C. PROJECT NARRATIVE

1. Project Description and Timeline

Project Narratives must include a "Project Description and Timeline" for both ABDG-Rural and ABDG-Urban applications. Provide a detailed description of the infrastructure improvements for which funding is required, including:

- **The nature of the improvements:**

Response: Cox and Pima County propose a public-private partnership to facilitate and expedite the delivery of broadband services to Three Points, Altar Valley School District and Sycamore Springs. This project is a Gen5 fiber-to-the-home PON network, enabling a future state of 1Gig symmetrical speeds for approximately 1,260 unserved/underserved premises. In order to achieve this, Cox will design and build a fiber network consisting of approximately 101 miles of new fiber and state-of-the-art equipment. This network will be equivalent to the technology standards offered throughout Cox's footprint in Phoenix and Tucson.

- **How the proposed project addresses the broadband needs of the area(s) that it serves:**

Response: High-speed broadband provides economic and educational opportunities for small communities such as the communities of Three Points and Sycamore Springs. In fact, *Arizona's Governor Doug Ducey clearly recognizes this reality as Arizona's 2018 Broadband Strategic Plan calls broadband "integral to education and job readiness, commerce, public safety, healthcare, infrastructure, research, government and just about every other factor of today's life."* Robust broadband access for all Arizonans is essential to reaching the governor's top five priorities: educational excellence, 21st Century economy, protecting our communities, fiscal responsibility, and happy and healthy citizens.

This project addresses two issues in both communities: 1.) lack access, and 2.) adequacy. Our partnership strives to deliver services to support learn-from-home, remote work, and substantive telehealth services. Today, Three Points and Sycamore Springs residents either have *no access* to broadband or only *limited access* to very high-cost, low speed, unreliable internet services. Where services do exist today, the maximum speed available is only 25 Mbps download in Sycamore Springs **(See Attachment 1)**, with the exception of ViaSat at an advertised 50 Mbps (ViaSat is not a FCC eligible provider for the Affordable Connectivity Program).

The Three Points community and Altar Valley School District area has households with no access to broadband services and some households that have access to only low speeds and high-cost providers. The barrier to adoption is considerable, considering limited service and packages in [redacted] for unreliable speeds of less than 25Mbps. **(See Attachment 1)**

An example of why a more robust internet service would benefit the community is the Vail School District's Beyond Textbooks (BT) program. As way of background, BT is a comprehensive program of curriculum development, instructional improvement, student assessment, and multi-level interventions. While a web-based tool, BT compliments the use of textbooks, and allows for the collection of digital curriculum materials, support materials, and other digital resources accessible to faculty and students. It enables online and hybrid learning models. Through Vail's participation in the program, the school district has increased student reading and math achievement from below state averages to pass rates of 20+ percent above state averages. Stretching beyond Arizona's borders, BT is a collaborative of 8,000 teachers, 140,000 students, and over 140 school districts in 26 states. To that end, a community without reliable, more affordable high-speed internet will not have digital equity where all students have equal access to technology.

Educational opportunity would also be enhanced in Three Points through deployment of high-speed internet. In-person instruction closed down during the pandemic, forcing students to rely on remote, internet-based instruction. Due to a significant lack of broadband access in the community, Altar Valley School district borrowed 400 "hot spots" from the Pima County Library because few of the residents had internet access. The library also underwrote the cost of unlimited data plans to enable Altar Valley students to access the data-intensive

educational platforms required by the schools. This was a temporary solution to respond to the emergency. With greater connectivity in the area, Altar Valley schools, and the surrounding households, have more diversity and capacity to expand their educational curricula to benefit community residents and students.

- **Number of community anchor institutions served:** Response: At least 10

- **Number of households served:** Response: 1,246

- **Number of businesses served:** Response: over 100 businesses including sole proprietorships

- **Total population served:** Response: 14,599 in census tracts 42.4, 41.4 and 41.09

- **The anticipated economic development benefit achieved by construction of such improvements:** Response: Greater, faster, more reliable and affordable internet speeds would enable new business expansion opportunities at Ryan Airfield and within the Three Points community; support creation of new workforce development programs with remote learning options to support critical industries located in the areas such as aviation; empower greater remote work opportunities which will incentivize new businesses to locate in the area while providing greater flexibility to existing businesses; and expand access to medical care through additional tele-health capacity. The proposed project also supports digital equity for the impacted communities by providing up to ultra-high speed broadband low cost, or no cost, alternatives for the residents.

- **Total miles of fiber to be installed:** Response: Approximately 101 new fiber miles

- **Location of new fiber (aerial, underground or both?):** Response: Both. Based on preliminary estimates and subject to adjustment during design/engineering, Cox expects to build 53 miles of aerial fiber and 48 miles of underground fiber.

- **Stated commitment to operate and maintain the network for a minimum of five (5) years upon completion of the improvements:** Response: If the requested grant funding is awarded, Cox expects to build a symmetrical all fiber network to the north and west portion of the Three Points area and Sycamore Springs as outlined in this application. Cox commits to operating and maintaining ownership of this network, according to the ABDG guidelines, and to deliver best-in-class broadband services by Arizona-based employees.

- **The party or parties that will perform the infrastructure construction (if known):** Response: When building and expanding our network, Cox Communications collaborates with several reputable construction companies in Arizona with whom we have ongoing working relationships. We require our partners to be compliant with local, state, and federal laws, and we hold them accountable. All of the subcontractors retained by Cox are properly licensed (e.g. business licenses, Registrar of Contractors licensing), staffed with qualified personnel, and maintain sufficient insurance coverages. At the time of this grant application submission, Cox has not yet identified the specific subcontractors that Cox will use for this project. Once specific awards are made available under the grant solicitation, and the project is authorized to proceed, Cox will be able to identify the subcontractors for the project and provide the list of the subcontractors to the Arizona Commerce Authority for review.

- **The intended uses of the ABDG Rural/Urban funds in respect to the construction or planning:** Response: The Partnership intends to use grant funding for the approved costs required to build a 100% fiber-to-the-home symmetrical speed network. The intended uses of the grant award include covering the costs associated with construction, materials such as fiber, and power supplies.

- **The specific information required under Section 1.4 (to the extent relevant):** Response: We share ACA's goal of ensuring our neighbors have access to robust broadband networks, whether that is through building new networks to unserved areas or supporting broadband adoption initiatives. Cox has solutions to increase broadband access and adoption, build a smarter, more efficient communities, and address digital equity. We are prepared to

partner with ACA to offer affordable, reliable internet as well as access to Cox's most affordable internet options and assistance programs. For eligible customers, speed internet packages are available at no-cost or at a very low cost. Cox is an eligible FCC provider in the Affordable Connectivity Program. Subject to funding availability, the ACP currently [redacted] which may take the total cost the ConnectAssist [redacted] **(See Attachment 2 for a complete list of digital equity assistance programs)**

Based on estimated project completion date, a summary of potential sample speeds by package follows below.

Connect2Compete	50Mbps/50Mbps	[redacted]		Connect Assist	50 Mbps/50Mbps	[redacted]
Starter, Essential and Straight Up Internet	50 Mbps/50 Mbps			Preferred	250 Mbps/250 Mbps	
Ultimate	500 Mbps/500 Mbps			Gigablast	1 Gbps/1Gbps	

The proposed Pima County project, upon project completion, will be capable of delivering speeds up to 1 Gbps (symmetrical). Cox's commitment is to build out these areas of Pima County to ensure they have access to the same speeds, services and offers we currently have available in all of our services areas across Arizona.

- **A timeline for completion of the infrastructure improvements:** Response: The proposal includes a full fiber build within the north and west portions of Three Points and Sycamore Springs communities. Cox expects to complete the project [redacted]. The exact start date will be established once specific awards are made, and a contract is executed between the parties. Where possible, Cox will work with Pima County and other entities to accelerate the timeline. A project schedule will include the following elements: project walkout, design, permitting, construction, cutovers and splicing, and customer fiber drops to the premises. Timelines may be impacted by situations such as delay in permitting, Blue Stake/811, supply chain issues and other events beyond reasonable control of Cox.

Cash Match

- **The time of such match:** Response: The Cox and Pima County public private partnership is committed to making a combined [redacted] to the overall project costs. This represents [redacted] for the overall project. Cox will provide a [redacted] over the course of the project, representing [redacted]. The match will be provided in equal installments over the course of the construction as necessary to support the deployment of critical broadband infrastructure to Sycamore Springs and Three Points. The Application includes a letter of support documenting Cox's match.

As a partner, Pima County will provide a [redacted] over the course of the project, and the Application includes a letter of support documenting the County's match. **(See "Documentation of Commitments"** and **"Attachment 3"** for the Pima County information.)

- **The intended uses of the match:** Response: Cox intends to use its cash match for the approved costs required to build the proposed areas of the Three Points and Sycamore Springs network. The costs include construction activities, materials such as fiber, and power supplies.

The identity of any sources other than the applicant who are responsible for such match or portions thereof: Response: As a partner, Pima County will provide a [redacted] over the course of the project, and the Application includes a letter of support documenting the County's match. **(See "Documentation of Commitments"** for the Pima County information.)

The nature of the commitment by the Applicant or other parties to deliver the match including whether such commitment is in writing and binding in all circumstances: Response: Both Cox and Pima County are fully

committed to delivering the respective matches set forth herein. Please find funding commitment letters from Pima County and Cox related to this project in the section titled **"Documentation of Commitments"** in this grant application, as well as additional information about Pima County in **"Attachment 3."**

- **This section must also explain the circumstances as to why, in the absence of the ABDG-Rural/Urban funding, the proposed project would not proceed within the same time frame or would not otherwise be as effective in advancing the objectives of the Program.** Response: Today, Sycamore Springs and Three Points residents have low-speed, high-cost internet services. In the absence of ABDG-Rural/Urban funding, the proposed project would not be financially viable for the Public Private partnership between Cox Communications and Pima County. The communities' geography and topography have made it cost-prohibitive for any broadband provider to fully upgrade or expand broadband services to them. Cox's financial modeling for this project only works with the Pima County partnership in concert with the [redacted]. We believe this grant proposal helps the State of Arizona achieve its goal to improve broadband services for rural communities with limited broadband access due to their size, location and demographics, and supporting these communities to be best positioned for their economic development needs of the future. As we've witnessed in this pandemic, these communities are in need of better broadband access to learn and work from home, utilize telehealth and participate in the global economy.

2. Project Description and Timeline – Development

Project Narratives must include a "Project Description and Timeline – Development" section which must include a detailed description of relevant future development that is intended to be benefited by the proposed infrastructure improvements, including, as applicable, a Gantt chart timeline for such development.
Response: Cox envisions laying fiber in two distinct communities in unincorporated Pima County: Three Points/Robles Junction and Sycamore Springs within Corona de Tucson. Total population in these communities is 14,599 as of the 2020 Census.

Three Points: This area is located at the junction of AZ Route 86 (W. Ajo Highway) and Route 286 (Sasabe Road). Ryan Airfield, which is a general aviation airport that is owned by the Tucson Airport Authority, anchors the north end of the community. Roughly 11 miles southwest of Ryan Airfield is Altar Valley Middle School, which sits right at the nexus of Routes 86 and 286. There are small bedroom communities located along this Route. Robles Elementary School is located about one mile south of the middle school.

Beginning in 2020, these schools closed in-person instruction as COVID-19 spread. However, because many of the families in this community lacked internet connectivity, on-line learning was challenging. The Pima County Public Library provided hundreds of hot spots for use in the community. The library discovered that on-line platforms use significant amounts of data and that the initial data plan underwritten by the library to support these students was insufficient. The library increased its data plan to support unlimited data to help these students, and great expense to the library.

The investment being requested under this grant application would provide fiber connectivity between network nodes Ryan Airfield and Altar Valley Middle School and between Altar Valley Middle School and Robles Elementary School. From this middle mile, fiber would be laid for the housing communities just to the south of W. Ajo Highway. This investment is being sought to alleviate serious connectivity challenges. The closing of in-person education likely led to delayed development for many of our students. Imagine how much worse that loss would have been had there been no capacity for connectivity.

This Southwest planning corridor is expanding with investment by the County in business and commercial development. New residential communities are being developed in this area. These new communities will need future broadband infrastructure investment to support the educational and economic resilience and vibrancy of this community. That investment would not be possible without Arizona Commerce Authority's investment in this application.

Sycamore Springs: This is a growing residential community south of the Tucson International Airport/Interstate 10 Economic Development Area, a targeted regional economic development zone. It is also an area experiencing high population growth, which is estimated by the Pima Association of Governments to continue to grow through 2045. Many of these residents are long-distance commuters; many of these commuters were asked to work from home during the pandemic. However, the area lacks high-speed, low-cost broadband access, negatively impacting remote work, small business development and education. The closest access point these residents now have is through the Sahuarita Public Library, which also serves as the nearest access point for business services including job help and workforce development services. Adding connectivity to homes in this community is critical to maintain and enhance educational achievements enjoyed by Sycamore Springs students. Better connectivity at the residential level will facilitate access to important business services offered by the Library and Pima County, support remote work and enhance educational opportunities. In the future, the connectivity will be expanded beyond Sycamore Springs to the larger Corona de Tucson community.

This section should also identify, to the extent known:

- **The nature and scope of the project:** **Response:** Cox and Pima County propose a public-private partnership to facilitate and expedite the delivery of broadband services to Three Points, Altar Valley School District and Sycamore Springs as described in the Project Narrative, Section 1. This project will deliver a Gen5 fiber-to-the-home PON network, enabling the area to have a future state of 1Gig symmetrical speeds for approximately 1,260 unserved and underserved premises. The design and build of the network will include a fiber network of approximately 101 miles of new fiber and state-of-the-art equipment. The network will be equivalent to the technology standards offered throughout Cox's footprint in Phoenix and Tucson.

- **Type of technology to be utilized:** **Response:** This project will deliver a Gen5 fiber-to-the-home PON network, enabling the area to have a future state of 1Gig symmetrical speeds for approximately 1,260 unserved and underserved premises. The design and build of the network will include a fiber network of approximately 101 miles of new fiber and state-of-the-art equipment. The network will be equivalent to the technology standards offered throughout Cox's footprint in Phoenix and Tucson. Cox will provide specific technology framework upon award of the grant.

- **Type of construction to be undertaken (aerial or underground):** **Response:** Both. Based on preliminary estimates and subject to adjustment during the design/engineering process, Cox expects to build 53 miles of aerial fiber ad 48 miles of underground fiber.

- **Qualifications of the vendors/contractors:** **Response:** When building and expanding our network, Cox Communications collaborates with several reputable construction companies in Arizona with whom we have ongoing vendor relationships and contracts. We require all partners to be compliant with local, state and federal laws, and we hold our vendors accountable. All of the subcontractors retained by Cox are properly licensed (e.g. business licenses, Registrar of Contractors licensing), staffed with qualified personnel, and maintain sufficient insurance coverages. At the time of this grant application submission, Cox has not yet identified the specific subcontractors that Cox will use for this project. Once specific awards are made available under the grant solicitation, and the project is authorized to proceed, Cox will be able to identify the subcontractors for the project and provide the list of the subcontractors to the Arizona Commerce Authority for review.

- **Engineering analysis;** **Response:** If grant is approved, Cox will provide this information to the Arizona Commerce Authority for review.

- **Project approach:** **Response:** If grant is approved, Cox will provide this information to the Arizona Commerce Authority for review.

- **Background of the project:** **Response:** High-speed broadband provides economic and educational opportunities for small communities such as the communities of Three Points and Sycamore Springs. In fact, *Arizona's Governor Doug Ducey clearly recognizes this reality as Arizona's 2018 Broadband Strategic Plan calls broadband "integral to education and job readiness, commerce, public safety, healthcare, infrastructure, research, government and just about every other factor of today's life."* Robust broadband access for all Arizonans is essential to reaching the governor's top five priorities: educational excellence, 21st Century economy, protecting our communities, fiscal responsibility, and happy and healthy citizens.

  This project addresses two issues in both communities: 1.) lack access, and 2.) adequacy. Cox and Pima County propose a public private partnership to help to deliver services to support learn-from-home, remote work, and substantive telehealth services. Today, Three Points and Sycamore Springs residents either have *no access* to broadband or only *limited access* to very high-cost, low speed, unreliable internet services. Where services do exist today, the maximum speed available is only 25 Mbps download in Sycamore Springs **(See Attachment 1)**, with the exception of ViaSat at an advertised maximum speed of only 50 Mbps and a high price point for entry. The Three Points community and Altar Valley School District area has households with no access to broadband services and some households that have access to only low speeds and high-cost providers. The barrier to adoption is considerable, considering limited service and packages in [redacted] for unreliable speeds of less than 25Mbps. **(See Attachment 1)**

- **Population to be served:** **Response:** The proposed project scope will serve 14,559 residents.

- **Number of households served:** **Response:** The proposed project will include an estimated 1,246 households.

- **Number of anchor institutions served:** **Response:** The proposed project includes at least 10 anchor institutions in both of the communities served, including ADOT, Border Patrol, Wastewater facility, Ryan Airfield, Altar Valley School District, fire stations. List of institutions upon request.

- **Number of businesses served:** **Response:** Based on available data, the proposed project will serve at least 100 businesses and commercial properties, including sole proprietorships.

- **Ways in which the project will improve redundancy and reliability if any:** **Response:** The expansion of Cox's network in Pima County to serve both Sycamore Springs and Three Points will bring critical fiber into these areas. The approximate 16 mile long fiber route connecting Cox's current network to Three Points is a critical step to bring Gig speeds and enhanced broadband services to the residents, schools and small business of Three Points These Pima County communities will benefit from Cox's state of the art network and commitment to service. (**See Project Narrative Section 1** above for additional information about network, broadband speeds and service capabilities.)

3. Other Project Outcomes:

Response: Pima County economic development initiatives include the enhancement and creation of new major employment centers, the support of existing industries, and workforce development to ensure our region has skilled worker meeting the needs of our employers. It also includes providing support the development, stability, and expansion of small business, which are particularly important in more remote areas such as Three Points and Sycamore Springs.

As so vividly demonstrated by the COVID pandemic, broadband is an essential economic enabler. It is the link to connect businesses with old and new customers and markets, students with teachers, residents with health care, job seekers with positions, and so much more. COVID also revealed the true extent that more remote communities like Three Points and Sycamore Springs can be left behind in the county's development without high-speed broadband.

With high-speed broadband deployed in these communities, the following outcomes can be achieved:

- Additional community development (residential and commercial) as these communities are seen as good, connected places to work.
- Expanded work opportunities, as more people are able to work remotely with sufficient broadband capacity.
- Expanded business development opportunities in the communities in and around target economic development zones as employers realize that remote work is possible and a preferred means of working. Additional business development is also specifically envisioned at Ryan Airfield, to support entrepreneurs, startups, and small businesses relevant to the aviation industry.
- Expanded workforce development opportunities as more diverse, on-line resources are made available. Some of these opportunities may directly relate to the aviation industry, which is a critical industry sector in Southern Arizona. But many of these opportunities will arise because job seekers will have better access to online skill development and job-hunting resources with high-speed broadband access. These same services are currently constrained by the lack of physical space, adequate transportation, and connectivity.
- Expanded customer development opportunities as businesses small and large, no longer dependent on physical access, can remotely reach new audiences while offering new and/or expanded services.
- Expanded opportunities to access quality, affordable health care as residents have a meaningful choice about accessing tele-health.
- Enable school districts to offer diverse, customized learning solutions and activities that can appeal to a wide array of learners.

In addition, should the grant be fully funded, Cox expects to provide the following additional benefits to support the Pima County public private partnership and digital equity initiative:

- [redacted] **Digital Equity Community Support:** In partnership with Pima County, Cox will host a computer distribution event to support broadband accessibility in the communities and for telework and tele education opportunities. Cox will commit 100 computer devices as part of a "Smart Life" celebration.
- [redacted] **Establishment of Innovation Lab:** Cox will donate the devices and tenant improvements to establish at least one Innovation Lab for the communities in the project scope. This Lab will not only provide a safe place for K-12 and post-secondary students to do school work, but it will also foster an entrepreneurial environment for small business start up's. A Pima Co.-identified site: TBD.
- [redacted] **Advertising campaign to promote the expansion communities in Pima Co.:** Cox would provide support for the creation of a long-form video to support broadband adoption. The video would be aired on Cox YurView channel and could be repurposed for digital equity purposes.

Census tracts of proposed project scope for Three Points and Sycamore Springs:

Sycamore Springs, AZ Network Expansion – 2010 Census Tracts

ogc_fid	statefp10	countyfp10	tractce10	geoid10	name10	namelsad10	mtfcc10	funcstat10	aland10	awater10	intptlat10	intptlon10
1420	4	19	4109	4019004109	41.09	Census Tract	G5020	S	778966112	0	31.8894428	-110.6151709
1224	4	19	4114	4019004114	41.14	Census Tract	G5020	S	120150510	0	32.0166682	-110.9098888
1189	4	19	4107	4019004107	41.07	Census Tract	G5020	S	488529062	0	31.8530017	-110.7828232

[redacted]

ogc_fid	statefp10	countyfp10	tractce10	geoid10	name10	namelsad10	mtfcc10	funcstat10	aland10	awater10	intptlat10	intptlon10
1245	4	19	4424	4019004424	44.24	Census Tract	G5020	S	309184140	0	32.131615	-111.3141621

[redacted]