Application to DHCD Submitted through CAMS

Roanoke County

Roanoke Universal B2X partnership

Application ID:	86509022021131108
Application Status:	Pending
Program Name:	Virginia Telecommunications Initiative 2022
Organization Name:	Roanoke County
Organization Address:	5204 Bernard Drive, SW, Rm 421 Roanoke, VA 24018
Profile Manager Name:	Tom Rowley
Profile Manager Phone:	(540) 315-0778
Profile Manager Email:	trowley@roanokecountyva.gov
Project Name:	Roanoke Universal B2X partnership
Project Contact Name:	Bill Hunter
Project Contact Phone:	(540) 777-8552
Project Contact Email:	bhunter@roanokecountyva.gov
Project Location:	5925 Cove Road Roanoke, VA 24019-2403
Project Service Area:	Roanoke County
Total Requested Amount:	$170,609.00
Required Annual Audit Status:	Accepted

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Budget Information:

Cost/Activity Category	DHCD Request	Other Funding	Total
Telecommunications	**$170,609.00**	**$177,572.00**	**$348,181.00**
Other: Total VATI Budget	$170,609.00	$177,572.00	$348,181.00
Total:	**$170,609.00**	**$177,572.00**	**$348,181.00**

Budget Narrative:

The County of Roanoke is requesting 49% project funding from DHCD ($170,609.00) to accompany a 23.25% contribution by B2X On-Line ($81,000.00) and a 27.25% contribution by the County of Roanoke ($96,572.00) for a total project budget of $348,181.00

Questions and Responses:

1. **Project Description and Need**

   Describe why and how the project area(s) was selected. Describe the proposed geographic area including specific boundaries of the project area (e.g. street names, local and regional boundaries, etc.). Attach a copy of the map of your project area(s). Label map: Attachment 1 – Project Area Map.

Answer:

Rural areas of Roanoke County have been in need of broadband connectivity for many years. An increasing number of requests from citizens over the years have brought much attention to these areas of the County. There are 520 homes without access to broadband internet speeds in the areas of the County covered in this project.

This proposed project fits into our larger plan to achieve universal broadband coverage for Roanoke County. Roanoke County supports the Commonwealth Connect efforts to bring functional universal broadband to Virginia. And we are focused on digital equity and making broadband affordable for all.

A citizen-based High-Speed Internet Survey was launched in December 2019 to give citizens a way to self-report where minimum broadband speeds are TRULY availability at street level. Along with an online survey promoted by Roanoke County, 10,250 printed survey postcards were mailed to targeted areas of the County, with an additional 14,000 printed survey postcards distributed to the homes of Roanoke County students through a partnership with Roanoke County Schools. A total of 2,608 surveys were returned which allowed staff to map citizen responses and target the unserved area of the County as described below.

2. List existing providers in the proposed project area and the speeds offered. Please do not include satellite. Describe your outreach efforts to identify existing providers and how this information was compiled with source(s).

Answer:

The County of Roanoke conducted extensive outreach in the form of citizen surveys and direct contact with citizens in the area. Roanoke County provides a data collection tool with feedback loops where citizens report lack of broadband service, the most recent version is:

https://www.roanokecountyva.gov/FormCenter/CommIT-22/Broadband-Comments-133

The county also refers to the I3 connectivity explorer https://internet-is-infrastructure.org/

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; the Broadband USA and ESRI broadband availability App
https://broadbandusa.maps.arcgis.com/apps/webappviewer/index.html?

USDA ReConnect maps, and FCC CAF 2 maps to determine coverage; then follows up with requests to service providers asking for service availability.

Wireless 4G Broadband Providers

Company Name

Download Speed

AT&T MOBILITY

768 Kbps - 1.5 Mbps

NTELOS

768 Kbps - 1.5 Mbps

SPRINT

768 Kbps - 1.5 Mbps

T-MOBILE

768 Kbps - 1.5 Mbps

US CELLULAR

768 Kbps - 1.5 Mbps

VERIZON WIRELESS

768 Kbps - 1.5 Mbps

Wireless LTE Broadband Providers

Company Name

Download Speed

AT&T MOBILITY

Minimum 4 Mbps

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T-MOBILE

Minimum 4 Mbps

US CELLULAR

Minimum 4 Mbps

VERIZON WIRELESS

Minimum 4 Mbps

Wireline (DSL) Broadband Providers

Company Name

Download Speed

VERIZON VIRGINIA LLC

Maximum 5 Mbps

3. Describe if any areas near the project have received funding from federal grant programs, including but not limited to Connect America Funds II (CAF II), ACAM, ReConnect, Community Connect, and Rural Digital Opportunity Funds (RDOF). If there have been federal funds awarded near the project area(s), provide a map showing these areas, verifying the proposed project area does not conflict with these areas. Do not include areas awarded to satellite broadband providers. Label Map: Attachment 2 – Documentation on Federal Funding Area.

Answer:

There are no federal funded programs within the project area

4. Describe if any blocks awarded in Rural Digital Opportunity Fund (RDOF), excluding those awarded to satellite internet service providers, are included in the VATI application area. If RDOF areas awarded to terrestrial internet service providers are included in the VATI application, provide a map of these areas and include information on number of passings in RDOF awarded areas within the VATI application area, and Census Block Group ID number for each block group in the project area. Label Attachment: Attachment 3 – RDOF Awarded Areas Form in VATI Area

Answer:

There are no RDOF blocks within the area

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5. Overlap: To be eligible for VATI, applicants must demonstrate that the proposed project area(s) is unserved. An unserved area is defined as an area with speeds below 25/3 mbps and with less than 25% service overlap within the project area for wireless projects and 10% for wireline projects. Describe any anticipated service overlap with current providers within the project area. Provide a detailed explanation as to how you determined the percentage overlap. Label Attachment: Attachment 4 – Documentation Unserved Area VATI Criteria.

Answer:

Our project area is unserved as each section is in rural part of the County where current speeds are less than 10 Mbps Down / 1 Mbps Up. We used a combination of the FCC Maps, USDA Reconnect Maps, BroadbandNow.com, and the citizen broadband reports we collected to determine this. For each citizen broadband report we received we followed up with the citizen(s) inquiring if they had checked with other providers.

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6. Total Passings: Provide the number of total serviceable units in the project area. Applicants are encouraged to prioritize areas lacking 10 Megabits per second download and 1 Megabits per second upload speeds, as they will receive priority in application scoring. For projects with more than one service area, each service area must have delineated passing information. Label Attachment: Attachment 5 – Passings Form.
a. Of the total number of VATI passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area. (Up to 10 points for businesses and community anchor institutions)

b. If applicable, of the total number of RDOF passings, provide the number of residential, business, non-residential, and community anchors in the proposed project area.

c. If applicable, provide the number of passings that will require special construction costs, defined as a one-time fee above normal service connection fees required to provide broadband access to a premise . Describe the methodology used for these projections.

d. If applicable, provide the number of passings included in the application that will receive broadband access because special construction costs have been budgeted in the VATI application. Describe the methodology used for determining which passings with special construction costs were budgeted in the application.

e. Provide the number of passings in the project area that have 10/1 mbps or less. Describe the methodology used for these projections. (up to 15 points)

Answer:

a. 520

b. 0

c. 0

d. 0

e. 520 - The County of Roanoke conducted extensive outreach in the form of citizen surveys and direct contact with citizens in the area. Roanoke County provides a data collection tool with feedback loops where citizens report lack of broadband service, the most recent version is:

https://www.roanokecountyva.gov/FormCenter/CommIT-22/Broadband-Comments-133

The county also refers to the I3 connectivity explorer https://internet-is-infrastructure.org/

; the Broadband USA and ESRI broadband availability App
https://broadbandusa.maps.arcgis.com/apps/webappviewer/index.html?

USDA ReConnect maps, and FCC CAF 2 maps to determine coverage; then follows up with requests to service providers asking for service availability.

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7. **For wireless projects only:** Please explain the ownership of the proposed wireless infrastructure. Please describe if the private co-applicant will own or lease the radio mast, tower, or other vertical structure onto which the wireless infrastructure will be installed.

Answer:

B2X Proposes to use an existing tower located on Poor Mountain located on Media way access by Honey Suckle Road. This location is owned and operated by Ion Media supporting a tower that is broadcasting television to the local region. We will have access to 150-foot section on the tower. We will install 2 transmitters capable of supporting 100 customers with a signal of 100meg each. In addition, we will be installing 3 additional wood 85-foot poles. Each of these poles will support transmitters and backhauls to connect back to the primary site.

The Primary site located on Poor Mountain is located (lat. 37.199089°, long. -80.150019°). It will have a set of licensed backhauls to link back to B2X main fiber location to supply the internet feed. This site will also have a licensed backhaul that links to the first pole location. The Primary Transmitters will have an azimuth of 135 degrees with a dual 65-degree antennas covering 90 total degrees. The Transmitter will be set for a 5-mile coverage.

The 2 poles will be installed in the area of Bent Mountain. These locations are defined and outlined in the images included with this proposal. We have tested these locations and are still in the process of land and lease arrangements. The pole locations will be located within a few hundred feet radius from the designated location identified on the map. Once the lease and land agreements are in place, we can provide an actual GPS location. But at this point we have identified where the poles need to be placed and anywhere within the half mile will still achieve the required results. Each pole will have its own router and base systems needed to supply Broadband to 50 people with the 100 meg down. It will also contain licensed backhauls to receive internet and relay it to the next pole.

The 2 Poles will be placed at 2 locations designate HighPoint1 and Highpoint2. HighPoint1 is located (lat. 37.166230°, long. -80.120034°) with 360degree coverage at a 3-mile range. HightPoint2 is located (lat. 37.152017°, long. -80.114015°) with 360dgree coverage at a 3-mile range.

We will be injecting 2Gig of internet into the area for the initial build. This will meet the initial demand. The backhauls we will be using will have room to double the initial amount with license purchase.

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8. Speeds: Describe the internet service offerings, including download and upload speeds, to be provided after completion of the proposed project. Detail whether that speed is based on dedicated or shared bandwidth, and detail the technology that will be used. This description can be illustrated by a map or schematic diagram, as appropriate. List the private co-applicant's tiered price structure for all speed offerings in the proposed project area, including the lowest tiered speed offering at or above 25/3 mbps. (up to 10 points)

Answer:

Proposed Service Plans and Pricing
The price sheet below represents the proposed service prices for the included project.
Price sheets

Package	Install	Monthly	Speeds	Data Transport
Basic	$200	$55	8X2	150 Gig
Silver	$200	$65	12X3	150 Gig
Gold	$200	$85	25X4	250 Gig
Unlimited	$200	$110	Unlimited	-

All above packages include:
(5) Email Accounts, System Monitoring, System Support, Traffic Graphing
Additional Packages available:
Router Rental
Whole House Wi-Fi
Router Support
Router Purchase
Tech Access
Additional Emails
Post & Trench
Web Site Space
Building2Building Link
Static IP Address
These prices are for the proposed project area only and will stand in place for the life of the project or the extent of the individual service agreement for each customer.

9. Network Design: Provide a description of the network system design used to deliver broadband service from the network's primary internet point(s) of presence to end users, including the network components that already exist and the ones that would be added by the proposed project. Provide a detailed explanation of how this information was determined with sources. Provide information on how capacity for scalability, or expansion, of how the network can adapt to future needs. If using a technology with shared bandwidth, describe how the equipment will handle capacity during peak intervals. For wireless projects, provide a propagation map for the proposed project area with a clearly defined legend for scale of map. Label Map: Attachment 6 – Propagation Map Wireless Project.

Answer:

B2X Proposes to use an existing tower located on Poor Mountain located on Media way access by Honey Suckle Road. This location is owned and operated by Ion Media supporting a tower that is broadcasting television to the local region. We will have access to 150-foot section on the tower. We will install 2 transmitters capable of supporting 100 customers with a signal of 100meg each. In addition, we will be installing 3 additional wood 85-foot poles. Each of these poles will support transmitters and backhauls to connect back to the primary site.
The Primary site located on Poor Mountain is located (lat. 37.199089°, long. -80.150019°). It will have a set of licensed backhauls to link back to B2X main fiber location to supply the internet feed. This site will also have a licensed backhaul that links to the first pole location. The Primary Transmitters will have an azimuth of 135 degrees with a dual 65-degree antennas covering 90 total degrees. The Transmitter will be set for a 5-mile coverage.
The 2 poles will be installed in the area of Bent Mountain. These locations are defined and outlined in the images included with this proposal. We have tested these locations and are still in the process of land and lease arrangements. The pole locations will be located within a few hundred feet radius from the designated location identified on the map. Once the lease and land agreements are in place, we can provide an actual GPS location. But at this point we have identified where the poles need to be placed and anywhere within the half mile will still achieve the required results.
Each pole will have its own router and base systems needed to supply Broadband to 50 people with the 100 meg down. It will also contain licensed backhauls to receive internet and relay it to the next pole.

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10. Explain how the proposed project achieves universal broadband coverage for the locality or fits into a larger plan to achieve universal broadband coverage for the locality. If applicable, explain the remaining areas of need in the locality and a brief description of the plan to achieve universal broadband coverage. (up to 50 points)

Answer:

Roanoke County is actively working to improve broadband connectivity throughout the community, as part of the "Connect Roanoke County to the World" Strategic Initiative outlined in the County's 2016 Community Strategic Plan.

This year a regional partnership was formed between Roanoke, Botetourt, Franklin Counties, and the Roanoke Valley Broadband Authority. Local providers from Cox Communications, Comcast, B2X On-Line, Segra, Lumos, Blue Ridge Towers, and Shentel all attended. Speakers from the Governors Office and from Revitalize Virginia made presentations to the group on the universal coverages plans of this years VATI Program.

Citizen can find additional information and express concerns at:

https://www.roanokecountyva.gov/ruralbroadband

11. **Project Readiness**

Describe the current state of project development, including but not limited to: planning, preliminary engineering, identifying easements/permits, status of MOU or MOA, and final design. Prepare a detailed project timeline or construction schedule, identifying specific tasks, staff, contractor(s) responsible, collection of data, etc., and estimated start and completion dates. Applicants must include Memorandums of Understanding (MOUs) or Memorandums of Agreement (MOAs) between applicants (drafts are allowable). Label Attachments: Attachment 7 – Timeline/Project Management Plan; Attachment 8 – MOU/MOA between Applicant/Co-Applicant; (up to 20 points)

Answer:

This project has passed engineering and financial commit stages and is approaching final design. Attachment 6 –

Timeline/Project Management Plan is included and identifies all tasks, staffing, contracting work, with estimated

start and completion dates.

12. Has the applicant or co-applicant received any VATI grants? If so, provide a list of these grants, with a detailed summary of the status of each.

Answer:

No

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13. Matching funds: Complete the funding sources table indicating the cash match and inkind resources from the applicant, co-applicant, and any other partners investing in the proposed project (VATI funding cannot exceed 80 percent of total project cost). In-kind resources include, but are not limited to: grant management, acquisition of rights of way or easements, waiving permit fees, force account labor, etc. Please note that a minimum 20% match is required to be eligible for VATI, the private sector provider must provide 10% of the required match. If the private co-applicant cash match is below 10% of total project cost, applicants must provide financial details demonstrating appropriate private investment. Label Attachments: Attachment 9 - Funding Sources Table; Attachment 10 – Documentation of Match Funding

Answer:

The matching funds invested are listed in Attachment 9 - Funding Sources Table. Those funds

include all of the costs for the project, including all of the planning, engineering, materials and labor for the installation of the facilities necessary for this project. The matching funds also include the costs of identifying and acquiring any necessary easements.

14. Leverage: Describe any leverage being provided by the applicant, co-applicant, and partner(s) in support of the proposed project. (up to 10 points)

Answer:

Beyond the leverage of using County resources and support for easements and working with VDOT, residents, and the power companies; the co-applicants plan to leverage strong relationships to provide distance learning and workforce training working with the Roanoke County Public Schools (RCPS) and Virginia Western Community College (VWCC).

We will also leverage support from our longstanding working relationship with the Roanoke Regional Commission. In addition, the Roanoke County Board of Supervisors appropriated funds in support of the program, coupled with dedicated time of at least 3 County staff to work on the resulting project. We are also leveraging existing resources which continue work on the five current projects funded by the Roanoke County Board of Supervisors bringing broadband to 350 homes in the County. The County regularly sponsors Civic League meetings where broadband needs are discussed. From those meetings, documents are created from the ideas and questions raised by the residents for use in any potential future projects and will be important assets for this new project and continue the Roanoke County goal for universal coverage.

15. Marketing: Describe the broadband adoption plan.

a. Explain how you plan to promote customer take rate, including marketing activities, outreach plan, and other actions to reach the identified serviceable units within the project area. Provide the anticipated take rate and describe the basis for the estimate. (up to 10 points)

b. Describe any digital literacy efforts to ensure residents and businesses in the proposed project area sufficiently utilize broadband. Please list any partnering organizations for digital literacy, such as the local library or cooperative extension office.

Answer:

a. B2X On-Line and Roanoke County will also work together on a public relations plan to announce the award and the extension of services throughout the county to bring awareness including but not limited to a joint press release and media event (in-person or virtual based on current conditions).

In addition to B2X On-Line efforts, the County will leverage its in-house channels including its website, Roanoke Valley Television and various social media outlets to market the availability of service as a result of this project. Due to the nature of the impact and the potential community response, it is expected that this project will also be covered by local television, radio, and newspaper.

The anticipated take rate is 60-65 percent based on previous post-pandemic projects.

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b. Roanoke County Public Libraries offer a wide range of free computer, Internet use and resource instruction to help people locate, evaluate, and use online resources. County libraries are vital centers for access to digital literacy and as library users continue to change, the County libraries continually evolve to meet the digital needs of our community. Some current programs include:

3D printing, also known as additive manufacturing, turns digital 3D models into solid objects by building them up in layers. The 3D printing process turns a whole object into thousands of tiny little slices, and then makes it from the bottom-up, slice by slice. Those tiny layers stick together to form a solid object.

The Library owns a Lulzbot Taz 6 and a Lulzbot Mini. Both are fused deposition modeling printers, which work on an "additive" principle by printing material in layers. We also offer regular 3D printing and 3D modeling classes for beginners.

Playaway Launchpads feature learning apps grouped together by subject, theme, grade level, and age. Each Launchpad features themed learning packs, such as:

- STEAM
- Early Literacy
- Award Winners
- Language Learning
- Life Skills
- Brain Play
- English Language Arts

Launchpads offer hours of interactive learning and play for children. There's even a section for parents to gain feedback on time spent on the device.

Roanoke County Public Library has placed focused on community digital literacy programs over the past several years, offering free classes most every month at each Library location. Topics range from basic usage of the latest consumer technologies to specific classes dedicated to popular software (Microsoft Office applications, photography apps, social media, networking, etc.) and other popular topics.

16. Project Management: Identify key individuals who will be responsible for the management of the project and provide a brief description of their role and responsibilities for the project. Present this information in table format. Provide a brief description of the applicant and co applicant's history and experience with managing grants and constructing broadband communication facilities. Please attach any letters of support from stakeholders. If the applicant is not a locality(s) in which the project will occur, please provide a letter of support from that locality. Attachment 11 – Letters of Support.

16. Project Management: Identify key individuals who will be responsible for the management of the project and provide a brief description of their role and responsibilities for the project. Present this information in table format. Provide a brief description of the applicant and co applicant's history and experience with managing grants and constructing broadband communication facilities. Please attach any letters of support from stakeholders. If the applicant is not a locality(s) in which the project will occur, please provide a letter of support from that locality. Attachment 11 – Letters of Support.

Answer:

Warren Kane – *Owner/CEO*

Mr. Kane has been with the company since inception and has been the driving force ever since. He brings knowledge of company management, back office, programming and Networking. Warren's programming knowledge

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and computer skill caught Microsoft's Attention and was brought in to work directly with the MS Site Server to combine Home Shopping and AOL with the first trial of the Intel's Cable Modem beta launch in Florida. Warren Worked Home Shopping and Intel to help design and create a working system for the beta launch. This skill set and others push direct work with AOL and Time Warner and 1-800-Flowers backend office and system processing. In the mid 1990's he launched an internet hosting company, URnet, Inc., that crew quickly to over 300 web sites and with over 500 clients. In June of 2002 Warren and his Brother Danny Kane were invited to Motorola to be one of the first in the nation to be certified with their new offering of Canopy Internet System. B2X Online, Inc. was launched as a company to provide internet services to unserved areas. Since the company's inception the company has grown to 13 counties.

Danny Kane – *Owner/VP*

Danny has been with the company since the beginning bringing his vast radio communication skills to company. In 1983, Danny started Kane Communication Systems, Inc a local 2-way radio company. He continued his drive for excellence by utilizing his extensive knowledge and training in the field of telecommunications. Choosing the electronic telecommunications field, he pursued his interests further as a major supplier of Motorola 2-way radio system as Kane's Communications Systems Inc. In 2002 KCS, Inc. by Danny's lead, was one of the first in the nation to be certified b Motorola's latest offering, the Canopy Internet System. Danny's skill set and Motorola experience joined together with Brother Warren Kane to launch B2X Online, Inc. Danny's critical 2-way and microwave knowledge and attention to detail became a great asset to this new technology-based company. His 2-way connections and past experience with tower equipment made the perfect partner for this joint adventure.

Cyndee Fortune – *Company Manager*

Cyndee has been with B2X Online since its inception in June of 2003. Cyndee's great managerial skillset from her strong past in leadership has provided vast insight and direction for B2X Online. Prior to B2X Online, she was the operations manager for a locally owned and successful communications company. Cyndee has been the assistant manager for several lucrative restaurants and left a positive culture at each establishment. Cyndee is highly organized and experienced in providing exceptional customer service, she is personally dedicated to ensuring customer satisfaction and going "the extra mile" by remaining accessible and friendly.

Travis Southers – *Tower Safety manager and Master Climber*

Travis is a Comtrain Certified Rescue Climber. Certified Structural Welder and holds Safety LMS commercial certifications. Travis brings a wide variety of management skills and experience to B2X Online. As the head of our Tower Crew for 2 years, Travis has maintained a safe and proficient team of certified climbers and ground personnel. With the extensive abilities of Travis and his crew they not only handle all of our tower projects but also the maintenance of each site, **Jason Wilmore** (Climber number 2 on his crew) is also a certified Journeyman Electrician. Travis' background in Diesel and Auto mechanics, electrical design and solar circuit design makes him a valuable asset to our company. He is involved in every aspect of our tower projects from the design phase, to the building and maintenance of the sites. His 12 years of prior management experience has been instrumental for us keeping up with inventory and preventive maintenance on each site with extensively detailed procedures.

In addition to his many certifications which also include being a Machinist, EPA safety supervisor, DOT and OSHA safety coordinator, Hydraulic System Maintenance and Microwave dish installation and service; Travis has extensive experience in site forming and building of tower compounds and the structures. "Stacking" communication towers "On the road", as is the vernacular common used in the trade, has been a big part of Travis' past. His appetite for learning new technologies as they are developed is abundant and he strives to be challenged. He has most recently

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installed the entirety of the MBC TVWS homework initiative project Adaptrum gear on the tower structures. He and his crew have worked closely with MBC and Adaptrum to develop a network of accessible points to provide internet access for students in Halifax and Charlotte Counties. Our utilization of Travis has been to the benefit of our team and customers with his willingness to go above and beyond normal working conditions and time on site. He stays on 24 hour call with his choice of certified rescue climbers to always support our systems.

County of Roanoke Project Manager: Bill Hunter, Director of Communications & Information Technology. Past project experience includes - Earth Station Satellite transceivers replacement for the USAF Air Mobility Command, Joint Law Enforcement stand-up and deployment for the 1996 Centennial Olympic Games (DOD Office of Special Events), activation of the Law Enforcement Information Center for the 1997 Presidential Inauguration (US Secret Service/Communications Management Control Activity) , Roanoke County Public Safety Center construction (IT Issues), and the Western Virginia Regional Jail construction project (IT Issues)

County of Roanoke Coordination: Heather Kluge, Business Coordinator - 10 years of grant Management Experience (Police, Fire, E911, & Information Technology)

17. **Project Budget and Cost Appropriateness**

Budget: Applicants must provide a detailed budget that outlines how the grant funds will be utilized, including an itemization of equipment, construction costs, and a justification of proposed expenses. If designating more than one service area in a single application, each service area must have delineated budget information. For wireless projects, please include delineated budget information by each tower. Expenses should be substantiated by clear cost estimates. Include copies of vendor quotes or documented cost estimates supporting the proposed budget. Label Attachments: Attachment 12 – Derivation of Costs; Attachment 13 - Documentation of Supporting Cost Estimates. (up to 10 points)

Answer:

Attachment 12 – Derivation of Costs; Attachment 13 - Documentation of Supporting Cost Estimates are completed and included in the Attachment Section. A detailed budget itemizes the electronics and fiber and includes all construction costs as proposed expenses. Each service area costs are documented.

18. The cost benefit index is comprised of state cost per unit passed. Individual cost benefit scores are calculated and averaged together to create a point scale for a composite score. Provide the following:
    a. Total VATI funding request

    b. Number of serviceable units
    (up to 125 points)

Answer:

a. $170,609.00

b. 520

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19. **Commonwealth Priorities (Up to 40 points)**

Additional points will be awarded to proposed projects that reflect Commonwealth priorities. If applicable, describe the following:
a. Businesses, community anchors, or other passings in the proposed project area that will have a significant impact on the locality or region because of access to broadband.

b. Unique partnerships involved in the proposed project. Examples include electric utilities, universities, and federal/state agencies.

c. Digital equity efforts to ensure low to moderate income households in the proposed project area will have affordable access to speeds at or above 25/3 mbps.

Answer:

This proposed project fits into our larger plan to achieve universal broadband coverage for Roanoke County. This proposed project fills many gaps in the rural areas of the County. One of our goals is to provide quality and reliable broadband with redundancy and future proof so all Roanoke County residents and businesses benefit. Our interactive project map documents the project areas. We continue to work with residents who identify areas where service is unreliable, non-existent, or not affordable. Through ongoing speed test and report gathering; we will continue to build project areas for broadband service. Not until after all areas are served with affordable and reliable broadband, will we consider our work done.

The proposed project impacts 311 homes and home-based businesses in the area, through the introduction of broadband will have a positive economic impact. Providing broadband to these businesses allows them to complete in the global economy and include a telecommuting workforce as part of their growth plans; providing more jobs and more revenue for the County.

Roanoke County supports the Commonwealth Connect efforts to bring functional universal broadband to Virginia. And we are focused on digital equity and making broadband affordable for all. We review our Broadband plan on an annual basis. Roanoke County is also equally concerned about and working to solve challenges identified in the most recent Commonwealth Connect 2.0. We are working to reduce cost of equipment; implement means to utilize shared

infrastructure for network deployment through support of reduced or no fees for pole attachments or other sharing of infrastructure such as conduit; support waiving the cost of easements for broadband deployment; and through our ongoing broadband survey and community outreach continue filling gaps and identifying borders of coverage; and working with ISPs to focus on technologies and projects which avoid or create difficult to serve areas

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20. **Additional Information**

Provide the two most recent Form 477 submitted to the FCC, or equivalent, as well as point, polygon, and, for wireless providers, RSSI shapefiles for the project area **in .zip file form**. With attachments 17 through 20, attach any other information that the applicant desires to include. Applicants are limited to four additional attachments.

Label Additional Attachments as:
a. Attachment 14 – Two most recent Form 477 submitted to the FCC or equivalent

b. Attachment 15 - Point and Polygon shapefiles, in.zip file form, showing proposed passings and project area

c. Attachment 16 - For wireless applicants: shapefiles, in .zip file form, indicating RSSI projections in the application area

d. Attachment 17 – XXXXXXX

e. Attachment 18 – XXXXXXX

f. Attachment 19 – XXXXXXX

g. Attachment 20 – XXXXXXX

Answer:
N/A

Attachments:

Map(s) of project area, including proposed infrastructure

Attachment1ProjectAreaMap92202114157.pdf

Documentation of Federal Funding (CAF/ACAM/USDA/RDOF, etc…) in and/or near proposed project area.

Attachment2DocumentationonFederalFundingArea92202114214.pdf

RDOF Awarded Areas included in VATI Application (Use template provided)

Attachment3RDOFAwardedAreasincludedinVATIApplication92202114238.pdf

Documentation that proposed project area is unserved based on VATI criteria

Attachment4DocumentationUnservedAreaVATICriteria92202114304.pdf

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Roanoke County

Roanoke Universal B2X partnership

Passings Form (Use template provided)

Attachment5PassingsForm913202144603.pdf

Propagation Map if Wireless Project

Attachment6PropogationMap92202114347.pdf

Timeline/Project Management Plan

Attachment7ProjectTimeLine913202144624.pdf

MOU/MOA between applicant/co-applicant (can be in draft form)

Attachment8MOUbetweenApplicantCoapplicant914202144817.pdf

Funding Sources Table (Use template provided)

Attachment9FundingSourcesTable913202144647.pdf

Documentation of Match Funding

Attachment10DocumentationofMatchFunding913202144701.pdf

Letters of Support

Attachment11LettersofSupport913202144721.pdf

Derivation of Cost/Project Budget (Use template provided)

Attachment12DerivationofCosts913202144736.pdf

Documentation of Supporting Cost Estimates

Attachment13SupportingCostEstimate913202144755.pdf

Two most recent Form 477 submitted to the FCC or equivalent

Attachment14TwomostrecentForm477913202144813.pdf

Point and Polygon shapefiles, in.zip file form, showing proposed passings and project area

B2XUpdatedProposedPolygon913202144841.zip

Application to DHCD Submitted through CAMS

Roanoke County

Roanoke Universal B2X partnership

For wireless applicants: shapefiles, in .zip file form, indicating RSSI projections in the application area

B2XProposedDirectionalRSSI913202144908.zip

Optional

B2XUpdatedProposedAddressesPoints913202144927.zip

Notes:
Thank you for the opportunity to extend broadband service to the unserved residence of Roanoke County. This project meets both the spirit and intent of the Virginia Telecommunication Initiative (VATI). I believe these investments have a significant impact on economic development by increasing options for residents to engage in virtual learning, access to telehealth, and telework. These projects also allow opportunities for more home-based businesses to thrive. With the demand for broadband connectivity higher than ever, I am optimistic that VATI submissions like these will be ranked in the top of submissions by the Department of Housing and Community Development.

The proposed area is located in Roanoke County Virginia. B2X Proposes to use an existing tower located on Poor Mountain located on Media way access by Honey Suckle Road. This location is owned and operated by Ion Media (Primary Site) supporting a tower that is broadcasting television to the local region. We will have access to 150-foot section on the tower. We will install 2 transmitters capable of supporting 100 customers with a signal of 100meg each. In addition, we will be installing 3 additional wood 85-foot poles. Each of these poles will support transmitters and backhauls to connect back to the primary site.

Image – Roanoke County Virginia

Sowing the overall county and the proposed 3 sites on Bent Mountain.
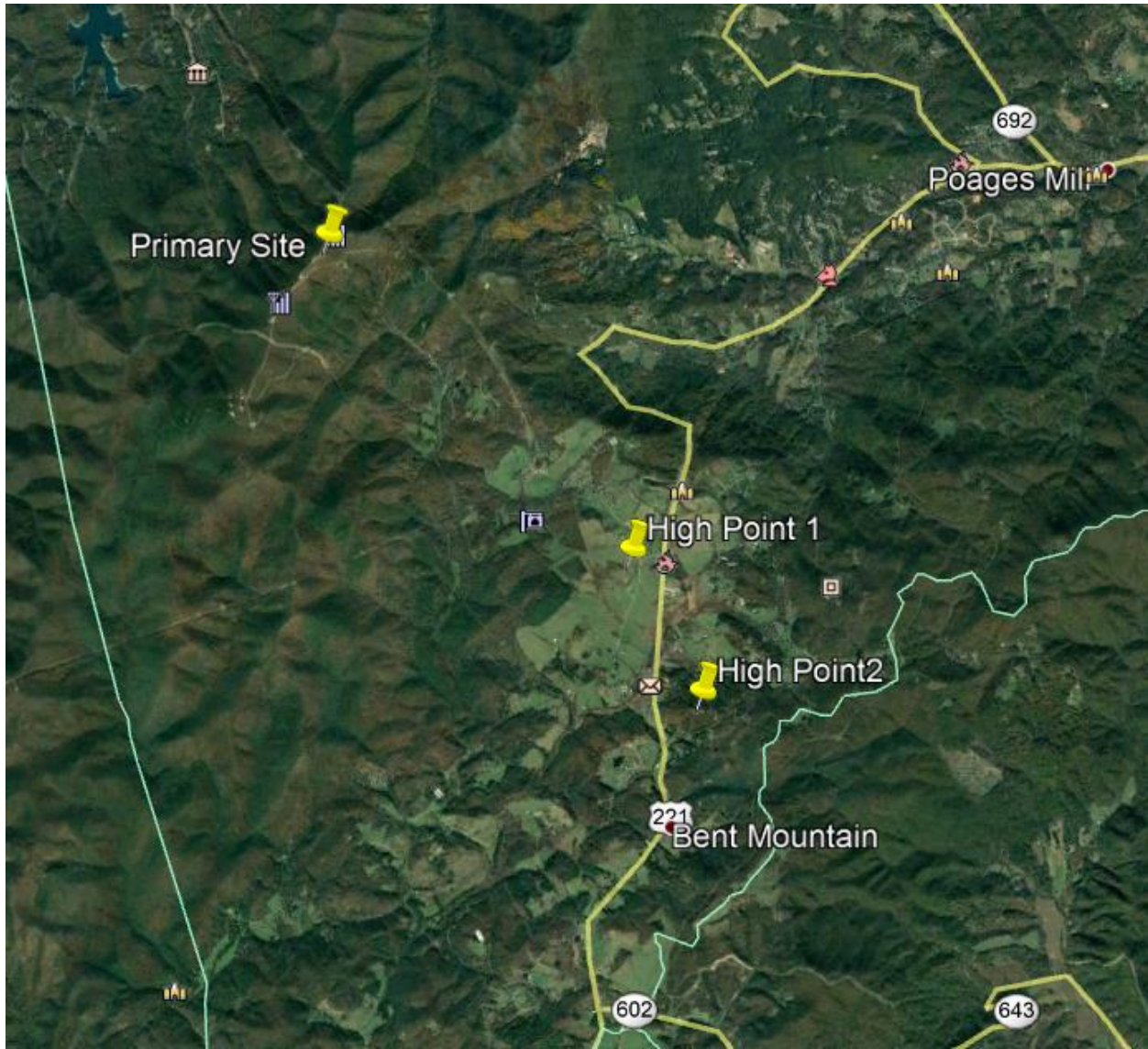
Image – Bent Mountain Area

This image shows where the 3 sites will be located on Bent Mountain.
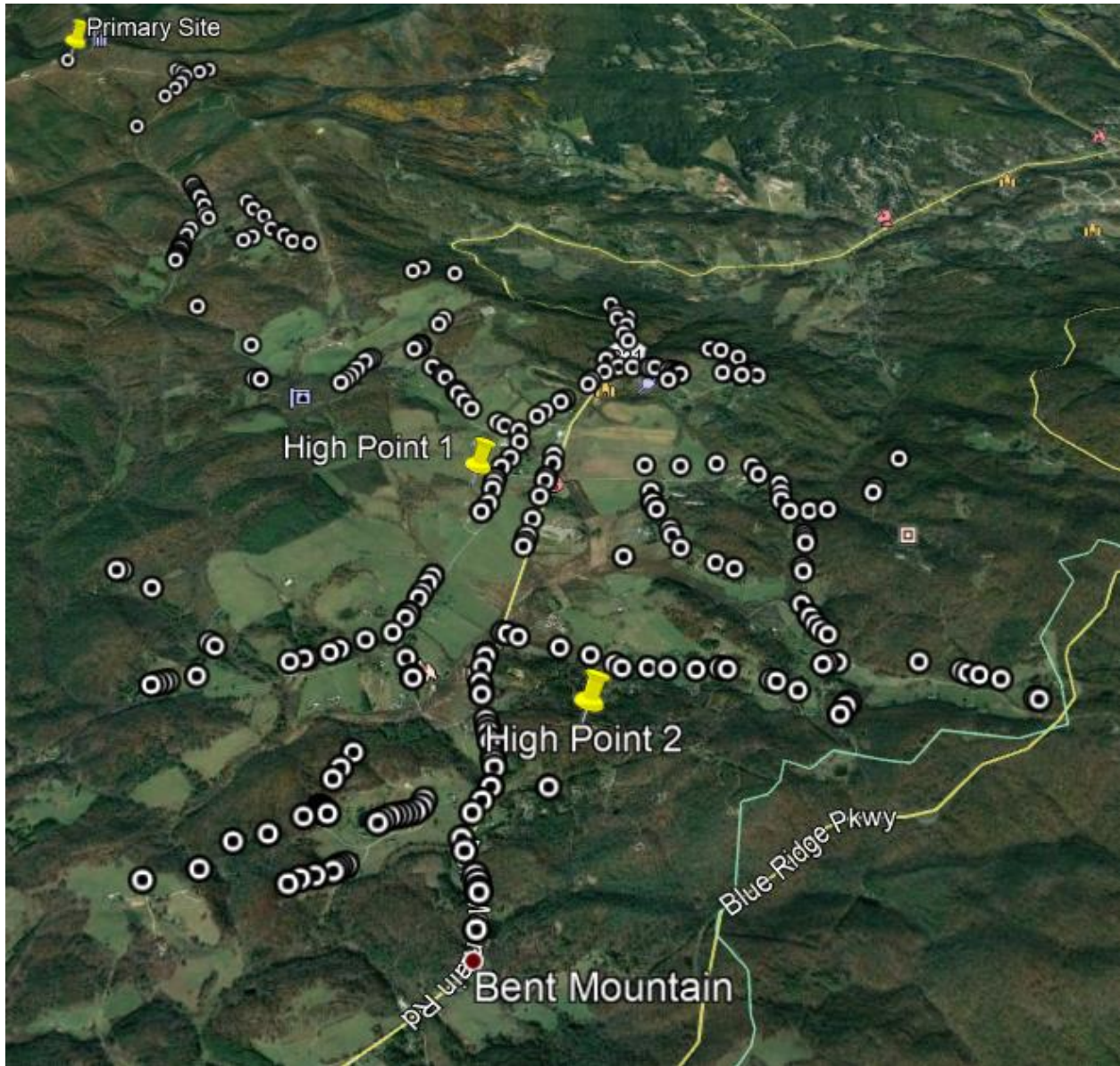
Image – Address Points in Coverage Area

Broadband Funding in Roanoke County

VIRGINIA **DHCD**

vati@dhcd.virginia.gov

Cox - RDOF

Legend

- 🟦 Virginia Telecommunication Initiative (VATI)
- 🟩 Rural Digital Opportunity Fund (RDOF)
- 🟧 Alternate Connect America Model (ACAM)
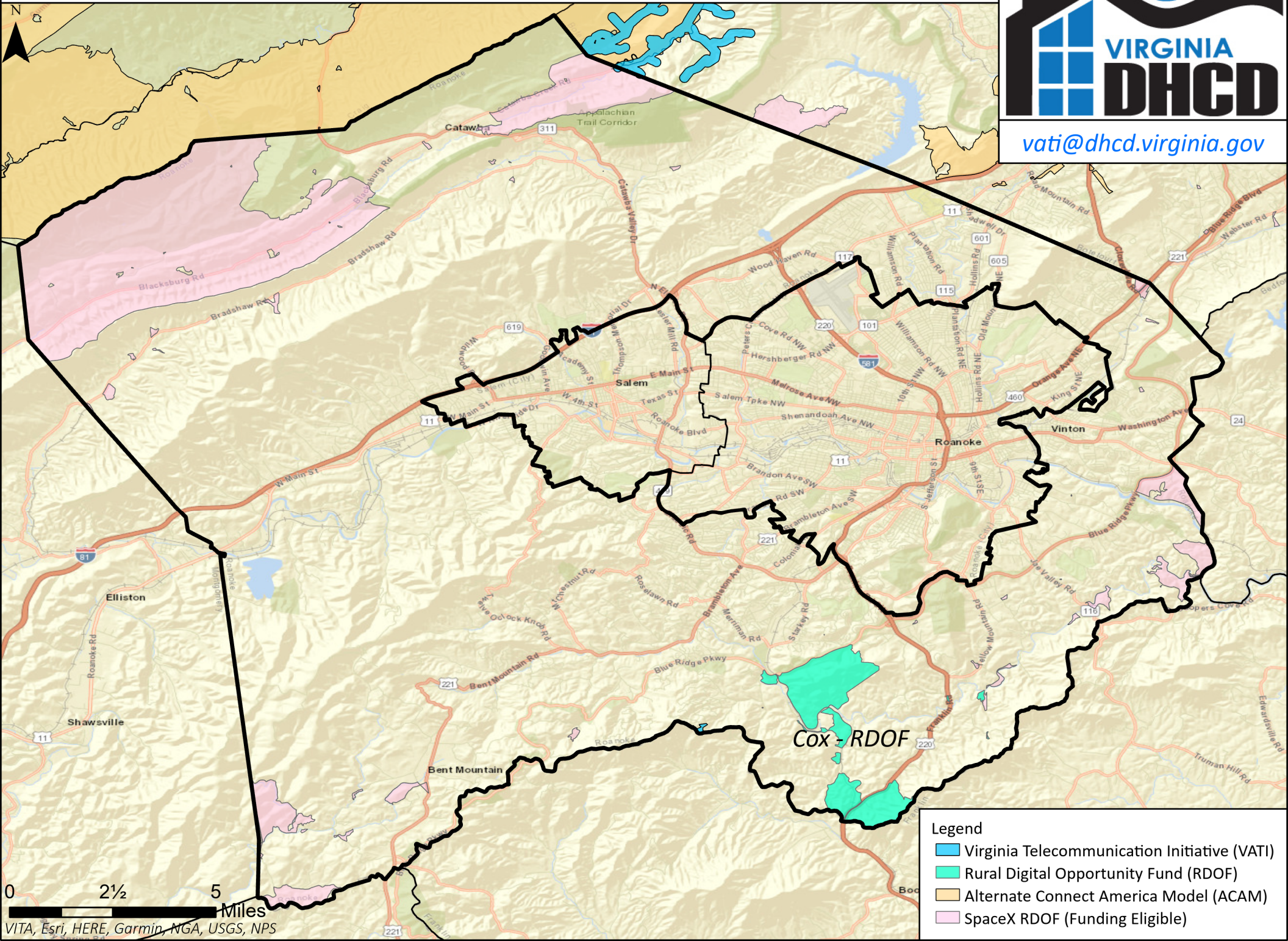- 🟪 SpaceX RDOF (Funding Eligible)

0   2½   5   Miles

Broadband Funding in Roanoke County

vati@dhcd.virginia.gov

VIRGINIA DHCD

Cox - RDOF

Legend
- Virginia Telecommunication Initiative (VATI)
- Rural Digital Opportunity Fund (RDOF)
- Alternate Connect America Model (ACAM)
- SpaceX RDOF (Funding Eligible)

VITA, Esri, HERE, Garmin, NGA, USGS, NPS

0   2½   5 Miles

To Whom it may Concern,

The areas proposed in this application meet the 2022 VATI unserved criteria.
These areas are defined as having broadband speeds at or below 25 Megabits per second (Mbps) download and 3 Megabits (Mbps) upload.

The areas proposed by the County of Roanoke meet these criteria.

William F. Hunter
Director, Communications and Information Technology

2022 Virginia Telecommunication Initiative (VATI)

Passing Form

Type of Passings	Total Number of Passings in the Project Area [1]	Passings in the Project Area, without Special Construction Costs Required[2]	Passings with Special Construction Costs budgeted in the Application [3]	Number of Passings with Speeds at 10/1 or below in Project Area [4]
Residential	520	520	0	520
Businesses (non-home based)	0	0	0	0
Businesses (home-based)	25	25	0	0
Community Anchors	0	0	0	0
Non-residential	0	0	0	0
Total	520	520	0	520

Note: *The Total Number of Passings MUST be equal to the Residential, Business (non-home based), Non-residential and Community Anchors sum.*

Note: *Do not include passings in RDOF awarded areas that were awarded to the co-applicant; these passings should be included in the RDOF Passings Form. Passings included in this application in RDOF awarded areas that were not awarded to the co-applicant, unless successfully challenged, are considered unserved and should be counted as passings in this form.*

[1] The total number of structures in the project area that can receive service. See definition of passing below for more detail.
[2] The number of structures in the project area that will not require special construction costs to provide service to. These passings fall within the broadband provider's standard service connection drop length and do not require nonstandard equipment or any additional fees above normal service connection fees required to provide broadband access to a premise.
[3] The number of structures in the project area with all construction costs budgeted in the application. These passings will not require any additional special construction costs beyond those budgeted for in the VATI application.
[4] The number of structures in the project area that do not have access to internet at speeds of at least 10 mbps download and 1mbps upload.

Definitions

Passing – any structure that can receive service. Multi-unit structures may be counted as more than 1 passing, provided individual connections and account are planned at that structure.

Business – An organization or entity that provides goods or services in order to generate profit. Businesses based in residential homes can count if they are a registered business (BPOL, LLC, etc.).

Community Anchor - schools, libraries, medical and health care providers, public safety entities, community colleges and other institutions of higher education, and other community support organizations and agencies that provide outreach, access, equipment, and support services to facilitate greater use of broadband service by vulnerable populations, including low-income, unemployed, and the aged.

Non-Residential Passing – places of worship, federal, state, or local facilities or other potential customers that are neither a residence, business or a community anchor as defined above.

The proposed area is located in Roanoke County Virginia. B2X Proposes to use an existing tower located on Poor Mountain located on Media way access by Honey Suckle Road. This location is owned and operated by Ion Media (Primary Site) supporting a tower that is broadcasting television to the local region. We will have access to 150-foot section on the tower. We will install 2 transmitters capable of supporting 100 customers with a signal of 100meg each. In addition, we will be installing 3 additional wood 85-foot poles. Each of these poles will support transmitters and backhauls to connect back to the primary site.
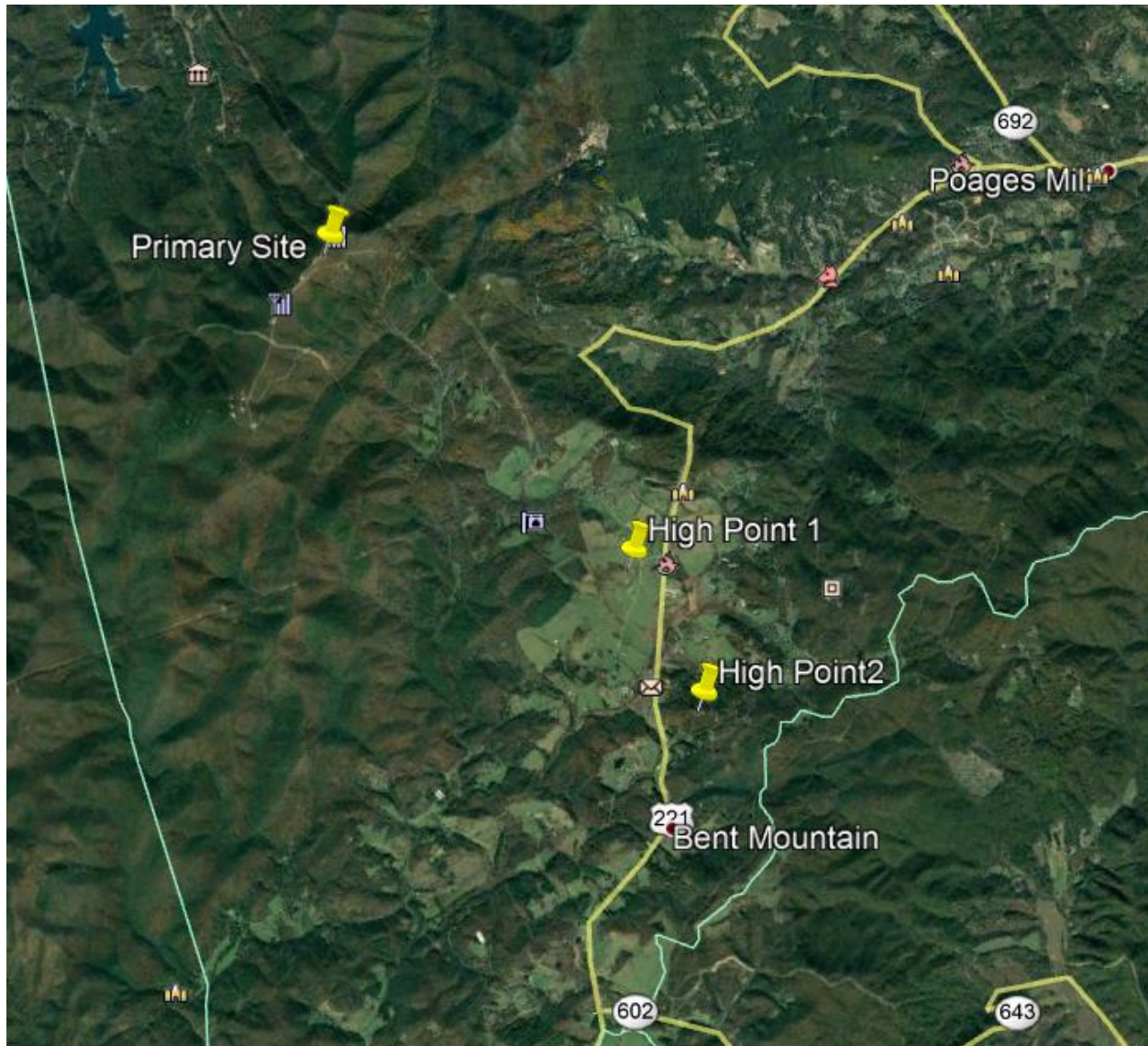
Image – Overall Area Transmitter Sites

Image – Showing Address Points in Area

Image – Backhaul Connections between sites
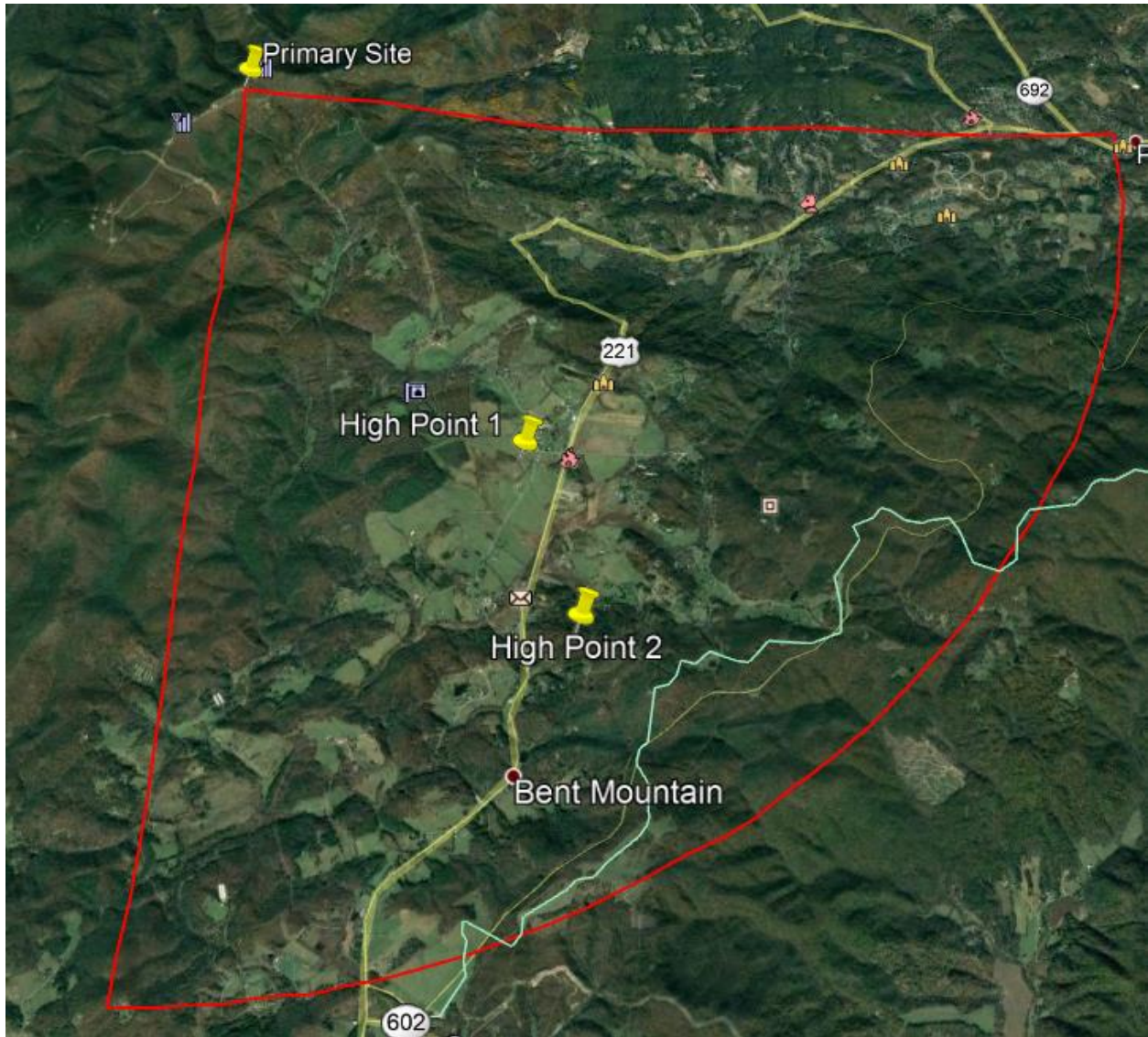

Image – Showing Backhaul Pathing

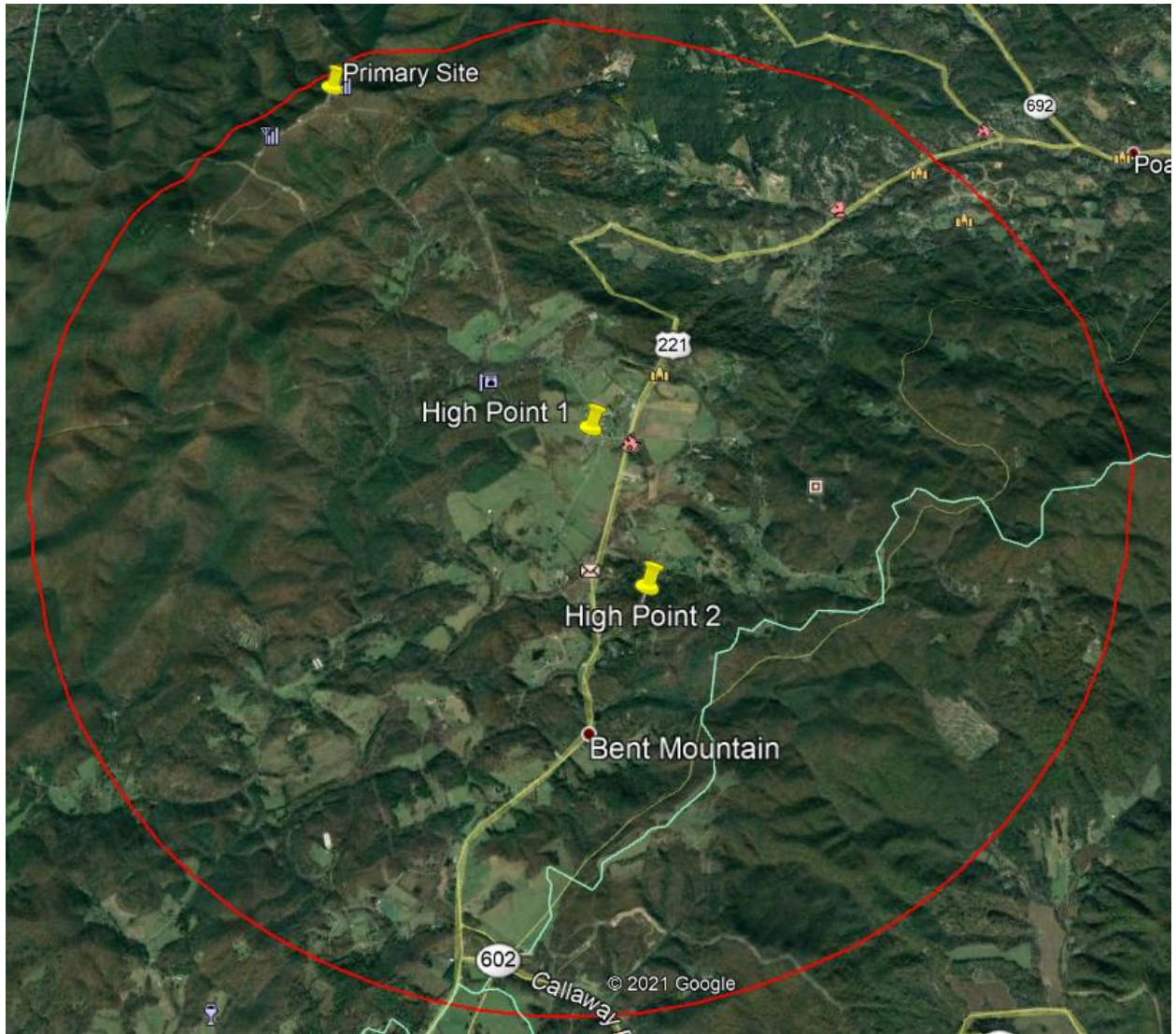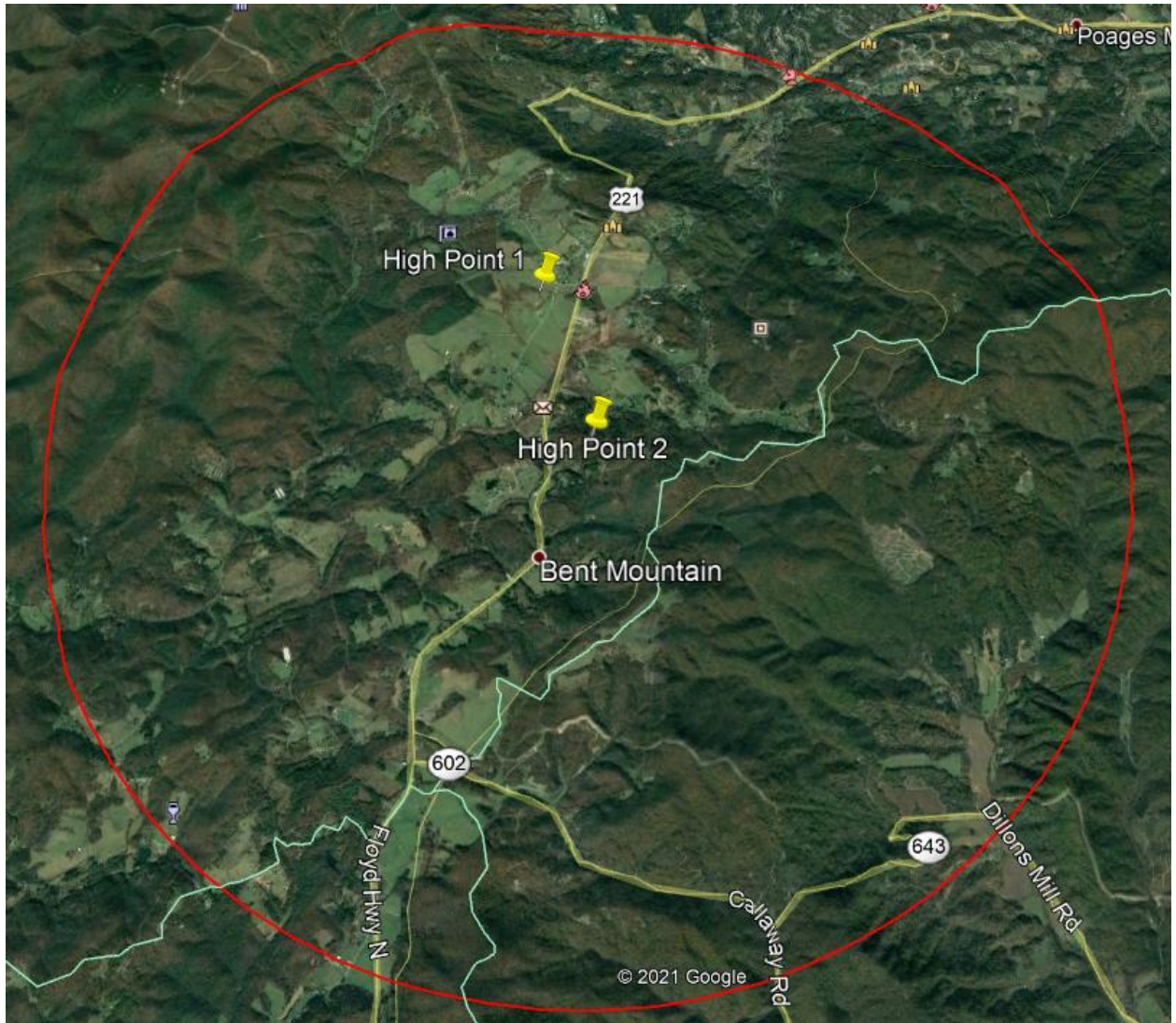Image – Showing Radiation Pattern of Primary Site Transmitters

Image - Showing Radiation Pattern of HighPoint1 Site Transmitters

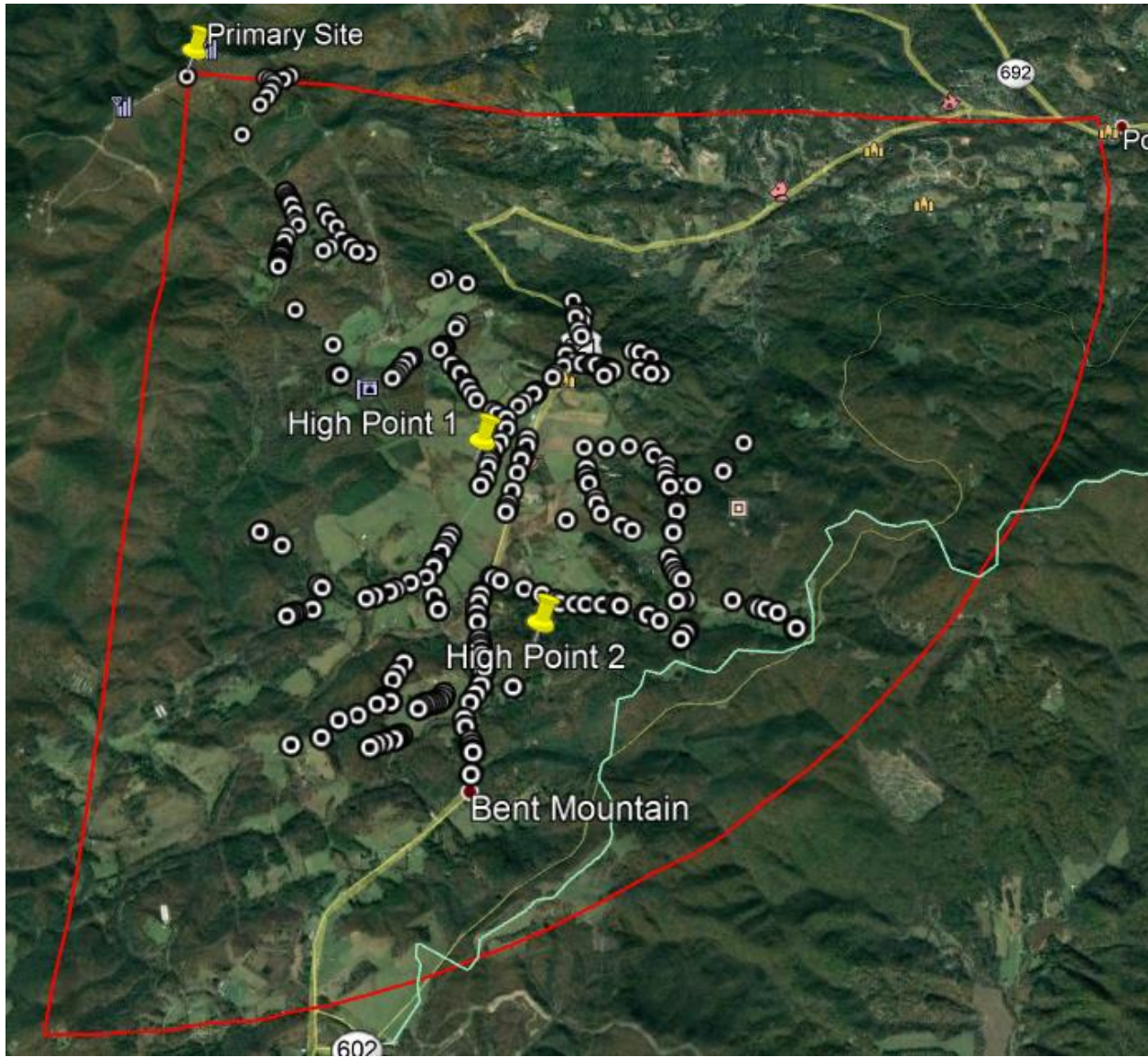Showing Radiation Pattern of HighPoint2 Site Transmitters

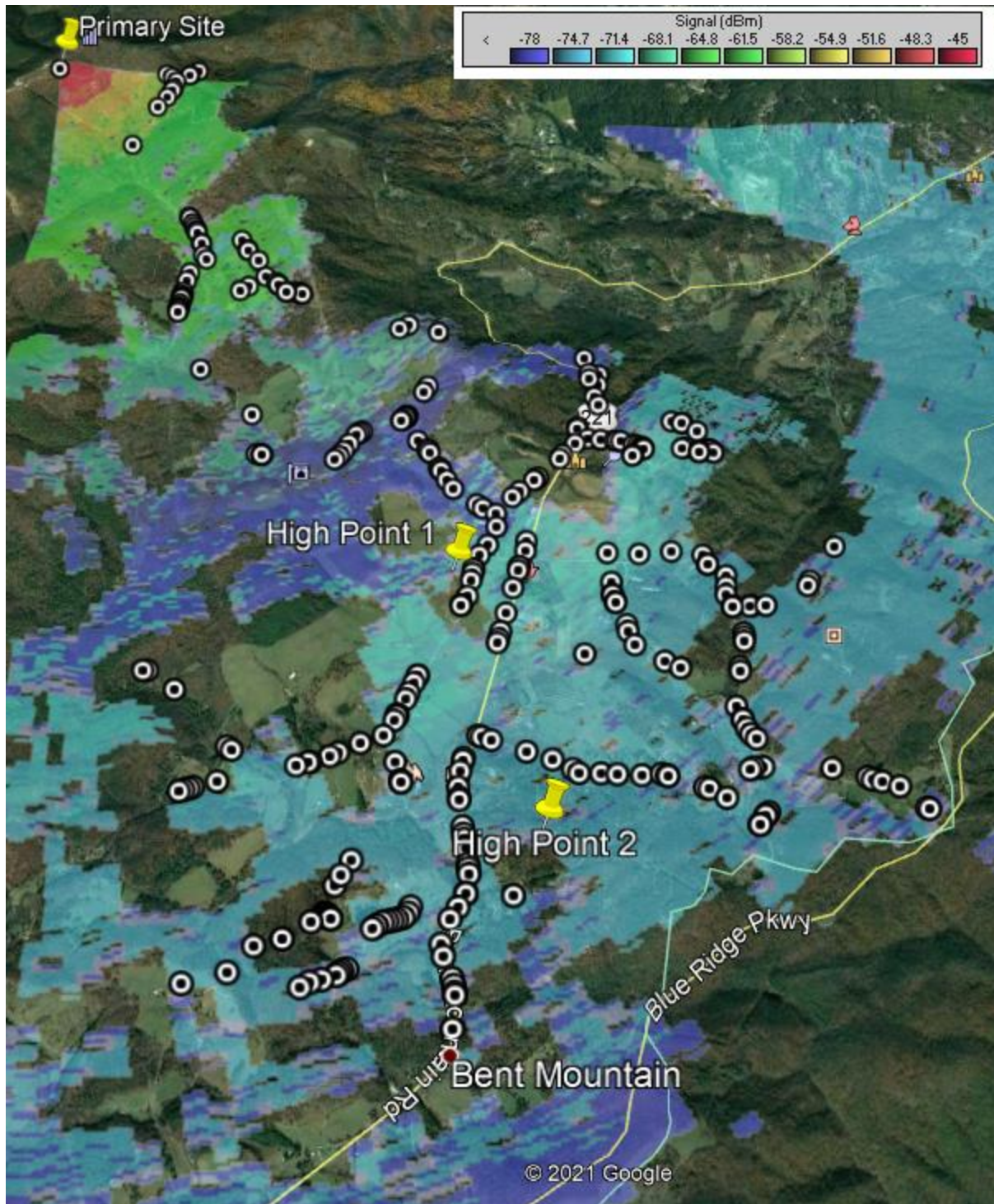Image – Showing Primary Site Radiation Pattern and Address Points

Image – Showing Primary Site Address Points and Coverage

The Primary site located on Poor Mountain is located (lat. 37.199089°, long. -80.150019°). It will have a set of licensed backhauls to link back to B2X main fiber location to supply the internet feed. This site will also have a licensed backhaul that links to the first pole location. The Primary Transmitters will have an azimuth of 135 degrees with a dual 65-degree antennas covering 90 total degrees. The Transmitter will be set for a 5-mile coverage.
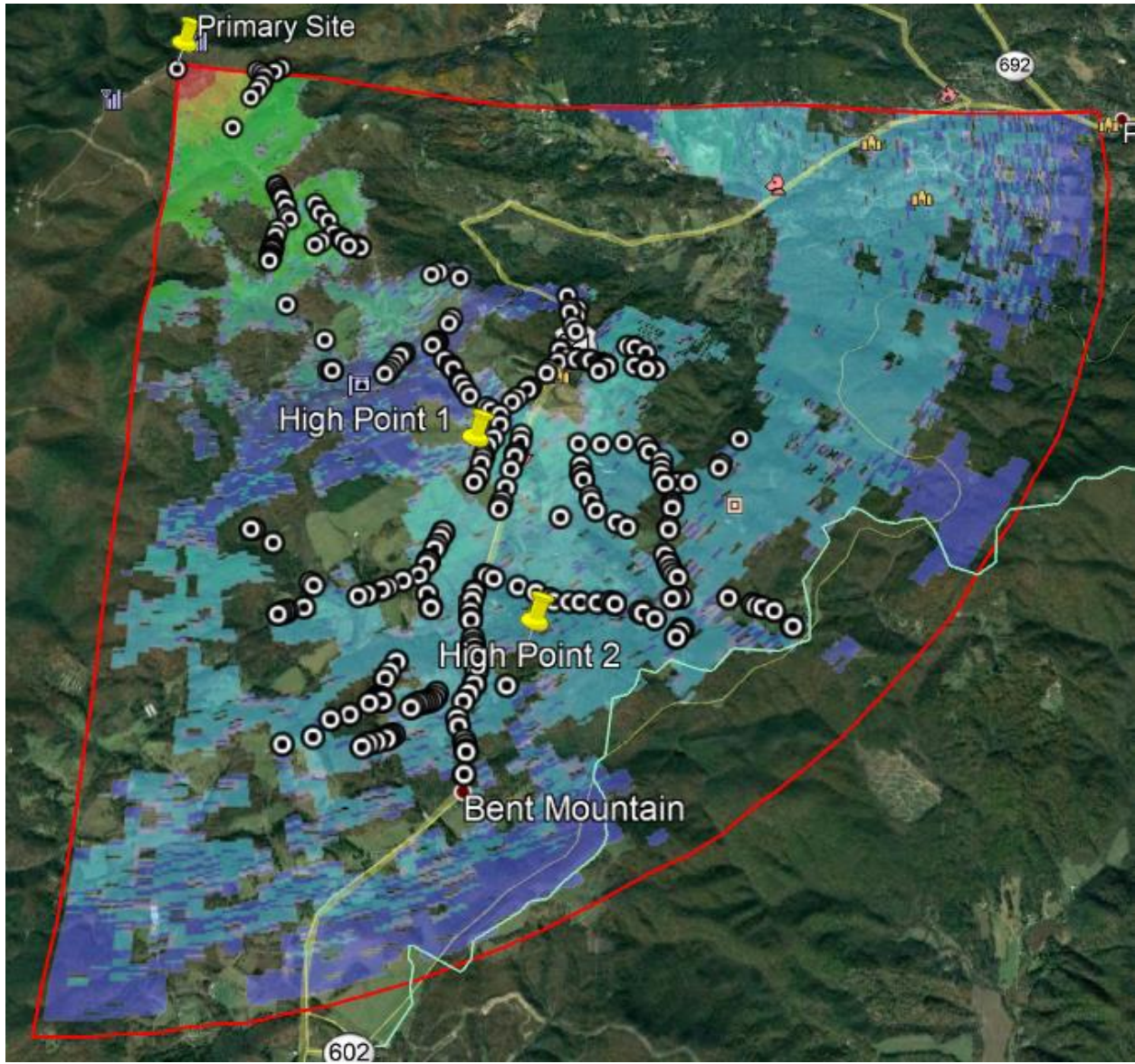
Image – Showing Primary Site Radiation, Address Points, and Coverage
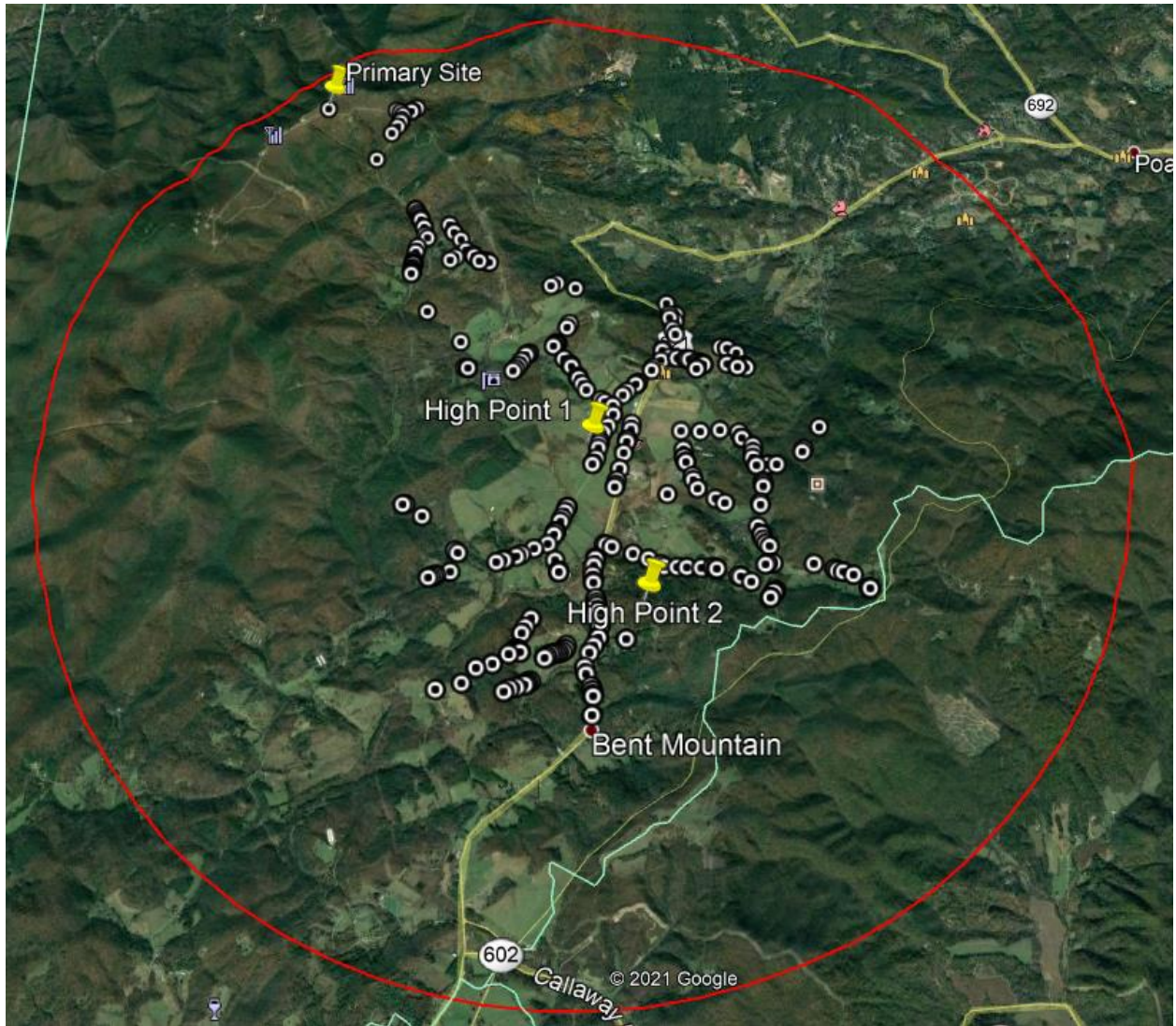
Image – Showing HighPoint1 Radiation Pattern and Address Points

Image – Showing High Point 1 Address Points and Coverage

HighPoint1 is located (lat. 37.166230°, long. -80.120034°) with 360degree coverage at a 3-mile range.

Image – Showing High Point 2 Radiation Pattern, Address Points, and Coverage
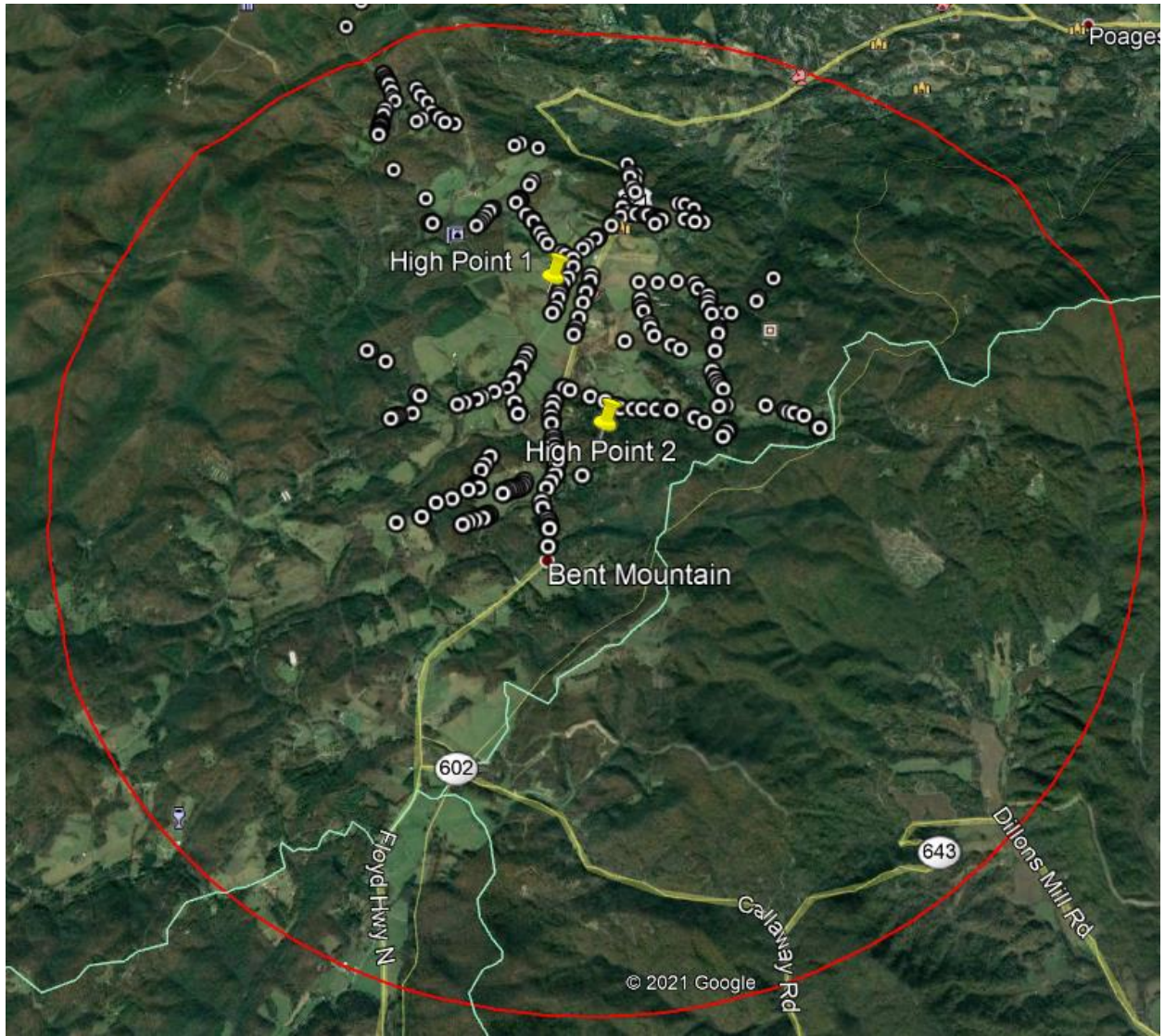
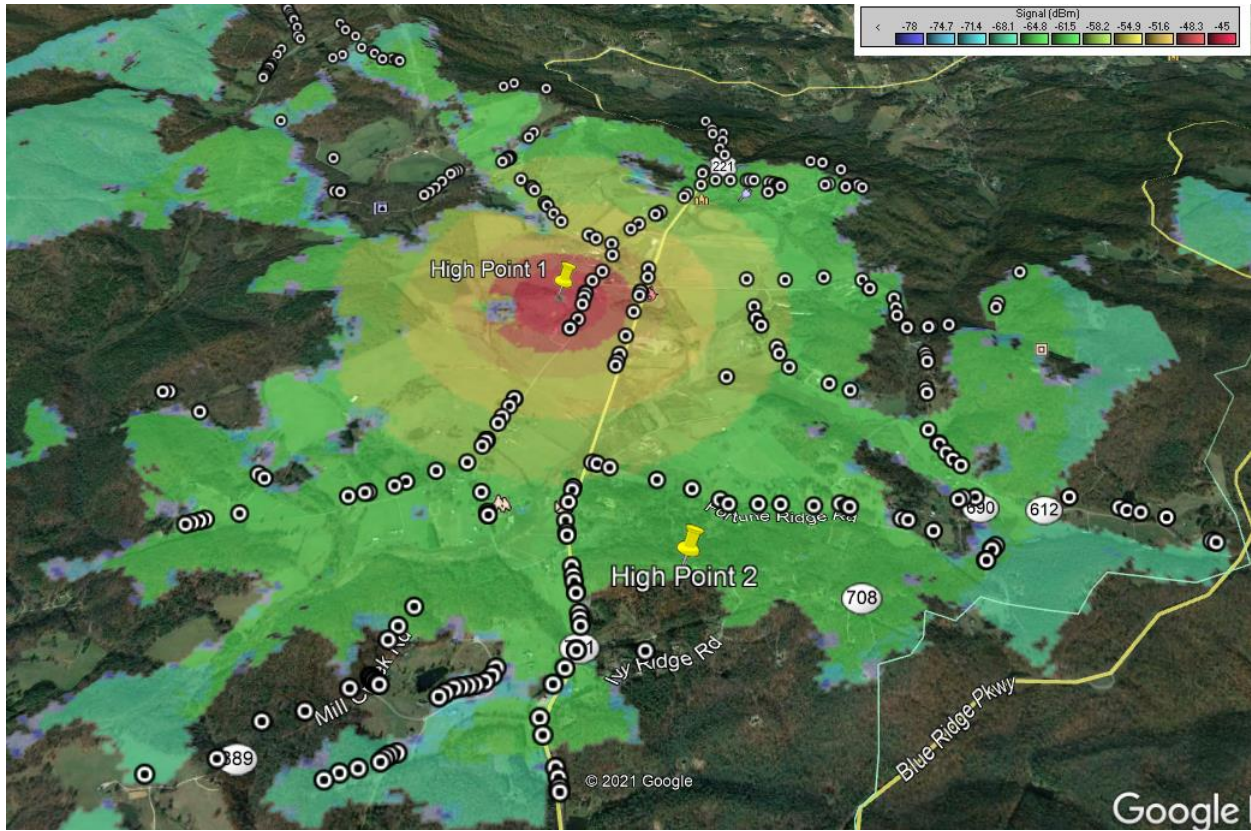Image – Showing High Point 2 Radiation Pattern and Address Points

Image – Showing High Point 2 Address Points and Coverage

. HightPoint2 is located (lat. 37.152017°, long. -80.114015°) with 360dgree coverage at a 3-mile range.
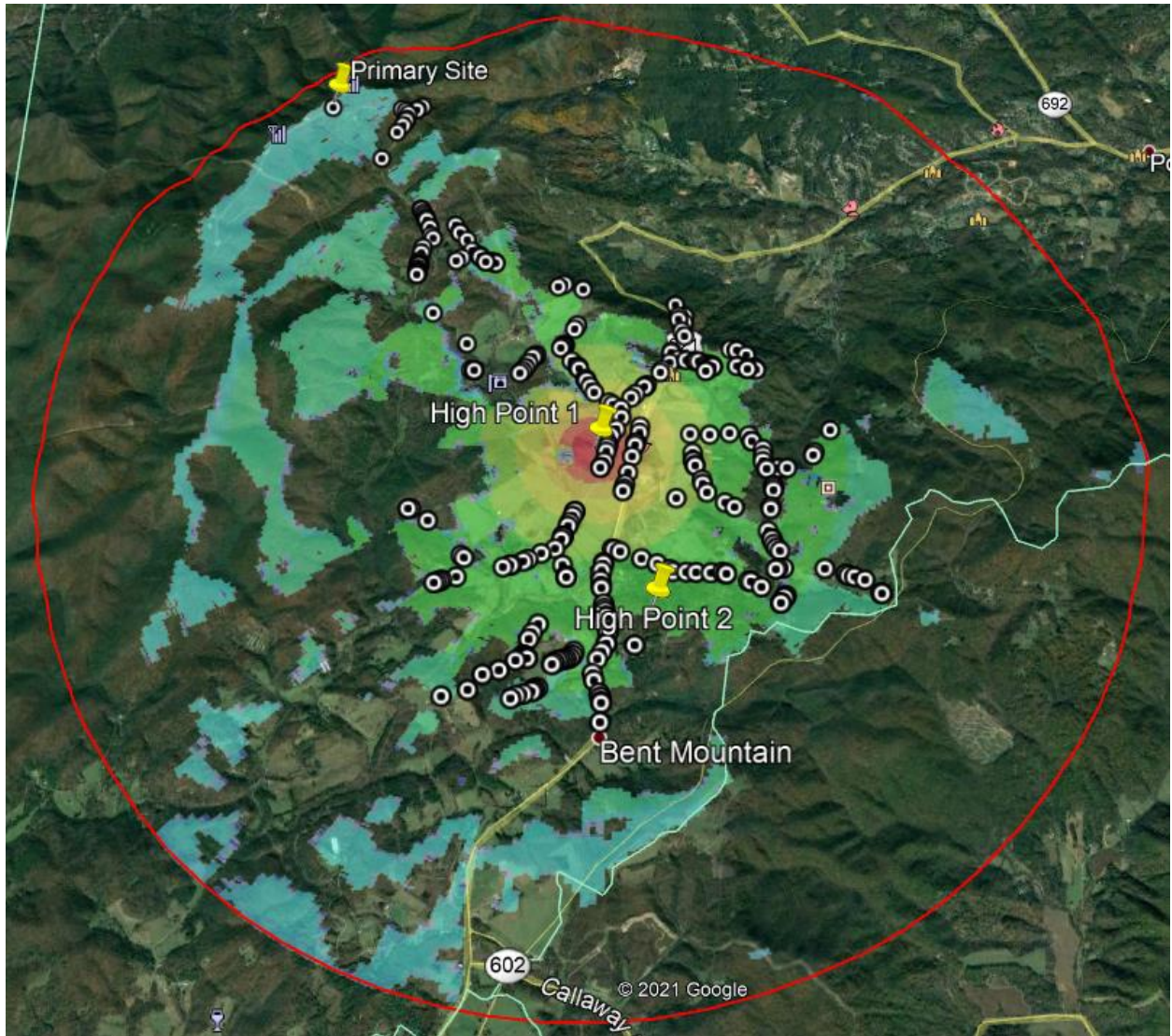
Image – Showing High Point 2 Radiation Pattern, Address Points, and Coverage
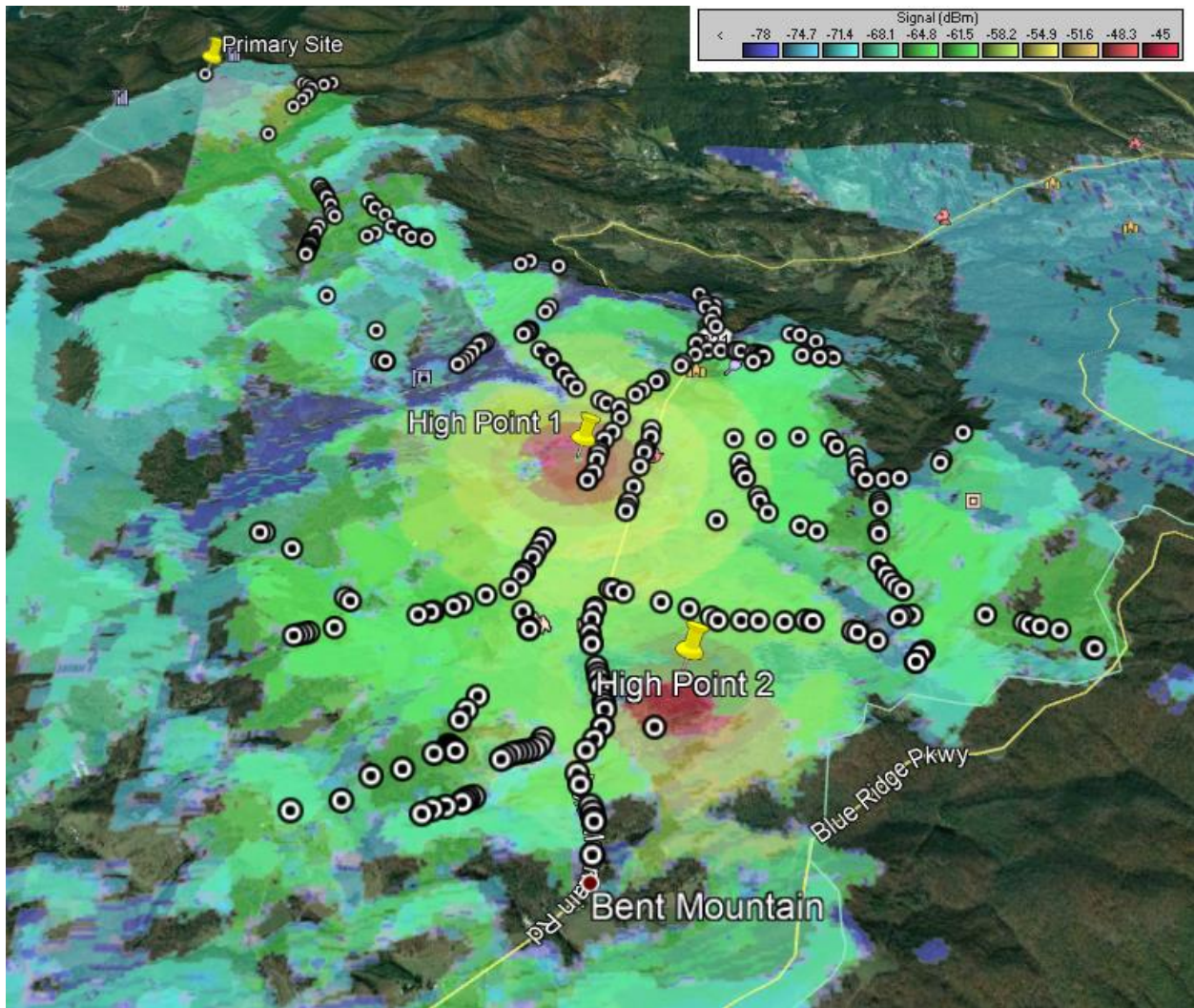
Image – Showing the combined Coverage and Address Points

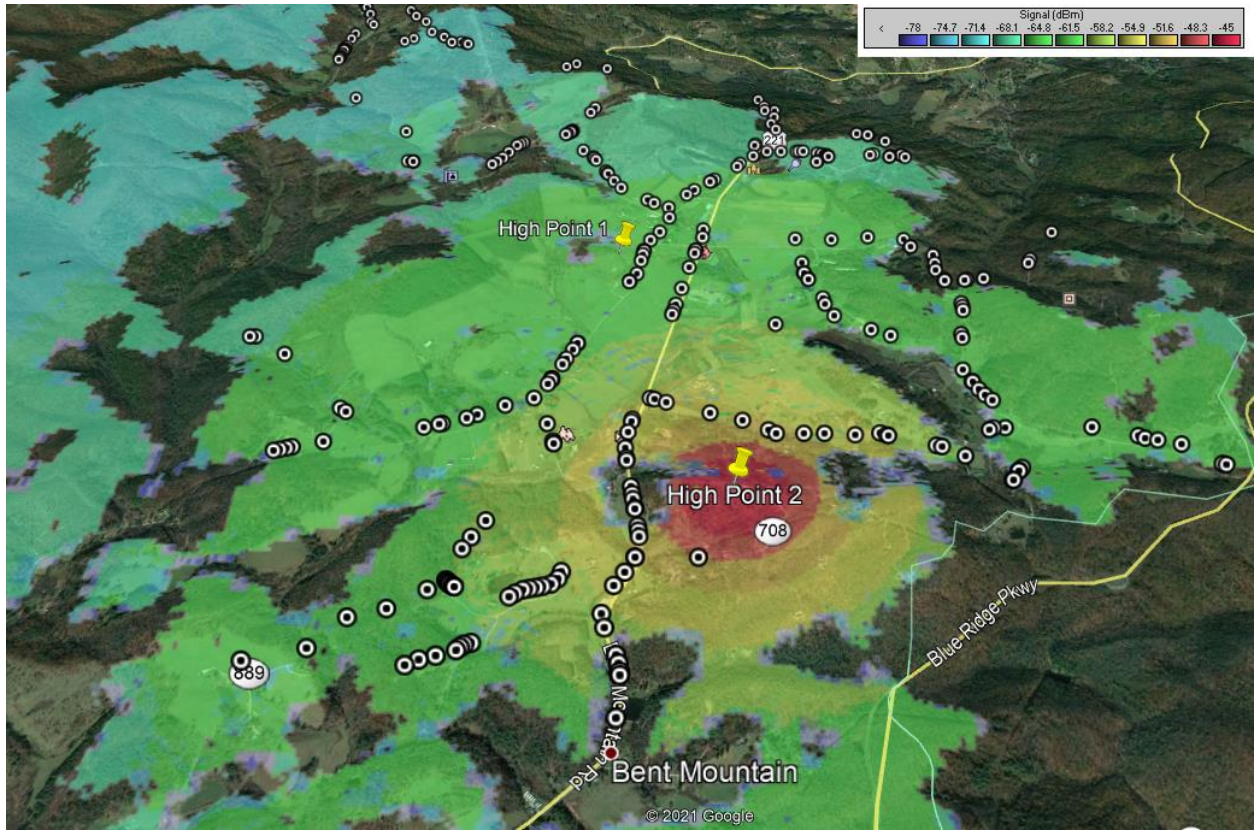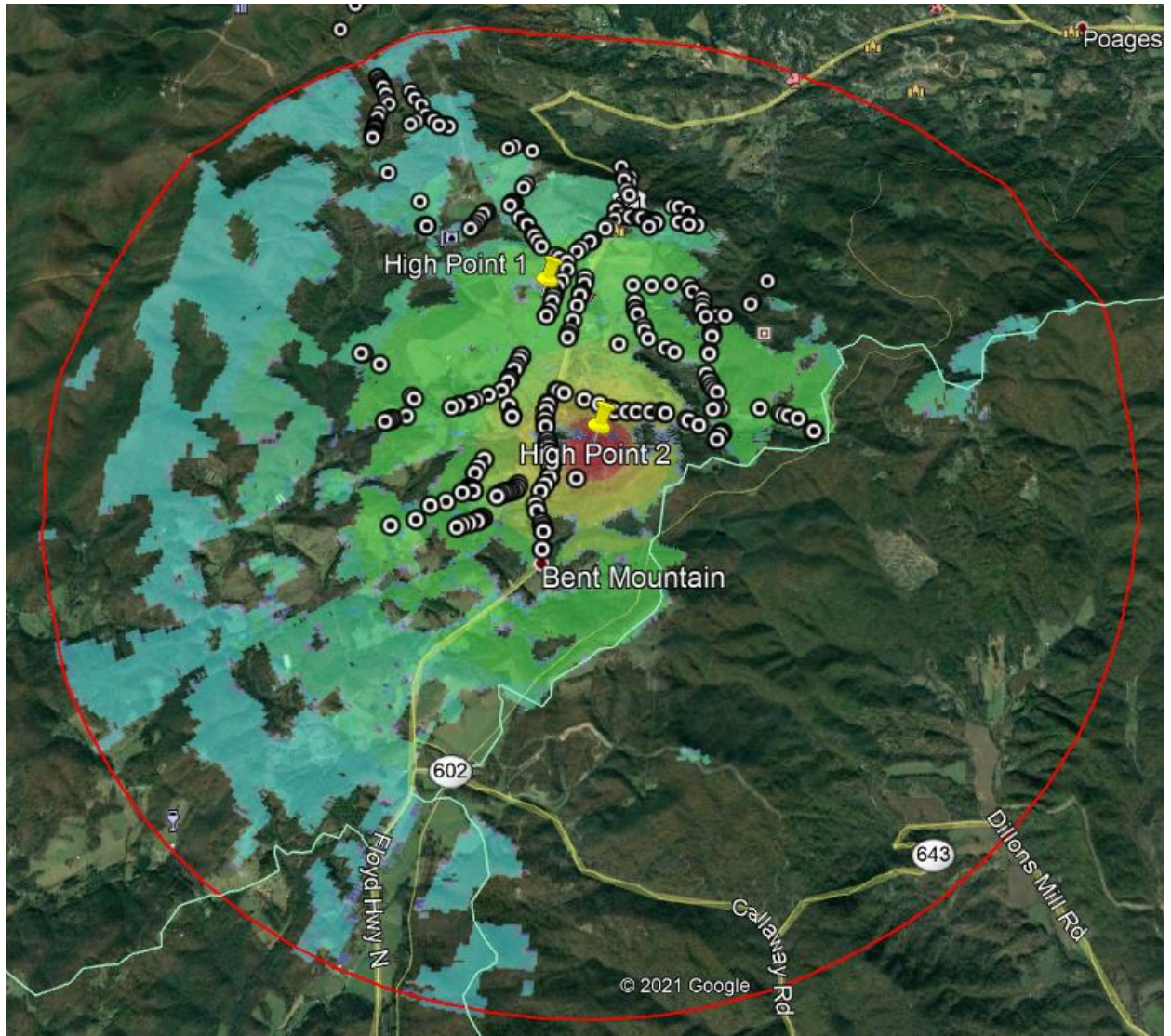**Propagation Summation**

Each site has a good prospective of coverage in the area. But each site has challenges with terrain and foliage. By using the 3 sites combined the overall coverage of the area is raised to the RSSI of at least 70db or better.

Bent Mountain Project Build Time

The system will begin construction once approved. Below is a timeline of the construction and build.

1. Site leases and backhaul pathing license will begin immediately and should be completed with-in 30 days.
2. Poles, transmitters, GPS, Switches, routers, base equipment, and cabinets orders will be placed within the first 30-days.
3. 90-days for site leases to be completed.
4. Installation of the primary site will begin after the site lease is signed. Construction time will be 30-days.
5. Installation of the microwave feed backhaul and alignment to make primary site active. 15-days
6. Begin both pole placements – 60-90 days.
7. Pole site prep and electricity setup. 20-days
8. Installation of equipment on poles and placement of ground site equipment. 30-days
9. SAS Registration and final system config and testing. 45-days.

Total build time 350-380 days.

**MEMORANDUM OF UNDERSTANDING
BETWEEN THE COUNTY OF ROANOKE,
VIRGINIA, THE ECONOMIC
DEVELOPMENT AUTHORITY OF
ROANOKE COUNTY, VIRGINIA, AND B2X
ONLINE, INC. FOR APPLYING FOR VIRGINIA
TELECOMMUNICATIONS INITIATIVE FUNDING
FOR PROVIDING BROADBAND SERVICES**

I.   PARTIES AND PURPOSE

This Memorandum of Understanding (MOU) is made and entered into as of the 14th day of September 2021, by and between Roanoke County, Virginia (the "County"), a political subdivision of the Commonwealth of Virginia, the Economic Development Authority of Roanoke County (the "Authority"), Virginia, a political subdivision of the Commonwealth of Virginia, and B2X Online, Inc. ("B2X"), a Virginia stock corporation, for the purpose of creating a partnership to prepare and submit an application for grant funding through the Virginia Telecommunications Initiative (VATI) the Virginia Department of Housing and Community Development in an effort to expand and improve broadband services to the citizens of Roanoke County, Virginia.

The County and Authority recognize that in order to attain and maintain a high-quality level of broadband service to the citizens of Roanoke County, a close working relationship with the private internet providers is desirable and will be made possible in large part through state and federal grant funding opportunities.

The Authority is a political subdivision of the Commonwealth of Virginia, authorized to make grants for the purposes of promoting industry, developing trade, and inducing manufacturing, industrial, governmental, nonprofit and commercial enterprises and institutions to locate, remain, or expand facilities in the Commonwealth, under Section 15.2-4905 of the Code of Virginia, 1950, as amended.

The County wishes to make certain funds available to the Authority, and the Authority wishes to make a grant to B2X, for the purposes of incentivizing B2X to expand its facilities in Roanoke County, increase jobs and employment, enhance learning opportunities for students, and otherwise expand the tax base of the County while simultaneously assisting in preserving public health in the midst of the COVID-19 crisis.

II.   SCOPE OF WORK

The County, Authority, and B2X desire to cooperatively work together to prepare and apply

for grant funding through the 2021 Virginia Telecommunications Initiative (VATI) Funding Program managed by the Virginia DHCD to provide fiber broadband service in several areas of the County by extending their existing fiber network. The application for funding anticipates coverage to be made available to approximately 520 households and businesses in the County that are currently unserved/underserved. Service is envisioned to be provided through the following infrastructure improvements:

- Placement of fixed wireless internet sending and receiving equipment on an existing wireless tower on Poor Mountain.
- Placement of two 85-foot wooden monopoles nearby, with fixed wireless internet sending and receiving equipment.
- Associated backhaul.

The proposal is more specifically laid out In *Proposal for Roanoke County Broadband Expansion Projects, August 2021*, submitted by B2X. The County and B2X agree to provide the necessary funding to construct the projects above to deliver internet service to the homes/businesses in these areas by providing minimum average internet speeds ranging from 25 Mbps/3 Mbps to 100 Mbps/ 10 Mbps. The total cost of these projects is estimated at $348,181.

To obtain necessary project funding, the County agrees to complete a grant funding application, with assistance from B2X through the DHCD VATI Funding Program requesting $170,609 (49% of the estimated project cost) to be allocated to the above projects. The County will contribute not more than $96,572 (27.25% of the estimated project cost) toward completion of the projects. B2X agrees to provide the remaining project funding to complete the above projects (which is anticipated to be 23.25% of the project cost).

The parties confirm that a detailed agreement shall be executed if funding is approved to outline all the obligations of the County, Authority, and B2X and providing performance guarantees for service delivery and maintenance. If funding is approved from DHCD, the parties confirm and understand that B2X will be responsible for providing the remaining of the funding necessary to complete the project for which DHCD funding was received.

Signatures on following page

IN WITNESS WHEREOF, the parties have executed this Memorandum of Understanding on the day, month, and year indicated:

FOR ROANOKE COUNTY, VIRGINIA:
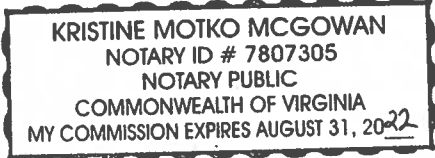
By: _____
Daniel R. O'Donnell
County Administrator

COMMONWEALTH OF VIRGINIA
COUNTY OF ROANOKE, to wit:
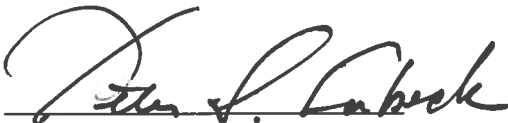
The foregoing instrument was acknowledged before me this 14th day of September 2021 by Daniel R. O'Donnell, on behalf of Roanoke County, Virginia.

My commission expires _Aug. 31, 2022_

Registration No. _7807305_

KRISTINE MOTKO MCGOWAN
NOTARY ID # 7807305
NOTARY PUBLIC
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES AUGUST 31, 2022

Approved as to form:

By: _____
Peter S. Lubeck
County Attorney

FOR THE ECONOMIC DEVELOPMENT AUTHORITY OF ROANOKE COUNTY:

By: _____
Steven A. Musselwhite
Chairman

Virginia.

My commission expires _____

Registration No. _____

FOR B2X ONLINE, INC.:

By: _____
[name] *E Warren Kane JR*
[title] *CEO*

COMMONWEALTH OF VIRGINIA
COUNTY OF ROANOKE, to wit:

The foregoing instrument was acknowledged before me this *14* day of September 2021 by
Cynthia Renee Fortune on behalf of the B2X Online, Inc..

My commission expires *07/31/2023*

Registration No. *7512432*
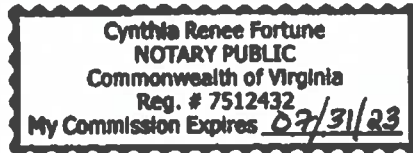
VATI FUNDING SOURCES TABLE

Please fill in the chart below with a description of the project funding source (local, federal, state, private, other), the amount from that source, the percentage of total project funding that source represents, and a description of the current status of the funds (pending, secured, etc.).

Source	Amount	%	Status
REQUESTED VATI	$ 170,609.00	49	Pending
	$		
B2X - ONLINE	$ 81,000.00	23.25	COMMITTED
	$		
COUNTY OF ROANOKE	96,572.00	27.25	COMMITTED
	$		
	$		
TOTAL	$ 348,181.00	100 %	

September 13, 2021

Mr. Bill Hunter
Director, Communications & Information Technology
County of Roanoke, Virginia
5925 Cove Road
Roanoke, VA 24019

Dear Mr. Hunter,

B2X is pleased to be partnering with Roanoke County to apply for funding to extend broadband service to unserved areas of the county.

The intent of this letter if to confirm our commitment to matching funds for this project and to provide assurance of our financial ability to do so. B2X has been in business since 2006 and currently serves around 3,200 customers in both central and southwest Virginia. B2X has been the recipient of many grant programs throughout our history and has completed all such projects without issues. B2X is a very finically sound company with solid growth year over year.

B2X has invested millions of dollars in central and southwest Virginia over the years to bring internet services to unserved areas who otherwise would not have access. B2X has been ranked by industry experts as one of the most advanced wireless internet services providers in the county with over 100 tower / access point locations in the area.

B2X will be providing $15,000 in cash which will not be a burden on the cash flow of the company. The $66,000 for in-Kind, will be created by the Price exceptions we have in place with the manufacturer and the initial install amount pushed to the subscriber during the install. Each install is $200 to each subscriber plus our $240 purchase which will make the $440 per initial estimated subscriber. $440 * 150 = $66,000 Customer Premises Equipment In-kind. Over the course of 12 months will be $3,000 a month as we put in the estimate of 150 subs during the 12-month span. $3,000 * 12 = $36,000 equipment costs. The install cost to each sub for each month $2,500 * 12 = $30,000 install paid by Subscribers.

Please accept this letter in lieu of a financial statement documenting current assets due to our positions as a privately – held company.

Thank you,

Warren Kane – CEO
B2X Online, Inc.

B2X Online, Inc.
30 Mill Lane
Salem, VA 24153
540-389-7924
www.b2xonline.com
sales@b2xonline.com

Better Internet solutions. The right Internet choice.

Memorandum

To: DHCD

From: William F. Hunter, Director

Date: September 13, 2021

Re: Matching Funds

The County of Roanoke has committed $96,572.00 in Capital Improvement Funds toward the completion of the B2X On-Line project applied for in the VATI Grant Application submission.

Good morning,

I am hoping to soon be among the many other citizens of Roanoke County that can say I have an internet provider. I unfortunately am in an area that is currently under served -- 7592 Willow Branch Rd. Boones Mill (but on the Roanoke County side) Cox services Roanoke County but not my area as there are not enough houses to be beneficial to them and I have checked with providers in Franklin County and they tell me they can't cross the county line so I am in NO MAN'S LAND. I would love for my area to be launched into the 21st century.
Thanks for your time & consideration,
Bettie Haupt

We have been without Internet Service since we moved to this rural area some 5 years ago. When I contacted one Internet provider I learned it would cost us $8000 to get broadband installed. Satellite monthly costs are way outside our budget because we are retired. So I used the library until Covid closed them.
Have you ever tried to do your taxes on a cell phone? Not easy! Our cell phone is our only access to the internet and doing things on a 5.5 x 2.5 screen gets old fast! Also, cell phone access is never at full bars.
We need low cost internet access!
Thank you,
Diane Carter
3663 Bradshaw Rd, Salem, VA 24153

Good morning. I received word you are the gentleman to contact to hopefully receive internet in our area. My husband and I live at 5449 Bandy Road. I have attempted multiple times in our almost 8 years in our home to get reliable internet. I have contacted Cox Communications multiple times, as they serve both ends of our road, but not the small stretch we are located at. The last time I contacted Cox I was told they would have to go through the "forest", and it would cost us $100,000. We are currently using an unreliable Jet Pack from Verizon Wireless, a jet pack from US Cellular has the same unreliable service. Satellite services like B2X were unavailable to my address, last time I checked.
Our need for reliable internet is extremely important to us as we are both RNs and my husband is planning to obtain his BSN soon, and these programs are almost all distanced learning these days. Our 2 children had the most difficult time getting anything completed when the pandemic first hit when Roanoke County offered online classes until they were able to return to school. Lastly, I need it for my job. My current role is the unit director/manager for the Transfer Center/Bed Placement @ Carilion Clinic. Sometimes with my job I need to access our applications from home after hours, or in emergency situations, or if my children are sick and I cannot make it into the office. My fear is that schools are going to be closed again due to COVID and I would need the ability to work from home, for childcare purposes.
Thank you for your time.
Constance Aaron, RN, BSN

August 19, 2021

Mr. Bill Hunter
Director, Communications & Information Technology
County of Roanoke, Virginia

Subject: Community need for internet

Dear Mr. Hunter,

I am writing to let you know of my need for internet. I am a resident of the Mount Pleasant Area and currently have no internet options, whatsoever, for my home. Having internet available at my home would mean the ability to manage bank accounts and finances from home, communicate with friends, family and co-workers, find and purchase goods not locally available, have information on the most current news, and lastly enhance educational opportunities for my children. This last item is huge, as I know you would agree. I have three school age children and without internet access there is no opportunity for them to do any meaningful online work, and hence fall into the risk of falling behind their peers.

Sincerely,

Danielle Bishop
4928 Brookridge Road
Roanoke, VA 24014

To Whom it May Concern,

My name is Dyanna Desforges and my husband and I live at 4699 Brookridge Rd in Roanoke, VA. We currently run two businesses out of our home and high speed internet is crucial for our productivity. We have satellite internet now that is mediocre at best. Very slow internet speeds. The internet doesn't work when it rains or snows. With high speed internet, we could be much more productive with our business and ultimately make more money not only for ourselves, but for the state as well. The world is so dependent on high speed internet these days. It doesn't make sense that some houses on our street have access to it and some don't. We have fought multiple times with Cox Cable to service to our home. We have even offered to rent a ditch witch and run the cables down our driveway ourselves. Having high speed internet would also increase the value of homes in the area. Please feel free to reach out to me if needed. Thank you and we appreciate your consideration for a VATI Grant.

Dyanna Desforges

Bill,

We have had satellite internet since we moved to Catawba twenty years ago. It's so slow it doesn't allow us to do most things people take for granted. Here are a few examples.

After my husband's surgery last month his doctor in North Carolina wanted to see a photo of an incision that wasn't healing properly. My husband had to drive over twenty miles to the Roanoke County library to send the picture, as our uplink speeds are so slow the doctor's app repeatedly timed out.

We can't have remote doctor appointments because we're unable to use Zoom or to video chat, a problem exacerbated by the pandemic. When the roads are bad in the winter, we can't have video appointments then, either.

Yesterday there was severe weather in our area and a tornado a few miles away. Because we have no cell phone service here, we couldn't receive radar, forecasts, or emergency information because we lose our internet in rainy weather. We're literally in the dark when we need weather information to be safe.

We're can't use video in any form to communicate with our family members and friends.

Even with theses limitations, we pay a lot to try to have access to communication and entertainment. Our satellite TV bill is $197/month, our internet is 94.51, and our land line is 69.05. In spite of that we can never stream anything -- Netflix, sports, Hulu, Peacock, for example - and even the services we pay for (like HBO) are streaming more and more of their content.

Our land line also tends to fail in rainy weather. Then, we have zero access to emergency services.

We need high speed internet!

Thanks, Elizabeth Kayser
7860 Miller Cove Road
Catawba VA 24070

B2X costs are based on the past history of other bids we have recently completed in the past and from distribution centers. B2X buys most of its wireless gear from Double Radius and the prices for the transmitters and backhauls are available on their web site. B2X uses Cambium and BaiCells equipment which are the leading wireless equipment on the market for both Line-of-Site and Non-Line-of-Site technology. The cost breakdown of each site shows a cost of the line items with the product and all items needed to mount, connect and install the product.

Labor is based on local labor rates for the work being performed.

The Poles have been quoted from several different locations in Kentucky and Alabama. The prices for the poles are created from a list of cost of pole, Shipping, labor, back fill, local transport, Crain rental, cleanup, drill costs, and engineering.

Transmitters are listed with the transmitter, several licenses, antenna, GPS, base and antenna Mounts, and labor to mount.

To restate most of these prices are available on the web for verification.

Primary Sit on Poor Mountain

Description	Total	VATI	Non-VATI	Type of Funds
Access point and backhaul equipment for internet transport to customer. Related mounting equipment and supporting tower-based equipment as well as installation of all equipment	$66,435	$66,435	_	Grant
Site study, Licensing, Engineering, Permits and other related installation cost to bring equipment on line and active	$5,000	_	$5,000	Cash
Customer Premises Equipment	$13,200	_	$13,200	In-kind
Total Project	$84,635	$66,435	$18,200	

Pole Site (High Point 1)

Description	Total	VATI	Non-VATI	Type of Funds
Install 85' wood utility pole with access point and backhaul equipment to transport internet to customer. Related mounting equipment and supporting pole-based equipment as well as installation of all equipment	$100,373	$100,373	-	Grant
Site study, Licensing, Engineering, Permits and other related installation cost to bring equipment on line and active	$5,000	-	$5,000	Cash
Customer Premises Equipment	$26,400	-	$26,400	In- Kind
Total Project	$131,773	$100,373	$31,400	

Pole Site (High Point 2)

Description	Total	VATI	Non-VATI	Type of Funds
Install 85' wood utility pole with access point and backhaul equipment to transport internet to customer. Related mounting equipment and supporting pole-based equipment as well as installation of all equipment	$100,373	$100,373	-	Grant
Site study, Licensing, Engineering, Permits and other related installation cost to bring equipment on line and active	$5,000	-	$5,000	Cash
Customer Premises Equipment	$26,400	-	$26,400	In- Kind
Total Project	$131,773	$100,373	$31,400	

Project Summation

Description	Total	VATI	Non-VATI	Type of Funds
All Project VITA Totals	$267,181	$267,181		Grant
All Cash Totals	$15,000		$15,000	Cash
All In-Kind Totals	$66,000		$66,000	In- Kind
Total Project	$348,181	$267,181	$81,000	

OMB 3060-0816

Form 477 Filing Summary

FRN:
0016101412

Data as of:
Jun 30, 2021

Operations:
Non-ILEC

Submission Status:
Original - Submitted

Last Updated:

Filer Identification

Section	Field	Response
Filer Information	Company Name	B2X Online, Inc
	Holding Company Name	B2X Online, Inc
	Filing Type	Non-ILEC
	SAC ID	N/A
	499 ID	N/A
Data Contact Information	Data Contact Name	Warren Kane
	Data Contact Phone Number	(540) 389-7924
	Data Contact E-mail	warren.kane@b2xonline.com
Emergency Operations Contact Information	Emergency Operations Name	Warren Kane
	Emergency Operations Phone Number	(540) 389-7924
	Emergency Operations E-mail	warren.kane@b2xonline.com
Certifying Official Contact Information	Certifying Official Name	Warren Kane
	Certifying Official Phone Number	(540) 389-7924
	Certifying Official E-mail	warren.kane@b2xonline.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	deployment1.csv	Aug 4, 2021 11:45 AM	1,853

Fixed Voice Subscription (iVoIP)

State	Total	Consumer	Business / Govt
Virginia	0	0	0
Total	0	0	0

All other VoIP Subscriptions by State, End-user Type, Bundle and Last-mile Medium

		by End-user Type		by Bundle		by Last-mile Medium			
State	Total	Consumer	Business / Government	Sold w/ Internet	Sold w/o Internet	FTTP	Coax	Fixed Wireless	Copper
Virginia	57	57	0	57	0	0	0	57	0
Total	57	57	0	57	0	0	0	57	0

Fixed Broadband Subscription

		Consumer	Business / Govt	Total
Virginia	Terrestrial Fixed Wireless	110	4445	661	5106
Total		110	4445	661	5106

(Note: Virginia row shows Consumer 4445, Business/Govt 661, Total 5106; the "110" appears under the Consumer column.)

Fixed Broadband Subscriptions by Bandwidths and End-user Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
25.000	6.000	4445	661	5106
Total		4445	661	5106

Fixed Broadband Subscriptions by Technology, Bandwidths and End-user Type

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business / Govt	Total
Terrestrial Fixed Wireless	25.000	6.000	4445	661	5106
Total			4445	661	5106

Fixed Voice Subscription

VGE Lines and VoIP Subscriptions by State and End-user Type

State	Total VGE Lines	Consumer VGE Lines	Total VoIP Subscriptions	Consumer VoIP Subscriptions
Virginia	6	6	57	57
Total	6	6	57	57

Fixed Voice Subscription (VGE Lines)

VGE Lines Provided to Unaffiliated Providers by State

State	Wholesale	UNE-L
Virginia	0	0
Total	0	0

VGE Lines Provided to End Users by State, Bundle and Product Type

		by Bundle		by Product Type			
				Consumer		Bus-Govt	
State	Total	Sold w/ Internet	Sold w/o Internet	& No PIC	& PIC	& No PIC	& PIC
Virginia	6	6	0	6	0	0	0
Total	6	6	0	6	0	0	0

VGE Lines Provided to End Users by State, Ownership and Last-mile Medium

		by Ownership			by Last-mile Medium			
State	Total	Owned	UNE-L	Resale	FTTP	Coax	Fixed Wireless	Copper
Virginia	6	6	0	0	0	0	6	0
Total	6	6	0	0	0	0	6	0

Over-the-top VoIP Subscriptions by State and End-user Type

FC Federal
Communications
Commission
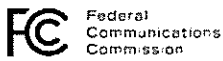
(RETAIN FOR YOUR RECORDS)
Form 477 Filing Summary

FRN: **0016101412**   Data as of: **Dec 31, 2020**   Operations: **Non-ILEC**   Submission Status: **Original - Submitted**   Last Updated: **Mar 22, 2021 15:47:55**

Filer Identification

Section	Question	Response
Filer Information	Company Name	B2X Online, Inc
	Holding Company Name	B2X Online, Inc.
	SAC ID	
	499 ID	
Data Contact Information	Data Contact Name	Warren Kane
	Data Contact Phone Number	(540) 389-7924 ext: 103
	Data Contact E-mail	warren.kane@b2xonline.com
Emergency Operations Contact Information	Emergency Operations Name	Warren Kane
	Emergency Operations Phone Number	(540) 389-7924 ext: 103
	Emergency Operations E-mail	warren.kane@b2xonline.com
Certifying Official Contact Information	Certifying Official Name	Warren Kane
	Certifying Official Phone Number	(540) 389-7924 ext: 103
	Certifying Official E-mail	warren.kane@b2xonline.com

Data Submitted

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Deployment	Deploy.csv	Mar 22, 2021 15:41:52	1683
Fixed Broadband Subscription	Subscription.csv	Mar 22, 2021 15:42:38	110
Fixed Voice Subscription	VOIP.csv	Mar 22, 2021 15:32:31	6

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	B2X Online, Inc.	Terrestrial Fixed Wireless	1683
Total			1683

Fixed Broadband Subscriptions by State, Technology and End-user Type

State	Technology	Census Tracts	Subscriptions

Form Section	File Name	Date & Time	Number of Rows
Fixed Broadband Subscription	Subscription1.csv	Aug 4, 2021 11:46 AM	114

Fixed Broadband Deployment

Census Block Counts by State, DBA Name and Technology

State	DBA Name	Technology	Blocks
Virginia	"B2X Online, Inc."	Terrestrial Fixed Wireless	1,853
Total			1,853

Fixed Broadband Subscription

Fixed Broadband Subscriptions by State, Technology and End User Type

State	Technology	Census Tracts	Subscriptions		
			Consumer	Business/Govt.	Total
Virginia	Terrestrial Fixed Wireless	114	4,714	668	5,382
Total		114	4,714	668	5,382

Fixed Broadband Subscriptions by Bandwidths and End User Type

Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business/Govt.	Total
25.000	6.000	4,714	668	5,382
Total		4,714	668	5,382

Fixed Broadband Subscriptions by Technology, Bandwidths and End User Type

Technology	Downstream Bandwidth (in Mbps)	Upstream Bandwidth (in Mbps)	Consumer	Business/Govt.	Total
Terrestrial Fixed Wireless	25.000	6.000	4,714	668	5,382
Total			4,714	668	5,382

Reminder: You must continue to use Census 2010 geographic codes in FCC Form 477.

For help or assistance, please contact (877) 480-3201 or (717) 338-2834 (TTY) or you may submit an online e-support ticket.

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