

Graham County Transit Feasibility Study



Final Feasibility Working Paper

Full Report July 2015



Graham County, Arizona



ADOT

Prepared by



TRANSIT  marketing LLC

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1. Introduction

This working paper presents the key findings and recommendations from the first phase of the Graham County Transit Feasibility Study.

The San Carlos Apache Tribe provides public transit intercity service among Globe, Apache Gold Casino, San Carlos, Bylas, Pima Thatcher and Safford three times a day. There is no intracounty public transportation service that provides internal circulation among the communities of Pima, Thatcher, Safford and Solomon.

Several social service agencies also provide transportation for mostly senior and disabled residents who participate in their respective programs. Members of the general public who do not own an automobile or do not possess a valid drivers license do not have public transit mobility options for work, education, medical, social service agency, or shopping trips. The purpose of the Graham County Transit Study is to address the following questions:

- 1) Is there community support and adequate potential ridership for a viable public transit system in Graham County?
- 2) Does sufficient local or other financial support exist to provide necessary matching funds for federal funding to financially sustain transit services over time?
- 3) Does a viable governance structure exist or can one be created to govern, manage and comply with federal funding regulations?
- 4) Is there the potential to leverage existing funding for transportation in Graham County, and coordinate and add value to existing social service agency transportation services with a public transit service?
- 5) Do the benefits of providing a public transit system outweigh the costs of service delivery?

This study is meant to update the 2007 Graham County Transit Study that concluded:

“This feasibility study identified a substantial demand for transit and developed a recommended operating alternative, the complexity of the funding and management issues was not resolved.”

The work scope for the 2015 Graham County feasibility study has two phases. The first phase is designed to answer the five questions above to determine if public transportation is feasible in Graham County. This working paper presents the key findings from the first phase of the study on whether or not public transportation is feasible. The working paper will be reviewed by the Technical Advisory Committee (TAC) and a recommendation made to the Graham County Board of Supervisors, City of Safford City Council, City of Thatcher City Council and the Pima Town Council regarding whether or not public transportation is feasible for Graham County. If public transportation is found to be feasible by the TAC, advisory votes will be taken by each of the elected bodies to determine if the study should move to the second phase of the analysis in developing a detailed service, financial and marketing plan.

In order to be feasible, each elected body must determine:

1. There is a need for public transportation in their jurisdiction.

2. They are willing and able to sustain a fair share of funding or in-kind service over a minimum five-year period.
3. They are willing to participate in a governance body to provide oversight to the public transportation system.

This working paper is meant to provide the information necessary for elected officials and key stakeholders to make informed determinations on the feasibility of public transportation in Graham County.

Background

There have been several past attempts to determine the feasibility of public transportation services in Graham County.

2007 ADOT Sponsored Graham County Transit Feasibility Review

A similar study was sponsored by the Arizona Department of Transportation in 2007. This study is meant to update the 2007 Graham County Transit Study. In 2007, a need for public transportation in Graham County was identified, and the study concluded that there was potential for generating 69,000 annual transit trips with a public transportation system. In a comparison with five other peer regions, the annual transit per capita ranged from 2.1 to 3.6 when public transportation was made available. In Graham County, the estimate was that a public transportation system would generate 2.9 annual trips per capita.

While the need for public transportation was identified, there were two stumbling blocks that ultimately made public transportation not feasible.

The first barrier was that there was not consensus on how to pay for the local support dollars required to operate a public transportation system. A two bus service was estimated to cost \$411,000 with fares contributing about \$37,000 annually. The Federal Transit Administration 5311 program was expected to contribute 58% of the net total (less fares) or \$231,000. The need for local contributions for annual operations was therefore anticipated to be \$143,000. The local match for the capital costs was estimated at an additional \$11,500. No consensus was reached among the potential partners on how to financially sustain the service.

The second barrier was that no local agency was willing to take on the responsibility for administration of the public transportation service. The study presented several management alternatives; however, the final report concluded that "No one government or organization is prepared to take on the task of administering a transit agency."

2010 Safford Transit Study

In 2010, Mayor Chris Gibbs from Safford convened a stakeholder group to explore the feasibility of public transportation. The effort included a survey of 408 individuals¹ that explored the feasibility including potential stops, anticipated number of trips per week, special needs and use factors such as cost and schedule. A potential schedule and coordination with the San Carlos Apache Tribe intercity service was explored.

Again, there was no consensus on how to pay for and govern a public transportation service in Graham County.

Bi-Monthly Mobility Management Coordination Meetings

Every other month, key stakeholders involved with human service agency transportation and staff from the SouthEastern Arizona Governments Organization (SEAGO) meet to discuss training issues, maintenance issues, outreach to seniors, and a number of other coordination issues. The subject of public transportation and FTA 5311 services in other communities regularly comes up in the group discussions.

Graham County Application to ADOT for Transit Feasibility Study

In March 2014, Graham County submitted an application to the Arizona Department of Transportation (ADOT) Planning Assistance for Rural Areas (PARA) grant program requesting funding for this public transportation feasibility study. The following was the primary rationale for requesting the grant funding for the Graham County Transit Feasibility Study: “We need this study as a tool for evaluating our complete transit needs, community interest, and the viability of Section 5311 program serving all of the communities of the County.” The grant application was approved and ADOT has hired Mobility Planners LLC in collaboration with Transit Marketing LLC to conduct the study.

Working Paper Organization

The next chapter documents the public involvement effort that has informed the development of this working paper.

Chapter 3 provides an overview of existing and planned transportation services provided within Graham County.

Chapter 4 discusses the needs for public transportation in Graham County. It includes qualitative input from stakeholders and focus groups, an analysis of 2010 Census data, and a comparison of per capita utilization of public transportation in comparable rural Arizona and California communities.

Chapter 5 provides an overview of the Federal Transit Administration (FTA) 5311 program features and requirements. FTA 5311 funding provides funding support for rural public transportation services throughout the United States.

¹ Respondents could respond to a question multiple times. The number of actual of respondents is based on the number of individuals who respondents to the age question.

Chapter 6 provides an overview of service delivery options in Graham County including intercity fixed route, local fixed route, community service route, flex-route and dial-a-ride options. These options were discussed at the Technical Advisory Committee (TAC) meeting on May 7, 2015 and this input is further developed with a concept map on a preferred service delivery option.

Chapter 7 provides information on the governance and management options for public transportation services. These options were discussed at the May 7, 2015 TAC meeting and the consensus position on the preferred governance option is provided.

Chapter 8 provides a reasonable estimate of the start-up, first year and five-year costs for a public transportation service in Graham County. Options for allocating costs are discussed, and the consensus from the May 7, 2015 TAC meeting is provided. Based on this consensus, a reasonable range of needed funding support from local partners to initiate and sustain the public transportation service is estimated over a five-year period. Conservative assumptions are utilized and these are documented in this chapter..

Chapter 9 provides further input on the benefits and costs of public transportation services based on national research efforts to quantify benefits.

2. Public Involvement Effort

Significant efforts have been made to solicit public input in determining whether or not public transportation is feasible in Graham County. The public involvement effort includes four components:

- Technical Advisory Committee
- Stakeholder Interviews
- Public Meetings
- Targeted Focus Groups

The public involvement process had a dual focus - collecting information about transportation needs and feasibility, while simultaneously educating community stakeholders about the possibilities for alternate service designs, governance models and funding opportunities.

This section of the working paper documents the process for the public involvement effort. Key findings and input received are incorporated into later chapters that address the key questions on whether or not transit is feasible in Graham County.

Technical Advisory Committee (TAC)

The Technical Advisory Committee includes key representatives of all sectors of the community. This body is a critical component of the public involvement process. The TAC has provided direct input about the views of their own constituencies, will serve as a critical conduit for communicating with their jurisdictions and organizations, and will help to facilitate outreach to key potential rider segments.

An initial meeting was held with the TAC on April 1, 2015. Participating entities included:

- ADOT
- Graham County
- SEAGO
- City of Safford
- Town of Thatcher
- Town of Pima
- Blake Foundation
- Graham County Health Department
- Mt. Graham Regional Medical Center
- Eastern Arizona College
- SEACAP

The meeting provided an opportunity for participants to review the scope of work and provide input about desirable outcomes for the project.

Additional organizations were identified at the first TAC and were invited to attend the May 7, 2015 meeting:

- United Way
- SEACUS
- Mt. Graham Regional Medical Center
- Freeport-McMoRan Inc.
- County Board of Supervisors
- Chamber of Commerce

A second meeting with the TAC was held May 7, 2015 at 1:00 PM. During this meeting, the consultants provided a preliminary report of findings from other outreach efforts and provided an overview of potential service designs, costs and revenues, and governance models which are further developed in this working paper.

A third meeting with the TAC was held on July 7, 2015 at 9:00 am when the consulting team presented findings of subsequent chapters of this working paper. At that time, the TAC made recommendations that transit is feasible in Graham County. Members of the TAC will present the key findings and recommendations to their respective governing bodies, asking for a preliminary commitment to provide the local match necessary and form a governance structure to govern and manage the public transportation system. If there is concurrence from the governing bodies of Pima, Thatcher, Safford and Graham County, then the study will proceed to the second phase where a detailed service, marketing, financial, and management plan will be prepared.

Stakeholder Interviews

In-depth stakeholder interviews were initiated in conjunction with the kick-off TAC meeting. Interviews were held with representatives of:

- Blake Foundation
- SEACUS
- Town of Thatcher
- City of Safford
- SEACAP (Community Action Program)

Additional interviews were held with several other stakeholders during a 3-day on-site visit May 5-7, 2015.

- Department of Economic Security
- Workforce Connection
- Freeport-McMoRan Inc.
- Mt. Graham Regional Medical Center
- San Carlos Apache Tribe
- Eastern Arizona College
- Canyonlands Health – Safford Clinic

Public Workshops

Three public workshops were held on May 5-6, 2015.

- City of Safford – General Services Building meeting room
- Town of Thatcher – council chambers or conference room
- Town of Pima – town hall

The public meetings were announced in the local newspaper. In addition, TAC members were provided with a promotional flyer and asked to assist with recruiting participation in the public meetings by posting the flyer, including information on their own social media sites and encouraging their constituents to attend.

Focus Groups

To better understand the transportation needs of key potential rider segments, the consulting team worked with TAC members and other stakeholders to recruit and conduct focus groups with several target populations. The following stakeholder meetings were held:

- Eastern Arizona College students (April 21, 2015)
- DES/Workforce Connection clients (May 5-6, 2015)
- WIC Clients through County Public Health (April 21, 2015)
- Seniors at SEACUS Senior Center (May 6, 2015)

The focus groups were used to understand the factors that influence the use of transit in Graham County and to test demand for potential services. This was an education process in presenting simplified examples of service delivery models and service levels and discussing how such services might improve resident mobility. The input from the focus groups was incorporated into the narrative of Chapter 4 on Transportation Needs.

The findings of the stakeholder meetings, public workshops and focus groups have been incorporated into the next two chapters.

3. Existing and Planned Transportation Services

San Carlos Apache Public Transit

The San Carlos Apache Nnee Bich’o Nii Transit has several routes that are open to the general public but are designed to meet the needs of tribe members.

Buses operate Monday through Friday on three general public routes:

- San Carlos to Globe
- San Carlos To Safford
- Bylas to San Carlos

Service is provided between San Carlos and Safford three times a day, with service to Safford starting in San Carlos at 6:45 am, 10:55 am and 4:45 pm, and arriving at Walmart at 8:10 am, 12:20 pm and the MVD at 6:10 pm. (It does not stop at Walmart on its last run). The return trip from Walmart in Safford leaves at 8:15 am, 1:25 pm and 6:30 pm.

Connections are provided to Globe on the outbound trips from Safford, with the 8:15 am and 1:25 pm departures from Walmart in Safford arriving in Globe at 10:15 am and 3:20 pm. These trips also serve the casino.

In addition to the intercity routes, the San Carlos Tribe also has a community route which serves local San Carlos trips and a Casino employee shuttle between Bylas and the Casino.

Funding for the San Carlos Apache service comes from the Federal Transit Administration Tribal Transportation Program. Funding applications are submitted directly to the Federal Transit Administration.

Public Involvement Input

The existing perception by many Graham County residents from stakeholders interviewed is that the San Carlos Apache Bus is for tribe members and is not open to the general public. The buses are currently branded with tribal images and “public transit” is not displayed on the buses. The Tribal Transportation Manager is taking steps to re-brand the bus to be more inclusive of the Graham County general public. According the Tribal Lead Driver/Supervisor, there are a couple of Graham County residents who utilize the service to the Casino and back as well as one individual who regularly takes the bus between Pima and Safford and back.

SouthEastern Arizona Community Action Program (SEACAP)

The SouthEastern Arizon Community Action Progam (SEACAP) provides transportation services in the Safford, Pima and Thatcher area. SEACAP is a community action agency with the following mission: “To assist families in the movement, transition and achievement of self-sufficiency.”

SEACAP provides dial-a-ride service to meet the needs of the elderly and disabled, but will serve the general public on a space available basis. The services are utilized for trips to congregate meal sites, doctor visits, dialysis, grocery shopping, DES visits, among other trip purposes. SEACAP is able to serve about 15-16 trips a day. Trips are normally scheduled with an advanced reservation. SEACAP transportation is free, with a donation box available for those clients who wish to contribute to the program.

SEACAP serves about 120 individuals with transportation according to the 2013 Coordination Plan. A 2011 cutaway bus with a lift is utilized to provide service from 8:00 am to 12:30 pm and 1:30 pm to 5:00 pm, Monday through Friday.

In the past, funding has come from Federal Transit Administration (FTA) 5310, 5316, 5317 and SEAGO Area Agency on Aging.

Service is also provided to Clifton in the morning from 9:00 am to 1:00 pm four days a week and on Thursday from 8:00 am to 5:00 pm.

Easter Seals Blake Foundation: SAGE Program

Easter Seals Blake Foundation, a 501(c)3 non-profit corporation, was originally formed in 1950 as the Cerebral Palsy Foundation of Southern Arizona. Easter Seals Blake Foundation is dedicated to the idea that all people deserve the chance to live healthy, productive and independent lives. The Blake Foundation's educational, therapeutic, family support and community living programs are designed in accordance with their mission: to enable each individual served to discover and meet his or her maximum potential for independent, productive living and developmental growth.

In Graham County, the Easter Seals Blake Foundation's SAGE Division provides residential, employment and day program services for individuals with developmental disabilities. SAGE provides programs to enable individuals with physical and/or intellectual disabilities to reach their maximum potential for independence.

SAGE provides transportation to and from day programs, residential programs, and individual homes. Clients are driven to social and recreational activities. Transportation is also available to clients for vacation use, visits to family and other group excursions to various cultural, historic and tourist sites both within and outside of Arizona.

In collaboration with S.E.A.C.U.S., SAGE provides seniors the opportunity to travel to and from the Apache Gold Casino in San Carlos, AZ the fourth Friday of the month. This service is paid for by the Blake Foundation.

In collaboration with SEACAP, SAGE provides back-up transportation to SEACAP when they cannot provide transportation to clients due to vehicle availability, or vacation or illness of SEACAP drivers.

The Blake Foundation has nine vehicles that operate in Graham County, funded with FTA 5310 capital funds. In 2014, SAGE's Blake Foundation transportation service provided 29,252 transportation trips.

Greyhound

Greyhound has submitted a Section 5311 application to the state DOT to provide intercity service that would serve Graham County. The proposed route would provide one daily round trip between Phoenix and El Paso, TX with intermediate stops in Mesa, Superior, Miami, Globe, Peridot, Bylas, Safford, Duncan, Lordsburg, NM and Las Cruces, NM. This new service would serve rural residents in the communities identified in the schedule and connect with service provided by Cobre Valley Transit in Globe, with the San Carlos Apache Transit in Bylas and Peridot and with Valley Metro in Phoenix. Not only would the service connect with existing transit, but would also provide daily service to many Arizona communities that do not have access to the national intercity bus network.

Private Transportation Providers

There are at least three private transportation providers that serve the area between Pima and Solomon. A local taxi service provides local on-demand taxi trips. A limousine and shuttle service provides transportation to both Phoenix and Tucson and intermediary destinations. For example, according to their website, it costs \$145 for a trip from Safford to the Tucson airport. A non-emergency medical transportation service provider also provides services in several southeastern Arizona counties, including Graham County.

4. Transportation Needs

The purpose of this section is to answer the question, is there a need for additional public transportation in Graham County?

To answer this question, we will rely on several sources:

1. Qualitative input from stakeholder interviews, focus groups, public meetings, and TAC meetings. When possible, quantitative input on the number of clients being served by social service agencies in Graham County who might benefit from public transportation.
2. Quantitative characterization of the socioeconomic needs utilizing Census data.
3. Quantitative input of average public transportation trips per capita in Arizona rural areas similar to Graham County.

Qualitative Input from Stakeholders and Focus Groups

The key finding from the focus groups and stakeholder interviews is that there are essentially four key market segments with a need for public transportation:

- Low income persons without a drivers license or without access to an automobile to get to training, jobs and other needs.
- College students living on campus at Eastern Arizona College without an automobile.
- Growing senior demand that will likely outstrip the available capacity of the SEACAP transportation program.
- Persons with disabilities, including behavioral health clients.

Input regarding the destinations that public transportation needs to serve was quite consistent among stakeholders and focus groups. These locations are itemized at the end of this section.

Transportation needs of low income individuals

According to the Census, 25.4% of Graham County residents live below the poverty level - almost 1 in 4 or 8,300 Graham County residents. This is significantly higher than the statewide average of 18.6%. Several of the stakeholders we talked to work with these residents on a regular basis to provide services.

The Arizona Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides nutrition education and breastfeeding support services, supplemental nutritious foods and referrals to health and social services. WIC serves pregnant, breastfeeding, and postpartum women, infants, and children under the age of five who are determined to be at nutritional risk. The WIC Program is funded by the United States Department of Agriculture. The WIC program in Graham County has a caseload of 1,120 with 985 participating in the program currently. At present, clients walk, get rides

or have transportation for their trips. Staff at the WIC program and the department of health believe that a public transportation system would provide a significant benefit to their clients not only for trips to the program, but for general health care, grocery shopping and other travel.

The Workforce Connection based in Safford is a One Stop for unemployed and underemployed persons. At present, most individuals bike, catch a ride or walk to get there. One young woman attending the focus group session had walked from Daily Estates to the Workforce Connections, a walk of 90 minutes one way. Typical of many, she had an older car, but it needs significant repairs and she cannot afford to get it fixed. Workforce Connection encounters prison release clients who are looking for work but have no drivers license and are without a car. In April 2015, there were 1,038 visits by clients to Workforce Connections. Most of these clients would benefit from a public transportation system that provided circulation among Pima, Thatcher, Safford, and Solomon.

At the Canyonlands Health clinic, approximately 60% of clients qualify for Access, Arizona's medicaid program. Access will pay for transportation. The clinic sometimes struggles in utilizing SEACAP for medical appointments with clients often having to wait 2-3 hours in their waiting room after their appointment. They call Access for transportation, but it usually requires a reservation three days in advance. The service is provided by a contractor. Access will pay for a taxi to Wilcox for a connection to Greyhound. The cost for a local trip is \$12 and \$200 for a trip to a specialist in Tucson.

The Department of Economic Security is currently serving 5,000 clients in Graham County. This does include some double counting for clients who are enrolled in multiple DES programs. However, with 9,300 residents living below poverty, the current caseload is not surprising. Due to the housing costs, many of their clients live in outlying areas and do not own automobiles. A large majority of DES clients would benefit from a local public transportation service.

Eastern Arizona College Students

Eastern Arizona College has approximately 3,500 students with 2,000 part-time and 1,500 full-time students. While many students have vehicles and can provide their own transportation, others rely on getting rides or walking to get around the local area.

Of the student population, 420 live on campus and 80% of these don't have automobiles. Students particularly need public transportation for trips to Walmart, the grocery store and for evening service. There is no taxi service after midnight, and it's problematic for students to get back to campus if they get out of the emergency room in the late evening. Some students at a focus group mentioned the difficulty of getting around without a car in the Thatcher/Safford area. Other students with cars related that they are often called on to provide rides for friends and dormmates.

Senior Transportation

Older adults (65 years of age or older) make up 12.2% of the Graham County population. This is below the Arizona statewide average of 13.8%. This represents 4,500 seniors. From Pima to Solomon, the percentage is consistently very close to 12%. The number of older adults 75 years old and above is 5.1% or about 1900 individuals. These older adults 75+ are the ones with a higher propensity to need specialized transportation service like what is currently provided by SEACAP. According to SEACAP many of the elderly clients they serve would be considered the frail elderly, but SEACAP also serves many other local transportation needs throughout Graham County.

Disabled Transportation

The number of disabled individuals below 65 years of age is 7.3% in Graham County, slightly below the statewide average of 8.1%. While data is not available for Graham County, the number of seniors 65+ who have a disability statewide is 33.8%. Assuming a similar percentage for Graham County, there are approximately 4,700 Graham County residents with a disability.

A representative from Southeastern Arizona Behavioral Health Services (SEABHS) says that with a recent rule change, Behavioral Health can only provide transportation for medical trips that are “clinically justifiable.” In the past, they used to provide transportation services for daily living such as trips to the grocery store. Such trips are now quite difficult for many clients who do not own an automobile. Clients are forced to walk and for many their medications and heat do not mix well. From Pima to Solomon, SEABHS has approximately 300 clients and approximately 50% are transit dependent without an automobile or drivers license.

Destinations Where Public Transportation Is Needed

The following are locations that were consistently mentioned by stakeholders and focus group participants as key destinations for a transit service.

- Eastern Arizona College
- Medical Facilities along 20th Ave
- Shopping at Hwy 70/20th Ave commercial area including Walmart, Safeway, and Bashas
- Downtown Safford
- Social Service Offices
- Low Income and Senior residential areas in Safford, Thatcher and outlying areas

Census Summary

The table below summarizes U.S. Census data for towns and cities in Graham County, along with a comparison of Graham County to Arizona as a whole.

	Pima	Thatcher	Safford	Solomon	Graham County	Arizona
Population	2,387	4,848	9,541	426	37,168	6,479,703
10-19 %	15.2%	21.7%	15.9%	10.4%	18.1%	14.2%
65+ %	12.4%	12.5%	12.2%	11.8%	12.2%	13.8%
75+ %	5.6%	4.5%	7.1%	5.3%	5.1%	6.0%
Veterans%	8.3%	5.3%	7.2%	13.1%	7.3%	8.1%
Disabled below 65 %	N/A	N/A	7.5%	N/A	8.6%	7.4%
Hispanic %	20.8%	29.6%	43.6%	75.8%	31.5%	43.6%
Income						
Median Income	\$ 44,583	\$ 50,099	\$ 42,669	\$ 52,431	\$ 44,943	\$ 49,774
People in Poverty %	18.9%	16.5%	19.9%	33.2%	22.3%	18.6%
Language						
Non-English	9.9%	12.4%	16.5%	26.7%	20.1%	26.8%

Source: 2009-2013 American Community Survey 2009-13 5 year estimate and 2010 Census

What stands out in the table above are the market segments for public transportation:

- Youth 10-19 years old need public transportation for mobility due to their age, student status and employment status. In many rural areas, youth who have not obtained their drivers license are an important market segment for public transportation. With approximately 340 Eastern Arizona students living on campus without a car, in addition to the substantial number of middle school and high school students without a car, this is a market segment with a substantial need for public transportation.
- Seniors are a very important market for public transportation. Many seniors in other communities with a community service route that connects their housing with the library, medical clinics, pharmacies, the senior center, grocery shopping like the flexibility and lower cost of using a local bus. Even seniors who are currently driving like the option of having a public transportation service available as most recognize that they will reach a point when they can no longer drive. SEACAP's dial-a-ride service is accommodating many of the frail senior population, but a community service route and general public dial-a-ride coordinated with SEACAP would provide significantly more mobility options with the growing number of seniors.
- There are many low income households in Graham County that live below the poverty line. The Department of Economic Security (DES) has 5,000 residents on its case load at the moment. While many own a car, many do not, as will be further explored with a map of autoless households in the next section of this chapter. Stakeholders told us that many of the very low income households live in isolated areas, such as the area adjacent to Jo-Bi Convenience store south of Safford along Highway 191. Providing mobility options for individuals without access to an automobile to receive DES services, attend school, get a part-time or full-time job, or conduct the basic necessities of life such as access to the grocery store are all important needs in Graham County.
- Veterans make up 7.3 percent of the Graham County population. Some of the veterans returning home from recent wars have either physical or mental disabilities. Providing public transportation serves an important mobility need for veterans.

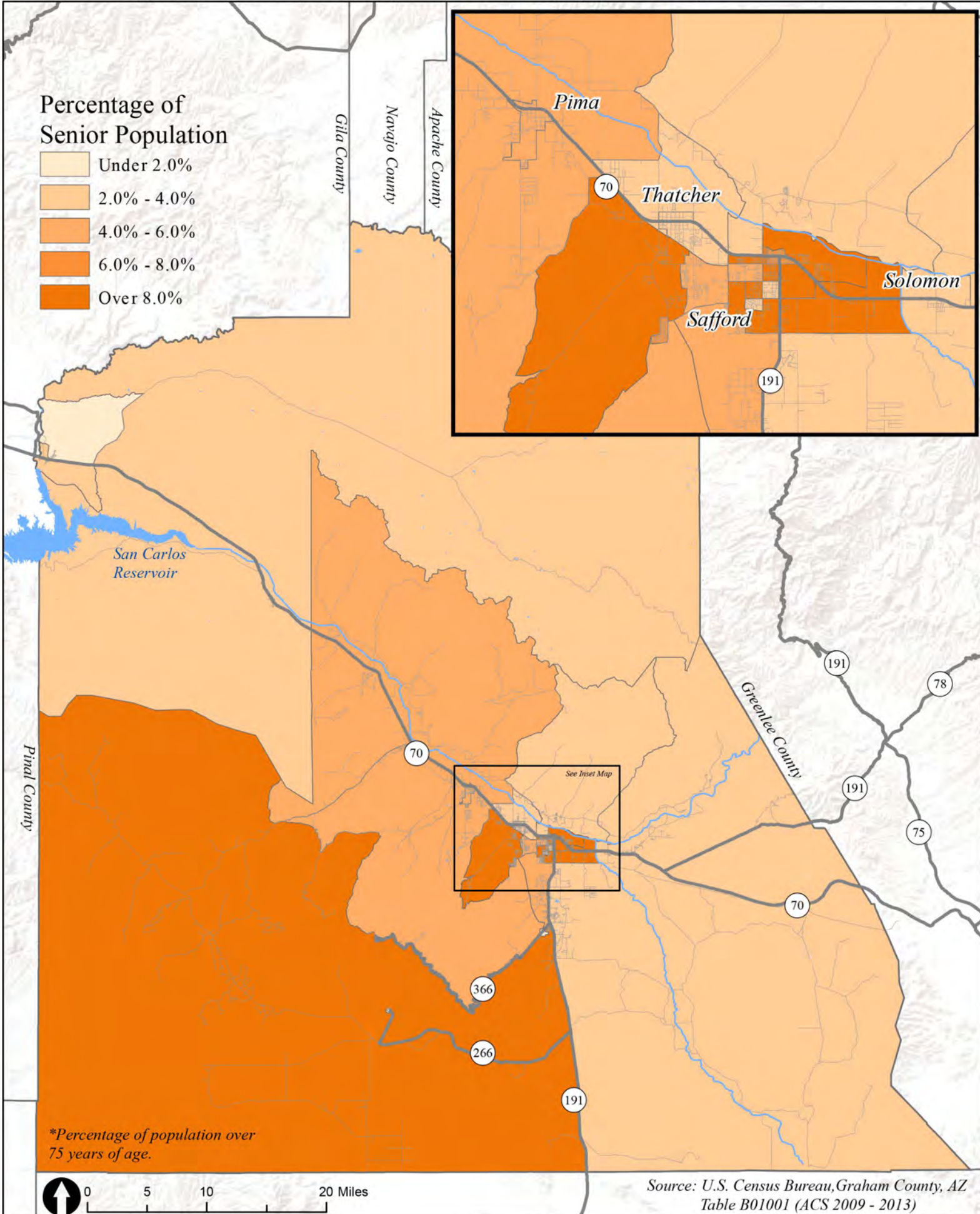
- As described above, there are approximately 4,700 disabled individuals, many of which are also low income or are in the senior category.

The maps on the following three pages show the distribution of seniors, households that do not own an automobile and persons living below the poverty level. The following are relevant observations from the review of the demographic maps:

- In the map of seniors 75 and older, there are concentrations of Census block groups with 8% or more located in Thatcher, Safford and east to Solomon. This is currently an important market segment served by SEACAP. The demand on SEACAP is growing. The aging of the population and a coordinated public transportation service with SEACAP would be advantageous for the senior population concentrations displayed on the map.
- The percentage of households without automobiles varies significantly in Graham County. The map displays the highest concentration with 12% or more households without automobiles in both the San Carlos reservation area as well as Safford. Secondary concentrations are found in southeastern Thatcher, Pima and Solomon. This is where the need for public transportation service among the general public population is greatest. Much of Thatcher has households with high auto ownership.
- In terms of concentration of households living below the poverty line, poverty is most prevalent with over 12% of households living in poverty located in the San Carlos reservation and small areas of Pima, Thatcher and Safford.

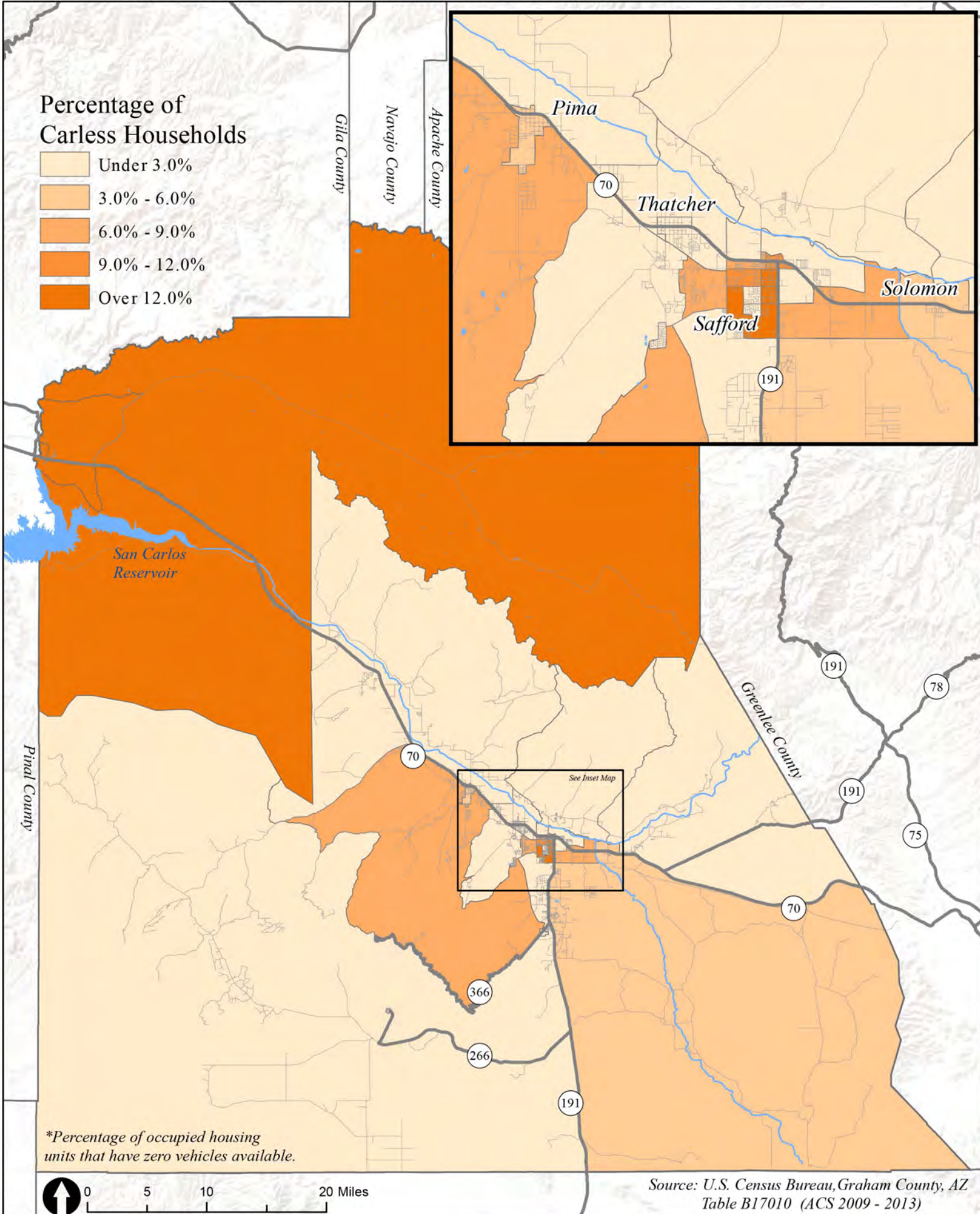
Graham County, AZ

Est. Percentage of Senior Population per Block Group (2009-2013)*



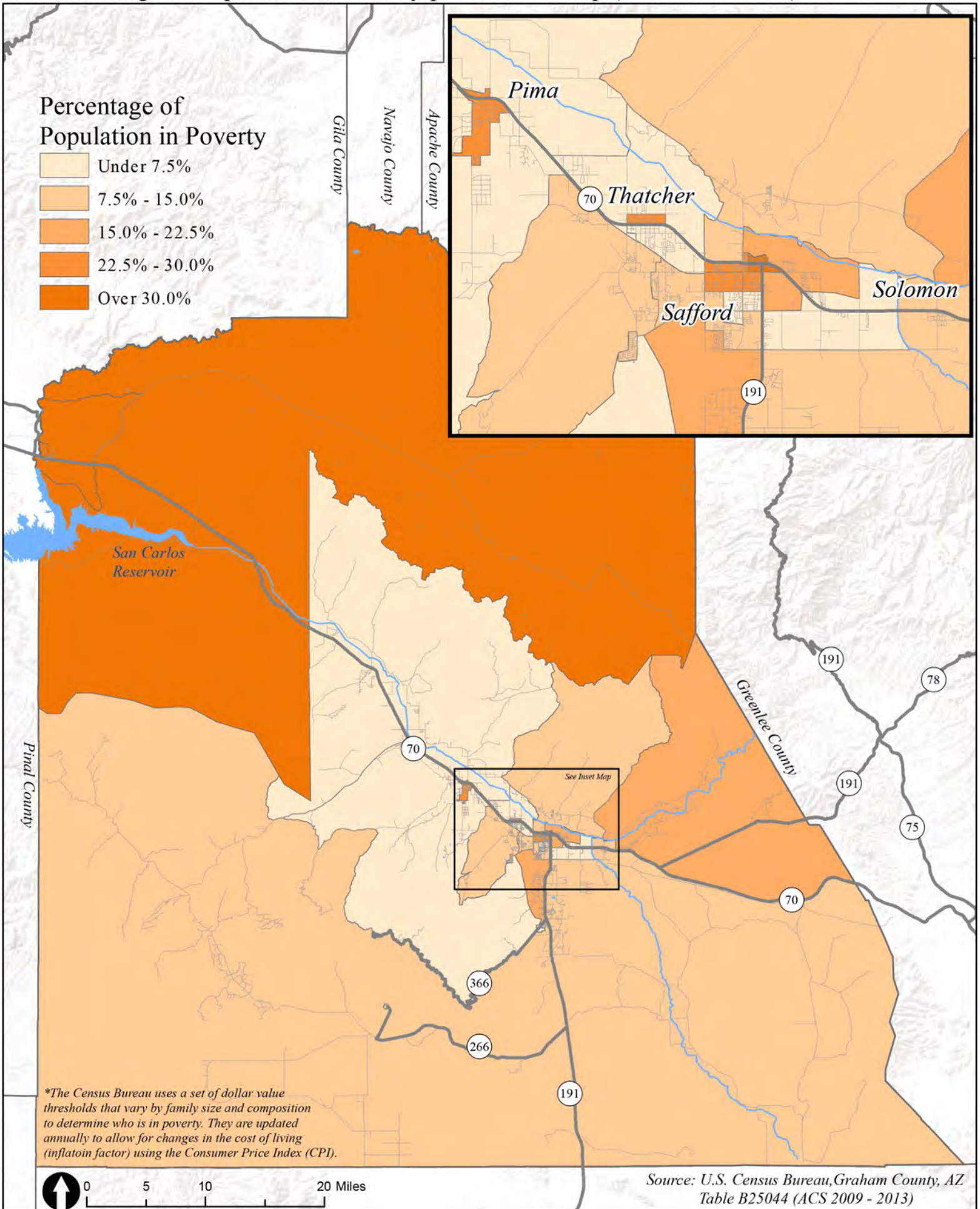
Graham County, AZ

Est. Percentage of Carless Households per Block Group (ACS 2009-2013)*



Graham County, AZ

Est. Percentage of Population in Poverty per Block Group (ACS 2009-2013)*



*The Census Bureau uses a set of dollar value thresholds that vary by family size and composition to determine who is in poverty. They are updated annually to allow for changes in the cost of living (inflation factor) using the Consumer Price Index (CPI).

Estimation of Transportation Need from National Research Efforts.

Estimating the need for public transportation is more of an art than a science. There are many factors that go into translating predictive transportation need into actual transit ridership including the service convenience, reliability, and affordability of fares. However, there has been good national research on rural public transit demand that can help to guide a reasonable range of expected ridership.

The Transit Cooperative Research Program is an arm of the National Academy of Sciences and serves as one of the principal means by which the transit industry can develop innovative near-term solutions to meet demands placed on it. One of the research efforts that was funded was *TCRP Report 161: Methods for Forecasting Demand and Quantifying Need for Rural Public Transportation: Final Workbook*. The Workbook is an excel spreadsheet tool that provides step-by-step procedures for quantifying the need for public transportation services and the demand that is likely to be generated if passenger transportation services are provided. The demand estimation tool is based on data from the Rural National Transit Database (2006, 2009, and 2010), the National Household Transportation Survey (2001 and 2009) and the American Community Survey.

The tool provides a realistic range of transportation need based on the number of persons living below poverty, the number of households without access to an automobile, and the trips per household per day for low income families based on national research. The area defined for the analysis was from Pima to Solomon, including about 5,000 persons in the unincorporated area of Graham County.

The following is a table that provides the output from the TCRP Report #161 Rural Transit Demand Estimation Tool:

TCRP Report 161 Variable	Output
Total Households without Access to Auto	1,070
Arizona Trips Per Capita On Transit	0.8
Total Transit Need, Daily One Way Trip	860
Annual One-Way Transit Trips	256,800

The estimation of transit need from Pima to Solomon is estimated at 256,800 annual trips. This is the estimated need that could be served by a combination of human service agency transportation and public transportation services. As discussed above, how much of this need can be served by public transportation is dependent on a number of factors. The projection of actual public transportation ridership is shown later at the end of Chapter 6.

Summary Conclusion on Transportation Needs

Based on both the qualitative and quantitative input, there is a need for additional public transportation in Graham County. The qualitative input from key stakeholders was unanimous on the need for public transportation. Based on national research the total need for transit, including both public transportation and human service agency transportation is approximately 257,000 annual trips.

The Technical Advisory Committee provided direction on May 7, 2015 that there was a need for public transportation. The TAC asked for additional quantitative documentation of the need for public transportation and this is documented above.

At the July 7, 2015 TAC meeting, TAC reaffirmed in a finding and recommendation that there is a need for local public transportation service between Pima and Solomon, as well as south along Highway 191 to Swift Trail Junction.

The Federal Transit Administration (FTA) provides a funding program to meet the public transportation needs in rural areas. The next chapter provides an overview of the FTA 5311 program for rural public transportation.

5. Rural Public Transit: FTA 5311 Program

Once there are identified transportation needs in rural areas like Graham County, an eligible entity can apply for Federal Transit Administration (FTA) 5311 funding to support a public transportation service. The following are important excerpts from the Arizona Department of Transportation (ADOT) Program Guidebook. The Guidebook is 44 pages and only the key elements relevant to the Graham County Transit Feasibility Study are included below.

Overview

The Multimodal Planning Division (MPD) of the Arizona Department of Transportation (ADOT) administers the Federal Transit Administration (FTA) Formula Grants for Rural Areas Program commonly known as the Section 5311 Program or as the Rural Public Transit Program. This program provides funds for public transportation and intercity bus projects serving rural areas. The purpose of these funds is to address the mobility needs of Arizona's rural population. Section 5311 grants are intended to provide access to employment, education, health care, shopping, and recreation. Funds may be used for public transit services operating: a) within rural communities, b) among rural communities, and c) between rural communities and urbanized areas.

Eligibility

Eligible applicants for Rural Public Transit funds include local public bodies (e.g., counties and municipalities), State agencies, Tribal governments and related Tribal communities and private non-profit agencies.

General Public Service

The transportation services funded under Section 5311 must be open and marketed to the general public. Projects or portions of projects which exclude certain groups of the general public, or are intended to benefit a specific group to the exclusion of others, are **not** eligible for funding. Providers of special needs transportation (e.g., elderly or disabled clients) are eligible to apply if they are a government entity (e.g. City, County, Tribe) and open their transit services to the general public.

Coordination with Existing Services

Section 5311 funds may be used in conjunction with, or to support, services provided under a variety of human service initiatives. Services funded under these initiatives potentially include a large group of economically disadvantaged clientele. Section 5311 Program applicants should work with local Department of Economic Security (DES) representatives to identify unmet transportation needs, investigate opportunities to coordinate service, and leverage funding opportunities available through these programs. Section 5311 Program participants are required to coordinate their services with other transportation providers in their areas, including potential purchase-of-service arrangements.

Pilot Program Option

Concern has been expressed by a number of providers, and other entities, that critical gaps now exist in transit service in their communities and between these locales and their proximate urban centers. Services impacted include critical-purpose trips such as those meeting medical, employment and nutrition needs. Therefore, ADOT will consider pilot projects that demonstrate the viability of transit services that address these needs. In order to increase the opportunity for early-phase success for a particular project, ADOT may elect to modify or waive certain performance and evaluation criteria for pilot projects.

Pilot project applications will be evaluated by the standard Section 5311 criteria and by how the following concerns are addressed in the planning process:

- Area wide scope of plans, documenting demand by user group and/or trip origins and destinations.
- Coordination of planning and articulation of demand among employers, businesses, social service agencies and user groups.
- Consolidation opportunities with social service transportation providers.

Pilot projects must meet all requirements in the Section 5311 program for initial funding. Once beyond pilot status, the transit service must continue to be managed by a local governmental agency if funded by ADOT through the 5311 Program.

Transit Advisory Committee

During the feasibility study process in Graham County, a Technical Advisory Committee has been formed to guide the Graham County Transit Feasibility Study. Obtaining and sustaining community support is an important part of developing and growing an effective rural public transit system. Section 5311 program applicants are responsible for garnering support from a broad number of stakeholders – local governments, local businesses, the medical community, agencies serving seniors and people with disabilities, as well as others. A Transit Advisory Committee (TAC), made up of key stakeholders similar to the current makeup of the Technical Advisory Committee for this study, is required. The TAC's role is to advise the grantee agency on the operation of the system. This includes ensuring that the service responds to changing local needs, commenting on service quality and effectiveness, soliciting community participation, helping the system achieve financial sustainability, and related issues. The TAC meets quarterly to provide ongoing guidance to the FTA 5311 rural program.

Local Financial Support

Sustained local financial support is needed for effective transit systems. The Section 5311 program covers 58% of the subsidy needed to operate transit services, 80% of the cost of administering the service, and 80% of the cost of capital equipment (A higher ratio of Federal funds may be available for capital projects under certain conditions). Local financial support is needed to cover the balance of the expenses.

Typically, local match funding comes from the local sponsoring agency or agencies, usually a local government agency, but other sources may support the transit program. Non-Federal local match

can be in the form of contract revenue, derived as part of purchase-of-service agreements with human service agencies, **only if the funding source is local or state.**

In-kind contributions may be used toward the local match only if the recipient formally documents the value of each non-cash share, and if this value represents a cost that would otherwise be eligible under the project. The net project cost must include the value of any in-kind contributions included in net project cost to the extent it is used as local match.

Cost Reimbursement Basis

All payments made under the Rural Public Transit Program are on a cost reimbursement basis, up to the authorized amounts described in grantee contracts. All expenses incurred during the contract period must be paid in full by the contractor to be eligible for reimbursement by ADOT. Non-compliance with billing schedules may result in delay or denial of reimbursement. ADOT will not consider requests for prepayment, no exceptions.

For vehicle purchases, Graham County has the option of going through the state contract where only the local match is required at the time of the contract. If a local procurement process is utilized, then the vehicle would need to be purchased, and the 80% Federal share would be reimbursed after the purchase.

This is a very important provision to note as the lead agency will need to provide sufficient cash flow in order to provide cost reimbursement.

Fares

FTA 5311 funded transit systems are not required to charge a fare. Applicants may establish a fare based upon its local needs. The farebox and other operating revenue reduce the overall project operating costs eligible for Federal funding.

Purchase of fares by local social service agencies can be a means of providing local contributions.

Project Evaluation Criteria

ADOT's Multimodal Planning Division uses the same evaluation criteria for all projects. However, it is recognized that new systems may not be able to achieve the same service levels as systems that have been in place for several years. The ADOT MPD expects new systems to begin with a firm foundation and to steadily improve over the first few years of operations.

The evaluation criteria address five specific areas:

1. Appropriateness and Effectiveness of Service
2. Financial and Managerial Capability
3. Local Commitment to Transit and Accessibility
4. Safety and Training

5. Coordination

Applicants from existing 5311 programs are evaluated based on current system performance, financial management, and contract deliverables. New applicants are evaluated on estimated performance and demonstrated financial management capabilities.

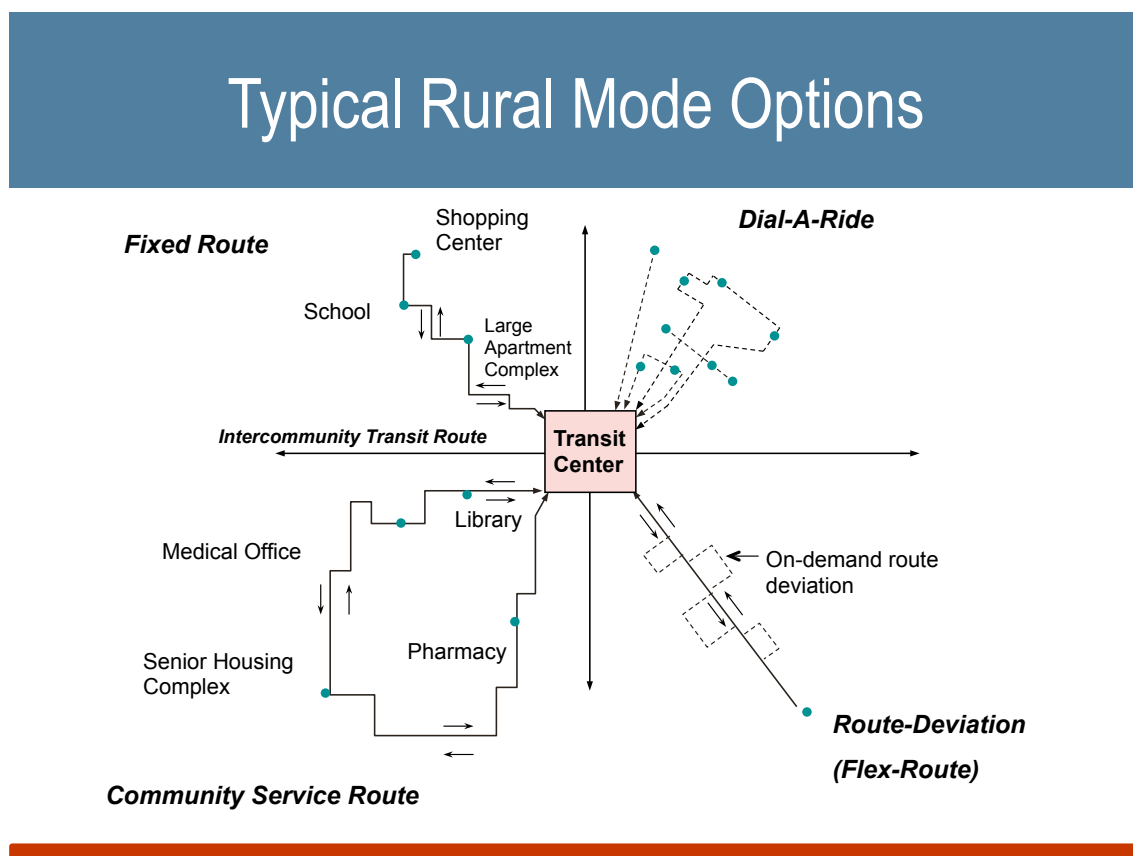
The Graham County Feasibility Study Phase I effort will evaluate the appropriateness or the need for the service, the local commitment to transit and accessibility, and whether there is commitment to provide adequate financial and managerial capability.

6. Service Options

There are a number of service delivery options with potential to meet the public transportation needs in Graham County. This section will provide a conceptual overview of these options to help decision-makers identify the type of public transportation most desirable for Graham County. If there is a determination that public transportation is feasible, Phase II will develop a detailed service plan, including specific bus routing, schedule, and bus stop locations.

Overview of Service Modes

The figure below provides an overview of the typical types of rural public transportation service.



There are four primary modes of public transportation service as illustrated above.

1. Fixed route with fixed schedule. The bus has an established route and schedule of when the bus stops at each location. In rural transit systems, there are typically local fixed routes that serve the needs of specific communities, and intercity routes connecting cities and towns in a region.

The San Carlos Apache Public Transit service between Globe and Safford is an example of an intercity fixed route and fixed schedule service that is available to the general public. The intercity transit needs between Globe and Safford are being met and the San Carlos Apache Tribe administrators are taking steps to make it more inviting for the general public to utilize, as well as providing better information and signage at the stops. The need for local transit service among Pima, Thatcher, Safford and Solomon is not being met and a fixed route, fixed schedule service is a viable option to consider.

2. Community service route. A regular fixed route bus drops off and picks up passengers at curbside of the street where a bus stop sign is located. A community service route is a variation of a fixed route that picks up and drops off passengers at or near the front door of the activity center it is serving. This makes the service more attractive to seniors and persons with disabilities who may have mobility limitations, as well as to families with small children or persons carrying groceries. There was consensus at the May 7, 2015 TAC meeting for a preference of the community service route.
3. Dial-A-Ride service with advanced reservation from origin to destination. Dial-A-Ride service typically provides one of three levels of service: curb-to-curb (passengers dropped off at the curb at both the origin and destination end), door-to-door (driver escorts passenger from the door of the origin to the front door of the destination), or door through door (driver escorts passenger from inside the origin building to the dial-a-ride bus and escorts the passenger inside the door of the destination).

The SEACAP Dial-A-Ride service provides door through door transportation for seniors and disabled individuals throughout Graham County. The general public can utilize the service on a space available basis. Overall, there is not sufficient capacity or funding to serve all of the need for Dial-A-Ride service at present.

Easter Seals Blake Foundation serves the needs of the developmentally disabled population with Dial-A-Ride service for their clients. They regularly coordinate with SEACAP to provide back-up assistance when the SEACAP service is not available.

4. Flex-route, or similar hybrid of fixed route and dial-a-ride services. There are a number of hybrid service designs that combine fixed route and dial-a-ride elements. The most common hybrid is a flex route service where the driver serves every stop on a schedule but deviates off the route (typically up to $\frac{3}{4}$ mile) to pick up a passenger with an advanced reservation and then returns to the next scheduled stop. Another hybrid that was the recommended service type in the 2007 Graham County Transit Feasibility Study is a checkpoint dial-a-ride. In this type of service, major stops are served on a regular schedule, but the bus picks up passengers at other locations and brings them to and returns them from the "checkpoint" stops.

The Americans with Disabilities Act requires that all fixed route services (with some exemptions for commuter services) provide complementary ADA Paratransit service. Service criteria provide guidelines on the coverage, hours of operation and fares for ADA Paratransit

service. The ADA Paratransit requirement can be satisfied through the provision of dedicated Dial-a-Ride service or a hybrid service such as a flex-route.

5. Taxi services. A fifth option used by many public agencies is to make taxis a part of their public transportation system through a user-side subsidy program where the public agency subsidizes a portion of a taxi trip up to a limited dollar value. Riders who are eligible for these subsidies are generally seniors and persons with disabilities. A 50% subsidy is typical up to a maximum of \$20 (user pays \$10), but there are many variations based on local conditions. There is often a trip cap per individual on a monthly or quarterly basis, so that subsidy dollars are available to a larger number of individuals. This allows seniors and disabled individuals to have a mobility option when public transportation services are not available. Some programs utilize public monies to purchase an accessible taxi for wheelchair users and lease it to the taxi company. The Pima to Solomon area has two taxi or limousine service providers, but the current operations are all private with no public subsidy provided.

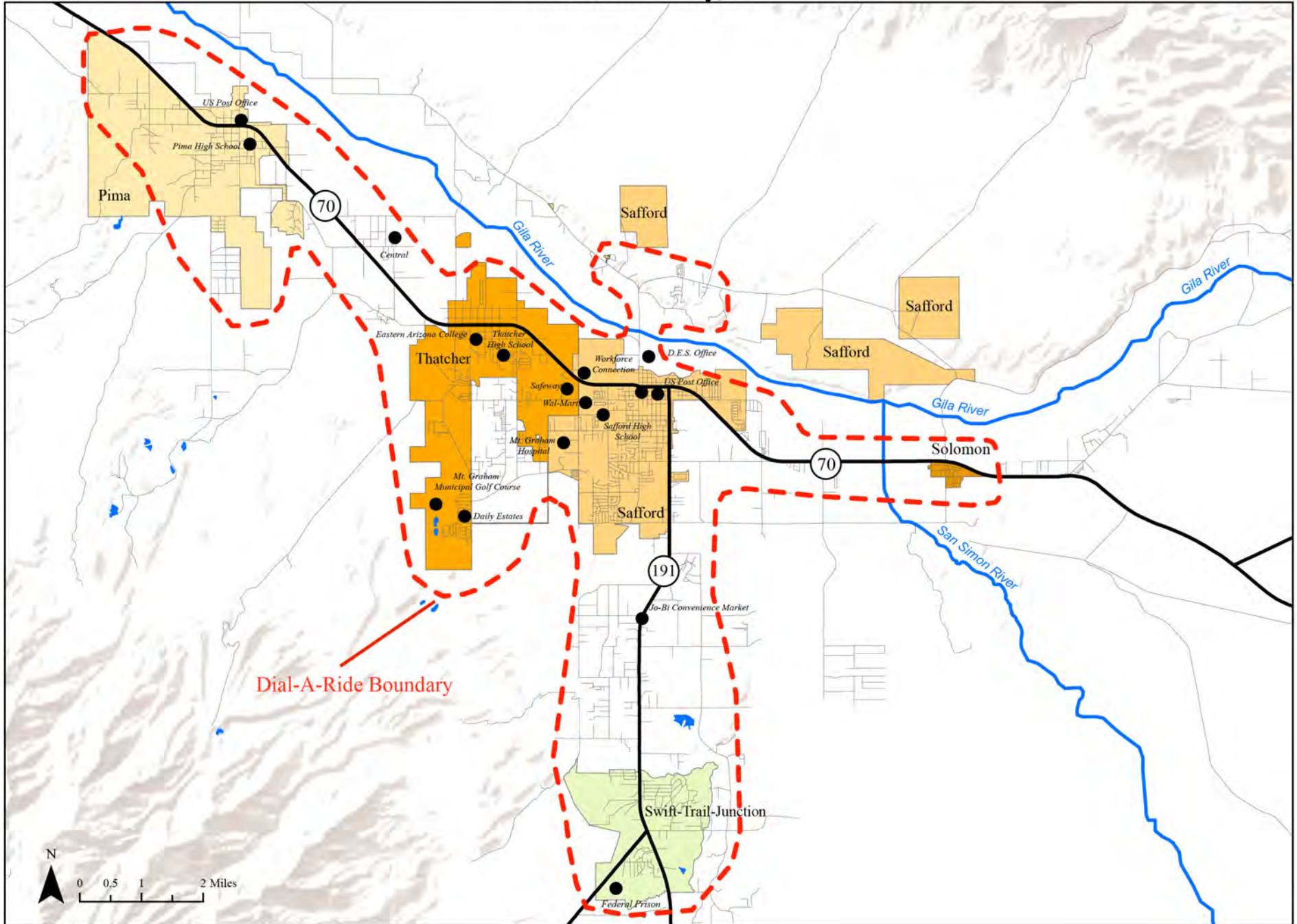
Service Options for Graham County

Following are five service options which offer the potential to meet transportation needs within Graham County.

1. Expand the Dial-A-Ride capability to make it available to the general public. Under this alternative, funding for one additional bus and operating expenses would be coordinated with the existing Dial-A-Ride service to expand the service to the general public utilizing FTA 5311 monies. The general public Dial-A-Ride would be coordinated with the SEACAP Dial-A-Ride that is primarily limited to seniors and persons with disabilities. In this alternative, the governing entity would enter into a MOU with SEACAP to provide for this purpose, making the \$30,000 that SEACAP receives in Area Agency on Aging funding eligible for in-kind match. Under this alternative, it would make sense to have SEACAP operate both their existing service and the general public Dial-A-Ride with two buses. A map of the general public Dial-A-Ride boundaries is shown on the following page. This is a general concept map and a more refined map would be developed in the second phase of the Feasibility study. The General Public Dial-A-Ride service would operate Monday to Friday from 7:00 am to 6:00 pm. Advanced reservation trips made the day before would receive priority over same day requests.
2. Expanded Dial-a-Ride Plus Taxi Subsidy. The second service option would be to expand Dial-a-Ride as in option #1 above, plus offer a user-side taxi subsidy program for trips that start before 7:00 am or after 6:00 pm on weekdays and weekends and holidays. The details of a user-side subsidy program would be developed in the second phase of the project, but would likely be a 50% subsidy of the standard taxi fare. This option would enable the general public without a car living inside the service boundary area (shown on the next page) to have a mobility option.

Dial-A-Ride Boundary Concept

Graham County, AZ



3. Checkpoint Dial-a-Ride. The third option is to implement a two bus checkpoint dial-a-ride service as was recommended in the 2007 Graham County Transit Feasibility Study. Service would be provided on a regular schedule to key destinations such as Walmart, Safeway, and Mt. Graham Regional Center. However, a prior day advanced reservation would be required for a pick-up at home or other location which is not a checkpoint. Under this alternative, SEACAP and the Blake Foundation would continue to provide specialized transportation for their clients, with SEACAP providing door to door service for the elderly and disabled populations.

4. Local flex route service that is open to the general public. Under this option, the bus would operate on an established route, but would deviate up to $\frac{3}{4}$ miles from the route to pick up passengers. Sufficient recovery time would be built into the schedule to allow the bus to remain on time at scheduled stops. Route deviation requests would be required one day in advance and would have a higher fare than regular fixed route service.

5. Community service route plus dial-a-ride service. There was general input among stakeholders and focus group participants that there is a need for both local fixed route service between Pima and Solomon, but also the need for dial-a-ride service that serves outlying areas beyond the reach of available fixed route service and individuals who are unable to utilize fixed route service. At the May 7, 2015 TAC meeting, there was a consensus for a combination of a community service route and general public Dial-A-Ride service in addition to the Dial-A-Ride service currently provided by SEACAP primarily to seniors and persons with disabilities. This option addresses that consensus.

Under this alternative, the first phase would be to have one fixed route bus on a fixed schedule that would serve Pima, Thatcher, Safford, Solomon, and Jobi's market along Highway 191. The one bus fixed route would serve all stops along the Highway 70 corridor and in Thatcher and Safford on every trip, and would alternate serving Daily Estates in Thatcher, Solomon and Jobi's market every third run. Assuming nine runs a day, Daily Estates, Solomon and Jobi's Market would have local fixed route service three times in each direction each day and Thatcher and Solomon stops would be served in both directions nine times a day. Pima would continue to be served by three runs per day on the San Carlos Apache Tribe service and would potentially be served by three to six additional trips on this service.

The community service route would combine curbside stops with stops within major activity centers to limit the amount of walking required to reach key destinations. A generalized concept map of the community service route is shown on the map on the following page.

The general public Dial-A-Ride would have the same parameters as Option #1, including the partnership with SEACAP.

For planning and budgeting purposes, the service would operate on weekdays and not on major holidays. One bus would be a fixed route bus and a second bus would be added to the SEACAP Dial-a-Ride service in order to provide more capacity and coverage. The hours of operation would be 11 hours per day from 7:00 am to 6:00 pm.

Following is a preliminary list of fixed route stops indicating how often the community service route would serve each stop. This is currently just a conceptual framework and would be refined and adjusted based on additional input during Phase II of the Feasibility Study. The stop list, turn by turn directions for the routing, and detailed schedule would be developed in detail in Phase II if public transportation is found to be feasible in Graham County.

Pima: (3-6 times daily in each direction)

- Taylor Freeze
- Pima Post Office
- Pima High School
- Neighborhood and apartment complex stops

Central (3-6 times daily in each direction)

- Stop location to be determined

Thatcher: (7-9 times daily in each direction)

- Eastern Arizona College
- Thatcher High School
- Safeway
- Basha's Grocery Store
- Neighborhood and apartment complex stops

Thatcher (3 times daily in each direction)

- Daily Estates

Safford (7-9 times daily in each direction)

- Walmart
- Safford High School
- Mt. Graham Regional Medical Center
- Medical offices on 20th St.
- Downtown Safford Main St.
- Courthouse
- Post Office
- Neighborhood and apartment complex stops

Solomon (3 times daily in each direction)

191 Corridor (3 times daily in each direction)

- Neighborhood and apartment complex stops
- Jo-Bi Convenience market

The map on the following page shows both the conceptual Dial-A-Ride boundary and the conceptual community service route. A refined Dial-A-Ride and detailed route, schedule and bus stops would be developed in Phase II of Graham County Feasibility Study. This map graphically displays the May 7, 2015 TAC meeting consensus for a combination of a community service route and general public Dial-A-Ride service in addition to the Dial-A-Ride service currently provided by SEACAP primarily to seniors and persons with disabilities.

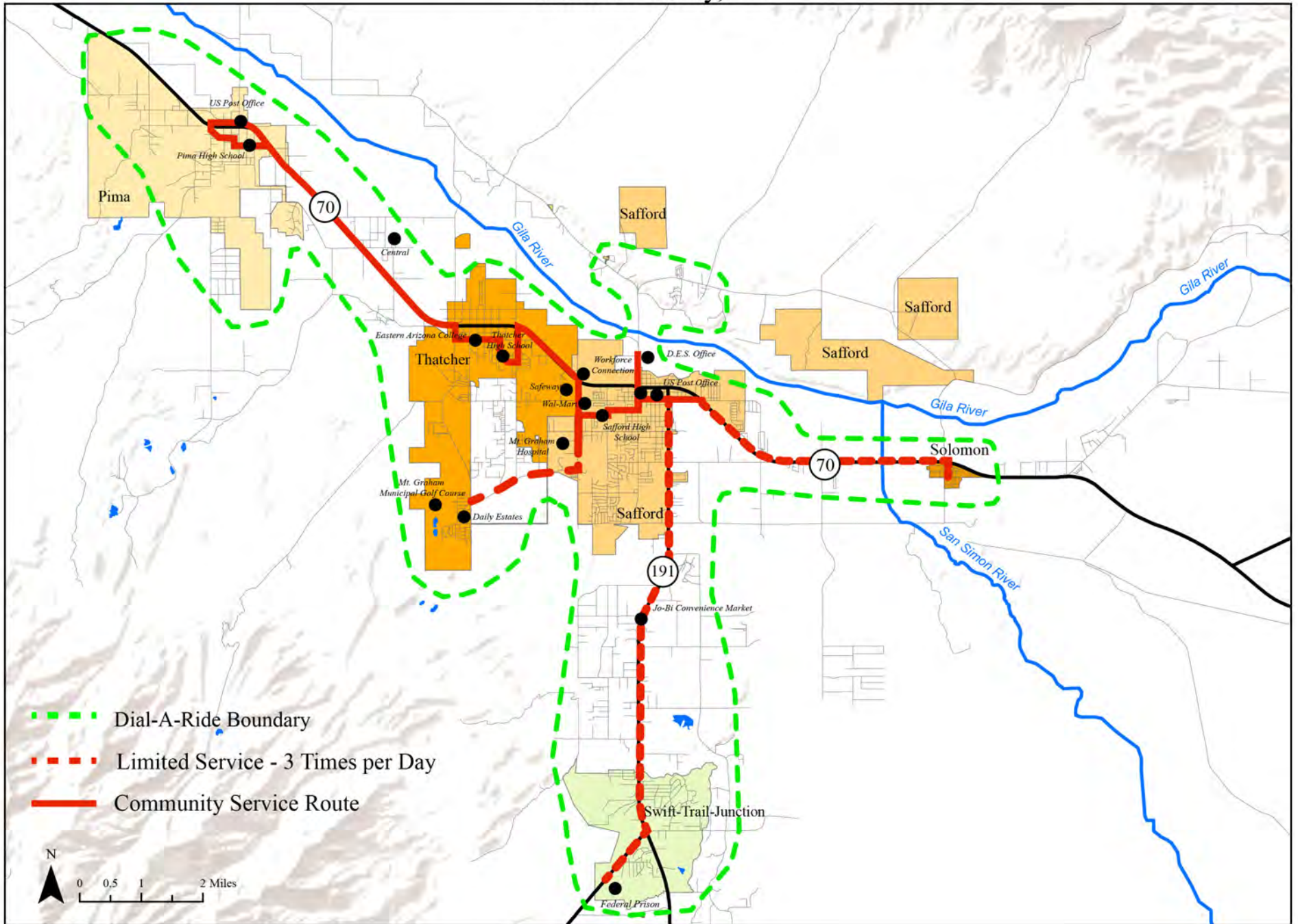
Estimated Ridership Demand

The above service description of a local public transportation service between Pima and Solomon, starting with two buses operating 11 hours per day from 7:00 am to 6:00 pm, 253 weekdays a year generates a total of 5,566 annual vehicle service hours and 83,490 annual vehicle service miles. Ridership demand has been estimated using the TCRP Report 161 demand estimation workbook methodology for a peer analysis of per capita ridership in FY 2012/13 that includes Bisbee, Benson, and Douglas.

The average per capita ridership for these three areas is 5.6 annual transit trips per capita, with a median of 4.8 transit trips per capita. Based on the TCRP Report 161 methodology for 5,566 vehicle service hours of public transportation, the ridership for a two bus public transportation system would be in the range of 21,700 to 45,641 annual transit trips. The best estimate is approximately 31,000 annual trips, likely at the end of the second full year of implementation. As a benchmark in FY 2012/13, Benson had an estimated 20,000 annual trips, and the more fully developed Douglas transit service has 51,572 annual transit trips in FY 2012/13 (with a supply of 10,804 vehicle service hours). Ridership on Douglas Transit on the route serving Cochise College now exceeds 1,000 passengers per month during peak months, and has doubled ridership since 2013.

A five-year goal of 45,000 to 50,000 annual transit trips would seem to be a reasonable goal. The growth in vehicle service hours necessary to achieve this goal is captured in the growth/minimized cost financial scenario discussed in Chapter 8, Financial Feasibility.

Fixed Route and Dial-A-Ride Boundary Concept Graham County, AZ



7. Governance Structure

This section of the working paper provides information on the options for a governance structure and helps to answer one of the key feasibility study questions:

Does a viable governance structure exist or can one be created to govern, manage and comply with federal funding regulations?

In order to address this question, this chapter first starts with the governance and management duties of the governing body. The second section is an overview of the available organizational options that are typically utilized in Arizona to govern and manage public transportation services, with Arizona examples provided. The final section provides input on the governance structure discussed during the public participation process.

Overview of Governance and Management Duties

All public transportation systems have the following functions:

- **Scheduling, Dispatch and Operations:** Assignment and scheduling of drivers and vehicles to routes; scheduling, dispatching and assigning of passengers to demand responsive routes; daily operations of buses.
- **Maintenance:** preventive maintenance, vehicle repairs, parts management, and facility maintenance.
- **Personnel Management and Training:** recruitment, training and safety, benefits, and discipline.
- **Planning:** strategic planning, public participation, short range planning, and passenger surveys.
- **Marketing and Public Information:** passenger communication, promotion, advertising, communication with other agencies.
- **General Management:** Correspondence with governing board, organizational structure and reporting, administrative oversight, and compliance with Arizona and Federal regulations.
- **Financial Administration:** Budgeting, management information, grant administration risk management, contract management, accounting, procurement, revenue collection, payroll.

Governance and management of these functions are handled in numerous ways throughout the United States and Arizona in particular.

The governing body for public entities are elected officials such as members of the Board of Supervisors or City Council. They are responsible for approving grant applications, approving the service plan and fares, adopting an annual budget, and ensuring that the Transit Manager has the

policies and procedures in place to ensure that safe, reliable and compliant public transportation services are being provided. Receiving Federal funding comes with a number of requirements and audit provisions. While these will be detailed further in Phase II of the Feasibility Study, the Transit Manager must have the knowledge and experience to administer the requirements that come along with Federal funding. Please note that two key criteria for FTA 5311 funding are: 1) Financial and managerial capability and 2) Safety and training capabilities.

An overview of governance options are presented below. An important component of financial capability is the ability to handle the cash flow of the cost reimbursement nature of FTA 5311 funding. All expenses incurred during the contract period must be paid in full by the governing agency to be eligible for reimbursement by ADOT.

Finally, regardless of the governance option selected for Graham County, the Transit Manager must be someone who can build and sustain partnerships among the public and human service agencies in Graham County. This will be critically important in not only providing the necessary bundling of financial resources necessary for public transportation service, but also building and sustaining the political support to sustain the public service for the transit dependent populations in the community: older adults, disabled, youth, and low income individuals.

Overview of Governance Options

There are essentially three primary governance options:

1. Governance by an existing public entity such as Graham County or the City of Safford.
2. Governance by an existing private non-profit.
3. Governance by a shared governance structure, an Intergovernmental Public Transportation Authority (IPTA).

The overview of the options below is generalized in this first phase of the feasibility study. If public transportation is found to be feasible, the second phase of the feasibility study, will provide significantly more detail on how the governance would work for the preferred option.

Governance by An Existing Public Entity

In this governance alternative, an existing City or Graham County would take responsibility for the public transportation function. This would likely be Graham County or the City of Safford.

Under this governance alternative, public transportation would be added as a program of the City of Safford or Graham County. Due to bus maintenance requirements, it is not unusual for public transportation to be a program of the Public Works or Maintenance Departments. Other typical departments are Community Development or Planning. In this alternative, public transportation would become a distinct budgeted program of the designated department.

Like any other public program, the Board of Supervisors would be the governing body in the case of Graham County, or the City Council in the case of the City of Safford. The governing body would

approve the public transportation budget, authorize approval of necessary grant applications, and provide oversight to Federal and State compliance issues as well as required reporting.

The day-to-day management of the public transportation function would be an employee of the designated department. There are two models for public transportation service delivery. The public transportation service can be directly operated which would mean the public entity would hire the drivers, provide maintenance of the buses, and provide all of the accounting and financial accounting of a public service. The second typical model is to contract the operations and maintenance to a private or non-profit vendor in a procurement process.

In the directly operated model, the Transit Manager is typically responsible for planning, budgeting, grant writing and compliance. The Transit Manager would also typically hire, train, and supervise the drivers. The Maintenance Department would provide maintenance of the buses. Financial accounting and procurement is typically handled by the Finance Department. In a directly operated system, the public entity owns the buses.

In the outsourcing model, the Transit Manager is responsible for planning, contract administration, budgeting, grant writing and compliance. A third party vendor is typically selected through a competitive procurement process to provide operations (drivers and dispatcher) and/or maintenance (mechanics and parts). In the outsourcing model, the contract with a third party vendor can specify the provision of buses for the contract period or the public entity can own the buses and allow the contract vendor to utilize the buses for operations. In the long-term, it is in the best interest of the governing agency to own and ensure proper maintenance of the buses utilized in the transit operations.

Arizona Examples

The City of Douglas has established a separate Transit Department, directly operates its service and provides all the necessary drivers and maintenance personnel to operate and maintain the public transportation service. The City Council is the governing body.

The City of Bisbee Transit Program is an example of a public entity governing the public transportation service, but who contracts with a third party to operate the service. The City of Bisbee has contracted with Catholic Community Services to run the day to day operations of the Bisbee Transit Program. The program uses 5311 funds for its deviated flex route service.

Governance by an Existing Non-Profit

FTA 5311 guidelines allow for a non-profit agency to be the governing agency for administration of public transportation services. In this governance model, an existing agency that is currently providing transportation would be the public transportation governing and management agency responsible for public transportation services. SEACAP or the Blake Foundation are the most likely candidates in Graham County to be the governing agency.

There are a couple of primary constraints for a non-profit to take on the responsibility of governing a public transportation system. The first primary barrier is the cost reimbursement requirements of FTA 5311 funding. Most non-profit agencies do not have the necessary cash flow to accommodate the significant cash requirements of a public transportation system. A second constraint is the lack of Board representation from the various jurisdictions in Graham County.

Intergovernmental Public Transportation Authority

In Arizona, shared governance of public transportation is authorized by Arizona law, and the type of governing agency depends on the size of the County. In Arizona, counties with less than 200,000 are organized as an Intergovernmental Public Transportation Authority.

Appendix A provides the regulatory details for the formaton and rights of an intergovernmental public transportation authority. The provisions are summarized below.

The members of an intergovernmental public transportation authority can include one or more county entities, incorporated cities or towns, community college districts, and any Indian nation that has a boundary within a county in which an authority is established.

Any combination of above potential members can petition the County Board of Supervisors to establish an intergovernmental public transportation authority consisting of the combined areas in the counties. The County Board of Supervisors holds a public hearing on the petition to determine public support for the authority and whether establishing the authority would be in the public interest. The County Board of Supervisors approves a resolution that includes the boundaries of the authority. Additional members can be added over time by the same petitioning process.

The Intergovernmental Public Transportation Authority gives the members all the rights and immunities of municipal corporations granted by the Arizona constitution and statutes, including the immunity of its property from taxation.

Arizona Examples of Intergovernmental Public Transportation Authority

The Yuma County Intergovernmental Public Transportation Authority (YCIPTA) is an IPTA that was formed on December 13, 2010 by the Yuma County Board of Supervisors to administer, plan, operate and maintain public transit services throughout Yuma County, including within the political jurisdictional boundaries of the Cities of Yuma, San Luis, Somerton, Town of Wellton and the unincorporated Yuma County areas.

The initial members of YCIPTA were the Town of Welton, City of Somerton, City of San Luis, City of Yuma, Yuma County and Northern Arizona University. Later Arizona Western College and Cocopah Indian Tribe joined in 2011, and Quechan Indian Tribe joined in 2012.

Yuma County Intergovernmental Public Transportation Authority (YCIPTA) provides Yuma County Area Transit (YCAT) fixed route, vanpool and YCAT On Call demand responsive bus service throughout southwestern Yuma County including the cities of Yuma, San Luis, Somerton, Town of Wellton, Cocopah Indian Reservation and unincorporated communities of Yuma County, including Gadsden, Fortuna Foothills and Ligurta. YCAT also provides service into Winterhaven and El Centro, CA and on the Quechan/Fort Yuma Indian Reservation.

In 2006, the Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA) was formed to provide a regional approach to transit in and around the Flagstaff area. NAIPTA is a regional organization including Coconino County, the City of Flagstaff, and Northern Arizona University. NAIPTA operates and maintains Mountain Line/Mountain Link fixed route and Mountain Lift demand response public transportation systems. These systems have been in operation since October, 2001.

Stakeholder Input and Consensus of Technical Advisory Committee

Discussions with representatives from the Town of Pima, Town of Thatcher, City of Safford, and Graham County in general felt that the public transportation service, “needs to be combined.” in the words of one elected official. The concept of shared funding and governance was a common theme among most stakeholder interviews. The prospect of an Intergovernmental Public Transportation Authority had the best chance to survive over the long-term according to one key stakeholder.

There were a few stakeholders who felt that the County was the, “natural governmental agency.” in the words of another elected official. The County has the regional perspective needed to make a public transportation operation work.

At the May 7, 2015 Technical Advisory Committee meeting, there was general consensus to move forward with an Intergovernmental Public Transportation Authority. This type of governing entity in the opinion of most TAC members has the best chance of being a viable governance structure to govern, manage and comply with federal funding regulations for a Graham County public transportation service.

8. Financial Feasibility

This section is designed to provide input on two key questions posed at the beginning of this working paper:

- Does sufficient local or other financial support exist to provide necessary matching funds for federal funding to financially sustain transit services over time?
- Is there the potential to leverage existing funding for transportation in Graham County, and coordinate and add value to existing social service agency transportation services with a public transit service?

It is important to note that the budget information provided here are generalized budget estimates in order to provide decision-makers a reasonable range of costs and needed local matching funds over a five-year period. The information is intended to assist potential members and partners of the Intergovernmental Public Transportation Authority to determine whether the financial participation of their agency is something they are willing to potentially commit to over a five-year period. Only a preliminary and non-binding commitment by the governing bodies of the potential partners is required for Phase II of the Feasibility Study. The Towns of Pima and Thatcher, City of Safford, and Graham County governing bodies will be asked to vote on a resolution that says that subject to final operating and capital financial plan, the entity is a willing and able financial partner in providing the necessary financial resources for a local public transportation system in Graham County.

A final more detailed and more specific five-year operations and capital budget would be prepared for final consideration and commitment in Phase II of the Graham County Transit Feasibility Study.

Three Financial Scenarios

Since there are many cost and revenue variables that would need to be addressed in the second phase of the Graham County Transit Feasibility Study, it is best to provide a reasonable range of costs and revenues that would need to be provided. Three financial scenarios are described below which help to bracket the potential actual costs and revenues, including a reasonable range of in-kind and cash contributions that would be required to match available FTA 5311 funding. In order to provide realistic estimates, budget figures for FTA 5311 grants for Bisbee, Benson and Douglas for FY 2012/13 were utilized as comparables for the purpose of providing the reasonable range of costs and revenues needed for a public transportation system in Graham County. The following is a description of the three potential scenarios.

Very Conservative Scenario: This scenario assume very low level in-kind contributions and estimated costs are very conservatively estimated at the high end of the cost ranges. This scenario provides a high end estimate of what would be required for cash contributions by potential members of the Intergovernmental Public Transportation Authority.

Best Estimate Scenario: This scenario is based on known cost information and a moderate level of in-kind contributions. In this scenario, costs are calculated based on the average of actual 2012/13 costs from three Arizona rural agencies and inflated to 2015 dollars.

Growth/Minimized Cost Scenario: In this scenario, the maximum amount of in-kind contributions are assumed, providing the low end estimate of what local match hard cash requirements might be. A low end estimate of potential operating costs is also utilized. This scenario results in the low end range of cash contributions by the potential members of the IPTA.

The assumptions utilized for each scenario are further documented below.

A bundling of financial resources – federal and local - will be required to operate rural public transportation services in Graham County. The necessary costs and revenues are broken into three distinct categories due to different matching requirements and potential funding partners.

- Administrative Costs and Revenues
- Operating Costs and Revenues
- Capital Costs and Revenues

Administrative Costs and Revenues Assumptions

Administrative costs include the salary and fringe benefit costs for the project director, Transit Manager, secretarial services, insurance costs, and facilities to house the administration of the transit program and any office supplies and rental equipment necessary for administration. Administrative costs can be no more than 30% of the budget.

All scenarios assume that a full-time Transit Manager will be required for one-year of start-up to formalize the organizational structure, develop policies and procedures, order buses, develop bus stop shelters and signage, procure buses, and either contract for operations and/or maintenance or directly hire drivers and make maintenance arrangements. The Phase II products will provide guidance on start-up.

Administrative costs for the Transit Manager, office space, administrative oversight and other eligible expenses are estimated to range from \$100,000 to \$140,000 during the first full year of operation, with the best estimate scenario at \$125,000 per year. After the first full year of implementation, it may be possible to reduce the Transit Manager position to a half-time position. That potential is reflected in the growth/minimized cost scenario. Most administrative costs are expected to increase at the rate of inflation.

Administrative revenues are funding sources to cover the cost of administering the public transportation service. FTA 5311 funds will pay 80% of administrative costs with 20% of the administrative revenue coming from local match. Local match can include cash contributions from participating members and in-kind contributions.

In-kind match for administration could be the use of office space from one of the participating entities, secretarial support, and department head oversight of the Transit Manager. It could also include participation by participants in the quarterly TAC meetings.

- The very conservative scenario assumes the only administrative in-kind contribution would be the participation in quarterly TAC meetings.
- The best estimate scenario assumption would add office rental and utilities provided by one of the participating agencies as an in-kind contribution.
- The growth/minimized cost scenario adds administrative overhead, the administrative oversight costs of the Transit Manager as an in-kind contribution.

Below is an illustrative administrative budget for the best estimate scenario for the first full year of public transportation operations.

Illustrative Administration Budget

Direct Salary	
Transit Manager	\$ 48,000
Administrative Assistant	\$ 13,500
Fringe Benefit @36%	\$ 17,280
Space Rental	\$ 6,000
Program Audit	\$ 2,600
Utilities	\$ 2,000
Marketing / Advertising	\$ 4,000
Printing	\$ 2,500
Rental Equipment	\$ 2,700
Accounting and Legal	\$ 6,000
Admin. Supplies	\$ 1,400
Travel/Conference	\$ 3,500
Office Phone/Cell Phone	\$ 1,400
Misc. Direct Expenses	\$ 3,000
Administrative Overhead	\$ 11,000
Total	\$ 124,880

If the above were the actual administration budget for the first full year of operation, the following are potential revenue sources to fund the administrative costs.

Administrative Costs and Revenues	
Total Administrative Cost	\$125,000
FTA 5311 Share (80%)	\$ 100,000
Local Share (20%)	\$ 25,000
Cash	\$ 11,610
In-Kind	\$ 13,390

As discussed earlier, the Phase II more detailed budget estimates will better define the in-kind contributions and actual hard cash contributions for administration.

Operating Costs and Revenues

Operating expenses are considered those costs directly related to system operations. At a minimum, the following items are considered to be operating expenses: fuel, oil, licenses, salaries and fringe benefits for drivers, dispatchers and transit supervisor/operations manager. In small rural systems like the anticipated Graham County service a lead driver often takes on the responsibility of an operations manager.

There are number of important factors that go into determining operating costs and revenues. Of course, the supply of service is a primary determinant, and this is typically measured in vehicle service hours and vehicle service miles provided. A vehicle service hour is when the bus is in revenue service and available for a passenger to board. A two bus public transportation system operating on 253 weekdays a year (excludes major holidays) from 7:00 am to 6:00 pm results in 5,566 vehicle service hours. This assumes one bus is in Dial-A-Ride operation and the second bus is in fixed route operation for a community service route.

- The very conservative scenario assumes that the service supply remains the same over the first four years of operation.
- The best estimate scenario assumes that two buses are in operation, but the hours of operation are expanded to 6:00 am to 7:00 pm and Saturday service is operated from 9:00 am to 5:00 pm starting in the third full year of operation. This is a very typical limited expansion of public transportation services.
- The growth/minimized cost scenario assumes that a third bus is added to the operations in the third full year of operations to improve service frequencies on the community service route. Therefore, the range of vehicle service hours is from 5,566 for baseline service to 10,683 vehicle service hours for the growth/minimized cost scenario. This provides a reasonable range of operating costs over the first five years of public transportation development.

The biggest driver of operating costs are driver wages and benefits. Fully burdened driver wages include direct wages and fringe benefits. A standard measure for comparison is the fully burdened driver wages per vehicle service hour. Total driver paid time includes inspecting the bus, driving to the start of revenue service, meal and other breaks. The median of the three local examples for fully burdened driver wages is \$17.13 per vehicle service hour. This is typical of fully burdened driver costs in more exhaustive peer review of driver wage costs in eight small rural systems in California where the average fully burdened cost per vehicle service hours was \$18.11.

Maintenance costs can be included in operations cost or can be capitalized. The capitalization of operating will be explored in more detail if the project proceeds to Phase II of the feasibility study. For the purposes here, vehicle maintenance is included as an operating cost for direct comparison of scenarios. There are a number options for maintenance including utilizing the fleet maintenance department of one of the participating government entities or contracting with a vendor.

The third major cost item for transit operations is fuel and there have been wide fluctuations in fuel costs for diesel, gasoline, and CNG over the past ten years. For the purposes here to illustrate the

range of costs, the consulting team is utilizing the average fuel cost per vehicle service mile of the three Southeastern Arizona peer examples, updated to 2015 dollars, in the operating cost estimates.

For the three local public transportation examples in Southeast Arizona, the average operations cost per vehicle service hour was \$46 per hour in 2015 dollars, with significant variance of \$35 per hour to \$67 per hour among the three systems.² A review of the cost components revealed that a public transportation system in Graham County should range from \$45 per vehicle service hour, utilized in the growth/minimized cost scenario to \$60 per vehicle service hour for the very conservative scenario. The best estimate is \$53 per vehicle service hour.

The figure below is an illustrative example showing the best estimate scenario for operating cost for the first full year of operations.

Illustrative Operations Budget

Driver Wages	\$ 67,000
Dispatcher Wages	\$ 31,200
Mechanic Wages (PT)	\$ 16,000
Fringe Benefits @41.5%	\$ 47,393
Fuel	\$ 50,211
Parts and lubricants	\$ 9,000
Vehicle Insurance	\$ 16,500
Vehicle Licensing	\$ 1,550
Driver Training/Testing	\$ 5,000
Misc.	\$ 6,000
MOU with SEACAP	\$ 45,000
Total	\$ 294,854

The fringe benefit rate for operations is the average of three public transportation rural services in southeastern Arizona. The best estimate approach assumes coordinated operations with SEACAP. A MOU with SEACAP would slightly expand the SEACAP paratransit services for elderly and disabled transportation. This would enable \$30,000 they are receiving from SEAGO to be utilized as matching funds, therefore reducing the cash local match by participating entities. This will be discussed in more detail under the cost allocation section later in this chapter.

The following is an illustrative example using the best estimate scenario in how costs would be funded over the first four years of operation. Year One would be devoted to handling start-up tasks. The service supply expansion in vehicle service hours is to increase span of coverage and initiate Saturday service would start in the fourth year. Fares are assumed to be low at \$1.00 for the general public and \$0.50 seniors and the disabled, with children riding free. The average fare is conservatively estimated at \$0.55 per passenger.

² Based on 2012/13 FTA 5311 budget spreadsheets for Benson, Bisbee and Douglas provided by ADOT and adjusted to 2015 dollars.

The net operating costs are the total operating costs minus fare revenues. The net operating costs are what are eligible for FTA 5311 reimbursement. The federal share of net operating costs is 58%, representing \$161,138 the first full year of operation, the second year of the five year plan. The local share is 42% or \$116,686..

Operating Costs	Second Year	Third Year	Fourth Year	Fifth Year
Estimated Vehicle Hours	5,566	6,072	7,394	7,394
Total Operating Costs	\$ 294,998	\$ 331,470	\$ 369,866	\$ 380,962
Fare Revenue	\$17,174	\$19,297	\$24,204	\$24,930
Net Operating Costs	\$277,824	\$312,173	\$345,662	\$356,032
FTA 5311 Share (58%)	\$161,138	\$181,060	\$200,484	\$206,499
Local Share (42%)	\$116,686	\$131,113	\$145,178	\$149,533
Cash	\$86,686	\$101,113	\$115,178	\$119,533
In-Kind	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000

With the desirable use of \$30,000 of local match for a coordinated service with SEACAP, the local share cash requirements for operating costs would start at approximately \$87,000 and increase to approximately \$120,000 over four years. The allocation of costs are described in more detail later in this chapter.

The very conservative scenario does not include the SEACAP coordination and this increases the first year cash contribution by local entities for transit operations.

Capital Costs and Revenues

Capital expenses include the acquisition and improvement of public transit equipment and facilities needed for an efficient public transit system. By FTA definition, all capital expenses include facilities or equipment with a useful life of at least one year. Capital expenses generally exceed \$5,000 purchase cost. Capital expenses include buses, vans, radios and communication equipment, vehicle rehabilitation, wheelchair lifts and restraints, engine overhauls and special maintenance tools, operational support such as computer hardware/software and minor construction or rehabilitation of transit facilities. Capital expenses also include bus shelters, and bus stop signage.

The major capital expense for a Graham County transit service will be procurement of three buses. Two buses would be in operation, and one bus would be utilized as a spare, when one of the operating buses needs repairs or preventative maintenance. The fleet characteristics and exact type of vehicle, and the options that should be part of the procurement will be detailed in the second phase of the feasibility study. To provide a reasonable estimate of capital costs, it has been assumed that the average cutaway bus purchased will cost \$80,000. This assumption is utilized in all three scenarios, and 80% of the capital costs are paid for through FTA 5311.

A second major capital expense will be bus shelters. The exact number and type of shelters will be determined in the next phase of the project. For budgeting purpose, a total of \$140,000 in bus shelter and signage is provided for the start-up year and the first year of operation. A basic bus shelter with delivery and installation typically costs an average of \$10,000. Another \$72,000 over the five year period is preliminarily budgeted for site improvements to address ADA accessibility issues.

This is likely a very low figure compared to what may be needed, but it provides a reasonable effort to ensure adequate wheelchair access at key bus stops.

The figure below is an illustrative example of a capital budget over a five year period. This is very preliminary and would be significantly refined in the second phase of the Graham County Transit Feasibility Study.

Capital Costs	First Year	Second Year	Third Year	Fourth Year	Fifth Year
Buses	\$ 240,000				
Bus shelters/access	\$ 110,000	\$ 30,000			
Signage and panels	\$ 30,000	\$ 10,000	\$ 10,300	\$ 10,609	\$ 10,927
Equipment and Other	\$ 45,000	\$ 15,000		\$ 15,000	
Total Capital Costs	\$ 425,000	\$ 55,000	\$ 10,300	\$ 25,609	\$ 10,927
FTA 5311 Share (80%)	\$ 340,000	\$ 44,000	\$ 8,240	\$ 20,487	\$ 8,742
Local Share (20%)	\$ 85,000	\$ 11,000	\$ 2,060	\$ 5,122	\$ 2,185
Cash	\$ 42,500	\$ 5,500	\$ 2,060	\$ 5,122	\$ 2,185
In-Kind	\$ 42,500	\$ 5,500			

The first year is the start up year where three buses would be ordered early in the year and delivered later in the same year. The first year capital cost is estimated at approximately \$425,000 and FTA 5311 would provide revenue to cover 80% of the cost or \$340,000. The 20% local match required is \$85,000. The best estimate scenario assumes that Freeport-McMoRan would fund 50% of the local share and the other partners fund the other \$42,500 in contributions. Freeport-McMoRan has provided very preliminary and non-committal interest in assisting with the start-up development of the public transportation service in Graham County. After the second year, all capital costs are expected to be cash contributions by members of the Intergovernmental Public Transportation Authority.

Best Estimate Scenario Summary

The table on the next page provides a five year summary of expected administrative, operating and capital costs over a five-year period. Under the best estimate scenario, these costs average just over \$500,000, per year over a five-year period. The amount of local share required ranges from \$109,000 to \$179,000 over the five-year period.

Best Estimate Scenario Preliminary Estimate

	First Year	Second Year	Third Year	Fourth Year	Fifth Year
Administrative Costs and Revenues					
Total Administrative Cost	\$ 120,000	\$125,000	\$128,750	\$132,613	\$136,591
FTA 5311 Share (80%)	\$ 96,000	\$ 100,000	\$ 103,000	\$ 106,090	\$ 109,273
Local Share (20%)	\$ 24,000	\$ 25,000	\$ 25,750	\$ 26,523	\$ 27,318
Cash	\$ 11,000	\$ 11,610	\$ 7,958	\$ 7,317	\$ 6,687
In-Kind	\$ 13,000	\$ 13,390	\$ 17,792	\$ 19,205	\$ 20,632
Operating Costs					
		Second Year	Third Year	Fourth Year	Fifth Year
Estimated Vehicle Hours		5,566	6,072	7,394	7,394
Total Operating Costs		\$ 294,998	\$ 331,470	\$ 369,866	\$ 380,962
Fare Revenue		\$17,174	\$19,297	\$24,204	\$24,930
Net Operating Costs		\$277,824	\$312,173	\$345,662	\$356,032
FTA 5311 Share (58%)		\$161,138	\$181,060	\$200,484	\$206,499
Local Share (42%)		\$116,686	\$131,113	\$145,178	\$149,533
Cash		\$86,686	\$101,113	\$115,178	\$119,533
In-Kind		\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
Capital Costs					
	First Year	Second Year	Third Year	Fourth Year	Fifth Year
Buses	\$ 240,000				
Bus shelters/access	\$ 110,000	\$ 30,000			
Signage and panels	\$ 30,000	\$ 10,000	\$ 10,300	\$ 10,609	\$ 10,927
Equipment and Other	\$ 45,000	\$ 15,000		\$ 15,000	
Total Capital Costs	\$ 425,000	\$ 55,000	\$ 10,300	\$ 25,609	\$ 10,927
FTA 5311 Share (80%)	\$ 340,000	\$ 44,000	\$ 8,240	\$ 20,487	\$ 8,742
Local Share (20%)	\$ 85,000	\$ 11,000	\$ 2,060	\$ 5,122	\$ 2,185
Cash	\$ 42,500	\$ 5,500	\$ 2,060	\$ 5,122	\$ 2,185
In-Kind	\$ 42,500	\$ 5,500			
Total Costs	\$ 545,000	\$ 474,998	\$ 470,520	\$ 528,087	\$ 528,480
Total Local Share Required	\$ 109,000	\$ 152,686	\$ 158,923	\$ 176,822	\$ 179,037

Cost Allocation Among Potential Partners

The following discussion is meant to provide elected officials with information on how the local share requirement could be shared among the potential partners of a local public transportation system in Graham County. The information is meant to help stakeholders and elected officials answer one of the critical questions on public transportation feasibility:

Does sufficient local or other financial support exist to provide necessary matching funds for federal funding to financially sustain transit services over time?

At the May 7, 2015 Technical Advisory Committee, there was consensus for using total population as the basis for cost allocation for the Town of Pima, Town of Thatcher, and City of Safford, and Graham County.

A more refined analysis of population by jurisdiction will be evaluated in Phase II of the project. The following is meant to be illustrative based on rough approximations. Graham's County population is estimated to be about 5,000 in the unincorporated areas. The basis for determining the actual population in the unincorporated area would be the population in the unincorporated areas within the Dial-A-Ride boundary as presented earlier in Chapter 6. Eastern Arizona College has approximately 3,500 students (2,000 part-time and 1,500 full time), 420 of whom reside on campus.

	Population	Illustrative Percentage
Safford	9,556	40%
Thatcher	4,848	20%
Graham County	5,000	20%
Pima	2,387	10%
Eastern Arizona College	3,500	10%

The table below has several sections.

- The first section is on service supply, showing the number of buses in operation, the number of spares, and the annual vehicle service hours provided.
- The second section shows the primary share of the major entities, and their total shares of the required local matched based on the illustrative example percentages of population shown above.
- The third section is the in-kind contributions that would be provided. The assumptions utilized for the in-kind contributions are explained immediately after the table.
- The final section is an estimate of local cash share contributions.

The cash contributions required are the total local share minus the in-kind contribution. In the first full year of operation of a local public transportation system, the best estimate scenario projects a need for \$152,686 in total local share. This is projected to include a total of \$48,890 in in-kind and \$103,796 in cash contributions by members of the recommended Intergovernmental Public Transportation Authority (IPTA), based on allocation of cash contribution by population shares. Another \$5,152 is contributed by other social service agency partners in purchasing transit passes for a total of \$108,498 in total cash contributions.

Individual contributions by potential members of the recommended IPTA are shown. For example, Safford would need to contribute \$41,518 in cash the first year of full operation (Year 2) of the public transportation service and this would grow to \$51,362 in the fourth year of operation (year 5), based on best estimate scenario assumptions.

Best Estimate Scenario	First Year	Second Year	Third Year	Fourth Year	Fifth Year
Service Supply					
Number of Buses Peak Operation	Start-up	2 buses, 1 sp.	2 buses, 1 sp.	2 buses, 1 sp.	2 buses 1 sp.
Vehicle Service Hours		5,566	6,072	7,394	7,394
Primary Partner Shares Based on Population					
Safford (40%)	\$ 43,600	\$ 61,074	\$ 63,569	\$ 70,729	\$ 71,615
Graham County (20%)	\$ 21,800	\$ 30,537	\$ 31,785	\$ 35,364	\$ 35,807
Thatcher (20%)	\$ 21,800	\$ 30,537	\$ 31,785	\$ 35,364	\$ 35,807
Pima (10%)	\$ 10,900	\$ 15,269	\$ 15,892	\$ 17,682	\$ 17,904
Eastern Arizona College (10%)	\$ 10,900	\$ 15,269	\$ 15,892	\$ 17,682	\$ 17,904
Total Local Share	\$ 109,000	\$ 152,686	\$ 158,923	\$ 176,822	\$ 179,037
Partner In-Kind Contributions					
SEACAP MOU	\$ 500	\$ 30,515	\$ 30,530	\$ 30,546	\$ 30,563
Safford	\$ 500	\$ 515	\$ 530	\$ 546	\$ 563
Graham County	\$ 8,500	\$ 8,755	\$ 9,018	\$ 9,288	\$ 9,567
Thatcher	\$ 500	\$ 515	\$ 530	\$ 546	\$ 563
Pima	\$ 500	\$ 515	\$ 530	\$ 546	\$ 563
Eastern Arizona College	\$ 500	\$ 515	\$ 530	\$ 546	\$ 563
Freeport-McMoRan Mine	\$ 42,500	\$ 4,000	\$ 2,000	\$ 2,500	\$ 3,000
Other TAC Members	\$ 2,000	\$ 2,060	\$ 2,122	\$ 2,185	\$ 2,251
Other Agency Advertising		\$ 1,500	\$ 2,000	\$ 2,500	\$ 3,000
Total In-Kind	\$ 55,500	\$ 48,890	\$ 47,792	\$ 49,205	\$ 50,632
Partner Cash Shares					
	First Year	Second Year	Third Year	Fourth Year	Fifth Year
Safford	\$ 21,400	\$ 41,518	\$ 44,452	\$ 51,047	\$ 51,362
Graham County	\$ 10,700	\$ 20,759	\$ 22,226	\$ 25,523	\$ 25,681
Thatcher	\$ 10,700	\$ 20,759	\$ 22,226	\$ 25,523	\$ 25,681
Pima	\$ 5,350	\$ 10,380	\$ 11,113	\$ 12,762	\$ 12,841
Eastern Arizona College	\$ 5,350	\$ 10,380	\$ 11,113	\$ 12,762	\$ 12,841
Total Population Based Cash	\$ 53,500	\$ 103,796	\$ 111,131	\$ 127,617	\$ 128,405
Other Agency Pass Purchases		\$ 5,152	\$ 5,789	\$ 7,261	\$ 7,479
Total Cash Contributions	\$ 53,500	\$ 108,948	\$ 116,920	\$ 134,878	\$ 135,884

In-Kind Contribution Assumptions

SEACAP MOU: SEACAP currently receives \$30,000 per year in Area Agency on Aging (AAA) funding from SEAGO, and is assumed to inflate at 3% per year. Staff at SEAGO and Arizona DOT have both confirmed that if the governing body executed a memorandum of understanding with SEACAP to continue to provide Dial-A-Ride service for elderly and disabled individuals in coordination with the public transportation service, the \$30,000 could be utilized as in-kind match. In effect, this substantially reduces the hard cash contributions by the members of the IPTA.

Participation in Transit Advisory Committee meetings: The labor value of participating in quarterly Technical Advisory Committee meetings, and any other meeting regarding the business of public transportation can be utilized as in-kind contribution. It is conservatively estimated at \$500 annually per participant, inflated by 3% annually. The actual value would be more definitely determined in Phase II of the Feasibility Study.

Graham County In-Kind: Assuming an Intergovernmental Public Transportation Authority is the governing agency, it would likely sign an agreement with one of the local partners to house the Transit Manager. The Best Estimate Scenario assumes that Graham County houses the Transit Manager and the annual value of the office space and utilities is conservatively estimated at \$8,000 annually. Again, the value would be more definitively determined in the next phase of the project.

Freeport McMoRan Mine: In stakeholder interviews, Freeport McMoran Mine (Freeport) indicated an interest in providing start-up assistance for a public transportation service and not providing ongoing operating support. The Best Estimate Scenario assumes that Freeport matches dollar for dollar the capital expenses during start-up, which is not completed until Year 2. Therefore, Freeport provides 50% of the capital costs in the start-up year and the first year of operations (year 2), with the governing agency entities providing the other 50% of capital contributions. In addition, it is assumed in the Best Estimate Scenario that Freeport McMoran Mine provides \$1,500 in advertising for the transit system the first full year of operating and increases this by \$500 per year.

Other Advertising Revenue: Advertising is an eligible in-kind expense. Advertising opportunities would exist in providing advertising on the buses, in bus shelters and local radio stations. This would be further investigated in the next phase of the Study, but is conservatively estimated at \$1,500 annually in the first year, and increasing by \$500 per year over the first four years of full operation.

Comparison of Scenarios

The Best Estimate Scenario presented above is based on a series of assumptions documented above. The table below is meant to provide a reasonable bracket of what in-kind contributions might be, with the resulting cash contributions of member agencies. There needs to be a sustained commitment and therefore the total five year commitment is shown in the table, with average local match contribution required by scenario.

Using Safford as an example, the required cash contributions vary based on the scenario and specific assumptions.

- Very Conservative Scenario - the average annual cash contribution would be \$60,391.
- Best Estimate Scenario - the average annual cash contribution would be \$41,956.
- Growth/Minimized Cost Scenario - the more aggressive use of in-kind contributions result in an average annual cash contribution of \$28,968. Under this scenario, Safford's in-kind contribution would average 35,176 and would include providing vehicle maintenance as in-kind service.

	Very Conservative		Best Estimate		Growth, Minimize Cost	
	5-Year Total	Average Annual	5-Year Total	Average Annual	5-Year Total	Average Annual
Partner Shares Based on Pop.						
Safford (40%)	\$ 324,633	\$ 64,927	\$ 310,587	\$ 62,117	\$ 319,886	\$ 63,977
Graham County (20%)	\$ 162,316	\$ 32,463	\$ 155,294	\$ 31,059	\$ 159,943	\$ 31,989
Thatcher (20%)	\$ 162,316	\$ 32,463	\$ 155,294	\$ 31,059	\$ 159,943	\$ 31,989
Pima (10%)	\$ 81,158	\$ 16,232	\$ 77,647	\$ 15,529	\$ 79,971	\$ 15,994
Eastern Arizona College (10%)	\$ 81,158	\$ 16,232	\$ 77,647	\$ 15,529	\$ 79,971	\$ 15,994
Total Local Share	\$ 811,582	\$ 162,316	\$ 776,468	\$ 155,294	\$ 799,715	\$ 159,943
Partner In-Kind Contributions						
SEACAP MOU*	None	None	\$ 122,655	\$ 24,531	\$ 122,655	\$ 24,531
Safford	\$ 2,655	\$ 531	\$ 2,655	\$ 531	\$ 175,878	\$ 35,176
Graham County	\$ 2,655	\$ 531	\$ 45,128	\$ 9,026	\$ 76,982	\$ 15,396
Thatcher	\$ 2,655	\$ 531	\$ 2,655	\$ 531	\$ 2,655	\$ 531
Pima	\$ 2,655	\$ 531	\$ 2,655	\$ 531	\$ 2,655	\$ 531
Eastern Arizona College	\$ 2,655	\$ 531	\$ 2,655	\$ 531	\$ 2,655	\$ 531
Freeport-McMoRan Mine	\$ 30,155	\$ 6,031	\$ 54,000	\$ 10,800	\$ 109,000	\$ 21,800
Other TAC Members	\$ 13,273	\$ 2,655	\$ 10,618	\$ 2,124	\$ 13,273	\$ 2,655
Other Agency Advertising	\$ 5,000	\$ 1,000	\$ 9,000	\$ 1,800	\$ 24,000	\$ 4,800
Total In-Kind	\$ 56,700	\$ 11,340	\$ 252,019	\$ 50,404	\$ 437,612	\$ 87,522
Partner Cash Shares						
Safford	\$ 301,953	\$ 60,391	\$ 209,780	\$ 41,956	\$ 144,841	\$ 28,968
Graham County	\$ 150,976	\$ 30,195	\$ 104,890	\$ 20,978	\$ 72,421	\$ 14,484
Thatcher	\$ 150,976	\$ 30,195	\$ 104,890	\$ 20,978	\$ 72,421	\$ 14,484
Pima	\$ 75,488	\$ 15,098	\$ 52,445	\$ 10,489	\$ 36,210	\$ 7,242
Eastern Arizona College	\$ 75,488	\$ 15,098	\$ 52,445	\$ 10,489	\$ 36,210	\$ 7,242
Total Population Based Cash	\$ 754,882	\$ 150,976	\$ 524,450	\$ 104,890	\$ 362,103	\$ 72,421
Other Agency Pass Purchases	\$ 9,406	\$ 1,881	\$ 25,681	\$ 5,136	\$ 65,842	\$ 13,168
Total Cash Contributions	\$ 764,288	\$ 152,858	\$ 550,131	\$ 110,026	\$ 427,945	\$ 85,589

* There is no SEACAP MOU in the Very Conservative Scenario. First year is start-up and no in-kind is accrued.

Summary of Cost and Revenue Estimates

The analysis above, utilizing three scenarios, provides a realistic range of the cash contributions that would be required by members of the IPTA.

- The best estimate is based on the assumptions that the consulting team feels are most likely and realistic based on experience elsewhere.
- The growth/minimized costs scenario maximizes the use of in-kind contributions and has the lowest operating cost assumptions. It provides what is likely the low end of what would be required in hard cash contributions on an annual basis.
- The very conservative scenario utilizes the high end of what operating costs might be and only assumes a minimal use of in-kind contributions.

Each potential member of the IPTA would need to answer the question:

Is my jurisdiction or college willing to provide financial support to meet local match requirements for federal funding to financially sustain local public transportation services over the next five years?

It is important to note that at this stage, participants are not being asked for a firm commitment, but rather for a pledge to the Arizona Department of Transportation that 1) yes, our jurisdiction would like to proceed to the second phase of the study for a more refined and detailed operations and capital financial plan and 2) that when the final financial plan is completed and comes back for formal adoption, that my jurisdiction is a willing and financially able partner based on the range of potential financial commitments described in the table above.

Of course, the response can come back with yes, proceed with Phase II of the study, but our financial participation comes with specified conditions on financial participation based on the potential member's internal analysis of what is financially feasible.

9. Benefits and Costs of Public Transportation

Chapter 8 provided significant detail on the estimated financial investment of local partners in public transportation. This chapter utilizes national research efforts to help provide a framework for understanding the benefits of public transportation. There has been a significant amount of economic analysis research on public transportation efforts in rural communities. This chapter reports on the findings of the national research and applies them to Graham County.

For the national research, the chapter relies primarily on the economic analysis conducted in two seminal national research efforts conducted for the Transit Cooperative Research Program. The two research efforts were:

1. TCRP Report 34 *Assessment of the Economic Impacts of Rural Public Transportation*, conducted by Ecosometrics. The objectives of this research and the report findings provide information that identifies and quantifies the economic impacts of rural public transportation in the United States on both a local and national level. The report also develops and presents a practical economic impact methodology for planning and designing rural public transportation to maximize economic benefits. The methodology and lessons learned are applied to Graham County.

2. TCRP Report 49 *Using Public Transportation to Reduce the Economic, Social and Human Costs of Personal Immobility* conducted by Crain & Associates. The Project Manager for the Graham County Transit Feasibility Study, Cliff Chambers, was also the Project Manager for this nationwide research project. In this research, a method was developed to define and measure the economic, social and human costs of immobility. Eleven case studies were selected and economic analysis was applied to quantify the economic and social benefits of public transportation services, including rural public transportation. Several of the case studies were in rural areas, and implications of the findings for Graham County are discussed.

Generalized National Findings on Economic Benefits of Rural Public Transportation

The following are four major findings from 268 rural areas studied by TCRP Report 34 of counties with public transportation and counties without public transportation:

- The average growth differential between rural communities with transit and rural counties without transit systems was 11 percent.
- The average annual economic impact in counties where transit was implemented was \$1,092,293 in 1998 dollars. Adjusted to 2015 dollar based on the CPI, this is \$1,594,000 in 2015 dollars.
- In studying the cost/benefit ratio the funding of rural public transportation throughout the FTA 5311 program found that implementing a FTA 5311 had a benefit/cost ratio of 3.35 to 1.
- Rural transit systems that were able to offer significant levels of employment benefits to their riders scored quite highly, as did those system that made important contributions to the ability of local residents to live independently and to access critical medical services (including dialysis treatment). These two factors should be seen as keys to success in generating economic impacts in the locations served by rural transit systems.

Types of Economic Benefits

Both national research efforts reported on the type of direct and indirect benefits of rural public transportation. The benefits include:

- Savings in transportation expenses for the system's riders.
- The value of trips that would not have been made without the transit service.
- Increased income from the systems users from participation in rural transit.
- The value of health care that would not have otherwise been obtained.
- Salaries to drivers and other employees.
- Benefits to merchants in areas served by the transportation system.

TCRP Report 49 also reported on societal benefits when individuals can access parts of society. While much of the above information is able to be quantified, the following benefits are not easily quantified. Rural public transportation provides benefits by helping to:

- Avoid medical institutionalization of the indigent.
- Prevent crime by providing job training for employment and food for the hungry.
- Provide a mobility alternative to a costly ambulance ride for medical care.
- Increasing the purchasing power enjoyed by transit riders with access to jobs or to broader market choices.
- Relieve other agencies funded by tax dollars of transportation responsibilities and, thereby, increase their productivity.

Illustrative Case Studies in Rural Areas

OATS, Inc., Missouri

Since 1971, OATS, Inc. has been providing rural public transportation, serving 87 of Missouri's 114 counties. The mission of OATS, Inc is to "provide reliable transportation for transportation disadvantaged Missourians so they can live independently in their own communities." Graham County might consider adapting this mission statement for its own use.

OATS utilizes a mix of funding sources to provide a broad array of public and agency based transportation services. When the case study was conducted in 1998, 40.6% of the funding came from the Area Agency on Aging, and 20.2% came from FTA 5311. For the 87 counties included, the overall budget was \$6.5 million in 1998 dollars. Today, per county, the annual budget is \$108,045. OATS utilizes volunteer county committees to dispatch trips for their services.

In order to estimate the economic benefits of OATS, the research team asked the question, *What costs would be incurred by OATS users in the absence of the OATS system.* If OATS did not exist, OATS users would either:

1. Not make a desired trip because a transportation alternative is not available. These "missing" trips have an economic value because the user is not able to receive a desired or needed service due to the lack of transportation. A value was put on these missing trips based on different trip purposes. In Graham County, where no public transportation is provided, the "missing trips" also have an economic value.

2. Substitute an auto trip for OATS trip. Most of these trips would be provided by family members or friends, since most OATS users cannot drive or do not have access to an automobile. The auto trips include the cost of operating the automobile and the value of the drivers' time to make the trip. In Graham County, those without access to an automobile often rely on family or friend to provide an auto trip. The value of the trip is the sum of these costs.
3. Utilize another transportation provider to make the desired trip. In Graham County, this is a very common practice for many medical trips for low income individuals. This includes the use of a taxi, or in the case of individuals with Access, a private vendor provides the trip. It costs \$12 or local trip within Safford, for example by the Access vendor. For a visit to medical specialist, it costs \$200.

A detailed economic analysis was conducted to determine the benefits and costs if OATS did not operate. The bottom line was that for every dollar invested in the OATS program, there is an economic benefit of \$2.32. A benefit/cost ratio is "quite favorable" concludes the research effort, with the usual criterion of a least a ratio 1.0 for economically viable projects. This is slightly lower than the national benefit/cost ratio found in the TCRP Report 34 of 3.35/1.0.

Sweetwater County Transit Authority

The Sweetwater County (Wyoming) Area Transit (STAR) Authority serves a very sparsely populated rural county not too dissimilar from Graham County. Initiated in 1990, STAR integrated service with a number of client-based, agency-operated system with a single coordinated public transportation system, somewhat similar to the collaborative effort envisioned in Graham County. At the time of the case study, the service was demand response service with higher than average productivity of 5-6 passenger per vehicle service hour. This is similar to the productivity expected from the fixed route and schedule trip for local transit within Graham County.

A sample of calculation of benefits based on 1996 data is provided below:

Access To Employment: 15,960 of its 83,059 trips provided were work trips. The researchers assumed that 50% of systems work trip riders were transit dependent with no other means of transportation and thus subject to the probable loss of their job without the STAR public transportation service. Using the minimum wage, they calculated the annual wage of the 16 workers this would impact, or \$174,720 in 1996 dollars. In addition, STAR had recorded 28 persons moved off of public assistance due to their use of public transit. The researchers assumed that the welfare benefits were half of the employment benefits, and for 28 individuals moved off the rolls, this equated to \$152,880 in economic benefits. Adding the employment and welfare reduction benefits together, there was an employment benefit of \$327,600 in 1996 dollars or \$494,000 in 2015 dollars. The lessons learned applicable to Graham County are that while the number of individuals is relatively small locally, the dollar value of economic benefit is relatively high even when measured conservatively.

Access to Medical Care and Other Social Services: For the STAR case study, medical trips accounted for 7% of the total and nutrition trips accounted for 14% representing 17,477 annual trips. The researchers estimated that most of the nutrition trips and about one third of the medical trips would not have been made. The remaining trips would probably have been made, but at a much higher

cost for the passenger. They very conservatively assumed a \$5.00 per extra cost, much lower than a taxi trip, then the extra trips made by the extra mode would be a value of \$36,000 for the 7,200 trips. They decided not to try to estimate the value of increased health or nutrition that STAR provided to its passengers. Stakeholders in Graham County discussed the cost of the Access vendor trip and the costs of a taxi trip as being too inexpensive for many of the very low income residents who might utilize public transportation. The value of providing lower cost service to replace the Access vendor trips could be quite substantial in Graham County, but the data is not available to calculate the value for the purposes of this working paper.

Access to Education and Counseling Services: These trips enable the travelers to increase their long-term chance of employment at a decent wage. Assuming 60% of those in the STAR program graduate to a paying job, and that half of these graduates take transit, the researchers estimated that 90 individuals are using STAR for those purposes, and benefits would accrue to 27 individuals. The researchers concluded there would be \$365,040 in annual wages in 1996 dollars. In Graham County, it would need to be determined in more detail what the economic benefit would be for providing public transportation for Eastern Arizona College students. This would require an intercept survey of students to provide accurate information, but the economic value to the students would likely be very high.

The researchers concluded that the benefit/cost ratio would be 3.5 to one.

Inferences for Graham County based on National Research

To project what the actual benefit/cost ratio would be in Graham County would require additional data collection. An intercept random sample survey, of 1,038 monthly Workforce Connection, the 5,000 Department of Economic Security caseload, Canyonland Health Clinic clients, and Behavioral Health clients would be necessary to gather the information needed to make an informed calculation of the economic benefits. This could be a task in Phase II of the Graham County Transit Feasibility Study if this task is determined to be a priority of the TAC.

However, based on the national research, the likely benefit/cost ratio would likely be close to the national average of 3.35 to one, with a likely range of 2.8 to 3.8 to one. Overall, there has been a very strong consensus that there is need for public transportation in Graham County, and that this need has a very substantial economic value. As discussed earlier, the more important questions to answer are whether or not Graham County elected officials are willing and able to 1) provide financial support to provide the needed local matching funds for FTA 5311 and 2) whether or not the proposed Intergovernmental Public Transportation Authority would be supported to govern and manage the public transportation system.

Appendix A Arizona Statutes for Intergovernmental Public Transportation Authority

28-9101. Definitions

In this chapter, unless the context otherwise requires:

1. "Authority" means an intergovernmental public transportation authority established pursuant to this chapter.
2. "Board" means the board of directors of an intergovernmental public transportation authority.
3. "Intergovernmental agreement" means an agreement or contract that meets the requirements of title II, chapter 7, article 3.
4. "Municipality" means an incorporated city or town.
5. "Operating area" means an area established pursuant to this chapter within which the authority provides transportation services.
6. "Public transportation" means local transportation of passengers by means of a public conveyance.

28-9102. Formation

A. An intergovernmental public transportation authority may be organized as provided by this section in any county with a population of two hundred thousand persons or less.

B. The governing body of one or more incorporated cities or towns may petition the county board of supervisors to establish an authority consisting of the area within the incorporated boundary of the municipality or municipalities.

C. If the organizing municipalities are not contiguous, the unincorporated areas between the organizing municipalities must also be included in the authority with the approval of the county board of supervisors. The board of supervisors shall establish the boundaries of the unincorporated area to be included in the authority.

D. Incorporated cities and towns in different counties, each of which meet the population limit prescribed by subsection A, may petition their respective county boards of supervisors to establish a joint authority consisting of the combined areas within their respective municipal boundaries and including any intervening unincorporated areas in the counties.

E. The board of supervisors shall hold at least one hearing on the petition in one of the petitioning municipalities to determine public support for the authority and whether establishing the authority would be in the public interest. In the case of petitioning municipalities in different counties, the board of supervisors of each county shall hold separate hearings and each board shall make its determination separately.

F. If the board of supervisors determines that establishing the authority would serve the public convenience, necessity, safety or welfare, the board of supervisors shall establish the authority by a resolution that includes a description of the boundaries of the authority. In the case of an authority in different counties, the county boards of supervisors shall establish the authority by an intergovernmental agreement.

G. If an authority is established under this chapter, any university that is under the jurisdiction of the Arizona board of regents and that is located in a municipality in the authority, any community college district that is located in a municipality in the authority, or any Indian nation that has a boundary within a county in which an authority is established, may become a member of the authority by intergovernmental agreement.

28-9103. Corporate existence; rights and immunities; official name

A. An authority is a corporate body and political subdivision of this state that may act in its official corporate name and has all of the rights and immunities of municipal corporations that are granted by the constitution and statutes of this state, including immunity of its property from taxation.

B. The initial board of directors of the authority shall adopt the official name of the authority that shall contain the words "intergovernmental public transportation authority".