

PURSUANT TO A.R.S. §38-431.01, THE GILA COUNTY BOARD OF SUPERVISORS WILL HOLD AN OPEN MEETING IN THE SUPERVISORS' HEARING ROOM, 1400 EAST ASH STREET, GLOBE, ARIZONA. ONE OR MORE BOARD MEMBERS MAY PARTICIPATE IN THE MEETING BY TELEPHONE CONFERENCE CALL OR BY INTERACTIVE TELEVISION VIDEO (ITV). **ANY MEMBER OF THE PUBLIC IS WELCOME TO ATTEND THE MEETING VIA ITV WHICH IS HELD AT 610 E. HIGHWAY 260, BOARD OF SUPERVISORS' CONFERENCE ROOM, PAYSON, ARIZONA.** THE AGENDA IS AS FOLLOWS:

WORK SESSION - TUESDAY, JULY 12, 2016 - 10:00 A.M.

1. **CALL TO ORDER - PLEDGE OF ALLEGIANCE**
2. **REGULAR AGENDA ITEMS:**
 - A. Information/Discussion regarding establishing broadband availability and resiliency in Gila County. **(Jim Simms)** Presented
 - B. Information/Discussion on changes implemented to the Consolidated Roads Department of the Public Works Division. **(Steve Sanders)** Presented
 - C. Information/Discussion/Action authorizing the Chairman to sign a letter terminating the current lease agreement with Globe Office Building Partners, LLC for office space located at 1100 Monroe St. Globe, AZ. **(Michael Scannell)** Authorized
 - D. Information/Discussion/Action to adopt Resolution 16-07-05 and to join with other counties, the National Association of Counties Organization, the Council of State Governments Justice Center, the American Psychiatric Foundation and the National Sheriffs' Association in support of The Stepping Up Initiative. **(Don McDaniel)** Adopted

- | | | |
|----|--|----------------------|
| E. | Information/Discussion/Action to vote to go into executive session to receive legal advice from its attorney regarding the lawsuit of Strawberry Ridge Estates LLC v. Gila County, 1 CA-TX-14-0004; consider its position in the lawsuit; and instruct its attorney how to proceed pursuant to A.R.S. § 38-431.03(A)(3)-(4). If the Board does go into executive session, the County Attorney's Office suggests that after the Regular Meeting has been reconvened, the Board vote to instruct the County Attorney's Office to proceed as directed in executive session. (Jeff Dalton) | Directed
Attorney |
| | | |
| 3. | CALL TO THE PUBLIC: Call to the Public is held for public benefit to allow individuals to address the Board of Supervisors on any issue within the jurisdiction of the Board of Supervisors. Board members may not discuss items that are not specifically identified on the agenda. Therefore, pursuant to Arizona Revised Statute §38-431.01(H), at the conclusion of an open call to the public, individual members of the Board of Supervisors may respond to criticism made by those who have addressed the Board, may ask staff to review a matter or may ask that a matter be put on a future agenda for further discussion and decision at a future date. | No
Comments |
| | | |
| 4. | At any time during this meeting pursuant to A.R.S. §38-431.02(K), members of the Board of Supervisors and the County Manager may present a brief summary of current events. No action may be taken on information presented. | Presented |

IF SPECIAL ACCOMMODATIONS ARE NEEDED, PLEASE CONTACT THE RECEPTIONIST AT (928) 425-3231 AS EARLY AS POSSIBLE TO ARRANGE THE ACCOMMODATIONS. FOR TTY, PLEASE DIAL 7-1-1 TO REACH THE ARIZONA RELAY SERVICE AND ASK THE OPERATOR TO CONNECT YOU TO (928) 425-3231.

THE BOARD MAY VOTE TO HOLD AN EXECUTIVE SESSION FOR THE PURPOSE OF OBTAINING LEGAL ADVICE FROM THE BOARD'S ATTORNEY ON ANY MATTER LISTED ON THE AGENDA PURSUANT TO A.R.S. §38-431.03(A)((3).

THE ORDER OR DELETION OF ANY ITEM ON THIS AGENDA IS SUBJECT TO MODIFICATION AT THE MEETING.

ARF-3806

2. A.

Work Session

Meeting Date: 07/12/2016

Submitted By: Marian Sheppard, Clerk
of the Board

Department: Clerk of the Board of Supervisors

Information

Request/Subject

Establishing Broadband Availability and Resiliency in Gila County

Background Information

The Central and Northern Arizona Broadband Consortium is working to establish broadband availability and resiliency in Gila, Apache and Navajo Counties. Members of the Consortium would like to provide the Board of Supervisors with an update on the status of the project to include a summary of the Central Arizona Broadband Technical Report.

Sandy Palmer, Manager for the Industrial Development Authority of the County of Gila (IDA) on behalf of the Consortium, contacted the Board of Supervisors' Office to request permission to present information on this topic at the Board's June 28, 2016, Work Session.

Evaluation

The Rim Country (northern Gila County area) experienced 3 major Internet and cell service outages in less than 12 months, as follows: December 16, 2014 - 8+ hours; February 25, 2015 - 8+ hours; and, September 28, 2015 - 13 hours. Each outing had a devastating impact on the residents and the economy.

Until broadband resiliency is established, the Rim Country will remain in a very vulnerable position. Lack of broadband resiliency impacts quality of life and cripples economic growth. Navajo County and Apache County face the same challenge.

Conclusion

It would benefit the Board of Supervisors to receive information and discuss broadband coverage and performance across the state, especially in northern Gila County.

Recommendation

N/A

Suggested Motion

Information/Discussion regarding establishing broadband availability and resiliency in Gila County. **(Jim Simms)**

Attachments

Broadband Gap Presentation Provided at the Meeting

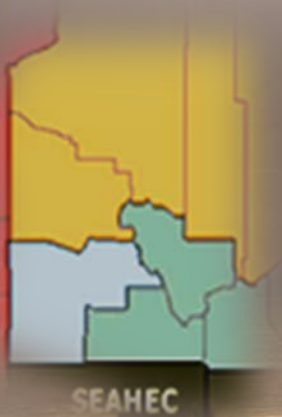
Central Arizona Broadband Technical Report

Broadband GAP

By Jim Simms
Chief Technologist

People

Quality of Life



What Is The Current Focus?

Business

Law -
Security

Education

Health

**Why Invest
This time?**

Success in rural Arizona?

**Safford Arizona
Yavapai County**

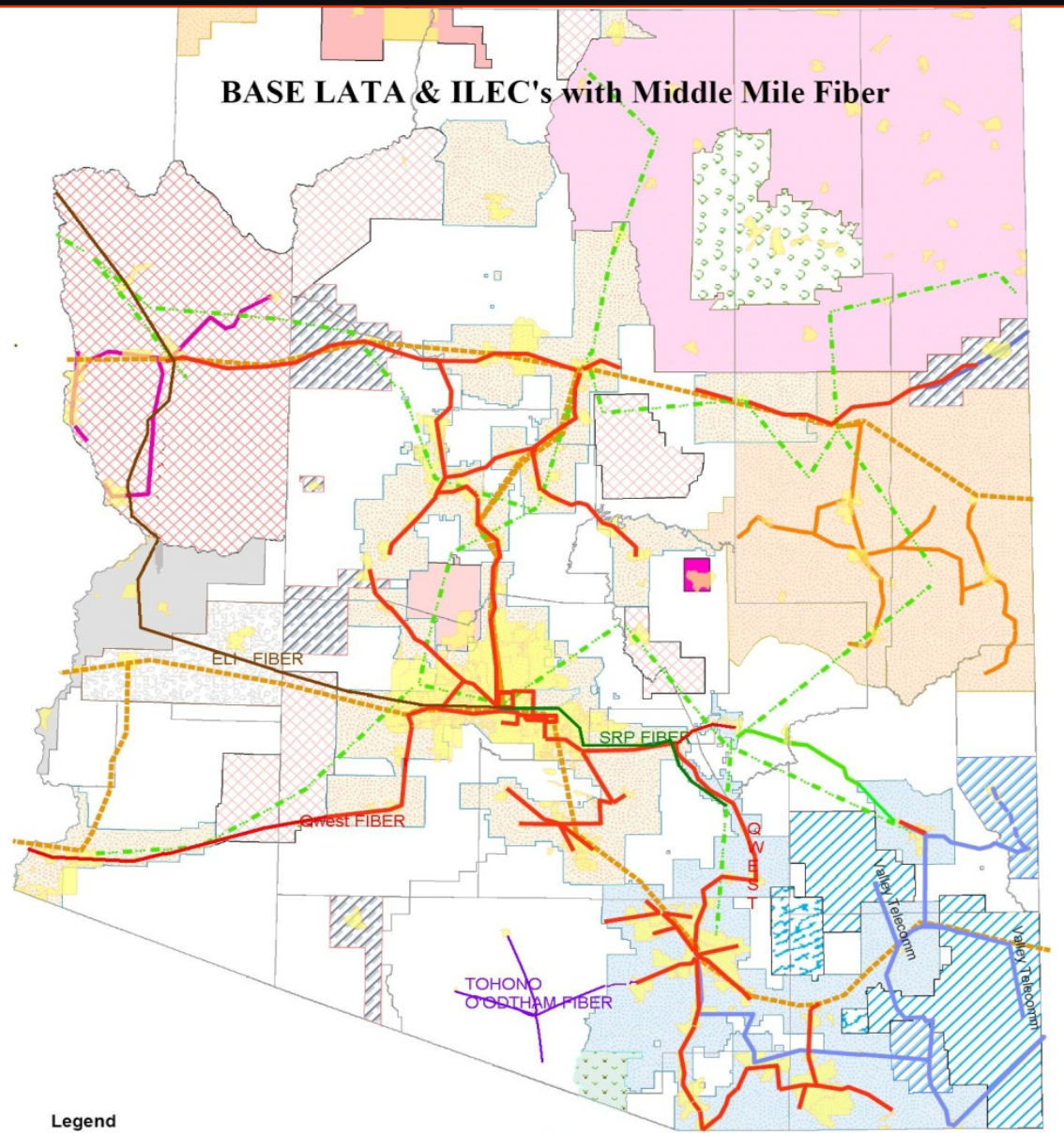
**Tuba City Arizona
Douglas Arizona**

Published February 26, 2015

Associated Press

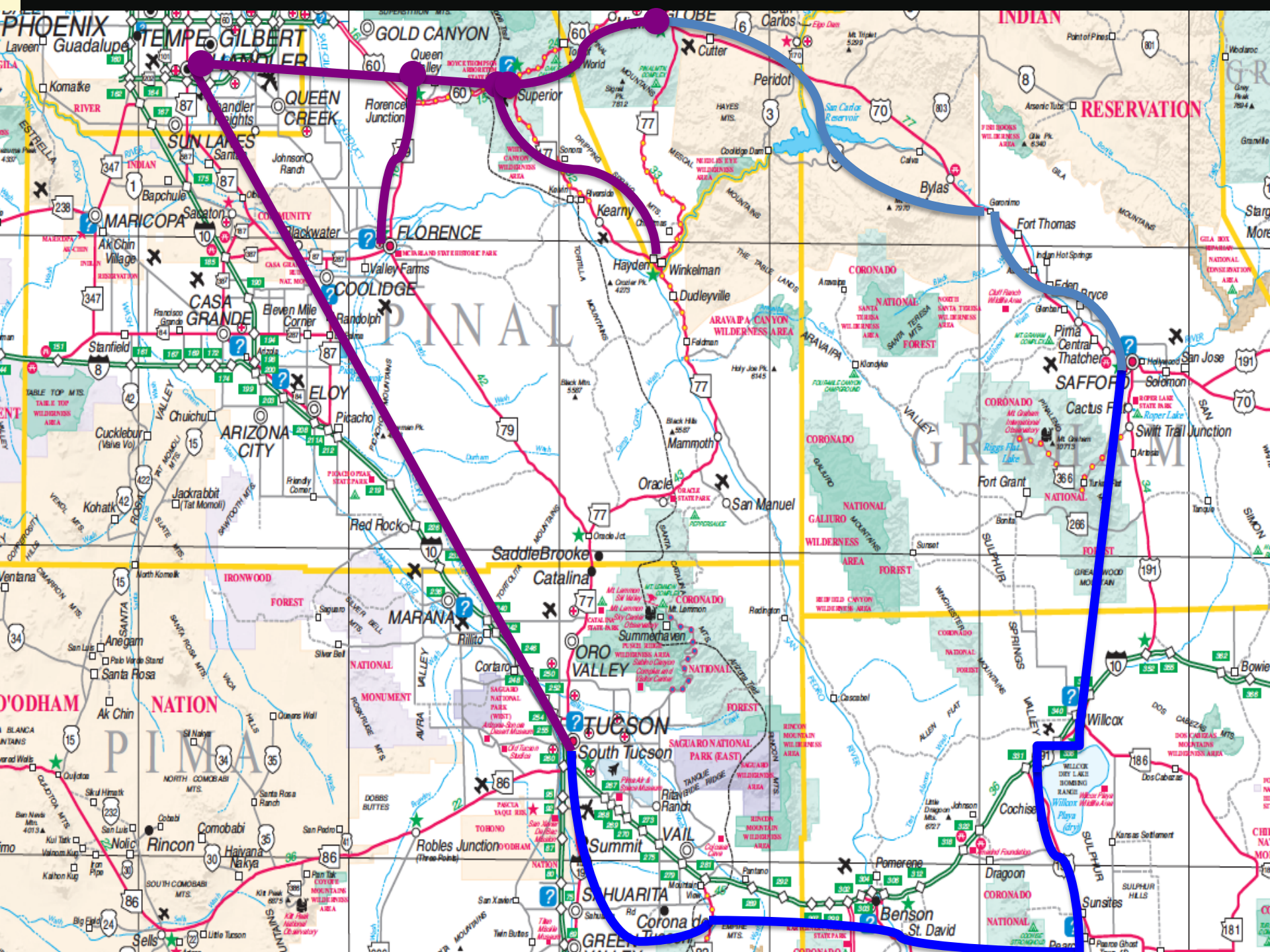
- Arizona authorities probe vandalism that cut off Internet, phones for hours
- Wednesday's outages, businesses couldn't process credit card transactions, ATMs didn't function, law enforcement databases were unavailable, and even weather reports were affected in an area stretching from north of Phoenix to Flagstaff, about 100 miles away. CenturyLink spokesman Alex Juarez said the problem was first reported around noon Wednesday. Internet and phone service started to come back to some residents and businesses in Flagstaff by 6:30 p.m.

BASE LATA & ILEC's with Middle Mile Fiber



Legend

- | | | | |
|-----------------------------|---------------------------------|----------------------------------|--|
| Qwest Fiber | Citizen Fiber | Navajo c301 Independent LATA | Frontier Telecomm White Mtns C105 |
| Valley Telecom Fiber | South Central c502 Utah LATA | Midval Telco c203 Tuc Lata | Citizens Utilities Rural C104 Phx Lata |
| Telespectra Wireless Routes | Valley Telecom c205 Tucson Lata | Copper Valley C202 Tucson Lata | Century Telephone SW C103 Phx Lata |
| ATT Fiber | Qwest C204 Tucson Lata | Arizona Telco C201 Tuc LATA | Arizona Telco C102 Phx Lata |
| San Carlos Apache Fiber | Rio Virgin c501 Utah LATA | South Central UTAH C107 Phx Lata | Accptiter Phx Lata C101 |
| Frontier Fiber | SouthWestern c402 LA Lata | Table Top C108 Phx Lata | Open Territory NO ILEC |
| Table Top Fiber | Verizon c401 LA LATA | Midvale Telephone C106 Phx Lata | |
| | | Qwest Phx Lata C109 | |



In Bjørndalen, Norway, a Small Cabin Enjoys Some of the World's Fastest Internet



What is Needed?

Skill

Will

Authority

Budget

Now What?

- **Understand information**
- **Learn from the islands of success**
- **Gather unique strengths & weaknesses**
- **Be the “Champion” for your community**
- **Engage non-traditional providers**
- **Engage experts**
- **Take the first step ... ACT!**

Arizona

Broadband Technical Report



April 27, 2014 UPDATED April 2016

Authors:
Jim Simms, ORACT LLC
Mike Whipple

Central Arizona

Broadband Technical Report

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Central Arizona Broadband Technical Report

Preface

Job creation, better education, and improved health and safety contribute to the economic development of a region and are the intended results of reliable access to high-speed, high-capacity internet services. Just as last century's roads, rail, waterways, and power formed the strategies and development of a region, so does a better Internet influence commerce and well being today.

Arizona recognizes its duty to support community and regional efforts that lead to these results. One initiative in particular has provided funding to help rural populations assess their current situations and shortfalls. This report is a product of that funding, which was provided through the Digital Arizona Program, which developed the Broadband Arizona Project with funding from the American Recovery and Reinvestment Act. The Arizona Strategic Enterprise Technology Office oversees and manages the distribution of funds for this program and its projects. This report has been updated to focus on the three counties of Gila, Apache and Navajo.

Development efforts in Arizona's Central Region have recently included a type of assessment that identifies technological and other deficiencies specific to individual communities throughout the region. Even in cities very close to Metro Phoenix like Payson we find large gaps in coverage. Analyzing such gaps provides the factual foundation for developing business cases for improving high-speed, high-capacity Internet access. These business cases provide road maps that comprise the strategies and tactics a community uses to start up and sustain its development efforts. And the data in the business cases provide a basis for measuring the success of a community's efforts.

There are several **Digital Arizona Program (DAP)** initiatives at the state level. The **Arizona Broadband Map** portal (http://www.digitalarizona.gov/Maps/Arizona_Broadband_Maps.html) offers interactive insight to broadband coverage across the state and the community planning version integrates substantial demographic and economic data to aid policy analysis and planning.

DAP has recently launched an **Arizona Broadband Speed Test** (<http://www.digitalarizona.gov/Survey/AffiliationQuestion.html>) for gathering information about broadband coverage and performance across the State. They are strongly encouraging Central Arizona broadband stakeholders to take the speed test periodically to determine statewide broadband capabilities.

As directed ORAct and the Rim Country Broadband Consortium (RCBC) conducted multiple meeting and training sessions in support of the following goals:

Provide technical assistance to areas and communities with broadband deficits, including:

- a. Middle-mile infrastructure deficits
- b. Last-mile broadband availability deficits
- c. Broadband adoption deficits

Improve broadband capabilities, in the categories above, to enhance the prospects for an area's economic development, education, health care, and quality of life.

Identify the required resources, capital, and expenses required deploying critical applications and missing infrastructure to support:

- d. Economic Development/Jobs
- e. Education and Distance Learning
- f. Tele-health

Develop a plan to accomplish the improvements listed above (may include new ways to increase adoption or improve middle mile capacity, new investment in last mile delivery, better redundancy etc.).

Disclaimer: This report is written by One Random Act (ORAct) LLC, a telecommunications consulting firm. None of the information in this report should be construed as official public policy of regional government or the Arizona State government.

Executive Summary

Communities and regional populations must identify people who will commit to “Champion” the local broadband-development efforts. Such champions need to know the stakeholder constituency extremely well and must work to keep those stakeholders engaged in the effort. These champions must be local, engaged and supported by experts not influenced by the Carriers in the marketplace.

A coalition or consortium that includes champions and stakeholders must develop a coherent development plan that clearly establishes implementation responsibilities. The complexity of telecommunications deployment means that a broad spectrum of expertise will be required.

The four guideposts to remember when producing a champion and coalition are:

SKILL	Must be able to lead, develop consensus, and manage.
WILL	Must be genuinely interested in bringing forward community needs.
AUTHORITY	Must be recognized as having legitimate authority to converse and lead.
BUDGET	Nothing happens without money. Find a way to sustain funding beyond planning.

These four guiding principles linked with demand aggregation are the keys to success. It is unlikely that high-speed Internet infrastructure will magically drop from the sky into your community or region.

Your champions and stakeholders must be creative enough to produce the business incentives that make Internet provisioning feasible. It is about the money. Additionally, you must show your population the benefits that will come from a better Internet, and you need to show providers that doing business with your community is a gainful proposition.

Communities have the responsibility to manage the data that is gathered. This data will come from various sources: surveys, events, public comment, various paperwork, and elsewhere. It is incumbent on the champions and stakeholders to fit this data into the big picture in a way that makes it easy to see where the risks and opportunities reside.

Next, invite the Carriers into the mix as suggested by Mr. Jim Simms of ORAct. They have the information you desire for broadband plan development. In Arizona we will use an open forum and invited the Carriers to attend.

As we continue the work of the Rural Broadband Project action will replace planning. In 2016 the goal is to improve access and resiliency of broadband in Gila, Apache and Navajo counties.

Connecting rural America with adequate broadband is being compared to the Rural Electrification Act of 1935 and the Federal-Aid Highway Act of 1956, helping to bring electric and telephone service to all rural areas of the country and later connected rural areas to urban areas through interstate highways, transforming rural economic and social life.

Together we shall succeed in fixing broadband in Northeastern Arizona.

Where does N.E. Arizona stand today as a result of this process?

As a result of the work by ORAct and the Rim Country Broadband Consortium (RCBC) what is needed to address broadband in the area would require work beyond the planning stages of the prior Digital Arizona Project (DAP) funding in 2014.

During the past few months meetings and conference calls were held related to a “Champion” being named for the City of Payson and the Counties. During these meetings it was discovered that the Traditional Carrier has a fiber built from the Phoenix Metro to Payson however the multiple outages over the last year made this single treaded service unreliable. Therefore the City of Payson jointly with the County of Gila has started the “Regional Network Resiliency Project”.

RCBC has decided to embark on implementing a plan to address broadband in the three counties of Gila, Apache and Navajo. This will require resources and budget beyond the current Resiliency Project.

The education of the RCBC team and the City employees will address the middle mile issue facing many within our rural communities. The County employee Mr. Kelly Riggs will preform the function of Champion during of the scope of this RCBC project.

The next steps can be found in the phased approach outlined in DAP GAP Phase I from 2013. (copied herein).

In summary, the Champion must outline a project to include, broadband need, future needs along with providing location addresses to the carriers. These steps should be taken while keeping in mind that this is an all-or-nothing approach. No picking the easy projects “low hanging fruit” leaving the remaining community members without broadband.

As this project sunsets, there is enough momentum in Gila County where one of the projects could very well have Broadband in a short period of time.

Conclusions and Recommendations for Action

Plan ahead. Technology and services change continually. What seems fast or huge today will be slow or trivial next year. Aim for more than what you think you need currently.

Understand that you are developing a business proposition. Be realistic about the costs and benefits, but also be creative. Sometimes value is hidden just as costs can be hidden. Engage continually in order to help bring to light what is hidden.

Identify the Champions and give them the power to implement action plans and see that all stakeholders remain engaged. Actively support those efforts. Gratitude is as important as the acknowledgment that the Champion is probably providing more than what might normally be called for.

Understand that the private sector will provide much of the incentives for investment. This is partly demand aggregation, but also might involve outright financial support for the community's efforts.

Educate yourself and other stakeholders on the financial considerations of broadband development. The community or region will sustain broadband access with a feasible market, yes, but the initial infrastructure development can be costly. Be creative in finding ways to pay for it. Work with the providers to determine funding needs (produce a Request For Information, or RFI). Engage finance, non-profit, and government experts to determine alternative funding possibilities.

A couple of major barriers to infrastructure development are right-of-way costs and usage fees. Work with your government representatives to determine who establishes these costs and then work with them to lower right-of-way and usage barriers to the benefit of all.

Convince your government representatives and administrators that benefit margins are increased when time-to-market is reduced because permitting, zoning, and other regulatory processes are streamlined or otherwise expedited.

Within each of the three counties and their respective communities, stakeholders and leadership should now put in place strategies and action plans to meet the emerging broadband capacity requirements so as to support the four key Internet application areas.

The core theme for these action plans is communication among all stakeholders. The importance of maintaining a dialogue between community stakeholder groups, including elected officials, and broadband providers to learn issues and strategize paths forward cannot be over emphasized.

We suggest the region undertake a series of short-term (tactical) options followed by a longer-term plan to pursue other, more strategic options. See list below:

Short Term Activities

- Educate citizens about options that already exist.
- Define and aggregate the demands among public institutions, commercial enterprises, non-profits, and residential users, getting pledges of support to purchase services.
- Support the expansion of wireless coverage in each County by facilitating use of existing towers by wireless providers and advocating that wireless providers expand coverage in known problem areas.
- Work with others to apply for grants and loans to improve middle mile bandwidth.
- Consider subsidizing infrastructure enhancements through grant funding.

Strategic Plan

In order to use the Internet to its greatest potential (such as operating online businesses, telecommuting, and participating in video-based education) RCBC should plan for a long-term future that provides reliable Internet speeds in excess of 10 Mbps, perhaps 50-100 Mbps to all homes and businesses. In some cases the schools and businesses will require up to 1,000 Mbps (1 Gbps) to support advanced applications and purposes. Because current offerings don't reach everyone and most are quite limited in bandwidth, central Arizona could undertake the following longer-term activities to improve the situation.

- Encourage wireline telephone providers to apply for grants and loans that would allow them to expand coverage.
- Continue demand aggregation and engage potential providers in reaching practical ROIs by reducing their costs to deploy and operate and/or build a customer base.
- Seek out partnerships to build out a fiber backbone within the cities that would allow either fiber to the home (FTTH) or fiber as a middle mile technologies which could potentially be shared between multiple providers and technologies.
- Consider supporting efforts toward a community area network and/or public Wi-Fi.
- Research and consider pilot studies of other wired and wireless technologies.

Priorities

Recognizing an array of diverse needs with many potential solutions, strategic priorities are:

- Options that support improved connectivity to local units of government.
- Options that support economic development and job creation.
- Options that support educational, telehealth, and public safety activities.
- Options that support service to residential users of better Internet as a service.

Future Broadband Planning:

Phase 1 – Inventory, Needs Identification and Gap Analysis

This phase requires a significant effort to continue to gather data about the current status of broadband services, gaps, and needs, including initiatives such as these:

- Open forum style meetings for businesses to provide information about their uses of and needs for broadband.
- Meetings for municipal officials throughout the Region.
- Public meetings with a target audience of citizens from the poorly served areas.
- An invitation to hundreds of area businesses to participate in an online survey regarding needs.
- Brief interviews with businesses located in business parks and a physical review of observable facilities in business parks.
- Additional phone call interviews with central Arizona's largest businesses and institutions.
- A survey mailed to residents regarding service quality.
- A poll of the Internet Service Providers to request and obtain information about offerings, prices and coverage areas.

Phase 2 - Cost Estimating

Any particular augmentation or addition of broadband service coverage and capabilities will have a tangible cost to be considered and weighed in the evaluation process. Current and potential broadband providers will have their own internal ROI models, go to market strategy, capital resources and constraints, as well as owner or shareholder issues. Community demand aggregation and offering of fiber and/or vertical assets at low or no cost can definitely shift the equation, as can grant contributions from a variety of sources. See the section **Understanding and Changing the Broadband Investor Equation** in the **central Arizona Broadband Business Case Analysis (BCA) Report** for an actual equation to consider and examples of how community efforts can change the math.

Phase 3 - Ownership/Operations Models and Potential Partnerships

If during or after the first two phases there is a good case to take action, Central Arizona's stakeholder alliance may choose to give the go-ahead for a study team to evaluate various models to enhance broadband infrastructure to meet current and future needs. Or depending on the circumstances and opportunities choose to pursue specific projects with specific public and private partners. Deliverables for future rounds will include information regarding potential take rate, ownership/operations options, and potential partnerships as well as action plans for moving forward if desired focused on the four selected central Arizona regions.

Potential Broadband Technologies:

In keeping with the State's desire to consider longer-term economic development and the need to be aware of specific broadband technology and market developments, we also examined some broadband technologies that may not currently be available throughout central Arizona, but might be in the future. Specifically this section discusses Middle Mile Fiber and Point-to-Point/Multipoint Wireless, 4G (WiMAX and LTE) Wireless, 5G Wireless, Wireless Broadband from Aerial Platforms, Satellite Broadband, Fiber to the Home and Premises, and Broadband over Power Line (BPL).

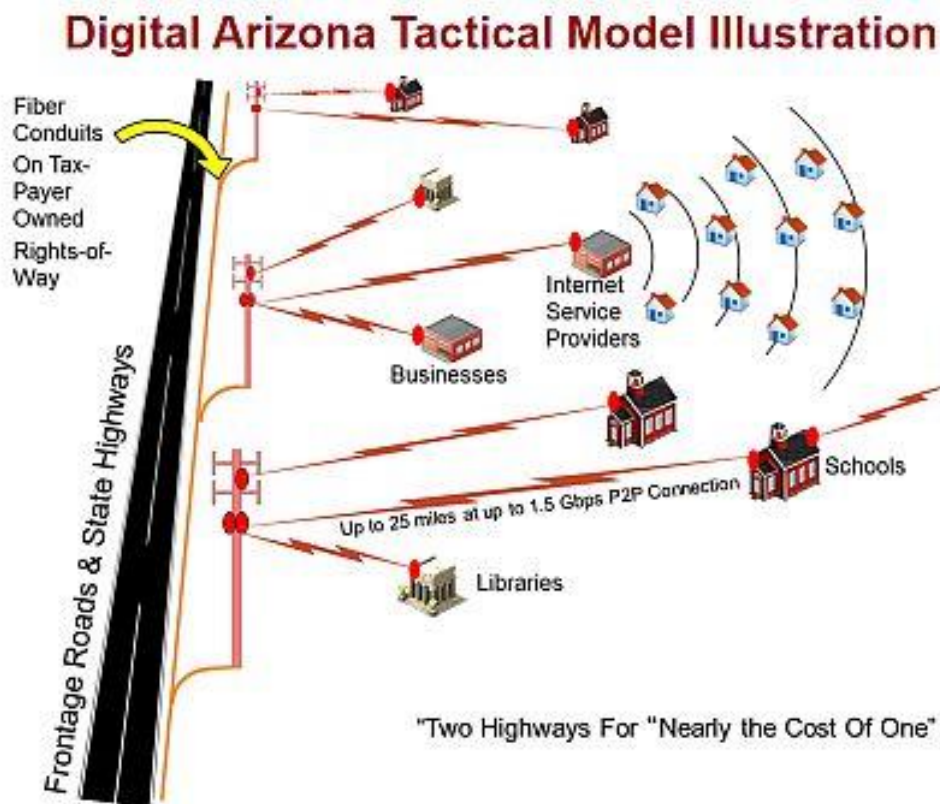
Middle Mile Fiber and Point-to-Point/Multipoint Wireless

ASET, along with legislature and our Governor, have taken steps to improve our regulatory environment including passage of SB1402 (the Digital Arizona Highways Bill) that allows and encourages providers to use ADOT rights-of-way to place fiber optic infrastructure along roadways. Because of the passing of SB 1402, ASET's Digital Arizona Program (DAP) is working closely with ADOA's Public Safety Interoperable Communications (PISC) Office, which has responsibility for FirstNet planning and outreach.

The objective of this effort is to explore synergistic ways of using SB 1402 to potentially lower the costs of expanding rural backhaul infrastructure for use by FirstNet while sharing those expanded resources to benefit educational, healthcare, and economic development uses in rural communities.

An example of a tactical model being considered in Arizona is to deploy middle mile fiber in highway Rights-of-Way that feeds towers from which mobile and fixed wireless broadband can be distributed to nearby communities and populations.

Mobile broadband can be delivered over large swaths of territory for building-based and mobile users at 3G and 4G performance levels, while fixed wireless broadband from the fiber-fed towers can be scaled up to a gigabit per second and higher depending on the equipment selected. Fixed wireless receiving sites in the community may themselves become retransmitters of broadband by various means including via Wi-Fi networks. This is illustrated in the drawing on the following page.



Source: Arizona Strategic Enterprise Technology Office (ASET)

4G (WiMAX and LTE) Wireless

Most mobile providers have begun the process of upgrading their cellular systems to a newer version of mobile wireless technology known as 4G (4th generation). Their initial focus has been on major metropolitan areas, but they are increasingly deploying 4G in the rural areas they have traditionally covered, albeit with some significant lag from the urban area. As the carriers install these network upgrades users see significant improvements in performance that vary according to the capabilities of their phones or other connected devices.

The competition between next generation cellular technologies LTE (Long Term Evolution) and WiMAX (Worldwide Interoperability for Microwave Access) is well underway. WiMAX has been quicker to market and already has operational networks in some areas, but more providers worldwide have announced they will use LTE and have ramped up related investments and deployments leveraging existing cellular network infrastructure.

Since cellular upgrade efforts tend to start in larger metro areas and “trickle down” to less densely populated areas later, customers in rural Arizona may have to wait some time to reap any benefits since the previous generation (3G) of services only quite recently came online in most of this area. However, even after these technologies are implemented, the “footprints” won’t necessarily cover more territory than is now the case. Community-based demand aggregation, measurable economic development and population/traffic growth can help motivate mobile wireless providers to target new geographic areas and increase the size of the covered territory.

Once rolled out, both LTE and WiMAX will provide significantly greater bandwidth than is now

available. The claims for 4G range are for 7 Mbps to more than 20 Mbps downstream while WiMAX can perform in the 100 Mbps+ range. However, such claims should be taken with a grain of salt until there are enough users on the systems to indicate the true capacity when heavily used. Interestingly, WiMAX is often implemented by smaller, regional and local wireless providers using different licensed frequencies than the larger companies.

5G Wireless

Just when you thought we could take a breath on 4G in our marketplace 5G (5th generation) is fast approaching. 4G standards have stabilized and networks are beginning to be deployed and leveraged in advanced mobile applications. With the historical 10-year cycle new generations of cellular advancement, the mobile research community is looking to the next set of innovations in wireless communications networks likely to be deployed around 2020.

No definition for 5G wireless is yet available, but it may well seek to exceed the 4G peak service rates of 100 Mbps for high mobility users and 1 Gbps for low mobility users or at least deliver those rates more consistently and with greater spectral and/or energy efficiency, as well as improved service quality and user experience. As we seek to remain connected all the time to the Internet, the cloud, and to the various technological things (Internet of things) in our lives, wireless networks will continue to be challenged to provide the speed, capacity, and end user service experience desired.

New services and devices will continue to emerge that deliver real-time information and media streaming, as well as leverage location and context based information, providing new capabilities and experiences well beyond those of today. However, in the absence of 5G standards, we will see many wireless technology and services vendors begin to tout their latest ultrafast wireless advances as 5G.

Wireless Broadband from Aerial Platforms

There are quite a few methods of providing high-capacity wireless broadband from aerial platforms placed at stratospheric heights including unmanned aerial systems (UAS) that include a wide variety of drones with powered flight and lighter than air platforms that may be tethered or left to drift with the prevailing winds. These generally haven't been deployed in the U.S. to any significant degree for wide broadband delivery, but they are likely to be at some point.

Some interesting examples include Chandler's Space Data Corporation (<http://www.spacedata.net/>), which offers a balloon-based SkySite Platform as a low-cost solution for data communications in remote areas with a coverage circle of over 400 miles. They are often used for remote telemetry and military field support, but may find use in cross-continental clusters for filling in the mobile wireless industry's dead zones so often found in rural areas. Google Project Loon (<http://www.google.com/loon/>) is a similar, though more recent balloon-based wireless platform initiative currently focused on third world environments with little mobile service today.

Satellite Broadband

Satellite-delivered broadband and Internet relies on one or more satellites in geostationary earth orbit (GEO) above the equator, a number of ground stations known as gateways that relay bulk data to and from the satellite via earth to sky radio transmission, and a small satellite dish antenna with a transceiver and modem located at the subscriber's premises.

Smaller businesses and home-based businesses or simply residences in more rural areas often have either just one or no broadband Internet service options except for satellite, which retains the issues of latency, data caps, and significantly higher cost. However, satellite services have been becoming more competitive with higher speeds in the 3-15 Mbps download and more generous data caps, though cost for some remains an issue.

Fiber to the Home and Premises

This method of providing service involves installing fiber optic cabling directly into each building (business or house). This technology is often referred to as Fiber to the Home (FTTH) or Fiber to the Premises (FTTP) across an entire area in comparison to direct Optical Carrier (OC) high capacity fiber circuits generally provided only to specific medium and large enterprise customers.

In some parts of the eastern United States, Verizon Communications has installed this type of service to residential and business customers. Verizon has dubbed its service FiOS. AT&T has also installed some FTTH in portions of Texas. In almost all cases, the providers installed these systems in densely populated, high-income areas. In less populated areas it can be difficult for for-profit companies to justify the cost to install new FTTH systems. There are an estimated 135 FTTH/FTTP projects around the country and such systems are growing significantly, but they still represent a very small portion of the broadband market.

A variation on this theme is to install fiber most of the way and then use copper cabling to reach the last few hundred feet to individual buildings. This type of installation is often referred to as Fiber to the Neighborhood/Fiber to the Node (FTTN). In the cable TV industry, the technology used for the last few hundred feet is usually coaxial cabling while in the telephone industry, it would be the existing phone wire. FTTN can be a phased step toward fiber to the home/fiber to the premise. A fiber to the home network is a major investment with an eye toward major long-term benefits. Those benefits include the following:

- Using fiber rather than copper cabling vastly increases the amount of data that can be transmitted. Fiber to the premise systems typically offer speeds from 10 Mbps to 100 Mbps per subscriber, and bandwidth amounts can be guaranteed, unlike wireless.
- Fiber has virtually unlimited bandwidth potential. 100 Gigabits capacity over 25 miles has been demonstrated, and even greater speeds are expected through ongoing research and development. Installed fiber capacity can often be expanded by changing out termination equipment.
- Fiber is immune to interference and much more secure from eavesdropping.
- Fiber has a long useful lifetime (30+ years) and, unlike wireless technologies, can be considered a long-term asset, rather than something that depreciates in value.

Many communications experts believe fiber is the only truly viable option for the long run and that it is simply a matter of time until everyone requires the service capacity only fiber can deliver. However, practically speaking, fiber broadband connectivity will remain very spotty for some time to come and relatively ubiquitous deployment would require the commitment of substantial investment by the private and/or public sectors that do not seem imminent.

Broadband over Power Line (BPL)

Broadband over Power Line (BPL) can deliver broadband Internet access over electrical power lines. To date, BPL has faced significant technical and market challenges in getting traction with utility companies. There are difficulties with interference as high and medium voltage electrical systems generate unintentional signals in some of the transmission ranges used by wireless networks. There is also the need to install special equipment to bridge signals around the frequent line transformers. The excitement around BPL is that it uses existing electrical power lines to distribute broadband to connected premises. This can mean a much smaller initial investment than bringing in new cabling for other technologies, but trials to date have been modest and the future of this technology in the marketplace remains uncertain.

A related item to keep in mind for BPL and electric utilities is that utilities generally install fiber bundles alongside power transmission lines. Each electric utility company could become suppliers for middle mile better Internet connections by leasing dark fiber and lit capacity. Electric utility companies also own power poles and sometimes street lights that can be leased for attachment of Wi-Fi access points or other wireless infrastructure.

Appendix A: Development Grants and Resources

The Local and Federal Governments provide a deep well of resources and tools for helping your community develop high-speed broadband access.

One such resource that DAP has published is a grant (and other resources) guide. It is in PDF format and available at this link

http://digitalarizona.gov/Resources/Arizona_Rural_Initiatives.html

The PDF document available at that link covers grant opportunities

- at almost a dozen Arizona government agencies
- at five federal government agencies
- under three federal programs
- and that are sometimes specific to telehealth, libraries, public safety and other institutions that anchor rural communities

The Grants and Resources Guide available at the link above also notes other broadband grant opportunities from Arizona-specific trusts and foundations, national foundations, and community investment opportunities from companies and communities.

The broadband resources section of the document includes links to studies, guides, reports, and more from various government, private, and non-profit entities.

The document will also guide you to web links related to:

- Arizona Strategic Enterprise Technology Office
- Arizona Corporation Commission
- Arizona State Land Department
- Arizona Department of Education
- Arizona Small Business Develop Centers
- ...many more

Appendix B: Broadband Request for Information (RFI) Example

Introduction

The State of Arizona, Department of Administration and Governor's Office of Education Innovation, is seeking technical input and recommendations to expand Internet connectivity to Arizona schools that do not have enough Internet capacity to successfully conduct online assessments of their students in 2015. This is an essential priority to meet the increasing high speed and high capacity broadband demands of education throughout the state. This Request for Information is based on our expectation that Arizona telecommunications providers can think creatively and innovatively to simultaneously transform education and invest in our state's network infrastructure.

To fully maximize opportunities created by expanded network capacity, Arizona schools should work collaboratively with public libraries and higher education institutions. Improving Internet connectivity in public schools would provide significant advantages to community colleges, universities, and libraries.

The Internet connections that are proposed must be secure, affordable, redundant, resilient and scalable. The connections should leverage existing assets owned by private or public entities in Arizona that are eligible to participate in the federal E-Rate program. Vendors are encouraged to focus on leveraging recent advancements in network technologies and network components already in place throughout the state, in order to establish a robust broadband communication infrastructure sufficient to meet the increasing demands of public schools in the State.

The purpose of this RFI is to identify broadband scenarios along with innovative pricing models. This process will allow the Department of Administration and Governor's Office of Education Innovation to understand the vision of Arizona telecommunications providers for increasing Internet capacity at Arizona public schools to meet immediate and longer-term future Internet capacity needs. Vendors are encouraged to utilize current, emerging, and next-generation technology as well as alternative last-mile solutions to propose optimal network connections.

Submitting a Response

Interested vendors should submit answers to the questions in Section IV and any additional material necessary for reviewers to understand the response. The State is not interested in receiving elaborate promotional or advertising material; such materials will not be reviewed or considered. Respondents are solely responsible for all expenses associated with responding to this RFI.

Background

Currently, Internet connections to Arizona public schools are provided through a bidding process managed by local school administrators. Consequently, there is great variability in the speed and capacity of Internet connections that are installed by independent telecommunications providers. Some connections are high capacity, high speed fiber that is sufficient to support instructional, assessment, administrative, and training requirements for students, staff, and teachers. Other schools lack funding and IT staff support to contract and pay for adequate connectivity. These locally-managed projects can result in network and IT silos that are redundant and repetitive, and the cost of the connections may be higher than they would be if a state-wide purchasing process were used.

The Governor's Office of Education Innovation is overseeing a statewide data collection and interviewing project that includes all Arizona public schools. This activity will be completed in September. It will show what current network capabilities are at each school in all districts, how much more capacity is needed, and the portion of the cost that will be covered by E-Rate.

The current need to expand network capacity at many Arizona schools also creates an opportunity to consider state-wide approaches to design, install and manage this project in ways that may take advantage of existing backbone and middle mile network infrastructure. The AZNet system provides an excellent example of an effective and efficient state-managed network. It is managed by the Department of Administration to provide network connections to state agencies and employees throughout the state. A single contractor manages the entire network and only 8 state employees oversee the system. Another state-wide approach is an education partnership-managed network found in many states. In these networks, the central campuses of higher education institutions are typically the hubs of backbone network rings, and public education administrative facilities and schools link to the hubs with robust middle and last mile fiber connections.

This RFI is intended to accomplish the following goals and objectives:

- Communicate to vendors the need in many Arizona schools for higher speed, higher capacity Internet connections. Later this year, the statewide data collection project will provide interested telecomm vendors with the capacity, speed, and security capability of Internet connections at all schools.
- Provide opportunities for vendors to suggest statewide or regional approaches similar to the AzNet state network or an educational network partnership that could utilize and expand existing backbone and middle-mile infrastructure.
- Propose connectivity to the Sun Corridor Terapop and/or existing University networks in Tucson, Phoenix, or Flagstaff.
- Learn from vendors what technical and networking options are available, with an emphasis on creative approaches that will provide growing bandwidth capacity at public schools and improved security levels, at lower prices.
- Solicit informational pricing to assist the state in formulating future budget requests.
- Give vendors the opportunity to provide strategic planning recommendations which accommodate increasing bandwidth requirements.
- Give vendors the opportunity to address how to leverage existing assets owned by private or public telecomm providers that are eligible to participate in the federal E-Rate program.

Questions

For all questions, provide a clear and concise response. Include illustrative examples where appropriate.

Company Information

Company Information	Response
Company name Company address Parent company Describe ownership and/or strategic partnerships of your company	
Name and signature of the person responsible for the information contained in this RFI	
Phone number Fax number E-mail address Web site URL	
Company location (corporate office; other offices)	
Describe your network service(s) and strategy, including markets served. Include information regarding any strategic partnerships or alliances with other providers.	
Identify major customers that use your network/telecommunication/services and are willing to serve as references. Please provide the appropriate contact information including telephone numbers and email addresses. We are especially interested in any statewide or large regional networks you provide in Arizona, or other states that serve public sector institutions.	

High Level Technical Requirements

Vendors must provide network designs for the following options. For each network design option, include/describe:

High Level Technical Requirements	Response
A network configuration narrative, diagram(s) and supporting documentation as needed	
A flat rate and/or bandwidth and/or burstable based pricing model	
Strategic planning recommendations	
How does the solution leverage existing assets the vendor has in Arizona?	

Which Qualifications/Characteristics Can Be Satisfied?

Vendors must indicate whether or not the following qualifications or service characteristics are met in their response:

Which of the following Qualifications or Characteristics does the solution satisfy?	Response
Bandwidth on demand – ability to scale up and scale down as Internet needs dictate?	
Scalable, non-blocking architecture over isolated but shared (public & private) infrastructure?	
In which Arizona counties does the vendor currently deliver high speed network bandwidth?	
Is your company eligible to participate in the federal E-Rate program? Do you have a SPIN number? Describe your previous experience with the federal E-Rate program.	
Quality of Service – the ability to prioritize traffic through the network from source to destination	
How does the proposal leverage the vendor's existing assets?	
Does the proposal allow logical/virtual isolation of data transport and services to separate and secure traffic, such as local school building to the school district office or school central IT location?	
Does the proposal allow multiple access circuit technologies to attach?	

Is the vendor willing to interconnect as needed to create a seamless regional or statewide network (from an end user's perspective)? Does the proposal provide inter-connection to the Sun Corridor Terapop and/or existing university networks? Where would the inter-connection be located?	
Will connections transport voice, video, data, and Internet?	
How can your proposal provide centralized affordable security for all school districts?	
How will ISP Services be provided by the solution?	
Will the proposal support video service – including standards based HD video conferencing/telepresence, bridging, scheduling and help desk support?	
How does the solution provide for Ethernet handoff?	
Describe how your proposed technology could be used to benefit all school districts?	
Describe the type of security technology you propose to use?	

Which Network Designs or Connections are Proposed?

For the first 3 options, the network must be designed at the core and middle mile to be redundant, resilient, robust, scalable, secure and non-blocking. Clearly identify redundant paths and all single points of failure in all diagrams.

Network Designs or Connections	Response
1. Statewide or regional management contract in conjunction with a state or education partnership for all circuits and related network equipment in backbone, middle and last mile including the core nodes, aggregation nodes, secondary contracts, service and support.	

2. Individual management contracts for the network elements of core, middle-mile and last-mile service and support, or that interconnect the core, middle-mile and last-mile service and support.	
3. Single management contract for all equipment in the middle mile including the core nodes, aggregation nodes, secondary contracts, service and support. Customer is responsible for the last mile from the site to an aggregation node.	
4. Contract does not include any equipment in middle mile including the core and aggregation nodes and no managed service level agreements. Customer is responsible for the last mile from the site to the Internet and managing Video services.	

Vendors are encouraged to propose alternative network topologies and pricing models that may differ from the options that are described above.

Appendix C: Glossary of Telecommunications Terminology

3G or Third Generation Wireless: This refers to the current state of cellular wireless data communications being actively deployed as a market overlay first in urban areas and along transportation corridors. The first generation was analog and the second was digital (CDMA, TDMA and GSM).

4G or Fourth Generation Wireless: This refers to the next step up for mobile wireless currently standardized and beginning to be deployed. Fourth generation systems provide higher-speed data connections of up to 100 Mbps for high mobility users and 1 Gbps for low mobility users, both fixed and mobile.

5G or Fifth Generation Wireless: This refers to the anticipated next step up for mobile wireless beyond 4G, but not yet standardized. Fifth generation systems will likely provide higher-speed data connections, both fixed and mobile with greater spectral and/or energy efficiency with improved service quality and user experience.

Antenna: Any structure or device used to transmit and/or receive electromagnetic waves for the provision of wireless services including, but not limited to, cellular, paging, personal communications services (PCS), and microwave communications.

Asymmetric: A connection with more capacity in one direction than the other. Most DSL and cable modem links are asymmetric, with higher capacity (speed) in the downstream path.

Attenuation: the deterioration of a signal over distance. Also may be referred to as “loss”

Backbone: This refers to the highest speed and widest bandwidth point of a communications circuit or path. In most cases data sources such as shared servers are connected to the backbone, with lower bandwidth circuits extending to user stations.

Backhaul: The intermediate links between the backbone of the network and the sub-networks or provider networks. See also “middle mile.”

Bandwidth: The amount of data (capacity) that can be carried by a circuit between two points of a network. Bandwidth is typically measured in Kilobits per second or Megabits per second (shortened to Kbps and Mbps). The top speed of modems is 56 Kbps. One strand of fiber optics can carry 20,000,000,000 bits per second (20 Gbps) or more.

Base Station: The central radio transmitter/receiver that maintains communications with end user sites within a given range. Although many base station site antennas are placed on specially constructed towers, where existing structures provide a site that is higher than its surroundings, antennas can be placed on those structures. For example, antennas have been placed on water towers, grain silos, and building rooftops.

BPL: Broadband over Power Line: A technology that allows broadband services to be delivered via electric lines. BPL is discussed in the **Potential Broadband Technologies** section of this report.

Broadband: A generic term for high-speed data transmissions. The current federal definition of broadband is a minimum of 768 Kbps downstream and 200 Kbps upstream.

Cable Modem: A device used to provide data services over a cable TV network. Users in a given locality (determined by the provider) share the available bandwidth, so when many local users are connected simultaneously they experience slower network performance.

Cell: The basic geographic unit of a wireless system, also the basis for the generic industry term ‘cellular.’ A geographic area is divided into ‘cells,’ each of which is equipped with a low-powered radio transmitter/receiver. The cells can vary in size depending upon terrain, capacity demands, etc. See also Base Station, Cell Site.

Cell Site: The place where communications equipment is located for each cell. A cell site includes antennas, a support structure for those antennas, and communications equipment to connect the site to the rest of the wireless or wired network. The equipment is normally housed in a small shelter or “hut” at the base of the site. See also Base Station, Cell.

Central Office: A term used by carriers when referring to switching points. May also be called a local exchange or telephone exchange.

CLEC: Competitive Local Exchange Carrier. A new entrant in a telecommunications market previously limited to one carrier. Contrast with ILEC.

Colocation: The siting of two or more separate companies’ (or departments’) equipment in or on the same structure/tower or building without the need to construct a new support structure or require a substantial increase in the size of an existing structure.

Contention: When multiple customers share a finite amount of broadband capacity and simultaneous use, they “contend” or compete with one another for that limited resource. Contention may be due to increased use or to inherent system design constraints. Synonymous with oversubscription.

CPE: Customer Premises Equipment. CPE is a term that refers to any equipment that is located at the customer’s site.

Downstream/download: Data transfer from the web/Internet “down” to the customer. Typically measured in thousands of bits per second (Kbps) or millions of bits per second (Mbps). See also Upstream/upload.

DS-3 (Digital Signal, Level 3): A 44.736 Mbps carrier facility, (also referred to as a T3, and generally thought of as 45 Mbps), which is the equivalent of 28-T1 connections.

DAS: Distributed Antenna Systems. An alternative wireless network technology utilizing small antennas usually mounted on existing infrastructure in the public rights-of-way, such as utility poles, and are connected to a central hub by wireless or fiber backhaul. Due to their limited power and coverage area, DAS elements are typically deployed to supplement traditional macro sites.

DSL: Digital Subscriber Line. A service providing data connectivity (to the Internet or private networks) over ordinary copper telephone lines. DSL circuits are switched, not shared as cable modems, but bandwidth can vary greatly, based on both distance and the quality of the circuit. There is typically a distance limitation of approximately 12,000 to 18,000 feet from the nearest main facility (telephone company central office or equivalent).

DSLAM: DSL Access Multiplexer. Used to aggregate many DSL connections onto a single higher-bandwidth connection/link. DSLAM equipment is typically placed in above-ground equipment cabinets within or at the edge of neighborhoods.

Ethernet: Ethernet is a family of computer networking technologies for local area networks (LANs), standardized in 1985 as IEEE 802.3 and largely replacing competing wired LAN technologies. It is generally carried over twisted pair wiring and fiber optic links in conjunction with hubs or switches at data rates from 10 Mbps to 1 Gbps on LANs and up to 100 Gbps on MANs and WANs.

FCC: Federal Communications Commission. The government agency responsible for regulating telecommunications in the United States.

Fixed wireless: Refers to wireless systems that are permanently installed and designed to cover a specific area or site.

Gbps: Gigabits per second. A thousand Mbps or a million Kbps.

ILEC: Incumbent Local Exchange Carrier. The former monopoly local telephone carrier. Contrast with CLEC.

ISP: An Internet service provider is a business or organization that offers users access to the Internet and related services. Many but not all ISPs are telephone companies or other telecommunication providers and may be organized as commercial, community-owned, non-profit, or otherwise privately owned entities. They may provide a variety of services such as Internet access and transit, domain name registration, web site hosting, and colocation.

Kbps: Kilobits per second. Thousands of bits per second.

LAN: Local Area Network. A local area network is a computer network interconnecting computers, storage, and other peripherals in a limited area such as a home, school, computer laboratory, or office building over a small geographic area using Ethernet, Wi-Fi, and possibly other short range interconnection technologies. See also MAN and WAN.

Last-mile (sometimes referred to as “first mile”): This term is used to describe the final connection to a building as opposed to the high capacity circuits extending across a city or county. This connection is often the bottleneck that prevents high-speed network connectivity, due to lack of high capacity cabling options. Contrast with “middle mile.”

Latency: The time it takes for a signal to travel between two points on a network. Also referred to as “delay”. When there is significant latency a normal voice conversation may be very difficult as the parties must wait for responses and may “talk over” each other.

Leased Line Services: These are typically communications circuits provided by a telephone company or cable company and leased for a monthly fee to a customer such as a city or school district. Typical leased lines include T-1 and T-3.

Line of Sight (LOS): Transmission limited to straight lines and in which the transmitting/receiving locations can be viewed/seen from one another. Most wireless wide area network transports require a line of sight from the sending location to the receiver.

MAN: Metropolitan Area Network. A metropolitan area network is a large computer network that spans a medium size geographic area such as a campus up to an entire metropolitan area, falling between a LAN and WAN. MANs provide Internet connectivity for LANs in a metropolitan region, and connect them to wider area networks like the Internet. See also LAN and WAN.

Mbps: Megabits Per Second - Million bits per second. Telephone modems operate at Kbps (thousands of bits per second) speeds, whereas local area networks operate at Mbps. See also Gbps.

Microwave: The portion of the electromagnetic spectrum, beginning with 1 GHz, which is used for many different wireless communications. Microwave links are often used in links where there is a line of site and a distance of less than 30 miles.

Middle mile: May also be referred to as backhaul. The links between ISPs and local or regional broadband service providers are considered “middle mile” connections. Contrast with “last mile”.

Monopole: A slender, self-supporting tower on which wireless antennas can be placed.

Oversubscription: See contention.

PROW: Public Right-of-Way or Public Rights-of-Way. The land/areas owned by a public entity such as a city or county that are used for installation of telecommunications and other services. For example, most counties own and control the PROW along county roads.

Right-of-Way (for outside plant cable): Refers to a designated space alongside a street or other access (such as a railroad line). An entity wishing to install cable among buildings must obtain the rights to a pathway for that cable. Right-of-way access must be granted by the owner of the path to be used, which may include public landowners (city, county, etc.), private landowners (railroad companies), or the owners of poles such as cable, telephone, or power companies. Cities typically require written permits for the use of their rights-of-way - usually for a fee. See also PROW.

Router: A device that “translates” among different types of network connections and speeds, and can also perform basic security functions. Routers are most frequently used at the point of incoming services such as ISP or carrier WAN connections.

Site Survey: Internet service provider personnel visit your home or business location to determine whether service is/can be made available there.

Symmetric: Used to describe communications technologies in which the upstream and downstream data rates are identical - e.g., High Bit-rate Digital Subscriber Line.

T-1 (DS1): In the United States the T-1 standard has a speed of 1.544 Mbps. T-1 circuits usually are provided by telephone companies using copper cabling, but fiber and wireless systems can be set up to provide T-1 connectivity as well.

Take Rate: The percentage of households or business that are offered service who choose to subscribe to that service. For example, if DSL service were available to 100 households and 33 elected to “take” that DSL service, the take rate would be 33%.

Underserved and Unserved: The FCC recently defined these terms that describe areas that lack broadband access. For complete definitions refer to the July 9, 2009 Federal Register Notice of Funds Availability (NOFA) at:
http://www.ntia.doc.gov/files/ntia/publications/fr_bbnofa_090709.pdf.

Upstream/upload: Data transfer from the customer back to the web/Internet or provider. Typically measured in thousands of bits per second (Kbps) or millions of bits per second (Mbps). See also Downstream/download.

VoIP: Voice over Internet Protocol. A technology that puts voice (telephone) conversations over an IP “data” network. Can be used to aggregate (or “trunk”) multiple calls between buildings, or for individual calls from an IP-enabled telephone or from a computer equipped with a microphone and speaker. Skype is one example of VoIP.

VPN: Virtual Private Network. A network set up for specific sites and users and open only to authorized users. A VPN uses encryption to prevent communications from being deciphered by non-authorized personnel.

WAN: Wide Area Network. A wide area network is used to extend connectivity beyond a building or campus, usually through telephone carrier facilities, but may also be privately installed and owned. See also LAN and MAN.

Wi-Fi: Wi-Fi is a popular technology that allows an electronic device to connect to a LAN and through it to exchange data or connect to the Internet wirelessly over unlicensed spectrum with various levels of encryption and security. Devices connect to network resources via a wireless network access point (AP) or hotspot with a range of up to about 65 feet indoors and greater distances outdoors depending on configuration, antennas, and mesh connections with other Wi-Fi APs. Wi-Fi is defined by IEEE 802.11 wireless LAN standards

WiMAX: WiMAX (Worldwide Interoperability for Microwave Access) is a wireless communications standard designed to provide some 30 to 40 megabit-per-second data rates and up to 1 Gbps for fixed locations enabling the delivery of last mile wireless broadband access as an alternative to cable and DSL. It is similar to Wi-Fi, but it can enable usage at much greater distances and speeds. WiMAX is defined by IEEE 802.16 wireless LAN standards ratified by the WiMAX Forum. A variant, Mobile WiMAX is being selectively employed to complement or compete with 4G mobile wireless.

Wind load: The designed capacity of a tower to withstand wind forces. Each structure (mast, antenna, etc.) added to a tower adds to the overall wind load of that tower.

WISP: Wireless Internet Service Provider. A company that distributes Internet service via wireless networking. In order to provide service to a given location or territory. A WISP may develop its own tower sites and/or may lease space on towers or structures owned by others.

ARF-3848

2. B.

Work Session

Meeting Date: 07/12/2016

Submitted For: Steve Sanders, Director

Submitted By: Shannon Boyer, Executive Administrative Asst.

Department: Public Works

Information

Request/Subject

Public Works update on the Consolidated Roads Department.

Background Information

Earlier this year changes were implemented in the Public Works Consolidated Roads Department. We want to update the Board on those changes and how they seem to be working.

Evaluation

N/A

Conclusion

N/A

Recommendation

N/A

Suggested Motion

Information/Discussion on changes implemented to the Consolidated Roads Department of the Public Works Division. **(Steve Sanders)**

Attachments

No file(s) attached.

ARF-3852

2. C.

Work Session

Meeting Date: 07/12/2016

Submitted For: Michael Scannell, Deputy County Manager

Submitted By: Shannon Boyer, Executive Administrative Asst.

Department: Public Works

Information

Request/Subject

Authorize the Chairman to terminate a lease agreement for professional office space at Copper Mountain Inn, Inc.

Background Information

In February 2001, Gila County entered into a lease agreement with Copper Mountain Inn, Inc. located at 110 Monroe St. Globe, AZ. in which Gila County would lease professional office space. Since that time there has been numerous amendments to the lease. The current being the Amendment to Lease Agreement Exhibit "B" signed by Gila County on November 18, 2014.

This amendment allows either party to terminate the agreement at any time by giving sixty (60) days written notice to the other party to terminate.

Evaluation

Currently the Gila County Probation Department is housed at 1100 Monroe St. It is the intent of the County to relocate the Probation Department to the Copper Administration Building located on the Gila County Campus at 1400 E. Ash St. Globe, AZ. when the building is completed. The scheduled completion date for the Copper Admin. Building is Sept. 13. Once the building is completed, one of the occupants will be the Probation Department. Prior to vacating their current location the County must provide sixty (60) days written notice.

Conclusion

It is in the best interest of the County to authorize the Chairman of the Gila County Board of Supervisors to sign a letter terminating the lease agreement no later than midnight September 30, 2016.

Recommendation

It is the recommendation of the Deputy County Manager that the Chairman sign the letter to terminate the lease agreement with current owner of the property at 1100 Monroe St. Globe, AZ.

Suggested Motion

Information/Discussion/Action authorizing the Chairman to sign a letter terminating the current lease agreement with Globe Office Building Partners, LLC for office space located at 1100 Monroe St. Globe, AZ.

(Michael Scannell)

Attachments

Lease Termination Letter

Amendment to Lease Agreement Exhibit

Lease Agreement

Tommie C. Martin, District I
610 E. Hwy 260, Payson, 85547
(928) 474-2029
tmartin@gilacountyaz.gov

Michael A. Pastor, District II
(928) 402-8753
mpastor@gilacountyaz.gov

John D. Marcanti, District III
(928) 402-8726
jmarcanti@gilacountyaz.gov



GILA COUNTY
BOARD OF SUPERVISORS
1400 E. Ash Street
Globe, Arizona 85501

Don E. McDaniel, Jr.,
County Manager
(928) 402-4344
dmcDaniel@gilacountyaz.gov

Marian Sheppard,
Clerk of the Board of Supervisors
(928) 402-8757
msheppard@gilacountyaz.gov

July 13, 2016

Mr. Robert Samuelian, Manager
Globe Office Building Partners, LLC
1 Whitecliff
Laguna Niguel, CA. 92677

Dear Mr. Samuelian:

Please let this letter serve as formal notification by the Gila County Board of Supervisors that it is the County's intention to terminate the Lease Agreement that governs the space that the Gila County Probation Department occupies at 1100 Monroe Street, Globe, Arizona no later than midnight on September 30, 2016.

Should you have any questions about the logistics of vacating the space in question or questions of a more general nature, please feel free to contact Michael Scannell, Deputy County Manager. Mr. Scannell may be reached by telephone at (928) 402-4344 or via e-mail at the following e-mail address: mscannell@gilacountyaz.gov.

Thank you for assisting Gila County with respect to addressing our space needs over the course of the last several years.

Respectfully,

Michael A. Pastor, Chairman, Gila County Board of Supervisors

cc: Don McDaniel, County Manager
Michael Scannell, Deputy County Manager
Honorable Timothy Wright, Presiding Judge, Gila County Superior Court
Sylvia Hernandez, Chief Administrative Officer, Gila County Probation Department
Steve Sanders, Gila County Public Works Director

AMENDMENT TO LEASE AGREEMENT
Exhibit "B"
PROFESSIONAL OFFICE SPACE
AT
COPPER MOUNTAIN INN, INC.
1100 Monroe Street
Globe, Arizona

ITEM "G"

Effective February 01, 2001, Copper Mountain Inn, Inc. and Gila County entered into an agreement whereby Gila County leases office space located at 1100 Monroe Street, Globe, Arizona. The agreement is automatically renewed every year. However, either party may terminate this agreement at any time by giving sixty (60) days written notice to the other party to terminate.

There have been multiple amendments (items) made to the agreement as follows:

- Item "A", the original Lease Agreement was approved by the Board of Supervisors on February 27, 2001, under the Owner's previous name of Mountain Professional Office Building.
- Item "B", was approved by the Board of Supervisors on May 31, 2001, and added 2,513 square feet to the existing lease space and also served to change the Owner name from Mountain Professional Office Building to Copper Mountain Inn, Inc.
- Item "C", was approved by the Board of Supervisors on September 25, 2001, changed the rate per square foot charged for the office area occupied by AHCCCS.
- Item "D", was approved by the Board of Supervisors on February 11, 2003, and served to extend the lease agreement through July 31, 2003 with automatic renewals every year thereafter subject to the right of either party to give sixty (60) days written notice to the other party to terminate the agreement at any time.
- Item "E", was approved by the Board of Supervisors on December 06, 2011, and served to reflected the correct amount charged per square foot and the square feet currently occupied by the County. The amount of space being leased is 9,213 square feet at a rate of \$1.32166612 per square foot for a monthly total of \$12,176.51.

- Item "F", was approved by the Board of Supervisors on February 5, 2013, and served to increase the square footage rate by ten (10) percent, for a new total square footage price of \$1.45383269 for 9.213 square feet.
- Item "G", will serve to acknowledge the new owner of the property at 1100 Monroe Street in Globe, Arizona, as Globe Office Building Partners, LLC, effective November 1, 2014.

All other terms and conditions of the lease agreement dated May 31, 2001, shall remain in full force and affect.

IN WITNESS WHEREOF, three (3) identical counterparts of this amendment, each which shall include original signatures and for all purposes be deemed an original thereof, have been duly executed by the parties hereinabove named, on this 18th day of November, 2014.

GILA COUNTY

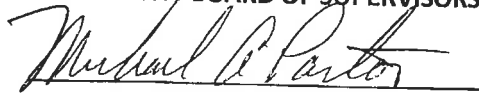
GLOBE OFFICE BUILDING PARTNERS, LLC


Authorized Representative

ROBERT SAMUELIAN
Print Name

MANAGER
Position

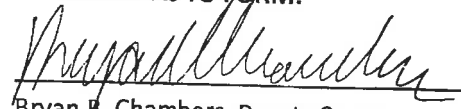
GILA COUNTY BOARD OF SUPERVISORS


Michael A. Pastor, Chairman, Board of Supervisors

ATTEST


Marian Sheppard, Clerk of the Board

APPROVED AS TO FORM:


Bryan B. Chambers, Deputy County Attorney/Civil Bureau Chief for
Bradley D. Beauchamp, County Attorney

After recording, please deliver to: Marian Sheppard, BOS



LEASE AGREEMENT

This Agreement is entered into by and between **Copper Mountain Inn, Inc.**, hereinafter referred to as the **Owner** and **Gila County**, through the administrative authority of the Gila County Board of Supervisors, hereinafter referred to as **Gila County**.

1. **LOCATION AND DESCRIPTION OF LEASED AREA:** This Agreement is to lease 2,513 net square feet of office space, not including hallways or common areas, by the Gila County Community Services Division/REPAC Department. The office space to be leased is located in the front portion of the Copper Mountain Inn office building facing 1100 Monroe Street, Globe, Arizona. Attached to this Agreement as Exhibit A is a copy of the floor plan with the office space to be leased highlighted.
2. **TERM AND RATES:** The initial term of this Agreement shall be for a period of one year, commencing on the 1st day of July, 2001, and ending June 30, 2002. **Gila County** may terminate this Agreement at any time by giving **Owner** sixty (60) days notice. This Agreement is automatically renewed at the end of the initial term and at the end of each renewal term thereafter with the same termination provision in effect. The initial monthly rent to be paid by **Gila County** shall be the sum of \$2,921.00 payable by the tenth of the current month.
3. **OWNER RESPONSIBILITIES:** **Owner** agrees to provide heating and air conditioning between the hours of 8:00 a.m. and 6:00 p.m. Monday through Friday and 9:00 a.m. to 1:00 p.m. on Saturdays of each week except holidays. **Owner** agrees to provide electricity and installed lighting to include replacement of light bulbs. **Owner** agrees to provide water for restrooms and drinking fountains. **Owner** agrees to provide and maintain automatic elevator services. **Owner** agrees to provide housekeeping services. **Owner** agrees to maintain all ingress and egress ways in a clean, safe and orderly fashion.

4. **GILA COUNTY RESPONSIBILITIES:** **Gila County** agrees to carry insurance on personal property. **Gila County** shall provide for telephone service and equipment at its own expense. **Gila County** shall provide furnishings and supplies necessary for operation in the area it occupies.
5. **LANDLORD - TENANT RELATIONSHIP:** The landlord-tenant relationship shall be governed by A.R.S. Section 33-301 to 33-381.
6. **FISCAL LIMITATIONS:** It is understood and agreed that **Gila County's** obligation pursuant to this Agreement is contingent upon adequate financial appropriation during the rental period. In the event such appropriation is inadequate, **Gila County** may discontinue occupying the office space as described herein with sixty (60) days notice.
7. **LIABILITY:** The parties hereto shall each be liable for damages to or theft of property or injuries or death to persons or any other loss or liability resulting from the negligence or intentional act or acts of their own employees or agents in operating, maintaining or occupying the facility noted herein.
8. **MODIFICATIONS AND IMPROVEMENTS:** All structural improvements or modifications desired and made to the premises by **Gila County** shall be subject to prior written approval by **Owner** through **Owner's** contact referenced herein.
9. **NOTICES:** All notices or demands upon either party by the other pursuant to this Agreement shall be in writing and shall be delivered in person or sent by mail addressed as follows:

Copper Mountain Inn, Inc.
Attn: Paul R. Friedlan
1100 Monroe Street
Globe, AZ 85501

Gila County
Facilities and Land Management
4053 E. Highway 60-70
Miami, AZ 85539

In witness whereof, both parties hereby execute this Agreement.

COPPER MOUNTAIN INN, INC.

GILA COUNTY

By: 
Paul Friedlan
Administrator

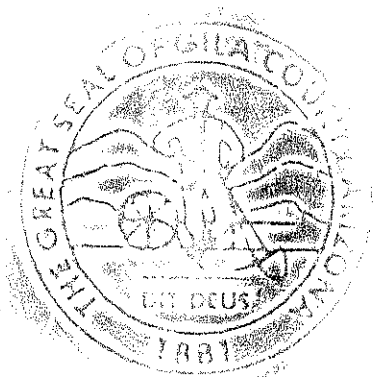
By: 
Chairman Cruz Salas
Gila County Board of Supervisors

Date: 5/30/01

Date: 5-31-01

APPROVED AS TO FORM:

By: 
Gila County Attorney
Date: 5/22/01



ARF-3858

2. D.

Work Session

Meeting Date: 07/12/2016

Submitted For: Don McDaniel Jr., County Manager

Submitted By: Jacque Sanders, Asst. County Manager/Librarian

Department: Asst County Manager/Library District Division: Administrative Services

Information

Request/Subject

Resolution No. 16-07-05 to Join the National Stepping Up Initiative to Reduce the Number of People with Mental Illness in Jails.

Background Information

Each year, there are an estimated two million people with serious mental illnesses admitted to jails across the nation. Almost three-quarters of these adults also have drug and alcohol use problems. Once incarcerated, individuals with mental illnesses tend to stay longer in jail and upon release are at a higher risk of returning to incarceration than those without these illnesses. (from the Stepping Up Initiative).

Recognizing the critical role local and state officials play in supporting change, the National Association of Counties (NACo), the Council of State Governments (CSG) Justice Center, and the American Psychiatric Foundation (AFP) have come together to lead a national initiative to help advance counties' efforts to reduce the number of adults with mental and co-occurring substance use disorders in jails. The Stepping Up Initiative is about creating a long-term movement, not a moment in time, to raise awareness of the factors contributing to the over representation of people with mental illnesses in jails, and then using practices and strategies that work to bring those numbers down.

With support from the U.S. Justice Department's Bureau of Justice Assistance, the initiative will build on the many innovative and proven practices being implemented across the country.

Evaluation

The human toll and its cost to taxpayers is staggering. Jails spend two to three times more on adults with mental illnesses that require intervention than on people without those needs, according to a study from Duke University, yet often do not see improvements in recidivism or recovery. Despite counties' tremendous efforts to address the problem, there are often significant obstacles, such as coordinating multiple systems and operating with minimal resources.

Despite important efforts already underway in many counties, there is an urgent need to address this national crisis using a common, data-driven process that encourages innovation and brings good work to scale.

The initiative has two key components; a call to action with planned measured action

steps, along with continued efforts in a national summit setting to advance county-led plans to reduce the number of people with mental illnesses in jails.

Conclusion

At last count, 273 counties have passed resolutions addressing the need to reduce the number of people with mental illnesses in jails. In addition, the National Sheriffs' Association has passed a resolution in support of The Stepping Up Initiative. In addition a wide range of supporting partners in the fields of law enforcement, policy research and behavioral health, along with several additional state and national associations have become partners in the Stepping Up Initiative. More information can be found at www.stepuptogether.org.

Recommendation

Staff recommends adopting this resolution and joining The Stepping Up Initiative.

Suggested Motion

Information/Discussion/Action to adopt Resolution 16-07-05 and to join with other counties, the National Association of Counties Organization, the Council of State Governments Justice Center, the American Psychiatric Foundation and the National Sheriffs' Association in support of The Stepping Up Initiative. **(Don McDaniel)**

Attachments

Resolution No. 16-07-05



RESOLUTION NO. 16-07-05

A RESOLUTION OF THE GILA COUNTY BOARD OF SUPERVISORS, TO JOIN WITH THE NATIONAL ASSOCIATION OF COUNTIES (NACo) IN THE “STEPPING UP INITIATIVE TO REDUCE THE NUMBER OF PEOPLE WITH MENTAL ILLNESSES IN JAILS.”

WHEREAS, counties routinely provide treatment services to the estimated 2 million people with serious mental illnesses booked into jail each year; and

WHEREAS, prevalence rates of serious mental illnesses in jails are three to six times higher than for the general population; and

WHEREAS, almost three-quarters of adults with serious mental illnesses in jails have co-occurring substance use disorders; and

WHEREAS, adults with mental illnesses tend to stay longer in jail and upon release are at a higher risk of recidivism than people without these disorders; and

WHEREAS, county jails spend two to three times more on adults with mental illnesses that require interventions compared to those without these treatment needs; and

WHEREAS, without the appropriate treatment and services, people with mental illnesses continue to cycle through the criminal justice system, often resulting in tragic outcomes for these individuals and their families; and

WHEREAS, Gila County, and all counties take pride in their responsibility to protect and enhance the health, welfare and safety of its residents in efficient and cost-effective ways; and

WHEREAS, through *Stepping Up*, the National Association of Counties, the Council of State Governments Justice Center and the American Psychiatric Association Foundation are encouraging public, private and nonprofit partners to reduce the number of people with mental illnesses in jails;

NOW, THEREFORE, BE IT RESOLVED, that the Gila County Board of Supervisors, does hereby sign on to the Call to Action to reduce the number of people with mental illnesses in our county jail, commit to sharing lessons learned with other counties in our state and across the

country to support a national initiative and encourage all county officials, employees and residents to participate in *Stepping Up*. We resolve to utilize the comprehensive resources available through *Stepping Up* to:

- Convene or draw on a diverse team of leaders and decision makers from multiple agencies committed to safely reducing the number of people with mental illnesses in jails.
- In collaboration with the Gila County Sheriff's Office, collect and review prevalence numbers and assess individuals' needs to better identify adults entering jails with mental illnesses and their recidivism risk, and use that baseline information to guide decision making at the system, program, and case levels.
- Examine treatment and service capacity to determine which programs and services are available in the county for people with mental illnesses and co-occurring substance use disorders, and identify state and local policy and funding barriers to minimizing contact with the justice system and providing treatment and supports in the community.
- Develop a plan with measurable outcomes that draws on the jail assessment and prevalence data and the examination of available treatment and service capacity, while considering identified barriers.
- Implement research-based approaches that advance the plan.
- Create a process to track progress using data and information systems, and to report on successes.

PASSED AND ADOPTED this 12th day of July 2016 at Globe, Gila County, Arizona.

Attest:

GILA COUNTY BOARD OF SUPERVISORS

Marian Sheppard

Michael A. Pastor, Chairman

Tommie Cline Martin, Vice-Chairman

John D. Marcanti, Member

ARF-3846

2. E.

Work Session

Meeting Date: 07/12/2016

Submitted For: Jefferson Dalton, Deputy County Attorney, Civil Bureau Chief

Submitted By: Laurie Kline, Deputy Clerk

Department: County Attorney

Fiscal Year: 2016-2017

Budgeted?: No

Contract Dates N/A

Grant?: No

Begin & End:

Matching No

Fund?: New

Requirement?:

Information

Request/Subject

Consideration of *Strawberry Ridge Estates LLC. v. Gila County*, 1 CA-TX-14-0004.

Background Information

On May 26, 2015, the Arizona Court of Appeals filed an opinion reversing a prior ruling of the Arizona Tax Court. The reversal reinstates the tax appeal of Strawberry Ridge Estates v. Gila County.

Evaluation

Due to the Court's reversal which reinstated Strawberry Ridge Estate's tax appeal, the Board should vote to go into executive session to receive legal advice from its attorney, consider its position in the lawsuit, and instruct its attorney how to proceed pursuant to A.R.S. § 38-431.03(A)(3)-(4).

Conclusion

Due to the Court's reversal which reinstated Strawberry Ridge Estate's tax appeal, the Board should vote to go into executive session to receive legal advice from its attorney, consider its position in the lawsuit, and instruct its attorney how to proceed pursuant to A.R.S. § 38-431.03(A)(3)-(4).

Recommendation

The County Attorney's Office recommends that the Board should vote to go into executive session to receive legal advice from its attorney, consider its position in the lawsuit, and instruct its attorney how to proceed pursuant to A.R.S. § 38-431.03(A)(3)-(4).

Suggested Motion

Information/Discussion/Action to vote to go into executive session to receive legal advice from its attorney regarding the lawsuit of Strawberry Ridge Estates LLC v. Gila County, 1 CA-TX-14-0004; consider its position in the lawsuit; and instruct its attorney how to proceed pursuant to A.R.S. § 38-431.03(A)(3)-(4). If the Board does go into executive session, the County Attorney's Office suggests that after the Regular Meeting has been reconvened, the Board vote to instruct the County Attorney's Office to proceed as directed in executive session. **(Jeff Dalton)**

Attachments

No file(s) attached.
