Application to DHCD Submitted through CAMS

Application ID:	86509012021075135
Application Status:	Pending
Program Name:	Virginia Telecommunications Initiative 2022
Organization Name:	Caroline County
Organization Address:	212 N. Main St. Bowling Green, VA 22427
Profile Manager Name:	Tomeka Smith
Profile Manager Phone:	(804) 633-3494
Profile Manager Email:	tsmith@co.caroline.va.us
Project Name:	Comcast VATI 2022
Project Contact Name:	David Sadler
Project Contact Phone:	(804) 633-1088
Project Contact Email:	dsadler@co.caroline.va.us
Project Location:	212 N Main St Bowling Green, VA 22427-9416
Project Service Area:	Caroline County
Total Requested Amount:	$2,273,136.00
Required Annual Audit Status:	No Current Audits Found

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Budget Information:

Cost/Activity Category	DHCD Request	Other Funding	Total
Telecommunications	**$2,273,136.00**	**$910,789.00**	**$3,183,925.00**
Construction	$2,045,822.40	$819,710.10	$2,865,532.50
Construction Related Soft Costs	$227,313.60	$91,078.90	$318,392.50
Total:	**$2,273,136.00**	**$910,789.00**	**$3,183,925.00**

Budget Narrative:

This application comes out of a collaboration between Comcast Corporation and Caroline County. This partnership was created because of the challenges Caroline faces as a rural community. Comcast has a footprint throughout a significant portion of the County, being one of the only wireline ISPs to provide high-speed connectivity to most of the population centers. Atlantic Broadband serves other distinct portions of the County with very little overlap. Regardless, this does still leave out those communities that are just not economically justifiable to build out. That is why funding opportunities such as VATI are so invaluable. Caroline has put in a great deal of legwork to prepare for opportunities like VATI, as they understand the need for sufficient, equitable access to broadband holds for the future of their communities. They have a Broadband Advisory Committee that reports to their respective Board of Supervisors. Through their work, they have garnered support from local organizations who also see the need for digital equity, and have recently approved a plan for Universal Coverage. This project intends to serve a total of 2 project areas, with 361 passings built to 306 residences and 51 home and commercial business buildings. This will result in 47.65 miles of construction. The total VATI funding request is $2,273,136. Caroline will provide about $1,200 per passing.

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:

Caroline County ("Partner" or "County") and Comcast of Virginia, LLC ("Comcast") appreciate the opportunity to respond to the Commonwealth of Virginia's Department of Housing and Community Development's ("DHCD") Virginia Telecommunication Initiative ("VATI") with respect to deploying broadband infrastructure to eligible service areas in the County. As detailed further below, we propose to deploy qualifying broadband service to 306 households, 51 businesses and 1 anchor institution.

Caroline County is one of the last mostly rural counties located between the two large metropolitan areas of Washington D.C. and Richmond, Virginia. Those surrounding areas are also well known globally for being high tech data hubs that attract huge businesses for the quality of their connections, which can be challenging in many large portions of the county.

As broadband requirements increase over time with demand, and its importance are highlighted by events such as the COVID-19 pandemic forcing people to work and learn remotely, Caroline County has taken steps to seize the opportunity that has been provided by the deluge of state and federal funding as a response. With the recent announcement of the Governor's $700 million in funding for broadband infrastructure that

aims to connect every last unserved Virginian by 2024, the County's broadband strategic plan for universal coverage finally has an opportunity to move forward.

By way of Caroline's Broadband Advisory Committee, as well as the Board of Supervisors' backing, the way to move forward with this plan is by encouraging the incumbent providers to expand their footprint. This can already be seen by Atlantic Broadband's (ABB) action to partner with Caroline, as well as Mathews, Middlesex, and Lancaster County to submit a VATI grant for FY2021, which was awarded and is in progress.

This project area was selected after consultation between the County and Comcast and meets the eligibility criteria established by the Virginia General Assembly and the Department of Housing and Community Development for a Virginia Telecommunication Initiative award.   VATI eligibility criteria being more restrictive than that of some federal programs, the project area was also selected to meet eligibility criteria for the Coronavirus State Fiscal Recovery Fund and/or the Coronavirus Local Fiscal Recovery Fund established under the American Rescue Plan Act.

Comcast proposes to extend its network so that homes and businesses in the project area are serviceable with broadband speeds of up to 1.2 gigabit per second ("Gbps") over a hybrid fiber coaxial network for residential customers and 10 Gbps for Business customers.

The County has researched internet service availability, including soliciting community engagement. The County has received many comments from citizens and businesses on the lack of adequate internet in areas of the County.

The western portion of the County, west of I-95, contains homes that are spread out over a wide area away from Atlantic Broadband's (ABB) service area, as they are the only other service provider that can provide adequate speeds. Comcast, with only a few exceptions, does not provide service in the county east of I-95. However, Comcast has agreed to take a phased approach to serving all of this portion of Caroline County. With this approach, and ABB's planned project (and VATI projects), Caroline has a path to universal coverage.

The geographic area for this proposed project (the " Caroline County] Project") includes approximately 47.65 miles of infrastructure generally dispersed throughout the project areas in Caroline, as noted on the attached Project Area map and further detailed below.

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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 predominant wireline terrestrial service providers in Caroline are Comcast and Atlantic Broadband. DSL coverage, as well as cell phone and satellite coverage are available, but these media do not meet the existing standards of adequate broadband access. Caroline County has services from Comcast and Verizon FIOS in parts of the county, but not in the proposed project areas (except for two census blocks that are overrepresented).

Used for this analysis was the website BroadbandNow.com, which takes its data from current FCC Form 477 reporting. Census blocks in the project areas that have less than 10/3 (salmon) and between 10/3 and 25/3 (cantaloupe) are depicted in the attached map (see Attachment 4 – "Documentation Unserved VATI Criteria"). In this map, areas in green are census blocks that are considered served, but since ABB is the only incumbent in these blocks, the addresses declared can be seen as currently not having service. It is the blocks in red that have some sort of coverage from Comcast, but these addresses (80) contribute to a small percentage of the total project as overbuild.

Other providers in the area were Viasat and HughesNet, as well as Verizon High Speed DSL, which were all not suitable to be considered served.

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:

No areas within the Caroline Project have received funding from federal grant programs such as the Connect America Fund, ACAM, ReConnect, and Community Connect unless noted below. Attachment 2 shows all of the listed funded areas through web tools that aggregate this information in one source. The first is from the USDA's Telecommunications program. It displays Reconnect awards, Community Connect awards, and CAF2 awards, all which can be seen to have no polygons in any of the applying counties. The second is from the Universal Service Administrative Company, which administers the Universal Service Fund under guidance of the FCC. This presents both CAF2 and A-CAM awards, and in a similar fashion, no areas in this application have received funding from these programs. As mentioned earlier, Caroline has not received any money for providing access to unserved areas.

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:

The Caroline Project area does not contain Rural Digital Opportunity Fund ("RDOF") eligible census blocks, as noted in Attachment 3.

Attachment 3 shows RDOF awarded areas in the project zone. All of the parcels in the project zone only overlap areas in Caroline that have been awarded to SpaceX, which being a satellite broadband provider, do not interfere with this application.

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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:

The project area is unserved based on data available through the FCC's publicly available Form 477 website and from broadband providers. Caroline conducted extensive outreach with existing wireline, wireless, and satellite internet service providers to determine if the areas proposed as part of the grant application had access to broadband internet service. Comcast and Caroline anticipate no service overlap within the project area as there are no current broadband providers. While the attached map of FCC Form 477 data shows providers offering internet service in this area, Caroline has verified that none of these providers offer service that would result in classifying the project area as served according to VATI guidelines.

As seen in Attachment 4, the two projects (Anderson and Jericho) are mostly underserved according to FCC Form 477 reporting on the census block level. The first map displays the pink areas showing blocks receiving less than 10/1, and the orange corresponds to between 10/1 and 25/3. This accounts for the majority of the project areas. However, there are a few blocks that are considered served, depicted in green on the second map. Included on the map is a link to explore the existing terrestrial providers in these blocks.Since Comcast is the only reported wireline provider in these blocks, it goes to say that the proposed addresses do not currently have service from Comcast, exemplifying the flaw in the overrepresentation that is inherent in the FCC's reporting method. Examining all the blocks, there are no other acceptable providers in these areas in the project, other than Comcast. Another drawback of this method is that addresses that are receiving less than 10/1 are possibly underrepresented by these maps.

In summary, the project area is unserved based on data available through the FCC's publicly available Form 477 website, broadband providers, and according to Caroline residents.

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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:

Comcast will extend service to 309 unserved homes, 51 unserved businesses, and 1 unserved anchor institution within the area provided in this application.

These projects only overlap with satellite RDOF winners, which do not factor in the calculations for this funding opportunity.

This project design has eliminated all special construction costs in the project.

To calculate the number of passings that currently have less than 10/1, we used FCC 477 reporting maps and overlaid those census blocks with the project area addresses. Because of the over-representation of service due to the method of reporting on block level, we estimate that the number provided on the passings form is lower than what is currently being experienced.

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:

N/A

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:

As detailed in the table below, upon completion of the project, Comcast will be able to offer customers multiple choices of residential and commercial broadband services, depending on the customers' specific needs:

Residential Service Tiers

Tier

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Speeds Up To

Standalone Pricing

With Xfinity TV or Voice Service

Performance Starter

50 Mbps / 5 Mbps

$54.95

$49.95

Performance

100 Mbps / 5 Mbps

$80.95

$64.95

Performance Pro

200 Mbps / 5 Mbps

$95.95

$79.95

Blast!

400 Mbps / 10 Mbps

$100.95

$84.95

Extreme Pro

800 Mbps / 15 Mbps

$105.95

$89.95

Gigabit

1.2 Gbps / 35 Mbps

$110.95

$94.95

Gigabit Pro

2 Gbps / 2 Gbps

$299.95

N/A

Comcast Business Tier[1]

Tier

Speeds Up To

Business Internet 100

100 Mbps / 15 Mbps

Business Internet 200

200 Mbps / 20 Mbps

Business Internet 300 Plus

300 Mbps / 30 Mbps

Business Internet 600

600 Mbps / 35 Mbps

Business Internet 1G

1.2 Gbps / 35 Mbps

Note: Prices do not include equipment or applicable taxes, fees and surcharges.

In addition to the multiple residential broadband options above, Comcast also makes available its Internet Essentials program to qualifying low-income customers in its service areas, which is the nation's largest, most successful, and most comprehensive broadband adoption program for low-income households, and Comcast's number one community impact initiative. Internet Essentials currently provides customers with broadband service at speeds of up to 50 Mbps/5 Mbps for $9.95/month plus applicable taxes, fees and surcharges, as well as free digital skills training in person and online. Customers also have the option to purchase a low-cost Internet-ready computer.

Since launching in 2011, Comcast has made dozens of improvements to the program, including expanding eligibility 12 times—bringing Internet Essentials to new audiences such as public housing residents, low-income veterans, seniors, community college students, and most recently, to all qualified low-income households living in Comcast's service area. Comcast has also increased the speeds for Internet Essentials, with the most recent speed increase to 50 Mbps/5Mbps occurring earlier this year. Since 2011, Internet Essentials has connected a cumulative total of more than ten million Americans to the Internet.

In addition, Comcast customers who subscribe to an Xfinity Internet package will have access to Xfinity WiFi hotspots, including those that would be newly added to the Project, for no additional cost. Moreover, these customers would be able to access any of Comcast's hotspots throughout Virginia and across the country. Comcast has the country's largest WiFi network, including more than 20 million hotspots nationwide. Combined with the company's recently launched Xfinity xFi platform, a new and personalized home WiFi experience, Comcast will provide its customers in the Project with the fastest speeds, the best WiFi coverage, and ultimate WiFi control in their homes. Xfinity Internet customers may also have the option to sign up for Xfinity Mobile service, which includes up to five lines with unlimited talk and text.

As is Comcast's usual practice through its footprint, Comcast will support all customers in the Project with call centers as well as self-service options such as digital and chat. Many customers take advantage of Comcast's different tools, including the MyAccount feature within the Xfinity app, which is available on the web and mobile devices. Customers can manage their service in many ways through the app, such as by troubleshooting a device in the home, managing programming options, and receiving important notifications.

[1] Speeds of up to 100 Gbps for medium to large businesses available in certain areas

For full documentation fo the available offerings, please see Attachment 20 - Comcast Service Offerings

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:

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Comcast has built a fiber backbone at the core of its network that stretches across the country with more than 191,000 route miles of fiber– using the industry's most advanced optics/lasers and IP routing technologies. Dozens of converged regional area networks interconnect to create this fiber backbone that delivers video, voice, and high-speed Internet services to tens of millions of customers throughout the country. IP technology ties all of this together, creating a highly scalable connectivity platform or "IP core." Comcast has been building fiber into its network incrementally over the past decade. In 2015, Comcast introduced Gigabit Pro, the industry's first residential fiber-to-the-home 2 Gbps service ever offered by an Internet service provider in the United States.

Comcast proposes to construct the project with a highly scalable hybrid fiber-coaxial ("HFC") solution, emanating from the closest facility to the project. Fiber-optic cables would be constructed to the service area, commonly referred to as a serving node, where optical signals would be converted to electrical or radio frequency for distribution over the coaxial network to subscriber's homes, businesses, and/or community anchor institutions. Comcast customers share bandwidth with other customers in their proximity.

Currently, Comcast employs Data Over Cable Service Interface Specification (DOCSIS) 3.1 technology in its broadband network infrastructure, and plans to use DOCSIS 3.1 for this project. DOCSIS is an international telecommunications standard that permits the addition of high bandwidth data transfer to an existing cable TV system. The technology is employed by many cable operators to provide Internet access over existing HFC infrastructure. DOCSIS is a proven, flexible protocol which offers the technological foundation upon which Comcast can meet any current or future anticipated need. As a highly scalable technology, it has, to-date, allowed Comcast to enhance the residential broadband speeds it offers from 50 Mbps to 1.2 Gbps, an almost 25-fold increase.

DOCSIS 3.1 was introduced in 2013 and will support a maximum downstream capacity of 10 Gbps and maximum upstream capacity of 1-2 Gbps. DOCSIS architecture includes two primary components – a cable modem, located at a customer's home or business, and a cable modem termination system (CMTS), located at the cable system headend. Comcast leases the cable modem to customers as a component of the service, or customers can provide their own modem, and the CMTS for this proposed project is located in Comcast's head end serving the Project area.

The design for the proposed project is based upon the current industry standards as developed by the Society for Cable Television Engineers (SCTE) and Comcast standards of broadband deployment. Comcast utilizes ARRIS cable modems and CMTS devices both of which have been certified by CableLabs for use with DOCSIS technology.

The industry continues to innovate, working through CableLabs, a joint non-profit research and development laboratory, to develop the next iteration of DOCSIS, named 10G. The 10G platform is a combination of technologies that will deliver Internet speeds 10 times faster than today's networks and 100 times faster than what most consumers currently experience. This technological development will allow Comcast to offer gigabit symmetrical service in the coming years over its existing HFC network throughout our entire footprint, as well as lower latencies, enhanced reliability, and better security in a scalable manner. Comcast began field trials of 10G earlier this year. This combination of technologies will result in much faster speeds, more reliability, stronger security, and even lower latency. The network will be able to transmit up to 50% more data, thereby augmenting the quality of video conferencing, telehealth, and connected devices, among many other things. Additional information about these exciting developments is available at
https://www.cablelabs.com/path-10g-2020-update.

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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:

Caroline's Universal Coverage Plan, whose acceptance is in the additional attachment section, was adopted by the Board of Supervisors on 9/7/2021. This can be seen as Attachment 18. The general idea for this plan is for Caroline to partner with the incumbents, ABB and Comcast, to obtain federal funding to build out in areas where they have existing plant. This application, as well as the other being submitted by Comcast this round, are the two next steps to accomplish this. This application will be the first step in completely serving all of Caroline west of I-95 through expansion of Comcast's plants, while the other application will be an effort to finish serving the whole portion of the county west of I-95. If this project is successful, we will apply for a phase 2 project to extend plant beyond the areas in this application.

Comcast is a leading communications provider in the United States, currently operating throughout 39 states and the District of Columbia. With over 31.4 million residential and business services broadband customers, 19 million video customers, and 10.8 million voice customers, Comcast passes over 60 million homes and businesses.

Over the past several decades, Comcast has invested in technology to build an advanced, highly scalable network that delivers among the fastest broadband speeds in the country, ranging from 25 Mbps to 2 Gbps for residential customers and up to 10 Gbps for business customers. Comcast is the nation's largest gigabit Internet provider, and nearly all of our 60 million homes and businesses passed in our service territory can access our ultra-fast Xfinity Gigabit Internet and Comcast Business Gigabit services, including our customers in Virginia. Moreover, approximately 85 percent of our residential High-Speed Internet customers subscribe to speeds of 100 Mbps or higher.

To support the growing needs of the digital world, Comcast is working hard to make its network smarter, by leveraging cloud, backbone, and architecture advancements to provide a faster, stronger, and more flexible network. By optimizing traffic routing and moving resources closer to where they are needed, our network provides the key to managing the ever increasing traffic demands of today's Internet. The powerful combination of our broadband and Wi-Fi network and the cloud is enabling us to innovate and bring transformative products to market, redefining how our customers enjoy entertainment, connect, and communicate inside and outside of their home or office.

We've spent nearly $30 billion in the last decade building an expansive fiber-dense network comprising 191,000 route miles that carries an immense amount of traffic and has demonstrated extraordinary performance throughout the pandemic.

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 grant will enable the partnership to extend broadband service at speeds ranging from 50 mbps to 1.2 Gbps to 309 unserved homes in the proposed service area. The proposed project area will have access to some of the fastest and most reliable broadband speeds available nationwide.

Comcast has completed the planning and preliminary engineering phase for the proposed project area. Final

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design and construction shall commence upon the award of the grant. Workflow is included in the attached project management plan. The specific initial tasks include project engineering and right of way preparation. Comcast will need to obtain the necessary permits from the Virginia Department of Transportation and any other government entities as needed. Comcast will work with the County to obtain the necessary permits and power supplies expeditiously. This coordination will need to begin immediately upon notice of the grant award. Comcast anticipates completing the project within 18 months after contract execution between the County and DHCD. As contemplated by the 2022 VATI guidelines, Comcast may request an extension if it encounters permitting, pole attachment, or other circumstances beyond its control which may delay the project timeline.

Comcast Service Delivery Major Milestones:

·   Outside and Inside Surveys – Comcast will conduct outside plant and customer site surveys.

·   Permits & Right of Entry Agreements – Comcast will obtain required permits and work with property owners to obtain Right of Entry/Access agreements.

·   Service Configurations – Comcast National Team will implement Network Core Configurations.

·   Outside and Inside Fiber/Coax Construction – Comcast will complete outside and inside construction.

·   Customer Premise Equipment Installation/Plant Test Date (PTD) – Comcast will dispatch to the customer's premise to install CPE, connect CPE to Fiber, and call Comcast Test & Turn-up to complete plant test.

*Comcast Responsibilities***:**

·   Construct all OSP and ISP fiber optic and coaxial cabling up to the agreed upon locations from the site survey forms and connect [XX] locations.

·   Call for locates of public utilities in the right of way.

·   Restoration of disturbed grounds.

·   Assemble, configure, and install all Comcast provided network equipment on customer premise.

·   Test and verify all appropriate fiber and coaxial connections.

·   Test and verify all appropriate data interfaces/connections and verify throughput.

·   Provide 24x7x365 network monitoring.

·   Provide contact list information including escalation procedures and NOC information.

·   Provide documentation detail services including customer network interface drawings.

·   And any additional agreements per site survey document. Detailed information regarding the customer responsibilities is available in the Technical Specifications section of the proposal. Additional information can

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be provided upon request.

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:

Between 2017 and 2020, Comcast received four Virginia Telecommunications Initiative ("VATI") grants from the Virginia Department of Housing and Community Development, and has now successfully deployed broadband to residences and businesses throughout each of the project footprints.

A summary list of projects is noted below:

2017: Albemarle County – 178 serviceable units: COMPLETED

2017: Spotsylvania County – 153 serviceable units: COMPLETED

2018: Clarke County – 97 serviceable units: COMPLETED

2019: Charles City County – 2,350 serviceable units: IN PROGRESS (EXTENSION GRANTED)

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 minimum20% match is required to be eligible for VATI, the private sector provider must provide10% 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 proposed project represents a partnership between Comcast and Caroline County. Comcast, the co-applicant, upon award of the VATI grant, will be responsible for any matching funds and will provide the labor and materials to complete the provision of services to the area delineated in the attached map. Comcast will provide approximately 15% of the projected project costs of $3,183,925, totaling approximately $477,589. Caroline County will assist in providing in-kind contributions including application analysis and preparation, coordination with the Department of Housing and Community Development, assistance with right of way permitting, and participating in further concert with Comcast as the project is approved and construction begins. The value of these services will depend on the level of activity occurring as the project commences.

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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:

N/A – there is no leverage funding being provided. Funding would be provided by DHCD and Comcast, as noted on Attachment 8 – Funding Sources Table.

Caroline leverages a number of activities that pertain to providing high speed internet. Combined there are years of developing and mapping many of the datasets required to submit, manage, and maintain grant funded infrastructure upgrades to the areas identified in Attachment 1 – "Project Area Maps". In an effort to support grant submittals, county GIS Managers have created multiple datasets (e.g., student locations, parcel values by regions, fiber/coaxial infrastructure, residents with copper/fiber, preliminary designs with costs, etc.) that can be used in this effort. Plenty of prior work has been done by Caroline's broadband steering groups to provide studies and strategic plans for guiding the best approach to expand broadband services. There is also a plan for universal coverage that will be used as the baseline and updated for projects moving forward. The counties leverage their economic investment to provide a sizable match to Comcast for their portion of this multimillion-dollar project. A significant investment by the county helps ensure that the project will be completed on time and within budget by utilizing county resources (i.e. administrative, management, financial) to execute the Contract.

As an in-kind contribution, Caroline offers the services of their broadband boards/authorities to continue throughout the project. The counties will remain active throughout the project's construction and implementation phases. They will also assist Comcast with its marketing, as described in the next section. If requested by Comcast , the counties will provide in-kind assistance. Board members are also exploring potential funding sources, such as the FCC's Lifeline Program, which may help citizens afford the monthly connection cost.

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:

Comcast's business model is not dependent upon a particular take rate. Forecasting a take rate with a high degree of accuracy is most challenging as the actual number of customers who choose to subscribe is beyond the parties' control. Comcast's take rate estimate for the project areas is based upon several unique factors. The County's support for the project and involvement with the community is expected to add heightened awareness earlier than might otherwise occur. The public nature of the VATI program is also expected to add to the early awareness of residents of broadband availability and positively enhance the take rate.

All of the factors combined inform our estimate that, on the high end, some 45-55% of residents may take service within the first year after project completion. These projections for overall subscriber levels are

dependent on several factors and even an initial prediction may change as the project progresses. Comparisons between applicants may not provide a useful measure of broadband access as each applicant will have different service offerings, marketing campaigns, and other intangibles that could drive take rates. For example, Comcast take rates may vary from those of other providers because Comcast offers more services than broadband alone – including video, telephone, mobile telephone, and home security –and the company offers bundled pricing promotions from time to time. These additional products and pricing options can change the value proposition of Comcast service for each household that is unique among providers.

Comcast does undertake various actions to make residents aware that service is available. During the construction phase, before the service is active, the presence of Comcast vehicles visually alerts residents that service is coming. Comcast personnel involved with the construction in the public rights of way are often asked about availability. Soon after completing construction, Comcast provides notice to potential customers of service availability on a rolling basis. It typically employs various communication tactics to inform residents of availability. These tactics can include direct mail pieces or event sponsorships. These efforts augment existing advertising campaigns already in place within Caroline County for Comcast's existing customer base. Once service is established, Comcast may communicate with these residents through direct mail, direct e-mail, radio ads, video ads, and other marketing tactics.

If conditions allow, a public meeting will be held in or near the proposed project area to inform the residents about the upcoming work and answer questions. Nearer the completion of the project a public meeting will be held to educate potential customers on the proposed services and to encourage sign-ups and answer questions. The County's Public Information Office will promote the proposed internet service and educate residents and businesses on the opportunities of this service through email and social media.

Caroline has its own approaches to community outreach and digital literacy. They will assist in marketing by providing the information needed to make contact with new potential subscribers and will mount outreach campaigns to inform the public at large of the VATI grant.

There are also general principles that have been has outlined as a broad strategy that will serve to educate those who will positively benefit from the new access. First, schools must push to educate parents, students, and teachers in the intricacies of virtual remote learning. Teachers and students can facilitate this process by holding forums and sharing actions and findings. Hiring educators that can conduct training to other teachers and students while reaching out to other school systems who have had success to share strategies will also be implemented.

Second, citizens who work from home (those who do, those who have tried to, those who would like to); address them and the options in an open forum with all interested/concerned. Presenters will be those who actively do so successfully. Based on demand, organize training sessions, and ask companies that allow work from home to come in and do training.

Third, local businesses can meet with business owners of all sizes and explore their needs. What do they need to be able to work in a pandemic situation? What do they need to know to expand their business using broadband? Working with the Chamber of Commerce, sessions can be conducted for local business owners.

Fourth, for all citizens who are interested in tele-health: hold multiple forums with presenters from local home

Caroline County

Comcast VATI 2022

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health care providers, pharmacists, and physicians. We will contact regional hospitals to bring in tele-health specialists to be presenters and to provide training.

This framework can be adopted to other rural counties who find themselves with increased access, or even an overwhelming interest from their constituents. One of the major outcomes of preparing a successful VATI application is that local organizations start mobilizing to fill the gaps in need for these types of endeavors.

A prime example of the aforementioned, Caroline has actively engaged for several years in digital literacy and training efforts through their local libraries.

The County's IT plans to partner with The Caroline Library, a County-operated library system, and the Caroline County Sheriff's department to assist in offering online safety education to its citizens through a combination of in-person training when current COVID restrictions are lifted, and through remote webinars that can be viewed on smart phones where service is available.

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:

Name

Title

Responsibility

Nathan Dougherty

Sr. Manager, Comcast Government Affairs

Project Coordination

Steve Hill

Senior Director of Network Engineering, Comcast Construction

Construction Supervision

Charles M. Culley, Jr.

County Administrator

Project Coordination

David Sadler

County IT Director

Caroline County

Comcast VATI 2022

Project Management

Comcast has significant experience constructing broadband communications facilities. It is a leading communications provider in Virginia, offering video, high-speed Internet, home security, and phone services to residential customers under the Xfinity brand and also providing services to businesses through its Comcast Business suite of products. Comcast has invested in technology to build an advanced network that delivers among the fastest broadband speeds, and brings customers personalized video, communications, and home management offerings. Comcast has invested billions of dollars to create a network across the U.S. that makes broadband widely available, as part of its commitment to provide superior services to its customers.

Since 2011, Comcast made more than $1.8 billion in technology and infrastructure investments in Virginia to offer reliably fast speeds even during peak use periods. The company has invested significant resources in both local and national Network Operations Centers ("XOC") to ensure continued proactive monitoring of network health.

In Virginia, Comcast employs over 1,900 people. In 2019 it invested more than $216 million annually in payroll, benefits, and training for its Virginia workforce. The company maintains a large, locally based engineering technical operations team that works around the clock to maintain network reliability and to directly support the company's business and residential customers. For many decades, Comcast, through its Beltway Region, has served over 140 communities in Virginia. Many of these communities are very rural in nature.

Comcast has experience partnering with public agencies to deploy broadband infrastructure in unserved areas. As noted above, Comcast was awarded four Virginia Telecommunications Initiative grants in 2018, 2019, and 2020.

In 2018 Comcast also earned a Last Mile Broadband grant from the Virginia Tobacco Region Revitalization Commission to provide broadband access to nearly 7,000 homes and businesses. With construction expected to be complete in 2020 and ahead of schedule, Comcast has already provided access to more homes and addresses than originally estimated.

In Massachusetts, Comcast was awarded a grant of $4,000,000 from the Massachusetts Technology Collaborative ("Mass Tech") for construction of line extensions to areas in nine towns whose costs to construct exceeded Comcast's economic standards. Comcast completed the project on time, on budget, and reached 20% more homes than the 1,000 originally anticipated. Comcast was also awarded a grant of $805,800 by Mass Tech for construction of approximately 27 miles of line extensions in Montgomery, Massachusetts, a town which is currently unserved. Comcast is currently deploying broadband in three additional unserved towns in partnership with the MBI.

In 2013 and 2014, Comcast received two grants from the Vermont Telecommunication Authority ("VTA") totaling $336,558 to provide service to areas that were economically unfeasible for construction. In 2015 and 2017, the Vermont Department of Public Service ("DPS") twice awarded Comcast funds from its Connectivity Initiative grant totaling $359,850. The DPS awarded Comcast another grant to deploy broadband in unserved areas of Cavendish VT. Comcast has either fulfilled or is on schedule to fulfill its grant obligations to the VTA and DPS.

David Sadler is the representative for Caroline County, his bio is attached below:

David Sadler, Caroline County

David Sadler is the Point of Contact for Caroline County -for questions pertaining to the 2021

VATI grant application. Mr. Sadler realizes that the problem of lack of access in rural Virginia

is not a problem unique to Caroline. This is the reason he works to support solutions that not only help Caroline residents, but area residents, such as the current VATI Grant.

Mr. Sadler currently serves as IT director for Caroline County, and owns an IT installation and

consulting company that serves many businesses from Fredericksburg to Richmond. As IT

director he has worked with current wired and wireless providers to provide solutions the County

Administration offices need to conduct business. Currently he manages the County owned wireless network that connects multiple sites to allow them to conduct business on Caroline Counties private network. This network connects offices that are separated and spread across our rural county. He currently oversees the county network, and is working hard to modernize the network with the focus being on improved security.

Prior to starting with Caroline County, Mr. Sadler worked in the Private Sector as sole proprietor

of On-Site P.C. In this position he worked to coordinate with Cable, Telephone and Fiber providers to integrate solutions to businesses large and small. He has overseen and actually performed large scale wired and wireless network installations in Virginia and Maryland. Mr. Sadler has been in IT for 22 years and has worked with all Wired and many of the wireless providers that offer internet in Caroline County. He has extensive knowledge of both the availability of broadband in Caroline, as well as the limitations of possible solutions. Because of this knowledge he has been appointed to

Caroline County Broadband Committee, where he works with a panel of highly qualified county

residents in the IT field, to find viable solutions to bridge the digital divide that exists in Caroline

county. He also manages Caroline's portion of the current ABB VATI effort awarded in FY2021.

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:

Please see corresponding Attachments 12 and 13 for a breakdown and justification of expenses.

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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. $2,273,136

b. 361

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:

The BoS for Caroline County has established a Broadband Committee to act in an advisory capacity. This group has established a Broadband Strategic Plan that evolved into a plan for universal coverage. It has also conducted its own outreach surveys that show overwhelming favor and enthusiasm for expanded access. Strategically, this expansion would also bring a quality backbone within reach of areas that are also in need of broadband service that will support Comcast's next level of expansion.

Members of the Caroline Broadband Advisory committee will launch a Public Information Campaign to educate the public on options available to citizens in need of assistance in obtaining a broadband Connection. Members will attend community functions and provide information to the public on the Plan for Universal Coverage, as well as assistance offered by the private sector partners. Committee members will make themselves available to Board of Supervisors members to attend constituent meetings to answer questions and provide partner produced literature on assistance programs.

Acknowledging the challenges of educating the public as to programs in an environment with limited broadband to obtain that information, the committee will continue to seek solutions that involve more available means of delivery, such as Facebook live events that are available to a higher number of citizens via cell phone. Members will organize and sponsor in person events at the Caroline Community Center to inform citizens of their options. This will be a huge challenge considering the constraints placed by the ongoing pandemic. Remote options will also be offered to those who do not feel comfortable attending in person.

The County's universal coverage plan aims to provide a framework for expanding broadband to unserved areas through partnerships with incumbent providers . A big factor with rural connectivity is that it depends primarily on real estate taxes for revenue. With such limited funds, all the essential services that the county

provides must be taken into consideration. This brings up a difficult problem in that either these counties must cut services to fund broadband or raise real estate taxes on those who are financially vulnerable. There is a similar problem for private entities that offer broadband services in that the customer base and revenue models are not sufficient enough to justify the very significant investment required to install a new physical plant. The opportunity of VATI support for collaborative efforts between these entities is one of the many steps that have been taken in a larger approach of addressing the unserved and upgrading overall infrastructure to be suitable for decades to come.

Fortunately, many of Caroline's main community anchor institutions are already served. However, this project will connect the Carmel Private school, as well as 51 homes and residential businesses .Since the beginning of the pandemic, we have seen many churches stepping up to serve in roles far different than before by providing outreach to citizens.   Churches have become community anchors. This project will extend broadband services to 3 churches to improve communications with the public and optimize the delivery of much needed services to the communities they serve.

Through construction of Comcast's network through the Caroline Project, more Caroline County school students would have Internet access, plus all qualifying low-income families will also have access to Comcast's Internet Essentials program. Internet Essentials is the nation's largest and most comprehensive broadband adoption program and Comcast's number one community impact initiative. Since August 2011, Internet Essentials has connected millions of low-income households to the Internet, most for the very first time. During that period, the program has grown from focusing on bridging the "homework gap" for school-age children to addressing digital equity issues for all Americans. The program offers low-cost, high-speed Internet service for $9.95 a month plus tax, provides access to free digital skills training in print, online, and in person, and includes the option to purchase a low-cost Internet-ready computer. All Internet Essentials customers will now also receive the xFi platform, which enables parents to control and manage their children's WiFi connected devices. xFi is a simple, digital dashboard where they can see what devices are connected, set safebrowsing modes so children can only access age-appropriate content, get notifications about activity on their home WiFi, and have the ability to pause devices for dinner or bedtime.

Due to the rurality of this project, no unique partnerships have been identified for this project.

Under Comcast's Internet Essentials offering – the most comprehensive and successful low-income broadband adoption program in the nation – qualifying residential customers can obtain broadband service at speeds of up to 50 Mbps/5 Mbps for $9.95/month plus applicable taxes, fees and surcharges, as well as free digital skills training in person and online. Additionally, earlier in 2020, Comcast announced a permanent speed increase for both new and existing Internet Essentials to 25 Mbps down / 3 Mbps up. Customers also have the option to purchase a low-cost Internet-ready computer. Internet Essentials is open to virtually *all* low-income households within Comcast's footprint, including families that qualify for federal assistance (e.g., National School Lunch Program, Medicaid, housing assistance) and low-income veterans, senior citizens, and persons with disabilities.

Moreover, Comcast is proud to be an approved provider supporting the FCC's Emergency Broadband Benefit (EBB) subsidy program. Under the temporary EBB subsidy, qualifying customers may apply a credit of up to $50 per month ($75 per month in Tribal lands) to any Xfinity Internet service tier, including Internet Essentials.

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:

Attachment 17 – Comcast Digital Literacy and Equity materials

Attachment 18 – Rate Card - Caroline County

Attachment 19 – Plan for Universal Coverage Acceptance

Attachment 20 – Comcast Service Offerings

Attachments:

Map(s) of project area, including proposed infrastructure

Attachment1ProjectAreaMap914202113010.pdf

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

Attachment2DocumentationofFederalFunding914202113027.pdf

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

Attachment3RDOFAwardedAreasIncludedinVATIApplication914202113107.pdf

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Documentation that proposed project area is unserved based on VATI criteria

Attachment4DocumentationUnservedAreaVATICriteria914202113151.pdf

Passings Form (Use template provided)

Attachment5PassingsForm914202113233.pdf

Propagation Map if Wireless Project

Attachment6PropagationMap914202113316.pdf

Timeline/Project Management Plan

Attachment7TimelineProjectMgmtPlanCarolineCounty914202113409.pdf

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

Attachment8DRAFTMOUbetweenComcastandCarolineCounty914202113453.pdf

Funding Sources Table (Use template provided)

Attachment9FundingSourcesTableCaroline914202113631.pdf

Documentation of Match Funding

Attachment10DocumentationofMatchFundingCaroline914202113718.pdf

Letters of Support

Attachment11LettersofSupport914202113804.pdf

Derivation of Cost/Project Budget (Use template provided)

Attachment12DerivationofCosts914202113847.pdf

Documentation of Supporting Cost Estimates

Attachment13DocumentationofSupportingCostEstimates914202113930.pdf

Two most recent Form 477 submitted to the FCC or equivalent

Attachment14TwomostrecentForm477submittedtotheFCCorequivalent914202114013.pdf

Application to DHCD Submitted through CAMS

Caroline County

Comcast VATI 2022

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

 Attachment15PointandPolygonShapefiles914202114058.zip

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

 Attachment16RSSIProjectionShapefiles914202114214.pdf

Optional

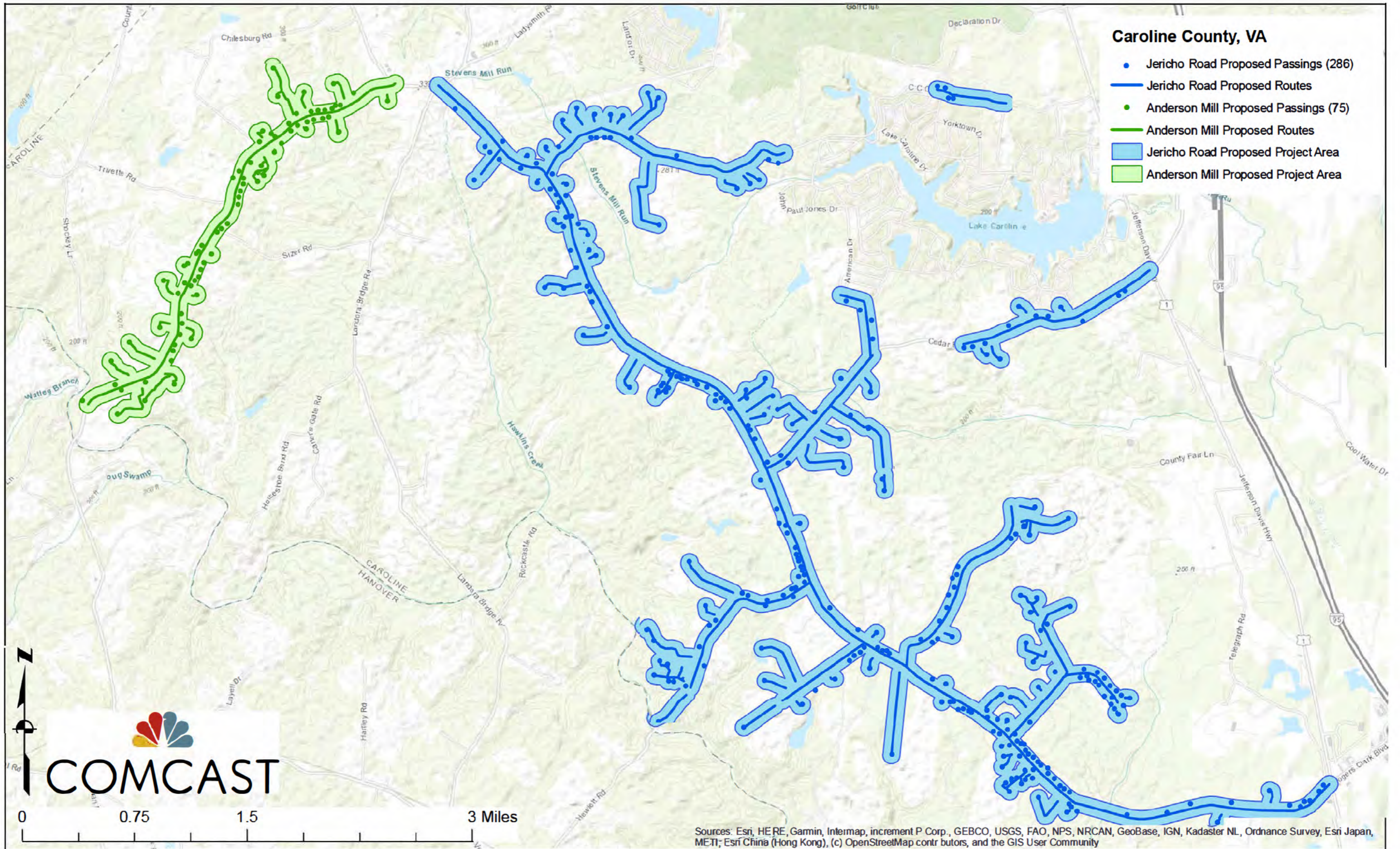 Attachment17ComcastDigitalLiteracyandEquitymaterials914202114350.pdf

Optional

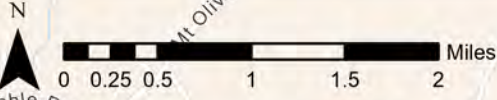 Attachment18ratecardCarolineCounty914202114503.pdf

Optional

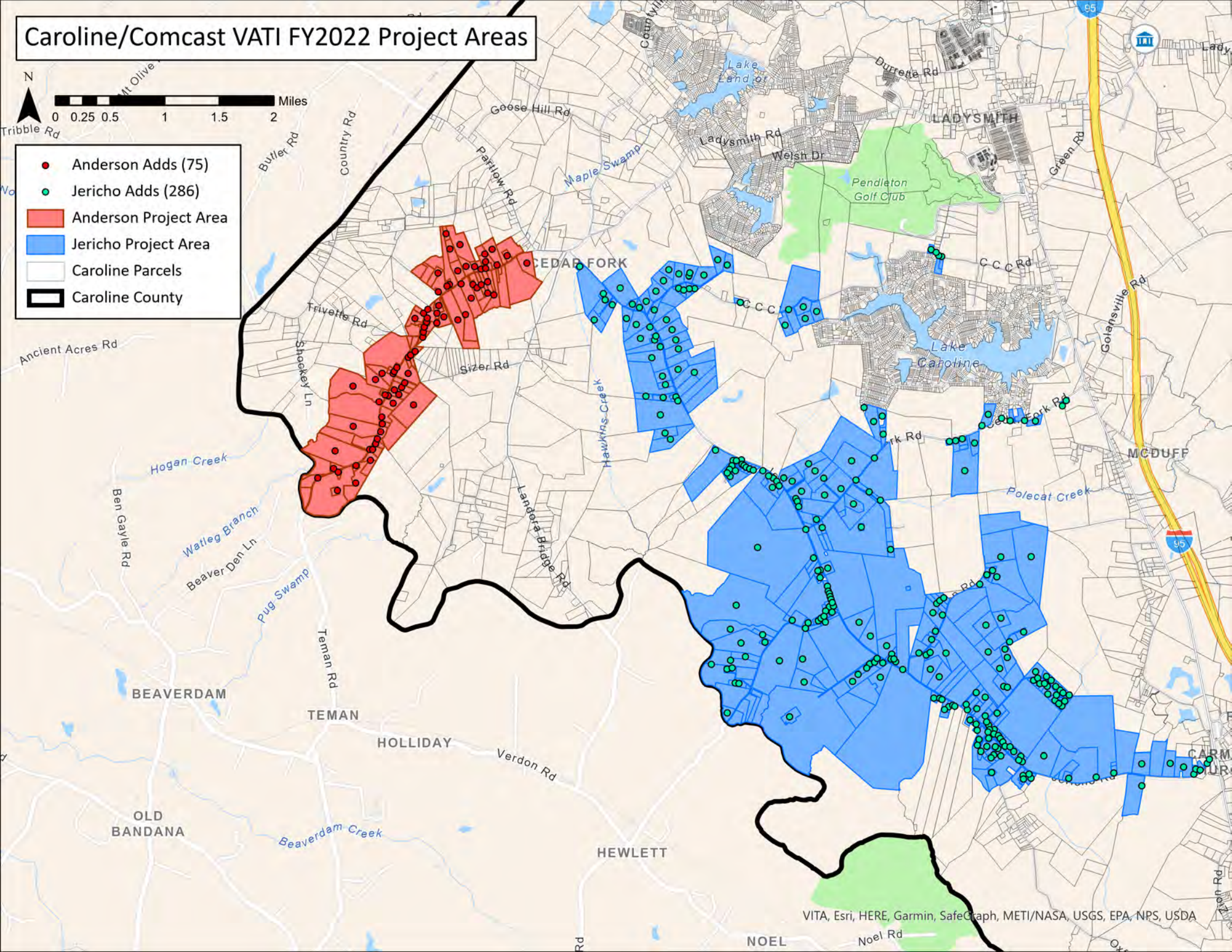 Attachment19PlanforUniversalCoverage914202114657.pdf

Optional

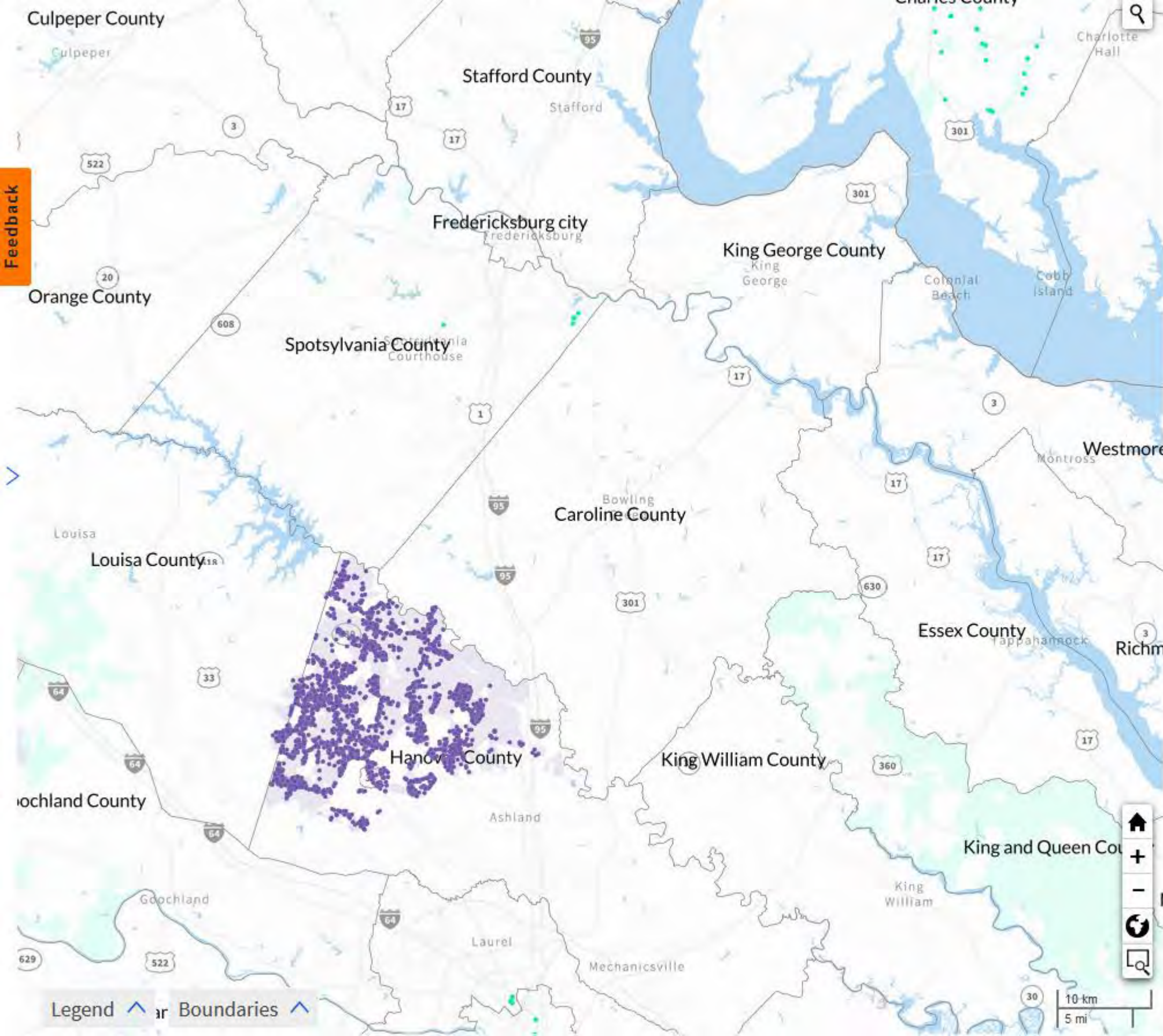 Attachment20ComcastServiceOfferings914202144932.pdf

Caroline County, VA

- • Jericho Road Proposed Passings (286)
- — Jericho Road Proposed Routes
- • Anderson Mill Proposed Passings (75)
- — Anderson Mill Proposed Routes
- ▢ Jericho Road Proposed Project Area
- ▢ Anderson Mill Proposed Project Area

COMCAST

0   0.75   1.5   3 Miles

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Fund

- ACAM ✕ ⌄
- ACAM II ✕
- AK Plan ✕
- CAF-BLS ✕
- CAF II ✕
- CAF II Auc ✕
- RBE ✕

State

All States ⌄

Company Name

Search Company Name

Speed (Applicable only to Local Data)
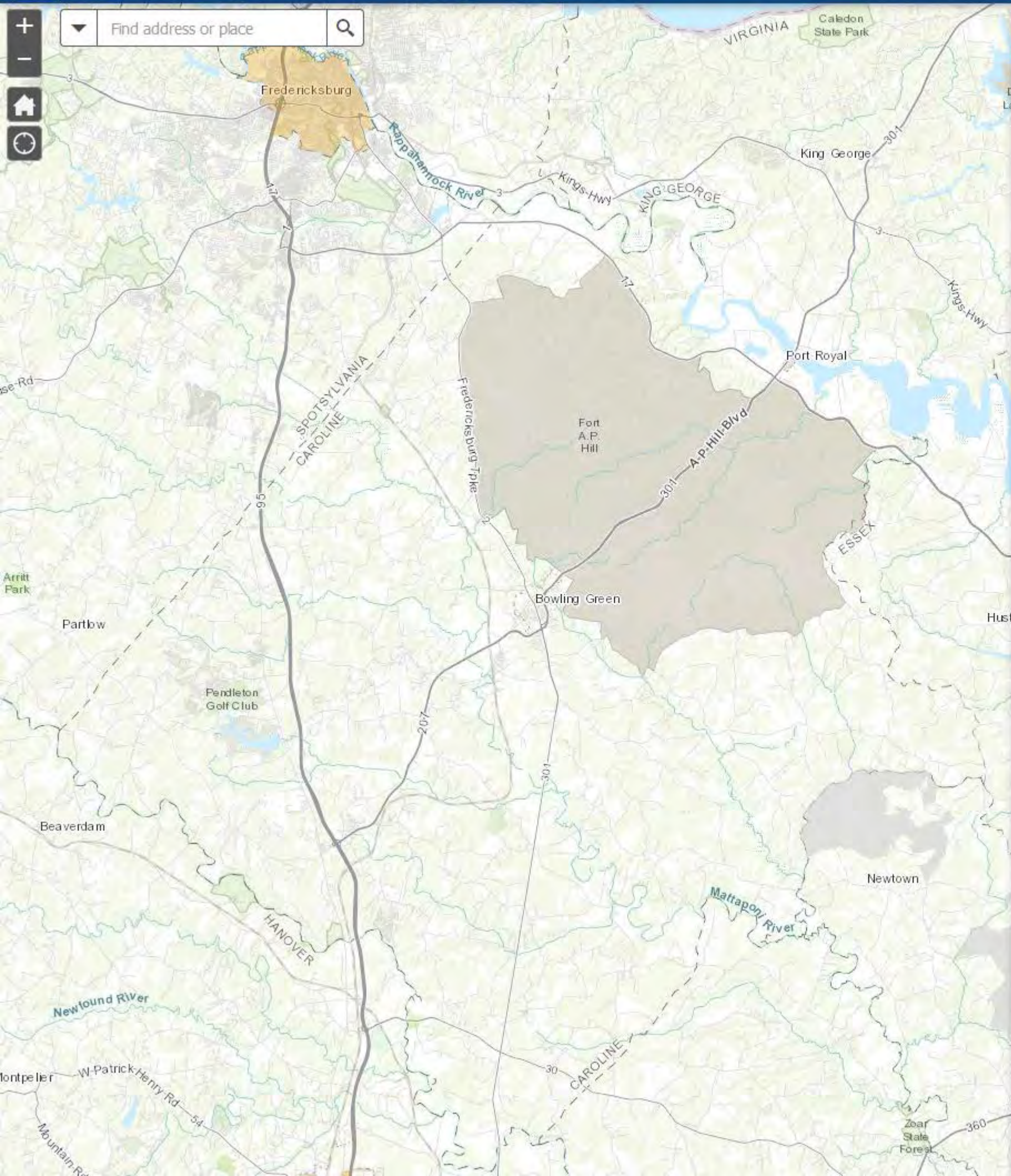
All Speeds ⌄

Deployment Year

All Years ⌄

Clear All Filters

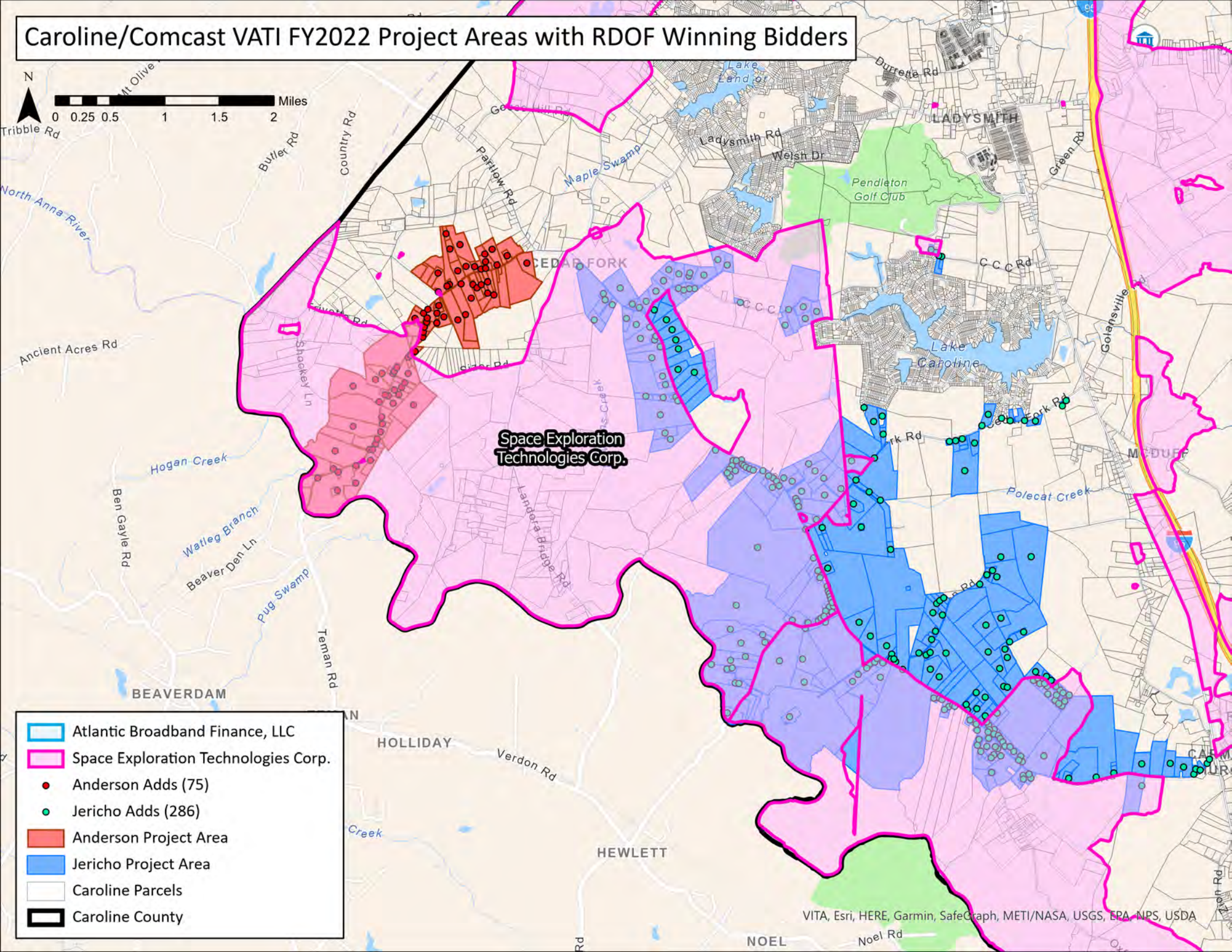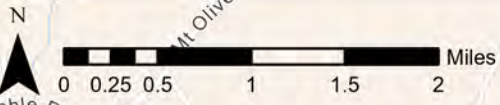Legend ∧ ar Boundaries ∧

10 km
5 mi

Feedback

Layer List

Layers

- ☑ Eligibility: Non-Rural Areas   ...
- ☑ Eligibility: Pending Applications   ...
- ☑ Eligibility: Protected Broadband Borrower Service Areas   ...
- ☐ Tribal Lands (2020 Census)   ...
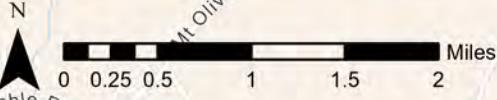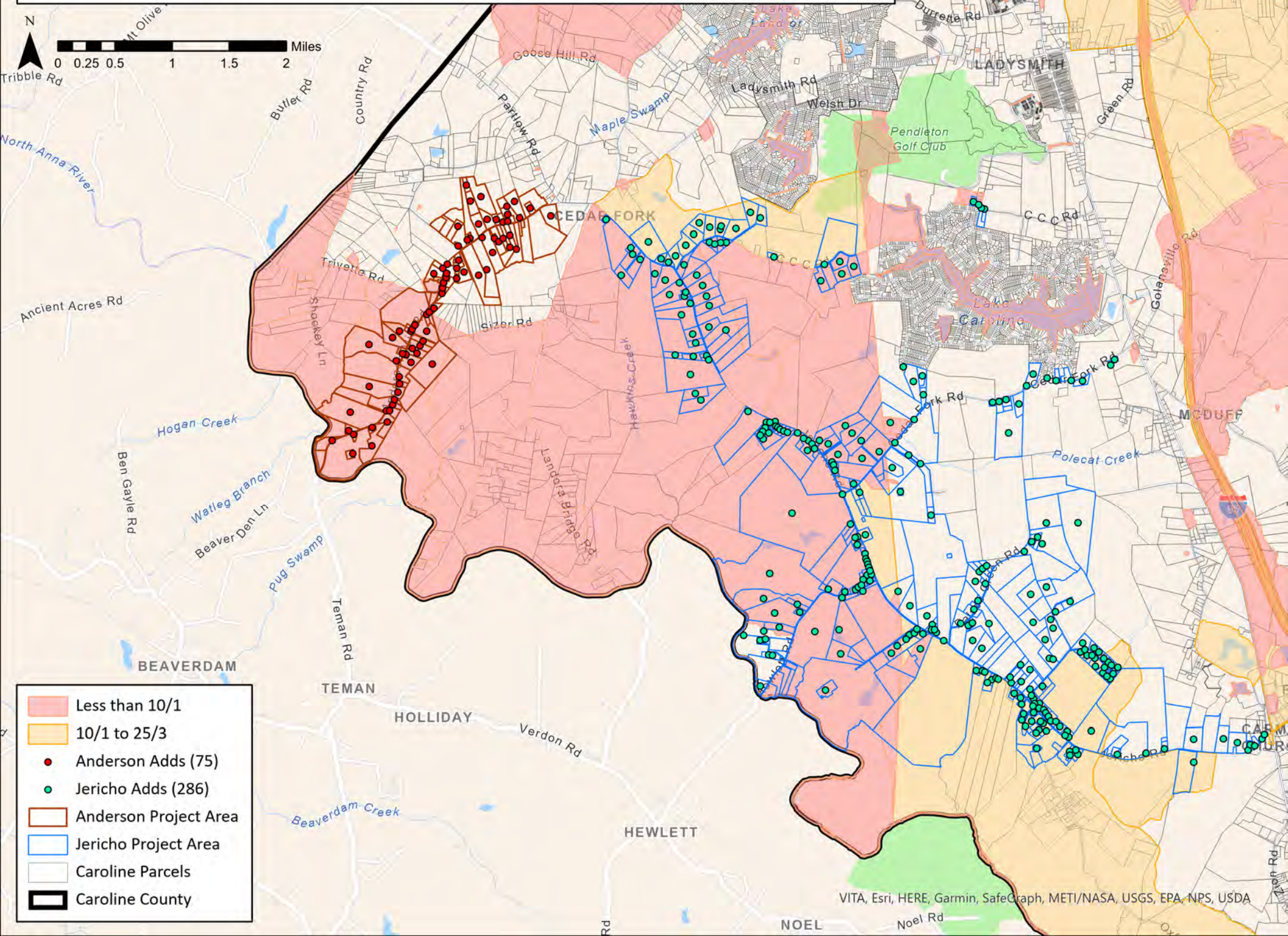
Caroline/Comcast VATI FY2022 Project Areas with RDOF Winning Bidders

Legend:
- Atlantic Broadband Finance, LLC
- Space Exploration Technologies Corp.
- Anderson Adds (75)
- Jericho Adds (286)
- Anderson Project Area
- Jericho Project Area
- Caroline Parcels
- Caroline County

VITA, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA

Caroline/Comcast VATI FY2022 Project Areas with RDOF Winning Bidders

N

Miles
0 0.25 0.5   1   1.5   2

Legend:

- Less than 10/1
- 10/1 to 25/3
- ● Anderson Adds (75)
- ● Jericho Adds (286)
- Anderson Project Area
- Jericho Project Area
- Caroline Parcels
- Caroline County

VITA, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA

Providers in Project Areas with FCC From 477 Data
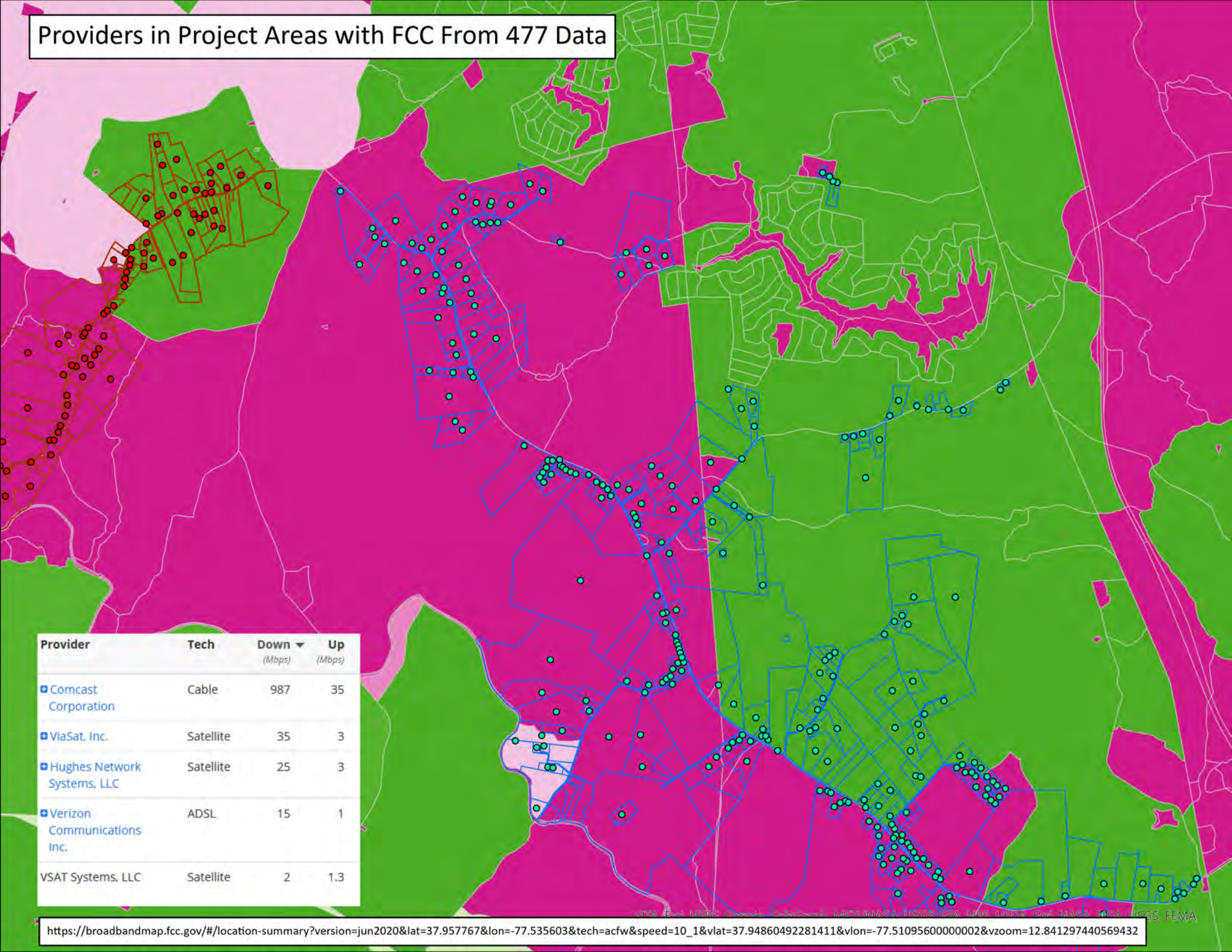
Provider	Tech	Down ▼ (Mbps)	Up (Mbps)
⊞ Comcast Corporation	Cable	987	35
⊞ ViaSat, Inc.	Satellite	35	3
⊞ Hughes Network Systems, LLC	Satellite	25	3
⊞ Verizon Communications Inc.	ADSL	15	1
VSAT Systems, LLC	Satellite	2	1.3

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	366	366	0	366
Businesses (non-home based)	0	0	0	0
Businesses (home-based)	20	20	0	0
Community Anchors	0	0	0	0
Non-residential	0	0	0	0
Total	366	366	0	366

*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.

September 14, 2021

ATTACHMENT 6. Propagation Map if Wireless Project

Attachment 6 is not applicable to this grant application.

CAROLINE COUNTY

ATTACHMENT 7

Timeline Project Management Plan

Comcast - FY22 Virginia Telecommunication Initiative Estimated Project Schedule

Task	Responsible Entity	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
		2021				2022												2023						
Application submission	Comcast / County	▓																						
Award announcement	VA DHCD	▓	▓	▓	▓	▓																		
Finalize grant agreement(s)	Comcast, County, VA DHCD					▓																		
Project engineering	Comcast						▓	▓																
Obtain necessary permits for right of way access and/or pole attachments	Comcast / County						▓	▓	▓	▓	▓	▓	▓	▓	▓	▓								
Materials procurement	Comcast						▓	▓	▓	▓	▓	▓	▓	▓	▓	▓								
Construction/installation of fiber	Comcast								▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
Turn-up, test and database work	Comcast								▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
Service availability notification to potential customers	Comcast																▓	▓	▓	▓	▓	▓	▓	▓
Final field inspection	Comcast																▓	▓	▓	▓	▓	▓	▓	▓

MEMORANDUM OF UNDERSTANDING

The parties to this Memorandum of Understanding (MOU) are Caroline County and Comcast. The purpose of this MOU is to establish a commitment by the parties to participate in the development of a grant proposal in 2021 for the FY22 Virginia Telecommunication Initiative (VATI) program established by the Virginia Department of Housing and Community Development (DHCD). Caroline County and Comcast agree to work jointly to coordinate a complete VATI application, making decisions on roles and responsibilities where necessary to facilitate an effective submission of necessary information. Although a partnership between Caroline County and Comcast has not yet been formalized for this proposed project, both parties are collaborating on an agreement to be executed if DHCD awards them a VATI grant. An agreement would cover the following areas:

Comcast commits to:
 a. Draft a Project Management Plan;
 b. Complete all Grant Activities described in pertinent DHCD agreements, as mutually agreed;
 c. Provide regular updates to Caroline County on the status of the project;
 d. Notify Caroline County if its assistance is needed;
 e. Submit requests for payment (no more frequently than monthly) to Caroline County as work is completed;
 f. Complete all work within the required timeframe;
 g. Provide Caroline County information on the locations where broadband had been enabled; and
 h. Propose any required nondisclosure agreements if Comcast were requested to share confidential information.

Caroline County commits to:
 a. Processing requests for payment in a timely manner;
 b. Review information provided by Comcast and submit requests for additional information in a timely manner;
 c. Complete any necessary non-disclosure agreements;
 d. Complete all Grant Activities described in pertinent DHCD agreements;
 e. Assist Comcast in obtaining necessary rights of way within the scope of Caroline County's authority; and
 f. Assist in contacting residents and others as appropriate to foster completion of the project within the required timeframe.

COMCAST   CAROLINE COUNTY

Name (printed):_____ Name (printed):_____

Title:_____ Title:_____

Signature:_____ Signature:_____

Date:_____ Date:_____

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	$ 2,273,136	71.4	Pending
PRIVATE	$477,589	15	CONFIRMED
LOCAL	$ 433,200	13.6	CONFIRMED
	$		
	$		
	$		
	$		
TOTAL	$ 3183925	100 %	

September 14, 2021

Charles M. Culley, Jr.
Caroline County Administrator
212 N. Main Street
Bowling Green, VA 22427

Dear Mr. Culley:

The purpose of this letter is to provide documentation regarding the in-kind contributions for the projects proposed to the Virginia Telecommunication Initiative ("VATI") program.

The proposed project represents a partnership between Comcast and Caroline County. As indicated in the application, Comcast will provide approximately 15% of the projected construction costs of $3,183,925 totaling approximately $477,589. Caroline County will provide approximately 13.6% of the projected construction costs, totaling approximately $433,200, in-kind contributions including application analysis and preparation, coordination with the Department of Housing and Community Development, assistance with right of way permitting, and participating in further concert with Comcast as the project is approved and construction begins.   The value of these services will depend on the level of activity occurring as the project commences.

Should you have any questions regarding the information listed above, please do not hesitate to contact me.

Sincerely,

Misty Allen
Regional Vice President, Government & Regulatory Affairs

Jeffrey S. Black
Western Caroline District

Clayton T. Forehand
Madison District

Nancy L. Long
Port Royal District

Jeffery M. Sili
Bowling Green District

Floyd W. Thomas
Mattaponi District

Reginald L. Underwood
Reedy Church District

Charles M. Culley, Jr.
County Administrator

Caroline County, Virginia
Board of Supervisors

Caroline County, VA
All-America City
2009

September 13, 2021

COUNTY OF CAROLINE, TO-WIT:

At a meeting of the Caroline County Board of Supervisors on September 7, 2021, at the Community Services Center, Milford, Virginia beginning at the hour of 6:00 p.m.

PRESENT: Reginald L. Underwood – Chairman
Jeffrey S. Black – Vice-Chair
Nancy L. Long
Jeffery M. Sili

ABSENT: Floyd W. Thomas
Clayton T. Forehand

Supervisor Sili moved and Vice-Chair Black seconded to authorize staff to move forward with the proposed plan for universal broadband coverage developed by the Caroline Broadband Advisory Committee and to submit a Fiscal Year 2022 VATI grant application for the following projects as presented:

- *Project #1*
  Location: Jericho Road/ Anderson Mill Road and Nearby Vicinity
  Service Provider: Comcast
  Approximate Mileage: 47.65 miles
  Estimated Homes Passed: 361
  Estimated County Contribution: $433,200 ($1,200 per passing)
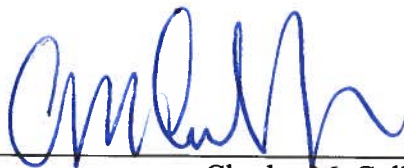 *Comcast Contribution: $477,588.56 ($1,322.96 per passing)*

- ### Project #2 (Phase 1)
  Location: Ruther Glen/Dawn
  Service Provider: Atlantic Broadband
  Approximate Mileage: 168.29 miles
  Estimated Homes Passed: 1,738
  Estimated County Contribution: $2,085,600 ($1,200 per passing)
  Estimated Atlantic Broadband Contribution: $2,085,600 ($1,200 per passing)

- ### Project #2 (Phase 2)
  Location: Woodford, Route 17 & Additional Project Areas
  Service Provider: Atlantic Broadband
  Approximate Mileage: 139.63 miles
  Estimated Homes Passed: 1,197
  Estimated County Contribution: $1,436,400 ($1,200 per passing)
  Estimated Atlantic Broadband Contribution: $1,436,400 ($1,200 per passing)

- ### Project #2 (Phase 3)
  Location: Sparta, Central Point, Passing (south of Fort. A.P. Hill to Rt. 600)
  Service Provider: Atlantic Broadband
  Approximate Mileage: 119.06 miles
  Estimated Homes Passed: 931
  Estimated County Contribution: $0
  Estimated Atlantic Broadband Contribution: $837,900 ($900 per passing)

Note: This portion of the project is part of the RDOF auction awarded to Atlantic Broadband by the Federal Communications Commission. The Rural Digital Opportunity Fund (RDOF) is an FCC program designed to close the digital divide in the United States by investing billions of dollars in the construction of rural broadband networks.

Roll Call Vote:		
	Black	Yea
	Long	Yea
	Sili	Yea
	Underwood	Yea

Charles M. Culley, Jr.
Clerk to the Board

ROBERT J. WITTMAN
1st District, Virginia

HOUSE ARMED SERVICES COMMITTEE
Ranking Member, Seapower and Projection Forces
Tactical Air and Land Forces

NATURAL RESOURCES COMMITTEE
Water, Oceans, and Wildlife

CO-CHAIR, CONGRESSIONAL
SHIPBUILDING CAUCUS

CO-CHAIR, CONGRESSIONAL
CHESAPEAKE BAY WATERSHED TASK FORCE

CO-CHAIR, CONGRESSIONAL
PUBLIC HEALTH CAUCUS

CO-CHAIR, CONGRESSIONAL
RURAL BROADBAND CAUCUS

Congress of the United States
House of Representatives
Washington, DC 20515
September 7, 2021

WASHINGTON OFFICE
2055 Rayburn House Office Building
Washington, DC 20515
(202) 225-4261

DISTRICT OFFICES:

STAFFORD OFFICE
95 Dunn Drive Suite 201
Stafford, VA 22556
(540) 659-2734

MECHANICSVILLE OFFICE
6501 Mechanicsville Turnpike Suite 102
Mechanicsville, VA 23111
(804) 730-6595

MIDDLE PENINSULA OFFICE
508 Church Lane
P.O. Box 3106
Tappahannock, VA 22560
(804) 443-0668

WWW.WITTMAN.HOUSE.GOV

Tamarah Holmes, Ph.D.
Director, Office of Broadband
Department of Housing and Community Development
600 East Main Street, Suite 300
Richmond, VA 23219

Dear Director Holmes:

I am writing in support of the Caroline County FY 2022 Virginia Department of Housing and Community Development Virginia Telecommunication Initiative (VATI) grant applications to expand high-speed broadband availability in the First Congressional District through a partnership with Comcast and Atlantic Broadband. Approval of this application would help meet the critical need to buildout high-speed broadband service to residents of Caroline County.
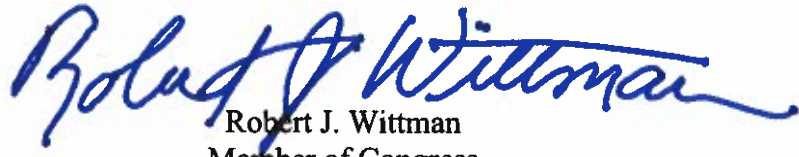
As we all know, broadband is now a necessity, not a luxury. With the ongoing threat of the COVID-19 pandemic causing a disruption to our daily lives, citizens need access to the internet now more than ever. I am proud to support the applications from Caroline County, and support the County's efforts to provide universal coverage to all its residents.

I appreciate the time and effort that Caroline County's leaders have devoted throughout the years to develop a plan to reach the entire county with broadband infrastructure in an effort to bridge the digital divide. Caroline County will greatly benefit from the broadband expansion outlined in the grant applications. Access to VATI grant funds will make it possible for Caroline residents to conduct business and access educational, telemedicine and economic development opportunities in a quickly changing environment.

With both Comcast and Atlantic Broadband as its partners, Caroline has devised an efficient and effective way to expand broadband access to over 4,500 homes that currently do not have an internet connection available. These are well-planned applications to finally bring an available broadband internet connection to everyone within the county. At times, our rural families have been overlooked.

Thank you for your consideration of the Caroline County applications. Moreover, if you have any concerns or questions, please do not hesitate to contact my office.

Sincerely,

Robert J. Wittman
Member of Congress

CAROLINE COUNTY SCHOOL BOARD

George L. Spaulding, Jr. Bowling Green	Nancy G. Carson Mattaponi	JoWanda Rollins-Fells, Ph.D. Reedy Church
	Shawn M. Kelley Madison	Calvin B. Taylor, Sr. Port Royal	John I. Copeland Western Caroline

Sarah Calveric, Ph.D. **Superintendent**	**16261 Richmond Turnpike** **Bowling Green, VA 22427**	**Office (804) 633-5088** **Fax (804) 633-5563**

September 8, 2021

Tamarah Holmes Ph.D.
Director, Office of Broadband
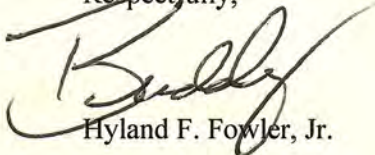600 East Man St. Suite 300
Richmond. VA 23219

Dear Dr. Holmes,

I am writing in reference to the grant applications submitted by Caroline County for the VATI 2022 grant cycle. As we all know, broadband is now a necessity, not a luxury. With the ongoing threat of the COVID-19 pandemic causing a disruption to our daily lives, it is clear that citizens need access to the internet now more than ever. I am proud to support the applications from Caroline County, and support the County's efforts to provide universal coverage to all of its residents.

I acknowledge and appreciate the time and effort that Caroline County's leaders have devoted throughout the years to develop a plan to reach the entire county with broadband infrastructure in an effort to bridge the digital divide. Caroline County and its citizens will greatly benefit from the broadband expansion outlined in the grant applications. Access to VATI grant funds will make it possible for Caroline citizens to conduct business and access educational, telemedicine and economic development opportunities in a quickly changing environment.

With both Comcast and Atlantic Broadband as its partners, Caroline has devised an efficient and effective way to expand broadband access to over 4,500 homes that currently do not have an internet connection available. This is a well-planned application to finally bring an available broadband internet connection to everyone within the county. At times, our rural families have been overlooked. Without assistance from VATI funding, Caroline County will not be able to complete this project for many years to come.

I wholeheartedly endorse the Caroline County VATI grant applications and offer my enthusiastic support.

Respectfully,

Dr. Sarah Calveric
Superintendent of Caroline County Public Schools

Explore Today, Impact Tomorrow

HYLAND F. "BUDDY" FOWLER, JR.
116 NORTH RAILROAD AVENUE
SUITE 13
ASHLAND, VIRGINIA 23005

FIFTY-FIFTH DISTRICT

COMMITTEE ASSIGNMENTS:
GENERAL LAWS
FINANCE
HEALTH, WELFARE AND INSTITUTIONS

September 7, 2021

Tamarah Holmes Ph.D.
Director, Office of Broadband
600 East Man St. Suite 300
Richmond. VA 23219

Dear Dr. Holmes,

I am writing in reference to the grant applications submitted by Caroline County for the VATI 2022 grant cycle. As we all know, broadband is now a necessity, not a luxury. With the ongoing threat of the COVID-19 pandemic causing a disruption to our daily lives, it has become clear that citizens need access to the internet now more than ever. I am proud to support the applications from Caroline County and support the County's efforts to provide universal coverage to all of its residents.

I acknowledge and appreciate the time and effort that Caroline County's leaders have devoted throughout the years to develop a plan to reach the entire county with broadband infrastructure that is intended to bridge the digital divide. Caroline County and its citizens will greatly benefit from the broadband expansion outlined in the grant applications. Access to VATI grant funds will make it possible for Caroline citizens to conduct business and access educational, telemedicine and economic development opportunities in a rapidly changing environment.

With both Comcast and Atlantic Broadband as its partners, Caroline has devised an efficient and effective way to expand broadband access to over 4,500 homes that currently do not have an internet connection available. I believe Caroline County has submitted a well-planned application to finally bring an available broadband internet connection to everyone within the county. Virginia's rural families have faced nearly impossible challenges with respect to expanding Broadband coverage, until now. Without assistance from VATI funding, Caroline County will not be able to complete this project for many years to come. For this reason, I wholeheartedly endorse the Caroline County VATI grant applications and offer my enthusiastic support.

Respectfully,

Hyland F. Fowler, Jr.

George Washington Regional Commission
406 Princess Anne Street
Fredericksburg, Virginia 22401
(540) 373-2890
Fax (540) 899-4808
www.gwregion.org

September 9, 2021

Tamarah Holmes, Ph.D.
Director, Office of Broadband
Virginia Department of Housing & Community Development
600 East Main Street, Suite 300
Richmond, VA 23219

Dear Dr. Holmes,

I am writing in reference to the grant applications submitted by Caroline County for the VATI 2022 grant cycle. As we all know, broadband is now a necessity, not a luxury. With the ongoing threat of the COVID-19 pandemic causing a disruption to our daily lives, it is clear that citizens need access to the internet now more than ever. I wish to express support for the applications from Caroline County as well as the County's efforts to provide universal coverage to all of its residents.

The George Washington Regional Commission (GWRC) serves Virginia Planning District 16, which includes the City of Fredericksburg and Caroline, King George, Spotsylvania, and Stafford Counties. Our mission is to coordinate planning to ensure economic competitiveness, reduce redundancy in government, improve efficiency, enhance services, and improve implementation time of regional projects. One important duty of the Virginia Planning District Commissions is to create strategic plans for their regions of service. GWRC's current strategic plan identifies promoting rural broadband internet solutions as a major need and priority within the region.

I acknowledge and appreciate the time and effort that Caroline County's leaders have devoted throughout the years to develop a plan to reach the entire county with broadband infrastructure in an effort to bridge the digital divide. Caroline County and its citizens will greatly benefit from the broadband expansion outlined in the grant applications. Access to VATI grant funds will make it possible for Caroline citizens to conduct business and access educational, telemedicine, and economic development opportunities in a quickly changing environment.

With both Comcast and Atlantic Broadband as its partners, Caroline has devised an efficient and effective way to expand broadband access to over 4,500 homes that currently do not have an internet connection available, finally bringing an available broadband internet connection to everyone within the county. Without assistance from VATI funding, Caroline County will not be able to complete this project for many years to come.

The efforts of Caroline County in pursuit of achieving universal broadband coverage for all of its residents will further the goals of GWRC's strategic plan and be of great benefit to our region.

Sincerely,

Kate Gibson
Interim Executive Director

September 7, 2021

Tamarah Holmes Ph.D.
Director, Office of Broadband
600 East Man St. Suite 300
Richmond. VA 23219

Dear Dr. Holmes,

I am writing in reference to the grant applications submitted by Caroline County for the VATI 2022 grant cycle. Broadband is a necessity, now more critically, with the ongoing threat of the COVID-19 pandemic causing a disruption in how we live. Essential shopping, off site employment, and education are required in normal times, and now essential during the global health crisis. I support the applications from Caroline County to provide universal internet coverage to all of its residents, and urge the complete funding of the application.

Caroline County and its citizens will greatly benefit from the broadband expansion outlined in the grant applications. Access to VATI grant funds will make it possible for Caroline citizens to conduct business and access educational, telemedicine and economic development opportunities in a quickly changing environment. As rural electrification spurred the American economy, and enhanced the quality of life for its citizens, so too will the equitable access to the internet for citizens outside urban centers. Currently excluded, Caroline citizens are especially in need of this utility.

With both Comcast and Atlantic Broadband as its partners, Caroline can expand broadband access to over 4,500 homes that currently do not have an internet connection available. Without VATI funding, Caroline County will not be able to complete this project, limiting the future of its citizens.

I emphatically endorse the Caroline County VATI grant applications and offer my enthusiastic support, and the resources of my office.

Sincerely,

Gary R. Wilson
Director, Caroline County
Department of Economic Development

23724 Rogers Clark Blvd., Ruther Glen, VA 22546   804.633.4074   GWilson@co.caroline.va.us

CAROLINE COUNTY

ATTACHMENT 12

Derivation of Costs

Product	Total	VATI	Non-VATI	Source of Estimate	Date
EXAMPLE					
Construction					
Broadband Construction – 47.65 miles	$3,183,925	$2,273,136	$910,789	Comcast	9/14/2020

CAROLINE COUNTY

ATTACHMENT 13

Documentation of Supporting Cost Estimates

September 14, 2021

Charles M. Culley, Jr.
County Administrator
212 N. Main Street
Bowling Green, VA 22427

Dear Mr. Culley:

The purpose of this Letter is to provide information and supporting documentation for cost estimates for the Caroline County Project proposed to the Virginia Telecommunication Initiative ("VATI") program. Comcast's Construction and Design team managed projects that added thousands of miles to Comcast's regional hybrid fiber coaxial network in 2020-2021. Comcast's construction estimates are determined though a detailed project analysis that includes a desktop survey, an analysis of permitting costs (internal or external), a network impact study to determine necessary hub site preparation and possible infrastructure requirements, and a financial evaluation for overall build costs and likely return-on-investment. When contract labor is utilized, costs are accrued according to the fee schedule in the contract. The design and construction process is standard within the telecommunications industry. The total build is estimated to be 48 miles of infrastructure and laterals. Estimated budget costs for construction are:

Project	Number of Passings	Material Costs	Labor	Project Management	Total Project Cost
Caroline County	361	$955,177.50	$1,910,355.00	$318,392.50	$3,183,925.00

Examples of items that are included in the Material category are: power supplies, fiber conduit, splice enclosures, pedestals, and taps. Examples of items in the Labor category are in-house and contract labor to trench and backfill, lay conduit and fiber perform administration of VDOT permits and provide crew supervision.

The precise amount to be spend on contract labor versus in house resources will be determined when the grant is approved, and the work commences. The allocation of work will depend on the level of construction activity at that time. Any contracted engineering and design work outlined in this proposal will be performed by Comcast approved contractors.

Should you have any questions regarding the information listed above, please do not hesitate to contact Nathan Daugherty at Nathan_daugherty@comcast.com or 434-238-0729.

Sincerely,

Steve Hill

Steve Hill
Senior Director of Network Engineering

September 14, 2021

Tamarah Holmes, Ph.D.
Director, Office of Broadband
Virginia Department of Housing and Community Development
Main Street Centre
600 East Main Street, Suite 300
Richmond, Virginia 23219

Re: Attachment 14 – Two most recent Form 477 submitted to the FCC or equivalent

Dear Dr. Holmes,

The purpose of this letter is to provide information regarding the recent Form 477 submissions or equivalent by Comcast to the Federal Communications Commission. Data from Comcast's submissions can be located at https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477.

Should you have any questions regarding the information listed above, please do not hesitate to contact me.

Sincerely,

Kevin Broadhurst
Vice President of Government and Regulatory Affairs

September 14, 2021

ATTACHMENT 16. RSSI Projection Shapefiles

Attachment 16 is not applicable to this grant application.

Pathways to Connection

Connectivity opens the door to a world of opportunity.

At Comcast, we believe deeply in the power of connection. That is why we recently announced a $1 billion commitment over the next 10 years to reach up to 50 million people from low-income families and provide them with the training, tools, and resources they need to succeed in a digital world.

We have always said closing the broadband adoption gap would take a comprehensive movement, and that is exactly what is happening today. There are more pathways than ever for students, families, and individuals to get connected and learn digital skills, at little or no cost to them.

If you or someone in your community needs to get connected today, the good news is there are a variety of resources available, including billions of dollars in federal benefits to cover the costs. These include:

RESOURCES FOR INDIVIDUALS & FAMILIES

Internet Essentials

Internet Essentials is the nation's largest and most comprehensive broadband adoption program, providing high-speed Internet service to low-income families. Over the past ten years, Internet Essentials has connected a cumulative total of more than 10 million people to the power of the Internet at home. The program has expanded its eligibility more than a dozen times, now including Federal Pell Grant recipients. New customers who sign up for Internet Essentials before June 30, 2022 will receive 60 days of complimentary service. Visit **InternetEssentials.com** on any web-enabled device or call 1-855-846-8376 to learn more about eligibility and apply today.

Emergency Broadband Benefit

Comcast is proud to participate in the federal government's Emergency Broadband Benefit program. This temporary benefit provides up to a $50/month credit per household for their Internet bill (up to a $75 credit in Tribal areas). To date, the Federal Communications Commission has enrolled more than 4.2 million U.S. households. While this program is set to expire 6 months after the Department of Health and Human Services declares an end to the pandemic, the federal Infrastructure bill calls for a permanent plan, which would provide $30/month for eligible applicants. Visit **www.xfinity.com/EBB** or call 1-855-846-8376 to learn more. call 1-855-846-8376 to learn more.

Lift Zones

Comcast Lift Zones are a first-of-their-kind digital equity initiative in community centers across our service area. Partnering with local organizations, non-profits, and city leaders, we are equipping community centers with complimentary WiFi, called "Lift Zones," where students and families can access the Internet. Lift Zones allow students, veterans, seniors, and other individuals, customers and non-customers alike, to get online and do their schoolwork, look for a job, stay in touch with family and friends, and so much more. Comcast has pledged to open more than 1,000 Lift Zones in underserved communities by the end of this year.
Visit **https://internetessentials.com/learningsearchpage** to find a Lift Zone near you.

RESOURCES FOR SCHOOLS & PARTNER ORGANIZATIONS

Internet Essentials Partnership Program

The COVID-19 crisis created an urgent need for a scalable solution to support school districts and partner organizations across the country. The Internet Essentials Partnership Program (IEPP) is designed to help connect large numbers of households at a critical time. The program provides the opportunity for schools, school districts, government entities, foundations, and other organizations to pay for students' and families' broadband Internet service at home. Creating strong and innovative public-private partnerships enables entire communities to work together to coordinate funding for a few months or a few years. Organizations interested in becoming IEPP partners or partnering with Comcast on the Emergency Connectivity Fund can fill out **this form** to receive more information or begin the sponsorship process.

Emergency Connectivity Fund

The FCC's Emergency Connectivity Fund (ECF) is a $7.17 billion government program to help schools and libraries provide the tools and services needed for remote learning during the COVID-19 emergency period. Comcast is proud to support schools and libraries as they work to connect even more households to the power of the Internet at home through ECF. Leveraging IEPP, we have a streamlined process for eligible entities to seek ECF funds and quickly connect individuals in need to broadband access at home through our acclaimed Internet Essentials program. Schools and libraries interested in working with Comcast can visit **InternetEssentials.com/sponsor** to learn more.
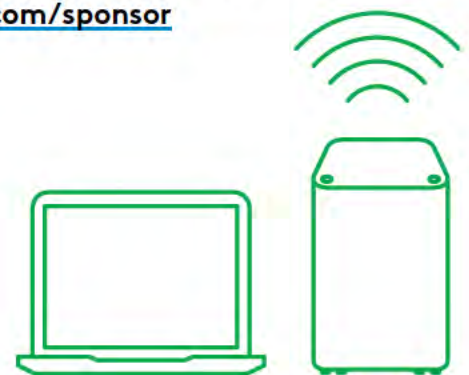
Ready for anything.

NOW TWICE AS FAST!

Inge, Jonah & Eleanor, Internet Essentials customers

Internet Essentials from Comcast

Bring low-cost, high-speed Internet home so you're ready for anything.

With a fast, reliable connection, you can work and learn from home, make video calls, stream movies and more.

Apply today if you qualify for programs like the National School Lunch Program, SNAP, housing assistance, Medicaid, and others.

$9.95
Per Month + Tax
after 2 free months

No credit check.
No term contract.
No cancellation fees.

APPLY NOW »
InternetEssentials.com
or call 1-855-846-8376

**internet»
essentials**
FROM COMCAST

Preparados para todo.

Podrías recibir servicio de Internet sin costo.*

Visita **es.xfinity.com/ebb** para saber cómo suscribirte en el Beneficio de Emergencia para Banda Ancha.

* Impuestos y cargos extra

Inge, Jonah y Eleanor, clientes de Internet Essentials

Internet Essentials de Comcast

Trae Internet de alta velocidad y bajo costo a tu hogar para estar preparado para todo.

Con una conexión rápida y confiable, puedes trabajar y aprender desde tu hogar, hacer videollamadas, hacer streaming de películas y más.

Solicítalo hoy si calificas para programas como el Programa Nacional de Almuerzos escolares (NSLP), cupones para alimentos (SNAP), asistencia para viviendas públicas, Medicaid y otros.

$9.95

al mes + impuestos
después de 2 meses gratis

Sin revisión de crédito.
Sin contrato.
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SOLICÍTALO AHORA »

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o llama al 855-765-6995**

internet≫ essentials
FROM COMCAST

Ready for anything.

Internet Essentials from Comcast

Get home Internet with 2 months FREE!

Promo ends 12/31/21

Get low-cost, high-speed Internet at home! With a fast, reliable connection, you can work and learn from home, make video calls, stream movies and more.

Apply today if you qualify for programs like the National School Lunch Program, SNAP, housing assistance, Medicaid, and others.

$9.95 Per Month + Tax
after 2 free months

No credit check. No term contract. No cancellation fees.

APPLY NOW »
InternetEssentials.com or call 1-855-846-8376

**internet»
essentials**
FROM COMCAST

COMCAST COMMITS TO INVESTING $1 BILLION OVER NEXT 10 YEARS TO REACH 50 MILLION LOW-INCOME AMERICANS WITH TOOLS AND RESOURCES TO SUCCEED IN DIGITAL WORLD

Comcast's Internet Essentials Program Has Now Connected More Than 10 Million People Over the Past 10 Years

PHILADELPHIA, PA – MARCH 24, 2021 – On the 10th anniversary of its Internet Essentials program, Comcast today announced it would invest $1 billion over the next 10 years to help further close the digital divide and give even more low-income Americans the tools and resources they need to succeed in an increasingly digital world. The announcement coincides with the release of a 10-year Progress Report showing that, since 2011, the company, working in collaboration with its network of thousands of nonprofit partners, has connected a cumulative total of more than 10 million people in America to broadband Internet at home, the overwhelming majority of whom were not connected prior to signing up.

Comcast's $1 billion commitment will include investments in a number of critical areas, including: additional support for its ongoing Lift Zone initiative, which establishes WiFi-connected safe spaces in 1,000+ community centers nationwide for students and adults by the end of 2021; new laptop and computer donations; grants for nonprofit community organizations to create opportunities for low-income Americans, particularly in media, technology, and entrepreneurship; and continued investment in the company's landmark Internet Essentials program. It is estimated that these new commitments will impact as many as 50 million Americans over the next 10 years. In 2021 alone, Comcast estimates students will be able to complete more than 25 million hours of remote learning lessons to further address the "homework gap" at the hundreds of Lift Zone locations that have already opened or will open soon.

"Ten years is a remarkable milestone, signifying an extraordinary amount of work and collaboration with our incredible community partners across the country," said Dave Watson, Chief Executive Officer, Comcast Cable. "Together, we have been able to connect millions of people to the power of the Internet at home, and to the endless opportunity, education, growth, and discovery it provides. Today, we are rededicating ourselves to this mission to ensure that the next generation of students in America has the tools, resources, and abilities they need to succeed in an increasingly digital world."

"For more than a decade, Comcast has been a leader in working with communities to close the Digital Divide through its Internet Essentials program," said Marc H. Morial, President and CEO of the National Urban League. "From its beginning as a pilot program with the Wilmington Urban League to today, Comcast's Internet Essentials program has transformed millions of lives by connecting low-income households to the power of broadband. While the ongoing COVID-19 pandemic placed a spotlight on the digital divide, for the past decade Comcast, in partnership with organizations like the National Urban League, has been leading the effort to close the digital divide, address the homework gap, and ensure low-income communities have the necessary digital skills."

"Last year, we partnered with Comcast on a major campaign to encourage Americans to participate in the first-ever digital census," added Rebecca DeHart, CEO, Fair Count. "We are so proud to have partnered with Comcast on this valuable work—connectivity is incredibly essential to civic participation. It gives communities a voice and it enables individuals to take part in the cultural conversations that need to take place in this country. Broadband adoption, just like census participation, can mean the difference between communities growing and thriving or being left behind. For the past decade, the Internet

Essentials program has successfully helped to narrow these digital divides. We look forward to the next 10 years of Internet Essentials and join Comcast in celebrating this significant achievement."

"For a decade Comcast's Internet Essentials program has provided Latino families with tools and resources to access high speed Internet at home. Hispanic Federation has been proud to partner with Comcast and work with this program to bridge the digital divide and offer Latino communities the opportunity to access health, educational, and economic resources online," said Brent Wilkes, Senior Vice President at the Hispanic Federation. "We look forward to the next ten years of partnership with Comcast as we tackle more challenges in our ever-changing digital world."

In addition to capturing the total number of connections Internet Essentials has provided, the 10-Year Progress Report also highlights other key metrics about the program, including having:

- Increased the program's Internet speeds six times, from 1.5 Mbps in 2011 to 50 Mbps today, without ever increasing the price of the program, which has remained $9.95/month.
- Launched its Lift Zones program, which aims to connect more than 1,000 community centers with free WiFi by the end of 2021.
- Developed an Internet Essentials Partnership Program that has signed up hundreds of schools, school districts, and other organizations that have come together to help connect tens of thousands of students to the Internet during the COVID-19 pandemic.
- Offered 60 days of free Internet service to any new Internet Essentials customer who needed to get online during the coronavirus outbreak.
- Expanded the number of languages our Internet Essentials call center agents can speak to more than 240, plus American Sign Language, to help ensure we break down language barriers that can prevent people from applying or getting online.
- Built up an online learning center that includes more than 200 digital literacy training videos, guides, and reports that are free to anyone to use, including non-customers.
- Developed an employee network of 3,000 Internet Essentials Ambassadors who volunteer their time to help spread the word about the program in their communities.

This new commitment comes on the heels of a series of initiatives announced during the COVID-19 pandemic that reinforced the company's commitment to addressing the digital divide and the homework gap by upping speeds to 50 Mbps downstream without changing the program's $9.95/month price. The company also continues to offer 60 days of free Internet service to new Internet Essentials customers who sign up before June 30, 2021.

About Internet Essentials
Internet Essentials is Comcast's signature digital equity initiative and the nation's largest and most comprehensive broadband adoption program. In 10 years, it has helped connect 10 million low-income Americans to broadband Internet at home, most for the very first time. Internet Essentials has a comprehensive design that addresses each of the three major barriers to broadband adoption. This includes: multiple options to access free digital literacy training in print, online, and in person; the option to purchase a heavily subsidized, low-cost Internet-ready computer; and low-cost, high-speed Internet service for $9.95 a month, plus tax. The program is structured as a partnership between Comcast and tens of thousands of school districts, libraries, elected officials, and nonprofit community partners. Comcast has never raised the price of the program. For more information about Internet Essentials and Comcast's commitment to education and digital equity, please visit https://corporate.comcast.com/education. To apply, visit www.internetessentials.com or call 1-855-846-8376 for English or 1-855-765-6995 for Spanish.

About Comcast Corporation
Comcast Corporation (Nasdaq: CMCSA) is a global media and technology company that connects people to moments that matter. We are principally focused on broadband, aggregation, and streaming with over 56 million customer relationships across the United States and Europe. We deliver broadband, wireless,

and video through our Xfinity, Comcast Business, and Sky brands; create, distribute, and stream leading entertainment, sports, and news through Universal Filmed Entertainment Group, Universal Studio Group, Sky Studios, the NBC and Telemundo broadcast networks, Peacock, NBC News, NBC Sports, Sky News, and Sky Sports; and provide memorable experiences at Universal Parks and Resorts in the United States and Asia. Visit www.comcastcorporation.com for more information.

<p style="text-align:center">###</p>

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10 YEARS

internet » essentials

Internet Essentials from Comcast has helped 10 million low-income Americans connect to the tools and resources they need to succeed in an increasingly digital world.
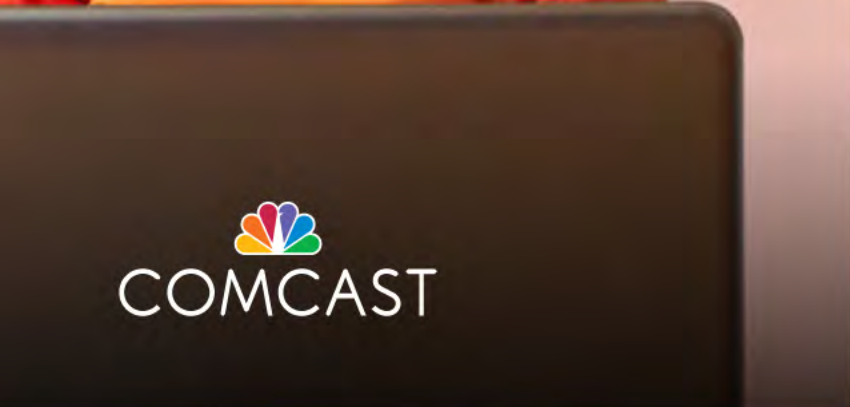
COMCAST

Ready for school no matter what it looks like.

Student from Northeast High School

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Letter from Dave Watson about Comcast's Commitment to Digital Equity

When we launched Internet Essentials 10 years ago, we began an ambitious journey to connect low-income Americans to the Internet. Thanks to the hard work and support of so many, Internet Essentials is now the largest and most comprehensive Internet adoption program in the country, connecting more than 10 million* people.

Ten million people over 10 years is an exciting milestone, but it's just the beginning of our next chapter. We are proud to share that over the next 10 years, Comcast is committing $1 billion to reach 50 million people from low-income families and provide them with the training, tools, and resources they need to succeed in a digital world. This investment will allow us to continue providing grants to nonprofit partners, supporting Internet adoption and digital skills training, and investing in underserved communities.

$1B

commitment over the next 10 years to reach 50 million people from low-income families with connectivity, skills, training, and resources.

This is not the first time we have accelerated our efforts to bridge the digital divide, nor will it be our last. Since the earliest days of the Internet Essentials program, we have partnered with incredible organizations to include more people, improve the program, and create a bigger impact. We have expanded the reach of Internet Essentials 12 times, most recently to include all low-income households in our service area, including veterans, seniors, people with disabilities, and more. We have increased speeds, from 1.5 Mbps in 2011 to 50 Mbps today, and subsidized or donated 150,000 desktop and laptop computers. Along the way, we have brought home the transformative power of connection to more than 10 million people and offered digital skills training and tools to millions more.

When the COVID-19 pandemic struck, we expanded again by launching a first-of-its kind connectivity initiative in community centers. Partnering with local organizations, non-profit partners, and city leaders, we equipped community centers across the country with WiFi-connected safe spaces, called "Lift Zones", where students and families can access the Internet. We plan to launch 1,000+ Lift Zones by the end of this year, reaching millions more people in our communities.

Students and Head of School of the Pennsylvania School for the Deaf

Ten years is a remarkable moment signifying an extraordinary amount of work, and we did not do it alone. The launch of Internet Essentials, as well as its tremendous growth and success over the past decade, is a result of those who paved the way through research, tireless advocacy for digital equity, and the creation and adaptation of digital skills training models to meet the needs of community members. I invite you to continue reading to learn more about the journey of Internet Essentials and the work of our team and our extraordinary partners.

We are proud of our progress, but we have more to do and more to learn. We are excited and energized to take these next steps, and we look forward to working with all of you to get there.

Sincerely,

DAVE WATSON
President and Chief Executive Officer
Comcast Cable

*Cumulative total since 2011

Student from Strawberry Mansion High School in Philadelphia with his mother

Digital Divide in the U.S.

We believe deeply in the power of connection. It is unacceptable that we have a digital divide in this country, which keeps so many families from the powerful skills, tools, and resources they need to succeed. Approximately 25% of American households do not subscribe to broadband Internet at home. Ten years ago, we created Internet Essentials to help address the digital divide and the homework gap and give low-income families the opportunity to experience the transformative power of the Internet in their own homes. Over the last decade, we've worked with thousands of partners across the country and have collectively made tremendous progress. **In our service area, 40% of the growth in broadband adoption among low-income households with school-age children can be attributed to the Internet Essentials program.***

CITY COMPARISON

Up to 95% of households

in affluent cities have a home broadband subscription.

VS.

Only 50% of households

in cities with high poverty rates have a home broadband subscription.

This 45-percentage-point gap represents the digital divide in the United States.**

*Zuo, G., 2021 (In Press). "Wired and Hired: Employment Effects of Subsidized Broadband Internet for Low-Income Americans." To be published in *American Economic Journal: Economic Policy*.
**U.S. Census 2019 American Community Survey

Program Timeline

For Comcast, addressing the need for digital equity has been a decade-long pursuit. In 2010, the Federal Communications Commission released the National Broadband Plan (NBP), articulating the barriers to broadband adoption and digital inclusion, and focusing attention on the importance of having a home Internet connection. In 2011, Internet Essentials was the first comprehensive programmatic response by a major Internet service provider to address the main barriers to broadband adoption.

For 10 years, we have worked closely with our partners to refine the program in meaningful ways and expanded the eligible population numerous times. Together, we are committed to creating and supporting digital equity within the communities we serve.

2011
Program launch for public-school students receiving free lunch

2012
Expanded to public-school students eligible for a reduced-price lunch

2013
Expanded eligibility to include public, charter, parochial, private, cyberschool, and homeschooled students

Included any family with a school-age student from Head Start through the 12th grade

2014
Extended program indefinitely, beyond initial three-year commitment

Provide amnesty to eligible families with past due Comcast debt older than one year

2015
Pilot launch for low-income seniors

Pilot launch for low-income community college students

2016
Pilot launch for HUD-housing recipients

Expansion of pilot to all HUD-housing recipients

2017
Expansion of pilot for low-income seniors

2018
Expansion to low-income veterans

2019
Expansion to all low-income people including those with disabilities

2020
Convened the first Internet Essentials National Impact Summit

Implemented key COVID-19 response measures

COVID-19 Response
- 60 days free service offer for new Internet Essentials customers through December 31, 2021
- Increased speeds to 50/5 Mbps
- Waived bad-debt program eligibility requirement through December 31, 2021
- Suspended disconnects for late payments
- Launched the Internet Essentials Partnership Program to connect large numbers of students to Internet Essentials
- Introduced xFi parental controls to Internet Essentials subscribers at no additional cost
- Unlimited access for Internet Essentials customers to Xfinity WiFi hotspots
- Began the rollout of 1,000 Lift Zones

2021
Celebrating 10 years of advancing digital equity

Increased speeds to 50/5 Mbps

and more to come...

---

12 expansions of eligibility (available to all eligible low-income households)

18 innovations (including improving our streamlined application process and launching the Internet Essentials Partnership Program)

14 improvements to the value of the service (including speed, in- and out-of-home WiFi, computer options)

9 innovations in digital literacy, including the creation of 1,000+ Lift Zones

Program Retrospective

in 10 years, we have...

CONNECTED **MORE THAN** **10M** LOW-INCOME AMERICANS TO THE INTERNET AT HOME

In 10 years, our commitment to bridging the digital divide has transformed into an enormous investment in advancing digital equity. Our newly created Internet Essentials Partnership Program and Lift Zone initiative are manifestations of this, as is our significant increase in investment in digital equity partners.

Program Design

Internet Essentials is about far more than bringing high-speed Internet into a home. From the beginning, we have designed our program based on comprehensive and consistent research which tells us there are three main barriers to broadband adoption: 1) a lack of perceived need for or interest in (and even fear of) the Internet, mostly stemming from limited digital skills, 2) not having functioning equipment, and 3) the cost of a monthly service subscription. Internet Essentials has been designed to address all of these barriers head-on. We continue to rely on external research, as well as sponsoring and conducting our own, to expand our understanding of these complex and evolving issues.

$700M

invested in the past 10 years to connect more than 10 million low-income people to the power of the Internet at home, provide digital skills training, and subsidize or donate devices.

A COMPREHENSIVE APPROACH

According to a 2019 U.S. Census Bureau and National Telecommunications and Information Administration survey, **among the top reasons people do not subscribe to Internet at home are:**

60% cite lack of need for, or interest in, the Internet

19% cite cost of monthly service

3% cite no computer, inadequate equipment, or cost of a computer

---

To address these barriers, Comcast designed Internet Essentials as a wraparound solution.

Awareness & Training
Comcast works with a network of partners to offer free in-person, online, and printed digital literacy training materials and classes.

Low-Cost Service
Comcast provides low-cost, high-speed Internet to low-income households across Comcast's service area for less than $10 per month.

Equipment
Internet Essentials customers can purchase a subsidized and discounted computer for less than $150

LOW-COST CONNECTIONS

We've made tremendous progress toward closing the digital divide. In ten years, we've connected millions of low-income people to the Internet at home, more than 80% of whom were not connected prior to signing up. The program is available to ALL low-income households including those participating in programs like NSLP, Medicaid, SNAP, SSI, and many more.

Since 2011, we've continued to improve our application process, including adding and expanding an expedited application review, and working to make the application and onboarding process easier and more convenient so that our customers have the best possible experience.

Just last year, we added two-factor ID verification to support applicants who are uncomfortable or unable to provide a social security number to verify their identity.

Continuous Improvement to Our Customer Experience
Since the beginning, we have pledged to listen to and learn from our partners, modify by trial and error, and rely on the best research in the field to build a program to reach as many people as possible.

240

languages available through our call center, **seven languages** available in our online application.

Expedited Review
Available to students attending Title I schools or those participating in the Internet Essentials Partnership Program, HUD housing residents, and households living in high-poverty areas.

Customer Satisfaction
90% of Internet Essentials customers surveyed are highly satisfied with the service they receive.

AWARENESS & TRAINING

Digital skills training is the most important facilitator for getting people connected. Since 2011, we have made nine enhancements to our digital skills training portfolio, including developing Online Safety Toolkits, working with partners to design best-in-class curricula to engage senior citizens, and providing computer labs and other equipment to support digital participation at community centers across the country. We are proud to support **digital skills training** via a network of tens of thousands of partners who share our vision of bringing the Internet to everyone.

8.5M

lifetime visitors to our online Learning Center, accessing more than 200 training videos, guides, and reports.

67M+

marketing materials have been sent at no cost to partners.

27M

PSAs aired valued at more than $255 million.

Ready for anything,

Internet Essentials from Comcast brings you affordable, high-speed home Internet. When you're connected, you're ready for anything.

Apply today if you qualify for programs like the National School Lunch Program, housing assistance, Medicaid, SNAP, SSI, and others.

2 months of free Internet Essentials service for new customers.

APPLY NOW »
InternetEssentials.com
1-855-846-8376

$9.95
Per Month + Tax after promotional pricing

No Term Contract
No Credit Check
Free Self Install Kit

Dale

CUSTOMER SPOTLIGHT

Dale learned about Internet Essentials from the Ed Snider Youth Hockey Foundation in Philadelphia while he was still in high school. When he and his family connected, the service benefited both Dale and his five brothers and sisters. Dale is in his sophomore year at Kutztown University of Pennsylvania.

EQUIPMENT

An Internet connection is only as good as the device through which it is accessed. That's why we offer the option to purchase a low-cost computer for less than $150. Internet Essentials customers can choose an Internet-ready laptop with a 1-year mail in warranty to get up and running.

We also know that innovations in technology happen every day, and we strive to bring those same innovations to all of our customers. Since 2011, we have made nine enhancements to the value of the service under the Internet Essentials program, including improving the quality and options of our computer offering.

25K

laptops personally donated
to the School District of Philadelphia
by the Roberts family.

130K computers provided

Comcast has provided 130,000 low-income people with affordable subsidized computers.

20K computers donated

Comcast has donated more than 20,000 Internet-ready devices to households and community-based organizations since 2015.

GIVEAWAY SPOTLIGHT

In an exciting moment of Comcast NBCUniversal synergy, we partnered with TODAY and Craig Melvin to pull off the biggest laptop and connectivity surprise giveaway in Internet Essentials' history. On September 18, 2020, we surprised the McKeesport Area High School and Founders Hall Middle School in Pennsylvania with 2,500 Dell Technologies laptops and Internet Essentials Opportunity Cards for 12 months of complimentary service—enough for every high school and middle school student, as well as the faculty and staff, to connect to school from home.

CUSTOMER SPOTLIGHT

At the start of the pandemic, LaJoy Johnson-Law knew her daughter's education would depend on having home Internet and the technology through which to access it. Since connecting to Internet Essentials, LaJoy has also used the service to access information and resources related to her daughter's special needs and to become a fierce community advocate herself. While her 2020 DC State Board of Education campaign run was unsuccessful, LaJoy remains committed to ensuring that all families are represented and all students have the opportunity to achieve greatness.

Elements of Success

Comcast is focused on shaping the future by driving innovation through technology—and staying connected to the communities we serve. These principles are core to our company and form the driving ethos of our community impact philosophy, which was first established by our founder, Ralph J. Roberts: when the communities we serve thrive, the company thrives as well. Empowering communities, supporting prosperity, and advocating and building skills for social inclusion and participation are essential to the program's success and to the success of the company as a whole.

EMPOWERING COMMUNITIES

Nothing we do in the Community Impact space has as much effect on our communities as the Internet Essentials program.

Partners and Ambassadors

The ten years of tremendous success we have had with the Internet Essentials program belongs to our internal and external partners—the communities we collaborate with and our employee volunteers, all of whom work tirelessly to build honest, meaningful, and long-lasting relationships that raise awareness for the program and drive participation.

tens of thousands
of community partners

3K+
current volunteer Ambassadors

20K
outreach engagements by Ambassadors since 2013

We have taken a consistent and integrated approach to work with government and elected officials, school districts, libraries, nonprofits, community-based organizations, and other partners to address the digital divide. Our community partners range from large national nonprofits like the Boys & Girls Clubs of America, the YMCA, the National Urban League, and UnidosUS, to hundreds of local nonprofits who not only help promote the program, but also form the bedrock of our digital literacy training efforts.

Our local Internet Essentials partnerships are built, in large part, on the relationships our employees have developed and fostered. Nonprofit partners are supported by a corps of volunteer Ambassadors who give their most valuable resource—time—to support their communities.

> " The work I do as an IE Ambassador is not only a mission in helping to connect low-income families to affordable Internet, but also a personal journey in reconnecting with my roots. As a Chinese immigrant raised in a low-income family, I know first-hand what education and Internet means to these families.
>
> Minzhi 'Jay' Chen, QA Lead, Xfinity Mobile

Minzhi 'Jay' Chen, Amrita Pannu, Justin Van Patten, and Jeanette Walton were selected as 2020 Internet Essentials Ambassadors of the Year for their commitment to advancing digital equity in their communities.

Internet Essentials Partnership Program

The Internet Essentials Partnership Program (IEPP) is designed to help connect large numbers of K-12 students at a critical time. The program provides the opportunity for schools, school districts, government entities, foundations, and other organizations to pay for students' and their families' broadband Internet service at home. Creating strong and innovative public-private partnerships enables entire communities to work together to coordinate funding for a few months or a few years. This sponsorship program enables more families to access all the benefits Internet Essentials has to offer, while allowing community-based partners to use their expertise to empower families to take on the challenges of today while preparing for the future.

IEPP began as a pilot in 2019, based on requests and feedback from partners. When schools around the country shifted to a virtual environment due to COVID-19, we were able to expedite formalization of the program in order to meet the extraordinary need.

Featured Partners

CHICAGO CONNECTED

ATLANTA PUBLIC SCHOOLS

Sacramento City Unified School District

PHL ConnectED

Pittsburgh Public Schools

PPS

Lift Zones

Working with our network of thousands of non-profit partners and city leaders, we are creating safe spaces for students and families to connect and learn. Together, we are creating more than 1,000 Lift Zones in community centers to provide internet connectivity and a safe place for students and families to get online.

Lift Zone at the
Boys & Girls Club
in Miami

LIFT ZONE
FROM COMCAST
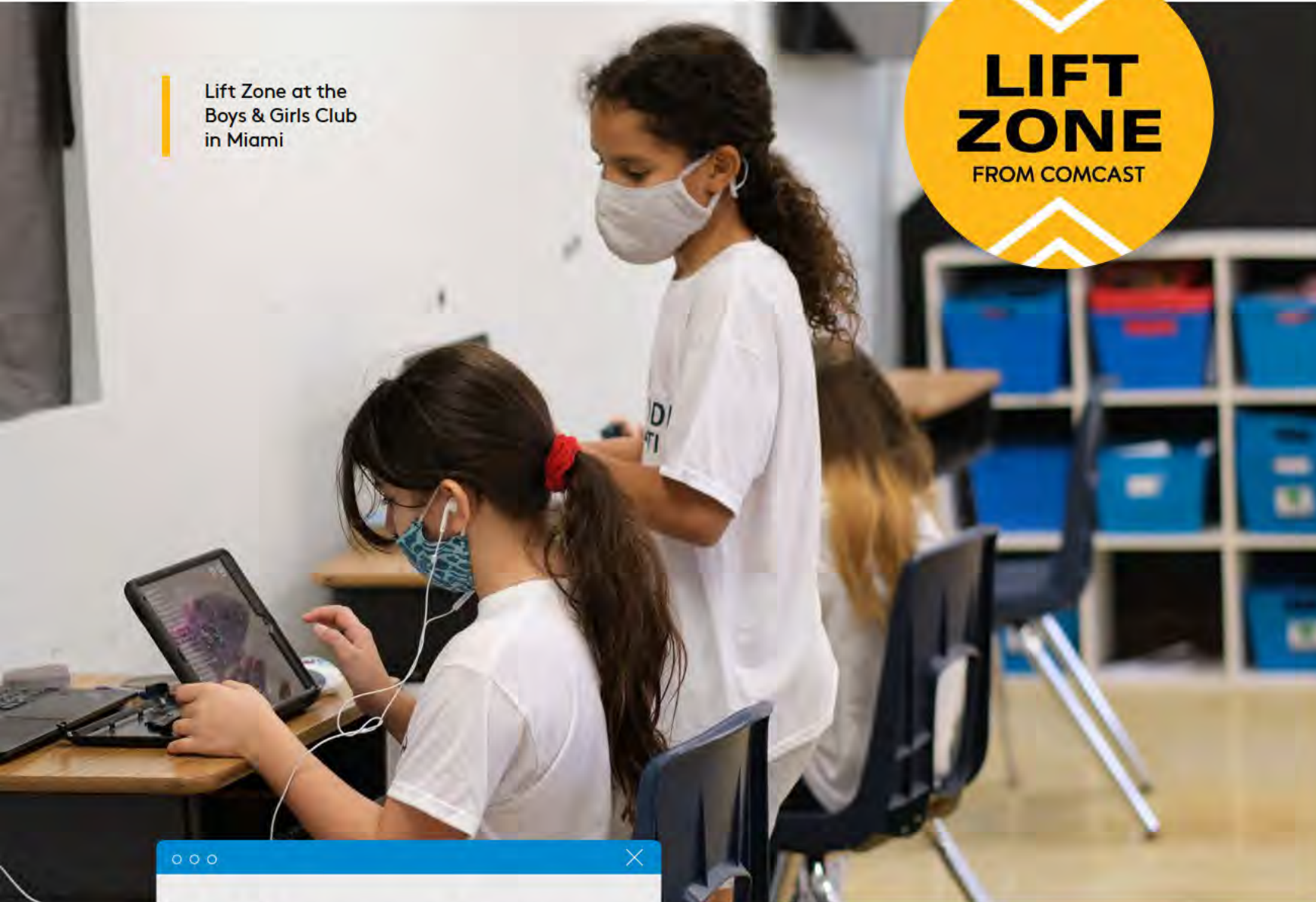
25M homework hours

In 2021 alone, WiFi-enabled Lift Zones across the country will allow students to complete over 25 million hours of homework and remote learning.

1K+

Lift Zones to be operational by end of 2021.

SUPPORTING ECONOMIC PROSPERITY

By increasing digital adoption rates, we will improve educational achievement and workforce preparedness—and that will help generate greater economic growth in which all of our citizens can share.

8%+

increase in the employment rate among households who subscribe to Internet Essentials.*

$1,385

annual increase in earnings for households who subscribe to Internet Essentials.*

BUILDING SKILLS & ADVOCATING FOR SOCIAL INCLUSION & PARTICIPATION

With social and civic engagement activities increasingly moving online, it's vital that everyone have an opportunity to participate and a platform to be heard.

2020 Census Awareness Campaign

Comcast partnered with the U.S. Census Bureau and Telemundo on a campaign to encourage Americans to participate in the first ever digital census.

$120K donated toward the cost of print materials for hundreds of Census Partner Toolkits, tens of thousands of direct mailers that targeted hard-to-count communities, and doorhangers for field operations.
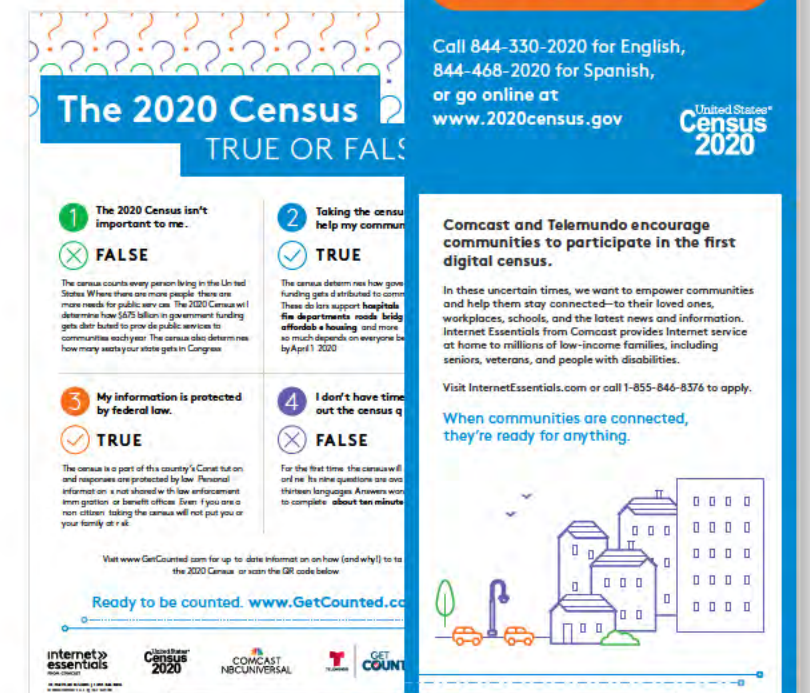
*Zuo, G., 2021 (In Press). "Wired and Hired: Employment Effects of Subsidized Broadband Internet for Low-Income Americans." To be published in *American Economic Journal: Economic Policy.*

Program Impact

Our work toward digital equity begins by connecting the unconnected, but it doesn't end there. Through our community partnerships to support educational success, build skills for a digital economy, access healthcare, and promote online safety, we are deeply committed to supporting positive change in our customers' lives.

EDUCATION

COVID-19 has more fully exposed systemic inequities across the board. Prior to the pandemic, we understood that access to an Internet connection was fundamental to the success of students and families around the country. As we started the 2020-2021 school year, many districts and states did not have students return to any form of in-person learning, while others returned with a hybrid approach. Because of existing digital inequities, combined with the global pandemic, low-income students suffer the most without a home broadband connection.

That's why in 2020, we launched two new initiatives: the Internet Essentials Partnership Program, allowing for a family's service to be sponsored by a third-party organization; and Lift Zones, 1,000+ WiFi-connected safe spaces in which students and their families can connect to the Internet. Our goal is to have launched all 1,000 of our Lift Zones by the end of 2021.

90%+

of parents surveyed say the service has a positive impact on their child's grades.*

5M

low-income students connected to the Internet via Internet Essentials.

*Comcast Annual Internet Essentials Customer Survey and internal application data
**Foundational Digital Skills for Career Progress*, Ian Hecker and Pamela Loprest, Urban Institute, August 2019

WORKFORCE

Prior to the COVID-19 crisis, there was a clear and pressing need to prepare the workforce for digitization. With the majority of education and business moving online, it is more important than ever to develop a workforce that is able to respond quickly to rapid shifts in a fast-evolving economy.

Workers who lack the digital skills required to create a resume, write an email, or apply for a job online face an ever-shrinking job market. The increasingly technological nature of work means that a baseline of digital skills is necessary to thrive in today's workplace—including in occupations that have not traditionally required technology, like home health aides or welders.**

Increasing digital adoption rates will improve both educational achievement and workforce preparedness, and that will help generate greater economic growth in which all Americans can share.

76%

of customers feel their service has already helped someone in the household locate or obtain employment.*

78%

of households say the service has helped them learn a new skill.*

CUSTOMER SPOTLIGHT

Everel and her family first learned about Internet Essentials from a community-based organization where her children received after-school care while she searched for employment. After receiving a certification in health management, Everel landed a job at a Baltimore hospital. She currently works and serves on the board of the same community organization where she learned about the program.

HEALTHCARE

Before COVID-19, telehealth was a less burdensome option for doctor visits, particularly for people or families managing multiple work schedules or struggling with reliable childcare and transportation. Opting for a telehealth appointment can reduce the total time spent on a doctor's visit from two hours to 15 minutes* and eliminate a number of the logistical barriers, especially for people with disabilities and those who have limited transportation.

The COVID-19 pandemic has led to a massive shift in healthcare delivery. Healthcare systems and physician offices have accelerated digital health solutions at record speed, making telehealth a critical component of flattening the COVID-19 curve.
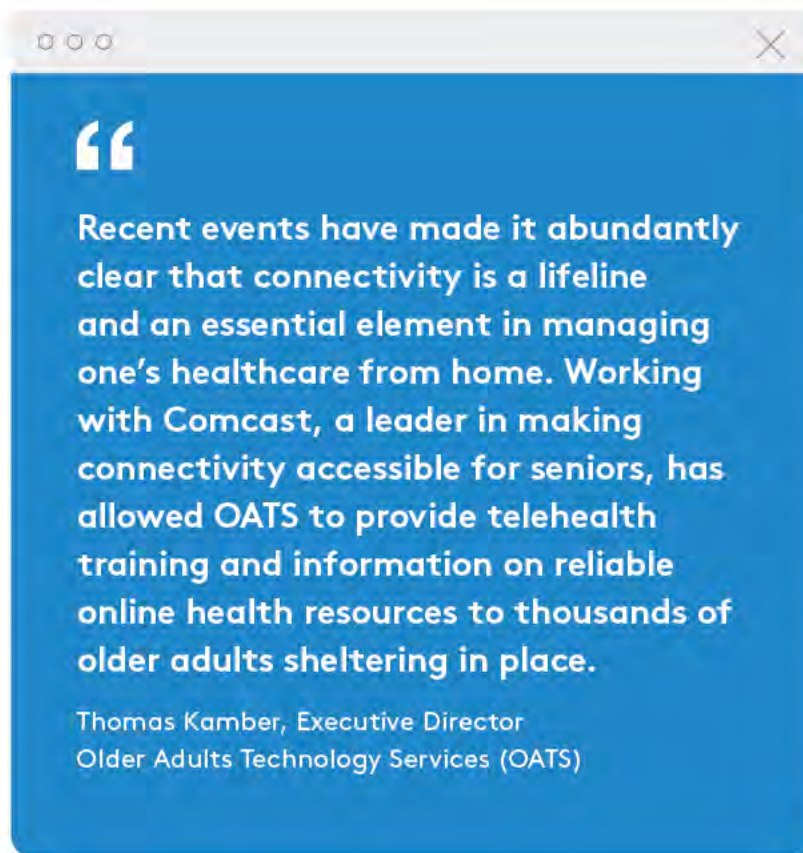
As a result, telehealth is no longer a convenient option, but an indispensable option.

" Recent events have made it abundantly clear that connectivity is a lifeline and an essential element in managing one's healthcare from home. Working with Comcast, a leader in making connectivity accessible for seniors, has allowed OATS to provide telehealth training and information on reliable online health resources to thousands of older adults sheltering in place.

Thomas Kamber, Executive Director
Older Adults Technology Services (OATS)

88%

of customers say the service has helped them remain connected to healthcare during COVID-19.

Of those who experienced difficulty getting medical treatment,

90%

of customers say that having Internet service at home helped them access healthcare services.

*Ray, K.N., Chari, A.V., Engberg, J., Bertolet, M. and Mehrotra, A., 2015. *Opportunity Costs of Ambulatory Medical Care in the United States. American Journal of Managed Care,* 21(8), pp.567-574.

ONLINE SAFETY

With the COVID-19 crisis shifting so much of our lives to the virtual world, online safety concerns for at-risk populations, like children, seniors, and the underserved, are becoming even more pronounced.

Our company first launched its national Online Safety initiative in the fall of 2017, when we announced an Internet Essentials partnership with Pennsylvania Attorney General Josh Shapiro to educate seniors, parents, and children about how to stay safe online. In 2018, we built on this work by entering into an ambitious partnership with the Conference of Western Attorneys General (CWAG) to further promote Internet safety for seniors and families.

Partnering with **more than 20 State Attorneys General**, Common Sense Media, ConnectSafely, FOSI (Family Online Safety Institute), and WGBH, we have delivered a comprehensive Online Safety Toolkit for law enforcement officials, provided significant investments in cybersecurity training classes, produced public service announcements, and distributed tens of thousands of online safety brochures for seniors and parents.

50+

Online Safety Toolkits delivered to Attorneys General across the country.

7M+

views in 2020 of WGBH PBS KIDS "Search It Up", 2021 winner of NETA's Annual Public Media Awards for Best Short Form.

The Online Safety Toolkit provides chief law enforcement officers with up-to-date materials to help spread awareness about the importance of online safety and digital citizenship, and contains information about the latest cybersecurity pitfalls.

In collaboration with Internet Essentials, WGBH produced, **"Search It Up" A Mini-Series About Kids and Technology**, featuring nine unscripted, live-action, short-form videos where children explore online safety and best practices for Internet use. **Click here** to view.

What's Next

In 2020, Comcast's Internet Essentials launched the Impact summits, a series of national and regional virtual convenings, bringing thought leaders, public officials, subject matter experts, and nonprofit partners together to discuss digital equity and the challenges related to COVID-19.

The first in a series of virtual convenings, the Impact Summit in March 2020 amassed the knowledge, experience, and skills of our partners to drive greater impact in the communities we serve. The event focused on three areas—education, workforce development, and healthcare—for Internet Essentials to understand its impact and refine its outreach and partnership strategies.

Our second event, the Impact on Education Summit, held in the fall of 2020, focused on discussing and disseminating best practices for communities across the country to ensure every student, teacher, and school has the tools necessary to create a high-quality online learning experience. Soon after, a series of virtual regional summits were held which also focused on best practices for communities across the country such as K-12 education, veterans, telemedicine, and seniors.

We plan to continue in 2021 with events that explore our efforts to bridge the digital divide in education as well as in other areas including online safety and workforce development.

KEY INSIGHTS WE LEARNED

Click here to download our **Impact Summit Recap Report.**

1 One of the most impactful roles Comcast can play is as a convener for business, government, and nonprofits, all working to close the digital divide.

2 Connectivity is seen by our partners as only a part of a multi-pronged solution to economic mobility, driving education equity, improving healthcare outcomes, and generating innovation.

3 Even as Internet Essentials expands its scope and reach, we must continue to build and strengthen our partnerships and constantly refine our strategy to ensure the possibilities of the Internet are available to as many people as possible.

IMPACT SUMMIT '20
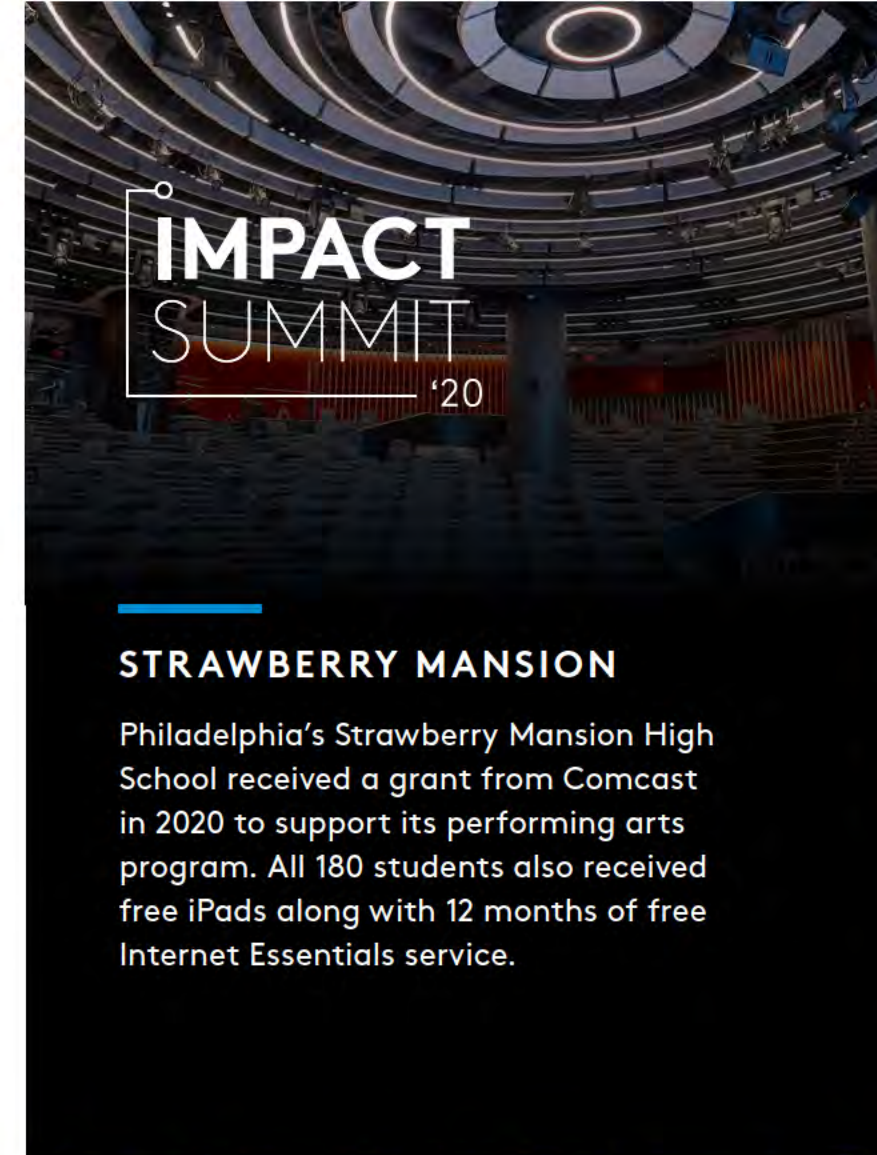
STRAWBERRY MANSION

Philadelphia's Strawberry Mansion High School received a grant from Comcast in 2020 to support its performing arts program. All 180 students also received free iPads along with 12 months of free Internet Essentials service.

IMPACT ON EDUCATION

MAURICE

Maurice Douyon, Internet Essentials customer and Florida Community Christian freshman, received a scholarship from Comcast in 2020 to help him achieve his academic dreams.

Commitment to Digital Equity

Since the program's inception a decade ago Interne Ess   ial ha connected more than 10 million people across the c un   to ow- os high-speed Internet at home, and provided free digital kills tr i ing and subsidized devices. However, our commitment to   ddressing digital inequities in underrepresented communities extends beyond this work. That is why we are pledging to invest more than $1 billion over the next 10 years to empower an additional 50 million low-income Americans with the tools and resources necessary to succeed in today's digital world. We will continue working hand-in-hand with our network of community partners across the country as we accelerate our goals to innovate and expand upon the Internet Essentials program.

> "
> **Advancing digital equity has been core to our company's DNA and it's an issue we've recommitted to during this critical time. Our mission is to create a more connected and equitable society. That begins with ensuring that every student—and adult—has access to the training and education resources they need to build a brighter future.**
>
> Brian L. Roberts
> Chairman & CEO
> Comcast Corporation

$1B

committed by Comcast over the next 10 years to the critical work of advancing digital equity.

50M

Americans empowered to take advantage of a world of knowledge and opportunity through our initiatives by 2031.
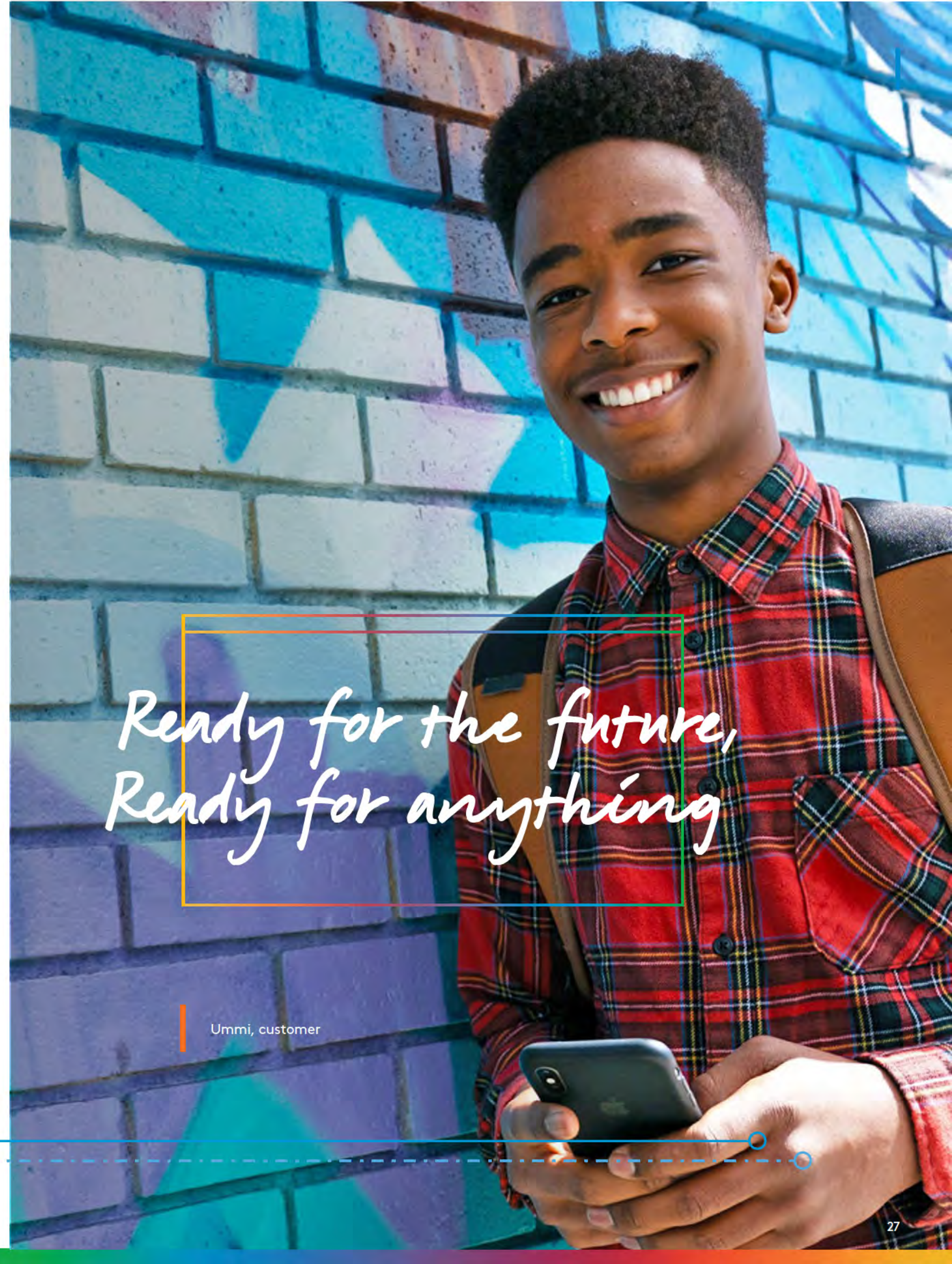
Ready for the future, Ready for anything

Ummi, customer

Lift Zone at the
Boys & Girls Club
in Miami

1-855-8-INTERNET (1-855-846-8376)
1-855-SOLO-995 (1-855-765-6995)
InternetEssentials.com | es.InternetEssentials.com

10 YEARS internet essentials   COMCAST

BUILDING A MORE DIVERSE, EQUITABLE AND INCLUSIVE SOCIETY

We are Committed to Advancing Diversity, from our Workforce and Board Leadership to our Programming and Community Investments

Comcast NBCUniversal embraces diversity of background, culture, and experience throughout every aspect of our business — from the people who power our teams to the products we create, the stories we tell, and the organizations we support. We believe that a diverse, equitable, and inclusive company is also a more innovative and successful one.

Our Multi-Year $100 Million Plan to Advance Social Justice

In the wake of growing public focus on issues of racial justice and equality in 2020, we pledged an additional $100 million to fight injustice and inequality. We also announced Dalila Wilson-Scott as our new Chief Diversity Officer to spearhead our Diversity, Equity, and Inclusion initiatives. We are partnering with, and providing significant grants to, organizations working to promote equity and inclusion. We are also accelerating our internal efforts in all areas of Diversity, Equity & Inclusion — including employee advancement, hiring, and training as well as highlighting underrepresented voices on our media platforms. We continue to deepen our long-standing commitment to promoting digital equity and supporting small businesses owned by people of color that have been affected by extended closures in the wake of COVID-19.

Our Longstanding Commitment to Diversity, Equity & Inclusion

Our company-wide **Diversity, Equity & Inclusion (DE&I)** initiatives are embedded in our business and culture and are shaped by our close and long-standing partnerships with many of the nation's leading civil rights organizations. Further, we commit to measurable goals in our board representation and governance, our programming, workforce, supplier diversity, and our community investment.

We also work in close partnership with our **Joint Diversity Advisory Council (JDC)**, which we founded a decade ago and which is composed of civil rights and political leaders representing the African American, Asian Pacific American, Hispanic, Native American, LGBTQ, military communities, women, and people with disabilities. These leaders monitor our progress and provide counsel on our DE&I initiatives. Nearly a decade after its founding, the JDC remains the largest external diversity council in corporate America, by a large margin.

Recognized as One of America's Most Inclusive Employers

Fortune: One of America's 20 Best Employers for Diversity in 2020

Fortune: One of America's 25 Best Large Workplaces for Women in 2020 and one of America's 30 Best Workplaces for Diversity in 2019

DiversityInc: #7 Company for Diversity in 2020

People Magazine: Named to "50 Companies that Care" list for the 3rd straight year in 2020

Human Rights Campaign: Received a score of 100 for "Best Places to Work for LGBTQ Equality" in 2020

Disability Equality Index: Received a score of 100 for "Best Places to Work for Disability Inclusion" in 2020

Hispanic Association of Corporate Responsibility: Recognized as a "5-Star Company" on the 2020 Corporate Inclusion Index

Military Times: #1 Ranked Company on MT's "Best for Vets: Employers" 2020 List

Building a Diverse and Inclusive Workforce

We are proud that our workforce composition reflects the diversity of the communities we serve. In 2019, 62% of our workforce and 71% of new hires were women or people of color. Currently, 50% of our board of directors are women or people of color.

Women | **People of Color**
- ■ African American ■ Asian American
- ■ Hispanic ■ 2+ Races ■ Native American

OVERALL WORKFORCE YEAR-END (YE) 2019[1]

Women ▾ | **People of Color[2]** ▾

Total
- Women: **35%** — **+18%** increase in number of women in the overall workforce since YE 2010
- People of Color: **44%** — 19% 7% 15% 3% <1% — **+30%** increase in number of people of color in the overall workforce since YE 2010

New Hires
- Women: **41%**
- People of Color: **54%** — 25% 9% 15% 6% <1%

GOVERNANCE

Our commitment to diversity starts at the top, with our Board of Directors. The diversity of our Board has nearly tripled since YE 2010.

BOARD DIVERSITY[4]

50% YE 2020 — 15% YE 2010

+160%[5] increase in percentage of women and people of color on the Board since YE 2010

LEADERSHIP YE 2019

Executive Leadership Team (ELT)[3]
- Women: **40%** — **+52%** increase in number of women in ELT since YE 2011
- People of Color: **20%** — 7% 7% 4% 2% 1% — **+94%** increase in number of people of color in ELT since YE 2011

Vice Presidents & Above
- Women: **40%** — **+78%** increase in number of VP+ women since YE 2010
- People of Color: **22%** — 5% 7% 8% 2% <1% — **+110%** increase in number of VP+ people of color since YE 2010

Directors
- Women: **41%** — **+84%** increase in number of women at the director level since YE 2010
- People of Color: **27%** — 6% 11% 7% 2% <1% — **+147%** increase in number of people of color at the director level since YE 2010

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1   Workforce metrics are reflective of our U.S. full-time employees.
2   Ethnic diversity numbers may not sum to total due to rounding.
3   Our Executive Leadership Team includes the CEOs and their first- and second-level direct reports
4   "Diversity" data refer to people of color and women, without double-counting women of color.
5   Throughout this document, changes in percentage representation refer to the growth rate of percentage representation between a starting point and an ending point. For example, an increase from 10% to 15% is a growth rate of +50%.

A Commitment to Diverse Storytelling Across Our Platforms

We lead the entertainment industry in empowering diverse content creators and using our storytelling platforms to deliver programming that represents the audiences we serve and features stories and diverse casts that reflect real life experiences in diverse communities. We carry more than 100 diverse networks on Xfinity platforms, and we offered more than 24,000 hours of diverse content on our on-demand and online platforms in 2019.

Further, we also curate easy-to-browse special content collections on our X1 platform featuring thousands of hours of culturally relevant programming.

Recent X1 content collections include:

- **Black Voices. Black Stories.** — A collection of bold movies, documentaries, TV series, and specials reflecting the country's long history of racial discrimination and injustice, designed to educate and drive awareness.

- **Echando Pa'lante Juntos** — Thousands of hours of programming designed to amplify and celebrate Latinx voices and Hispanic culture, history, and community.

- **Native American Heritage Month Content Collection** — Movies, programs, and documentaries that pay tribute to Native American culture and history, including popular Native American dramas, thrillers, and westerns.

Additionally, this year we've entered into multiple content partnerships with diverse content creators including Lebron James, Ava DuVernay, Sean Combs, Justin Lin, and Tanya Saracho.

Expanding Diversity in Front of and Behind the Camera

At Comcast NBCUniversal, we take pride in creating opportunities in the media industry for women and people of diverse backgrounds and experiences — both in front of and behind the camera.

NBCUNIVERSAL DIVERSITY YE 2019[6]

On Air	Women	% CHANGE	People of Color	% CHANGE
Film	39%	+46%	37%	+155%
Entertainment & Lifestyle Group[7]	42%	−8%	34%	+15%
NBC Primetime Scripted Series	43%	+5%	39%	+8%
News Assets[8]	51%	+6%	49%	+40%

Behind the Camera	Women	% CHANGE	People of Color	% CHANGE
Film	30%	+216%	23%	+406%
Entertainment & Lifestyle Group[7]	42%	+67%	25%	+79%
NBC Primetime Scripted Series	35%	+48%	25%	+61%
News Assets[8]	58%	+11%	27%	+34%
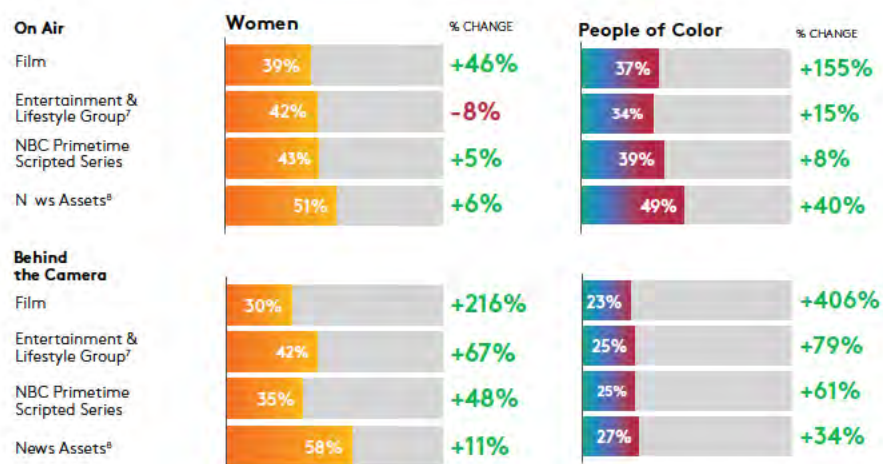
** Increases and decreases next to each graph represent the growth rate of percentage representation. For women the numbers reflect the growth rate since YE 2015; for people of color they reflect the growth rate since YE 2010.
[7] Entertainment & Lifestyle Group includes USA and Syfy.
[8] News assets includes NBC News, MSNBC, CNBC, and NBC-owned stations, but does not include Telemundo Network News or Telemundo stations.

Addressing Digital Inequities

Our **Internet Essentials** broadband adoption initiative, launched in 2011, has connected more than 8 million low-income individuals to residential broadband — more than 90 percent of whom were not previously connected. The NAACP has hailed Internet Essentials as "the largest experiment ever attempted to close the digital divide."

In response to the unprecedented COVID-19 emergency, we've built on the success of Internet Essentials to launch the **Internet Essentials Partnership Program (IEPP)**, a new initiative that works with school districts, local government, and philanthropic partners to get unconnected students online at home.

In 2020, Comcast also launched **Lift Zones**, a cooperative effort with local community and government leaders to open 1,000 WiFi-connected facilities in community centers nationwide. These centers offer students free connectivity, digital literacy training, and support for online learning.

Since September, we've announced new partnerships with organizations that share our commitment to creating a more connected and equitable world, helping to provide critical skills training to youth and adults to ensure everyone has the opportunity to succeed. Examples include:

- **Saga Education:** We partner with Saga Education to bring their world-class tutoring online and invested in the organization to help expand their reach and impact.

- **Coded by Kids:** We support Coded by Kids, whose founder and CEO Sylvester Mobley and team recently launched OnE Philadelphia — a new initiative focused on transforming the city into a pipeline for high-level tech talent and tech startup leaders in communities of color in Philadelphia.

Building a Diverse Supply Chain

Since 2011, Comcast NBCUniversal has spent over $25 billion with diverse Tier 1 and Tier 2 businesses owned by women, people of color, veterans, individuals with disabilities, and members of the LGBTQ community members.

In that time, we've quadrupled our annual spending with diverse Tier I suppliers (vendors). We've also increased our spending with Tier II suppliers (subcontractors) by 221% since launching our Tier II program in 2012. We're proud to work with more than 3,000 diverse suppliers.

Comcast NBCUniversal Supplier Diversity at a Glance

$22.7B
spent with diverse Tier I suppliers since 2011

$2.9B
spent with diverse Tier II suppliers since 2012

3K+
diverse suppliers
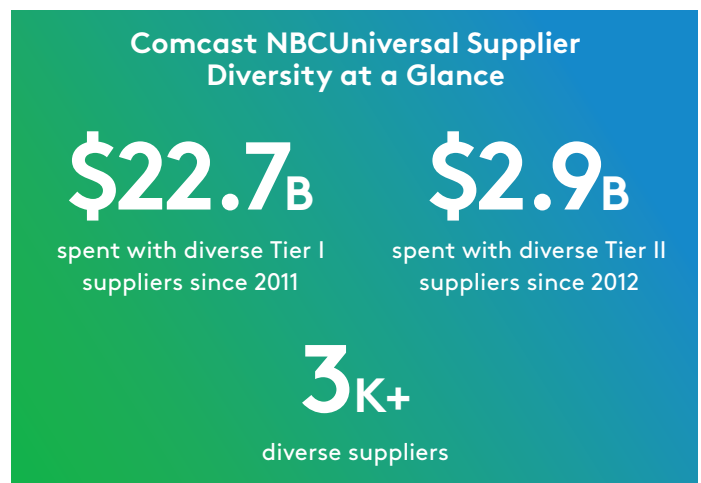
Comcast RISE: Helping BIPOC-Owned Businesses Impacted By Covid

The COVID-19 pandemic decimated many minority-owned businesses. The National Bureau of Economic Research reported that just between February and April 2020, the number of active Black-owned businesses declined by 41%, Latinx-owned businesses declined by 32%, and Asian-owned businesses dropped by 25%, versus just 21% for the general population.

We recently announced Comcast RISE, a multi-year initiative to help thousands of small businesses impacted by COVID-19. Beginning in November 2020, all Black, Indigenous, and People of Color (BIPOC) business owners will be eligible to apply for Comcast RISE.

Through this initiative, we will give meaningful support to the small businesses that are shaping our communities, including:

- Advertising and marketing consultations
- Production of a 30-second TV commercial
- A 90-day TV advertising campaign
- Computer equipment and Internet, voice, and cybersecurity services for 12 months
- Monetary Grants

For more information:

- [Comcast's 2020 Values Report](#)
- [Comcast Values: Diversity, Equity & Inclusion](#)
- [Comcast CEO Brian Roberts' open letter announcing our new $100 million commitment to fight inequality and injustice](#)

Richmond, Chesterfield & Caroline County

BUNDLED PACKAGES[1,2]

QUAD PLAY PACKAGES
QUAD PLAY PACKAGE PRICING BELOW IS ADDITIONAL TO TRIPLE PLAY PACKAGE PRICING

with Xfinity Home Security add[24]	$30.00
with Xfinity Home Security Plus add[25]	$40.00

TRIPLE PLAY PACKAGES[40]

Standard+ More
Includes Limited Basic, Expanded Basic and HD programming for primary outlet, 20 Hour DVR Service, Performance Pro Internet and Unlimited Voice

	$130.99
- with Xfinity Mobile save	$-10.00
- with DVR Service upgrade add	$10.00
- with Premium DVR Service upgrade add	$20.00
SurePrice[35]	$124.99
- with Gigabit Pro Internet upgrade add[36]	$235.00
- with Blast! Internet upgrade add	$20.00
- with Extreme Pro Internet upgrade add	$25.00
- with Gigabit Internet upgrade add	$30.00

Select+ More
Includes Limited Basic, Expanded Basic, Digital Preferred Tier and HD programming for primary outlet, DVR Service, Extreme Pro Internet and Unlimited Voice

	$159.99
- with Xfinity Mobile save	$-10.00
- with Premium DVR Service upgrade add	$10.00
SurePrice[35]	$134.99
- with Gigabit Pro Internet upgrade add[36]	$235.00
- with Gigabit Internet upgrade add	$30.00

Signature+ More
Includes Limited Basic, Expanded Basic, Digital Preferred Tier, Epix, and HD programming for primary outlet, Premium DVR Service, Gigabit Internet, Unlimited Voice and Netflix Standard HD Plan

	$189.99
- with Xfinity Mobile save	$-10.00
SurePrice[35]	$164.99
- with Gigabit Pro Internet upgrade add[36]	$235.00
- with Netflix Premium UHD Plan upgrade add	$4.00

Super+ More
Includes Limited Basic, Expanded Basic, Digital Preferred Tier, Epix, HBO Max, Showtime, TMC, More Sports & Entertainment Package and HD programming for primary outlet, Premium DVR Service, Gigabit Internet, Unlimited Voice and Netflix Standard HD Plan

	$199.99
- with Xfinity Mobile save	$-10.00
SurePrice[35]	$184.99
- with Gigabit Pro Internet upgrade add[36]	$235.00
- with Netflix Premium UHD Plan upgrade add	$4.00

DOUBLE PLAY PACKAGES[34]

Choice Double Play[37]
Includes Choice Limited TV and Performance Internet

	$89.99
- with DVR Service upgrade add	$10.00
- with Premium DVR Service upgrade add	$20.00
- with Performance Pro Internet upgrade add	$15.00
- with Blast! Internet upgrade add	$20.00
- with Extreme Pro Internet upgrade add	$25.00
- with Gigabit Internet upgrade add	$30.00
- with Gigabit Pro Internet upgrade add[36]	$235.00

Standard+
Includes Limited Basic, Expanded Basic and HD programming for primary outlet, 20 Hour DVR Service, and Performance Pro Internet

	$110.99
- with DVR Service upgrade add	$10.00
- with Premium DVR Service upgrade add	$20.00
- with Blast! Internet upgrade add	$20.00
- with Extreme Pro Internet upgrade add	$25.00
- with Gigabit Internet upgrade add	$30.00
- with Gigabit Pro Internet upgrade add[36]	$235.00

Select+
Includes Limited Basic, Expanded Basic, Digital Preferred Tier and HD programming for primary outlet, 20 Hour DVR Service, and Blast! Internet

	$139.99
- with DVR Service upgrade add	$10.00
- with Premium DVR Service upgrade add	$20.00
- with Extreme Pro Internet upgrade add	$25.00
- with Gigabit Internet upgrade add	$30.00
- with Gigabit Pro Internet upgrade add[36]	$235.00

Signature+
Includes Limited Basic, Expanded Basic, Digital Preferred Tier, Epix, and HD programming for primary outlet, DVR Service, Extreme Pro Internet, and Netflix Standard HD Plan

	$169.99
- with Premium DVR Service upgrade add	$10.00
- with Netflix Premium UHD Plan upgrade add	$4.00
- with Gigabit Internet upgrade add	$30.00
- with Gigabit Pro Internet upgrade add[36]	$235.00

Super+
Includes Limited Basic, Expanded Basic, Digital Preferred Tier, Epix, HBO Max, Showtime, TMC and HD programming for primary outlet, DVR Service, Extreme Pro Internet, and Netflix Standard HD Plan

	$189.99
- with Premium DVR Service upgrade add	$10.00
- with Netflix Premium UHD Plan upgrade add	$4.00
- with Gigabit Internet upgrade add	$30.00
- with Gigabit Pro Internet upgrade add[36]	$235.00

XFINITY TV[1]

BASIC SERVICES

Limited Basic[7]	$22.95
Broadcast TV Fee[19]	$17.10
Expanded Basic[9] Includes Kids & Family, Entertainment and Sports & News	$44.32

XFINITY TV SERVICES

Choice Limited TV[31] Includes Limited Basic, Streampix, 10 hours DVR Service and HD programming	$30.00
Choice TV[32] Includes Limited Basic, Streampix, 20 hours DVR Service, HD programming and Broadcast TV Fee	$30.00
- with TV Box	$37.50

Genre Packs[23] Choose up to 2

Kids & Family Includes kid and family-friendly channels including Disney Channel, Nickelodeon and Universal Kids	$10.00
Entertainment Includes entertainment channels including A&E, AMC, Bravo, Food Network, FX, TNT and VH1	$15.00
Sports & News Includes sports and news channels including CNBC, CNN, ESPN, Golf, MSNBC and NBC Sports	$30.00
Extra Includes Limited Basic, Expanded Basic, access to Pay-Per-View and On Demand programming and Music Choice	$67.27
Digital Preferred Tier[11] Includes over 65 channels including CBS College Sports, Destination America, Disney XD and Science Channel	$17.95

*Refer to the last page for additional information. For information about Xfinity policies and terms of service, go to **xfinity.com/policies**.*

Digital Preferred Tier plus One Premium Includes Digital Preferred Tier and choice of Showtime, Cinemax, or The Movie Channel	$29.95
Digital Preferred Tier with HBO Max Includes Digital Preferred Tier and HBO Max	$32.94
Digital Premier Tier Includes Digital Preferred Tier, HBO Max, Showtime, Epix, Hitz and The Movie Channel	$64.95
More Sports & Entertainment Package[11] Includes over 15 channels including NFL Red Zone, ESPNews and TCM	$9.95
Deportes[9] Includes over 6 deportes channels including ESPN Deportes, FOX Deportes and NBC Universo	$5.00
Xfinity TV Latino [9] Includes over 50 channels of Spanish language programming	$17.95
With Choice Double Play or Standard, Select, Signature, Super Double or Triple Play Packages	$10.00
HBO Max[9]	$14.99
HBO[9]	$15.00
Showtime[9]	$12.00
Starz[9]	$8.99
Cinemax[9]	$12.00
The Movie Channel[9]	$12.00
Epix[22]	$5.99
Playboy[9]	$15.00
HD Technology Fee[8]	$9.95
DVR Service[30]	$10.00
Premium DVR Service[38]	$20.00
Service to Additional TV with TV Adapter[10]	$7.50

INTERNATIONAL SELECTIONS[27]

ART: Arabic	$9.99
TV Globo: Brazilian	$19.99
Brazilian 2 Pack Includes TV Globo and SporTV	$24.99
Brazilian 4 Pack Includes TV Globo, SporTV, Band Internacional and Record TV	$34.99
Mandarin 2 Pack Includes Phoenix Info News and Phoenix North America	$6.99
Mandarin 4 Pack Includes CTI Zhong Tian, CCTV4, Phoenix Info News and Phoenix North America	$19.99
Filipino 2 Pack Includes GMA Pinoy w/ GMA Video On Demand and GMA Life	$14.99
Filipino 3 Pack Includes GMA Pinoy w/ GMA Video On Demand, GMA Life and TFC	$22.99
TV5MONDE: French With Cinema On Demand	$9.99
DW Deutsche +: German	$9.99
Antenna: Greek	$14.99
The Israeli Network	$19.99
Rai Italia: Italian	$9.99
Italian 2 Pack Includes Rai Italia and Mediaset	$14.99
TV JAPAN	$24.99
SIC: Portuguese	$9.99
Portuguese 2 Pack Includes RTPi and SIC	$14.99
Impact TV: Russian Add-on With any International package	$6.99
Russian 2 Pack Includes Channel One Russia and NTV America	$14.99
Russian 4 Pack Includes Channel One Russia, RTN, TV1000 Russian Kino and NTV America	$26.99
Russian 5 Pack Includes Channel One Russia, RTVi, NTV America, RTR-Planeta and Rossiya 24	$26.99
Russian 8 Pack Includes Channel One Russia, RTN, RTVI, TV1000 Russian Kino, NTV America, RTR-Planeta, Rossiya 24 and CTC	$34.99
Willow: Cricket Add-on With any International package	$6.99
Willow: Cricket	$14.99
Zee TV: Hindi	$14.99
SET: Hindi	$14.99
Hindi 2 Pack Includes Zee TV and SET	$24.99
Hindi Pack Includes Zee TV, SET, TV Asia and NDTV 24x7	$29.99
Hindi Plus Pack Includes Zee TV, SET, TV Asia, NDTV 24x7, Eros Now and Willow	$39.99

SBTN: Vietnamese	$14.99
TVB Jade: Cantonese	$10.99
Record TV: Brazilian	$14.99
ABP News: Hindi	$7.99
TFC: Filipino	$11.99

PAY-PER-VIEW AND ON DEMAND SUBSCRIPTION SERVICES

Eros Now On Demand[29]	$12.99
Eros Now On Demand[29] w/a South Asian international selection	$9.99
here! TV On Demand[29]	$7.99
Filipino On Demand[29]	$7.99
Filipino On Demand[29] w/a Filipino international selection	$5.99
The Jewish Channel On Demand[29]	$6.99
Kidstream On Demand[29]	$4.99
History Vault On Demand[29]	$4.99
Gaiam TV Fit & Yoga On Demand[29]	$7.99
Grokker Yoga Fitness On Demand[29]	$6.99
UP Faith and Family On Demand[29]	$5.99
Lifetime Movie Club On Demand[29]	$3.99
Anime Network On Demand[29]	$6.99
Stingray Karaoke On Demand[29]	$6.99
DOGTV On Demand[29]	$4.99
Gaia On Demand[29]	$11.99
AMC + On Demand[29]	$6.99
Stingray Classica On Demand[29]	$6.99
TumbleBooksTV On Demand[29]	$4.99
FitFusion On Demand[29]	$6.99
CuriosityStream On Demand[29]	$2.99
PlayKids On Demand[21]	$6.99
MagellanTV History On Demand[21]	$5.99
Disney Story Central On Demand[29]	$4.99
Acorn TV On Demand[29]	$5.99
Daily Burn On Demand[21]	$14.99
Xive TV On Demand[21]	$4.99
Quark On Demand[21]	$4.99
Stephens Drum Shed On Demand[21]	$4.99
Pro Guitar Lessons On Demand[21]	$4.99
Touchfit TV On Demand[21]	$4.99
Lion Mountain TV On Demand[21]	$3.99
Craftsy On Demand[29]	$7.99
WE tv + On Demand[29]	$5.99
The Great Courses Signature On Demand[21]	$7.99
DJAZZ On Demand[21]	$6.99
Pantaya On Demand[29]	$5.99
Outside TV Features On Demand[21]	$4.99
The Reading Corner On Demand[21]	$3.99
Hopster On Demand[21]	$6.99
Ride TV On Demand[21]	$4.99
Brown Sugar On Demand[21]	$3.99
Echoboom Sports On Demand[21]	$5.99
Stingray Qello On Demand[21]	$7.99
GOLFPASS On Demand[21]	$4.99
Hallmark Movies Now On Demand[21]	$5.99
Dove Channel On Demand[21]	$4.99
Kocowa On Demand[21]	$6.99
WHAM On Demand[21]	$2.99

Gravitas Movies On Demand[21]	$4.99
MHz Choice On Demand[21]	$7.99
Hi-YAH! On Demand[21]	$2.99
True Royalty On Demand[21]	$5.99
Real Vision On Demand[21]	$14.99
Docurama On Demand[21]	$4.99
Con TV On Demand[21]	$4.99
Walter Presents On Demand[21]	$6.99
Dekkoo On Demand[21]	$9.99
ZooMoo On Demand[21]	$2.99
Miniteve On Demand[21]	$1.99
WildBrain On Demand[21]	$5.99
Cinemoi On Demand[21]	$2.99
Fox Nation On Demand[29]	$5.99
Wanderlust On Demand[21]	$9.99
Music Choice Karaoke On Demand[21]	$6.99
Music Choice Relax On Demand[21]	$5.99
Curious World On Demand[21]	$3.99
kweliTV On Demand[21]	$5.99
Marquee TV On Demand[21]	$8.99
Passionflix On Demand[21]	$5.99
Conspiracy TV On Demand[21]	$4.99
FlixFling On Demand[21]	$7.99
A&E Crime Central On Demand[21]	$4.99
CultFlix On Demand[21]	$4.99
CineFest On Demand[21]	$4.99
PREMO On Demand[21]	$5.99
MyOutdoorTV On Demand[21]	$9.99
One Day University On Demand[21]	$7.99
Qwest TV On Demand[21]	$4.99
Black&SexyTV On Demand[21]	$6.99
Hitz[26,29]	$12.00
Streampix[17,29]	$4.99
Pay-Per-View and On Demand Movies and Events[3,29] (per title or event)	Prices Vary
Revry On Demand[21]	$6.99
Too Much for TV On Demand[29]	$14.99
Vivid On Demand Subscription[12,29]	$19.99
Hustler On Demand Subscription[12,29]	$19.99
TEN On Demand Subscription[12,29]	$19.99
Urban Fantasy On Demand[12,29]	$19.99
Falcon On Demand[12,29]	$19.99
Homegrown Amateur On Demand[12,29]	$19.99
Evil Angel On Demand[12,29]	$19.99
Mature Lust On Demand[12,29]	$19.99
Penthouse On Demand[12,29]	$19.99
Girlfriends Films On Demand[12,29]	$19.99
Wicked On Demand[12,29]	$19.99
XTSY On Demand[12,29]	$19.99
Arouse On Demand[12,29]	$19.99
Vixen On Demand[12,29]	$19.99
Buku TV On Demand[12,29]	$19.99
Zero Tolerance On Demand[12,29]	$19.99

SPORTS PACKAGES[28]

MLB Extra Innings	Call 1-800-XFINITY for pricing
NHL Center Ice	Call 1-800-XFINITY for pricing
NBA League Pass	Call 1-800-XFINITY for pricing

XFINITY TV EQUIPMENT

TV Box and Remote	$7.50
HD TV Box and Remote Limited Basic	$7.50
TV Adapter (Limited Basic — Primary TV)	$0.00
TV Adapter (Limited Basic — 1st and 2nd Additional TVs)	$0.00
TV Adapter (Limited Basic — 3rd Additional TV)	$0.50
CableCARD (first card in device)	$0.00

INSTALLATION (PER OCCURRENCE UNLESS NOTED)	Initial Installation of Service	After Initial Installation of Service
Professional Installation[15,16]	$100.00	N/A
Self Installation Plus[39]	$39.99	N/A
In-Home Service Visit[33]	N/A	$70.00
Hourly Service Charge[15] (Custom Installation)	$50.00	$50.00
Xfinity Internet Gigabit Pro Professional Installation (per occurrence)	$500.00	
Wireless Networking On-Site Professional Set-Up (Separate trip, per occurrence)	$99.95	
Wireless Networking On-Site Professional Set-Up (each additional device over 4 devices per occurrence)	$29.95	

REACTIVATION
(NO IN-HOME VISIT REQUIRED—PER OCCURRENCE UNLESS NOTED)

Reactivation - TV	$6.00
Reactivation - Internet	$6.00
Reactivation - Voice	$6.00

MISCELLANEOUS (PER OCCURRENCE UNLESS NOTED)

Regional Sports Fee[20] (per month)	$4.15
Field Collection Charge Visit to customer's residence required to collect past due balance or unreturned equipment	$30.00
Late Fee	5%
Agent Assisted Payment For payment made by phone with a Customer Care Representative	$5.99
Unreturned or Damaged Equipment Fees[4] (per piece)	Replacement Cost
Getting Started Kit Shipping and Handling (Standard Shipping)	$15.00
Getting Started Kit Shipping and Handling (Priority Shipping)	$29.95

XFINITY VOICE[1,5]

Xfinity Voice—Unlimited	$44.95
With TV and Internet Service	$39.95
Xfinity Voice—Local with More	$34.95
With TV or Internet Service	$24.95

XFINITY INTERNET[1,6]

	Xfinity Internet Service Only	with Xfinity TV or Voice Service[18]
Performance Starter	$65.00	$49.95
Performance	$80.95	$64.95
Performance Pro	$95.95	$79.95
Blast!	$100.95	$84.95
Extreme Pro[13]	$105.95	$89.95
Gigabit[13]	$110.95	$94.95
Gigabit Pro[13,14]	$299.95	$299.95
Modem Rental		$14.00
Wireless Adapter (each, one-time charge)		$30.00

	Replacement Cost
Gigabit Pro Activation Fee (per occurrence)	$500.00
Unreturned or Damaged Equipment Fees[4] (per piece, per occurrence)	

1 Certain services available separately or as a part of other levels of service. Xfinity services are subject to Comcast's standard terms and conditions of service. Unless otherwise specified, prices shown are the monthly charge for the corresponding service, equipment or package. Prices shown do not include applicable taxes, franchise fees, FCC fees, Regulatory Cost Recovery, Public Access fees, other state or local fees or other applicable charges (e.g., per-call toll or international charges). Prices, services and features are subject to change. If you are an Xfinity TV customer and you own a compatible TV Box or CableCARD device, please call 1-800-XFINITY for pricing information or visit www.xfinity.com/equipmentpolicy. © 2021 Comcast. All rights reserved.

2 Requires a compatible modem and TV Box with remote, CableCARD or compatible customer owned device.

3 Price of Pay-Per-View and On Demand Movie or Event is displayed prior to the completion of the Pay-Per-View or On Demand ordering process.

4 Contact 1-800-XFINITY for questions regarding equipment replacement charges.

5 Requires a compatible modem. Unlimited Local and Long Distance package pricing applies only to direct dialed calls from home to locations included in the plan. Plans do not include other international calls. For more information regarding Xfinity Voice pricing go to https://www.xfinity.com/Corporate/About/PhoneTermsOfService/ComcastDigitalVoice/cdvresidential.

6 A compatible modem is required. For more information regarding Xfinity Internet go to http://www.xfinity.com/internet-service.html.

7 Requires TV Box, TV Adapter, CableCARD or compatible customer owned device.

8 Not available to customers with Limited Basic only. Must subscribe to HD Technology Fee to receive HD programming.

9 Requires Limited Basic, TV Box, CableCARD or compatible customer owned device.

10 Includes TV Adapter and remote. Digital service tier on additional TV corresponds to digital service tier on primary outlet. Does not include access to On Demand content, premium channels or channel numbers above 1000 unless otherwise noted on the channel lineup. Not available to customers with Limited Basic only.

11 Requires Extra.

12 One month minimum purchase required. Not available in all areas.

13 Not available in all areas. May require installation and non-refundable installation charge.

14 Requires 2 year contract. Monthly rental of Gigabit Pro cable modem/router additional. Activation and professional installation fees additional. Gigabit Pro does not qualify for Comcast 30-day money back guarantee.

15 Standard installation includes installation of service line up to 125 feet from existing Comcast plant for the primary outlet only, except as otherwise required under local franchise agreement. Comcast does not perform custom installations, including installations which require in-wall wiring, wiring in extensive drop ceilings, basements, or crawl spaces.

16 Includes standard installation of Xfinity TV, Xfinity Internet and/or Xfinity Voice and installation of additional outlets and wireless networking set-up if requested at time order is placed. Does not include installations of Xfinity TV only, Xfinity Home Security or Xfinity Gigabit Pro Internet.

17 Requires Limited Basic and TV Box and remote or compatible customer owned device. Requires HD Technology Fee to receive HD programming.

18 Xfinity Internet discount does not apply to Xfinity Instant TV.

19 Applies to Limited Basic and Xfinity Instant TV.

20 Applies to Extra and above, and Sports & News.

21 Requires Limited Basic with X1 TV Box and Xfinity Internet service.

22 Requires Limited Basic, HD Technology Fee and TV Box, CableCARD or compatible customer owned device.

23 Requires Choice Double Play, Choice Limited TV or Choice TV. Cannot be combined with Limited Basic only.

24 Equipment required at an additional cost. For additional information go to http://www.xfinity.com/homesecurity.

25 Includes Xfinity Home Security and 24/7 Video Recording for up to 4 cameras. Equipment required at an additional cost. For more information on 24/7 Video Recording go to http://www.xfinity.com/videorecording.

26 Requires Limited Basic TV service and a compatible Xfinity TV Box or customer owned device.

27 Requires Limited Basic with X1 TV Box or compatible customer owned device and Xfinity Internet service.

28 Requires Limited Basic, HD Technology Fee, X1 TV Box with remote or compatible customer owned device. Sports Package subscriptions can be billed at once or in 4 total payments. Call 1-800-XFINITY to cancel subscription within 30 days of first charge to bill. Charges are non-refundable after 30 days of first charge to bill. Restrictions may apply.

29 Requires Limited Basic, TV Box or compatible customer owned device with Xfinity Internet.

30 Requires HD Technology Fee and TV Box or compatible customer owned device. DVR Service with compatible customer owned device limited to 60 hours DVR Service.

31 Requires TV Box, CableCARD or compatible customer owned device. 10 Hours DVR Service available with X1 TV Box (X1 TV Box requires subscription to one Genre Pack) or compatible customer owned device. Cannot be combined with Xfinity Voice or Xfinity Home Security.

32 Requires minimum of Xfinity Performance Internet service and an Xfinity Flex Streaming device. Choice TV available for ordering through the Flex box only. 20 hours DVR Service available with X1 TV Box or compatible customer owned device. Not eligible for multiproduct pricing on Xfinity Internet, Xfinity Voice or Xfinity Home Security.

33 Applies to installation, relocation and activation of additional outlets as well as upgrade downgrades of service after initial installation of service and in-home visits. Does not cover installation or in-home visits for Xfinity Home Security.

34 20 Hour DVR Service requires Xfinity Internet Service and either an X1 TV Box or compatible customer owned device.

35 SurePrice only available for 12 months to customers with Standard+ More, Select+ More, Signature+ More and Super+ More packages after qualifying 12 month promotional pricing.

36 Requires 2-year contract. Monthly rental of Gigabit Pro compatible modem/router additional. Activation and professional installation fees additional. Gigabit Pro does not qualify for Comcast 30-day money back guarantee.

37 Cannot be combined with Sports & News genre pack.

38 Requires Xfinity TV Latino, More Sports & Entertainment Package, Choice TV Double Play with one Genre Pack, Choice TV, or Extra or higher, Xfinity Internet, TV Box or compatible customer owned equipment.

39 Includes delivery of up to a total of three Get Started Kits for Xfinity TV, Xfinity Internet, or Xfinity Voice and a network signal test. Requires service address activation for Xfinity services within in the last 2 years. Does not include installation or relocation of outlets, equipment installation, setup or troubleshooting, or installation of Xfinity Home or Xfinity Gigabit Pro Internet.

40 20 Hour DVR Service requires Xfinity Internet Service and either an X1 TV Box or compatible customer owned device.

Caroline County's Plan For Universal Coverage

as developed and approved by

The Caroline Broadband Advisory Committee

In August of 2020 The Caroline Broadband Advisory Committee Adopted the Strategic plan which outlined the guidelines that it would use to guide future discussions involving broadband. It was decided in this plan that we would prioritize solutions that were in current use to deliver broadband to rural areas. The committee considered multiple solutions. The committee then Ranked solutions based on their ability to deliver internet to houses in rural areas with challenging topography and thick vegetation such as the unserved areas in Caroline County. The committee researched solutions and provided the following list to drive future conversation based on years of engineering construction, maintenance, and ISP experience.

1st Fiber to the Home

2nd Hybrid Fiber Coax/Coax

3rd Fixed Wireless

4th Satellite

5th Existing wireless/ hotspots.

In discussing all options, it was acknowledged that a short-term solution may be needed until the best and final solutions can be delivered. It was also discussed that due the scalability of Coax that it can deliver near fiber speeds however the speeds were not symmetrical.

In August 2021, based on the strategic plan, The Committee formulated a roadmap, the Plan for Universal Coverage to deliver an Internet connection to all homes in Caroline County. The Committee acknowledged that the successful VATI 2021 project should be part of multiyear project to deliver internet availability to each and every home.

By building on the Year 2021 project, and following our strategic plan of expanding existing footprints of Cable providers, we can avoid the cost of mid-mile construction and deliver a solution that is saleable and will not need to be replaced with a different solution in the near future. Expansion beyond 2021 was approved by the Committee to presented to the Board of Supervisors. The plan involves two providers, Comcast and Atlantic Broadband. Since we have form Private/Public partnerships with both companies, a tiered approach will need to be used to attain universal Coverage.

Caroline County has been working for over 4 years to encourage Comcast to expand their footprint in the western portion of Caroline County to reach unserved houses that are surrounded by Comcast service areas. Jericho Road, and Anderson Mill Road identified and approved by the Board of Supervisors as the 2022 VATI project. During the second VATI cycle Caroline should work to develop a partnership with Comcast to complete coverage of remaining unserved addresses identified in the attached map as areas West of 95. The Attached map titled Caroline County/Comcast Project Areas.

Due the expansion of VATI funding for 2022 and the willingness of Atlantic Broadband to partner with Caroline County the Broadband Advisory committee decided to Prioritize the Dawn Area, then followed by Woodford and Corbin. This left only a large area in Sparta/Central point to be covered and it had already been targeted for RDOF funding. This area would be covered in 6 years. In discussions with ABB they could actually cover the RDOF during year three of the funding cycle. This will complete coverage of all areas East of 95. The Eastern Area Plan for universal Coverage is defined in the attached Caroline County /ABB FY2022 Project Areas map.

The Caroline Broadband advisory committee recommends that we work to expand coverage as described to attain an available internet connection to all Unserved rooftops in Caroline County.

Jason Barlow

Chairman, Caroline Broadband Advisory Committee

Caroline County's Plan For Universal Coverage

as developed and approved by

The Caroline Broadband Advisory Committee

For consideration by

The Caroline County Board of Supervisors

Strategic Plan to Plan for Universal Coverage

- August 2020 Strategic Plan was formulated and adopted by the Caroline Broadband Advisory Committee

- Service Type was Prioritized based on the expertise of the Committee
  - Fiber to the Home
  - Hybrid Fiber Coax/Coax
  - Fixed Wireless
 - Satellite
  - Existing Cell/Wireless providers

Strategic Plan to Plan for Universal Coverage

- Using the strategic Plan a Plan for Universal Coverage was developed
- Building on 2021 VATI
  - Partner with Comcast to address needs near its existing footprint
  - Break expansion in two phases a 2022 VATI C, and a 2023 VATI C project
  - Covers Caroline County West entirely in two VATI Cycles

Caroline County/Comcast Project Areas
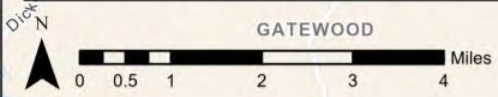
Legend:
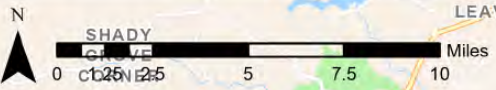- Phase 1 (361 Adds)
- Phase 2
- Phase 1 Plant
- Caroline County
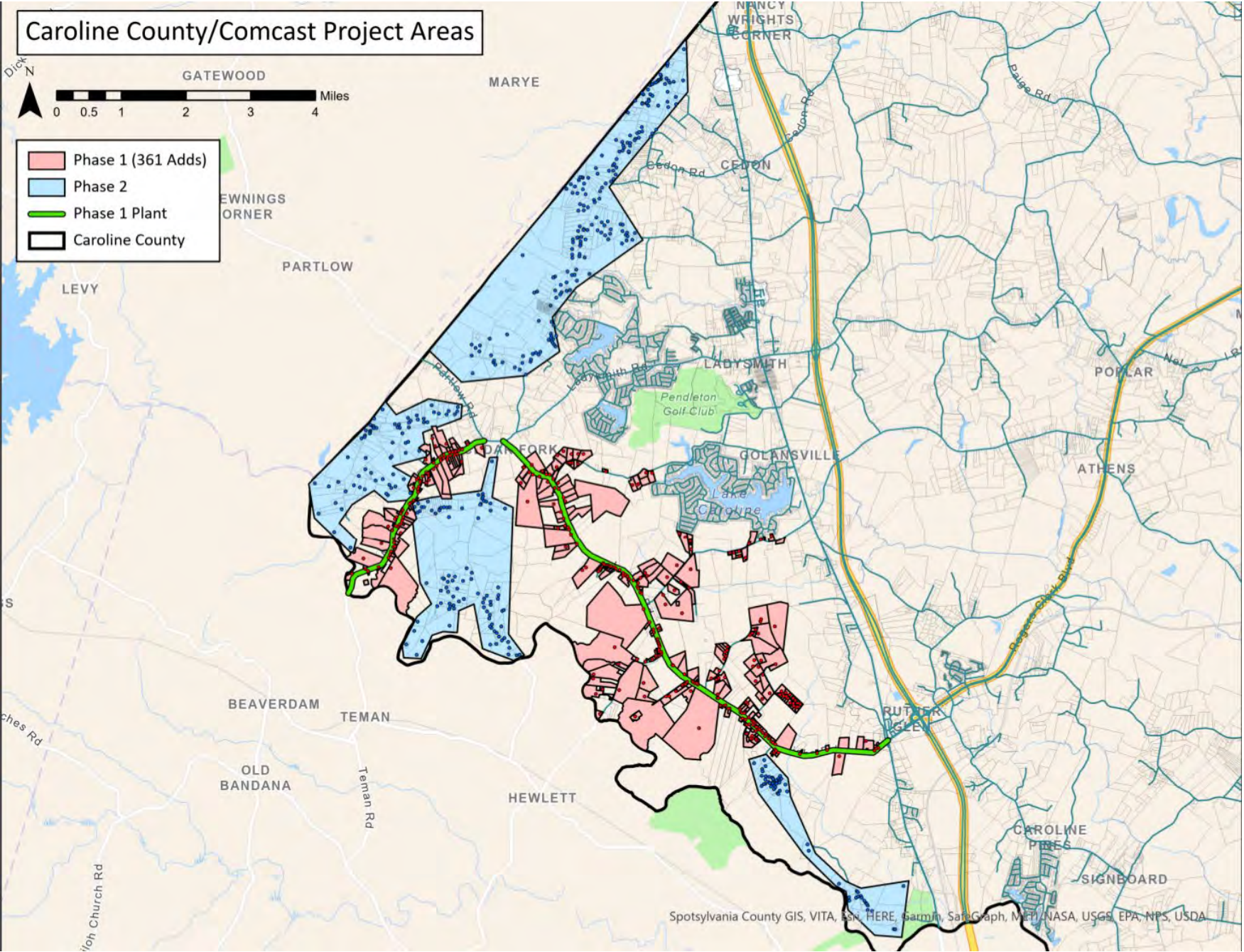
Strategic Plan to Plan for Universal Coverage

- The Plan for Universal Coverage for Caroline County East
  - 3 year project
  - Can be applied for in 1 VATI application
  - Covers Caroline County East in 3 phased as seen in attached map

Caroline County/ABB FY2022 Project Areas

Legend:
- Phase 1 - Dawn (1738)
- Phase 2 - Rt 17 & Woodford (1196)
- Phase 3 - RDOF Areas (931)
- Caroline County
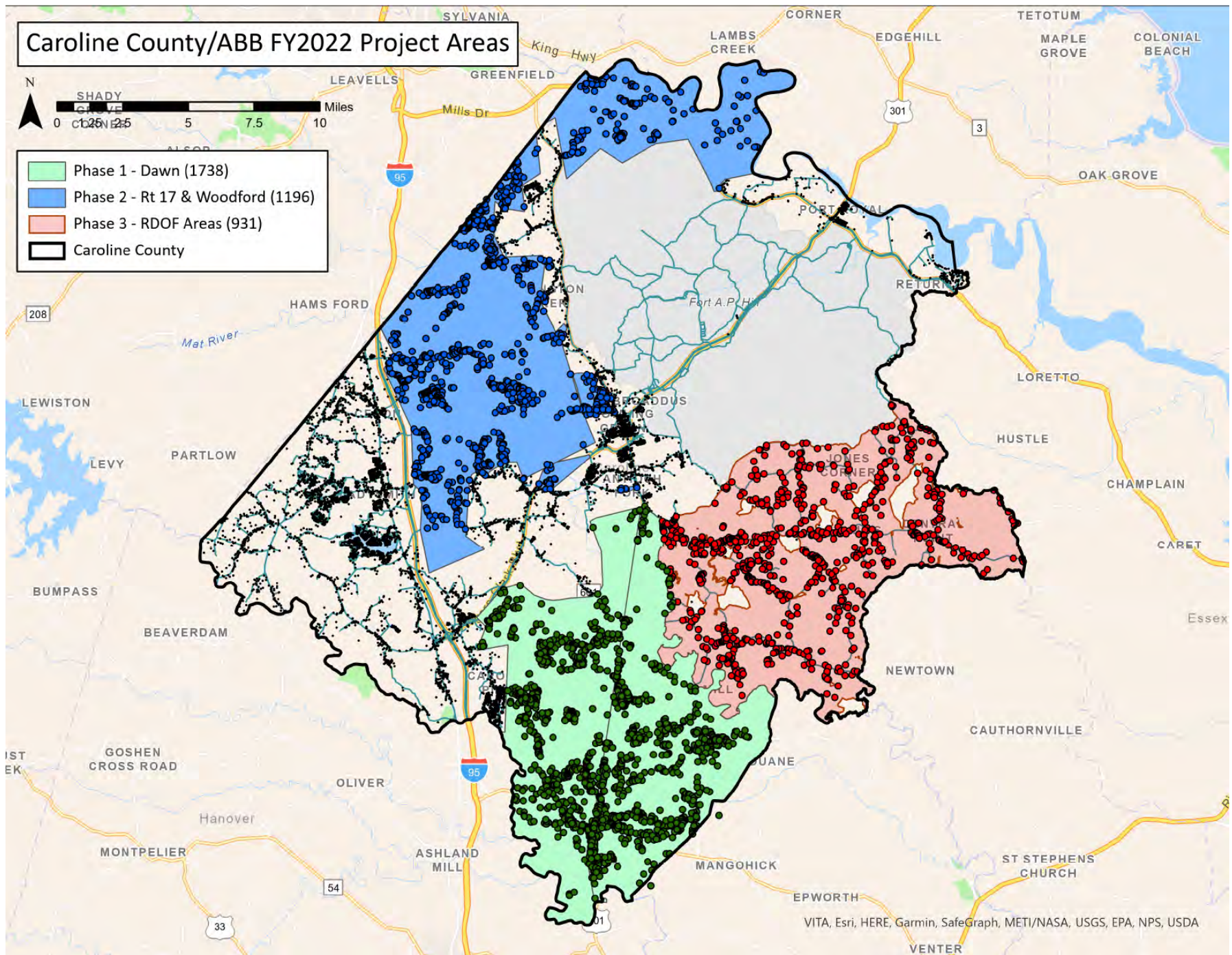
To support the growing needs of the digital world, Comcast is working hard to make its network smarter, by leveraging cloud, backbone, and architecture advancements to provide a faster, stronger, and more flexible network. By optimizing traffic routing and moving resources closer to where they are needed, our network provides the key to managing the ever increasing traffic demands of today's Internet. The powerful combination of our broadband and Wi-Fi network and the cloud is enabling us to innovate and bring transformative products to market, redefining how our customers enjoy entertainment, connect, and communicate inside and outside of their home or office.

Upon completion of the project Comcast will offer the following services:

High-Speed Internet Services. Comcast's robust high-speed Internet services provide a range of fast, reliable Internet speed tiers to fit customers' needs, as well as access to over 20 million secure Wi-Fi hotspots nationwide so that customers can stay connected on the go. Customers also have access to the Xfinity app to optimize their home connections, view their plans, pay their bills, and get 24/7 real-time support. And they also have access to xFi – a simple, digital dashboard for customers to control their home Wi-Fi network.   In addition to parental control features like pausing Wi-Fi and screen time scheduling, xFi provides content filters that ensure younger children can only access age-appropriate content. xFi now also comes with xFi Advanced Security, that protects all the devices connected to a customers' home network from malware and other security threats.

Video Services. Comcast also offers a broad variety of video services, primarily through our X1 platform, an IP and cloud-enabled video platform that delivers the simplest, fastest, and most complete way for customers to access all their entertainment on all their screens. Video customers have access to hundreds of channels depending on the level of service, which typically range from limited basic service with access to between 20 and 60 channels to full service with access to more than 300 channels. Video services generally include programming provided by national broadcast networks, local broadcast stations, and national and regional cable networks, as well as government and public access programming. Our video services also include access to video on demand services and an interactive, on-screen program guide. Through the X1 platform, customers have integrated search functionality, including the us e of the X1 Voice Remote, a voice-activated remote control that customers can use to change channels, search for shows, get recommendations, and more; and access to and the integration of Peacock, which X1 customers receive for no additional charge, certain third-party direct-to-consumer streaming services such as Amazon Prime Video, HBO Max, Hulu, Netflix, YouTube, and Disney+, and a variety of other Internet-based apps providing content and music. Customers have access to their video services through the Stream mobile app and an online portal that allow them to view certain live programming and OnDemand content and to browse program listings.

For high-speed Internet customers that prefer streaming content over the Internet rather than linear cable television, Comcast offers Flex, a streaming device that provides access to certain online programming on their television with integrated search functionality, including the use of a voice-activated remote control and personalized recommendations. Flex uses IP technology

and our own cloud network servers to deliver video and advanced search capabilities, including through a voice-activated remote control, and that provide access to certain third-party internet apps. Flex programming includes Comcast's Peacock service and certain other Internet-based apps at no additional charge, access to pay-per-
view and video on demand content, and access to and the integration of certain third-party direct-to-consumer streaming services such as Amazon Prime Video, HBO Max, Hulu, Netflix, YouTube, and Disney+. Additionally, a variety of music apps such as Pandora are offered through Flex.

VoIP Services. In addition, Comcast offers voice services using interconnected Voice over Internet Protocol technology. Service options provided include either unlimited or usage-based local and domestic long-distance calling, as well as options for international calling plans, voicemail, readable voicemail, nuisance call blocking tools and various call features such as caller ID and call waiting. Voice services also include the ability to access and manage voicemail and other account features through an online portal or mobile app.

Xfinity Mobile. Furthermore, Comcast offers wireless services for handsets, tablets and smart watches using mobile virtual network operator rights to provide the services over Verizon's wireless network and our existing network of more than 20 million in-home and outdoor Wi-Fi hotspots. We currently only offer these services as part of our bundled service offerings to residential customers that subscribe to high-speed Internet service within our cable distribution footprint and to a limited group of small business high-speed Internet customers on similar terms. Customers may choose to pay for services on an unlimited data plan, shared data plans, or per gigabyte of data used. Customers have the ability to bring their own device or purchase them from us with the option to pay upfront or finance the purchase interest-free over 24 months.

Comcast Business Services. Comcast Business Services offers a variety of products and services to businesses. Our service offerings for small business locations primarily include high-speed Internet services, as
well as voice and video services, that are similar to those provided to residential custo mers, cloud-based cybersecurity services, wireless backup connectivity, advanced Wi-Fi solutions, video monitoring services and cloud-based services that provide file sharing, online backup and web conferencing, among other features. Comcast also offers Ethernet network services that connect multiple locations and provide higher downstream and upstream speed options to medium-sized customers and larger enterprises, as well as advanced voice services, along with video solutions that serve hotels and other large venues. In addition, Comcast provides cellular backhaul services to mobile network operators to help them manage their network bandwidth. Comcast has expanded its service offerings to include a software-defined networking product for medium-sized and enterprise customers. Larger enterprises may also receive support services related to Wi-Fi networks, router management, network security, business continuity risks and other services. These service offerings are primarily provided to Fortune 1000 companies and other large enterprises with multiple locations both within and outside of Comcast's cable distribution footprint, where we have agreements with other companies to use their networks to provide coverage outside of our service areas.

Customer Service. In addition to Comcast's deep experience as a communications service provider offering a variety of services, Comcast also has the appropriate number of technicians, call center agents and backend support employees to care for additional customers. Comcast also maintains large, locally based engineering and technical operations teams that work around the clock to maintain service reliability and provide direct support to the company's business and residential customers. Moreover, Comcast proactively monitors and maintains its network 24/7 through its dedicated Network Operations Center (NOC). The NOC continuously monitors the network equipment, service health, and performance of the Comcast network, responds to network events and service degradations, dispatches local field technicians, and informs customers of service issues, in many cases before the customer has noticed the problem. The NOC group also provides technical support and responds to trouble calls from network service customers including carriers, TLS and Native ATM customers, and voice product customers, through a staff of Technical Support Representatives (TSRs). The NOC also operates a 24 x 7 x 365 Technical Customer Support helpdesk that responds to calls for all of Comcast's services.

As detailed in the table below, upon completion of the project, Comcast will be able to offer customers multiple choices of residential and commercial broadband services, depending on the customers' specific needs:

Residential Service Tiers

Tier	Speeds Up To	Standalone Pricing	With Xfinity TV or Voice Service
Performance Starter	50 Mbps / 5 Mbps	$54.95	$49.95
Performance	100 Mbps / 5 Mbps	$80.95	$64.95
Performance Pro	200 Mbps / 5 Mbps	$95.95	$79.95
Blast!	400 Mbps / 10 Mbps	$100.95	$84.95
Extreme Pro	800 Mbps / 15 Mbps	$105.95	$89.95
Gigabit	1.2 Gbps / 35 Mbps	$110.95	$94.95

Gigabit Pro	2 Gbps / 2 Gbps	$299.95	N/A

Comcast Business Tier[1]

Tier	Speeds Up To
Business Internet 100	100 Mbps / 15 Mbps
Business Internet 200	200 Mbps / 20 Mbps
Business Internet 300 Plus	300 Mbps / 30 Mbps
Business Internet 600	600 Mbps / 35 Mbps
Business Internet 1G	1.2 Gbps / 35 Mbps

Note: Prices do not include equipment or applicable taxes, fees and surcharges.

In addition to the multiple residential broadband options above, Comcast also makes available its Internet Essentials program to qualifying low-income customers in its service areas, which is the nation's largest, most successful, and most comprehensive broadband adoption program for low-income households, and Comcast's number one community impact initiative. Internet Essentials currently provides customers with broadband service at speeds of up to 50 Mbps/5 Mbps for $9.95/month plus applicable taxes, fees and surcharges, as well as free digital skills training in person and online. Customers also have the option to purchase a low-cost Internet-ready computer.

Since launching in 2011, Comcast has made dozens of improvements to the program, including expanding eligibility 12 times—bringing
Internet Essentials to new audiences such as public housing residents, low-income veterans, seniors, community college students, and most recently, to all qualified low-income households living in Comcast's service area. Comcast has also increased the speeds for Internet Essentials, with the most recent speed increase to 50 Mbps/5Mbps

occurring earlier this year. Since 2011, Internet Essentials has connected a cumulative total of more than ten million Americans to the Internet.

In addition, Comcast customers who subscribe to an Xfinity Internet package will have access to Xfinity WiFi hotspots, including those that would be newly added to the Project, for no additional cost. Moreover, these customers would be able to access any of Comcast's hotspots throughout Virginia and across the country. Comcast has the country's largest WiFi network, including more than 20 million hotspots nationwide. Combined with the company's recently launched Xfinity xFi platform, a new and personalized home WiFi experience, Comcast will provide its customers in the Project with the fastest speeds, the best WiFi coverage, and ultimate WiFi control in their homes. Xfinity Internet customers may also have the option to sign up for Xfinity Mobile service, which includes up to five lines with unlimited talk and text.

As is Comcast's usual practice through its footprint, Comcast will support all customers in the Project with call centers as well as self-service options such as digital and chat. Many customers take advantage of Comcast's different tools, including the MyAccount feature within the Xfinity app, which is available on the web and mobile devices. Customers can manage their service in many ways through the app, such as by troubleshooting a device in the home, managing programming options, and receiving important notifications.

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[1] Speeds of up to 100 Gbps for medium to large businesses available in certain areas