

City of Lovelock

Pershing County Rural Areas

Broadband Enhancement Request for Information (RFI)

Pershing County and City of Lovelock, Towns and Unincorporated Areas

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1. RFI Timeline

- **June 4, 2020** **RFI is released**
- **June 18, 2020** **Initial Vendor Questions e-mailed to:
pceda.hlusby@gmail.com**
- **June 29, 2020** **Vendor Meeting – 10AM PT at following link:
<https://us02web.zoom.us/j/83028330732?pwd=aHVERmVjaWc4cmVWbFdSdFpEZnBBUT09>**
- **July 2, 2020** **Final Vendor Questions**
- **July 7, 2020** **Q&A posted**
- **Aug 7, 2020** **Responses due at 5 PM PT; E-mailed to:
pceda.hlusby@gmail.com**

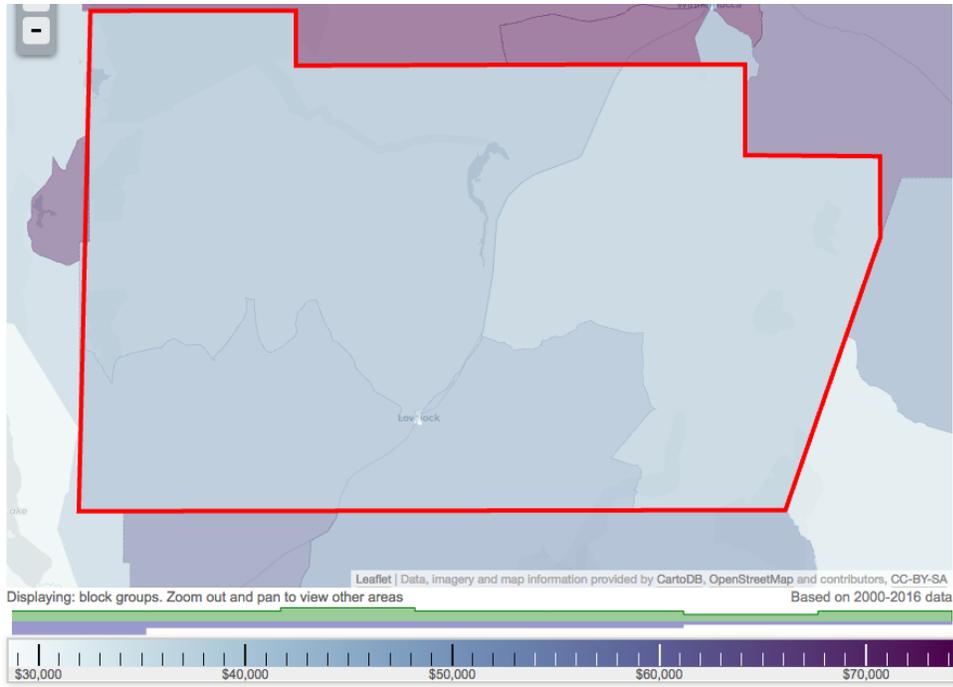
2. Pershing County Background

Pershing County is a county in the U.S. state of Nevada. As of the 2010 census, the population was 6,753. Its county seat is Lovelock. The county was named after General of the Armies John J. Pershing (1860–1948). It was formed from Humboldt County in 1919, and the last county to be established in Nevada. The Black Rock Desert, location for the annual Burning Man festival, is partially in the county.

The county contains 6,037 square miles (3,863,664 acres) with a population density of 603 acres per person or about 1 person per square mile.

There are approximately 3380 households in the county.

Median Household Incomes in Pershing County \$50,846. The map below shows the relative distribution of median household incomes.



Employment in Pershing County

- Private wage or salary: 28%
- Government: 16%
- Self-employed, not incorporated: 56%
- Unpaid family work: 0%

Pershing’s economic mainstay is agriculture. Here are some farming statistics from the County:

Average size of farms: 1140 acres

Average value of agricultural products sold per farm: \$223,544

Average value of crops sold per acre for harvested cropland: \$292.46

The value of nursery, greenhouse, floriculture, and sod as a percentage of the total market value of agricultural products sold: 0.00%

The value of livestock, poultry, and their products as a percentage of the total market value of agricultural products sold: 66.51%

Average total farm production expenses per farm: \$201,242

Harvested cropland as a percentage of land in farms: 22.45%

Irrigated harvested cropland as a percentage of land in farms: 90.69%

Average market value of all machinery and equipment per farm: \$138,432

The percentage of farms operated by a family or individual: 81.74%

Average age of principal farm operators: 53 years

Average number of cattle and calves per 100 acres of all land in farms: 14.62

Milk cows as a percentage of all cattle and calves: 0.08%

Two economic development disclosures could provide for momentum, population and business growth in Pershing County.

On June 20th, 2018, Pershing County Commissioners discussed the location of a data center and high technology manufacturing center near Imlay.

On August 28, 2018, Pershing Gold announced the acquisition of over 4200 acres of mineral rights for land near the existing Relief Canyon Mine in eastern Pershing County.

<https://markets.businessinsider.com/news/stocks/pershing-gold-announces-mineral-lands-acquisition-to-further-consolidate-relief-canyon-land-position-1027489846>

Pershing County Government

Pershing County Government has 133 employees.

Pershing County Government released in 2019 an RFP for a comprehensive network and connectivity solution. Here is a link to the bid package for this project.

http://www.pershingcounty.net/document_center/index.php#outer-726 (click on the information technology section for the bid documents)

Lovelock Correctional Center

Within Pershing County is the State of Nevada's Lovelock Correctional Center. **Lovelock Correctional Center (LCC)** is a Nevada Department of Corrections prison in unincorporated Pershing County, Nevada, near Lovelock approximately 9 road miles east of the center of Lovelock. The Correctional is sited on a 38-acre plot of land on the south side of Interstate 80.

Lovelock Correctional Center is the seventh major institution of the Nevada Department of Corrections. It was constructed and opened in two phases. The first started in August 1995 with two 168 cell housing units. Each 80-square-foot (7.4 m²) cell can house two inmates. Construction on the second phase saw two 168 cell units and two 84 cell units made available for the institution to hold 1,680 offenders. Its industrial plant, housed in two 20,000-square-foot (1,900 m²) buildings, makes garments and mattresses. In addition to the 213 Protective Service staff, Lovelock Correctional Center employs a number of professional and skilled staff:

- 14 skilled maintenance personnel
- 5 warehouse employees
- 5 correctional cooks
- 1 laundry/dry cleaning specialist
- 1 recreation specialist

- 13 classification specialists
- 9 administrative/clerical

City of Lovelock

The City of Lovelock is the County seat of Pershing County. The City's population is 1,900 (2014). The city limits encompass about 14.5 square miles. Lovelock's median household income is \$44,969 (US Average is \$59,039; Nevada Average Median Income is \$55,180). The area of Lovelock encompasses approximately 1 square mile. Density is 1900 people per square mile.

Pershing County School District is all networked with single-mode fiber owned by WanRack, except Imlay school which is a lit leased service with AT&T. The Pershing County Library was also included in the fiber optics build. All are connected through a Wide Area Network.

Imlay

Imlay is an unincorporated town in Pershing County, Nevada, United States. It has an elementary school, a general store, a post office, and a trading post. As of the 2010 census the population was 171 around the center of the unincorporated area. The unincorporated area is just off Interstate 80 about 40 miles east of Lovelock.

Mill City

Mill City is an unincorporated community in Pershing County, Nevada, United States. The ZIP Code of Mill City is 89418. Population is less than 50.

Mill City had its start as a mining community. The community was named for a quartz mill near the original town site

Lovelock Indian Colony

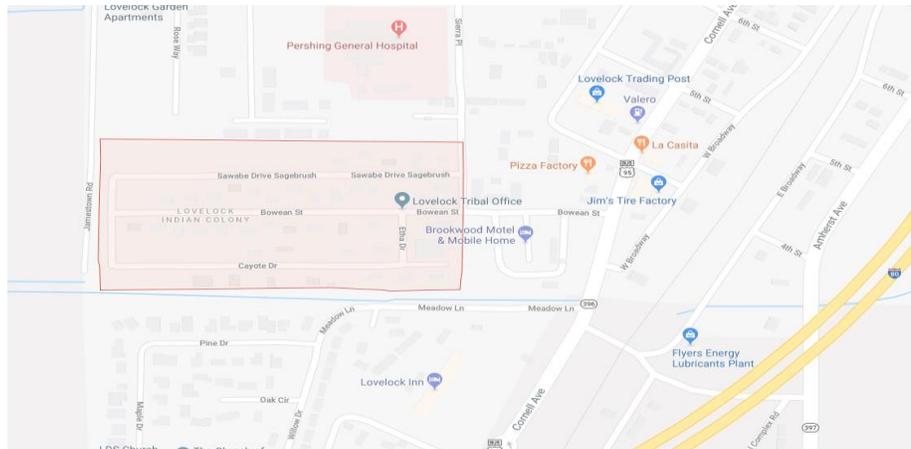
The Lovelock Paiute Tribe of the Lovelock Indian Colony is a federally recognized Tribe of Northern Paiute Indians. The colony resides on fifteen acres of land and is located in Pershing County in Lovelock, Nevada.

The Tribe has a Tribal Administration Office, Tribal Law Enforcement; Tribal Court; Tribal Human Services, Diabetes Center, Dispensary, Cannabis growing facility and a Tribal Health Clinic. The tribal population is estimated at 85 according to census.gov. The colony is housed within the city limits of Lovelock.

A community development project recently was completed to include: speed bumps, lit public safety signage, manholes and will continue with plans to add curbing and new fencing. Conduit is expected to be installed along the streets within the tribal community.

Lovelock Indian Colony is actively pursuing a TeleHealth Clinic, to include an Opioid Outreach Program.

Universal Services Administrative Company, through the Erate program awarded Lovelock Indian Colony funding for a library, housed in the Administration Building. A fiber optics cable will be run off of the AT&T fiber, into the Administration Building. Project to begin June 2020.



Pershing County School District Wide Area Network (WAN)

Pershing County School District in 2018 awarded a school district Wide Area Network contract to WANRack. WANRack has constructed aerial and buried fiber to connect the elementary school, Pershing County Public Library, the middle school, the high school and the Pershing County School District within the City of Lovelock.

NOTE: There are excess strands in this fiber build that have been properly cost allocated by WANRack and may be available to third party service providers via dark fiber lease.

3. Pershing County Location Map:

The locations of key community anchor institutions are on the map at this link:

https://www.google.com/maps/d/viewer?mid=1yfA_I_w2dRKB6J5hjX1NyxzVOMbUzclp&ll=40.47915916729932%2C-118.19518399373396&z=9

4. Problem Statement and Statement of Need

Pershing County, the Lovelock Paiute Tribe, and the City of Lovelock have formed the Pershing Broadband Action Committee (PBAC) to address the lack of scalable broadband access in the county. This committee is made up of numerous Pershing Affiliates from Pershing County, City of Lovelock, Lovelock Indian Colony, and other. This lack of scalable broadband access is prevalent in both high density population and remote/rural areas of Pershing County. Access to education, access to healthcare, communication with public

safety, school work, economic vitality, business innovation, entertainment, tourism and other critical services are increasingly delivered over a broadband Internet connection.

The lack of scalable broadband infrastructure and broadband services in Pershing County will limit the county's ability to:

- Retain jobs and existing business
- Increase tourism and destination location opportunities
- Promote Economic Development efforts to attract and expand commercial business
- Conduct business without fear of Internet connectivity loss
- Provide life-long "K to Gray" education for its citizens
- Advance the capability for digital and distance learning
- Provide leading edge healthcare
- Ensure the timely delivery of government services to Pershing County, City of Lovelock and municipal residents
- Ensure timely and seamless public safety communication
- Benefit from cloud-based/streaming services currently rendered inoperable by poor broadband
- Expand home business capability

Goals of the PBAC:

The PBAC set Several Goals for its work:

- Throughout Pershing County create a scalable network solution to foster diversity and innovation, drive job retention and creation, stimulate economic growth, and serve new areas of development in the community; by providing service for a minimum of twenty (20) years from the date of first operation.
- While the PBAC prefers that the broadband solutions proposed by providers/vendors network be fiber based; **all technologies will be considered, especially in lower density unserved/underserved areas.**
- Provide a flexible menu of broadband services, that improve service to the following eligible service areas:
 - a. Unserved/Underserved/oversubscribed areas - Offer new or enhanced service in underserved and unserved areas of the county.
 - b. Economic Corridors - Offer enhanced service along key business and high density residential corridors in Lovelock's higher density areas including Lovelock, Imlay and other unincorporated areas and connects broadband assets that serve remote areas of the county.
 - c. Government facilities – Offer lit or dark fiber services to meet the administrative and public safety needs of Pershing County Government and the City of Lovelock.

Note that the PBAC owns no assets nor is the PBAC a decision-making body. The PBAC is a coordination body that allows service providers to coordinate efforts with one organization that represents all bodies (called Affiliates) who possess jurisdictional authority over areas

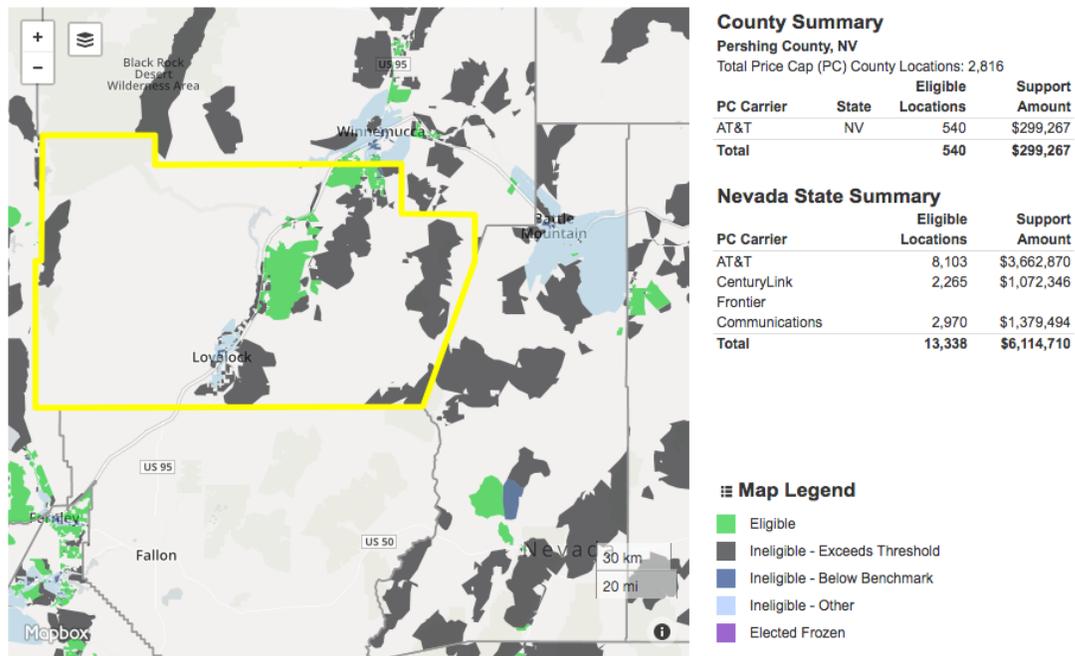
of Pershing County. The Affiliate with jurisdictional authority over a proposed service area is the only organization with the authority to enter into service agreements, subsidy agreements or other agreements with service providers.

5. Areas of Need

The Pershing Affiliates have identified three areas in need of new or improved service – 1. Unserved areas 2. High Population Density areas to serve residents and businesses 3. Government facilities

Unserved/Underserved Areas

According to the Federal Communications Commission’s (FCC) Connect America Fund (CAF) map the areas in green in Pershing County are underserved.

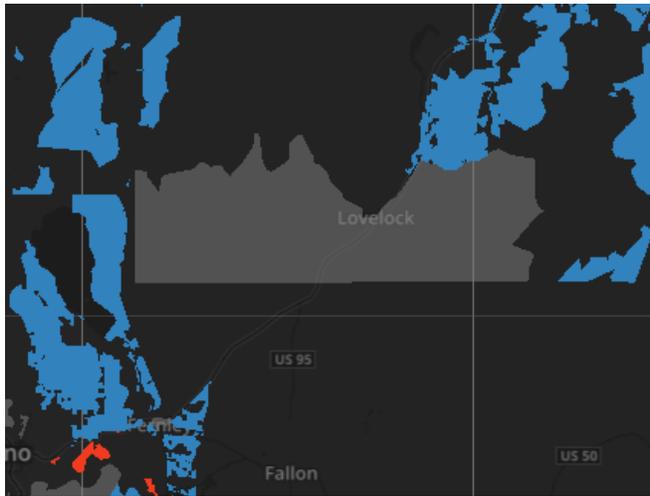


In all, there were 540 locations in Pershing County with \$299,267 of support.

The accepted areas appear in green. No eligible areas were accepted by the incumbent.

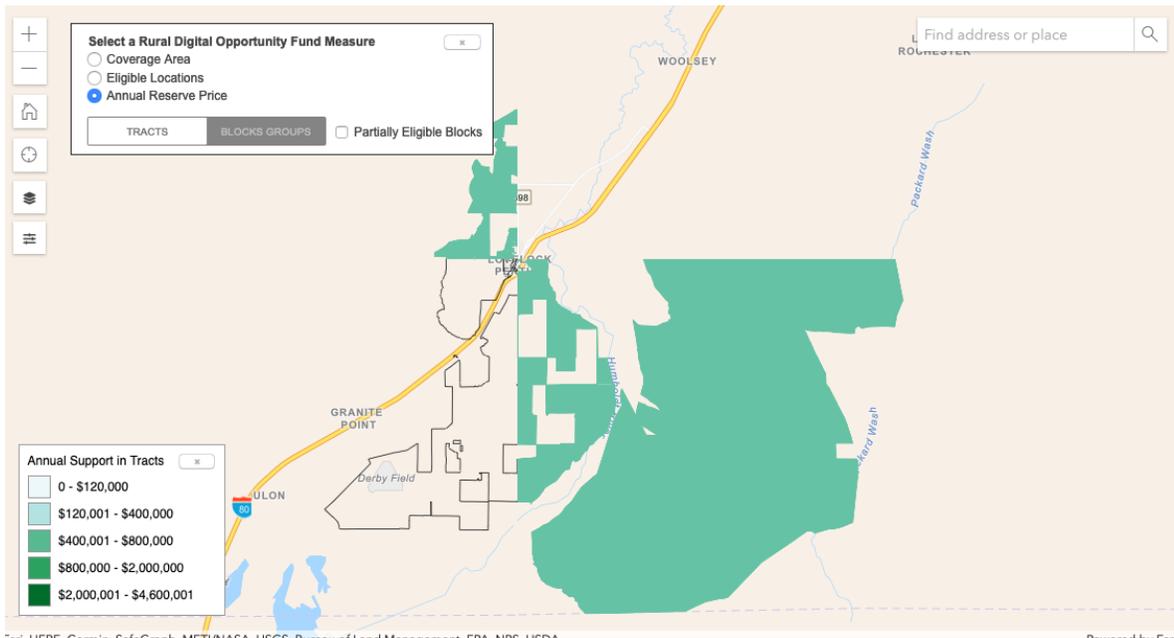
CAF Phase II 903 Auction-In the CAF Phase II 903 auction, service provider CommNet which operates under the brand Choice Wireless, accepted Connect America Funding to serve 2 census blocks on 804 locations in Pershing County. These areas will see at least 10Mbps download and 1Mbps upload broadband service options from CommNet/Choice Wireless in the next 5 years.

The areas where CommNet accepted funding are depicted on this map:



Rural Digital Opportunity Fund

The FCC recently released eligible areas for its next round of subsidies. Subsidies for the new Rural Digital Opportunity Fund (RDOF) will be awarded via a reverse auction that is scheduled to begin October 22nd, 2020. In Pershing County, there are 1386 locations eligible for up to \$5.78 Million in total subsidies over a 10 year period.



Pershing County Assistance in making application for Federal Funds

Pershing Affiliates will assist respondents in making application for Federal Broadband grant, subsidy and reimbursement funds. Some of the programs respondents may pursue are as follows:

Fund Source	Fund Name and Definition	Process
Federal Communications Commission (FCC)	<p>Rural Digital Opportunity Fund – (RDOF) the RDOF is the successor to the Connect America Fund. It will distribute \$20 Billion via reverse auction to bridge rural broadband gaps. The auction will begin in October 2020. The areas eligible for funding are still being determined. The reverse auction process will be similar to the Connect America Fund II 903 Auction. (RDOF rulemaking process)</p>	<p>Rulemaking is in process. Providers should monitor the eligible areas and broadband standards.</p>
FCC	<p>E-rate-Reimbursement for School and Library broadband connections (FCC E-rate Website). Reimbursements range from 20-90% of the total one-time and monthly recurring costs. The reimbursement rate is based on the % of student participation in the National School Lunch Program (NSLP) in the district.</p>	<p>School or library must follow E-rate procurement guidelines.</p>
FCC	<p>5G Fund for Rural America- \$9 Billion in subsidies awarded via reverse auction to introduce 5G wireless service to most rural areas of the country.</p>	<p>Announced on 12/4/19- rulemaking still to be done.</p>
FCC	<p>Rural Healthcare Program (RHP) - The FCC’s RHP provides reimbursements for broadband connections to rural healthcare providers and some urban healthcare providers if a member of a consortium that has a majority of rural based members. The RHP has two funding scenarios, the telecommunications program and the healthcare connect fund (HCF). The Healthcare Connect Fund is a flat 65% reimbursement of broadband costs for participants.</p>	<p>Applicants must follow RHP procurement guidelines</p>
US Economic Development	<p>The U.S. Economic Development Administration's investment policy is</p>	<p>US EDA Grant Opportunities</p>

<p>Association (US Department of Commerce)</p>	<p>designed to establish a foundation for sustainable job growth and the building of durable regional economies throughout the United States. In recent grants to communities and regions have included broadband infrastructure grants.</p> <p>Pershing County is of the Western Nevada Development District.</p>	
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Description of Services for rural and/or underserved areas of Pershing County

Based on residential and business survey feedback, these Connect America Fund areas and other rural areas of the county appear to still lack appropriate broadband service, the county is seeking other options for service in unserved or underserved areas.

The following specifications have been developed for broadband service providers interested in offering service in these regions. Provider(s) of the broadband services in the unserved/underserved areas will take responsibility to design, engineer, construct, project manage and equip the Network(s). Network(s) access should include building up to the end user drop point or the end user Network(s) interface device. In addition, the Vendor(s) will bear all the operating and maintenance costs, including insurance costs and relevant taxes of the Network(s). Vendor(s) should also demonstrate a clear and continuous upgrade path for the Network(s) to meet future consumer demand, business demand, community anchor institute demand, and service developments.

- SPEED: 25Mbps download (down) and 3Mbps upload (up) wired or wireless solutions, scaling to 50Mbps symmetrical over the majority of rural areas of Pershing County by 2022. Preference will be given to Vendors offering higher network speeds.
- SERVICES REQUIRED: high quality voice, data, and video services, and tele-health solutions.
- PREFERRED TECHNOLOGY absent fiber infrastructure:
 - Lit Point to Point Microwave service - Service provider owned microwave with a fully managed, bundled (transport and access included) service at a minimum 25Mbps download/3Mbps upload initially scaling to 50Mbps symmetrical service by 2022.
 - Mobile Broadband Service using existing wireless networks –

Preferred using LTE or other current generation fully managed, bundled (transport and access included) service at a minimum 25Mbps download/3Mbps upload initially scaling to 50Mbps symmetrical service by 2022.

- Others proposed by vendors

- TECHNICAL SPECIFICATIONS:

- **Microwave Wireless-** The vendor shall engineer, design, and implement high-availability microwave paths that have path reliabilities of not less than 99.95% and a fade margin of not less than 30 dB for all microwave paths. The contractor shall apply for, coordinate and obtain FCC licenses for all microwave paths requiring licensing.
- **Mobile wireless solutions** – The vendor can propose to utilize an existing mobile network for delivery of last mile mobile to the premise solutions. An LTE platform or equivalent mobile wireless broadband technology should be proposed. The vendor should illustrate the existing capacity of the mobile network to be used for last mile broadband and the amount of oversubscription planned in the last mile, in the transport to a POP and at the POP.
- **Mesh mobile network solutions or other innovative solutions-**Given the rapid pace of innovation in the wireless space, considerations for other last mile solutions will be considered. In all proposals of this kind, the vendor(s) should illustrate the existing capacity of the mobile network to be used for last mile broadband and the amount of oversubscription planned in the last mile, in the transport to a POP and at the POP.

- SERVICE LEVEL AGREEMENT

- For all services wired or wireless provided in high density areas, the following service specifications should be met for all connections:
 - 99.9% circuit uptime
 - Frame/packet loss .50% commitment
 - 50 ms Network Latency Commitment
 - 10 ms Network Jitter Commitment
 - Rate limiting and throttling will be reported to customer
 - Credits for outages according to the following schedule:

Length of Service Outage	Credit is the following percentage of Monthly Recurring Cost
Less than 2 hours	No Credit

Two (2) to four (4) hours	5%
Greater than four (4) hours and less than eight (8) hours	10%
Greater than eight (8) hours and less than twelve (12) hours	15%
Greater than twelve (12) hours and less than sixteen (16) hours	20%
Greater than sixteen (16) hours and less than twenty-four (24) hours	35%
Greater than twenty-four (24) hours	50%

- SERVICE PERIOD: Up to 20 years from date of first operation
- EXPANSION: Provides a comprehensive broadband infrastructure that can be expanded upon to serve other areas of Pershing County when deemed practical.
- GRANT ASSISTANCE: Providers may seek Federal or State Grant assistance to serve these “higher density” areas. The Governor’s Office of Science, Innovation, and Technology, (OSIT) can advise and provide resource avenues. This could include:
 - Grants available to Federally Recognized Tribal Organizations
 - Universal Service reimbursement funds
 - Anticipated Federal Infrastructure Investment Funds
 - Future rounds of Connect America Funding
 - USDA Community Development and ReConnect Grant
- ACCESS TO ASSETS: The Pershing Affiliate with jurisdictional authority over the asset, whether this be the Pershing County Commissioners, the Lovelock City Council, the Lovelock Indian Colony or another entity, must formally approve the service providers proposed use of a facility or asset. These facilities include land and potential access to vertical assets.

Description of Services for “higher” density Areas of Pershing County Including the City of Lovelock

High density areas of Pershing County are as follows:

Pershing Affiliates are also seeking to improve the higher density areas of the county. These areas tend to cluster residences and businesses in a relatively compact area. These areas, for the most part, also cluster around Interstate 80.

The provider(s) proposing to serve areas within the City of Lovelock and the unincorporated area of Imlay (and areas/subdivisions/multi-dwelling units outside of or adjacent to these areas).

Fully Managed Fiber Service:

The first option for improved service within the City of Lovelock and other high density areas, is a fully managed lit service over fiber that the Broadband Service Provider owns. For this service, the vendor/service provider will take responsibility to design, engineer, construct, project manage and equip the Network(s). Network(s) access should include building up to the end user drop point or the end user Network(s) interface device. In addition, the Vendor(s) will bear all the operating and maintenance costs, including insurance costs and relevant taxes of the Network(s). Vendor(s) should also demonstrate a clear and continuous upgrade path for the Network(s) to meet future consumer demand, business demand, community anchor institution demand, and service developments.

- SPEED: At initial service introduction, minimum 25Mbps download /3Mbps upload for business and consumers within the city limits with availability of service packages up to 1 Gbps symmetrical. As part of the respondent’s proposal, please outline how the service will scale to a minimum of 100Mbps symmetrical minimum service up to 10 Gbps maximum service by 2022.
- SERVICE REQUIRED: For fiber-to-the-premise proposals, Active Ethernet, GPON, and/or WDM/PON technologies to provide services to households, businesses, governments, and institutions throughout the Service Area are all acceptable technologies. This Network(s) must include all active and passive infrastructure, including fiber cabling, active repeater equipment, uninterruptible power supplies, Network(s) cross-connections, software, and ancillary equipment.
- PREFERRED TECHNOLOGY:
 - **Lit Fiber Service**-Service provider owned fiber with a fully managed lit service at a minimum of 25Mbps download /3Mbps upload for business and consumers within the city limits with availability of service packages up to 1 Gbps symmetrical. As part of the respondent’s proposal, please outline how the service will scale to a minimum of 100Mbps symmetrical minimum service up to 10 Gbps maximum service by 2022.

Fully Managed Service over a Transport Medium Other than Fiber

The Second Option for improved service within the City of Lovelock and other high density areas of the County (if any) is a fully managed service over a transport medium other than fiber. Pershing Affiliates would offer no incentive for these technologies: The Service

Provider would own the infrastructure, the equipment and fully manage the provisioning and operation of the service. Service options acceptable include:

- Lit Point to Point Microwave service - Service provider owned microwave with a fully managed, bundled (transport and access included) service at a minimum of 25Mbps download /3Mbps upload for business and consumers within the city limits with availability of service packages up to 1 Gbps symmetrical. As part of the respondent’s proposal, please outline how the service will scale to a minimum of 100Mbps symmetrical minimum service up to 10 Gbps maximum service by 2022.
- Mobile Broadband Service using existing wireless networks – Preferred using LTE or other current generation fully managed, bundled (transport and access included) service at a minimum of 25Mbps download /3Mbps upload for business and consumers within the city limits with availability of service packages up to 1 Gbps symmetrical. As part of the respondent’s proposal, please outline how the service will scale to a minimum of 100Mbps symmetrical minimum service up to 10 Gbps maximum service by 2022.
- Others proposed by vendors

Standards for all Fully Managed Service over fiber or non-fiber transport medium

- SERVICE LEVEL AGREEMENT for all fully managed services over fiber or other transport medium:
- For all services wired or wireless provided in high density areas, the following service specifications should be met for all connections:
 - 99.99% circuit uptime
 - Frame/packet loss .25% commitment
 - 25ms Network Latency Commitment (on circuit to ISP access point)
 - 5ms Network Jitter Commitment
 - Rate limiting and throttling will be reported to customer
 - Credits for outages according to the following schedule:

Length of Service Outage	Credit is the following percentage of Monthly Recurring Cost
Less than 45 minutes	No Credit
Forty-five (45) min. to four (4) hours	5%
Greater than four (4) hours and less than eight (8) hours	10%
Greater than eight (8) hours and less than twelve (12) hours	15%

Greater than twelve (12) hours and less than sixteen (16) hours	20%
Greater than sixteen(16) hours and less than twenty-four (24) hours	35%
Greater than twenty-four (24) hours	50%

- SERVICE PERIOD: Up to 20 years from date of first operation
- EXPANSION: Provides a comprehensive broadband infrastructure that can be expanded upon to serve other areas of Pershing County, including those outside the high density areas, when deemed practical.
- ACCESS TO ASSETS: Access to other broadband delivery assets owned or controlled by the City of Lovelock, Pershing County and other entities. There will be a consideration to enter into service contracts with prospective vendors. This means, City and County facilities currently subscribing to broadband service will consider options for service proposed by respondents.

The Pershing Affiliate with jurisdictional authority over the asset, whether this is the Pershing County Commissioners, the Lovelock City Council, the Lovelock Indian Colony, or another entity, must formally approve the service providers proposed use of a facility or asset.

- OPEN ACCESS: open access solution is preferred; the main network vendor offers lit and dark fiber services to other service providers, but proposals that have some variance on this preferred solution may be considered.
- GRANT ASSISTANCE: Providers may seek Federal or State Grant assistance to serve these “higher density” areas. The Governor’s Office of Science, Innovation, and Technology can advise and provide resource avenues. This could include:
 - Grants available to Federally Recognized Tribal Organizations
 - Universal Service reimbursement funds
 - Anticipated Federal Infrastructure Investment Funds
 - USDA Community Development and ReConnect Grant
- PRICING:
 - Service for government may be priced as;
 - Transport only
 - Transport and access (bundled) package

Service for business may be priced as:

- Transport only
- Transport and access (bundled) package

Service for residences may be priced as:

- Transport and access (bundled) package

Pershing County Government Services

Pershing County desires a substantial upgrade to its current network environment. The specifications are outlined below. The Pershing County Information Technology staff will oversee responses to this portion for of the Pershing County Broadband Enhancement RFI.

Here are the requirements for Pershing County Government.

Current Pershing County Government Environment

Pershing County has approximately 106 PCs and laptops and 13 servers. The County's network consists of 10 locations with LAN subnets with site-to-site IPSec VPNs. We currently use Cisco ASA 5500 series firewalls (reaching end of life) and ISR routers (reaching end of life), HP and Netgear switches, and a Nortel NorStar MICS PBX phone system.

PCs are primarily Dell OptiPlex desktop models ranging from 3 to 10 years of age, and HP All-In-One Business PCs. The standard operating systems are Windows 7 Pro 64-bit and Windows 10 Pro 64-bit.

Server locations are split between five small server rooms at different county buildings (See map for details):

- Pershing County Administration Building
- Pershing County Courthouse – District Attorney's Office
- Pershing County Courthouse – Judge's Chambers
- Pershing County Sheriff's Office
- Pershing County Annex Building – Child Support Division Office

The servers consist of a mix of rack mounted Dell PowerEdge and HPE ProLiant DL380 and DL360 servers with redundant power supplies, and direct attached storage arrays. The environment is completely physical with no virtual machine guests. The typical storage configuration consists of a RAID 1 array(OS) and a RAID 5 array (DATA). The network is an unmanaged TCP/IP switch Ethernet flat network with IPSec site-to-site VPNs connecting certain geographically dispersed locations. Critical servers are backed up with Symantec Backup Exec and Unitrends Backup and Disaster Recovery.

While this RFP focuses on bringing broadband connectivity to sites, an accompanying RFP to upgrade County WAN and LAN equipment; client devices, phone systems and other premise equipment is also expected to be issued in the near term.

County Facility Broadband Needs

The County is bidding broadband service to the facilities listed below. Pershing County Information Technology (PCIT) will be the decision maker on the bids for broadband service to these locations. Pershing County Government has not yet determined the impact

Service Definition: The County is seeking **fully managed transport links between sites and designated county hubs**. The County is also seeking fully managed Internet bandwidth (ISP service) upstream from the designated hub.

For a fully managed service, the respondent owns, supplies, installs, provisions, manages and provides 24/7/365 technical support for all fiber and equipment.

Respondent bids should include:

- Furnishing, installation, testing, and configuration of selected network components.
- Then vendor should describe the test data it will supply to PCIT prior to acceptance of the equipment and configuration. This description should include adherence to the security, VLAN, QoS, diagram, and logistics standards set forth in this section.
- Strict inter-VLAN access rules to improve network and data security (identification, isolation and control of illegitimate traffic or system anomalies).
- Segregated and hardened network segments for NCJIS and DMV access complying with state and federal standards (See Section 6.5.4).
- QoS controls to guarantee bandwidth allocation and prioritization for mission critical application traffic, de-prioritization of less critical network traffic, and VoIP capability.
- Necessary, scalable network capacity to support future technologies including hybrid cloud services and internet bandwidth transfer support of 250Mbps to 500Mbps with support for burst 1 Gb and internal 1Gb internal network traffic support. With scalability to higher capacities.
- Network resilience with 99.99% uptime
- Detailed bill of materials (BOM) of equipment and services to upgrade the entire system of all buildings at all locations for a fully managed service
- Spare parts inventory that supports an appropriate balance of downtime risk, investment cost
 - PCIT desires to have at least one complete spare switch (include cables and modules) for any switch model that has more than four switches in the

network design. PCIT also desires vendor to carry replacement inventory of any switches in the network design within a four-hour drive of Lovelock.

- A specification for the construction and/or lease of the layer one infrastructure (fiber, fixed wireless or alternative transport medium) that will interconnect county government sites. This includes construction specifications for new fiber builds and link loss budgets (in dB) for existing fiber links.
- A specification and quote for the emergency maintenance, repair or replacement of the network equipment. This can be included in the warranty maintenance section of the equipment proposal.
- Diagrams, in printed and electronic formats, of physical network interconnections
- Diagrams, in printed and electronic formats, of logical network interconnections

Services are expected to be delivered from the county hub, the Pershing County Administration Building (or another suitable County location) at:

Name	Address	Lat/Long
Pershing County Sheriff's Office	355 9 th Street, Lovelock, NV 89419	40.17923, -118.47622

Service is expected to be delivered to the eligible service locations from the county hub at the following locations. The preference is for these sites, in Lovelock, to be served by a fiber connection between the hub and the endpoint for direct connection and LAN/VLAN management.

The following facilities should be served by fiber based connections beginning at 1G symmetrical service and scaling to 10G as needed. Contracts will be for a minimum of 60 months with pricing requested for 36 and 60 month renewals.

Name	Address	Lat/Long
Pershing County Courthouse	400 Main Street, Lovelock, NV 89419	40.18098, -118.47661
Pershing County Administration Building	400 Main Street, Lovelock, NV 89419	40.18098, -118.4758
Pershing County Annex Building	535 Western Avenue, Lovelock, NV 89419	40.18004, -118.47794
Pershing County Senior Center	630 Western Avenue, Lovelock, NV 89419	40.18057, -118.4795
Pershing County Road Department	1075 Arobio Lane, Lovelock, NV 89419	40.17979, -118.49667

Pershing County Community Center	820 6 th Street, Lovelock, NV 89418	40.176371, -118.48127
Pershing County Buildings and Grounds Shop	795 Western Avenue, Lovelock, NV 89419	40.17995, -118.4828
Pershing County Juvenile Probation Office	795 Western Avenue, Lovelock, NV 89419	40.17995, -118.4828

Optionally, service to these locations can be included for Internet Connectivity. For these sites outside of Lovelock (or a distance away from the center of Lovelock), the transport medium from the transport circuit back to the County hub, can be fiber, fixed wireless or other option that meets the bandwidth and service level agreement standards.

Imlay Fire Department	850 Pacific Avenue, Imlay, NV 89418	40.6575, -118.16178
Rye Patch Fire Department	Old Victory Highway, Lovelock, NV 89419	40.44616, -118.2688
Grass Valley Fire Department	5505 Katrena Drive, Grass Valley, NV 89445	40.83135, -117.74658
Derby Field Airport	1 Derby Field Road, Lovelock, NV 89419	40.07044, -118.56932

County Desired Service Level Agreement for WAN Transport:

Pershing County Government desires the following Service Level Agreement and Service Credits are outlined on the following schedule for all **WAN Transport** (from the County Hub to another County facility) circuits.

- For all services wired or wireless provided in high density areas, the following service specifications should be met for all connections:
 - 99.999% circuit uptime
 - Frame/packet loss .25% commitment
 - 25ms Network Latency Commitment
 - 5ms Network Jitter Commitment
 - Rate limiting and throttling will be reported to customer
 - Credits for outages according to the following schedule:

Length of Service Outage	Credit is the following percentage of Monthly Recurring Cost
Less than 45 minutes	No Credit
Forty-five (45) min. to four (4) hours	5%

Greater than four (4) hours and less than eight (8) hours	10%
Greater than eight (8) hours and less than twelve (12) hours	15%
Greater than twelve (12) hours and less than sixteen (16) hours	20%
Greater than sixteen (16) hours and less than twenty-four (24) hours	35%
Greater than twenty-four (24) hours	50%

County ISP Service

Pershing County also wants to receive quotes for 1G, 2G and 5G commodities of ISP service delivered to the following location:

Name	Address	Lat/Long
Pershing County Sheriff's Office	355 9 th Street, Lovelock, NV 89419	40.17923, -118.47622

The quotes should be for 36 and 60 months and the County should be able to upgrade service without renewal of the contract.

The respondent for ISP service should outline the following:

- The upstream NAPs from which ISP service is delivered. The County prefers bi-directional delivery with fail-over
- A description of the commodity peering relationships the proposed ISP provider has in place with content providers
- A diagram of the pathways to reach the NAPs
- An outage history of ISP service along these pathways for the last 36 months

In addition, the ISP Service Level Agreement should meet the following specifications:

- 99.99% circuit uptime
- Frame/packet loss .25% commitment
- 45ms Network Latency Commitment
- 5ms Network Jitter Commitment
- Rate limiting and throttling will be reported to customer
- Credits for outages according to the following schedule:

Length of Service Outage	Credit is the following percentage of Monthly Recurring Cost
Less than 45 minutes	No Credit
Forty-five (45) min. to four (4) hours	5%
Greater than four (4) hours and less than eight (8) hours	10%
Greater than eight (8) hours and less than twelve (12) hours	15%
Greater than twelve (12) hours and less than sixteen (16) hours	20%
Greater than sixteen (16) hours and less than twenty-four (24) hours	35%
Greater than twenty-four (24) hours	50%

City of Lovelock Broadband Services Needs

The City of Lovelock will also consider pricing to provide bundled transport and Internet Access Services to the Following Facilities/Offices:

Facility Name/Type	Address	Latitude/ Longitude
Lovelock City Clerk	400 14th St, Lovelock, NV 89419	40.184567, -118.47322
Lovelock City Police Department	400 14th St, Lovelock, NV 89419	40.184567, -118.47322
City of Lovelock - Maintenance Shop	590 8th St, Lovelock, NV 89419	40.178605, -118.478025
Lovelock Meadows Water District	400 14th St, Lovelock, NV 89419	40.184567, -118.47322
City of Lovelock Animal Shelter	700 S Meridian Rd Lovelock, NV 89419	40.169430, -118.475520

- For all services wired or wireless provided quoted for City of Lovelock facilities, the

following service specifications should be met for all connections:

- 99.999% circuit uptime
- Frame/packet loss .25% commitment
- 25ms Network Latency Commitment
- 5ms Network Jitter Commitment
- Rate limiting and throttling will be reported to customer
- Credits for outages according to the following schedule:

Length of Service Outage	Credit is the following percentage of Monthly Recurring Cost
Less than 45 minutes	No Credit
Forty-five (45) min. to four (4) hours	5%
Greater than four (4) hours and less than eight (8) hours	10%
Greater than eight (8) hours and less than twelve (12) hours	15%
Greater than twelve (12) hours and less than sixteen (16) hours	20%
Greater than sixteen (16) hours and less than twenty-four (24) hours	35%
Greater than twenty-four (24) hours	50%

- Price quotes should be provided for bundled transport and Internet Access services at the following bandwidths 25Mbps/3Mbps; 25Mbps symmetrical; 50Mbps symmetrical; 100Mbps symmetrical and 250Mbps symmetrical for terms of 1, 3 and 5 years.

Other Key Facilities Table (These are not Part of the County Government Facilities that require service)

Bolded entries indicate possible Universal Service Fund reimbursement eligibility. These are not part of the Pershing County IT bid, but may be part of future procurements.

A map of these locations is here:

Facility Name/Type	Address	Latitude/Longitude

Lovelock Rural Counseling & Supportive Services	775 Cornell Ave., Ste. A-1, Lovelock, NV. 89419	40.178103, -118.476519)
Pershing County Community Health Nurse	535 Western Ave., Lovelock, NV. 89419	40.180093, -118.477632
Pershing General Hospital	850 Sixth Street, Lovelock, NV 89419	40.176643, -118.484275
Unionville Post Office	Imlay, NV 89418	40.445463, -118.120695
Imlay Post Office	410 Main St, Imlay, NV 89418	40.658602, -118.147572
Oreana Post Office	Lovelock Unionville Road, Oreana, NV 89419	40.658455, -118.147637
Pershing County Schools - Imlay Elementary School* (BID on a separate E_rate RFP)	380 Main St., Imlay, NV 89418	40.659366, -118.148174
Paiute Tribal Council	201 Bowean St, Lovelock, NV 89419	40.173730, -118.48177
City of Lovelock Strip Park	1085 Amherst Ave, Lovelock, NV 89419	40.179251, -118.471867
Lovers Lock Plaza	Lovelock, NV 89419	40.180722, -118.476904
Lovelock Swimming Pool	1110 Elmhurst Ave, Lovelock, Nevada 89419	40.181426, -118.476980
McDougal Sports Complex	Airport Rd, Lovelock, NV 89419	40.186526, -118.433705
Telecommunications Facilities	These are key telecom facilities in and around Lovelock	
LVLNV11DS1-Colocation Hut	955 Amherst, Lovelock, NV 89419	40.178994, -118.472159
IMLYNV12RS0-Colocation Hut	Apache and California Streets, Imlay, NV 89418	40.659405, -118.149966
NV Energy	Miriam., Approx 3.9 mi WSW Of Toy, NV	39.999167, -118.742556
T-Mobile	1500 Derby Field Rd., Lovelock, NV	40.069806, -118.570917
Insite Towers LLC	1708 E Broadway Ave., Lovelock, NV	40.187806, -118.466222
American Towers LLC	2500 Holmstrom Rd. (Lovelock #40559--can), Lovelock, NV	40.238250, -118.420639
NV Energy	Fencemaker Mt, .5 Miles NE of Fencemaker Pass, Lovelock, NV	40.079083, -117.832000
Unionville Post Office	Imlay, NV 89418	40.445463, -118.120695

Lovelock Meadows Water District	400 14th St, Lovelock, NV 89419	40.184567, - 118.47322
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Pershing County Key Location Map

https://www.google.com/maps/d/viewer?mid=1yfA_I_w2dRKB6J5hjX1NyxzVOMbUzclp&ll=40.47915916729932%2C-118.19518399373396&z=9

Fiber Construction-If new fiber is constructed to serve any of these locations, the EBCA prefers using the construction specifications located in Appendix A.

Access to publicly owned or tribal assets: The Community Anchor Institution facilities listed above as well as properties listed in Appendix C are considered “broadband assets” of the city, county or other public entity.

The Pershing Affiliate with jurisdictional authority over the asset, whether this is the Pershing County Commissioners, the Lovelock City Council, the Lovelock Indian Colony, or another entity, must formally approve the service providers proposed use of a facility or asset.

6. Survey Results (as of 03/03/2020)

Residential Survey: (176 responses)

Provider - Northern Nevada Internet Service (33.52%) and ATT (42.05%) are the two dominant providers

Satisfaction: 19.89 % very satisfied; 25.57% Satisfied; 18.18 % neither satisfied or dissatisfied; 27.24 % Dissatisfied; 9.09% very dissatisfied

Slow speeds (cited by 48.44% of users) **and Service Interruptions** (51.56%) are the main reasons for dissatisfaction.

Buffering: 60.88% of users experience frequent buffering.

Users interest in Faster Speeds: 88.64% of users are interested in faster speeds

Pershing County/Lovelock participation: 89.20% of respondents want the county and City actively involved in seeking better broadband service.

Business Survey: 18 respondents

Provider: ATT serves 10 respondents; NNIS serves 3 respondents; Great Basin Broadband serves 2 respondents and the remaining 3 respondents use their cellular data plan for broadband service

Satisfaction: 16.67% of respondents are very satisfied; 22.22% of respondents are satisfied; 5.56% of respondents are neither satisfied or dissatisfied and 55.56% of respondents dissatisfied with current service

Slow speeds (cited by 61.11%) **and Service Interruptions (Cited by 50.00%)** are the main reasons for dissatisfaction

Upgrades: 72.22% of respondents are interested in upgrades; 50.00% of respondents are seeking 1G or higher capacity.

Buffering: 55.56% of business respondents experience daily or weekly buffering

Pershing/Lovelock participation: 94.44% of respondents want the County and City actively involved in seeking better broadband service.

7. Characteristics of desired vendors/service providers

Eligible vendors will meet the following requirements:

- A Private For-Profit business licensed to operate in NV
Vendors must have a minimum of three years of operations providing high-speed Internet service.
- Vendors must be in good financial standing. Vendors should have a positive cash flow, a positive credit history and must provide an audit. Financial documents that must be submitted along with this application are outlined in Section 11.4.

Each Vendor will be an independent contractor that provides all design, construction, and operation services for the Network(s). Pershing Affiliates will have no ownership in the Vendor(s) that owns and operates the Network(s). Pershing Affiliates' contract(s) with the Vendor(s) do not constitute franchise(s). Pershing Affiliates do not plan to regulate generally Vendor(s)' business activities, nor to grant Vendor(s) a franchise for its activities and operations. Pershing Affiliates expect that the contracts and property instruments associated with this effort shall establish terms and conditions governing the use of public assets that are utilized by Vendor(s) in its service delivery to its customers.

8. City and County Offerings

City and County Asset Access Specifications

Buried Fiber in Conduit

There is no city or county owned fiber in Pershing County. WANRack, the vendor that is providing fiber services to Pershing County Schools, recently installed fiber to connect the Schools and the Pershing County Library in Lovelock. WANRack possesses excess strands to lease other respondents.

Tower and Building Attachment Access

Access to space on towers that is owned by Pershing Affiliates or allow county providers to access them. Any access to towers contingent upon approval by the Affiliate who has jurisdiction over the area of proposed service.

The Pershing Affiliate with jurisdictional authority over the asset, whether this is the Pershing County Commissioners, the Lovelock City Council, the Lovelock-Paiute Tribal Administrator or another entity, must formally approve the service providers proposed use of a facility or asset.

Rights of Way

Construction and the installation of equipment in affiliated government entities rights-of-way will be subject to the applicable requirements and ordinances. Subject to existing rights-of-way and easements, the Affiliates will allow Vendor(s) to have access to necessary rights-of-way on property owned by an Affiliate and property on which it has an easement and authority to allow such access.

Access will be provided in accordance with the applicable requirements or ordinances, but generally access will be provided during regular business hours for non-emergency work and 24 hours a day, 7 days a week in the event of an emergency. Access includes permission to perform construction work on Pershing Affiliate's property, including construction in the streets as needed for the Network(s), subject to permit requirements. Pershing Affiliates will assist in obtaining on a timely basis the required approvals to allow such work in said rights-of-way. Any right of way access is contingent upon approval by the Affiliate who has jurisdiction over the area of proposed service.

If requested, the Pershing Affiliates will also cooperate with Vendor(s) in efforts to allow Vendor(s) to gain access to rights-of-way owned or controlled by third parties within the Service Area.

Planned street maintenance could be utilized to coordinate any proposed work with preexisting construction schedules and these schedules may have certain flexibility to align with a potential network rollout. Coordination with NV DOT; Lovelock Meadows Water District; the City of Lovelock; Pershing County; SW Gas; NV Energy is required for locate services; and City and County coordination is required for encroachment permits. All construction must meet the latest Orange Book standards.

The Pershing Affiliate with jurisdictional authority over the asset, whether this is the Pershing County Commissioners, the Lovelock City Council, the Lovelock Indian Colony, or another entity, must formally approve the service providers proposed use of a facility or asset.

Pole Attachment Rights

Affiliates may provide Vendor(s) with access to existing utility poles owned or controlled by its Affiliates. The mechanisms by which its Affiliates will provide such access to the poles, along with fees that will be charged, are listed in the will be subject to negotiation with the pole owner. Any pole attachment right is contingent upon approval by the Affiliate who has jurisdiction over the area of proposed service.

If requested, OSIT will cooperate with Vendor(s) in its efforts to gain access to poles owned or controlled by third parties within the Service Area.

Co-location Space and Power

A Pershing Affiliate may provide access to segregated, secured spaces for telecommunications and network equipment within facilities owned or leased by a Pershing Affiliate; this space may exist in telecom closets or equipment huts at tower sites, fire stations, municipal buildings, or other locations. This space is typically not tiered data center space, and is generally unconditioned beyond standard building climate control. Some locations may contain generator/UPS backup for electrical utility service, although PBAC and its Affiliates are open to proposals from Vendor(s) to add redundant services. Vendor(s) may choose to segregate their equipment within the shared space. Pershing Affiliates will provide reasonable 24x7 access to the space for equipment maintenance and repair. The intent of Pershing Affiliates is to make space available through a leasehold interest that matches the term of service. Any access to these facilities is contingent upon approval of the Affiliate who has jurisdiction over the area of proposed service.

Access to a segregated, secured space within a data center facility or computer room owned or leased by Pershing Affiliates used for servers, telecommunications, and/or network equipment may also be made available. Pershing Affiliates may provide access to the space through routine IT operations processes or through accompanied access to the space; alternatively, Vendor(s) may choose to segregate Vendor(s) and Pershing Affiliates equipment from each other in order for to provide full access by Vendor(s) into the facility without escort. Pershing Affiliates will ensure data center is capable of receiving electrical service, computer room air conditioning, and customary facility monitoring services, as well as provide reasonable 24x7 access for equipment maintenance and repair. Vendor(s) will be required to adhere to municipal security policies and practices for working in such a space.

The Pershing Affiliate with jurisdictional authority over the asset, whether this is the Pershing County Commissioners, the Lovelock City Council, the Lovelock Indian Colony, or another entity, must formally approve the service providers proposed use of a facility or asset.

Service to Underserved Areas of Pershing County- Pershing County Commissioners, and/or the Lovelock Indian Colony jurisdiction of a proposed service area may consider small amounts of subsidy funding for deployment of enhanced terrestrial or wireless service into these unserved and underserved areas of the county.

Funding restrictions

All governing entities in Pershing County have agreed **not** to award grants to substitute for lost government appropriations or cover pre-existing operating expenses for established organizations or pre-existing deployment to any of the Eligible Service Areas.

Assistance in Identifying and Generating Demand

All governing entities within Pershing County, to include Pershing County, the City of Lovelock, and/or the Lovelock Indian Colony with jurisdiction over proposed service areas may negotiate individual commitments to purchase Network(s) services needed for its

operations (e.g., transmission capacity, Internet access, voice, video, security monitoring, cloud computing and storage) through the Network(s).

If requested, governing organizations will provide Vendor(s) with publicly available information as to entities in the Service Area that are candidates to enter into contracts for fiber or Network(s) services. Such potential end-users may include educational institutions, large/medium/small employers, and governments. An initial list of such entities and contact information for key personnel may be listed in the Schedules for each individual community.

Pershing Affiliates may each publicize the proposed Network offerings in the same manner as other private economic development announcements.

9. Proposal Content from Finance/Design/Build Vendors or Fully Managed Service Provider Solutions

For fully managed, service provider owned solutions, proposals must include:

- Proposed service packages for business and residential customers including all monthly recurring and on-time installation costs
- Plans for maintenance of the network
- Service level agreements for business and residential customers
- Detailed plans for installation, provisioning, maintenance, support of business and residential connections
- Detailed plans for periodic upgrade of the network

The Network(s) rollout will be based upon demonstrated demand by community residents, institutions, governments and businesses, and the availability of necessary infrastructure. The Network(s) design and operation should preferably provide an open access framework that maximizes wholesale and retail service delivery and competition.

10. Vendor Services

Pershing Affiliates are looking for innovative solutions which may entail one or more Vendors collaborating to create a turn-key system.

Service descriptions must include complete system design, engineering, operations, monitoring, maintenance, customer support provisions, and enhancements. The Network(s) rollout will be based upon demonstrated demand by community residents, institutions, governments and businesses, and the availability of necessary infrastructure. The Network(s) design and operation should preferably provide an open access framework that maximizes wholesale and retail service delivery and competition.

11. Glossary of Terms

<p>Pershing Broadband Action Committee (PBAC)</p>	<p>An effort led by the Pershing County Commissioners, the City of Lovelock City Council, and/or the Lovelock Indian Colony with jurisdiction over areas of Pershing County and supported by its citizens and business to bring faster, more reliable, higher value, scalable broadband service to Pershing County, NV. PBAC includes affiliate organizations that have agreed to support the effort to bring enhanced broadband service to PBAC.</p> <p>The PBAC has no decision-making authority on its own but works with the governing organizations of Pershing County to provide seamless coordination of efforts between these governing organizations. All decisions regarding formal agreements with proposed service providers are the responsibility of the governing organization(s) for the area of proposed service.</p> <p>The goal of this effort is 3-fold:</p> <ol style="list-style-type: none"> 1. Reach underserved areas of the county with more and better broadband service 2. Provide scalable broadband infrastructure within Pershing County that will allow private sector service providers to offer enhanced services to business and consumers within the “high density” business corridors of the county and relatively high density residential corridors of the county. This includes Lovelock, Imlay and other unincorporated areas. 3. Meet PBAC member administrative, public safety, public health and other area needs for scalable broadband service for at least the next 20 years
<p>Affiliate</p>	<p>Possess jurisdictional authority over a proposed service area. An affiliate with jurisdictional authority is the only formal body with the authority to enter into contractual agreements regarding service, subsidies, access to assets for its area of jurisdiction.</p>
<p>Advanced Network</p>	<p>A comprehensive approach to meeting the goals of</p> <ol style="list-style-type: none"> 1. Better broadband access for the underserved areas 2. Enhanced broadband access for key business/economic development and high density residential corridors 3. An efficient way to meet the broadband needs of government, residents and businesses for the foreseeable future <p>Last mile solutions can be fiber, coax, mobile wireless or microwave. Solution that provide 25Mbps download/3Mbps upload immediately and 50Mbps symmetrical service by 2022. For last mile solutions in higher density areas fiber based solutions are preferred.</p>

Open Access	Pershing County, the City of Lovelock, and/or the Lovelock Indian Colony with jurisdiction over proposed service areas prefer that the chosen vendor (s), if the vendors operate a wholesale network (sell access to other service providers), will have reasonable and non-discriminatory access arrangements that (i) ensure equivalence of price and non-price terms and conditions for all retail service providers and (ii) permit such providers to differentiate their product offerings. In addition, the Vendor(s) may not limit the ability of retail service providers or their customers to run applications, use services, and connect devices of their choice to the Network(s).
Service Area:	Service area includes Pershing County and the following higher density areas (including The City of Lovelock, and the unincorporated area of Imlay) and the outlying areas of Pershing County, NV.
Vendor(s):	Business entity or entities which respond to described needs

12. Evaluation Criteria

Fully Managed Service Provider Solutions

% Weight	Criteria
20%	Cost of business and residential broadband packages and the terms and conditions ¹
15%	Complete bid submission ²
10%	Ability to support requirements of this RFI including the ability to adhere to service level agreement standards in RFI ³
15%	Proposed contract terms and conditions ⁴
15%	Request for Subsidy ⁵
5%	Respondent references on similar projects ⁶
20%	Selection of local partner ⁷

- 1. This is the total cost of broadband subscriptions for business and residential subscribers**-The package offerings will be evaluated for their costs; their term of the commitment necessary to receive the rate; the adherence to service level agreement standards in the RFI; installation, special construction, and other one-time charges.

2. **Bid Submission**-Did the respondent meet all the response requirements of the RFI with special attention to:
 - i. The inclusion of prices and terms for broadband subscription packages for businesses and consumers
 - ii. The adherence to terms and conditions of the service level agreement
 - iii. Detailed request for subsidy assistance from the affiliates
 - iv. Detailed request for access to facilities owned by affiliates (towers, colocation, etc.)
 - v. Detailed request for permit, easement and right-of-way assistance from the affiliates
3. **Demonstrated ability to meet all terms and conditions of the RFI**
4. **Proposed contract terms and conditions:** Proposed contract has flexibility and terms desired by HBAC and its affiliates.
5. **Request for Subsidy:** A detailed request for subsidy that also outlines the respondent's investment
6. **Provider references:** response included references that were similar in size and scope to this project.
7. **Formation of Partnership with a local service providers:** The Pershing Affiliates believe having a local presence is vital to the uptake and support of service. The evaluation criteria gives significant weight to the formation of a local partnership to assist the service provider in delivery of a fully managed service.

Appendix A – Access to Assets

The Affiliate of jurisdiction will provide Vendor(s) with access to a common pool of the assets, services and infrastructure to the extent available and needed by the Vendor(s) for deployment of the Network(s). Infrastructure may include, but will not be limited to, conduit, fiber, poles, substations, rack space, nodes, buildings, facilities, central office or switch locations, available land, and other assets and services identified below. Ownership of any and all such assets used by the Vendor(s) shall remain with the owner unless provided for otherwise by contract. Any network elements added by the Vendor(s) shall belong to the Vendor(s) but may be purchased at the end of the term by the affiliate at reasonable, depreciated market value. If such network elements are not so purchased and are no longer in use, the Vendor(s) shall remove such elements at the affiliate's request. the affiliate may also offer access to additional assets, services, and infrastructure at their discretion, this will be determined during the negotiation process with the vendor.

The Pershing Affiliate with jurisdictional authority over the asset, whether this is the Pershing County Commissioners, the Lovelock City Council, the Lovelock Indian Colony or

another entity, must formally approve the service providers proposed use of a facility or asset.

The Affiliate may charge Vendor(s) as may be authorized or required by law for access to Affiliate assets and infrastructure as set forth herein or as otherwise may be required by law. If the response from the vendor indicates funds are required for the design, construction, engineering, project management of the aggregation network or last mile services, the Affiliate of jurisdiction, subject to applicable Nevada law, will consider provision of these funds.

Appendix B: Fiber Construction Specifications

The following are general terms that apply to the construction of fiber to the premise within the or in the area surrounding the cities or higher density unincorporated areas for routes to connect Pershing County Government Offices.

These build specifications apply to all new fiber builds contained in this RFI whether directly owned by the Pershing Affiliate, leased dark strands by the Pershing Affiliate or within the cities and unincorporated areas (**The City of Lovelock, and the unincorporated area of Imlay**) and owned by a vendor to serve the citizens, businesses and government. Orange Book Construction standards must be followed.

Colocation Space Availability

A Pershing Affiliate may decide lease rack or caged spaced at (interconnection address) to house electronics for traffic that will go upstream from the Pershing Affiliate Hub. Fiber construction/self-provisioning vendors should provide detailed information on access and cross-connect policies and arrangements for power and telephone service at (interconnection address).

Meet-me Hole and Mid-Span Interconnection Splicing

It is possible that the Pershing Affiliate may want to interconnect with the existing or newly planned carrier facilities at meet-me manholes or mid- span splice locations. Vendors should detail policies and guidelines that document meet-me manhole and mid-span interconnection procedures along with detailed costs for these activities.

Dark Fiber Performance

Pershing Affiliates prefer newly built fiber that contains a homogenous fiber type throughout the entire build. It is currently anticipated that fiber utilized for the self-provisioned fiber proposal will be G.652.D fiber.

New Build Fiber Specification.

If newly constructed fiber is part of any service offering, the following fiber construction specifications/or more stringent ones should be used:

Project Management

- Selected contractor and its subcontractors will provide all project management to accomplish the installation of all project work as outlined in the Statement of Work
- Provide engineer(s), certified on selected fiber system specifications and procedures to manage all phases of project as outlined in this proposal. This includes ordering and managing the bill of materials as outlined below, directing and managing cable placement and restoration, directing and managing splicing crews and providing detailed documentation at the end of the project
- Selected contractor and its subcontractors will develop a project management plan, which will include a milestone chart. The milestone chart will outline any critical path events and then track these with the appropriate agency/organization whether; selected contractor, a selected contractor subcontractor or (Vendor name)

Material Management

- Selected contractor and its subcontractors will provide all material management to ensure that the project remains on track according to the project milestones.
- Selected contractor and its subcontractors will develop in conjunction with selected contractor plants and other suppliers a material management plan.

Property Restoration

- All cable routes, which are plowed, will be restored to as near to original condition as possible.

Install overhead and underground fiber optic cable.

- Bore approximately 3 feet of fiber optic cable through inner duct/conduit/hand hole system for highly traveled areas and roads where there significant activity in the right-of-way.
- Plow approximately 3 feet of fiber optic cable in accordance with selected contractor installation specifications for highly traveled areas and roads where there significant activity in the right-of-way.
- Microtrenching will be considered for lightly traveled/neighborhood roads.
- Install customer approved hand-holes and place marker/locator posts.
- Customer will provide entry/exit holes into buildings for routing cables to distribution frames unless otherwise noted.
- (Vendor name) will provide specific details of cable placement using aerial photography and cad drawings.

Install and Splice Hardware at Head Ends and in the Field

- Install optical hardware and splice field cable to equipment tail at head ends and splice tail to pre-stubbed hardware with SC pigtails.
- Prep closures, cables, fibers and splice fibers at all field locations
- Fiber to fiber fusion splicing of optical fibers at each point including head ends.
- Individual splice loss will be ≤ 0.10 dB for single-mode unless after 3 attempts these values cannot be achieved, then the fibers will be re-spliced until a splice loss within 0.05 dB of the lowest previous attempts is achieved. Splice loss acceptance testing will be based on the fusion splicer's splice loss estimator.

Total Project Splices: (number)

Final Testing

- In addition to splice loss testing, selected contractor will perform end-to-end insertion loss testing of single-mode fibers at 1310 nm and 1550 nm from one direction for each terminated fiber span in accordance with TIA/EIA-526-7 (OFSTP 7). For spans greater than 300 feet, each tested span must test to a value less than or equal to the value determined by calculating a link loss budget.
- Inspect each terminated single-mode fiber span for continuity and anomalies with an OTDR at 1550 nm from one direction in accordance with OTDR operating manual.

Documentation

- Provide final documentation consisting of:
 - o Route "As-Built" Maps/Diagrams
 - o End-to-End Insertion Loss Data
 - o OTDR Traces
 - o Individual Splice Loss Data

General Scope of Work (Description of all routes)

- Placing approximately (Number of Feet) of new (fiber count) SM cable to provide bored fiber connectivity in route that is used to provide connectivity to (Vendor's eligible facility).
- Placing approximately (number of feet) of buried (fiber count) SM fiber from an existing handhold at (address) to vendor eligible facility.
- Placing approximately (number of feet) of buried (fiber count) SM fiber from an existing handhold at (address) to vendor eligible facility.
- Placing of associated hand holes, marker posts, locator posts, inner duct, and miscellaneous materials.
- Splicing of fiber optic cables as specified.
- Procuring and Provisioning of hand holes and miscellaneous materials

required to accomplish the above.

Bid Specifications

- All fiber will be bid separately by the Owner in addition to turn-key including fiber and construction.
- All splicing shall be by the fusion method.
- All splicing enclosures and Hand Holes shall be of a type to be determined by the owner.
- All Hand Holes shall be NV DOT approved, 45,000 lb. load rated CDR or comparable enclosures.
- All plowed cables shall be placed at a depth of 36" along roadways and 24" on private property, unless other methods are approved.
- All road and driveway bores shall be at a depth of 36" and will have a 2" inner duct placed within.
- All buried splice locations will be marked with a locator post and a copper ground wire shall be attached to the splice closure/cable sheath.
- Buried marker posts shall be placed every 1500'.
- A warning tape shall be placed 12" above the buried cable.
- All highway shoulders, schoolyards, and ditch lines will be compacted and restored to satisfactory condition.
- All DOT encroachment permits, railroad encroachment permits, and National Park Service permits shall be submitted by (Vendor) in accordance with the permitting agency requirements.
- The vendor shall be responsible for the payment of any permitting fees and shall be the owner of said facilities.
- Contractor shall furnish an as-built drawing to the owner.
- Contractor shall perform an end-to-end continuity and loss test on each spliced fiber segment and provide the owner with the db loss of each fiber segment.
- Contractor shall be responsible for submitting the appropriate ULOCO locate requests.
- The vendor, the (Vendor) of (name) and the municipalities of (name) and (name) shall grant contractor right of way permission for municipal-owned properties and roadways.
- All cables to buildings shall be fusion spliced within a minimum of 50' of entering a building at a location to be determined by the owner with an existing single mode fiber and terminated at customers rack.
- A minimum of 100' coil of cable shall be left in each Hand Hole/Building for splicing use.
- The (Vendor) shall provide the contractor with secured space to store materials and equipment if needed.

Right-of-Way Acquisition & Permitting

- Vendor is responsible to ensure that all cable routes have approved

access & rights-of-way for all proposed cables installations.

- Vendor will provide any information or points of contact to allow selected contractor and its subcontractors to facilitate the route prep “Make-ready” and actual cable installation.
- Vendor is responsible for pulling all required construction permits. Selected contractor and its subcontractors will provide officials at (Vendor) with any information necessary to pull these permits in a timely fashion.

Route Maps

- Vendor is responsible for providing maps, drawings or aerial photographs of the route.

Termination and Splicing locations

- Vendor will in conjunction with selected contractor designate/decide on all termination locations, whether in-building, outside plant or in customer premises. This will include all hand-hole or manhole locations
- Vendor will in conjunction with selected contractor designate/decide on all field splice locations, in-building splice locations (if applicable), or other splice locations necessary to connect the network.

Cable and Hardware Approval

- Vendor will approve all cable and hardware prior to ordering or installation. Selected contractor will provide any required consultation to assist vendor in this effort.
- Vendor will approve all hand-hole or building entrance hardware prior to ordering or installation. Selected contractor will provide any required consultation to assist vendor in this effort.

Material Delivery, Receipt & Storage

- Vendor will provide warehouse or yard space to accommodate all materials provided by selected contractor to accomplish this project. Vendor will inspect, receive and issue any materials to provide accountability. This will reduce the overall cost to the vendor with no added costs being placed into the proposal to cover the receipt and storage.

Final Inspection

- Vendor will provide at their discretion a person(s) to witness any final testing or construction verification. The person designated by Vendor will be required to initial/provide acceptance of any results. This person(s) will represent Vendor during any and all acceptance testing. This does not relieve the selected contractor from providing agreed upon documentation or absolve the selected contractor of any warranty

support.

Communications

- Vendor is responsible for all communications with its customers or other interested parties concerning the proposed construction. Notification of any person(s) affected by this construction is the responsibility of Vendor. Selected contractor will work directly with any persons designated to handle project communications to facilitate awareness and reduce turmoil in the Vendor. Selected contractor will provide consultation to assist in the development of a communications plan as required.