

# Washington Drop Service Installations Policy

The Town of Washington, through its Washington Municipal Light Plant (MLP), is constructing a fiber-optic broadband network in order to provide Internet and digital phone service. The network will pass by and include a connection point for 99% of currently occupied and habitable premises in town. The network design includes sufficient extra fiber for anticipated future growth.

## Definitions

A glossary of technical terms and abbreviations is provided at the end of this document.

## Drop Service Installation Credit

In order to maximize the incentive for townspeople to take service during the initial startup period, the Washington MLP will offer a **\$650** subsidy to defray the Drop Service Installation costs for a limited time. This amount is equivalent to the cost of materials and labor for a Standard Interior Installation plus the minimum Drop Fiber Installation of up to 150 ft overhead involving no additional utility poles.

Customers must sign up for either Internet service or Phone-only service before the initial Sign-up Deadline to qualify for this Drop Service Installation Credit.

## Initial Sign-up Deadline

The initial Sign-up Deadline in order to receive the Drop Service Installation Credit is **December 31, 2019**.

## Drop Service Installations

A Drop Service Installation consists of a Drop Fiber cable connection from a designated MST on the Distribution Network to a NID on the exterior of the customer premise, plus the interior installation of an ONT and Wi-Fi router. The installation of digital phone equipment is optional.

All electronic components and the Drop Fiber cable will remain the property of the Washington MLP.

## Interior Installations

For customers who formally sign up for service before the initial Sign-up Deadline, the Drop Service Installation Credit will cover the cost of materials and labor for a Standard Interior Installation.

The Standard Interior Installation includes:

- installation and set-up of an ONT in a basement location, including an optical jumper from the NID, up to 50 feet;
- installation of a Cat6 Ethernet cable from the ONT to a first floor location, up to 100 feet, and installation of a Cat6 wall-plate, as necessary;
- installation and set-up of a Wi-Fi router (provided by WCF).

The customer is responsible for providing 110V AC electrical outlets at the ONT and Router locations.

Custom installation services may also be arranged — for example, a non-standard ONT location, router installation on a second floor, or additional Ethernet wiring and outlets. Optional digital phone service will also require additional installation costs. Customers will be responsible for any and all interior installation costs in excess of the Standard Interior Installation.

After the initial Sign-up Deadline, customers requesting service will be responsible for paying any and all costs of a future installation.

Customers who are not the owner of the premise will be required to provide proof of prior approval from the property owner.

The customer is responsible for providing any optional backup power source for the ONT and Router that may be desired in case of a power outage.

### **Exterior Drop Fiber Installations**

For customers who formally sign up for service before the initial Sign-up Deadline, the Drop Service Installation Credit will cover the equivalent of the cost of materials and labor for an overhead Drop Fiber up to 150 ft involving no additional utility poles.

The total cost of the exterior Drop Fiber Installation will depend upon several factors:

- the total distance from the MST to the premise;
- whether the fiber drop travels overhead or underground or some combination;
- in the case of overhead, whether additional utility poles are involved or not;
- in the case of underground, whether existing suitable conduit already exists or new microduct cable needs to be installed.

The Drop Fiber Installation typically follows the pathway of existing utility services to the home. Exceptions can be made if circumstances warrant. The Washington MLP Manager and the installation subcontractor will work with the customer to identify the most cost-effective method to provide a Drop Fiber connection.

The customer will be responsible for any and all costs beyond those covered by the Drop Service Installation Credit. A reasonably complete estimate for installation costs will be provided for customer approval prior to any work.

## **Make-Ready and Pole Licenses**

The Washington MLP has already paid from the capital construction budget for all utility costs associated with make-ready and licensing for poles on private property that have been deemed necessary for drop service installations. Customers will not be responsible for these costs.

In the few cases where the utilities would have required the replacement of a private pole, for which the Town would not have been reimbursed by the State and which cost would have then fallen to the property owner, an alternative, more cost-effective installation path was identified. These poles have therefore not been licensed and will not be used for installation.

Customers who do not subscribe for service during the initial startup period and request Internet service at a later date may be responsible for paying any application fees and make-ready costs necessary to re-license poles in the future.

## **Network Extensions**

A Network Extension occurs where the Distribution Network extends off the public way and on to private property. This is necessary where service poles on private property are more than 170 ft apart and a typical drop fiber cannot be sustained. In this case, the Distribution Network's stranded steel support cable and MST must be extended on to these private poles.

The cost of all Network Extensions in the final network design has been factored into the construction budget. As they are part of the Distribution Network, customers will not be charged for these costs.

The presence of a Network Extension does not obligate the homeowner to take service.

However, if a homeowner chooses to deny permission for the construction contractor to enter upon the property to install a Network Extension and MST, then any future service request that requires a Network Extension in order to provide the Drop Service Installation will incur the full cost of constructing the Network Extension as well.

## **Phone-only Service Installation**

Since Phone-only service will be delivered over via the same fiber-optic infrastructure as Internet service, the same Drop Service Installation components are required.

Customers who request Phone-only service before the initial Sign-up Deadline will be eligible for the same Drop Service Installation Credit outlined above.

## **Cold Drops**

“Cold Drop” refers to an exterior Drop Fiber Installation only, with no Interior Installation, where the homeowner does not wish to take any service at this time.

The Washington MLP is not currently offering installation for Cold Drops.

After initial customer installations have been completed and before the startup installation period concludes, this policy may be revisited. Homeowners who are interested only in a Cold Drop may contact the Washington MLP Manager to be put on a waiting list. No incentive Drop Service Installation credit will be provided.

### **Future Construction**

Every effort has been made in the final network design to accommodate all currently occupied and habitable premises in Washington. Effort has also been made to identify and accommodate any pending new construction that is set to break ground within nine months of the commencement of network construction.

Customers requesting service for new homes built after the completion of the network may incur the full cost of any Network Expansion that is required in order to provide an MST connection, in addition to the Drop Service Installation costs.

Homebuilders and developers are encouraged to contact the Washington MLP Manager to discuss future home construction in order to accommodate these connection costs into their building plans.

### **Glossary of Technical Terms**

**Cat6** = Category 6 Ethernet wiring, used to connect the ONT to the Router. Cat6 Ethernet supports network connections up to 10Gbps, providing the ability for future network speed enhancements.

**Cold Drop** = a drop fiber from the road to the outside of the premise only, without any interior installation and without being lit up for any service.

**Distribution Network** = the fiber-optic cables and associated components, including MSTs, that transmit the broadband service from the Hub throughout the Town and past each premise.

**Drop Fiber** = a fiber-optic cable that extends from the Distribution Network to the premise. The Drop Fiber connects an MST on the network to a NID mounted on the exterior of the premise.

**Gbps** = Gigabits Per Second, a measure of the amount of data that can be transferred through a network connection in one second, used to express network speed. 1Gbps is equal to 1000 Mbps (Megabits Per Second). The FCC defines “broadband” as a minimum of 25 Mbps download and 3 Mbps upload.

**Hub** = the central telecommunications shelter at 8 Summit Hill Rd, Washington, MA, where all of the Town’s fiber-optic cables originate and which houses the electronic components that connect the network to the Internet.

**MST** = Multi-port Service Terminal, the network component that allows Drop Fibers to be plugged into the Distribution Network.

**Network Expansion** = any expansion of the Distribution Network which becomes necessary after the completion of the initial network construction in order to provide an MST for future home construction.

**Network Extension** = an extension of the Distribution Network where the MST continues from the road on to private property. This is required where poles on private property are more than 170 feet apart. It involves spanning the poles with a stranded steel support cable and lashing the MST to this support.

**NID** = Network Interface Device, the drop service component mounted on the exterior of a premise that receives the exterior Drop Fiber and connects it to an Optical Jumper to the interior ONT.

**ONT** = Optical Network Terminal, the drop service component installed inside the premise that translates between the optical (light) connection on the fiber network and the electronic network connection needed by routers and computer devices. The ONT is typically installed in the same general vicinity as the main electrical panel, although alternate arrangements may be made in consultation with the installation technician.

**Optical Jumper** = a ruggedized fiber-optic cable that connects from a NID to an ONT.

**Router** = an electronic component located inside the premise that allows multiple computers and devices to be connected to the network, via both wired (Ethernet) and wireless (“Wi-Fi”) connections.