### Water Leakage

No water customer shall permit their water supply pipes, connections, or fixtures to be out of repair so that water leakage can occur. Failure to repair within 5 working days may result in discontinuance of service. The BPU may charge a customer an estimated amount for water wasted because of the leak.

No water supply pipes, connections, or fixtures shall be installed unprotected from frost, in unheated rooms or apartments, on outside uninsulated walls, or in any other manner so that water must be left running to prevent freezing.

#### Pollution of Water Supply-Cross Connections

See City Ordinance Number: 13.12.160, 1984-2, and approved Cross Connection Program.

#### Curb Boxes

No unauthorized person shall open or attempt to open any curb or gate box. No unauthorized person shall cover or conceal any curb or gate box. At any time it is desired to change the surface grade near any curb or gate box the BPU shall be given proper notice so that the box grade may be changed to correspond.

#### Operation of Fire Hydrants

Private Hydrants The operation by the owner of privately owned fire hydrants for other than fire fighting purposes is prohibited except when any one of the following requirements are met:

1. Written permission is obtained from management of the BPU.
2. Verbal permission is obtained by the management of the BPU less than 12 hours prior to actual hydrant operation.
3. Arrangements are made to have a BPU representative present during operations.

In all cases a properly sized hydrant wrench must be used.

BPU Hydrants BPU fire hydrants shall be operated by authorized personnel of the fire department or BPU and such others as may be authorized by the management of the BPU from time to time.

When water is required for construction purposes, etc., and other means of obtaining water is not readily available, application may be made to the BPU for use of water from an existing fire hydrant. It will be the responsibility of BPU personnel to install a meter complete with sill cock and RPZ backflow preventer for the attachment of a garden hose on the fire hydrant and turn the hydrant on.

As soon as the use for which the meter was set is completed, BPU personnel will close the hydrant, check for proper "drain back" and remove the meter.

It will be the responsibility of the person requesting the use of temporary water to pay for the installing, removing, the turning on and off of the hydrant, the water used and any damage which may result from such use as follows:

1. Installation, removal, operation of fire hydrant – billed time/material.
2. Water usage will be charged at the standard rates as published.

If more than one location is required, the same meter will be relocated and the above rate will apply to such location and installation.

#### Use of Shut Off Keys

No unauthorized persons are permitted to use operating wrenches, curb stop keys, or gate keys on any curb stop, gate valve or fire hydrant.

#### Cleaning of Service Pipes

When water customers experience low pressure or stoppage of flow, the BPU shall take steps to restore proper service. The BPU shall not be liable for any damage resulting from such cleaning of the water service.

#### Excess Pressure

No person shall use any pump, ram or other device on any piping system connected with the BPU water piping system, which is capable of producing a pressure in excess of the normal water pressure unless a representative of the BPU is present and is in direct charge of the work.

### Grounding of Electrical Circuits

Where electrical light and power circuits, communication circuits, and radio systems are grounded to the water service pipes, such connections shall be made mechanically and electrically secure and in accordance with the grounding provisions of the National Electrical Code.

All such ground connections shall be made to the service pipe where it enters the building and on the street side of the first valve or fitting.

Any person who removes such ground connection for work in or about the plumbing or electrical system of the building shall do so only after taking proper safeguards against the hazards involved and shall, upon completion of their work, reestablish such connections in accordance with the provisions outlined above.

### Use Limitations

In the event of an emergency, the BPU reserves the right to place any restriction that it deems necessary on the use of city water so that the health, safety and other interests of the water users and of the water supply system may be safeguarded.

## Section 4

### WATER MAIN EXTENSION POLICY

Subject to the BPU's specific approval for each such extension, water mains may be extended for the purpose of supplying fire protection and normal water service provided that:

- A. The water production, treatment and/or pumping facilities are ample and adequate to supply the additional quantity and quality of water, at pressures and rates of flow, that are anticipated as being required to properly supply the new area.
- B. The transmission, feeder and distribution mains which will be called upon to carry water to the new area are sufficient in size and capacity to do so without in any way deteriorating the water service to those presently collected and served by such mains.
- C. Such water main extensions will be made only in public streets and/or right of ways provided for public utilities.

The BPU may contract with sub-dividers to extend water mains in privately owned streets where such streets are for common use and; or may be destined at some future date to become public streets.

It is the purpose of this section to prohibit the installation of water mains on privately owned properties with any part of the cost of such water mains being paid for by the BPU. Extensions to supply fire protection service in factory yards, and to supply water service to properties built in off-street areas with private or semi-private entrance drives are included in this category.

- D. This policy does not apply to water main extensions to be made outside of the corporate limits of the City of Hillsdale.
- E. Except that the BPU may especially contract otherwise, all water mains installed under this policy, even though cost of such installation may be borne in part or in total by others than the BPU, shall be the property of the BPU and shall be responsible for their operation, repair and maintenance throughout their life.

# **SEWER DEPARTMENT**

## **Section 1**

### **SEWER REGULATIONS**

#### Separation of Sewers

No roof water, surface drainage or storm water drainage from any point shall be admitted to or connected with any sanitary sewer. No sanitary sewer waste shall be admitted to, or connected with any storm water sewer. The two systems must be kept entirely separate.

#### Prohibited Connection

No sewer connection shall be made to any septic tank, privy vault, outhouse, cesspool, or to any source of prohibited waste, or directly with any part of the city water supply system.

#### Openings Below Ground Level

No sewer openings or connections shall be installed below the overflow or relief point of any street sewer.

By special permission, closets, urinals, floor drains, laundry tubs, sinks and such other sewer connections as the BPU may deem permissible may be installed below the overflow or relief point of any street sewer when each such connection is equipped with an approved sewage sump which is equipped with proper venting and automatic sewage removal facilities.

#### Stoppage of House Sewers

Removal of stoppages and repairs to house sewers is the responsibility of the property owners. In the event that trouble is found in the wye connection at the street sewer, or in vertical risers extending there from, the property owner shall establish that fact to the satisfaction of the BPU who shall then cause proper repairs to be made at the expense of the BPU.

The BPU shall not be held liable for any expense incurred by the property owner in repairing or removing stoppages in house sewers or for any expense incurred

by him in satisfying the BPU that such damage or stoppage lies within that portion of the sewer system maintained by the BPU.

### Grease Traps

To insure protection of the municipal sewer system, commercial, industrial, and/or institutional restaurants and food service customers may be required to install a grease trap.



## Section 2

### SEWER TAPS AND BUILDING SEWERS

#### General

The sanitary sewers in the City of Hillsdale are generally constructed, operated and maintained by the BPU.

#### Installing Sewer Taps

Sewer tap connection and inspection permits may be obtained by the property owner and placed in the hands of a licensed master plumber, by an owner acting under State Permit as their own plumber, or by a licensed master plumber acting as agent for a property owner, upon payment of the proper fee.

Such information that the BPU may have relative to sewer tap locations, lateral locations, sewer sizes and grades, are available to the public, however, the BPU will assume no liability for the accuracy of such information.

#### Inspection Fees

Application must be made with the BPU prior to any new construction, rebuild or re-laid work is started that involves reconnection to the BPU provided lateral, wye, or manhole. There is no fee associated with this application, and the inspection will be performed free of charge during normal working hours. If an inspection is needed after normal working hours, the minimum charge set forth in Appendix II, "Schedule A – Fees and Charges" will be applicable. In addition, there may be regular and/or special assessments levied for sewer construction purposes.

#### Connection Fees

Properties which are not located within the limits of a special sewer assessment district and which have never been assessed for or otherwise provided with a sewer connection, may by prepayment of the sum that the BPU may set, be permitted such benefit, providing that all expenses of construction of such connection be borne by the owner of that property. All of the details of such construction and connection shall be subject to the approval of the BPU.

### Stubbing Laterals

In connection with the construction of new sewers and with old sewers, prior to the paving or repaving of any street, the BPU, at their option, may extend such sewer taps or laterals that in their judgment appear necessary, from the main sewer to the curb. The entire cost of such work to be charged to the owner of the benefiting property, and the charges to be collected by special assessment in the event they remain unpaid for one year following their installation.

The BPU shall in no way be held liable for failure to extend any sewer tap or lateral as outline above.

### Inspection of Sewer Connections

In addition to assisting the property owner or their agent in planning the layout of each proposed new sewer connection, the work will also be given a field inspection.

The inspection will be made at the time the connection is made with the wye connection, riser or lateral at the street sewer.

The owner or licensed master plumber named in the tapping application shall notify the BPU of the readiness of the work for inspection and the BPU will within 24 hours, exclusive of Saturdays, Sundays and holidays, make such inspection as required. (Or in following with Appendix II, "Schedule A – Fees and Charges," the inspection may be after normal working hours for the fee specified.)

The BPU may, from time to time, make such other inspections of the work as are deemed necessary and upon disapproval of any part of the work by the inspector, all work on the sewer shall be stopped until proper correction has been made and its approval obtained.

### Point of Connection – Locating Wye

Connections shall be made to the street sewer only at a wye or lateral, which has been provided for the purpose. In the event that no such point of connection has been provided, that the connection cannot be found, or is found to be inaccessible, special permission may be issued by the BPU to tap the main sewer with a new connection, the work of making such tap to be performed to the satisfaction of the BPU's inspector.

In attempting to locate a wye or lateral connection, an excavation shall be made at the point where the records indicate that a connection may be found, such excavation to extend not less than five feet in a dimension parallel to the main sewer and to a depth

ample for the purpose. No part of the house sewer trench shall be excavated until the wye or lateral is found or it has been definitely established that it cannot be found.

### Construction of Sewers

Building sewers shall be constructed of socket type premium joint vitrified clay tile, approved cast iron soil pipe, or S-40 PVC or PVC ASTM D3034 (SDR35) approved plastic pipe. All installations shall be sized and constructed to meet the Plumbing Code and the BPU's Rules and Regulations.

The building sewer shall begin at the main sewer in the street, or at the end of the stubbed lateral provided for the purpose, and extend as near as possible in a straight line from that point to the point of connection with a clean-out opening just within the wall from which point the building sewer may be effectively rodded and cleaned for its entire length. The BPU also requires the installation of a clean-out just outside a building wall or foundation.

It is the owner's responsibility to insure the integrity of the existing lateral before connection is made.

The building sewer shall be carefully laid in a compacted bed of select material and shall be brought to grade by tamping under the pipes as they are laid, not less than three joints of pipe being left exposed continually as the work progresses for purposes of inspection and checking of grade, such exposed piping to be fully protected from injury and disturbance if the work is to be left unattended for any length of time. The interior of the pipe and the inside of the pipe joints shall be carefully cleaned as the work progresses and the opening in the pipe shall be kept continually closed with a stopper.

Cast Iron Sewers constructed of cast iron shall meet all of the requirements of the Plumbing Code.

Plastics Sewers constructed of plastic must be S-40 PVC or PVC ASTM D3034 (SDR35) and comply with commercial standard to meet all requirements of the Plumbing Code. The BPU will consider other plastic pipe specifications on an individual basis.

Concrete Work Concrete for encasement and support of sewer pipes shall meet the requirements of the Plumbing Code and BPU approval.