NYS Consolidated Funding Application # 135202

**Organization Name:** Livingston County

Project Name: MIP City: State:

Created on March 8, 2024 - 02:15 PM Application finalized on March 8, 2024 - 02:08 PM

# Region

Finger Lakes

# Questionnaire Questions & Answers

**Standard Question** 

# **ConnectALL – Municipal Infrastructure Program (MIP)**

Q\_15017 Do you acknowledge that the project(s) you are proposing for grant funding will meet the minimum project requirements as stated in the RFA and any subsequently published updates?

Yes

# **Applicant Information**

**Applicant** 

Name of the Primary Applicant Organization Livingston County

Applicant Street Address 6 Court Street, Room 302

Applicant City Geneseo
Applicant State NY

Applicant ZIP Code (please use ZIP+4 if known) 14454-1403

Applicant organization website https://www.livingstoncounty.us/

Q 14435 Is the applicant "Doing Business As" (DBA)?

No

## **Primary Contact Information**

**Primary Contact** 

Primary Contact First Name Megan
Primary Contact Last Name Crowe

Primary Contact Title

Deputy Planning
Director

Primary Contact Telephone

585-243-7550

Primary Contact Email Address mcrowe@ co.livingston.ny.us

Q\_14736 What is the type of entity for the lead applicant?

## Eligible Public Applicant

Q 14693 Please specify the Public entity type for the lead Applicant:

#### (This question is associated with your answer selection in question: Q\_14736)

### County

Q\_14443 Select an applicant ID type from the list below that you normally use to identify your organization on application forms.

## Employee Identification Number (EIN)

Q 14444 Based on your selection from the previous question, enter the associated ID number.

#### 16-6002561

Q\_14445 If you are a business, have you been certified as a New York State Minority or Women-owned Business Enterprise (MWBE)?

#### N/A

Q 14695 What is the expected infrastructure ownership structure?

#### **Public**

Q\_14696 Based on your selection from the previous question, please specify the entity or entities and entity type that will ultimately own the proposed infrastructure.

## Livingston County or Livingston County Broadband, LDC

Q\_14446 Please indicate if this application is submitted by a partnership or joint venture.

No

Q\_14766 Please provide brief description of the operating model, specifying whether and how the infrastructure will be used by one or more internet service providers and what will be required of those ISPs.

Livingston County will own the network infrastructure then utilize contractual term agreements to operate and maintain the network. At the moment, one provider is anticipated to utilize the network based on a prior partnership with the County. While one ISP has been identified for the operation and maintenance for the MIP, Livingston County acknowledges a benefit of owning the network allows the County to exert meaningful control over any ISP that may operate or maintain the network beyond the first term. To ensure services are delivered up to specification, the following requirements will be formalized within the operator and maintenance agreement:

- Base level service will be at least 100 Mbps download/upload.
- Speeds will be symmetrical.
- Must have latency from the ONU to the local gateway of less than 10 ms.
- Cost of base level service will be under \$60.
- Use reputable vendors that hold warrantees (no white box equipment).
- Buy American (if possible, provide reasonable explanation of why it cannot be met)
- FTTH Provider (Minimum GPON or EPON)
- Participate in the ACP or alternate affordability program.
- Must provide managed WiFi6 or better available through an integrated ONU or as a separate device.
- Enforcement Require customer credits from ISP for network outages or deficiencies.

Q\_14697 How many years has the Primary Applicant's organization been operating in New York?

150

Q 14458 Briefly describe the history of the Applicant or team as well as ownership and legal structure.

Livingston County was founded in 1821 and is currently comprised of 17 Towns and 9 Villages. Livingston County is a non-chartered county in the State of New York. The County government is a Board of Supervisors structure where the Board consists of seventeen members, each representing one town. Each member's vote is weighted dependent upon the population within the town he/she represents. All votes are weighted as a simple majority vote or a 2/3-majority vote. The county departments can be organized into three functional areas: Administration, Public Services and Human Services. Aside from County Department tasks, there are a number of services offered to County residents through County Related Agencies. These agencies have their own independent Board of Directors, but work closely with the County Departments. County related agencies receive funds through the County and frequently have County Supervisors sit on their board.

Q\_14459 Briefly describe the Applicant's experience in broadband deployment in New York.

Livingston County as the applicant has been working to expand fiber to the premise broadband solutions in our county since the 2018 Asset Inventory was completed. In 2019, technical expertise was sought for a Broadband Deployment Strategy conducted by Hunt Engineers. Utilizing the data from federal, State, local and private sources, the team has created a set of data for existing broadband infrastructure in the county. The strategy and dataset included a survey of residents which was instrumental to inform officials of service providers, speeds and the interest of citizens to have governmental solutions to lack of internet service. Livingston County solicited a formal Request for Proposals to engage with Empire Access (ISP) to deploy a public private partnership and ultimately was funded by USDA's ReConnect program to build a fiber backbone and provide service to county residents. The team (Livingston County, Empire Access and Hunt EAS) has been established since 2021 and working on fiber deployment alongside other subcontractors. We are experienced, local and have the established relationships necessary for successful deployment of additional fiber deployment grants.

Q\_14698 How does the Applicant or team plan to staff for the project?

#### Applicant or team already have the skilled resources required to staff the project

Q\_14764 Does the primary applicant have experience in broadband deployment – planning, project managing, delivering and/or operating broadband infrastructure?

### Successful broadband deployment in New York

Q\_14751 For aerial construction of the proposed broadband deployment, what is the applicant teams' ability to mitigate cost and timeline risks as it relates to pole make-ready and licensing?

#### None of the above

Q\_14467 Describe prior experience coordinating with permitting authorities, utility pole owners, and existing utilities.

The Livingston County Broadband team has decades of experience with local permitting jurisdictions, utility pole owners and existing utility providers. Our team is currently engaged in a countywide USDA ReConnect project, expanding broadband service to rural residents primarily via existing electric and telecommunications poles. Livingston County has two incumbent electric providers in Avangrid (NYSEG) and National Grid. Hunt EAS will provide all staking, submit the pole application and see the applications through the reconciliation and bidding process. Additionally, all highway work and occupancy permit from the NYSDOT, Livingston County and local municipalities will be handled by a combination of the Hunt project management team and the Construction Managent firm. Some examples of this permitting work are in the previously mentioned USDA ReConnect project which consisted of just over 300 miles of make-ready construction and highway work permitting.

Q\_14700 For underground construction of the proposed broadband deployment, what is the applicant teams' ability to mitigate cost and timeline risks as it relates to pathway to receive expedited permitting for right-of-way (ROW)?

#### Can easily get permits and ROW

Q\_14468 Do you have experience managing state or federal grants or loans for broadband

Yes

Q\_14469 Have any of your grants or loans for broadband deployment been suspended, paused, or rescinded at any time due to lack of performance or compliance with program rules or applicable law?

(This question is associated with your answer selection in question: Q 14468)

No

Q\_14470 Briefly outline the Applicant's background in overseeing state or federal grants or loans for broadband deployment. If applicable, explain the circumstances that led to any grants or loans that faced suspension, pause, or rescission due to performance issues or non-compliance with program regulations or relevant laws.

### (This question is associated with your answer selection in question: Q\_14468)

Livingston County, in partnership with Empire Access, received an \$11.3 million grant from Round 2 of the United States Department of Agriculture's Rural Development Broadband ReConnect program. Livingston County as partner on the application provided the match requirement (\$3.7 million) for a project total of \$15 million. The purpose of the USDA ReConnect grant is to provide fiber to the premise broadband internet service to the most rural unserved and underserved addresses within Livingston County. The public private partnership project team consists of local officials from Livingston County, Empire Access staff for deployment, and technical expertise in design, permitting and construction from Hunt EAS. This team is already established, functional and successful at deployment of federal grant funds for broadband deployment. The public private partnership team is committed to the administration of federal grant funding to improve both broadband infrastructure and access in our County. There are no circumstances for grants or loans facing suspension, pause or rescission with Livingston County and partners for broadband deployment.

Q\_14473 Describe past record of responding to information requests to share data with the NYS Department of Public Service concerning broadband mapping initiatives, including the length of time taken to furnish the requested information.

Livingston County has worked extensively and in a timely manner with NYSDPS for broadband data mapping initiatives including, sharing the results of our county-wide survey (2019) and the Municipal Analysis (2022). All County data, including over 2, 000 responses has been shared to assist in refining the map fabric to produce the most accurate information for both locations and service providers.

Q\_14701 Describe your current or past participation in the FCC's Affordable Connectivity Program (ACP) or other public subsidy programs.

In 2022, Livingston County was selected as a recipient of the FCC's Affordable Connectivity Program Outreach grant and received \$50,000 to help promote the availability of the program, highlight its benefits and ultimately assist eligible households with registration efforts. As part of this grant award, the County developed a marketing and promotion strategy that included a robust media outreach strategy using radio, print, grassroots and online marketing efforts to promote the ACP. Our application's initial focus was supplying information on the program by engaging in a public information campaign that touches all towns, villages, municipalities, schools and locations throughout its borders by using regional print and radio media outlets as well as social media campaigns,

billboards, signage at municipal town and village halls, take-home informational handouts distributed at schools and direct-mail and paid email marketing initiatives. Without the implementation of these awareness measures, residents of Livingston County may not have access to information regarding the ACP and its registration process, which will result in lower participation rates among eligible households and a missed opportunity for financial relief. To date, the County developed a paid social media campaign, worked to develop radio-friendly advertising solutions through FM and AM channels as well as through online platforms like Spotify and Pandora. In addition, Livingston County has worked with members of the FCC's grant team to ensure that guidelines of the program are being met, reporting requirements are fulfilled in a timely fashion and the goals of the program are being met. Unfortunately, as this program is in a wind-down status pending funding from Congress the implementation of ACP grant promotions has also been put on pause. Any public subsidy program and funding for the ACP is supported by Livingston County and the County will work with ISP partners to ensure that public subsidy programs are implemented on this network.

Q\_14702 Is the applicant team local to the proposed broadband deployment region in the New York State?

Yes

### **Approach and Scope of Services**

Q\_14703 Describe the broadband infrastructure project and the specific geography and locations it would service (the Project Area(s))?

The project will reside exclusively in Livingston County with a few short network segments briefly leaving the county for a specific purpose and to complete connections to other municipal open access systems. The project areas do not overlap any other federally funded projects with the exception of the Frontier RDOF award of 2022. This area was included as we have experience with USDA treating these territories as eligible for grant funds due to the "lack of meaningful action by Frontier." The team is more than willing to engage with the CAO to remove the territories if necessary. These areas are included in the project area as it is our belief that the likelihood of Frontier moving forward fiber deployment is ideal and supported, but not likely.

Q\_14704 What are the wealth and income demographics for the proposed Project Area(s)?

Predominantly mid-income mixed investment area

Q\_14705 Provide a list of the existing Internet Service Provider(s) in the Project Area(s) along with their advertised range of speed (download and upload) in Mbps and any other services offered.

The focus of this project is to serve the remaining unserved and underserved residents of Livingston County. In those unserved and underserved areas, the existing ISP options include Frontier copper (ADSL2+), Satellite or cellular carriers. Frontier is the Incumbent Local Exchange Carrier (ILEC) for most of Livingston County and is best positioned to serve the unserved customers. Throughput speeds on these legacy copper networks range from the single digit Mbps to 25Mbps depending on distance from the active equipment and line quality, both of which are challenges in rural environments. Despite two RDOF awards within Livingston County, the RDOF funding has not progressed past the award stage for Frontier to update their infrastructure. Any improvements by Frontier are encouraged by Livingston County. Satellite service and cellular service are cost prohibitive for low/moderate income households, have poor service quality and have expensive data limits. Rather than discuss the numerous challenges with these types of

providers in depth, we will summarize that the Livingston County officials understand the capability of fiber technology and the return on investment. Because of this, it is the County's decision to invest in a sustainable technology like fiber for a municipal network.

Q\_14706 Describe any patterns of non-investment or past challenges preventing Internet Service Provider(s) to provider services in the Project Area(s).

Livingston County, like many others in Western New York, lacked meaningful investment in broadband without government involvement including grants and auctioned territories. Hughes Net (satellite) and Armstrong were the companies awarded for expansion by the NYS Broadband Office, including portions of Livingston County in the Towns of Portage, Nunda, Ossian and West Sparta. This project is completed and residents may subscribe for affordable broadband services. Typically, ISPs are not interested in expanding services to rural and geographically diverse territories due to the high cost of deployment and the low take rates due to household income. This has resulted in poor service from telephone, wireless and satellite infrastructure. Through the Light Up Livingston project, County officials are committed to facilitating broadband internet deployment as they recognize the importance of high speed internet to every address for an economic, health and quality of life aspect.

For the proposed Project Area(s), please provide the numbers of broadband serviceable locations (unserved, underserved, & served locations).

Note: Total is auto-populated after saving & moving to next page.

#### **Broadband Serviceable Locations**

**Number of Locations** 

Unserved Locations1246Underserved Locations242Served Locations2573Total4,061

For the proposed Project Area(s), please provide the numbers of broadband serviceable locations (residential, business, & community anchor institutions).

Note: Total is auto-populated after saving & moving to next page.

## **Broadband Serviceable Locations Type**

**Number of Locations** 

Residential Locations 3740
Business Locations 316
Community Anchor Institutions 5

**Total** 4,061

For the proposed Project Area(s), please provide the total miles of new fiber construction being proposed (aerial fiber construction, underground fiber construction, & drop fiber (aerial and underground) for the last-mile).

Note: Total is auto-populated after saving & moving to next page.

## Miles of New Fiber Construction Proposed

Aerial Fiber Construction	Total Miles 298
Inderground Fiber Construction	0
Prop Fiber (Aerial & Underground) For the Last-Mi	<b>le</b> 0
<b>Total</b>	298

For the proposed Project Area(s), please provide the financial details (MIP grant requested, available or earmarked public funds, & available private funds). The "Total" should represent the Total Project Cost.

Note: Total is auto-populated after saving & moving to next page.

#### Financial Details

Total Dollars
23,879,730
3112,000
60
23,991,730
3,991

Q\_14707 Briefly provide the information about the available or earmarked public funds and/or the available private funds.

Since 2019 Livingston County has made a significant investment in broadband data gathering, mapping, grant applications, gathering citizen input and refining the strategy for infrastructure deployment. The County has invested \$ 141, 364 dollars in consultant services and hundreds of hours of County staff time to assist with developing the county's broadband strategy. We feel that we have the data to best understand the broadband landscape, service providers, future expansions and needs based on this time and financial investment. In order to continue this effort, Livingston County has contractual

agreements to the expense of \$112,000 that are earmarked public funds.

Q\_14708 Describe Applicant or teams' access to capital to address any potential debt or operating revenue shortfalls.

If awarded funding, the County will enter an operator and maintenance agreement with a provider that will contain a provision for the operator agreement's cost will be credited via a revenue share between the ISP and the County. This means that the county will receive a revenue share from any provider who chooses to be on the network and the operator agreement will credit that against the costs of operating and maintaining the network. In order to completely credit the O& M agreement, a 20% take rate of the 4, 061 addresses will be required. This would fund the O& M Agreement and contribute a small amount to a maintenance fund. In the gap year of 2025-26, Livingston County will budget the projected maintenance costs and use local budget funds.

Q\_14709 Describe the methodology and any assumptions made to determine the cost estimates.

The methodology used for the cost estimates was to first use an upward method to project straight line construction costs based on distances and quantities. The estimate is then approached using downward methods, analyzing each cost category to determine what costs are appropriate, where efficiency can be achieved and incorporate any changes/method that need to be estimated. Additionally, make-ready estimating was done with the approach of using a NTE budget requiring value engineering if the budget is exceeded. This provides a guarantee they make-ready costs will be in line with expectations. The bulk of new construction costs were derived from local data sourced from both work within and outside of Livingston County. Other assumptions include 3% inflation over the life of the project and a potential labor shortage in the state for the years of 2025 and 2026.

Q\_14710 What is the projected take-rate % in the first five years of broadband service?

40

Q 14711 What is the take-rate % to break-even the Operations and Maintenance (O&M) expenses?

20

Q\_14712 Describe efforts that will be made by the Applicant or team to keep costs reasonable and competitive.

Cost for the project will be kept reasonable by using three methods. The first method is to keep make-ready costs low. Make-ready construction can be the highest cost for any project where aerial construction is the primary method of installation. To keep these cost low, high cost make ready that is billable to Livingston County will be minimized during the reconciliation process of the pole applications. This is done by estimating cost of consecutive high cost billable poles and determining if a new pole or plowed duct can be used as an alternative route. Second, all make ready will be bid to multiple contractors to get the best possible pricing. This includes both electrical make-ready and telco make-ready construction. Thirdly, Livingston will attempt to consolidate as much of the telco make ready costs and new attachments to a single contractor, reducing the mobilization costs from multiple contractors. This consolidation is Livingston County's effort to create a "one touch" makeready situation, or as close to "one touch" as possible.

Q\_14753 Please describe the revenue sharing model between the Applicant and partner(s), including but not limited to the Internet Service Provider (ISP).

If awarded funding, the County will enter an operator and maintenance agreement with a provider that will contain a provision for the operator agreement's cost to be credited via a revenue share between the ISP and the County. This means that the county will receive a revenue share from any provider who chooses to be on the network and the operator agreement will credit that against the costs of operating and maintaining the network. Additional ISPs can join the network and pay a fee per customer in order for the County to recoup any cost to install the customer and maintain operations. This fee will be negotiable depending on the scope and scale of what they are trying to accomplish.

Q\_14713 For any proposed public-private partnership, what is the minimum duration in years of shared public ownership?

0

Q\_14714 For any proposed acquisitions as a part of the project (e.g. fiber leases), describe the age and remaining useful life of the infrastructure.

Livingston County will acquire a fiber lease as part of this project for the fiber backbone. The fiber lease will be part of 2024 constructed fiber optic infrastructure. This will provide a useful life of a minimum 20 years.

Q\_14715 Within how many months of the project kick-off are the first connections expected?

12

Q\_14716 Within how many months of the project kick-off will the project complete?

20

Q\_14717 Describe the work that has been done to date in developing the project and explain why this grant is necessary to advance the Applicant's project to implementation.

Livingston County began its broadband development initiatives in 2019, conducting a study that included a residential/business survey to determine the level of need in the County. As a result of this planning, the County issued an RFP to local FTTH service providers to engage in a partnership that sought funding to address Livingston County's needs. This opportunity came by way of USDA ReConnect funding in 2021. A core component of the ReConnect project is a countywide backbone that lays the foundation for future infrastructure, such as the project proposed for the Municipal Infrastructure Program. Specific work that has been done to date on the MIP is a Schematic Design of the proposed network and a constructability review to determine what level of design contingency should be set aside during the design process. Additionally, project planning has been conducted by the Livingston County team to identify risks associated with the project and put measures in place to mitigate/respond to those risk factors. Please see the Approach and Scope Document for these measures.

Q 14718 How does the Applicant plan to share the newly built network infrastructure?

Open-access network with transparent pricing and unbiased availability for multiple ISP(s)

Q\_14719 Describe the identified risks for the proposed project and plans to mitigate those (if identified).

A detailed risk analysis was conducted while planning the Municipal Infrastructure Program and has been uploaded to the additional documents section of the application. The risk factors identified in the analysis were as follows: Overall Project Timeline, Construction Schedule, Pole Application Timelines and Material Availability. The majority of risk in the project surrounds the schedule and implementation timeline for permitting, and make-ready which then cascades into the construction schedule and this overall project timeline. To mitigate the risk, Livingston County has developed a comprehensive Project management and Construction Management Strategy. This strategy implants a Project Management Professional (PMP) on the front end of the project and then implementing a dedicated Construction Management Firm to ensure all construction is completed on schedule. Both roles will be involved throughout the process but have distinct roles specific to the planning, permitting, design and construction. The PMP will create, schedule and assign the work structure breakdown to the team then track tasks/schedule/budget through the design process. The CM will provide a complimentary role during design, estimating and providing construction/permitting support. The CM will then take over the primary management role during construction, including make ready construction. Likewise, the PMP will provide management of engineering support during construction, including but not limited to Requests for Information (RFI), submittals, change management, specification interpretation, etc. All parties, including Livingston County, will use a OECM (Owner, Engineer, Construction Management) meeting to coordinate all activities across the project once monthly. Construction meetings will occur bi-weekly and include the owner, engineer, construction manager and all contractors working on the project.

## **Network Design**

Q\_14720 Is the network design of the proposed Project Area(s) complete or close to complete? Please ensure to upload the network design in whatever stage it is at in the Documents tab.

Close to complete network design

Q 14755 Is the proposed network design completely fiber?

Yes

Q\_14721 Are there any interconnection plans with the existing publicly controlled middle mile and/or last mile infrastructure assets?

Contiguous with public infrastructure

Q\_14722 Describe whether any existing infrastructure would or has been integrated into the design.

Livingston County plans to utilize the network backbone installed by the USDA ReConnect project to take advantage of existing infrastructure. The partnership between Empire Access and Livingston County will facilitate an IRU of the County backbone fiber

for use by Livingston County. Using the 12-strands of the backbone, Livingston will connect to Colocations in Dansville, Wayland, Mt. Morris, Conesus, Caledonia and Lima. Services will originate at the colocation, use the backbone for transport through the county and then finally, use the distribution fiber funded by MIP to serve the defined addresses. Additionally, this project plans to connect to the Southern Tier Network in Wayland, NY as well as, eventually connect to the NY State Thruway Network in order to provide middle mile network infrastructure to the two regional networks.

Q\_14723 Describe performance metrics of your proposed network, including the speeds, latency, average outage, network uptime, and existence of data caps or throttling.

Livingston County is dedicated to the concept of using all fiber optic infrastructure as a full measure to close the digital divide. It is an investment in a sustainable technology that will serve the community for the next 40 years. As opposed to wireless solutions, fiber optic electronics are approximately 10% of the total project cost. To guarantee service delivery, the network will be designed as a Passive Optical Network following the ITE G.984 standard. No distrbution fiber will extend beyond 12 miles or 20 km. This will allow for the following network types to be operated on the network: GPON, EPON, xG-PON, XGS-PON, NG-PON2 or any next generation PON standard that adopts ITE G9. PON has been adopted as the industry standard for both private and common carriers because of its adoption of and building off of ITE G.984, providing a standard that ensures the infrastructure will support new technologies as they are introduced to the market. For this project, Empire Access will use an XGS-OON system to deliver symmetrical service at sub 2 ms latency. In the XGS-PON standard (ITE-T G.9807.1), latency is referred to as "maximum mean signal transfer delay tolerance" and can be no higher than 1.5 ms for the maximum delay time for packet transfers of data only. All splicing will be fusion splicing and all optical splitters will be by fusion splicing, not connectors, in order to reduce reflectance points.

## **Service Quality**

Q\_14760 In addition to completing the Service Tiers and Pricing template under the Documents tab of this application, please also describe the service speeds and means of delivery of any free service tiers or free introductory periods available to end-users. Specify if such options will be generally available without ACP utilization or will require additional qualification.

Lifeline is an FCC program to help low-income households pay for internet and phone services. Lifeline discounts qualifying monthly telephone service, broadband internet service, or bundled voice-broadband packages. Households with an income that is at or below 135% of the Federal Poverty Guidelines are eligible to receive assistance or households with a family member who participates in at least one of these federal assistance programs: SSI, SNAP, Medicaid, Veteran's Pension or Survivor's Pension Benefit and Federal Public Housing Assistance. Empire Access participates in the ACP program and will continue to do so if the program is renewed. The service for these residents will be 100/20 Mbps Download/Upload.

Q\_14724 Describe plans to market the service to customers and plans to work with customers to enroll.

Livingston County will work with internet service providers to market their service and ensure enrollment. Empire Access, a known partner at this time, has provided information regarding their marketing strategy. The Empire marketing strategy typically starts when there are 90 days from serviceability to a given location. Empire runs marketing campaigns at 90, 60, and 30 days from serviceability. The marketing efforts include address-level, social media, radio, and community advertising. Marketing materials include the customer service phone number, an email address, info@empireaccess.com and a link to the website for more information.

Once Empire Access customer service representatives make contact with a customer that is interested in service, representatives gather the necessary information and schedule an install typically within 10 days. Empire Access staff then run a drop from the network to the customer's home and send an install technician to complete the install and answer customer questions.

Q\_14480 Specify the type and daily operating hours for all types of customer service provided for broadband subscribers including phone, email, SMS, and/or in person customer assistance (if provided). How is customer support provided outside of regular working hours and on weekends?

At this point, Livingston County has identified Empire Access for operations and customer service support on the network. Details included here are provided by Empire staff and will be utilized for this MIP deployment. Empire operates a 24/7/365 customer service and network operations center, located in Prattsburgh, New York and Mansfield, Pennsylvania. The customer support teams can be reached via email, phone, or by messaging the company Facebook page. The customer service centers are staffed and available 24/7/365, including holidays. When a customer gets in touch with Empire Access regarding an issue they may be having, the company is able to resolve these issues over the phone or in some cases dispatch a technician to the customers location.

Q\_14481 What aspects of the customer service experience are automated and which are provided through live customer support?

Livingston County intends to contract with Empire Access for customer service. According to Empire Access the 1-800-customer service number is answered immediately by a live, in-house customer service representative.

Q\_14482 What is the scope of any subcontractors providing customer support?

Livingston County intends to subcontract all customer support to the ISP partner, Empire Access. All support services will be provided in house by Empire Access.

Q\_14725 Describe how Applicant will ensure long-term, high-quality connectivity and support for residents, including a proposed Service-Level Agreement.

Livingston County intends to develop an agreement with Empire Access (and other ISPs as they commit to the network) to address specifics regarding connectivity and support to ensure that all service level metrics for the network are maintained. These network performance metrics such as uptime, speed, latency, packet delivery, and others would be part of the contractual obligation from Empire Access to Livingston County. If material network performance metrics are missed or if there is chronic non-performance, Livingston County would explore the right to replace Empire as the operator of the network. It is not anticipated that this would occur given the existing relationship between Livingston County and Empire Access. According to ISP representatives, Empire remains committed to providing communications services and solutions to local customers ranging from residential, retail, manufacturing, carriers, wineries, banks, health care facilities, schools and law enforcement agencies.

As the company continues to grow and evolve, the focus remains on exceeding customers' expectations with high quality service. In 2021, PC Mag named Empire the fastest internet provider in the United States. In 2022, PC Mag named Empire the fastest internet provider in the US Northeast. Empire Access aims to extend the same award-winning service to the proposed network and the residents it will serve.

Empire continues to maintain networks and have increased the available residential service speeds while simultaneously while keeping prices steady. There are also monitoring systems in place for network equipment that alert to possible outages as soon as possible, allowing crew to dispatch to investigate and limit downtime.

Q\_14484 How will the Applicant adhere to net neutrality principles, including commitments to no blocking, no throttling, no unreasonable discrimination in the transmittal of lawful internet traffic, and no paid prioritization?

Livingston County is committed will require all service providers, including Empire Access, to all net neutrality principles. Net Neutrality principles are already practiced by Empire and it's Livingston County's belief that partnering with regional internet service providers increases the likelihood of compliance with this policy.

Q\_14485 What measures and strategies will the Applicant take to safeguard the privacy and cybersecurity of residents and other end-users?

Livingston County will ensure that ISPs are safeguarding the privacy and security of user data as they join the network. At this time, Empire Access collects typical information such as cookies and browser types to make improvements to the system. This data is kept protected and not shared outside of the organization. Livingston County will ensure any provider on their network will have a similar privacy policy in place.

https://www.empireaccess.com/privacy-policy/

## Digital Equity Impact, Workforce Development and Diversity Practices

Q\_14726 Describe Applicant or teams' outreach targets, including any plans to engage the community with any non-English-speaking residents.

Livingston County is committed to eliminating the digital divide by expanding infrastructure and access to services. This fiber deployment proposal will build upon principles for digital equity to all, including target populations that are often the most difficult to reach. As part of the deployment of MIP grant funds and to meet target rural take-rates, Livingston County will develop a Marketing and Outreach Strategy. It will be vital to work with community groups and anchor institutions to reach target populations. The Genesee Finger Lakes Regional Planning Council and the Finger Lakes Digital Inclusion Coalition are partner organizations to Livingston County and can be utilized as part of the Marketing and Outreach Strategy for community engagement to county residents, especially non-English speakers.

Q\_14727 Describe Applicant or teams' prior experiences adopting community support programs and the outcomes of such programs.

Several departments within Livingston County offer community support programs for digital literacy. One such program is offered by the Livingston County Office for the Aging. The Office provides computer essential classes, introduction to digital culture through the lens of Senior Planet, an outreach arm of AARP. These courses are typically held at local libraries around the county and attended by residents 60 years and older. Please see the additional uploads for some of the materials used to solicit to older adults for these opportunities.

Q\_14728 Describe any plans to provide devices, skills and safety trainings, or provide other support to the community.

Livingston County and partners will assist with efforts, especially those of the Finger Lakes Digital Inclusion Coalition member organizations and the OWWL public library system, who are already conducting trainings and support to the community for digital literacy. As previously mentioned several County human service departments offer trainings to residents for devices, digital literacy and online safety.

Q 14729 Describe any accessibility plans to the community residents with disabilities.

It is anticipated that Livingston County and partners will develop a Marketing and Outreach document to address strategies for successfully reaching and engaging with residents with disabilities. Through many of the human service departments within the county government, relationships exist with groups that currently work with disabled individuals. Livingston County has also began discussions with the Genesee Finger Lakes Regional Planning Council to determine if there is a potential for GFLRPC to assist with the Marketing and Outreach Strategy.

Q\_14730 Describe the projected economic development and job creation impacts from the proposed project.

Prospective and existing businesses are all seeking a faster connection in today's fast-paced world. The constant movement and storage of data requires a seamless and secure route with which that data is transferred. This, of course, requires the use of a talented and knowledgeable workforce that supports these activities. The largest non-governmental employment sector in Livingston County is the healthcare industry, which can continue to grow if certain infrastructure exists that promote the necessary conditions to consolidate scattered rural health solutions into regional hubs such as UR Noyes Health. The retail sector is somewhat limited in our Villages as merchants shift toward omni-channel sales opportunities allowing them to sell and market their items online, the viability and success of which offers growth in employment. As streaming services and gaming devices become more and more popular as a way to entertain, the population is shifting from urban to rural living, as long as the modern expectation of high speed broadband exists. These and other factors create a higher quality of life, which in today's economic environment, bring employers and investment to areas that are in desperate need.

Q\_14731 Describe Applicant or teams' current practices aligning with NYS "good job" definitions and safety standards by committing to appropriate policies and investments to recruit, train, hire, retrain, and upskill a diverse workforce, particularly local workers and/or workers from historically disadvantaged communities, into good jobs that pay the prevailing wage.

The diverse economic conditions that exist in Livingston County would reap significant benefit from the installation of fiber technology and high speed broadband. The pandemic reinforced the need for this as students and workers were asked to be remote and found themselves unable to connect without the mass deployment of personal "hotspots" provided by the schools and employers. The "Good Jobs Initiative" requires both preparation and opportunity in order to be successful, and the "Light-Up Livingston" application aims for 100% connectivity of all households in the County. That translates to opportunity for everyone to pursue success in whatever market or industry sector, whether it is remote work, selling goods and services online, research and development, pursuing advancement in education or networking connections. Every aspect of connectivity can provide anyone with an opportunity for a better quality of life.

Q\_14496 Describe current and planned future workforce training, certification, and licensure (e.g., in-house training, safety training, industry-recognized certifications, and offer of vocational training, apprenticeships, pre-apprenticeships, or other "earn and learn" opportunities) that

are part of the Applicant's workforce development strategies.

Livingston County has a Workforce Development Office which provides training (and funding for some training) to individuals, schools and programs as approved by New York State. Workforce Development also does recruitment services, on-the-job training programs, job connections, pre-employment testing and assessments. Increased access to broadband in the rural areas of Livingston County could help provide more people access to workforce training. There are quite a few online training programs that the Workforce Development Department refers customers to use. A short sample of these trainings are listed below:

Medcerts - provides personalized, short-term online career training to get nationally recognized certifications & credentials in healthcare and IT.

Coursera is an online learning platform featuring courses, degrees, certificate programs, and tutorials in a wide range of subjects. Over 300 leading universities and companies provide instruction, including Stanford, Duke, Google, and IBM. Learning experiences range from targeted hands-on projects to comprehensive, job-ready certificates and degrees. The NYSDOL is providing this free to unemployed customers in New York.

Northstar Digital Literacy - is a group of standards-based interactive assessment modules that measure adult digital literacy skills at a basic level. Each assessment moves the learner up a level in their digital literacy skills.

SUNY Attain Lab - is a computer lab offering academic, occupational, and employability courses through technology. The Attain lab in our region is only available virtually now.

Q\_14732 Explain current and planned future efforts to diversify the talent pipeline by engaging underrepresented and/or underserved individuals, including any statewide, regional, or local partnerships in place to support recruitment and hiring.

In Livingston County employers, educators and regulatory agencies, among other, have truly embraced the benefits of online learning and continuing education programs over the internet. The use of self-guided testing and virtual classrooms have vastly increased the opportunity for new and existing employees to obtain varying degrees of accreditation without having to travel or devote significant time away from family and work. The ability to achieve career milestones or annual training certifications can develop a stronger workforce that is more prepared to take on new challenges. The applications of using technology to prepare and strengthen individuals into a talented workforce cross every sector from OSHA trainings and ISO certifications, to continuing education course work and advanced degrees. The result is a workforce that is prepared, motivated, diverse and ready-to-work.

#### **Workforce Development**

Q\_14486 Describe the Applicant's current employee engagement strategy as it relates to ensuring good jobs for the Applicant's employees. Include an overview of compensation and benefits, job security, working conditions, worker engagement, and the organizational culture.

Livingston County is a public employer. The County has approximately 1, 200 employees. Employees must meet the requirements of the NYS Civil Service System. They are part of the Agreement between the County of Livingston and CSEA, Local 1000 AFSCME, AFL-CIO Full-time Unit, Livingston County Local 826. Part-time employees are part of the Agreement between the County of Livingston and CSEA, Local 1000 AFSCME, AFL-CIO, Part Time/Seasonal. The County offers health insurance, dental and vision coverage, flexible spending and health savings accounts, wellness programs, employee assistance program, paid leave time, paid holidays, and participation in the NYS retirement system. The County has a position dedicated to employee professional training and development.

One function of this position is to provide training opportunities for all employment levels to help ensure successful employment. This includes programs for improving computer literacy, working with others, stress management, proper management techniques, and more. The County encourages a culture of good employee and family health and wellness. The County offers multiple fitness centers and has a Supportive Health Awareness Program for Employees (SHAPE) to improve emotional and physical health of employees. The SHAPE Committee sponsors activities like an annual employee family 1K/5K walk run, food competitions, fitness/exercise competitions, offers opportunities for special interest groups like knitting, crafts, book reading, and more.

Q\_14733 Describe the interest of one or more eligible partners and vendors to support the project. Detail any specific commitments that have been made.

Livingston County has engaged with Empire Access to be a primary internet service provider on the network. In addition to Empire Access, the established team includes Hunt EAS for technical design, mapping and network deployment expertise. The MIP proposal includes maintaining this existing and successful team while bringing on additional support through subcontractors to complete the fiber deployment. Additional subcontractors could include Airosmith and LaBella. The team is considering an additional construction management firm to assist with the project management as well.

Q\_14734 Please specify the level of commitment from the Internet Service Providers (ISPs) to operate on the proposed network build. For open-access network, the Applicant must have commitment from one or more ISPs to operate on the network.

Committed one or more ISPs for last-mile

#### Certification

Q\_1038 By entering your name in the box below, you certify that you are authorized on behalf of the applicant and its governing body to submit this application. You further certify that all of the information contained in this Application and in all statements, data and supporting documents which have been made or furnished for the purpose of receiving assistance for the project described in this application, are true, correct and complete to the best of your knowledge and belief. You acknowledge that offering a written instrument knowing that the written instrument contains a false statement or false information, with the intent to defraud the State or any political subdivision, public authority or public benefit corporation of the State, with the knowledge or belief that it will be filed with or recorded by the State or any political subdivision, public authority or public benefit corporation of the State, constitutes a crime under New York State Law.

#### Megan Crowe on behalf of Livingston County

Q 14767 By entering your name in the box below, you the Applicant acknowledges the following:

-Applicant will meet all Project Requirements and Applicant Requirements per the RFA.
-Application is not receiving funding from other federal or state sources for the same activities proposed for MIP funding.

- -Applicant will provide additional cost estimates, if requested, for Properties in the portfolio agreed upon with CAO, including total grant amount requested and matching funds.
- -Application will work with all appropriate agencies to obtain all required right of way approvals.
- -Application will obtain all required permits and private easement approvals.
- -Application will coordinate project deployment with all utilities.
- -Application will obtain any necessary subcontractors.
- -Application will provide on-site construction inspections to ensure proper design and execution.
- -Application will coordinate and resolve third-party or private claims.

- -Application will repair any and all damage to private and government property.
- -Application will at all times, maintain an adequate staff of experienced and qualified employees for efficient performance.
- -Application will at all times, furnish or perform any services in a safe, proper, and professional manner.
- -Application will comply with all federal, state, and local laws and regulations.
- -Application must submit a performance report to the State that includes the following key performance indicators, if selected to be a Grantee:
- Project milestones and percentage of project/site completion, including construction milestones, quantity of fiber deployed, problems/issues encountered, and actions taken to resolve construction issues
- Description of changes, challenges, or risks to project timeline, including environmental compliance and permitting challenges
- Detailed reporting of actual construction costs, as compared to approved construction costs
- Speed and latency test data at the address level for all locations served in the project area--including maximum download speed offered, maximum download speed delivered, maximum upload speed offered, maximum upload speed delivered, and latency.
- Maps and associated data for all locations served, including all buildings/sites where service was installed.
- Compliance with Prevailing Wage requirements, as determined during negotiations
- Implementation progress of Digital Equity, Workforce Development, and Diversity Practices plans
- Other reporting as required by grantor agencies or as mutually agreed upon by the Applicant and State.
- Subscription information including the number of paying subscribers enrolled in the service, the number of low-income subscribers enrolled in ACP, and the number of subscribers enrolled in a low-cost service plan
- Information about customers' Internet access prior to enrolling in the service including whether or not the customer had a previous fixed Internet subscription and the speed of that previous subscription
   Applicant acknowledges receipt of and compliance with addenda to this RFA.

### Megan Crowe on behalf of Livingston County

Q\_2365 By entering your name in the box below, you are acknowledging that ESD's Contractor & Supplier Diversity policy will apply to this project. You are further acknowledging that you are aware of ESD's agency-wide Minority and Women Business Enterprise ('MWBE') utilization goal of 30%. Please note that each project will be assigned an individual contract-specific goal, which may be higher or lower than 30%. Furthermore, you understand that, should this project receive a funding award, the Applicant shall be required to use good faith efforts to achieve the prescribed MWBE goals assigned to this project and failure to attain MWBE goal could result in grant amount being reduced.

#### Megan Crowe on behalf of Livingston County

Q\_4182 By entering your name in the box below, you certify and agree that you are aware that your award will be reduced in proportion to the reduction of jobs and/or total project costs.

Furthermore, you understand that, should this project receive a funding award, the Applicant will maintain such records and take such actions necessary to demonstrate such compliance throughout the completion of the project.

#### Megan Crowe on behalf of Livingston County

- Q\_7341 By entering your name in the box below, you certify, under penalty of perjury, that the information given herein is true and correct in all respects for the company or organization applying for funding (the "Company"), presently and for the past five years: -the Company is not a party to any litigation or any litigation is not pending or anticipated that could have an adverse material effect on the company's financial condition;
- -the Company does not have any contingent liabilities that could have a material effect on its solvency;
- -the Company, its affiliates or any member of its management or any other concern with which such members of management have been officers or directors, have never been involved in bankruptcy, creditor's rights, or receivership proceedings or sought protection from creditors;

- -the Company is not delinquent on any of its state, federal or local tax obligations;
- -No principal, officer of the Company, owner or majority stockholder of any firm or corporation, or member of the management has been charged or convicted of a misdemeanor or felony, indicted, granted immunity, convicted of a crime or subject to a judgment, or the subject of an investigation, whether open or closed, by any government entity for a civil or criminal violation for: (i) any business-related activity including, but not limited to, fraud, coercion, extortion, bribe or bribe receiving, giving or accepting unlawful gratuities, immigration or tax fraud, racketeering, mail fraud, wire fraud, price fixing or collusive bidding; or (ii) any crime, whether or not business related, where the underlying conduct relates to truthfulness, including but not limited to, the filing of false documents or false sworn statements, perjury or larceny;
- -the Company or any of the Company's affiliates, principal owners or Officers has not received a violation of State Labor Law deemed "willful";
- -the Company or any of its affiliates has never been cited for a violation of State, Federal, or local laws or regulations with respect to labor practices, hazardous wastes, environmental pollution or other operating practices;
- -there are not any outstanding judgments or liens pending against the Company other than liens in the normal course of business.
- -the Company or any of its affiliates, principal owners or officers the company has not been the subject of any judgments, injunctions, or liens including, but not limited to, judgments based on taxes owed, fines and penalties assessed by any governmental agency, or elected official against the Company.
- the Company or any of its affiliates, principal owners or officers the company has not been investigated by any governmental agency, including, but not limited to, federal, state and local regulatory agencies
- -the Company or any of its affiliates, principal owners or officers the company has not been debarred from entering into any government contract; been found non-responsible on any government contract; been declared in default ore terminated for cause on any government contract; been determined to be ineligible to bid or propose on any contract; been suspended from bidding on any government contract; received an overall unsatisfactory performance rating from any government agency on any contract; agree to a voluntary exclusion from bidding or contracting on a government contract.
- the Company or any of its affiliates, principal owners or officers the company has not failed to file any of the required forms with any government entity regulating the Company. By entering your name in the box below, you agree to allow the Department of Taxation to share the Company tax information with ESD. By entering your name in the box below, you agree to allow the Department of Labor to share tax and employer information with ESD. Note: If any of the statements above are not true, in addition to entering your name, also include an explanation in the box below, indicating which issue you are addressing.

Megan Crowe on behalf of Livingston County

# **Net New Jobs**

No job answers necessary due to your associated programs.

# Qualified Investments

No investment answers necessary due to your associated programs.

# **Total Project Cost**

Total project cost: \$ 23,991,730

# Funding Requested from Program

ProgramAmount RequestedConnectALL – Municipal Infrastructure Program (MIP)\$ 23879730

# **Attachment Questions & Answers**

## **ConnectALL – Municipal Infrastructure Program (MIP)**

## **Project Summary**

Q\_14740 Provide a summary of the following key points of the project [Not to exceed two pages]:

- List of applicants and any eligible partners
- List of the proposed project areas with a percentage of unserved and underserved locations
- Total miles of proposed new fiber construction
- Brief overview of the proposed project approach
- Proposed infrastructure ownership model
- Approach for sharing the newly built infrastructure as open-access or reserved for exclusive use
- Total project budget with the amount requested from MIP grant funds

Name your file using the following naming convention: "ApplicantName Project-Summary MM.DD.YY"

Please note that the accepted file type for this question is PDF. If you have an issue with uploading any files, please reach out to cfa-programs@ny.gov and MIP@esd.ny.gov.

LivingstonCounty\_Project-Summary\_030824.pdf Download

## Financial Capability

Q\_14686 Upload the Applicant's most recent financial statements prepared in accordance with standard accounting procedures of the Applicant and all principals of the organization. Eligible Private Applicants should provide three years of audited financial statements.

Name your file using the following naming convention: "ApplicantName Finances MM.DD.YY"

Please note that the accepted file type for this question is PDF. If you have an issue with uploading any files, please reach out to cfa-programs@ny.gov and MIP@esd.ny.gov.

LivingstonCounty\_Finances\_12312022.pdf <u>Download</u>

#### **Experience and Relevant Qualifications**

Q\_14687 Please provide two case studies of relevant past work done by the Applicant or team, with preference to work conducted in New York State. Include reference to adhering to relevant state and federal regulations.

Case studies shall be brief and include the following for each:

Number of addresses served

- Number of businesses subcontracted
- Route miles constructed, and costs incurred by category (e.g., make-ready, permitting, engineering/design, labor, construction)
- Description of the technology deployed and why it was the appropriate choice for the project
- Service level commitment offered
- · Advertised download speed in megabits per second
- · Advertised upload speed in megabits per second
- Monthly, non-promotional price for each service offered over the funded infrastructure
- Specifications of signal latency and service reliability parameters
- · Descriptions of any delays or changes made to project timeline

Name your file using the following naming convention: "ApplicantName\_Experiences\_MM.DD.YY"

Please note that the accepted file type for this question is PDF. If you have an issue with uploading any files, please reach out to cfa-programs@ny.gov and MIP@esd.ny.gov.

Livingston\_Experience\_03.07.24.pdf Download

## **Deployment Timelines**

Q\_14688 Please provide a project management plan with timelines clearly identifying the time to first connections and the time to project completion.

Name your file using the following naming convention:

"ApplicantName Deployment-Timelines MM.DD.YY"

Please note that the accepted file types for this question are PDF and XLSX. If you have an issue with uploading any files, please reach out to cfa-programs@ny.gov and MIP@esd.ny.gov.

Livingston\_County\_Deployment-Timelines\_03.05.24.pdf Download

#### **MIP RFA Templates**

- Q\_14765 Please provide the following information by filling out all four tabs of the MIP RFA Templates file (link to download below).
- 1. Project budget with a breakdown of costs using the "MIP Budget Templates" tab
- 2. Services and products that will be offered to the end-users, and pricing of those by completing the "MIP Service Tiers and Pricing" tab:
- a) Include description of service tiers, speeds, and pricing, inclusive of all taxes and fees.
- b) Indicate price, upload speed, and download speed for a product at or below \$30 per month, if such a price point is planned
- c) Include description, including service speeds and means of delivery, of any free service tiers or free introductory periods, if available
- 3. Details on the intent to hire additional employees if the Applicant is selected to be a Grantee by filling out the "MIP Workforce Development" tab
- 4. A list of locations the project will serve by filling out the "MIP Location Data" tab. Provide all available location data such as FCC Location ID, address, and latitude/longitude for each location
- a) Indicate which locations are Unserved, Underserved or Served
- b) Business, Residential or Mixed
- c) Community Anchor Institutions

Name your file using the following naming convention: "ApplicantName MIP-RFA-Filled-Templates MM.DD.YY"

Please note that the accepted file type for this question is XLSX. If you have an issue with uploading any files, please reach out to cfa-programs@ny.gov and MIP@esd.ny.gov.

Please use the link below to download the templates file.

## MIP RFA Templates

Livingston County\_MIP-RFA-Filled-Templates\_03.07.24.xlsx Download

#### **Network Design**

Q 14689 Please provide a complete or close to complete network design and architecture, including:

- Network elements (both active and passive)
- Connectivity to the internet backbone
- · Delivery to each served address with the required throughput and capacity
- Engineering decisions required to achieve service speeds and latency, such as:
- Backhaul connectivity
- Head end deployment
- Core network electronics
- Fiber capacity and strand counts on each segment of the network
- · Maximum line speed at the premises
- Oversubscription ratio
- Split ratios
- Splice points
- Drop installation
- In-unit termination specification
- CPE or router model and capabilities (including Wi-Fi interface)

Name your file using the following naming convention: "ApplicantName Network-Design MM.DD.YY"

Please note that the accepted file type for this question is PDF. If you have an issue with uploading any files, please reach out to cfa-programs@ny.gov and MIP@esd.ny.gov.

Livingston County\_Network\_Design\_03.07.24.xlsx <u>Download</u>

## **Maps and Addresses**

Q\_14690 Please provide Maps and address lists indicating the fiber routes and accompanying infrastructure (e.g., poles and huts) that the MIP grants would fund. Include a list of publicly controlled assets the project may use to support deployment. Include a .kmz or shapefile of the proposed routing with clearly defined layers for the various types of infrastructure and any other information relevant to the design, including:

- Fiber routes and segment types (backbone, distribution, etc.)
- Installation method (direction bore, micro-trenching, etc.)

Name your file using the following naming convention: "ApplicantName Maps-Addresses MM.DD.YY"

Please note that the accepted file types for this question are kmz, kml, shp, and shx. If you have an issue with uploading any files, please reach out to cfa-programs@ny.gov and MIP@esd.ny.gov.

Livingston County Maps-Addresses 03.07.24.kmz

#### **ISP Letters Of Commitment**

Q\_14691 For an open-access infrastructure, please provide Letters of Commitment to operate on the network from one or more ISP, indicating details of the ISP's planned technology approach and demonstration of a currently functional network meeting CAO requirements elsewhere. Other supporting documentation may include letters of endorsement from ISP(s) currently operating on infrastructure built by the applicant elsewhere, and documentation from an operator using infrastructure built by the Applicant to host ISPs that meet CAO's service requirements.

Name your file using the following naming convention: "ApplicantName ISP-LOC MM.DD.YY"

Please note that the accepted file type for this question is PDF. If you have an issue with uploading any files, please reach out to cfa-programs@ny.gov and MIP@esd.ny.gov.

Livingston\_County\_ISP-LOC\_03.07.24.pdf <u>Download</u>

### **Workforce Development**

Q\_15016 Attach letter(s) of commitment, if available, from partner organization(s) that demonstrate(s) Applicant's current engagement, or future intent to engage, with partner(s) through advising on curriculum or program design, providing program funding, interviewing talent, hiring talent, building an apprenticeship or other program, or upskilling existing workers. Letters can be from labor unions, workforce development organizations, state and local workforce boards, educational institutions, community-based organizations, or others relevant organizations.

Name your file using the following naming convention: "ApplicantName WorkforceLOCs MM.DD.YY"

Please note that the accepted file type for this question is PDF. If you have an issue with uploading any files, please reach out to cfa-programs@ny.gov and MIP@esd.ny.gov.

No attachment, cannot upload

### Additional Document(s)

Q\_15018 Provide any additional document(s) to strengthen your application (e.g. letters of endorsement from the proposed area municipality).

Name your file using the following naming convention: "ApplicantName AdditionalDocs MM.DD.YY"

Please note that the accepted file types for this question are PDF and ZIP. If you have an issue with uploading any files, please reach out to cfa-programs@ny.gov and MIP@esd.ny.gov.

Livingston\_County\_AdditionalDocs\_03.08.24.pdf Download

# Legend

[x] = Expired Program

Single Audit Reports
For the Year Ended December 31, 2022

Bonadio & Co., LLP Certified Public Accountants

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# Bonadio & Co., LLP

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

June 29, 2023

To the Board of Supervisors of the County of Livingston, New York

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the County of Livingston, New York (the County) as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise the County's basic financial statements, and have issued our report thereon dated June 29, 2023. The financial statements of the Livingston County Center for Nursing and Rehabilitation were not audited in accordance with *Government Auditing Standards*, and accordingly, this report does not include reporting on internal control over financial reporting or instances of reportable noncompliance associated with the Livingston County Center for Nursing and Rehabilitation.

#### Report on Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the County's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the County's internal control. Accordingly, we do not express an opinion on the effectiveness of the County's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

171 Sully's Trail Pittsford, New York 14534 p (585) 381-1000 f (585) 381-3131

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Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or, significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

#### **Report on Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the County's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

#### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the County's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Bonadio & Co., LLP

# Bonadio & Co., LLP Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM AND ON INTERNAL CONTROL OVER COMPLIANCE AND REPORT ON SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS REQUIRED BY THE UNIFORM GUIDANCE

August 24, 2023 (except for the Schedule of Federal Awards, as to which the date is June 29, 2023)

To the Board of Supervisors of the County of Livingston, New York

#### Report on Compliance for Each Major Federal Program

#### Opinion on Each Major Federal Program

We have audited the County of Livingston, New York's (the County's) compliance with the types of compliance requirements identified as subject to audit in the *OMB Compliance Supplement* that could have a direct and material effect on the County's major federal programs for the year ended December 31, 2022. The County's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

The County's basic financial statements include the operations of its component units whose federal awards are not included in the schedule of expenditures of federal awards for the year ended December 31, 2022. Our audit, described below, did not include the federal awards of the component units as these entities conducted separate audits in accordance with OMB Uniform Guidance, if required.

In our opinion, the County complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended December 31, 2022.

#### Basis for Opinion on Each Major Federal Program

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Our responsibilities under those standards and the Uniform Guidance are further described in the Auditor's Responsibilities for the Audit of Compliance section of our report.

We are required to be independent of the County and to meet our other ethical responsibilities, in accordance with relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on compliance for the major federal programs. Our audit does not provide a legal determination of the County's compliance with the compliance requirements referred to above.

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#### Responsibilities of Management for Compliance

Management is responsible for compliance with the requirements referred to above and for the design, implementation, and maintenance of effective internal control over compliance requirements of laws, statues, regulations, rules, and provisions of contracts or grant agreements applicable to the County's federal programs.

#### Auditor's Responsibilities for the Audit of Compliance

Our objectives are to obtain reasonable assurance about whether material noncompliance with the compliance requirements referred to above occurred, whether due to fraud or error, and express an opinion on the County's compliance based on our audit. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards, *Government Auditing Standards*, and the Uniform Guidance will always detect material noncompliance when it exists. The risk of not detecting material noncompliance resulting from fraud is higher than for that resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Noncompliance with the compliance requirements referred to above is considered material if there is a substantial likelihood that, individually or in the aggregate, it would influence the judgment made by a reasonable user of the report on compliance about the County's compliance with the requirements of each major federal program as a whole.

In performing an audit in accordance with generally accepted auditing standards, *Government Auditing Standards*, and the Uniform Guidance, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material noncompliance, whether due to fraud or error, and design
  and perform audit procedures responsive to those risks. Such procedures include examining, on a
  test basis, evidence regarding the County's compliance with the compliance requirements referred
  to above and performing such other procedures as we considered necessary in the circumstances.
- Obtain an understanding of the County's internal control over compliance relevant to the audit in order to design audit procedures that are appropriate in the circumstances and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of the County's internal control over compliance. Accordingly, no such opinion is expressed.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and any significant deficiencies and material weaknesses in internal control over compliance that we identified during the audit.

#### **Report on Internal Control Over Compliance**

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A significant deficiency in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the Auditor's Responsibilities for the Audit of Compliance section above and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies in internal control over compliance. Given these limitations, during our audit we did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above. However, material weaknesses or significant deficiencies in internal control over compliance may exist that were not identified.

Our audit was not designed for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, no such opinion is expressed.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

#### Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance

We have audited the financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the County of Livingston, New York (the County), as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise the County's basic financial statements. We issued our report thereon dated June 29, 2023, which contained unmodified opinions on those financial statements. Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the basic financial statements. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by the Uniform Guidance and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated in all material respects in relation to the basic financial statements as a whole.

Bonadio & Co., LLP

# Schedule of Expenditures of Federal Awards December 31, 2022

Federal Grantor/Pass Through Grantor/Program or Cluster Title	Federal Assistance Listing <u>Number</u>	Pass Through Entity Identifying <u>Number</u>	Federal <u>Expenditures</u>	Expenditures to Subrecipients
U.S. Department of Agriculture				
Passed through the New York State Office of Temporary and Disability Assistance -				
SNAP Cluster:				
State Administrative Matching Grants for the				
Supplemental Nutrition Assistance Program	10.561	N/A	\$ 818,002	<u>\$</u>
Subtotal - SNAP Cluster			818,002	
Passed through the New York State Department of Health -				
Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)	10.557	C35461GG	559,602	_
mana, and amaren (vito)	201557	000-10100		
Total U.S. Department of Agriculture			1,377,604	
U.S. Department of Housing and Urban Development				
Passed through NYS Division of Housing and Community				
Renewal -				
Housing Voucher Cluster:				
Section 8 Housing Choice Vouchers	14.871	N/A	313,316	-
COVID-19 - Section 8 Housing Choice Vouchers	14.871	N/A	13,914	
Subtotal - Housing Voucher Cluster			327,230	
Community Development Block Grants/State's Program and Non-Entitlement Grants in Hawaii	14.228	658ME970-21	181,647	181,647
COVID-19 - Community Development Block			·	•
Grants/State's Program and Non-Entitlement Grants in				
Hawaii	14.228	658CV-SB5-21	1,468,929	1,468,929
Total NYS Division of Housing and Community Renewal			1,977,806	1,650,576
vellemgi				1,030,370
Total U.S. Department of Housing and Urban				
Development			1,977,806	1,650,576

## Schedule of Expenditures of Federal Awards December 31, 2022

Federal Grantor/Pass Through <u>Grantor/Program or Cluster Title</u>	Federal Assistance Listing <u>Number</u>	Pass Through Entity Identifying <u>Number</u>	Federal <u>Expenditures</u>	Expenditures to Subrecipients
U.S. Department of Justice				
State Criminal Alien Assistance Program	16.606	N/A	129	
Bulletproof Vest Partnership Program	16.607	N/A	7,020	
Crime Victim Assistance/Discretionary Grants	16.582	N/A	85,404	-
Passed Through the New York State Office of Victim Services -		,		
Treatment Court Discretionary Grant Program	16.585	N/A	16,369	
Total New York State Office of Victim Services			16,369	
			<del></del>	
Total U.S. Department of Justice			108,922	
U.S. Department of Labor				
Passed Through the New York State Department of Labor -				
Trade Adjustment Assistance	17.245	N/A	84,786	15,145
WIOA National Dislocated Worker Grants / WIA National				
Emergency Grants	17.277	N/A	38,199	
WIOA Cluster:				
WIOA Adult Program	17.258	N/A	496,463	283,560
WIOA Youth Activities	17.259	N/A	566,964	373,605
WIOA Dislocated Worker Formula Grants	17.278	N/A	505,374	283,560
Subtotal - WIOA Cluster			1,568,801	940,725
Total New York State Department of Labor			1,691,786	955,870
Total U.S. Department of Labor			1,691,786	955,870
U.S. Department of Transportation				
Passed Through the New York State Department of				
Transportation -				
Highway Planning and Construction Cluster:				
Highway Planning and Construction	20.205	D040005	1,834,887	-
Highway Planning and Construction	20.205	D010015	589,587	-
Highway Planning and Construction	20.205	D040348	82,392	
Subtotal - Highway Planning and Construction Cluster			2,506,866	<del>_</del>
Total New York State Department of				- <del></del>
Transportation			2,506,866	

# Schedule of Expenditures of Federal Awards December 31, 2022

	<del> </del>		-	
	Federal			
	Assistance	Pass Through		
Federal Grantor/Pass Through	Listing	Entity Identifying	Federal	Expenditures to
Grantor/Program or Cluster Title	<u>Number</u>	<u>Number</u>	<b>Expenditures</b>	<u>Subrecipients</u>
Passed Through the NYS Governor's Traffic Safety				
Committee -				
Highway Safety Cluster:				
State and Community Highway Safety	20.600	T006748	31,637	-
National Priority Safety Programs	20.616	N/A	38,331	<del></del>
Subtotal - Highway Safety Cluster			69,968	
Total NYS Governor's Traffic Safety Committee			69,968	
Passed Through the Federal Transit Administration -				
Transit Services Programs Cluster:				
Enhanced Mobility of Seniors and Individuals with				
Disabilities	20.513	N/A	17,000	17,000
Subtotal - Transit Services Programs Cluster			17,000	17,000
Total Federal Transit Administration			17,000	17,000
Total U.S. Department of Transportation			2,593,834	17,000
U.S. Department of Treasury				
COVID-19 - Coronavirus State and Local Fiscal Recovery				
Funds	21.027	N/A	2,360,932	728,000
		•		
Total U.S. Department of Treasury			2,360,932	728,000
U.S. Department of Education				
Passed through the New York State Department of Health -				
Special Education - Grants for Infants and Families	84.181	C36412GG	30,268	_
Special Education Cranta for Infanta and Farmings	041202	03041200		
Total U.S. Department of Education			30,268	<del>-</del>
U.S. Department of Health and Human Services				
COVID-19 - Provider Relief Fund	93.498	N/A	898,459	-
Passed through the New York State Office for the Aging -				
Special Programs for the Aging - Title III, Part D - Disease				
Prevention and Health Promotion Services	93.043	N/A	4,163	
Aging Cluster:				
Special Programs for the Aging - Title III, Part B -				
Grants for Supportive Services and Senior Centers	93.044	N/A	58,400	-
COVID-19 - Special Programs for the Aging - Title III,				
Part B - Grants for Supportive Services and Senior				
Centers	93.044	N/A	1,308	-
Special Programs for the Aging - Title III, Part C -				
Nutrition Services	93.045	N/A	155,084	-
COVID-19 - Special Programs for the Aging - Title III,	** *			
Part C - Nutrition Services	. 93.045	N/A	64,815	-
Nutrition Services Incentive Program	93.053	N/A	49,774	
Subtotal - Aging Cluster	_		329,381	

## Schedule of Expenditures of Federal Awards December 31, 2022

Federal Grantor/Pass Through <u>Grantor/Program or Cluster Title</u>	Federal Assistance Listing <u>Number</u>	Pass Through Entity Identifying <u>Number</u>	Federal Expenditures	Expenditures to Subrecipients
COVID-19 - Aging and Disability Resource Center -				
Vaccine Access Supplemental Funding	93.048	N/A	31,304	<u> </u>
National Family Caregiver Support - Title III, Part E	93.052	N/A	32,848	
Medicare Enrollment Assistance Program	93.071	N/A	16,343	
Centers for Medicare and Medicaid Services Research,				
Demonstrations and Evaluations	93.779	N/A	21,694	
Total New York State Office for the Aging			435,733	
Passed Through the New York State Office of Temporary and Disability Assistance -				
Child Support Enforcement	93.563	N/A	324,239	-
Low-Income Home Energy Assistance	93.568	N/A	3,247,068	
Total New York State Office of Temporary and				
Disability Assistance			3,571,307	
Passed Through the New York State Department of State -				
Community Services Block Grant	93.569	N/A	289,968	=
COVID-19 - Community Services Block Grant	93.569	N/A	185,468	
Total New York State Department of State			475,436	-
Passed Through the New York State Office of Children and Family Services - MaryLee Allen Promoting Safe and Stable Families				
Program	93.556	2201NYFPSS	62,789	44,751
John H. Chafee Foster Care Program for Successful				<del></del>
Transition to Adulthood	93.674	N/A	6,000	
Temporary Assistance for Needy Families	93.558	N/A	3,440,289	2,815,057
Child Care Development Fund Cluster:				
Child Care and Development Block Grant	93.575	2201NYCCDD	1,402,392	<u>-</u>
Subtotal - Child Care Development Fund Cluster			1,402,392	
Foster Care - Title IV-E	93.658	2201NYFOST	672,905	-
Adoption Assistance	93.659	2201NYADPT	543,833	
COVID-19 - Adoption Assistance	93.659	2201NYADPT	23,836	
Social Services Block Grant	93.667	2201NYSOSR	731,477	
Elder Abuse Prevention Interventions Program	93.747	N/A	17,252	<del></del>
Total New York State Office of Children and Family	33.747	NA		
Services			6,900,773	2,859,808

# Schedule of Expenditures of Federal Awards December 31, 2022

Federal Grantor/Pass Through <u>Grantor/Program or Cluster Title</u>	Federal Assistance Listing Number	Pass Through Entity Identifying <u>Number</u>	Federal <u>Expenditures</u>	Expenditures to Subrecipients
Passed Through the New York State Department of Health -				
Family Planning Services	93.217	C36279GG	25,320	
Immunization Cooperative Agreements	93.268	C32524GG	5,793	
COVID-19 - Immunization Cooperative Agreements	93.268	C36938GG	29,989	
Maternal and Child Health Services Block Grant to the				
States	93.994	C36279GG	25,320	
Maternal and Child Health Services Block Grant to the				
States	93.994	C36994GG	14,363	
Maternal and Child Health Services Block Grant to the				
States	93.994	C35723GG	15,201	
Block Grants for Community Mental Health Services	93.958	N/A	13,967	
Medicaid Cluster:				
Medical Assistance Program	93.778	N/A	560,589	-
Medical Assistance Program	93.778	C37298GG	65,960	
Subtotal - Medicaid Cluster			626,549	
Total New York State Department of Health			756,502	
Passed Through Health Research, Inc				
Public Health Emergency Preparedness	93.069	1617-15	48,591	-
COVID-19 - Epidemiology and Laboratory Capacity for				
Infectious Diseases (ELC)	93.323	6811-01	1,027,474	-
COVID-19 - Epidemiology and Laboratory Capacity for				
Infectious Diseases (ELC)	93.323	6430-01	23,654	-
COVID-19 - Public Health Emergency Response	93.354	7002-01	201,963	<u> </u>
Total Health Research, Inc.			1,301,682	-
Total U.S. Department of Health and Human			14 220 002	2 050 000
Services			14,339,892	2,859,808
Cooled Consulter Advantations				
Social Security Administration Passed Through Research Foundation for Mental Hygiene -				
Social Security State Grants for Work Incentives				
Assistance to Disabled Beneficiaries	96.009	N/A	23,281	-
Total Research Foundation for Mental Hygiene		• • •	23,281	
Total Social Security Administration			23,281	_
rotal occurry nationality				-

# Schedule of Expenditures of Federal Awards December 31, 2022

Federal Grantor/Pass Through <u>Grantor/Program or Cluster Title</u>	Federal Assistance Listing <u>Number</u>	Pass Through Entity Identifying <u>Number</u>	Federal Expenditures	Expenditures to Subrecipients
U.S. Department of Homeland Security				
Passed Through the New York State Division of Homeland				
Security and Emergency Services -	97.067	WM20971302	19,138	_
Homeland Security Grant Program Homeland Security Grant Program	97.067	WM21837211	29,000	_
Homeland Security Grant Program	97.067	WM22190134	19,999	_
Homeland Security Grant Program	97.067	C971390	98,151	98,151
Homeland Security Grant Program	97.067	C971300	48,913	48,913
Building Resilient Infrastructure and Communities	97.047	C000847	67,500	67,500
Emergency Management Performance Grant	97.042	T837215	28,873	28,873
Total New York State Division of Homeland Security				
and Emergency Services			311,574	243,437
Total U.S. Department of Homeland Security			311,574	243,437
Total Federal Award Expenditures			\$ 24,815,899	\$ 6,454,691
Total Program Expenditures by Assistance Listing Number  Community Development Block Grants/State's Program				
and Non-Entitlement Grants in Hawaii	14.228		\$ 1,650,576	\$ 1,650,576
Special Programs for the Aging, Title III, Part B, Grants for Supportive Services and Senior Centers	93.044		\$ 59,708	<u>\$</u>
Special Programs for the Aging - Title III, Part C - Nutrition Services	93.045		\$ 219,899	\$
Immunization Cooperative Agreements	93.268		\$ 35,782	\$ -
Epidemiology and Laboratory Capacity for Infectious Diseases (ELC)	93.323		\$ 1,051,128	\$ -
Adoption Assistance	93.659		\$ 567,669	\$
Medical Assistance Program	93.778		\$ 626,549	\$ -
Maternal and Child Health Services Block Grant to the States	93.994		\$ 54,884	\$ -
Homeland Security Grant Program	97.067		\$ 215,201	\$ 147,064

Notes to the Schedule of Expenditures of Federal Awards December 31, 2022

### 1. BASIS OF PRESENTATION

The accompanying schedule of expenditures of federal awards (the Schedule) includes the federal award activity of the County of Livingston, New York (the County) under programs of the federal government for the year ended December 31, 2022. The information in this Schedule is presented in accordance with the requirements of Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative requirements, Cost Principles, and Audit requirements for Federal Awards (Uniform Guidance). Because the Schedule presents only a selected portion of the operations of the County, it is not intended to and does not present the financial position, the respective changes in financial position, or, where applicable, cash flows of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the County.

### 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Expenditures reported on the Schedule are presented in conformity with accounting principles generally accepted in the United States of America and the amounts presented are derived from the County's general ledger. For programs with funding ceilings and caps, federal expenditures are only recorded and presented in the schedule of expenditures of federal awards up to such amounts.

The County has not elected to use the 10 percent de minimis indirect cost rate as allowed under the Uniform Guidance.

### 3. PASS-THROUGH PROGRAMS

Where the County receives funds from a government entity other than the federal government (pass-through), the funds are accumulated based upon the Assistance Listing (AL) number advised by the pass-through grantor.

Identifying numbers, other than the AL numbers, which may be assigned by pass-through grantors are not maintained in the County's financial management system. The County has identified certain pass-through identifying numbers and included them in the schedule of expenditures of federal awards, as available.

### 4. INDIRECT COSTS

Indirect costs are included in the reported expenditures to the extent such costs are included in the federal financial reports used as the source for the data presented.

### 5. MATCHING COSTS

Matching costs, i.e., the County's share of certain program costs, are not included in the reported expenditures.

# Notes to the Schedule of Expenditures of Federal Awards December 31, 2022

### 6. NONCASH AWARDS

A significant portion of federal award programs do not involve cash awards to the County. The value of these noncash awards has been recorded as expenditures on the schedule of expenditures of federal awards. Those relating to the County are as follows:

	Federal AL	
Program Title	Number	Amount
U.S. Department of Health and Human Services:		
Low-Income Home Energy Assistance	93.568	\$ 2,964,232

### 7. PROVIDER RELIEF FUNDS (PRF)

The amount included in the schedule of expenditures of federal awards is based upon the June 30, 2022 and December 31, 2022 PRF reports as directed by the United States Treasury.

### 8. RELATED PARTY TRANSACTIONS

Community Development Block Grants/State's Program and Non-Entitlement Grants in Hawaii, AL #14.228, funding in the amount of \$1,650,576 is passed through to Livingston County Development Corporation (LCDC) as a subrecipient. LCDC is a component unit of the County.

Coronavirus State and Local Fiscal Recovery Funds, AL #21.027, funding in the amount of \$500,000 is passed through to Livingston County Land Bank Corporation (the Land Bank) as a subrecipient.

# Schedule of Findings and Questioned Costs December 31, 2022

## A. SUMMARY OF AUDITOR'S RESULTS

Financial Statemer Type of auditor's re prepared in accord	eport issued on whether the financial statements were		Unr	modified	·
Material weakne Significant deficie	er financial reporting: ss(es) identified? encies identified not considered to be material		Yes		No
weaknesses?			Yes	_X	None reported
Noncompliance ma	aterial to financial statements noted?		Yes	<u>x</u>	No
Federal Awards					
Internal control over Material weakness		_	Yes	<u>x</u>	No
weaknesses?			Yes	<u> x</u>	None reported
Type of auditor's re	eport issued on compliance for major programs			opinions il progra	for each of the ms
-	disclosed that are required to be reported in niform Guidance, 2 CFR Section 200.516(a)?		Yes	<u> x</u>	. No
<u>AL Number</u>	Name of Federal Program or Clust	ter			
10.561	State Administrative Matching Grants for the Supplen Assistance Program		Nutritio	on	
14.228	COVID-19 - Community Development Block Grants/St Non-Entitlement Grants in Hawaii	ate's P	rogram	and	
21.027 93.323	COVID-19 - Coronavirus State and Local Fiscal Recover COVID-19 - Epidemiology and Laboratory Capacity for (ELC)	•		seases	
93.498 93.558	COVID-19 - Provider Relief Fund Temporary Assistance for Needy Families				
WIOA Cluster:	remporary Assistance for Needy Families				
17.258	WIOA Adult Program				
17.259	WIOA Youth Activities				
17.278	WIOA Dislocated Worker Formula Grants				
Dollar threshold us	ed to distinguish between Type A and Type B programs:	\$	7	750,000	
Auditee qualified a	s low-risk auditee?	x	Yes		No

Schedule of Findings and Questioned Costs December 31, 2022

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None.

C. FINDINGS AND QUESTIONED COSTS - MAJOR FEDERAL AWARD PROGRAM AUDIT

None.





## **Experience and Relevant Qualifications**

Livingston County and the partners on this project have a history of state and federally funded Broadband projects in Upstate New York. In 2021, Livingston County in partnership with Empire Access (Empire), was awarded \$11.3M of a \$15.1M total project by the USDA's ReConnect grant program. The awarded funding was to be used to serve the most rural and unserved addresses in the County. The project is currently under construction and will serve over 1,100 of the most unserved and rural customers in Livingston County. The Project consists of 308 miles of aerial and buried infrastructure. The service that will be offered is gigabit speed to residents with packages of 500 x 500 Mbps for \$50 and 1 x 1 Gbps for \$65, both symmetrical speeds via XGS-PON. This type of network has sub 2ms latency over the network and average latency to the internet exchange gateway under 10ms. The public private partnership included Empire Access as the internet service provider (ISP), providing internet service and owning the network, with Livingston County providing grant support and the \$3.8M match. Hunt EAS provides project management including technical support, permitting and make-ready, as well as network engineering. The FCC's new Broadband mapping system has facilitated more unserved addresses in the County and those addresses are the MIP project scope. Since 2021, an established team has been working to deploy fiber to the premise internet service to Livingston County residents.

Additional State funding experience includes Empire when they took part in the New York State Broadband Project in phases 1 and 2. These two projects took place under separate grant disbursement agreements and were administered independently of each other. These projects brought high-speed fiber-optic broadband service to 1,992, and 1,692 addresses respectively, with 148.5 and 136.2 total network miles. These projects utilized the services of three subcontractors.

These networks were constructed to run 100% G-PON Fiber to the Home (FTTH) services. G-PON FTTH was the best technology we employed across our networks at the time and was therefore the technology we chose to employ for these networks. We maintain five-nines (99.999%) uptime at 20 millisecond latency, with speeds of  $500 \times 50$  megabits per second internet speeds. These speeds are up from the  $100 \times 20$  megabits per second offered when the project was constructed, while the costs have stayed constant at \$50 per month.

Phase 1 had \$4,245,468 in total project costs in constructing 148.5 total miles of fiber optic network. These costs include \$550,212 in Network & Access Equipment, \$2,830,056 in Outside Plant expenses, and \$865,200 in Drop & Customer Premises equipment. Phase 2 had \$4,046,120 in total project costs in constructing 136.2 total miles of fiber optic network. These costs include \$295,073 in Network & Access Equipment, \$3,004,742 in Outside Plant expenses, and \$746,305 in Drop & Customer Premises equipment. These projects were completed with no changes to the project timeline or budget as agreed upon between Empire and the state.



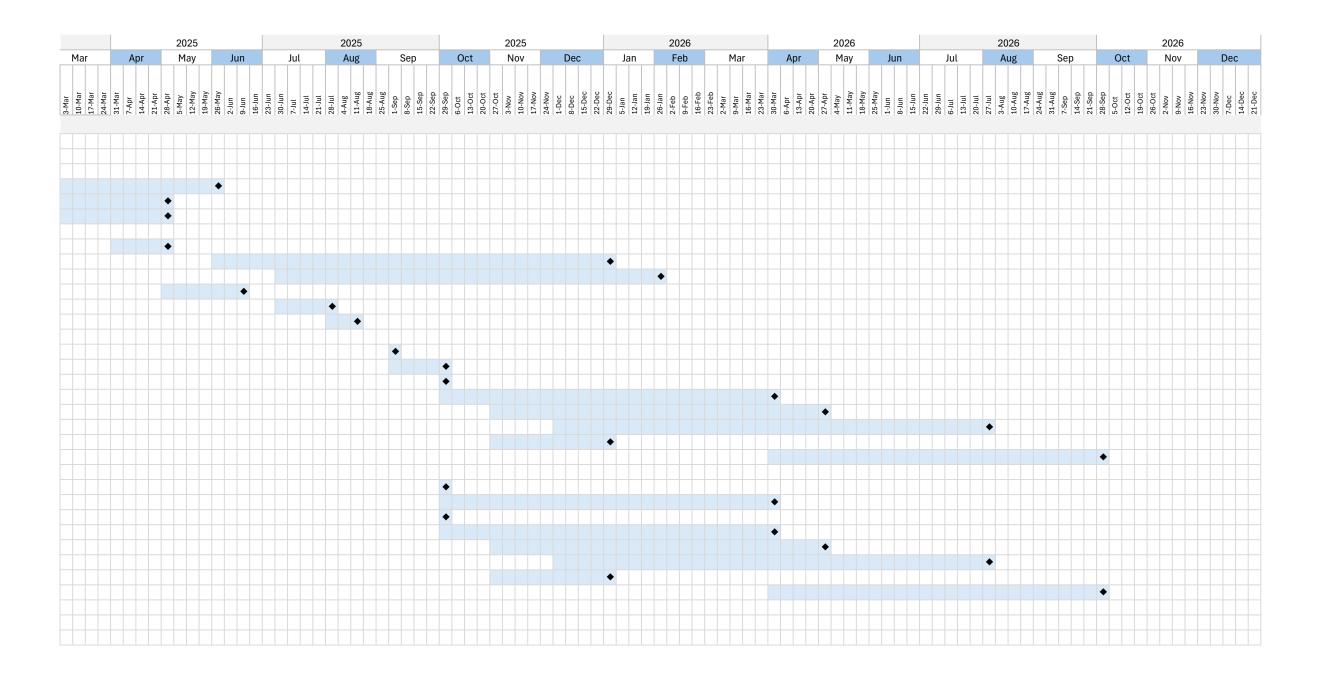
Project Name: Livingston County Broadband MIP

PROJECT Start Date: 4/1/2024

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	8-Apr	15-Apr	22-Apr	₹		က်	20-May	27-May	3-Jun	10-Jun	17-Jun	24-Jun	1-Jul	8-Jul	15-Jul	22-Jul	29-Jul	5-Aug	12-Aug	19-Aug	26-Aug	2-Sep	9-Sep	16-Sep	23-Sep	30-Sep	7-0ct	14-0ct	21-0ct	28-Oct	4 I	11-Nov	18-Nov	25-Nov	2-Dec	9-Dec	16-Dec	23-Dec	30-Dec	6-Jan	13-Jan	20-Jan	27-Jan	3-Feb	10-Feb	

1							1.4 Ppr 1.4 Apr 1.5 App 1.5 App 1.5 App 1.5 App 1.5 App 1.5 App 1.5 App 1.5 App 1.5 App 1.6 Sep 1.6 Sep 1.7 App 1.7
#	Activity	Start	End	Duration	Status	% Done	
1	Finalize routes	5/1/2024	6/1/2024	23		70%	
4	Design Development	6/1/2024	8/1/2024	44	Not Started	0%	
2	Order materials	5/1/2024	8/31/2024	88	In Progress	20%	
3	Submit Pole Applications	8/1/2024	6/1/2025	217	Not Started	0%	
5	NYDOT permits	10/1/2024	5/1/2025	153	Not Started	0%	
6	Municipal Permits	2/1/2025	5/1/2025	64	Not Started	0%	
7	Pole App Reconciliation	12/1/2024	1/30/2025	44	Not Started	0%	
9	Make- Ready Bidding	4/1/2025	5/1/2025	23	Not Started	0%	
10	Electric MR Construction	6/1/2025	12/31/2025	153	Not Started	0%	
11	Telco MR & 3rd Part Moves	7/1/2025	2/1/2026	154	Not Started	0%	
12	Contact Documents	5/1/2025	6/14/2025	32	Not Started	0%	
13	Bidding/Procurment	7/1/2025	8/1/2025	24	Not Started	0%	
14	Bid Award	8/1/2025	8/14/2025	10	Not Started	0%	
15	Construction Kickoff	9/1/2025	9/1/2025	1	Not Started	0%	
16	Submittals	9/1/2025	10/1/2025	23	Not Started	0%	
17	Begin Construction Areas 1 & 2	10/1/2025	10/1/2025	1	Not Started	0%	
18	Strand and Anchoring	10/1/2025	4/1/2026	131	Not Started	0%	
19	Cable Installation	11/1/2025	5/1/2026	130	Not Started	0%	
20	Splicing and Closures	12/1/2025	8/1/2026	175	Not Started	0%	
21	PoP Terminations and FDP	11/1/2025	12/31/2025	43	Not Started	0%	
22	Testing and Closeout	4/1/2026	10/1/2026	132	Not Started	0%	
23	Begin Construction Areas 3 & 4	10/1/2025	10/1/2025	1	Not Started	0%	
24	Strand and Anchoring	10/1/2025	4/1/2026	131	Not Started	0%	
25	Cable Installation	11/1/2025	5/1/2026	1	Not Started	0%	
26	Splicing and Closures	12/1/2025	8/1/2026	131	Not Started	0%	
27	PoP Terminations and FDP	11/1/2025	12/31/2025	130	Not Started	0%	
28	Testing and Closeout	4/1/2026	10/1/2026	175	Not Started	0%	
				43	Not Started	0%	
29	Closeout with CAO	7/1/2026	11/1/2026	132	Not Started	0%	
30	Begin Operations						

Week Starting:





## **Letter of Commitment**

March 5, 2024

To the NYS ConnectALL Municipal Infrastructure Program selection committee,

I am writing on behalf of Empire Long Distance Corporation d/b/a Empire Access (Empire), an internet service provider located in Prattsburgh, New York. We commit to operating the network included in Livingston County's application to the NYS ConnectALL Municipal Infrastructure Program.

Empire owns and operates fiber optic networks totaling over 2,400 miles of fiber optic cable, over 100 central office locations, servicing over 34,000 customers across New York and northern Pennsylvania. Empire remains committed to providing communications services and solutions to local customers ranging from residential, retail, manufacturing, carriers, wineries, banks, health care facilities, schools and law enforcement agencies. Empire offers a wide range of products and services from basic phone service to customized phone systems, scalable high-speed Internet, TV, dedicated circuits, and security system solutions to meet varied business needs. Our company utilizes a 100 percent fiber optic connection to deliver service.

We have experience working with city and county governments as they navigate state and federal grant programs. We have been especially involved with Livingston, Yates, Steuben, and Madison Counties as they increase their commitment to a dependable, high-speed, fiber optic internet connection for more and more of their residents through the United States Department of Agriculture's ReConnect Program. We have participated in the New York State Broadband Program starting in 2016, resulting in Empire providing access to Gigabit fiber optic Internet to more than 3,600 rural homes and businesses across the Finger Lakes and Southern Tier regions of New York State. We have also worked with the City of Elmira as they earmarked a portion of their American rescue plan funds to expand broadband service in the city.

As we continue to grow and evolve, our focus remains on exceeding customers' expectations with high quality service. In 2021, PC Mag named Empire the fastest internet provider in the United States. In 2022, PC Mag named Empire the fastest internet provider in the US Northeast. We aim to extend the same award-winning service to the residents to be serviced by this project.

Empire operates a 100% non-blocking fiber-optic network on XGS-PON technology via Calix and Nokia. We operate a closed-ring network topology which allows us to redirect traffic in the event of a network outage, minimizing downtime. We design our networks with scalability in mind. This has allowed us to upgrade network rings individually as usage continues to increase. This technology is scalable, if every address passed were to request service, we will be able to provide it.

We look forward to working closely with Livingston County and the ConnectALL Office to bring high-speed fiber-optic internet to those in need.

Sincerely,

James Baase

**Chief Executive Officer** 

**Empire Access** 



## APPLICANT AND PARTNERS

Light Up Livingston (LUL) is Livingston County's initiative to provide high-speed reliable broadband fiber available to every address. In order to accomplish this goal, the Livingston County Board of Supervisors determined they would prioritize all addresses deemed unserved (less than 25/3 Mbps) and underserved (less than 100/20 Mbps). The funding allocated to broadband development through the County's local investment to-date has been in mapping, citizen outreach, network engineering and deployment consulting. The County has also provided significant match funds to leverage a competitive federal grant. Light Up Livingston is one of the top priorities for the Board of Supervisors as identified in the *Livingston County Strategic Plan*. This application to New York State's Municipal Infrastructure Program (MIP) aligns with many goals of Light Up Livingston.

Livingston County in partnership with Empire Access (Empire), was awarded 11.3 million dollars of a 15.1 million dollars total project by the USDA's ReConnect grant program to serve the most rural and unserved addresses in the County. The public private partnership included Empire Access as the internet service provider (ISP), providing internet service and owning the network, with Livingston County providing grant support and the 3.8 million dollar match. Hunt EAS provides project management including technical support, permitting and make-ready, as well as, network engineering. Since 2021, an established team has been working to deploy fiber internet service to Livingston County residents.

Livingston County proposes to continue working with the same partners and augment the team to include a construction management firm, increased project management and marketing assistance. The outlined project team will help Livingston County meet the deployment timeline requirements by implementing a lead Project Management Professional (PMP) during planning, design and permitting processes. This will ensure the project reaches completion given the project timelines. Additionally, a dedicated construction manager will be hired to manage the several prime contracts the County will hold during the project. This includes construction administration, track schedules, financial reporting, lead project coordination meetings and provide an interface to the ConnectALL Office. Please refer to the Approach and Scope of Services document for further details regarding the team's approach, roles and responsibilities.

## PROPOSED PROJECT

The project request includes funding for 298 miles of aerial fiber that will serve approximately 4,061 addresses including 1,246 unserved and 242 underserved broadband serviceable locations.

It is Livingston County's assertion that through the deployment of MIP funds, all known unserved locations will have fiber broadband internet available.

## INFRASTRUCTURE OWNERSHIP MODEL AND APPROACH

The MIP project is designed to utilize Empire's existing fiber backbone that traverses the entire County by way of an Irrevocable Right of Use (IRU). This 317 mile backbone was funded through the USDA ReConnect Project. The backbone will provide Livingston County with access to the established colocations it will share with Empire. Livingston County is proposing to hold title to the new MIP fiber network and partner with Empire for operations and maintenance. In this relationship, Empire would participate in the initial deployment, assume responsibility for the customer installations, outage response and repair of the network, billing and collections and customer service. Livingston County would ensure the Service Level Agreements (SLA) for network performance such as uptime, speed, latency, packet delivery, jitter and other material network performance metrics. It is anticipated that Empire will formalize an IRU from the County to Empire to enable their use of the existing fiber routes. The new distribution fiber proposed in the MIP application will originate from the existing backbone via the IRU and serve the addresses identified in the project. The County oversee the network deployment in coordination with Hunt EAS and a construction management firm. This team will cover project management, construction management, engineering, and financials to oversee the project. Empire has agreed on the change in agreement structure moving forward and if chosen for funding, the two parties will formalize the agreement terms.

The proposed strategy is the most efficient and cost-effective solution, understanding the broadband infrastructure in Livingston County, and represents a continued investment of previous efforts. Adding to Empire's fiber backbone to make a larger network is synergistic from a contractual, operational and geographic perspective. The proposed partnership is preferred by the County based on past experience and confidence in Empire with the legal, managerial and financial capability and operating experience.

## OPEN ACCESS

Livingston County recognizes the importance of interconnected municipal public infrastructure to bring future proof resilient technology to the region and the State as a whole. The 278 miles of laterals proposed to be funded by the MIP grant will be owned by Livingston County and approximately twenty percent of the strands will be reserved for open access. Given the sparsely populated areas in Livingston County, open access may not be an economically viable option to support multiple retail internet service providers in all locations.

However, given the significance of open access to reflect broader needs, this project proposal includes a connection to both the Southern Tier Network (STN) in Wayland and potentially reach to the Thruway Network north of Caledonia. Livingston County offers a unique geographic benefit to the initiative of middle mile open access network and are more than happy to help establish regional connections between the Western New York, the Finger Lakes and the Southern Tier regions. STN has endorsed the Livingston County proposal and will continue to collaborate to further the shared interests of broadband deployment.

## **GRANT REQUEST**

Livingston County requests \$23,879,730 from the ConnectALL Office for the deployment of 298 miles of all fiber internet to serve approximately 4,061 addresses.

As proposed, the MIP grant request will accomplish the goals of the Light Up Livingston broadband program and will serve all identified unserved and underserved addresses in the County. The local team is strong, experienced and established for implementation of a project that is nearly shovel ready and can complete this grant proposal given the stringent timeline.



# THE ASSEMBLY STATE OF NEW YORK ALBANY

RANKING MINORITY MEMBER Children & Families Committee

COMMITTEES
Ethics & Guidance
Health
Housing
Judiciary
Small Business

March 8, 2024

Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33<sup>rd</sup> Floor New York, NY 10017

Re: Light Up Livingston/ConnectALL Municipal Infrastructure Program

Dear Mr. Breitbart:

I am the New York State Assemblywoman for the 133<sup>rd</sup> District which covers the entirety of Livingston County. I am writing to express my support of the Light Up Livingston application to the ConnectALL's Municipal Infrastructure Program (MIP).

Light Up Livingston is the County's program with the goal of providing reliable, high-speed and affordable internet service to every address. Without financial assistance through state and federal grants it is unlikely that private internet service providers would build out to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households. My office has gotten numerous calls, letters, and emails about the gaps in internet accessibility in the district.

High-speed internet will result in immediate and long-term economic benefit to Livingston County. I applaud the efforts of Livingston County and appreciate their dedication to seeking alternative funding for these projects. I urge the ConnectALL office to fund the Livingston County request for broadband grant funding to achieve goals of Light Up Livingston project. Should you have any questions, please contact me at 585-781-0885.

Sincerely,

Marjorie L. Byrnes Member of Assembly

Maijoi I Sym

133<sup>rd</sup> District

## CHAIR OF THE MINORITY CONFERENCE

#### RANKING MINORITY MEMBER

HOUSING, CONSTRUCTION AND COMMUNITY DEVELOPMENT

**INSURANCE** 

LEGISLATIVE COMMISSION ON RURAL RESOURCES

February 23, 2024

STATE OF NEW YORK

THE SENATE

SENATOR
PAMELA A. HELMING
54TH DISTRICT

### COMMITTEES

**AGRICULTURE** 

COMMERCE, ECONOMIC DEVELOPMENT AND SMALL BUSINESS

RACING, GAMING AND WAGERING
RULES

### **MEMBER**

LEGISLATIVE WOMEN'S CAUCUS

Mr. Joshua Breitbart, Senior Vice President ConnectALL Office 633 Third Avenue, 33<sup>rd</sup> Floor New York, NY 10017

Dear Mr. Breitbart:

As the New York State Senator for the 54<sup>th</sup> District, I am proud to represent Livingston County. I am writing to express my support of the Light Up Livingston application to the ConnectALL's Municipal Infrastructure Program (MIP).

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants, it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households.

High-speed internet will result in immediate and long-term economic benefit to Livingston County. I urge the ConnectALL office to fund the Livingston County request for broadband grant funding to achieve goals of Light Up Livingston project. Should you have any questions, please contact my office at 315-568-9816.

Sincerely,

Pamela A. Helming Senator, 54<sup>th</sup> District

District Office: 25 North St., Canandaigua, NY 14424 • (315) 568-9816 • FAX: (585) 393-0825

Albany Office: Room 711B Legislative Office Building, Albany, NY 12247 • (518) 455-2366 • FAX: (518) 426-6953

www.helming.nysenate.gov • helming@nysenate.gov









Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33rd Floor New York, NY 10017

Dear Mr. Breitbart,

My name is Jeff Gasper, and I am writing on behalf of Southern Tier Network, STN. Please accept this letter of commitment as demonstration of our support for the Light Up Livingston application to the ConnectALL's Municipal Infrastructure Program (MIP).

STN is excited to engage with Livingston County (a contiguous County for the existing STN middle mile network) in a potential expansion of our open-access middle mile and last-mile network. We believe that the STN organization and the Livingston County teams combined offer a creative and well positioned expansion of municipally based open-access fiber infrastructure in the County to help serve the residents and businesses in Livingston County.

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households.

We thank you for taking the time to consider the Light Up Livingston application, and urge you to fund the Livingston County request for broadband grant funding to achieve goals of Light Up Livingston project.

Sincerely,

Jeff Gasper, CEO



# Genesee/Finger Lakes Regional Planning Council

ROCHELLE STEIN, Chair • MICHAEL FALK, Vice Chair • KEVIN KELLEY, Treasurer • Richard Sutherland, Executive Director

March 8, 2024

Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33<sup>rd</sup> Floor New York, NY 10017

Dear Mr. Breitbart:

I write to you on behalf of the Genesee/Finger Lakes Regional Planning Council, which works to bring together community organizations from nine counties in western New York as partners in advocacy. We support the Municipal Infrastructure Program (MIP) grant application filed by Livingston County.

Light Up Livingston has made substantial effort to develop open-access, public use fiber broadband infrastructure to promote economic development opportunities for agriculture and businesses and improve quality of life for all County residents, which could be furthered through last-mile Municipal Infrastructure Program grant funding. A community-wide survey of residents, businesses and farm operators reinforces the need for highspeed, reliable internet access for economic success in Livingston County.

High-speed internet will result in immediate and long-term economic benefit to Livingston County. I urge the ConnectALL office to fund Municipal Infrastructure program to Light Up Livingston. This project is critical to economic development and quality of life in Livingston County.

Sincerely,

Richard Sutherland

RSutherland

**Executive Director** 

Genesee/Finger Lakes Regional Planning Council



# LIVINGSTON COUNTY BOARD OF SUPERVISORS

Livingston County Government Center 6 Court Street, Room 302 Geneseo, New York 14454 (585) 243-7030 (585) 243-7045 Fax

e-mail: dlefeber@co.livingston.ny.us www.livingstoncounty.us

David L. LeFeber Chairman of the Board

Michele R. Rees, IIMC-CMC Clerk of the Board

March 8, 2024

Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33rd Floor New York, NY 10017

Dear Mr. Breitbart:

My name is David LeFeber and I am writing on behalf of the Livingston County Board of Supervisors to express our support of the Light Up Livingston application to the ConnectALL's Municipal Infrastructure Program (MIP).

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households.

I thank you for taking the time to consider this demonstration of support and urge you to fund the Livingston County request for broadband grant funding to achieve the goals of the Light Up Livingston project. Should you have any questions, please contact my office at 585-243-7030.

Sincerely.

David L. LeFeber

Chairman of the Board

DLL/mrr



Ian M. Coyle, ICMA-CM County Administrator

Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33rd Floor

New York, NY 10017

Dear Mr. Breitbart:

# LIVINGSTON COUNTY OFFICE OF COUNTY ADMINISTRATOR

Livingston County Government Center 6 Court Street, Room 302 Geneseo, New York 14454

(585) 243-7040 Fax (585) 243-7045

February 22, 2024

As County Administrator for Livingston County, please accept this letter as demonstration of my support for the County's application to the ConnectALL's Municipal Infrastructure Program (MIP). Our Light Up Livingston initiative is built on the foundation of improving and providing high speed internet to those in our community and this endeavor has become the Board's number one strategic plan priority. This project seeks to accomplish our mission to improve high-speed broadband access to those in need in our county.

Light Up Livingston is the County's advanced initiative with the ultimate goal of being able to provide reliable and affordable high-speed internet service to every address within County lines. Without financial assistance through State and federal grants, it is unlikely that private internet service providers would build fiber networks that would benefit our most remote locations in Livingston County who are in need of this service. For this reason, the County has come up with an innovative approach to the issue – to build an open-access fiber optic network with private partners for the deployment of a last mile, fixed broadband service to unserved and under-served households.

We are proud to say that our plan, and its various components, is likely the most ambitious such county-led program for any rural county in New York State. They say success begets success, and ConnectALL funding would be augmenting our preexisting efforts that have started to address this issue through a mix of private sector, Federal and local funds. An award through the MIP would be an incredible accelerator for our Light Up Livingston program. The impact of providing high-speed internet will fuel long term rural economic development, accessibility, and quality of life opportunities, especially in the rural areas of Livingston County.

Thank you for taking the time to consider the Light Up Livingston application. I urge you to fund this worthwhile project so we can achieve these goals that require grant funding. Please do not hesitate to contact me with any questions at (585) 243-7040. We appreciate your time, attention and consideration.

Sincerely,

Ian M. Coyle

County Administrator

Jan m Cyle

## LIVINGSTON COUNTY

SHERIFF



## THOMAS J. DOUGHERTY, SHERIFF

MATTHEW D. BEAN, UNDERSHERIFF

February 23, 2024

Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33rd Floor New York, NY 10017

Dear Mr. Breitbart:

My name is Undersheriff Matthew D. Bean, and on behalf of the Livingston County Sheriff's Office, please accept this letter as demonstration of our support for the Light Up Livingston application to the ConnectALL's Municipal Infrastructure Program (MIP). Our team is committed to keeping our community safe through forward thinking, innovative solutions and open communication. As such, this project seeks to accomplish our mission to improve high-speed broadband access, which is critical to emergency communications.

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households.

High-speed broadband internet will result in immediate and long-term benefit to Livingston County. I thank you for taking the time to consider the Light Up Livingston application, and urge you to fund the Livingston County request for broadband grant funding to achieve goals of Light Up Livingston project.

Sincerely.

Undersheriff Matthew D. Bean

Livingston County Sheriff's Office

4 Court St.

Geneseo, NY 14454

(Office) 585-243-7143

# **TOWN OF SPARTA**

SUPERVISOR

MARK J. SCHUSTER 6464 LIBERTY POLE RD. DANSVILLE, NY 14437 (585) 669-2803 FAX (585) 669-9018

LIVINGSTON COUNTY NEW YORK SUPT. OF HIGHWAYS **KEVIN ROBINSON** (585) 335-6703 FAX (585) 335-9005

TOWN JUSTICE RODNEY DOE

TOWN COUNCIL

DEBRA HALPENNY

WILLIAM SMITH

AARON SCHREINER

MARY ELLYN CALABRESE

Town Clerk/Tax Collector **SHEILA DUFFY** 8824 ROUTE 256 DANSVILLE, NY 14437 (585) 335-9290 Fax (585) 335-3570

March 8, 2024

Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33rd Floor New York, NY 10017

Dear Mr. Breitbart:

I am a business owner and the Sparta Town Supervisor. On behalf of the Town of Sparta, please accept this letter as a demonstration of our support for the Light Up Livingston application to ConnectALL's Municipal Infrastructure Program (MIP). As Town Supervisor, I fully support efforts and projects that improve the community and promote economic development and quality of life for my constituents and the region at large.

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants, it is unlikely that private internet service providers would build fiber to the premises in many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open-access fiber optic network with private partners for the deployment of a last-mile fixed broadband service to unserved and underserved households.

I thank you for taking the time to consider this demonstration of support and urge you to fund the Livingston County request for broadband grant funding to achieve the goals of the Light Up Livingston project. Should you have any questions, please contact my office at (585-669-2803).

Sincerely,

Mark J. Schuster, Town Supervisor

Town of Sparta

<Header>

March 8, 2024

Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33rd Floor New York, NY 10017

Dear Mr. Breitbart:

My name is Donald Wester, Town Supervisor, and on behalf of the Town of Conesus, please accept this letter as demonstration of our support for the Light Up Livingston application to the ConnectALL's Municipal Infrastructure Program (MIP). As Town Supervisor, I fully support efforts that improve the community while promoting economic development and quality of life of my constituents and the region at-large.

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households.

I thank you for taking the time to consider this demonstration of support and urge you to fund the Livingston County request for broadband grant funding to achieve goals of Light Up Livingston project. Should you have any questions, please contact my office at (585-346-3130x1).

Sincerely,

Donald W. Wester, Town Supervisor

Donald W. Wester

Town of Conesus



Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33rd Floor New York, NY 10017

Dear Mr. Breitbart:

My name is William Bacon, and on behalf of the Livingston County Industrial Development Agency, please accept this letter as demonstration of our support for the Light Up Livingston application to the ConnectALL's Municipal Infrastructure Program (MIP). The Industrial Development Agency is committed to finding new and innovative ways to provide our community with a strong, adaptable workforce and culture. As such, this project seeks to accomplish our mission through improvement of high-speed broadband access.

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households.

High-speed internet is critical to the economic development of Livingston County. I thank you for taking the time to consider the Light Up Livingston application, and urge you to fund the Livingston County request for broadband grant funding to achieve goals of Light Up Livingston project.

Sincerely,

Wiliam Bacon, Director

Livingston County Industrial Development Agency



Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33<sup>rd</sup> Floor New York, NY 10017

Dear Mr. Breitbart:

I write to you on behalf of the Finger Lakes Digital Inclusion Coalition. The Coalition works with more than 100 community-based organizations to enhance digital equity and inclusion in the Finger Lakes. We support the Municipal Infrastructure grant application filed by the public-private partnership in Livingston County, NY.

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners for the deployment of a last mile fixed broadband service to unserved and underserved households.

The Finger Lakes Digital Inclusion Coalition strongly supports the public-private partnership initiative between Livingston County and its private partners as outlined in their Municipal Infrastructure Grant Application. This Light Up Livingston project will help the Finger Lakes Digital Inclusion Coalition achieve its goals of increasing digital equity in the region for those who are currently unserved and underserved.

High-speed internet will result in immediate and long-term economic benefit to Livingston County. I urge you to fund the Livingston County request for broadband grant funding to achieve the goals of the Light Up Livingston project. This project is critical to economic development and quality of life in Livingston County.

Sincerely,

Lynn Thurston,

**Board President** 

Finger Lakes Digital Inclusion Coalition



Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33rd Floor New York, NY 10017

Dear Mr. Breitbart:

My name is J. Chad Teeters, and on behalf of Noyes Health please accept this letter as demonstration of our support for the Light Up Livingston application to the ConnectALL's Municipal Infrastructure Program (MIP). The mission of Noyes Health is to support and promote the health of our community through expansion of resources, services, and external relationships. As such, this project seeks to accomplish our mission through improvement of high-speed broadband access, which is critical to telehealth and telemedicine uses.

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households.

I thank you for taking the time to consider the Light Up Livingston application, and urge you to fund the Livingston County request for broadband grant funding to achieve goals of Light Up Livingston project.

Sincerely,

J. Chad Teeters
President and CEO

UR Medicine - Noyes Health



Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33<sup>rd</sup> Floor New York, NY 10017

Dear Mr. Breitbart:

On behalf of the Board of Directors of the Livingston County Chamber of Commerce and our nearly 600 business members, we are writing to express our support of the Livingston County grant application to the ConnectALL's Municipal Infrastructure Program (MIP).

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households.

Livingston County Area Chamber of Commerce strongly supports the public-private partnership between Livingston County and its private partners for the Municipal Infrastructure grant application to improve broadband internet in Livingston County. This Light Up Livingston project will help increase the competitiveness of our rural businesses, helping them to operate in the 21<sup>st</sup> Century economy.

High-speed internet will result in immediate and long-term economic benefit to Livingston County. I urge the ConnectALL office to fund the Livingston County request for broadband grant funding to achieve goals of Light Up Livingston project. This project is critical to economic development and quality of life in Livingston County.

Sincerely,

Laura Lane

President & CEO

Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33rd Floor New York, NY 10017

Dear Mr. Breitbart,

My name is Patricia Moran, and I am a home owner who lives within the boundaries of the *Light Up Livingston* project in Livingston County. I am writing to express my support of the *Light Up Livingston* application to the ConnectALL's Municipal Infrastructure Program (MIP).

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households.

Light Up Livingston has applied for grant money for my area multiple times, but we have been turned down at every turn. Recently, an area adjacent to ours with the same rural character was approved (through a different grant application) for high speed internet. My neighbors and I have been flummoxed as to why and extremely disappointed that we are repeatedly overlooked. I myself have a DSL line with a download speed of 2.74 Mb/s (I am paying for a speed of 6.0) and an upload speed of .68 Mb/s. Other than expensive satellite service, this is the only connectivity option open to me. Many of my neighbors cannot even access this Frontier DSL line. Several of them work from home, and have had to pay the big bucks for satellite service.

We can't help feeling left out. We are frustrated and desperate. We pay taxes, too! It is my strong and sincere hope that our area will be approved this time around. Please!

Thank you for taking the time to consider this letter of support, and <u>I urge you</u> to fund the Livingston County request for broadband grant funding to achieve the goals of *Light Up Livingston's* project.

Sincerely,

Patricia S. Moran 4104 Hogmire Rd Avon, NY 14414 February 23, 2024

Mr. Joshua Breitbart Senior Vice President ConnectALL Officeit 633 Third Avenue, 33rd Floor New York, NY 10017

Dear Mr. Breitbart.

Our names are Brian Thorn and Diane Attea. We are homeowners on Hogmire Road in Avon, NY, which lies within the boundaries of the Light Up Livingston project in Livingston County. We are writing to express our support of the Light Up Livingston application to the ConnectALL's Municipal Infrastructure Program (MIP).

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premises of many remote locations in Livingston County. During our 11 years on Hogmire Road no service provider has elected to do so. Our current internet service arrives through a sluggish, unreliable, and poorly maintained telephone landline connection. This is not only inconvenient for residents, it places small businesses that rely on internet connectivity at a competitive disadvantage. We are delighted that Livingston County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households. We hope to see the plan carried through to completion.

Thank you for taking the time to consider this letter of support. We strongly urge you to fund the Livingston County request for broadband grant funding to achieve goals of Light Up Livingston project.

Sincerely,

Diane M. Attea

Diane Attea

Brian Thorn

Brier K. Thorn

Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33rd Floor New York, NY 10017

Dear Mr. Breitbart,

Our names are Nicole & Richard Erhardt, and we are home owners who live within the boundaries of the Light Up Livingston project in Livingston County. I am writing to express my support of the Light Up Livingston application to the ConnectALL's Municipal Infrastructure Program (MIP).

Light Up Livingston is the County's program with the goal to provide reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households.

Thank you for taking the time to consider this letter of support, and I urge you to fund the Livingston County request for broadband grant funding to achieve goals of Light Up Livingston project.

Sincerely, NICOLE ERHARDT

# **Project Approach**

**Supplemental Information** 



# **Project Schedule**



Project Name: Livingston County Broadband MIP

PROJECT Start Date: 4/1/2024

				20	24												20	)24												20	24												20	)25	,	
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1-Apr 8-Apr	18	22-Apr	29-Apr	6-May	13-May	20-May	27-May	3-Jun	10-Jun	17-Jun	24-Jun	1-Jul	8-Jul	15-Jul	22-Jul	29-Jul	5-Aug	12-Aug	19-Aug	26-Aug	2-Sep	6-Sep	16-Sep	23-Sep	30-Sep	7-0ct	14-Oct	21-Oct	28-Oct	4-Nov	11-Nov	18-Nov	25-Nov	2-Dec	9-Dec	16-Dec	23-Dec	30-Dec	6-Jan	13-Jan	20-Jan	27-Jan	3-Feb	10-Feb	17-Feb	13

#	Activity	Task Owner S	art End	Duration	Status	% Done	 	 		- 0 0 0	 	 	 	 		12214
1	Finalize routes	5/1	2024 6/1/202	23		70%		•								
4	Design Development	6/1	2024 8/1/202	1 44	Not Started	0%				•						
2	Order materials	5/1	2024 8/31/202	4 88	In Progress	20%										
3	Submit Pole Applications	8/1	2024 6/1/202	217	Not Started	0%										
5	NYDOT permits	10/2	/2024 5/1/202	153	Not Started	0%										
6	Municipal Permits	2/1	2025 5/1/202	64	Not Started	0%										
7	Pole App Reconciliation	12/1	/2024 1/30/202	5 44	Not Started	0%									•	
9	Make- Ready Bidding	4/1	2025 5/1/202	23	Not Started	0%										
10	Electric MR Construction	6/1	2025 12/31/20	25 153	Not Started	0%										
11	Telco MR & 3rd Part Moves	7/1	2025 2/1/202	154	Not Started	0%										
12	Contact Documents	5/1	2025 6/14/202	5 32	Not Started	0%										
13	Bidding/Procurment	7/1	2025 8/1/202	24	Not Started	0%										
14	Bid Award	8/1	2025 8/14/202	5 10	Not Started	0%										
15	Construction Kickoff	9/1	2025 9/1/202	1	Not Started	0%										
16	Submittals	9/1	2025 10/1/202	5 23	Not Started	0%										
17	Begin Construction Areas 1 & 2	10/3	/2025 10/1/202	5 1	Not Started	0%										
18	Strand and Anchoring	10/2	/2025 4/1/202	131	Not Started	0%										
19	Cable Installation	11/3	/2025 5/1/202	130	Not Started	0%										
20	Splicing and Closures	12/2	/2025 8/1/202	175	Not Started	0%										
21	PoP Terminations and FDP	11/1	/2025 12/31/20	25 43	Not Started	0%										
22	Testing and Closeout	4/1	2026 10/1/202	6 132	Not Started	0%										
23	Begin Construction Areas 3 & 4	10/3	/2025 10/1/202	5 1	Not Started	0%										
24	Strand and Anchoring	10/1	/2025 4/1/202	131	Not Started	0%										
25	Cable Installation	11/2	/2025 5/1/202	1	Not Started	0%										
26	Splicing and Closures	12/3	/2025 8/1/202	131	Not Started	0%										
27	PoP Terminations and FDP	11/1	/2025 12/31/20	25 130	Not Started	0%										
28	Testing and Closeout	4/1	2026 10/1/202	6 175	Not Started	0%										
				43	Not Started	0%										
29	Closeout with CAO	7/1	2026 11/1/202	6 132	Not Started	0%										
30	Begin Operations															
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Week Starting:

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Learn to use a PC for email, web research, and more so you can stay connected online!









# **Computer Essentials**

Dates: October 24th, 26th, 31st November 2nd, 7th, 9th, 14th, 16th, 28th, 30th

**Days: Tuesdays and Thursdays** 

Time: 10-11:30 am

**Location: Mount Morris Town Building** 

This 5-week course covers the essentials of how to use the basic functions of a personal computer, how to navigate the internet, and how to send and receive email. By the end of the course, you'll have a foundation for using a computer and internet to enrich your life.

\* Prerequisites:\* <u>A Gmail address.</u> If you need help setting up a Gmail address, please call the Senior Planet hotline 888-713-3495.



To register: Call Livingston County Office for the Aging at 585-243-7520 or email cwagner@co.livingston.ny.us

# SENIOR PLANET









# **Introduction to Digital Culture**

Dates: 1/16, 1/18, 1/23, 1/25, 1/30, 2/1, 2/6, 2/8, 2/13, 2/15

**Days: Tuesdays and Thursdays** 

Time: 10am-11:30am

**Location: Livingston County Office for the Aging** 

Build #3 Murray Hill Dr. Mt. Morris, NY 14510 (1st floor conference

room)

Take your digital skills up a notch so that you can thrive online! Unlock new opportunities in the digital world! Learn how to connect with others, research topics online, pursue your passions, and more! Prerequisites: You should have taken a Basics or Essentials course for your device, or be familiar enough with your device to use it independently in class. You must also have an email address.

# Sign Up Today!

Call: 585-243-7520 or

Email: <a href="mailto:cwagner@co.livingston.ny.us">cwagner@co.livingston.ny.us</a>

\*limited spots available\*





# SENIOR PLANET

Brought to you by Livingston County Office for the Aging









# **Apply for the Affordable Connectivity Program Online**

Date: Saturday, October 28th 2023

Time: 11 AM – 12 Noon

Location: Livonia Library, Patterson Room

The Affordable Connectivity Program (ACP) is a permanent, government program that provides a discount on home internet bills for qualifying low-income households. This program replaces the Emergency Broadband Benefit (EBB) program. You can see if you're eligible and apply for the program online! After your application is accepted, the next step is to contact an Internet Service Provider about getting home internet.

Call the library to sign up (346-3450) or sign up

at www.livonialibrary.org under









March 8, 2024

Mr. Joshua Breitbart Senior Vice President ConnectALL Office 633 Third Avenue, 33rd Floor New York, NY 10017

Dear Mr. Breitbart,

My name is Curt Kolakowski, and I am writing on behalf of Airosmith Development. Please accept this letter of commitment as a demonstration of our support for the Light Up Livingston application to the ConnectALL's Municipal Infrastructure Program (MIP).

Airosmith has a great working relationship with Livingston County and their partners providing network infrastructure development services. Our team has performed permitting and pole licensing services for Livingston County throughout NYSDOT Region 4 including Perm 75 & 32, and railroad permits. Airosmith is excited about the potential economic and social development that *Light up Livingston* will bring to the county and looks forward to our continued partnership.

Airosmith Development is a **certified women owned business** with staff located across NYS. Our corporate office is in Saratoga Springs, NY and we have staff located across NYS, several in Livingston County. Margaret Smith established Airosmith Development in 2004 and is currently the President & CEO.

Light Up Livingston is the County's program with the goal of providing reliable, high-speed and affordable internet service to every address. Without financial assistance through State and federal grants it is unlikely that private internet service providers would build fiber to the premise to many remote locations in Livingston County. For this reason, the County has devised an innovative approach to build an open access fiber optic network with private partners, for the deployment of a last mile fixed broadband service to unserved and underserved households.

We thank you for taking the time to consider the Light Up Livingston application, and urge you to fund the Livingston County request for broadband grant funding to achieve goals of Light Up Livingston project.

Sincerely,

Curt Kolakowski

Vice President, Broadband Project Delivery



# **Network Design**

The network design for this project will follow the ITU-T G.9807.1 standardization of XGS-PON technology. This standard provides a future proof plan for implementing all fiber optic infrastructure that guarantees a path to upgrade technologies over the same infrastructure. This results in increased speed every time the equipment is upgraded, no infrastructure changes are required. Passive Optical Networks or PONs support large scale deployments without using high fiber counts or large amounts of equipment, thus reducing capital costs. PON requires less cabinets to be built due to the low fiber counts and 20km reach of the electronics. Less equipment, cabinets and fiber counts equate to lower capital expenditures during construction and lower operational costs once the network is functioning. Additionally, Livingston County will require all providers on its network to comply with the following core principles:

- Base level service will be at least 250 Mbps download and upload.
- Speeds will be symmetrical.
- Use reputable vendors that hold warrantees (no white box equipment)
- Buy American
- FTTH Provider (Minimum GPON)
- ACP or alternate affordability program

The proposed network will be an extension of the countywide backbone that is being constructed by the USDA reconnect project. Livingston County will have an IRU to use the network backbone with rented space at colocations around the county. As part of this project the backbone will be extended to STN in Wayland, NY and to the Thruway Network that passes through Livingston County.

For all new new network routes, one 1x8 optical splitter will be installed to support 8 fibers on the distribution cable. Multiple optical splitters may be installed to support 12, 24 and 48 count fiber cable counts. Using splitters at the backbone junction reduces the congestion/utilization of the 12 fibers available to the County on the backbone. Along with the new aerial distribution cables, 1x8 access terminals will be installed, providing ready access to subscribers at the "curb". The architecture incorporates two 1x8 splits facilitating 64 customers per PON port. This ratio guarantees that the port will not be oversubscribed regardless of GPON, EPON, xG -PON, XGS-PON or and next generation PON technology deployed.

The network follows the four service areas set up in the USDA reconnect project and phasing of the project will revolve around breaking these areas up between two contractors who will both be required to have two crews. This division of labor will allow Livingston County to meet the short schedule outlined by the MIP.



In this document, the Connect All Office requirements are summarized in the table below and followed by a three-part technical specification. The technical specification lists referenced standards, product specification and installation requirements. Additionally, all product specification sheets have been attached for reference to the *Network Maps and Addresses* uploaded to the CFA portal.



CAO Requirement	Livingston County Specification	Reference
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Speeds	10Gbps Symmetrical, 64 subscribers per PON port.	ITU-T G.9807.1
Latency	Max 1.5ms, average is 1ms XGS-PON networks.	ITU-T G.9807.1
SLA	Service level agreements will be held between the ISPs on the network and the customers. Livingston County will guarantee the continuity of the physical infrastructure to the ISPs by way of the O&M agreement.	ISP Letter of Commitment
Average Outage Time per Customer	<.1%	Empire SLA
Network Availability	99.9%	Empire SLA
Network Design Topology	Passive Optical network, fiber to the premises (FTTP)	ITU-T G.9807.1
СРЕ	Power, interface	
Network elements (both active and passive)	The network is designed as all fiber Optical Distribution Network with two distributed splits. All elements of the Outside plant are passive. The only active elements will reside in the Colocations and the CPE.	ITU-T G.9831
Connectivity to the Internet Backbone	Connectivity with the internet will happen through two separate Tier 1 Peering Providers.	
Delivery to each served address with the required throughput and capacity.	Service delivery to each address identified will be guaranteed by strictly adhering to the ITU G9807.1 XGS-PON standard. This standard uses PON architecture to deliver symmetrical 10Gbps throughput by limiting reach to 20km, limiting split ratios to 120 or less and lave light levels between-8db and -28db.	ITU-T G.9807.1
Backhaul connectivity	Backhaul connectivity is accomplished via the fiber backbone lease held by the County. This is done with point to points 100Gbps connections in and out of each POP. The backbone can facilitate aggregated links to increased backhaul in 100Gbps increments.	ITU-T G.872.1
Head end deployment	Head End deployment occurred as part of the USDA Reconnect project and exists in Wayland, Dansville, Mt. Morris and Geneseo, NY. Additional POPs are being added in Caledonia, Conesus and Nunda, NY.	Maps and Addresses
Core network electronics	Cisco Nexus 9000, Juniper MX480, Cisco ASR99K and Nokia 2100 OLTs	Network Diagram

Fiber capacity and strand counts on each segment of the network	The network will consist of either 12, 24 and 48 fiber strands in each cable. This infrastructure is rural distribution, the backbone consists of 96 fibers of which the County can use 12.	ITU-T G.652
Oversubscription ratio	The over subscription ratio for XGS-PON is 128 subscribers per 10G PON. Livingston County will design a 64-subscriber split using two 1x8 optical splitters. Due to the rural nature of the County, the architecture will be distributed meaning splitters will be in the "field" and will be cascaded on a single fiber.	ITU-T G9807.1
Split ratios	Split ratio will be 1:64 using two 1x8 optical splitters in a distributed architecture.	ITU-T G9807.1
Splice points	Splicing will be all fusion slicing and occur are the beginning of each route where the distribution cable is spliced into the existing backbone. Each distribution cable will be spliced into the backbone using an optical splitter to reduce the number of backbone fibers used.	ITU-T G9807.1
Drop installation	Drop installations will be all opti-tap pre-terminated drop cables. This will eliminate splicing to aerial infrastructure when drops are installed. It also guarantees quality through pre-termination of the cables.	See cut sheets.
In-unit termination specification	The drop cable assembly will include a pre terminated SC/APC connector on the "home" end of the cable. This allows for connectors to be mated in the NID rather than the need for field splicing. Similarly, the customer premises cable is pre-terminated so connectors can be mated rather than splicing.	See cut sheets.





Livingston County Network Diagram



#### **Part 1 References and Abbreviations**

### **Abbreviations**

ODN – Optical Distribution Network

OLT – Optical Line Terminal

ONT – Optical Network Terminal

POP – Point of Presence

FDP – Fiber Distribution Panel

SLA – Service Level Agreement

IRU – Irrevocable Right of Use

#### **References**

ITU-T G.652 (2016), Characteristics of a single-mode optical fiber and cable.

ITU-T G.872 (2019), Architecture of the optical transport network.

ITU-T G.983.1 (2005), Broadband optical access systems based on Passive Optical Networks (PON).

ITU-T G.983.3 (2001), A broadband optical access system with increased service capability by wavelength allocation.

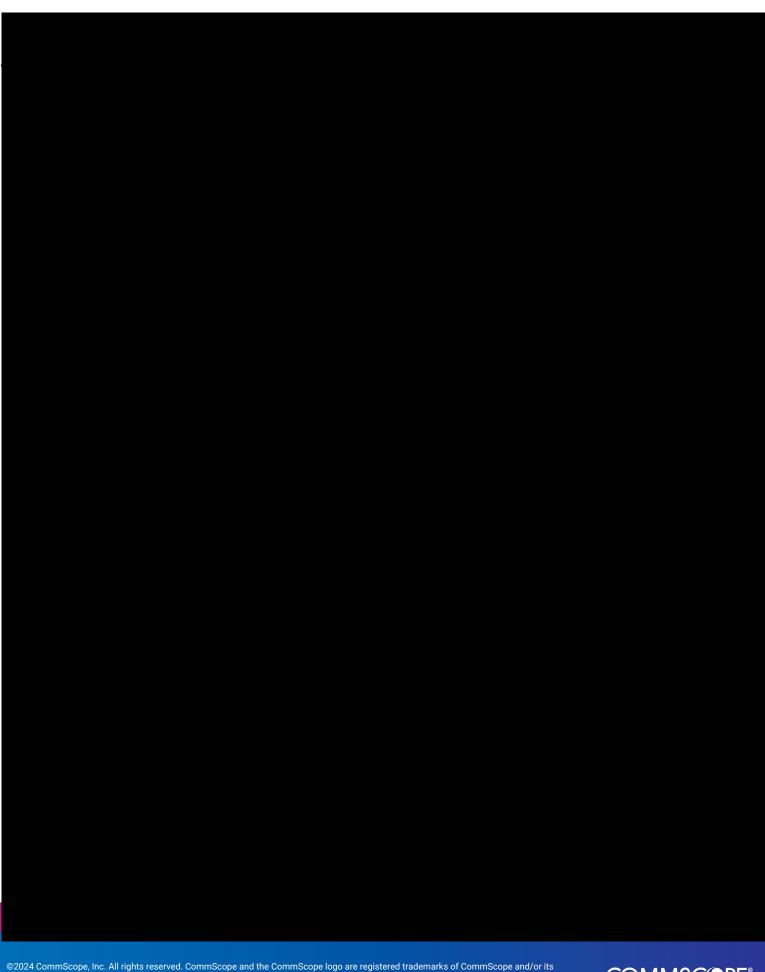
ITU-T G.984.1 (2008), Gigabit-capable passive optical networks (GPON): General characteristics.

ITU-T G.984.2 (2019), Gigabit-capable Passive Optical Networks (GPON): Physical Media Dependent (PMD) layer specification.

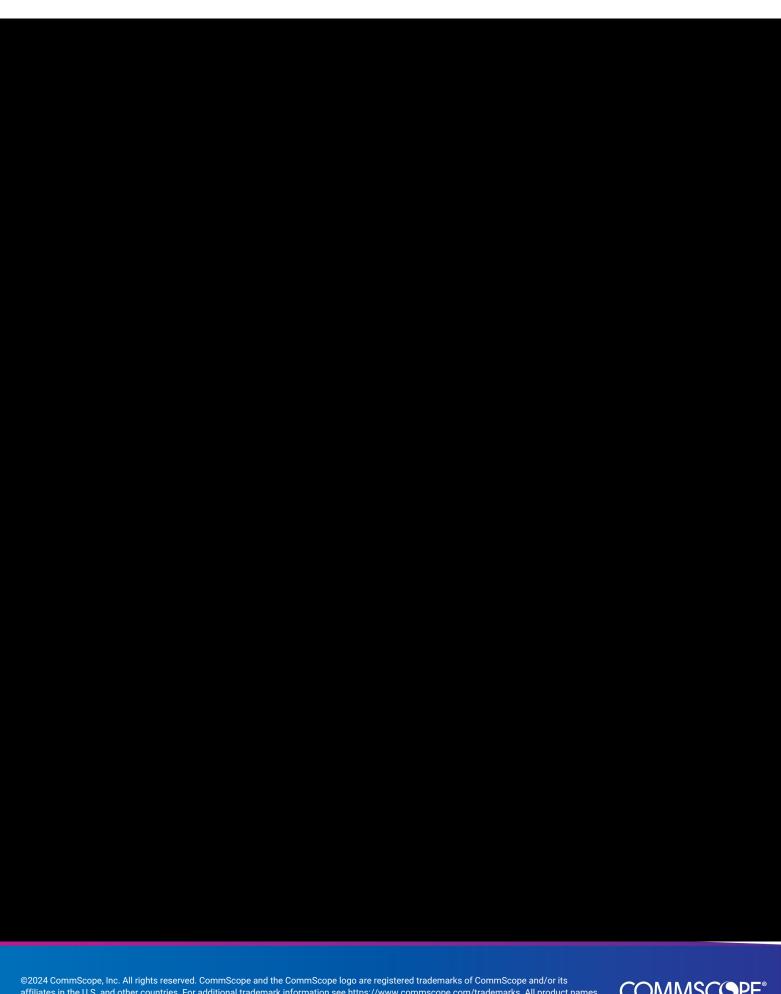
ITU-T G.9807.1 (02/2023), 10-Gigabit-capable symmetric passive optical network (XGS-PON)



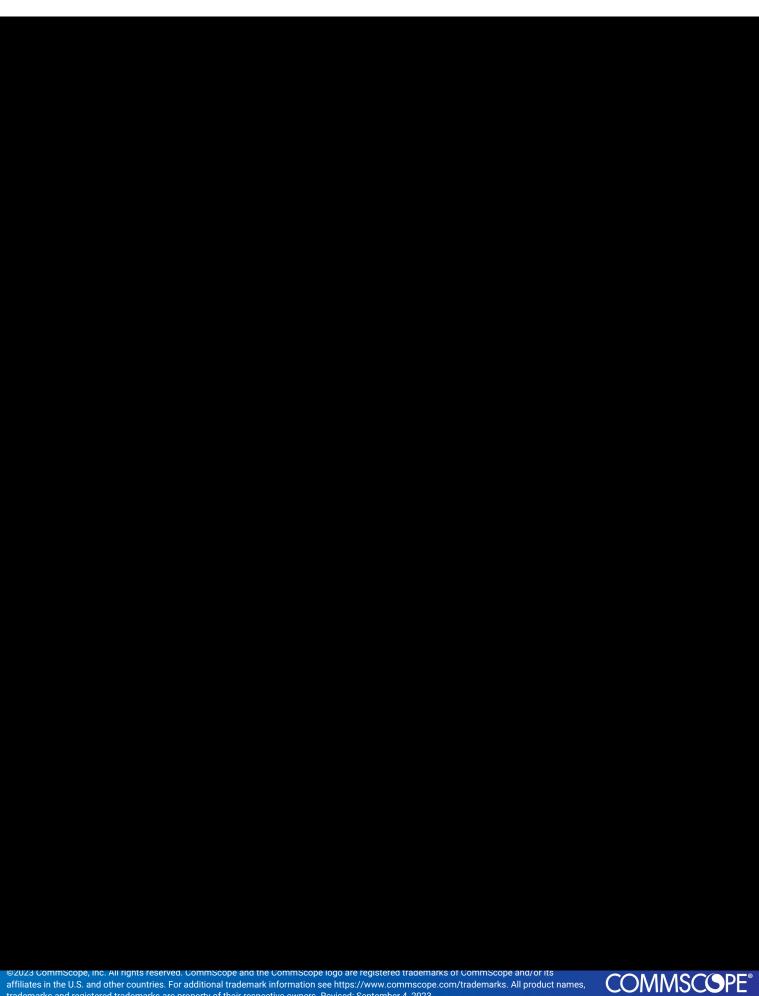
# Part 2 products and Specifications



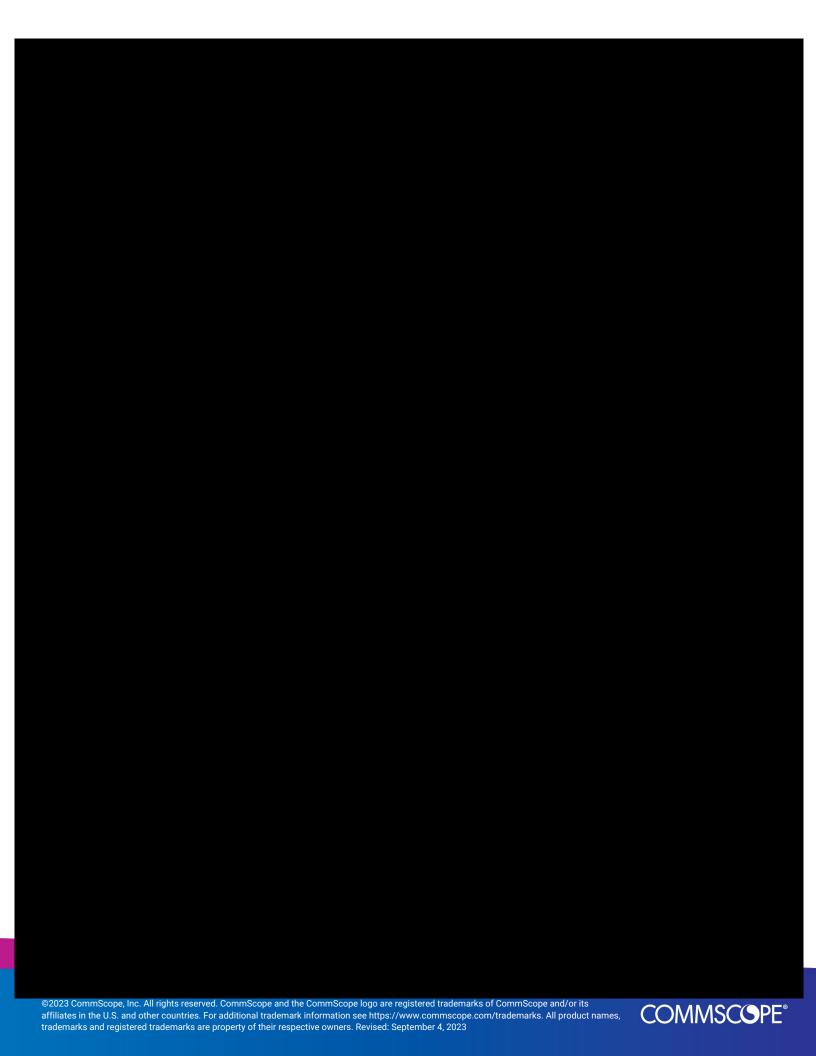














## **Part 3 Installation Requirements**

- 1. All existing utilities and obstructions are for reference purposes only and is the responsibility of the contractor to locate all existing facilities 48 hours prior to construction.
- 2. Shoring of soil may be required and is the responsibility of the contractor.
- 3. All cable and conduit shall be placed at a depth of 36" to 48" below grade unless indicated otherwise.
- 4. Any disturbance caused by construction shall be restored to its original condition prior to completion of the project. This includes, but is not limited to grass, shrubs, curbs, pavement, asphalt, ditches and trees.
- 5. All materials shall be installed per the manufacturer's recommendations in order to ensure proper performance. Any deviation is the responsibility of the contractor and must be approved by the engineer.
- 6. The bending radius of the fiber optic cable should not exceed 15 times the cable diameter.
- 7. Lubricant shall be water-based and used as directed by the manufacturer, the lubricant shall not damage the pathway materials of fiber cable jacketing in any way.
- 8. All splicing shall be fusion splicing performed by a qualified splicer in a "protected" environment specifically suited for fusion splicing fiber in the field.
- 9. Testing equipment shall be current with maintenance and calibration within 6 months of the commencement of work.
- 10. Slack loops shall be provided in the cable span, buffer tubes and fibers where indicated and noted.
- 11. All fiber optic splice closures shall be pressurized and tested per the manufacturer's requirements.
- 12. Install cable tags at each handhole for underground installations and every third pole in aerial installations.
- 13. Testing shall be completed on all splices and provided to the engineer for approval. testing shall be completed bidirectionally with an OTDR at 1310 nm and 1550 nm. testing shall support the operational specifications of XGS-PON networks. Refer to ITU G.9807.



- 14. All work shall be warrantied for one year beginning upon issuance of substantial completion from the engineer.
- 15. Grounding rods shall be placed in all handholes for underground installations and bonded to existing grounding rods in aerial installations. aerial runs shall have grounding at the first and last pole with every 9th/ pole receiving grounding as well.
- 16. Aerial fiber cable shall be securely lashed to braided strand using a mechanical lashing device.
- 17. Locating wire shall be installed in all underground installations and spliced in each handhole.
- 18. Mule tape/pull string shall be installed in all innerducts and conduits. its mule tape/pulling string shall be sufficient in tensile strength to install the specified cable or any fiber optic cable of 288-strands or less.
- 19. The contractor shall be responsible for any and all corrections identified as unacceptable to the engineer based on the drawings, notes, specifications and testing results.
- 20. The contractor shall keep a clear and organized jobsite, ensuring the removal of all packaging materials, waste and trash at the completion of the project as well as any jobsite locations in the field. The contractor is responsible for all temporary facilities and staging sites that shall be returned to their previous condition.
- 21. The drawings are intended to show the design intent of the project and have included as much relevant information as possible. It is the contractor's responsibility to provide the materials and labor required to complete this project and produce a functioning system. The contractor shall work with the engineer via the submittal process to identify all contractor provided materials required to provide a completely functional system.
- 22. The bill for materials has been provided as a result of the contract documents and shall be furnished by the owner. Quantities that exceed the bill of materials may be purchased in order to have a small stock of the materials beyond what is specified in the documents. all other materials are to be provided by the contractor.

Cable Span Schedule							
Span ID	Service Area	<b>Cable Strand Count</b>	<u>Cable Purpose</u>	<u>Deployment Type</u>	Construction	Length (ft)	Length (Miles)
1	Service Area 1	48F	DISTRIBUTION	AERIAL	NEW	15,171.85	2.87
2	Service Area 1	48F	DISTRIBUTION	AERIAL	NEW	17,235.80	3.26
3	Service Area 1	48F	DISTRIBUTION	AERIAL	NEW	17,960.69	3.40
4	Service Area 1	48F	DISTRIBUTION	AERIAL	NEW	13,564.29	2.57
5	Service Area 1	48F	DISTRIBUTION	AERIAL	NEW	13,437.22	2.54
6	Service Area 1	48F	DISTRIBUTION	AERIAL	NEW	17,392.12	3.29
7	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	7,712.57	1.46
8	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	4,591.52	0.87
9	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	7,754.58	1.47
10	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	11,911.94	2.26
11	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	7,918.28	1.50
12	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	10,825.83	2.05
13	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	5,792.87	1.10
14	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	10,936.93	2.07
15	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	7,425.92	1.41
16	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	5,318.95	1.01
17	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	5,603.95	1.06
18	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	9,074.70	1.72
19	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	6,963.53	1.32
20	Service Area 1	24F	DISTRIBUTION	AERIAL	NEW	11,757.58	2.23
21	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	3,125.06	0.59
22	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	3,668.02	0.69
23	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	2,948.64	0.56
24	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	4,542.03	0.86
25	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	2,791.47	0.53
26	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	3,991.80	0.76
27	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	3,676.71	0.70
28	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	3,207.12	0.61
29	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	1,941.61	0.37
30	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	2,395.33	0.45
31	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	3,900.10	0.74
32	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	2,485.41	0.47
33	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	4,297.82	0.81
34	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	3,026.02	0.57
35	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	4,166.05	0.79
36	Service Area 1	12F	DISTRIBUTION	AERIAL	NEW	1,869.25	0.35
37	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	31,705.32	6.00
38	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	15,186.50	2.88
39	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	22,801.23	4.32
40	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	14,942.62	2.83
41	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	23,368.35	4.43
42	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	21,987.52	4.16
43	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	33,406.30	6.33
44	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	13,594.51	2.57
45	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	26,602.78	5.04
46	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	11,595.96	2.20
47	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	14,070.92	2.66
48	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	5,451.00	1.03
49	Service Area 2	48F	DISTRIBUTION	AERIAL	NEW	9,250.53	1.75
50	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	7,304.24	1.38
51	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	5,342.23	1.01
52	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	8,594.39	1.63
53	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	9,308.27	1.76

54	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	9,475.23	1.79
55	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	7,982.98	1.51
56	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	8,109.02	1.54
57	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	6,970.69	1.32
58	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	5,643.52	1.07
59	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	5,822.42	1.10
60	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	9,875.17	1.87
61	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	5,477.21	1.04
62	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	9,157.46	1.73
63	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	7,989.45	1.51
64	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	5,377.11	1.02
65	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	17,321.37	3.28
66	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	5,635.90	1.07
67	Service Area 2	24F	DISTRIBUTION	AERIAL	NEW	6,166.24	1.17
68	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	4,383.59	0.83
69	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	1,364.28	0.26
70	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	4,136.75	0.78
71	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	2,548.95	0.48
72	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	3,617.23	0.69
73	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	4,536.11	0.86
74	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	2,019.21	0.38
75	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	3,321.18	0.63
76	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	2,756.45	0.52
77	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	3,435.92	0.65
78	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	5,231.42	0.99
79	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	2,651.26	0.50
80	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	3,078.72	0.58
81	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	8,371.15	1.59
82	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	1,787.49	0.34
83	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	4,020.24	0.76
84	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	2,686.05	0.51
85	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	1,647.73	0.31
86	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	4,318.64	0.82
87	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	3,984.13	0.75
88	Service Area 2	12F	DISTRIBUTION	AERIAL	NEW	3,965.21	0.75
89	Service Area 3	48F	DISTRIBUTION	AERIAL	NEW	25,742.32	4.88
90	Service Area 3	48F	DISTRIBUTION	AERIAL	NEW	17,225.06	3.26
91	Service Area 3	48F	DISTRIBUTION	AERIAL	NEW	18,513.54	3.51
92	Service Area 3	48F	DISTRIBUTION	AERIAL	NEW	19,405.97	3.68
93	Service Area 3	48F	DISTRIBUTION	AERIAL	NEW	16,211.62	3.07
94	Service Area 3	48F	DISTRIBUTION	AERIAL	NEW	13,491.30	2.56
95	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	7,590.28	1.44
96	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	9,406.37	1.78
97	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	7,146.71	1.35
98	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	7,376.24	1.40
99	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	7,510.49	1.42
100	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	9,797.14	1.86
101	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	7,567.46	1.43
102	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	9,850.95	1.43
102	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	7,218.94	1.37
104	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	8,584.42	1.63
105	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	6,441.80	1.22
105	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	5,064.88	0.96
107	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	2,009.35	0.38
107	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	6,456.57	1.22
_50	20. 1.00 / 11 04 0		2.0		**	5, .50.5,	

Service Area 3								
110   Service Area 3   24F	109	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW	1,568.67	0.30
111   Service Area 3   24F	110	Service Area 3	24F	DISTRIBUTION	AERIAL			2.28
1113   Service Area 3   24F		Service Area 3	24F					
111   Service Area 3   24F   DISTRIBUTION   AERIAL   NEW   7,144.66   1.35     114   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   9,841.35   1.86     115   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   902.91   0.17     116   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   902.91   0.17     117   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   998.74   0.19     118   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   4,935.10   0.86     119   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   4,916.09   0.76     120   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   4,916.09   0.76     121   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   4,916.09   0.76     122   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   5,316.19   0.01     123   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   5,316.19   0.01     124   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,081.74   0.39     125   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,775.13   0.53     126   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,775.13   0.53     127   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,775.13   0.53     128   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,775.13   0.53     129   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,775.13   0.53     120   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,775.10   0.53     121   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   3,189.99   0.60     129   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   3,272.74   0.61     131   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   3,272.74   0.61     132   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,255.73   0.23     133   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,255.73   0.23     134   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,255.73   0.23     135   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,277.50   0.49     136   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,277.50   0.49	112	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW		0.37
114   Service Area 3   24F   DISTRIBUTION   AERIAL   NEW   9,241.35   1.86		Service Area 3	24F	DISTRIBUTION	AERIAL			
115   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   902.91   0.17	114	Service Area 3	24F	DISTRIBUTION	AERIAL	NEW		1.86
116         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         902.91         0.17           117         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         4,535.10         0.86           119         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,046.52         0.39           120         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         4,918.69         0.76           121         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         1,988.73         0.38           123         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         1,964.58         0.30           124         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,755.13         0.53           125         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,906.64         0.93           127         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,906.64         0.93           128         Service Area 3         12F         DISTRIB		Service Area 3		DISTRIBUTION				
117   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   4,535.10   0.86		Service Area 3						
119   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   4,014.09   0.76	117	Service Area 3	12F	DISTRIBUTION	AERIAL		998.74	0.19
119   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   4,014.09   0.76	118	Service Area 3	12F	DISTRIBUTION	AERIAL	NEW	4,535.10	0.86
121	119	Service Area 3	12F	DISTRIBUTION				
121   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,584.53   0.38     122   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,564.58   0.30     124   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,564.58   0.30     124   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,081.74   0.39     125   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,775.13   0.53     126   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,775.13   0.53     127   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   4,908.64   0.93     128   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   3,189.99   0.60     129   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   3,189.99   0.60     129   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   3,227.24   0.61     130   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   S80.48   0.11     131   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,225.73   0.23     132   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,486.17   0.28     133   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,486.17   0.28     134   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,486.17   0.28     134   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,257.73   0.36     135   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,257.70   0.49     136   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,924.10   0.36     136   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,924.10   0.36     137   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,775.50   0.49     138   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,757.50   0.49     139   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   2,3135.12   4,38     139   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803.65   0.72     140   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803.65   0.72     141   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,999.92   0.76     143   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,999.92	120	Service Area 3	12F	DISTRIBUTION	AERIAL	NEW	4,014.09	0.76
123   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,081,74   0.39     124   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,081,74   0.39     125   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,775,13   0.53     126   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,936,82   0.56     127   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,936,82   0.56     128   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,936,82   0.56     129   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   3,189,99   0.60     129   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   3,227,24   0.61     131   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   580,48   0.11     131   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,225,73   0.23     132   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,225,73   0.23     133   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,360,08   2.58     134   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,360,08   2.58     134   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,324,10   0.36     135   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,924,10   0.36     136   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,924,10   0.36     137   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,577.50   0.49     138   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,645,25   0.50     139   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   2,645,25   0.50     140   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   2,645,25   0.50     141   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803,65   0.72     142   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803,65   0.72     143   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803,65   0.72     144   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,907,909   0.76     145   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,907,909   0.76     146   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,907,909	121	Service Area 3	12F	DISTRIBUTION	AERIAL	NEW		0.38
124   Service Area 3   12F	122	Service Area 3	12F	DISTRIBUTION	AERIAL	NEW	5,316.19	1.01
124   Service Area 3   12F	123	Service Area 3	12F	DISTRIBUTION	AERIAL	NEW		0.30
125   Service Area 3   12F	124	Service Area 3	12F					
126		Service Area 3						
127   Service Area 3   12F	126	Service Area 3						
128   Service Area 3   12F								
129   Service Area 3   12F	128	Service Area 3						
130   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,225.73   0.23     131   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,225.73   0.23     132   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,486.17   0.28     133   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   13,620.08   2.58     134   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   3,007.23   0.57     135   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,924.10   0.36     136   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,577.50   0.49     137   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,577.50   0.49     138   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,645.25   0.50     138   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   23,135.12   4.38     139   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   656.02   0.12     140   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   12,696.36   2.40     141   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803.65   0.72     142   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803.65   0.72     143   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803.65   0.72     144   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   1,017.72   0.19     144   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,893.53   7.37     145   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,893.53   7.37     146   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     147   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     148   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     149   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     149   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     149   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     149   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     149   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92								
131   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,425.73   0.23     132   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,486.17   0.28     133   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   13,620.08   2.58     134   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   3,007.23   0.57     135   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,924.10   0.36     136   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,924.10   0.36     136   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,645.25   0.50     137   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,645.25   0.50     138   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   2,645.25   0.50     138   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   656.02   0.12     140   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   12,696.36   2.40     141   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803.65   0.72     142   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803.65   0.72     143   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   2,407.06   0.46     143   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   2,407.06   0.46     143   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,893.53   7.37     145   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,893.53   7.37     146   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,893.53   7.37     147   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     147   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     149   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     149   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     149   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     149   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     149   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,290.25.85   5.80     140   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,290.2		Service Area 3		DISTRIBUTION				
132   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,486.17   0.28     133   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   13,620.08   2.58     134   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   3,007.23   0.57     135   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   1,924.10   0.36     136   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,577.50   0.49     137   Service Area 3   12F   DISTRIBUTION   AERIAL   NEW   2,645.25   0.50     138   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   23,135.12   4.38     139   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   23,135.12   4.38     139   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   1,696.36   2.40     141   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803.65   0.72     142   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803.65   0.72     143   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,803.65   0.72     144   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   1,017.72   0.19     144   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   1,017.72   0.19     144   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,893.53   7.37     145   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,893.53   7.37     146   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     147   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,997.92   0.76     148   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,0625.85   5.80     148   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   3,0625.85   5.80     149   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   1,017.34   3.81     150   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   1,017.34   3.81     151   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   1,017.36   3.50     151   Service Area 4   48F   DISTRIBUTION   AERIAL   NEW   1,017.36   3.50     151   Service Area 4   24F   DISTRIBUTION   AERIAL   NEW   1,002.72   2.25     153   Service Area 4   24F   DISTRIBUTION   AERIAL   NEW   1,002								
133         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         13,620.08         2.58           134         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         3,007.23         0.57           135         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         1,924.10         0.36           136         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,577.50         0.49           137         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,645.25         0.50           138         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         23,135.12         4.38           139         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         12,696.36         2.40           141         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,696.36         2.40           141         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,697.06         0.46           143         Service Area 4         48F         DI		Service Area 3		DISTRIBUTION				
134         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         3,007.23         0.57           135         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         1,924.10         0.36           136         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,577.50         0.49           137         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,645.25         0.50           138         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         23,135.12         4.38           139         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         12,696.36         2.40           141         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         12,696.36         2.40           141         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         12,407.06         0.46           143         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,017.72         0.19           144         Service Area 4         48F         D								
135         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         1,924.10         0.36           136         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,577.50         0.49           137         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,645.25         0.50           138         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         23,135.12         4.38           139         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         656.02         0.12           140         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         12,696.36         2.40           141         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,803.65         0.72           142         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,017.72         0.19           144         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           146         Service Area 4         48F         DIST								
136         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,577.50         0.49           137         Service Area 3         12F         DISTRIBUTION         AERIAL         NEW         2,645.25         0.50           138         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         23,135.12         4.38           139         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         16,66.36         2.40           140         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         12,696.36         2.40           141         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,803.65         0.72           142         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,017.72         0.19           144         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           146         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           146         Service Area 4         48F         D								
137         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         2,645.25         0.50           138         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         23,135.12         4.38           139         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         656.02         0.12           140         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         12,696.36         2.40           141         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,803.65         0.72           142         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         2,407.06         0.46           143         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,017.72         0.19           144         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           146         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,997.92         0.76           147         Service Area 4         48F         DIST								
138         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         23,135.12         4.38           139         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         656.02         0.12           140         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         12,696.36         2.40           141         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,803.65         0.72           142         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         2,407.06         0.46           143         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,017.72         0.19           144         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           146         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           147         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DI								
139         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         656.02         0.12           140         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         12,696.36         2.40           141         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,803.65         0.72           142         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         2,407.06         0.46           143         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,017.72         0.19           144         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           145         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,997.92         0.76           147         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         30,625.85         5.80           148         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DIS								
140         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         12,696.36         2.40           141         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,803.65         0.72           142         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         2,407.06         0.46           143         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,017.72         0.19           144         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           145         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           146         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,997.92         0.76           147         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           148         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F			48F					
141         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,803.65         0.72           142         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         2,407.06         0.46           143         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,017.72         0.19           144         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         38,893.53         7.37           145         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           146         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,997.92         0.76           147         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         30,625.85         5.80           148         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F								
142         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         2,407.06         0.46           143         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,017.72         0.19           144         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         38,893.53         7.37           145         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           146         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,997.92         0.76           147         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         30,625.85         5.80           148         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         18,216.28         3.45           150         Service Area 4         24F <td< td=""><td></td><td></td><td>48F</td><td></td><td></td><td></td><td></td><td></td></td<>			48F					
143         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         1,017.72         0.19           144         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         38,893.53         7.37           145         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           146         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,997.92         0.76           147         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         30,625.85         5.80           148         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         18,216.28         3.45           150         Service Area 4         24F <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
144         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         38,893.53         7.37           145         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           146         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,997.92         0.76           147         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         30,625.85         5.80           148         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         18,473.96         3.50           151         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         18,216.28         3.45           152         Service Area 4         24F         <		Service Area 4						
145         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         13,496.54         2.56           146         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,997.92         0.76           147         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         30,625.85         5.80           148         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         20,107.34         3.81           150         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         18,473.96         3.50           151         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         18,216.28         3.45           152         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         19,072.95         1.72           153         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         10,388.19         1.97           154         Service Area 4         24F         <		Service Area 4	48F					
146         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         3,997.92         0.76           147         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         30,625.85         5.80           148         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         20,107.34         3.81           150         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         18,473.96         3.50           151         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         18,216.28         3.45           152         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         19,072.95         1.72           153         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         10,388.19         1.97           154         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         14,997.82         2.84           155         Service Area 4         24F         <	145	Service Area 4	48F				•	
147         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         30,625.85         5.80           148         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         20,107.34         3.81           150         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         18,473.96         3.50           151         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         18,216.28         3.45           152         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         9,072.95         1.72           153         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         10,388.19         1.97           154         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         14,997.82         2.84           155         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         7,005.72         1.33           156         Service Area 4         24F <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
148         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         10,520.29         1.99           149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         20,107.34         3.81           150         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         18,473.96         3.50           151         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         18,216.28         3.45           152         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         9,072.95         1.72           153         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         10,388.19         1.97           154         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         14,997.82         2.84           155         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         7,005.72         1.33           156         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         7,736.13         1.47           157         Service Area 4         24F <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
149         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         20,107.34         3.81           150         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         18,473.96         3.50           151         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         18,216.28         3.45           152         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         9,072.95         1.72           153         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         10,388.19         1.97           154         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         14,997.82         2.84           155         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         7,005.72         1.33           156         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         7,736.13         1.47           157         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         9,912.50         1.88           158         Service Area 4         24F								
150         Service Area 4         48F         DISTRIBUTION         AERIAL         NEW         18,473.96         3.50           151         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         18,216.28         3.45           152         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         9,072.95         1.72           153         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         10,388.19         1.97           154         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         14,997.82         2.84           155         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         7,005.72         1.33           156         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         7,736.13         1.47           157         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         9,912.50         1.88           158         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         11,902.72         2.25           159         Service Area 4         24F		Service Area 4	48F					
151       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       18,216.28       3.45         152       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       9,072.95       1.72         153       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       10,388.19       1.97         154       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,997.82       2.84         155       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       7,005.72       1.33         156       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       7,736.13       1.47         157       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       9,912.50       1.88         158       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       11,902.72       2.25         159       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       8,529.67       1.62         160       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,107.31       2.67         161		Service Area 4	48F	DISTRIBUTION				
152         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         9,072.95         1.72           153         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         10,388.19         1.97           154         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         14,997.82         2.84           155         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         7,005.72         1.33           156         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         7,736.13         1.47           157         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         9,912.50         1.88           158         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         11,902.72         2.25           159         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         8,529.67         1.62           160         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         14,107.31         2.67           161         Service Area 4         24F         D		Service Area 4	24F	DISTRIBUTION		NEW	18,216.28	
154       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,997.82       2.84         155       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       7,005.72       1.33         156       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       7,736.13       1.47         157       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       9,912.50       1.88         158       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       11,902.72       2.25         159       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       8,529.67       1.62         160       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,107.31       2.67         161       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       5,858.19       1.11         162       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       6,315.03       1.20		Service Area 4	24F	DISTRIBUTION				
154       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,997.82       2.84         155       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       7,005.72       1.33         156       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       7,736.13       1.47         157       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       9,912.50       1.88         158       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       11,902.72       2.25         159       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       8,529.67       1.62         160       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,107.31       2.67         161       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       5,858.19       1.11         162       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       6,315.03       1.20							10,388.19	
155       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       7,005.72       1.33         156       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       7,736.13       1.47         157       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       9,912.50       1.88         158       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       11,902.72       2.25         159       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       8,529.67       1.62         160       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,107.31       2.67         161       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       5,858.19       1.11         162       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       6,315.03       1.20		Service Area 4	24F	DISTRIBUTION				
157       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       9,912.50       1.88         158       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       11,902.72       2.25         159       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       8,529.67       1.62         160       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,107.31       2.67         161       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       5,858.19       1.11         162       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       6,315.03       1.20		Service Area 4	24F	DISTRIBUTION		NEW		
157       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       9,912.50       1.88         158       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       11,902.72       2.25         159       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       8,529.67       1.62         160       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,107.31       2.67         161       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       5,858.19       1.11         162       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       6,315.03       1.20			24F	DISTRIBUTION				
158       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       11,902.72       2.25         159       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       8,529.67       1.62         160       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,107.31       2.67         161       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       5,858.19       1.11         162       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       6,315.03       1.20		Service Area 4	24F	DISTRIBUTION				
159       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       8,529.67       1.62         160       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,107.31       2.67         161       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       5,858.19       1.11         162       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       6,315.03       1.20								
160       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       14,107.31       2.67         161       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       5,858.19       1.11         162       Service Area 4       24F       DISTRIBUTION       AERIAL       NEW       6,315.03       1.20								
161         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         5,858.19         1.11           162         Service Area 4         24F         DISTRIBUTION         AERIAL         NEW         6,315.03         1.20								
162 Service Area 4 24F DISTRIBUTION AERIAL NEW 6,315.03 1.20								

164	Service Area 4	24F	DISTRIBUTION	AERIAL	NEW	9,785.10	1.85
165	Service Area 4	24F	DISTRIBUTION	AERIAL	NEW	14,522.63	2.75
166	Service Area 4	24F	DISTRIBUTION	AERIAL	NEW	4,109.34	0.78
167	Service Area 4	24F	DISTRIBUTION	AERIAL	NEW	7,203.89	1.36
168	Service Area 4	24F	DISTRIBUTION	AERIAL	NEW	6,891.81	1.31
169	Service Area 4	24F	DISTRIBUTION	AERIAL	NEW	11,311.90	2.14
170	Service Area 4	24F	DISTRIBUTION	AERIAL	NEW	7,760.51	1.47
171	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	6,063.30	1.15
172	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	2,388.94	0.45
173	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	8,853.62	1.68
174	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	3,693.13	0.70
175	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	4,895.97	0.93
176	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	3,626.96	0.69
177	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	3,402.95	0.64
178	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	1,555.20	0.29
179	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	1,746.12	0.33
180	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	1,937.64	0.37
181	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	3,200.92	0.61
182	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	4,463.96	0.85
183	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	5,185.86	0.98
184	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	2,302.74	0.44
185	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	3,970.15	0.75
186	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	2,853.00	0.54
187	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	5,665.55	1.07
188	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	3,655.79	0.69
189	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	2,299.62	0.44
190	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	4,467.92	0.85
191	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	973.41	0.18
192	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	2,891.81	0.55
193	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	4,080.46	0.77
194	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	1,646.90	0.31
195	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	2,558.08	0.48
196	Service Area 4	12F	DISTRIBUTION	AERIAL	NEW	1,895.89	0.36

Total Distance: 1,511,275.93 286.23

Ор	tical Split	ter Sched	dule
Splitters ID	Service Area	<u>Latitude</u>	<b>Longitude</b>
1	Service Area 1	42.64142612	-77.65410021
2	Service Area 1	42.62766818	-77.63272823
3	Service Area 1	42.63058025	-77.59931623
4	Service Area 1	42.63099588	-77.61590513
5	Service Area 1	42.63021495	-77.61813053
6	Service Area 1	42.60090258	-77.75573725
7	Service Area 1	42.60388055	-77.75876879
8	Service Area 1	42.609684	-77.76485478
9	Service Area 1	42.61122785	-77.73675412
10	Service Area 1	42.59331083	-77.72804637
11	Service Area 1	42.59786161	-77.80134825
12	Service Area 1	42.59794604	-77.83112714
13	Service Area 1	42.51505825	-77.79395145
14	Service Area 1	42.50665913	-77.75553287
15	Service Area 1	42.50502099	-77.74575284
16	Service Area 1	42.50690409	-77.74258043
17	Service Area 1	42.58667651	-77.69504479
18	Service Area 1	42.59097649	-77.65118568
19	Service Area 1	42.58018421	-77.66451714
20	Service Area 1	42.61257019	-77.65243505
21	Service Area 1	42.62216668	-77.63254342
22	Service Area 1	42.63745375	-77.59883825
23	Service Area 1	42.63721821	-77.5959378
24	Service Area 1	42.62155037	-77.60116442
25	Service Area 1	42.65568085	-77.54874903
26	Service Area 1	42.64701243	-77.56429846
27	Service Area 1	42.63134633	-77.55975264
28	Service Area 1	42.59751289	-77.58023506
29	Service Area 1	42.59755975	-77.58571824
30	Service Area 1	42.61249626	-77.52133881
31	Service Area 1	42.61690321	-77.51197371
32	Service Area 1	42.59361807	-77.50258886
33	Service Area 1	42.5875184	-77.49937016
34	Service Area 1	42.594325	-77.53158257
35	Service Area 1	42.58994248	-77.53166743
36	Service Area 2	42.58310301	-77.83095122
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39	Service Area 2	42.55167325	-77.84915535
40	Service Area 2	42.54653143	-77.87810686
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42	Service Area 2	42.53028546	-77.95100866
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44	Service Area 2	42.57863827	-77.92305466

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163	Service Area 4	42.69434006	-77.7349826
164	Service Area 4	42.64903466	-77.69034113
165	Service Area 4	42.68380167	-77.73254909
166	Service Area 4	42.702487	-77.77283186
167	Service Area 4	42.68639248	-77.77266177



3/22/2024

To whom it may concern,

This letter is to certify that the enclosed documents have been reviewed for quality assurance and quality control. All Hunt-EAS design activities comply with generally accepted good workmanship practices and industry standards with specifics to the cable routing, cable lengths & cable splicing.

Sincerely,

HUNT ENGINEERS, ARCHITECTS, LAND SURVEYORS & LANDSCAPE ARCHITECT

Jason Saltsman, RCDD Associate / Technology Design Team Leader

