

Getting Ready for the Islesboro Municipal Broadband (IMB)

As an IMB subscriber your home or business will access the Internet using a high-capacity symmetrical 1-gigabit fiber-optic broadband connection.

Your home or business will be equipped with an electronics box called an Optical Network Terminal or ONT. Most Subscribers will utilize an interior-space ONT that provides password-protected Wi-Fi access, jacks for direct-wired Ethernet, and a provision to connect your current phone wiring if you purchase the optional phone plan from our partner GWI. Some Subscribers with existing wired Ethernet networks will utilize an exterior ONT that provides just wired-Ethernet and phone provisions. Which ONT is installed is a Subscriber choice.

You will pay a \$360 yearly subscriber fee in June at the Islesboro Town Office. For the first partial year of service the fee will be \$180 for the period from when your installation occurs through June 30th, 2018. If your construction phase installation can't be completed by Jan 1, 2018, you will be given a credit.

If you need support or the IMB needs repair, help can be reached by dialing or emailing a 24x7 support center. If the issue can't be resolved over the phone, a trained on-island technician will be dispatched for an onsite visit to get the IMB Service back to good working order. There is no charge for this service call during business hours unless the issue is due to damage to the IMB Equipment.

Get Your Property Ready for the IMB Installation

Getting your property ready for your IMB installation is your responsibility. Help us make sure that your installation will be successful the 1st time.

For the great majority of subscribers, getting ready is easy.

No Charge Construction-Phase Installation Steps Summary

- 1. Owner's signatures –**
 - The property owner must sign the owner's rider of the Subscriber agreement.
 - Notarized signature on any required property easement - if it is necessary for your property. See below for details. The Town Office provides no-charge notary services and will pay for the easement filing.
- 2. Answer your Premise Readiness Questions – see below for details...**
- 3. Pay Your Subscriber Fee –** your \$180 partial year Subscriber Fee must be paid prior to the installation team arriving in your neighborhood.
- 4. Return** the signed pages, payment and questionnaire to the Town Office
- 5. Installation of Exterior Fiber Drop Cable -** Waveguide will install an aerial and/or buried fiber optic drop cable from your premise's power/phone service utility pole (along island public or private utility pole lines) to the exterior of your home or business adjacent to your existing utilities. No one need be home for this step unless there is interior work required. Generally they will also install a small plastic clamshell enclosure to protect the connection of the exterior fiber drop cable to the interior fiber drop cable. There are some special considerations, especially for buried conduit installations - See below for the detailed information.
- 6. Installation and Testing of Your Electronics –** Waveguide will schedule a time to come into your home or business to install, connect & test your Optical Network Terminal (ONT) electronics box. They will then clean up. You or your representative must be present for this step.

Though this is a simple 6-step process; there are a number of special considerations to review. Please read thru the considerations section below to see if any apply to your property.

Answers to Your Questions

The latest information on getting ready, construction progress, and answers to frequently asked questions are posted on the Town website (www.townofislesboro.com/imb) and via subscriber e-mail and Facebook social media.

If you have questions or issues getting ready contact the Town Office. They will either help you then or connect you with someone who can help. Page Clason has volunteered to perform brief site readiness assessment for a flat fee of \$25.

- Town Office point-of-contact person: Tina Pendleton
 - E-mail: IMB@townofislesboro.com
- Town Office at 150 Main Road
 - Phone: (207) 734-2253
 - Mail: PO Box 76, Islesboro, ME 04848

No Charge Construction Phase Installation Details and Policies

- Be ready when Waveguide is.
 - Waveguide is the town's contracted construction firm building the IMB.
 - Once we have all the Subscriber paperwork and easement documents Waveguide will perform the exterior drop installation. They will then contact you to schedule a mutually agreeable time for the interior ONT electronics installation. Your or an adult representative must be present and the power must be on. If you fail to be ready, they will work with you to schedule a second visit. However, after two scheduled attempts to perform the installation, your property will be taken off the construction phase installation list and you will be billed for the installation if/when you choose to sign up again.
- IMB's construction budget pays to install one subscriber fiber + *Optical Network Terminal* (ONT) electronics box per property where the owner has signed up.
 - A single ONT and 1-gigabit service is more than enough Internet access bandwidth for most subscribers or island businesses
 - Property owners may distribute the IMB Service to their similarly owned directly adjacent properties. However, any wiring or equipment to distribute connectivity around a property is the owner's responsibility.
 - Subscribers cannot share their IMB Internet connection with other owner's properties.
 - Additional drops are available to those who have signed up. These will be installed at an additional cost of \$600 each.
- Nothing happens without a signed subscriber paperwork and payment that provides permission for property access, policy details, Fee schedule, who does what...
- The Town and IMB assume the responsibility for subscriber support and assuring a working connection and ONT. The IMB does not provide other interior wiring, configuration or gear beyond the working ONT.

Aerial Utility Service Drop

Most properties on the island have a typical aerial cable power & telco service from a nearby utility pole to the exterior wall of the premise. In these cases the Waveguide team will follow that path and install an aerial fiber cable to the location near where your other utilities attach to your home or business. Your only readiness concern is the actual location of the ONT electronics box.

Buried Utility Conduit Service Drop

If buried conduits are part of the run from the nearby utility pole to your home or business you will need to assure that those conduits are ready to receive the IMB fiber optic cable. All conduits on the island are privately owned or shared/owned by a home-owner association. In many cases our prior site surveys determined if the conduits were present. However, the Subscriber Questionnaire asks for you to confirm this survey.

The Waveguide installation team needs an open unobstructed conduit from your premise's utility service pole to your premise near where the electronic equipment will be installed. Typically the conduit leads to a point near your existing power facilities and/or phone network interface box.

Readying your conduits is your responsibility. You can do the job yourself or hire a contractor to do it. The Town provides the specifications and has briefed island contractors who do this work if you need their help doing it. In addition the Town Office has a list of contractors who have the briefing materials.

Conduits Specifications Summary:

- Existing Conduits Containing Telco Cables - can be used if there is at least a 1" diameter of free space AND a pull line AND there are no Telco-owned pedestal boxes anywhere along the run (IMB has no rights to collocate within these pedestals.) Your contractor can in some cases bypass these enclosure pedestals.
- Intermediate Pull Enclosures - conduit pull runs should be no longer than approximately 500'. Longer runs will need intermediate pull boxes or other provisions such as a post or protected enclosure or pedestal box thru which the fiber can be pulled and secured from damage. The recommended pull box pedestal is Channell Commercial Corp #SPH920C1B1L00
- Drip Stops - Some island conduits that run directly into basements or interior spaces incorporate a drip-stop to prevent exterior ground water in the conduit from getting into the interior. Drip stops make a new cable pull impossible where the conduit might otherwise meet the IMB installation specs. Ask your contractor if you have drip stops in the conduit run. If so, answer Yes to the drip stop conduit question on the subscriber readiness questionnaire. The remedy for this situation is for your contractor dig up the drip stop and prepare the conduit run – open unobstructed conduit with pull line. The Waveguide team will leave the drop cable coiled at the last location or pull enclosure that is ready. Your contractor can then expose the drip stop and pull the fiber cable thru. If there is damage to that cable, then your contractor is responsible for any repairs. Once the fiber is pulled to the interior of the building contact Waveguide to schedule the remainder of the installation.

If you have no conduit, no conduit space or Telco pedestals exist then a new conduit needs to be installed. See the IMB Conduit briefing documents for the specifications for new conduits. Generally a new conduit of 1-1/4" or larger from your nearest utility pole with appropriate pull enclosures every 500' or so that terminates at a secure place on the exterior of your premise or just within the basement or utility space is adequate.

ONT Considerations and Choices

The IMB offers a choice between two Optical Network Terminals or ONTs. Which ONT is the correct one for your home or business is not a difficult choice. Both of these ONTs can be seen at the Town Office in typical installation mockups. Please confirm with the Town Office what your choice is on the Subscriber Questionnaire. If we don't hear from you the IMB will assume you are ready to have a living space interior ONT with Wi-Fi installed.

Living Space ONT with Wi-Fi – This ONT is a one-box-does-it-all solution for most residences and small businesses. It is installed along with its power supply within roughly 10-15' of the location where the fiber attaches to your home or business – typically near the current phone interface box in a small plastic enclosure called a clamshell.

The built-in Wi-Fi is adequate to serve most modest homes so the actual mounting location is not critical. However this ONT and its power supply must be securely mounted to a wall or placed in a secure location (utility closet) within the living space. A standard 110v receptacle must be within about 8' of the mounting location.

A typical installation mockup can be seen at the Town Office. Note the 2'x2' square area of wall space. An ideal situation is a 2'x2' piece of plywood mounted to the wall. However the ONT can be mounted directly to the interior drywall.

In addition to Wi-Fi this ONT provides 4xRJ45 1-gigabit Ethernet jacks for directly wiring network gear and 2xRJ11 phone jacks that can be wired to your existing phone wiring if you purchase an optional phone plan.

Please make note on the Subscriber Questionnaire if the typical 10-15' from the exterior connection limitation is not the right location for your ONT. The Town can supply an interior fiber optic cable that your contractor can install along with the proper phone line wiring.

Weatherproof ONT (no built-in Wi-Fi) – This ONT is ideal for homes or businesses with existing Ethernet wiring serving one or more Wi-Fi routers and other direct-wired network gear. It is housed in the exterior weatherproof clamshell box mounted on your premise where the aerial or buried fiber drop cable ends. The ONT clamshell can be located on an exterior utility stub pole, exterior wall, in a basement, utility closet and so forth. However its partner power supply must be securely mounted inside out of the weather as close as possible to the ONT but no further than 25’+/- from the ONT location. The power supply must be within 8’ +/- of a 110v receptacle. This ONT provides connections to: 2x1gigabit Ethernet RJ45 jacks and provision for multiple phone lines. However you are responsible for any wiring and the connectivity to the ONT.

Easements

A critical path to your successful installation is execution of easements on some properties for attaching the fiber optic lines to the utility poles or feeding the lines through community conduit. We have compiled a list of properties needing easements. These easement documents will be mailed to property owners for review and signature. The easements itself is a page long and can be signed and notarized (at no charge) at the Town Office. Once signed, the easements will be recorded in the Waldo County Registry of Deeds. There is no fee to the property owner for notarizing or recording the easement via the Town Office. If you have your signature notarized elsewhere, please mail it to the Town Office.

If you receive an easement document and have any questions about the easement, please contact Vern Ziegler at the Town Office. The prompt execution and recording of these easements will keep the project on schedule and allow everyone to have free installation while the contractors are still on island.

From 1978 to 2017 CMP obtained 521 easements in Islesboro. The new IMB easements will grant the Town the same rights that have been given to CMP – permission to cross your property in a narrow corridor defined along the poles that cross your property. The difference is that our easement is only for the installation of fiber - no other utilities.

Not all properties need these IMB easements. There are three situations where the easements are necessary.

1. In subdivisions with Homeowner or Road Associations the easement grants the right to follow the existing utility lines to extend the IMB network to you and your neighbors. All property owners within the subdivision will need to give an easement to the Town for us to install the fiber.
2. For properties on private roads (roads not owned or maintained by the Town) the property owners with utility pole corridors on their property will need to give an easement to the Town for fiber installation. In this example, the utility corridor does not cross every property.
3. Town needs an easement on properties where the utility corridor crosses the property to service another property. In the past, the utilities ran poles to the first house built and after feeding electricity there, they used those same poles to feed the neighbors. We need to use that same path to connect you and your neighbors.

Premise Readiness Questionnaire

The Town Office needs several pieces of information to help plan your installation with the Waveguide team.

ONT Type?

- Standard Interior ONT with Wi-Fi or...
- Exterior ONT to connect directly to my existing network wiring

Exterior Service?

- Aerial cable from the nearest pole to my premise exterior
- Some or all of my service cable is in buried conduits

If Yes, Conduit Readiness?

- My conduit runs are ready with space and a pull cord.

- My conduit runs are ready with space and a pull cord but I have drip stops and my contractor must pull the final leg to the premise.

Location of the Interior ONT?

My interior ONT with Wi-Fi is within 10-15' of where the exterior clamshell will be located and there is a working 110v Power Receptacle within 8-10' of the ONT location

My interior ONT with Wi-Fi is NOT within 10-15' of where the exterior clamshell will be located.

_____ feet of cable is needed to reach my desired Interior ONT location. I can ask my contractor to install this cable prior to the Waveguide team finishing the installation.

Frequently Asked Questions

What is the IMB Internet Connectivity?

The IMB provides residential and small business Subscribers with a symmetrical 1-gigabit Internet service at the Subscriber's Optical Network Terminal or ONT. This provides exceptional Internet access for web browsing, e-mail, entertainment streaming, access to other networks that are also connected to the Internet (i.e., VPN corporate networks) and so forth.

The IMB is configured and designed to handle Internet traffic from all the IMB residential and small business Subscribers. This capacity and usage is constantly monitored and, if necessary, reconfigured to provide additional connectivity capacity.

However, in practice, the data throughput speed a given Subscriber might measure at any given time is highly dependent on the actual subscriber equipment doing the test and other factors such as cabling or Wi-Fi interference – most residential and small business network equipment is not designed to take advantage of the full 1-gigabit IMB data throughput capacity. 100 mega-bits or 10% of a gigabit is more typical of the maximum speed of consumer electronics. With proper equipment the maximum effective speed of data throughput one might measure is 0.8 to 0.9 gigabits owing to Internet protocol overhead depending on the type of user data stream. 2017 surveys show that a typical residential Internet customer might drive or consume 0.0015 - 0.03 gigabits of throughput – approximately 30 times less than the typical IMB per subscriber capacity.

Is there a Charge for Support?

Generally, there is no charge for support. The Telephone and Email support system is no-charge. If the Telephone Support Center can't resolve the problem, an on-site visit will be scheduled with the on-island technician. The IMB pays to maintain a Subscriber's IMB Service in good working order. The exceptions to this no charge for support policy are:

- Equipment Damage - In the event that there is damage to the IMB Equipment, the Subscriber will need to pay the labor and materials costs to bring everything back to good working order. In the case of an interior ONT with an interior fiber optic cable from the exterior clamshell to the ONT then, once installed and tested, it is assumed that any subsequent issue with that cable is the Subscriber's responsibility.
- Off Hours On-Site Service – On-site service calls by the On-island Technician are available during business hours Monday thru Friday. If you must have an emergency on-site service, you will be advised of the labor charge and billed accordingly.
- Other services like the labor and materials to relocate a Subscriber's ONT are billed to the Subscriber
- Reconnection following voluntary or involuntary disconnection incurs a fee billed to the subscriber.
- Installations, post construction phase are billed to the Subscriber at the actual labor and materials.

How Fast Will My Service Be Repaired?

Every attempt will be made to restore a single Subscriber outage on the next business day. In the event that there is widespread multiple subscriber outages, the priority will be on restoring the IMB infrastructure first. Also, there may be cases where the outage is too complex for the On-Island Technicians to handle in a timely fashion. In that case, additional resources will be called from the mainland. The Telephone Support Center will know the status of severe outages and we are working to post this status info on the Island Facebook social media page.

What happens if I don't complete the IMB install now?

After the Waveguide construction installation team completes its work and departs the island, subscribers will pay the actual labor and material costs to complete their installation.

Who owns the IMB equipment?

The Town owns all the IMB Equipment up to and including the ONT, its power supply, wiring and fiber. You are responsible for labor and materials to repair any damage to the IMB equipment. Once installed and tested, any damage to the interior fiber cable connecting the exterior fiber optic cable clamshell to the interior ONT with Wi-Fi is assumed to be the Subscriber's responsibility.

What About Other Equipment in My House?

Any equipment connected to the IMB ONT either via Wi-Fi or directly-wired, is the Subscriber's responsibility. Such equipment is called the Subscriber's Equipment. IMB and GWI provide no service, support or advice on Subscriber Equipment.

What About The ONT's Battery Backup?

A working battery backup is a key part of the IMB Service – It is designed to keep the IMB ONT operating for about 8 hours during a power outage. It does not provide a power backup for your Subscriber Equipment. If the battery should ever fail, the on-island technician will replace it at no charge assuming the issue is not damage to the unit. For Subscribers who turn off the power to their home or business in the off season, there is a series of steps to disconnect the battery and prevent it being damaged during the off season.

Can I move the ONT?

No. However there are many reasons that you may need to – repaint, remodel, or reconfigure. Call the Telephone support center and request a visit from the On-Island Technician to relocate your ONT so that you can remodel, reconfigure or repaint. There is a modest charge for any labor and materials that the On-Island Tech will discuss with you prior to doing the work.

I rent my home?

The IMB service connection is to a particular property. The owner signs the Owner's Rider of Subscriber's Agreement. The Subscriber is the user. Any remaining Subscriber service period is transferable to a different tenant or owner however the new subscriber must sign a new subscriber agreement.

What if I Need More than Residential or Small Business Service?

There may be a situation where Subscribers need more than the standard IMB Service. For example, if the Subscriber needs a fixed IP address for a server or has a business need that can't wait to the next business day for repairs. In these situations, contact the Town Office or GWI and the IMB team will work out a plan for you, though there may be additional subscriber fees.

Is there a phone plan?

GWI, the IMB network operator, offers several optional phone plans for an additional monthly fee. These plans range from simple residential plans to business plans. You can transfer your 734 numbers to this new service and use your existing phones and wiring. GWI will send the details to all signed-up subscribers.

