

**TOWN OF ENFIELD
DEPARTMENT OF PUBLIC WORKS
MUNICIPAL WATER AND SEWER CONNECTION GUIDE**

Revised 2 March 2020

**PART I
REQUESTS FOR SERVICES**

Owners of vacant lots abutting existing municipal water and/or wastewater mains may make application for a connection by sending a letter to:

Town of Enfield
Department of Public Works
P.O. Box 373
Enfield, New Hampshire 03748

The request should state the number of water units desired, and the purpose for which the utilities would serve. For example, a single family home would require one (1) water unit applicable for both water and wastewater services, and would be for residential use. A convenience store, though probably using less water than a single family home, would still require at least one water unit, and would be for commercial purposes. Apartment buildings and restaurants, due to the higher water consumption, would probably require more than one water unit. For the higher volume usage's, the applicant would need to provide the total amount of water in gallons proposed to be used in a calendar year. The Enfield Department of Public Works (EDPW) will assist the applicant in determining the number of water units required for apartment buildings and commercial establishments.

The Director of Public Works may be reached at 603-632-4605.

APPLICATION FEE

Before any action will be taken by the EDPW a non-refundable application fee of \$150 for water and \$150 for sewer will need to be paid to Enfield Waterworks. All fees and charges can be mailed to the Town at the above address or paid in person at Town Hall, 23 Main Street; Monday-Friday 8:00 am to 4:00 pm, or Tuesdays until 7:00 pm.

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PART II

PLANNING STAGE

Once a project has been approved for a connection by the Board of Selectmen, the owner should then apply for all required permits; building permit, State Energy Code, site plan review, wetlands permits, driveway permit, etc. Some situations may require action by the Community and Land Use Administrator, Planning Board or Zoning Board of Adjustment. Detailed instructions for other permits required are beyond the scope of this guide, but are mentioned here to alert the owner. Please call the Building Inspector at 632-4343 or the Land Use and Community Development Administrator at 632-4607 for further information.

Granting of a water and sewer connection by the Board of Selectmen does not guarantee that your project will receive all other permits.

The Town does not physically do the connections. The owner will have to secure the services of a utility/site-work contractor to do the work. We encourage owners to get estimates from multiple contractors. The owner should copy and deliver Part III of this guide, Construction Specifications, to the contractor/s for estimating purposes. Only your contractor can give you an accurate cost to do the connections. The Department does reserve the right to prohibit an inexperienced or otherwise incapable contractor from working on Town water and sewer utilities.

Once chosen we will sit down with your contractor and go over the specifications and help plan the job. In some rare cases, the complexity of the job may indicate the need for professional engineering services, the cost of which must be born by the applicant.

Water Permit/Sewer Permit

Before construction is allowed to commence, the owner of the property must receive approval as outlined above and remit \$2,500 for each water hookup and \$2,500 for each sewer hookup.

In 2018, the NH Route 4A section of the municipal sewer system was extended from Landing Road to Lakeview Condominiums. The debt service associated with this project is being funded with revenue collected from special assessments levied on Lakeview Condo property owners. However, prior to the commencement of the project, an understanding was reached between the Town and Lakeview Condominiums that a

portion of the project costs would be offset with revenue collected from future sewer hookups along NH Route 4A. This would come in the form of a supplemental sewer hookup fee over and above the standard hookup/connection fee. The amount of this supplemental sewer hookup fee is \$5,500.

Meter Costs and Setting Fee

The water meter and meter horn, up to 3/4 inch nominal size, must be purchased from the Department, the cost of which will be billed to the customer's new account. A typical **5/8" x 3/4"** residential meter and horn and fittings will cost approximately \$135 (Market Cost adjusted annually). A \$100 setting fee will be charged to the customer account for setting the meter and wiring the remote reading device, which must be scheduled a minimum of 48 hours in advance.

RECAP OF REQUIRED FEES AND WHEN DUE

For a typical single family home with both municipal water and sewer:

Non-refundable application fee, due with application:

Water	\$150
Sewer	\$150

Standard hookup payment due prior to hookup:

Water	\$2,500
Sewer	\$2,500

Supplemental hookup payment due prior to hookup (NH Route 4A properties ONLY):

Sewer	\$5,500
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The meter costs and setting fee will be charged to your account after the meter has been set. This will appear on your first quarterly bill, but may be paid in advance:

Meter and meter horn and meter setting fee:

\$ 135 (approximately) Meter, horn, and fittings
\$ 100 Meter setting fee

TOTAL TOWN FEES AND CHARGES: \$2,500 per connection (plus \$5,500 for applicable NH Route 4A sewer customers), \$150 per connection non-refundable

application fee, \$100 meter setting fee, plus the meter costs. Remember, the actual cost of constructing the connections is payable directly to your contractor.

Special Sewer Districts: If the proposed connection is at a location where the infrastructure was paid by entities other than the Town there may be other connection fees designed to cover the appropriate share of the existing infrastructure.

Lebanon Connection Fees:
Content coming soon.

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PART III

CONSTRUCTION SPECIFICATIONS AND PROCEDURES

I. PROCEDURES.

Before Construction

Note: no construction within a Town right-of-way (ROW) is to take place between November 15 and March 31. NH DOT may have different no-work dates for proposed construction in a State ROW. Contractors or owners are not to operate any water service corporation or curb stop unless authorized by the Enfield Department of Public Works (EDPW) inspector.

A. Contractor notifies **DIG SAFE, 1-800-344-7233** and gets a permit number. The EDPW will not allow an excavation without a DIG SAFE permit number. Allow 5 days in advance of desired work date.

B. Contractor provides EDPW inspector with copy of NHDOT Trench Permit, if excavation is in State right of way.

NH DOT District Office 603-448-2654

C. Contractor notifies EDPW at least 3 working days in advance of desired work date (603-632-4605 or 603-632-4002). EDPW marks out pipe locations and known interferences.

D. Contractor arranges with a water main live tapping sub-contractor, if needed.

Construction

E. Contractor erects and maintains proper work zone traffic control signs in accordance with NHDOT and most current edition of the Manual of Uniform Traffic Control Devices and provides well trained flaggers where necessary. Uniformed police officers for traffic control may be arranged by calling the Enfield Police Department at 603-632-7501.

F. DO NOT START A UTILITY EXCAVATION AFTER 9:00 am. If equipment

is not on site and operating by 9:00 am the chances of finishing the job by 3:30 pm is not good. EDPW personnel will not be available after 3:30 pm for inspections.

G. Contractor makes pavement cuts with a pavement saw, cutter, or jack-hammer, taking care not to unnecessarily damage adjoining pavement. Contractor carefully excavates to mains, frequently hand digging to verify locations. **There is absolutely no reason, other than carelessness, for striking a marked water or sewer main with an excavator bucket.** Costs to repair damages to mains will be charged to the owner/contractor.

H. Contractor places OSHA approved trench shoring devices as may be necessary. Note: EDPW, Red-Hed, or EJ Prescott personnel will not enter a trench not properly and safely shored. ****WARNING** OSHA fines for failure to maintain adequate trench safety are in the thousands of dollars!**

I. Contractor does not backfill any portion of a trench until EDPW inspector has had a chance to check depths of bury, alignments, grades and pitches, pipe joints, tie measurements, etc.

J. Contractor disinfects water service lines per direction from EDPW inspector. This normally involves a 5% bleach solution (Clorox) poured into the service pipe prior to charging with water, letting it sit for 24 hours, then flushing until no noticeable chlorine odors are present.

K. Owner's plumber installs meter horn (supplied by EDPW) and back-flow preventer (to be supplied by owner) in building or meter pit. After disinfection period, line is flushed of chlorine and debris, prior to setting of water meter.

L. EDPW employee sets water meter and wires remote reading device. Water service may be turned on at this point only by EDPW personnel.

M. Properties wishing to connect to the sewer system at a location where there is only a pressure main will need to furnish plans prepared by a licensed septic designer or professional engineer showing the infrastructure to be installed on the property and properties in common including the proposed connection to the pressure main, structures, clean outs and pumping systems. This will be reviewed by the EDPW staff and the Town Engineer. Depending on the complexity of the proposed project the Town reserves the right to hire a construction inspector at the owner's expense.

Clean-up

N. Contractor brooms off road surfaces, repairs damaged landscaping, and generally leaves site in a clean and workmanlike manner. Maintain work zone warning devices to mark freshly paved areas or any remaining hazards.

II. TRENCHING, BACKFILL, COMPACTION, PAVING, AND LANDSCAPING.

A. Pavement Cuts. Cut with jackhammer or saw-cut. Edges of utility cut must be straight and square. Cutting with excavator teeth is not acceptable.

B. Damages to drains and other utilities. Contractor to repair all underdrains, stormdrains, culverts, and other utilities damaged in the course of the work. Repairs are subject to the inspection and approval of the EDPW inspector.

C. Trench depths, alignment, and pitch.

1. Water Services.

a. **Depth of bury:** no less than 5 1/2 feet to top of pipe.

b. **Alignment** from main to curb stop must be perpendicular to the water main.

From the curb stop to the foundation, the pipe must take a straight and direct approach and not meander over the property.

2. Sewer services.

a. **Depth of bury:** no less than 4 feet to top of pipe. Shallower bury requires rigid insulation foam and is subject to approval of the EDPW inspector.

b. **Alignment and slope:** gravity sewer pipe to be laid straight and true with no less than 1/4 inch per foot of slope. Pressure sewer pipe generally laid to grade. Pipe alignment must take the shortest and straightest approach from the main to the foundation. One (1) 22.5 degree fitting may be permitted in a gravity sewer without additional cleanouts. 90 degree fittings shall not be permitted.

c. **Separation from water lines:** sewers shall be located at least 10 feet horizontally from any existing or proposed water line or main, except that a deviation from this separation may be allowed to avoid subsurface structures when it is not practicable to achieve the separation, provided that the sewer is constructed as follows: the sewer shall be located 18 inches below and 36" horizontally from an existing or proposed waterline, with the waterline bedded on undisturbed soil. If the reduced minimum separation cannot be achieved, more elaborate protections may be required. In all cases, a reduction in the 10 foot horizontal separation, or other protections, are to be approved only by the Director of Public Works.

d. **Cleanouts:** one (1) cleanout in gravity sewers shall be located just outside the building foundation, and at no more than 75 foot intervals and

just upstream of every turn of 45 degrees or more. Cleanouts in pressure sewers shall be located and constructed per the manufacturer's recommendation and the EDPW inspector's direction.

e. Prohibited drains. Roof, floor, cellar, sump pump, downspout, perimeter, and footer drains are not to be led to the municipal sewer system. No surface water shall be pumped to a municipal sewer connection.

f. Grease and oil interceptors. Grease and oil interceptors may be required in restaurant or other large food preparation facility drains, and in floor drains from auto repair shops and similar facilities.

D. Backfill material.

1. Water services. 6 inch layer of clean sand bedding, with 12 inch layer of clean sand blanket. All other backfill common fill, generally being the material removed from the trench. *When PE pipe is used, lay in 12 inches from finish grade and along centerline of pipe, a ferrous foil pipe marking tape, blue in color, with "Water Line, " or words to that effect, imprinted on tape.* EDPW will provide the tape.

2. Sewer services. 6 inch layer of 3/4" crushed stone well compacted under pipe and well chinked halfway up sides of pipe. 12 inch layer of clean sand blanket. All other backfill common fill, generally being the material removed from the trench. *Lay in, 12 inches from finish grade and along the centerline of the pipe, a ferrous foil pipe marking tape, green in color, with "Sewer Line," or words to that effect, imprinted on tape.* EDPW will provide the tape.

3. Road bedding. If in a Town road, 18 inch layer of 3/4" crushed gravel, well compacted. State roads per NHDOT permit.

E. Compaction.

All backfill to be compacted with compaction equipment specifically designed for such purpose, e.g., plate vibratory compactors, sheeps-foot rolls, etc. Compaction with excavator bucket is not acceptable. Compaction to be done in no more than 12 inch lifts. State roads per NHDOT permit.

F. Paving.

1. Temporary pavement. If in a Town road, pave no less than 2 inches of hot bituminous pavement, or equal to the depth of the existing pavement, with 3/4" aggregate and emulsion binder on edges. Temporary or "permanent" cold patch may be used as a temporary pavement until permanent pavement is installed, usually after 90 days.

Exposed gravel is not to be left for more than 24 hours, and must in all cases be covered with pavement prior to any weekend. State roads per NHDOT permit.

2. Permanent pavement. Final paving must present a trim and neat appearance, with straight and squared edges. Contractor to shim or remove temporary pavement, depending upon the type of material used as temporary pavement and the condition thereof, and repave to end up with no less than 3 inches of hot bituminous asphalt or equal to the depth of the existing pavement, 3/4" aggregate, with emulsion binder on edges. If the roadway in the area of the excavation was damaged during the construction, i.e., outrigger cuts, cracks, etc., the EDPW may require the contractor to install a full width overlay of hot bituminous asphalt, 3/8" aggregate, 3/4 inch to 1 inch in depth.

G. Settling. Contractor to monitor cut for settling and to promptly correct any problems within 24 hours of notification to do so.

H. Landscaping. Contractor to place erosion controls, hay-bales, mats, etc., in Town ROW's if needed, and to place loam, seed, lime, and fertilizer as needed to re-establish roadside vegetation. Landscaping on owner's property to be according to owner/contractor agreement.

III. WATER SERVICE MATERIALS SPECIFICATIONS. Note: contractor should submit a list of proposed substitutions to the specified materials below for approval at least 3 days in advance.

A. Service brass. All service brass fittings to be Mueller, 110 compression fittings, or approved equal.

B. Pipe. Minimum 3/4" i.d. The EDPW may dictate larger pipe sizes. Type K-soft copper. No joints permitted between corporation stop and curb stop. Between curb stop and foundation, one compression joint permitted in copper pipe. Runs of greater than 120 ft between the curb and foundation may use copper tube size "CTS" 200 psi polyethylene (PB) tubing, with connections made up from brass push-on adapters with (2) stainless steel pipe clamps per connection (total of 4 clamps for a union, for example).

C. Meters and backflow preventers. Meters 3/4 inch and smaller, and up to 3/4 inch meter horns, will be provided by the EDPW. Larger meters must be purchased by the owner and must meet EDPW's specifications. All backflow preventers must be purchased by the owner and must meet EDPW specifications.

IV. SEWER SERVICE MATERIAL SPECIFICATIONS.

Note: contractor should submit a list of proposed substitutions to the specified materials below for approval at least 3 days in advance.

A. Pipe. For gravity sewers, minimum 4" i.d, with 6" i.d. on all commercial properties, SDR 35 with **bell and spigot push on joints**. For low pressure sewers and lift pump installations, per manufacturer's recommendations.

B. Cleanouts. Constructed of the same material as the pipe, with a plastic screw in plug, minimum **4 inch** i.d. Cover shall be located flush with finish grade. For most residential properties the cleanout shall be enclosed in a standard **5 1/4"** cast iron gate valve box top section with an iron lid having the word "SEWER" in raised lettering. For all properties where the service lateral is especially lengthy and runs cross country through fields, woodlots, or other areas where grass and brush are not regularly mowed, the clean-out shall be enclosed in a 9" iron sewer cleanout ring and cover, such as manufactured by LeBaron Foundry, Inc., with the word "SEWER" in raised lettering. For all properties where the clean-out must be located in parking lots, driveways, and streets, the cleanout cover must be enclosed in a 10 3/4" iron heavy duty clean-out ring and cover, such as manufactured by Bibby LaPerle, Inc., with the word "SEWER" in raised lettering.

C. Adaptors. Connectors for adapting various pipe sizes and materials together shall be designed for the particular purpose, e.g., rubber FERNCO fittings with stainless steel clamps, and sized by the manufacturer for joining plastic to cast iron, plastic to clay, and so on, and shall be installed in accordance with the manufacturer's instructions.

D. Grease and oil interceptors. Interior interceptors may be permitted and are subject to the Town building codes (contact the Building Inspector at 603-632-4343). The specific model, features, and size of exterior interceptors will depend upon the application. Modified septic tanks or built in place modified man-holes shall not be permitted for interceptors. Generally, the following specifications apply:

1. The interceptor shall have a minimum capacity based on estimated flows from the facility and the requirements of the New Hampshire Department of Environmental Services.

2. The access hole shall be 30 inches in diameter. It shall have a 30 inch man-hole cover meeting NH State Standards and have the word "SEWER" cast into the cover. The manhole cover shall be adjusted to finish grade using pre-cast concrete adjusting rings, and/or rubber adjustment risers as manufactured by GNR Technologies, Inc. Brick corbels shall not be used.

3. PVC pipe and fittings shall be SDR 35 PVC with push on joints and

elastomeric gaskets. Pipe shall be marked with the manufacturer's name, diameter, and thickness class.

4. The invert of the outlet shall be 3 inches lower than the invert of the inlet pipe.
5. Only kitchen waste shall enter the grease interceptor. All other wastes shall be piped downstream of the interceptor.
6. Wherever possible, the inlet pipe and the outlet pipe shall have 4 feet of cover.
7. The grease interceptor shall be a minimum of 10 feet from the building and shall be accessible to a cleaning vehicle.
8. The grease interceptor may be vented (optional). If a vent is installed, it shall run up the side of the building to a point above the roof and in accordance with State building codes.
9. The grease interceptor shall be set on 6 inches of 3/4 inch crushed stone.