



Angie Lopes Ellison
Town Administrator
Town of Fairhaven
40 Center Street
Fairhaven, MA 02719

Wednesday, June 14, 2023

RE: Contract/Project Closing Report

To Angie Lopes Ellison,

The intent of this report is fulfill your request for a detailed report of the work performed by EntryPoint as project management services under the contract executed in November 2022.

Pre-Contract History

EntryPoint Networks was made aware of a municipal fiber grant opportunity in April of 2022 through it's work with the State Broadband Office. Subsequently, EntryPoint assisted the Town of Fairhaven in administering a grant application at no cost to the town as a trusted partner.

The application's stated goals would extend fiber from the existing municipal fiber asset to the 163 State owned public housing living units located within the Dana Court and Oxford Terrace properties to improve pricing and service levels for the tenants. This work could serve as a foundation for future improvements in public safety, civic engagement, community resiliency, and the local economy for both the public housing properties and the surrounding neighborhoods. The budget estimate for the overall project, as submitted, was \$324,550. The project estimate relied on \$250,000 in grant funding combined with match funding of \$37,500 from the Town and \$37,050 from public housing as either in kind or direct contributions.

As a part of project development, EntryPoint facilitated and participated in meetings that included town leadership and public housing management to confirm the stakeholder's support for the application and verify their ability to actively participate. High level project design would place a small telecommunications shelter that would house the fiber terminations and equipment necessary to create the open access network. Individual fiber strands would be installed from a termination inside the shelter into each of the 163 living units and Customer Premise Equipment would be installed. Public housing residents desiring service would not require any installation but would be able to simply plug into the network device located in their unit, create an account, select their service and payment method and the service(s) would all be provisioned and available on demand.

Fairhaven was notified of the grant award some months later. In October 2022 Fairhaven reached out to EntryPoint requesting assistance with 'project management' due to a lack of both technical understanding and internal capacity. A Management Services Agreement that established a formal arrangement for EntryPoint to 'assist the Municipality to construct the Project' was provided and executed in November. A limit of \$9,800 was placed on the agreement out of expediency because of the short timeline available for project completion under the grant agreement.

To assist the Town with the project, EntryPoint's Projects Director at the time, Ben Miller, performed a local site visit at the public housing property in Fairhaven on



12/16/2022 with Town leadership and housing management to discuss the project and outline a path forward. Outcomes from that meeting included the following:

1. Town administration was undergoing change.
2. Housing management had recently changed.
3. The housing property was having a backup generator installed which would have an impact on the project design.
4. The greatest risks to the project were the short timeline for completion as provided in the grant application and market volatility (materials and labor availability and cost increases).

Contract Work Performed by Month

December 2022: Early in December EntryPoint engaged in sourcing Internet Service Providers (ISPs) willing to provide service to the public housing residents using the projects constructed infrastructure. Using industry standard tools research was performed to identify telecommunications assets in the area capable of supporting a carrier neutral interconnect. After some hours of research, it was determined that the local area assets were owned by the local phone and cable company. They proved to be unable or unwilling to provide access to any new provider on their infrastructure. Further research found that OpenCape was serving the Fairhaven police department.

OpenCape was established in 2007 to provide broadband services to the cape region. OpenCape's mission is to ensure that all segments of the population have access to robust, reliable, and affordable internet connectivity. They were willing to use their fiber optic network to connect the public housing locations and deliver cost effective internet service.

An introductory meeting was held in December initially to verify project alignment and OpenCape's capacity to support the project. Secondary meetings were held to discuss expectations, including potential costs, customer support responsibilities, technical aspects, and timelines.

EntryPoint performed a site visit to discuss expectations and gain support from local stakeholders. The new public housing management was not informed of the project, and some time was spent outlining the project, objectives, and deliverables. Challenges to locating a small fiber shelter on the property were identified. The housing authority was sensitive to the location and how it would be powered. Due to the cost limitations of the project and market availability, purchasing a used shelter was recommended, and well received by the stakeholders.

Used shelter building design criteria were identified. Standard shelter design criteria will typically accommodate installation in most areas. Fairhaven wind load as a coastal town was identified to be 150 mph for essential infrastructure, and a preference for 3-phase power was also identified. These criteria are not commonly used, which made sourcing a used shelter challenging. This required extra time to find, evaluate costs, and procure a compliant structure.

To better support the available project budget and timeline, the concept of an exterior micro duct installation was discussed with the stakeholders. This would involve the installation of a single micro duct from the fiber shelter to the exterior of each unit, where the exterior wall would be penetrated to create a fiber path into the interior of each living unit. Cost models showed that installing a single large cable to



the building with interior improvements that would create fiber raceways to get a fiber strand to each unit through the building's interior spaces would result in high construction costs compared to running all fiber strands on the exterior in micro ducts. Notably, the local cable operator recently ran a coaxial line to each unit as an improvement, and they also ran all the coaxial drops to each unit on the exterior.

Additionally, while it was initially thought that the municipal fiber system was already landed and in use inside the public housing property, the site visit revealed that the duct that was installed from the street to the interior of the housing facility when the municipal fiber system was constructed was blocked and no fiber path had been installed as expected.

Commtract is the area contractor that has constructed the Town's current municipal fiber optic asset. They are also under contract for maintenance. For this reason, it was necessary for EntryPoint to contact Commtract to exchange information. EntryPoint requested information relative to the current fiber asset, and Commtract informed EntryPoint of current operations and warranties to assure that any future work would not invalidate any existing warranties.

Billable hours for the month included contract completion, project management organization, middle mile research, and service provider acquisition activities for a total of **3.5 billable hours** that were billed to the town under the agreement.

January 2023: Industry outlets were contacted and provided with the fiber shelter design criteria to source a shelter that would fit within the project budget and comply with the housing authority's requirements. Due to the specific nature of some of the design requirements, options were limited. Regular contact was maintained with potential suppliers and the Town to procure a solution that met all stakeholders' expectations and project needs.

Billable hours for the month included developing shelter design criteria, performing a used market availability analysis, and sharing potential solutions with local stakeholders for approval. These activities resulted in **4 billable hours** under the agreement.

February 2023: Very few fiber shelters compliant with the Town's design criteria were found to be available in the used market. The few available units were in distant states and larger than required. Shipping costs could result in costs that might exceed the available budget. Additionally, recognizing that the available shelter site space was limited on the housing property, and that management was sensitive to its location, project management efforts focused on how the available shelters could potentially be located on the property. Fairhaven public works was engaged to request utility locates on the property to determine the most efficient way to locate the improvements within the property. Initial site designs were created electronically using Google Earth to determine the feasibility for the available options.

More design detail was required to inform decision making, including product availability. Initial outreach to potential labor and material providers was made to determine the best path to develop project specifications. A third-party engineering firm was approached to provide pricing to develop drawings both to facilitate stakeholder approvals and lead to construction drawings.

Three update meetings were held with Town leadership throughout the month, including a virtual walk through of the public housing property in an attempt find a shelter location and size acceptable to housing management.



Billable hours for the month included continuing market research to determine the availability of a used shelter acceptable to all parties, high level design modeling in software to determine existing utility placement to coordinate efficient fiber improvement placement and market availability for fiber duct and cable products and solutions. These activities resulted in **10 billable hours** under the agreement.

March 2023: The decision was made to move forward with a third-party engineering firm to create final construction drawings. The Town's fiber asset was uploaded into the firm's GIS/Auto Cad software for modeling. Preferred duct and fiber standards were identified and an initial high-level design that included shelter and duct locations on the lot was shared with the stakeholders in a Google Earth format. It was determined that while the shelter could possibly be powered by an extension from the public housing facility, utility power would be required in the future. The local electric utility and the electrical designer, and contractor working on the generator improvement at the site were engaged to assist with design decisions.

During this month, locating the fiber shelter on the property became a critical need as this location would drive all other design metrics and costs. There were hours devoted to communicating back and forth with property management. These communications included graphical representations of solutions in map format and actual pictures of shelter options and installations. Design efforts also included the sharing of potential solutions both for materials, such as vaults, pedestals, fiber, outside enclosures, and exterior building trims.

Hexatronics was identified as a product supplier of end-to-end micro duct solutions for both exterior and interior improvements. Multiple meetings were held with Hexatronics and design professionals to determine what products and design methodology would achieve the highest level of efficiency for the project. Datasheets were collected and standards identified that could be used to inform processes going forward. Exterior building trim products were identified and priced to protect the project budget before advancing the design to utilize products.

Commcontract, electrical contractors, and other specialty contractors were consulted to analyze budget performance and gauge contractor interest in responding to a procurement process from the Town. It was determined that many contractors would not respond due to their current workload and the effort surrounding responding to a public RFP of this size.

The final week of the month included meetings on three separate days to resolve the shelter location, and in the absence of a shelter solution, an interior space within the property with power and environmental controls capable of housing the core network electronics. This work involved shifting the focus from designing an approved shelter location within the property, to identifying an existing interior space capable of housing the core network equipment that would also be acceptable to management.

Billable hours for the month included stakeholder meetings to discuss design decisions, potential shelter locations, electric service for the shelter, fiber and duct locations, and design standards. High level design modeling was shared with the Town and housing authority for review. A third-party contractor was used for some of the drafting activities and to create a GIS compliant design. A video conference with stakeholders at the housing facilities was held to try and identify an alternate interior location for the core network. These activities resulted in **29 billable hours** under the agreement and an engineering/drafting fee of \$1,182.50 incurred and paid by EntryPoint. By the end of March EntryPoint's contract budget only had another 1.5 hours remaining, with EntryPoint not invoicing for some hours, travel, or third-

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party engineering work. This highlights the need to resolve any outstanding design issues and find a management solution for the remainder of the project.

April 2023: The inability of the design/management team to identify a fiber shelter location acceptable to all stakeholders would result in project failure without an alternative location to house the equipment. The only potential alternatives would need to be already existing interior spaces capable of supporting equipment needs due to the project's budget and shrinking timeline. An in-person site visit was scheduled and performed on 4/12/2023. An interior space was identified in the southwest corner of the Oxford Terrace property in an old boiler room. The room once housed large coal fired boilers to supply hot water heating, but the systems have been upgraded to very small natural gas units leaving copious amounts of available floorspace in the boiler room. Additionally, there are existing phone terminations in the room and electrical panels, both demonstrate the room's capacity to support network equipment.

Housing management was amenable to relocating the core network into this interior space as it was remote from the private rooms, unused, and was easily upgraded to support the required racking, electrical circuits, and environmental controls. High level design considerations were adjusted to accommodate this new design.

Project complexities, combined with the requirement for high levels of outside project management on behalf of the Town, and the consumption of the \$9,800 available to EntryPoint to assist with project management demonstrated a requirement to establish a sustainable path forward for the project. Based on the project history, the current design information, the market conditions, and the limited availability of the skillsets, materials, and labor force required, a sole source recommendation was compiled by Commtract and EntryPoint to complete design, acquire materials, install the improvements, and turn up the services within the timeline and budget outlined in the grant application. This was presented to Town leadership on 4/28/2023 and rejected. EntryPoint was asked to provide the content for a Town issued RFP for materials and labor to construct the improvements outlined in the grant agreement. The current state of design is sufficient to inform a procurement process wherein the selected contractor will have to determine the exact placement of the fiber duct and vaults as a part of construction based on existing conditions.

The greatest project risks continue to be market availability of materials and labor combined with the technical nature of the work to be performed in a short period of time. EntryPoint has clearly articulated these concerns to city leadership.

Billable hours for the month included remote and in-person, onsite stakeholder meetings to discuss design adjustments to accommodate relocating the core network equipment from a shelter placed on the property into an interior space acceptable to all parties. No travel costs were charged to the Town for the onsite coordination meeting. These activities resulted in **7 billable hours** under the agreement.

May 2023: Two hours were spent creating RFP content for the Town, and another two hours were spent collecting historical information and creating this report for the Town.

EntryPoint's total hourly contribution to the project exceeds 62 hours combined with travel expenses for two site visits, and over \$1,800 in engineering costs. Fairhaven currently carries a balance of \$9,000 due for services performed.

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It is our hope that this detailed report is sufficient to close out our engagement and that the Town will release payment for the services rendered.

Please let us know if you have any further questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'B. Patterson', with a long horizontal flourish extending to the right.

Bruce Patterson
Head of Operations

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