



Municipal Fiber-To-The-Home Broadband Network Request for Information for:

Town of New Marlborough

January 4, 2016



January 4, 2016

Anne Marie Enoch, Town Administrator
Town of New Marlborough
P.O. Box 99
Mill River, MA 01244

Dear Ms. Enoch,

On behalf of Frontier Communications, thank you for the opportunity to submit a response to the Town of New Marlborough's Request for Information (RFI) regarding a Fiber-To-The-Home (FTTH) network.

As a Local Exchange Carrier, Frontier possesses vast experience in building, maintaining, and operating fiber networks, including providing the services to our customers who use them. This includes backbone fiber networks as well as local, last mile fiber deployments. Currently Frontier is working with a number of municipalities in your neighboring state, Connecticut, and elsewhere in our national footprint to determine how best to meet the increasing interest and demand for widespread or ubiquitous fiber last mile deployments and the provisioning of ultra-high-speed services. As with New Marlborough, these towns are looking at various business models to determine how best to meet the desires for higher-speed broadband access, and the benefits it can generate, while minimizing risk for the municipality and its residents and taxpayers.

Frontier's intent, should New Marlborough issue its RFP, is to propose that we build, operate, maintain the network and provide the required services over the network to your residents and businesses. While we potentially could be in a position to fill fewer than all four roles, we believe a single provider solution will streamline the interactions between New Marlborough, its residents and businesses, and the network provider; minimize risk for the Town, and provide the best overall experience to consumers. Our "local engagement" model of management ensures the engagement of our employees in the communities they work and live in.

We are close by – our service area in Connecticut abuts New Marlborough's southern border. We have thousands of employees in Connecticut, more in New York State, and across the country.

Frontier is uniquely qualified to be the provider of the New Marlborough municipal FTTH network. With decades of experience delivering a comprehensive range of services -- from traditional phone lines to high-performance voice, data, IP network, fiber, wireless and equipment solutions -- Frontier has the experience and capabilities to meet and exceed your expectations.

Frontier wants to be your first and only choice for the FTTH network. Frontier is a state-of-the-art organization focused on excellence. We will work with you to understand your specific



Frontier Response to RFI

communications needs, and your growth and success is our utmost priority. Together, we will determine the best solution for your business.

I look forward to the release of your RFP, and can be contacted anytime you would like to discuss the RFI, our response or the RFP.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ken Mason", with a long horizontal flourish extending to the right.

Ken Mason
Vice President, Business Operations, East Region
6980 Pittsford Palmyra Road
Fairport, NY 14450
Ken.Mason@FTR.com
585-777-5645



RFI Cover Sheet

Name of Respondent Organization Frontier Communications			
Mailing Address: 6980 Pittsford Palmyra Rd	City/Town Fairport	State NY	Zip 14450
Phone 585-777-5645	Fax 585-262-5625	Web Address http://www.frontier.com/	
Name of Primary Contact Person Ken Mason			
Primary Contact Title VP Business Operations, East Region	Email Address ken.mason@ftr.com	Phone 585-777-5645	

Which of the following best describes the respondent: *You must select at least one.*

- Broadband Service Provider
- Government Organization
- Equipment Manufacturer
- Non-profit Organization
- Equipment Vendor
- Network or Systems Integrator
- Interested Individual
- Advocacy Group
- Investor/Venture Capital Consultant
- Owner of Physical Assets *Please specify assets:*

Other *Please specify:*

Brief Description of Organization
(Please outline previous experience with broadband deployment and/or provision of broadband services)

Frontier Communications is an S&P 500 company and is included in the Fortune 1000 list of America’s largest corporations. Frontier serves predominantly a mix of suburban, small/medium town and rural areas across the U.S. We offer a variety of technology products and services to both residential and business customers, including high speed broadband, advanced voice products, satellite video and personal online and data security solutions.

Quick Facts

- Employees: Approx. 18,600
- 2015 Revenue as of 9/30 \$4.16B
- 2014 YTD Revenue: \$4.77B
- Operating: 28 states
- Incorporated: 1935
- 100% U.S.-based workforce

List of anticipated partner organizations – Unknown at this time.

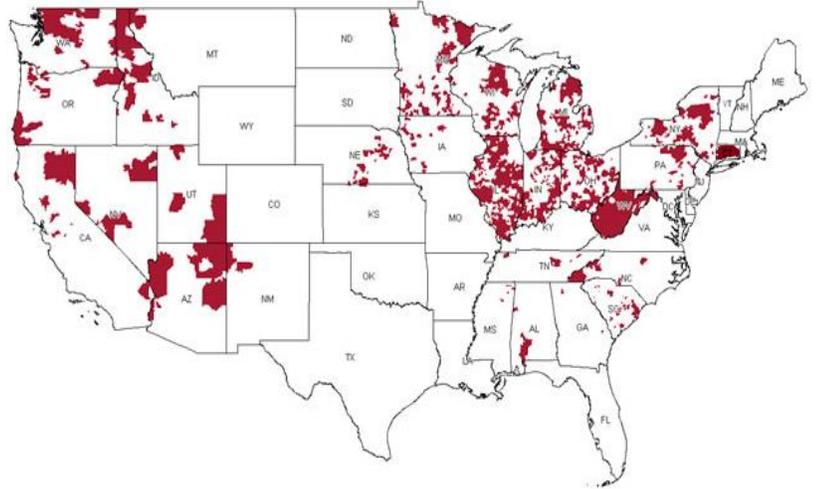
Key Questions for Respondents - Construction

EXPERIENCE

- Please discuss the respondent's corporate history and structure.

Frontier Communications Corporation was incorporated in Delaware in 1935 with headquarters in Norwalk, Connecticut. Frontier is a Fortune 1000 company included in the S&P 500 index (NASDAQ: FTR).

Frontier is one of the nation's largest providers of communications services focused on rural America, offering end-to-end data, voice and video solutions to businesses of all sizes. We pride ourselves on our unmatched customer service, locally based technical support, customized solutions and commitment to help our customers succeed. With 18,600 plus employees across 28 states, we are 100% U.S. based.



We're committed to providing next generation technology that's flexible and reliable, ready to grow to meet customer needs. And our customers enjoy the convenience of having one single, responsive source for all their communications needs, including:

- Ethernet Solutions
- Dedicated Internet Access
- Managed IP VPN
- VoIP (hosted and premise based)
- Communications & Network Equipment
- Optical Transport Services
- Managed IT Services
- Audio, Web & Video Conferencing
- Wireless Data Access/Wi-Fi
- Data Backup & Recovery
- Business High-Speed Internet
- Local & Long-Distance Service
- Computer Security

Frontier is uniquely qualified to be the provider of the New Marlborough municipal fiber network. With decades of experience delivering a comprehensive range of services -- from traditional phone lines to high-performance voice, data, IP network, wireless and equipment solutions -- Frontier has the experience and capabilities to meet and exceed your expectations.

Frontier wants to be your first and only choice. Frontier is a state-of-the-art organization focused on excellence. We will work with you to understand your specific communications needs. Your success is our utmost priority. Together, we will determine the best solution for your business.

Frontier Communications is committed to helping New Marlborough succeed. We have the technology, the expertise, and the tenured people to help build and operate your municipal fiber network at peak efficiency. We deliver services that empower people around the world to communicate easily and exchange information quickly. New Marlborough will benefit from outstanding service quality, product flexibility, and competitive pricing.

- **Please describe the respondent's experience building networks of this type and size. Please provide specifics.**

As a local exchange communications provider, Frontier has constructed many interoffice fiber networks and fiber-to-the home (FTTH) networks serving our customers. Our experience with such networks and the technology involved, particularly in a rural environment such as New Marlborough, is second to none. We have completed local FTTH build-outs in many of our service areas, and are currently engaged in discussions with a number of municipalities, both large and small, on building and operating municipal fiber-based broadband networks.

- **Does the respondent have a presence near New Marlborough or experience building networks in Massachusetts or for municipalities? Please provide specific examples.**

Frontier local exchange territory abuts New Marlborough at the Massachusetts/Connecticut border, with employees and equipment located less than 30 minutes away. In Connecticut Frontier provides the full scope of telecommunications products and services including fiber-to-the-home network deployments. Frontier is currently working with several Connecticut municipalities regarding fiber-based broadband network build-out projects to their residents and businesses.

- **Does the respondent have any previous case studies that could provide insight for the Committee?**

Frontier has placed FTTH networks throughout its national footprint.

- **Can the respondent provide materials on any other municipal networks that have adopted the approach and/or best practices the respondent recommends?**

Currently Frontier is working with a number of municipalities in your neighboring state, Connecticut, and elsewhere in our national footprint to determine how best to meet the increasing interest and demand for widespread or ubiquitous fiber last mile deployments and the provisioning of ultra-high-speed services. As with New Marlborough, these towns are looking at various business models to determine how best to meet the desires for higher-speed broadband access, and the benefits it can generate, while minimizing risk for the municipality and its residents and taxpayers.

- **Will the respondent use subcontractors?**

Unknown at this time.

CONSTRUCTION

- **What is the typical duration of a project like this and how would the ultimate timeline look, e.g. award => permit => make ready => construction to acceptance?**

Timelines vary for this type of work based on build environment, permitting rules, municipality requirements, etc. Milestones will be charted along a timeline once a definitive scope of work is established.

- **What actions can the Town of New Marlborough or the construction company take to reduce construction time?**

Expedite municipal permitting, pole make-ready work, access to municipal ROW, and provide any required easements for network terminating equipment.

- **In the respondent's past experience, what has been the best way to structure the relationships between the town, network operator, construction company, and third parties for construction of the network?**

As Frontier's intent would be to fill all four roles the Town envisions, the only relationship to be established would be with the Town. Clear and fair contractual agreements would be the underpinning of a productive relationship, along with clearly identified individuals from both Frontier and the Town empowered with the ability to resolve issues that may arise.

- **What permitting and rights of way considerations are relevant? What best practices in permitting and ROW acquisition should New Marlborough adopt?**

Any efficiencies that can be achieved between request and approval times are relevant. The ability to establish hub locations is crucial to network architecture and build timing. If the Town retains ownership of the network, there should be no obligation for obtaining permits or ROW beyond those already applicable to the Town.

- **Can a builder construct the desired network without the previous selection of a network operator?**

Frontier recommends first selecting an operator who has the required expertise to design a network that can be built to accommodate short term and long term goals for that network. An understanding of specific network and vendor technologies to be deployed allows for minimal construction rework.

- **Are there any issues or risks in approaching construction this way?**

Construction approached contrary to the strategy described above increases the opportunity of rework and poses the potential of not maximizing the build to achieve scalability for future technological and network growth.

TECHNICAL MODEL AND APPROACH

- **Are there specific standards or manufacturers the respondent prefers or requires? Are there technical reasons for such preferences?**

Frontier has an established network standard and vendor already in use and would deploy the network with this architecture in mind. This equipment would allow service interconnectivity to our existing network and the Internet. This equipment is also capable of providing video services.

- **If New Marlborough decides to include video, or any other services with their network infrastructure, what additional equipment and other network requirements will be necessary to provide the service?**

No additional equipment would be required (see response to question above). Also, depending on Massachusetts video franchising requirements, the awarded FTTH entity should also be granted video franchise.

- **What physical facilities are required for the network? What facilities can New Marlborough provide to reduce the cost and/or deployment time?**

This build is a 100% fiber build with fiber cross-connect cabinets strategically placed to provide distribution fiber to all residents and businesses within New Marlborough. There are no facilities required by the town – only possible access to town-owned structure. Consequently, any assistance to access existing pole lines, permitting, easement obtainment, etc. will reduce costs/deployment time.

- **What additional requirements on network construction are necessary for Smart Grid or medical monitoring support?**

Frontier has the expertise to connect to any network. Additional information on the Smart Grid and medical monitoring networks is required to answer this question accurately.

Key Questions for Respondents – Maintenance, Network Operators and Service Providers

EXPERIENCE

- **Please discuss the respondent's corporate history and structure.**

Please refer to the response to the same question in the Construction section above.

- **Please describe the respondent's experience operating or maintaining networks of this type and size. Please provide specifics.**

Please refer to the response to the same question in the Construction section above.

- **Please describe the respondent's experience providing customer service functions, billing, technical support, etc., for a project of this type and size. Please provide specifics.**

Frontier currently provides communications services to millions of customers which includes all aspects of customer service, including ordering, billing, technical support, and repair services. These services are delivered by Frontier employees (as opposed to contracted), and all are US-based.

- **Does the respondent have a presence near New Marlborough or experience operating in Massachusetts or with municipal-owned systems? Please provide specific examples.**

Please see response to the same question in the Construction section above.

- **Does the respondent have any previous case studies that could provide insight for the Committee?**

Please see response to the same question in the Construction section above.

- **Can the respondent provide materials on any other municipal networks that have adopted the approach and/or best practices the respondent recommends?**

Please see response to the same question in the Construction section above.

BUSINESS AND TECHNICAL MODEL

Frontier proposes to provide all four functions to the Town in support of the fiber broadband network. Frontier currently has significant expertise in each area – Construction, Maintenance, Network Operator, and Service Provider – and believes few, if any, other potential partners will be able to do the same for New Marlborough.

General

- **Is the desired Four Functional Areas approach appropriate? If not, what other roles should be added or what roles should be combined?**

Frontier believes the “Four Functional Areas” approach is appropriate and has the unique ability to fill all four roles for New Marlborough.

- **Can the Four Functional Areas be separated as described in Section 4? Are there any benefits to assigning more than one of these roles to a single firm?**

For the most efficient build and operation of the network, Frontier believes it best that the Functional Areas be filled by the same provider. The clearest benefit to New Marlborough is to the time and energy the Town will be required to devote to managing the relationship and all related activities and responsibilities. Frontier follows and established “local management” organizational construct that engages our employees in their community. A single individual would be identified to manage all aspects of the relationship with the Town, its residents and its businesses.

- **What specific services and product offerings would the respondent make available beyond entry level, commercial Internet access and phone service (e.g., extended phone services, video, etc.)? What requirements do these additional services have on network design, construction, and operation? Does the respondent consider the proposed services necessary or optional?**

Frontier would expect to provide a full spectrum of broadband-enabled services to the Town, its residents and its businesses. Specific services beyond internet access at several speed tiers and Voice-over-IP (VoIP) are clearly technically feasible and would be based on the needs and demands of the community. Such services would be anticipated and incorporated in the design of the network based on projected demand.

- **Does the respondent recommend any specific actions prior to network activation that would ease the transition, especially for users with limited technical expertise?**

Not at this time.

- **What start-up assistance would the respondent make available to the MLP?**

At this time Frontier would expect start-up assistance needed by the MLP to be minimal, as Frontier would provide all four functional areas. This question can better be addressed in response to a more detailed RFP.

Maintenance

- **Should the town contract out maintenance as needed or have an ongoing service contract?**

Frontier's approach would be to provide all required maintenance services.

- **What ongoing operating and other costs will be required to sustain and operate the network?**

Best answered via an RFP.

- **What kind of service life should be expected from network hardware (including embedded software)? Describe the financial plan for sustaining the infrastructure through reinvestment as network hardware reaches the end of its useful life.**

The network we deploy will be scalable with minimal impact to the core hardware. Using the newest technologies available for an infrastructure, we can meet end user requirements as they grow by simple card change-outs. This high-quality network will also allow us to continually monitor our equipment as usage grows.

- **How should the operator and New Marlborough plan for network refresh and one-time maintenance, such as repairing storm damage?**

To be determined

Network Operator

- **Does the Network Operator need a local presence?**

It is best if the Network Operator has a local presence rather than rely on third parties for work requiring on-site presence. Frontier would provide a model of operation which combines remote centralized monitoring and configuration support with local presence for those activities that require hands-on involvement.

- **What ongoing operating and other costs will be required to sustain and operate the network?**

Best answered via an RFP.

- **What technical aspects should the Town consider when building the network?**

Interconnectivity with the existing middle mile network.

- **What attributes should the Town consider when selecting an operator?**

The ability to design, build, and operate a scalable network that future-proofs the ability to serve an ever-growing tech-savvy customer base.

- **What monitoring and reporting capabilities would the respondent recommend New Marlborough include in the RFP?**

The capability to monitor congestion on the network.

Service Provider

- **Are there a minimum number of subscribers that an operator would need to participate?**

The RFI provided a clear description of the available subscriber base assuming a complete build out within the Town, as is expected. Determination of a minimum number of subscribers is dependent upon specific operational revenue and cost forecasts to be determined through preparation of an RFP response.

- **With whom should the customer relationship exist? The MLP or the Service Provider? What other considerations are important?**

The Service Provider.

- **What ownership model does the respondent recommend for other CPE past the ONTs?**

This is best assessed and determined in response to an RFP.

CONTRACTS

- **What kind of legal structure needs to be in place in terms of Service Level Agreements between the town and the vendors? What conditions would the operator want with respect to customers, i.e. should the town guarantee customers a minimum speed?**

Depending on Massachusetts video franchising requirements, the awarded FTTH entity should also be granted video franchise. Service Level Agreements and other customer-related conditions are open for discussion.

- **How should customer information be handled? Where will the subscriber usage information live, and who will have access to it and for how long? What privacy rules will apply?**

Customer information would be handled in a manner compliant with all local, state and federal law. All customer information, including usage information, will be stored in secure facilities and will be retained as long as necessary for the business purposes and to meet legal retention requirements.

- **Should the vendor have any right to sell or otherwise benefit from any of New Marlborough's subscriber information based on usage patterns?**

This response would depend on the larger relationship between the Town and the Network Operator/Service provider, and is best addressed in the RFP.

- **How long of a contract does the operator need to be incentivized to bid on the RFP?**

For initial planning purposes the Town should consider a minimum of a 3 year term.

- **What contracts does the operator need in order to use public infrastructure or rights of way from New Marlborough?**

Unknown at this time.

- **What could be expected in terms of multi-vendor arrangements?**

Our recommendation is that Town would select a single vendor for the project. If that isn't possible then a prime contractor-subcontractor relationship should be pursued to eliminate the Town's management of the project diversity amongst suppliers.

- **Will contracts with more than one vendor be required to complete this project?**

Frontier's approach would not anticipate the Town needing to contract with any additional vendors/

- **Will the respondent use subcontractors?**

Unknown at this time

- **Does the respondent have a supplier diversity plan?**

Frontier sources equipment, materials and services from a wide variety of suppliers to ensure any interruption in availability can be mitigated. Frontier also maintains productive relationships with key manufactures and that assures it receives proper treatment should shortages or other supply issues occur. Frontier also proudly supports minority, women and veteran-owned business and requests all such suppliers to self-identify when working with us.

Does the respondent plan to support local businesses? How? Please include specifics.

Yes. Specifics of Frontier's approach to support local businesses will be provided in an RFP response.

- **How much time does the respondent need to respond to an RFP?**

45-60 Business Days