

MAG Rural Paratransit Needs Assessment

July 2017





RURAL PARATRANSIT NEEDS ASSESMENT

FINAL REPORT

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BACKGROUND AND STUDY OBJECTIVES

In November 2004, voters of Maricopa County approved Proposition 400, a dedicated twenty-year funding source for transportation improvements. The previous regional funding program, 1985's Proposition 300, provided funding for freeways and minimal allocations for regional bus service, paratransit, transit planning and administration. Proposition 400 funding was the first regional opportunity to provide substantial transit funding for regional services. State funding was also made available for a time. A modest portion of lottery funds, called Local Transportation Assistance Funds II, or LTAF II, was earmarked for transit. During the recessionary period beginning in 2008, these LTAF II transit funds were swept into the general fund by the Arizona Legislature, but were subsequently reinstated for the Maricopa Association of Governments (MAG) region only under the term Arizona Lottery Fund.

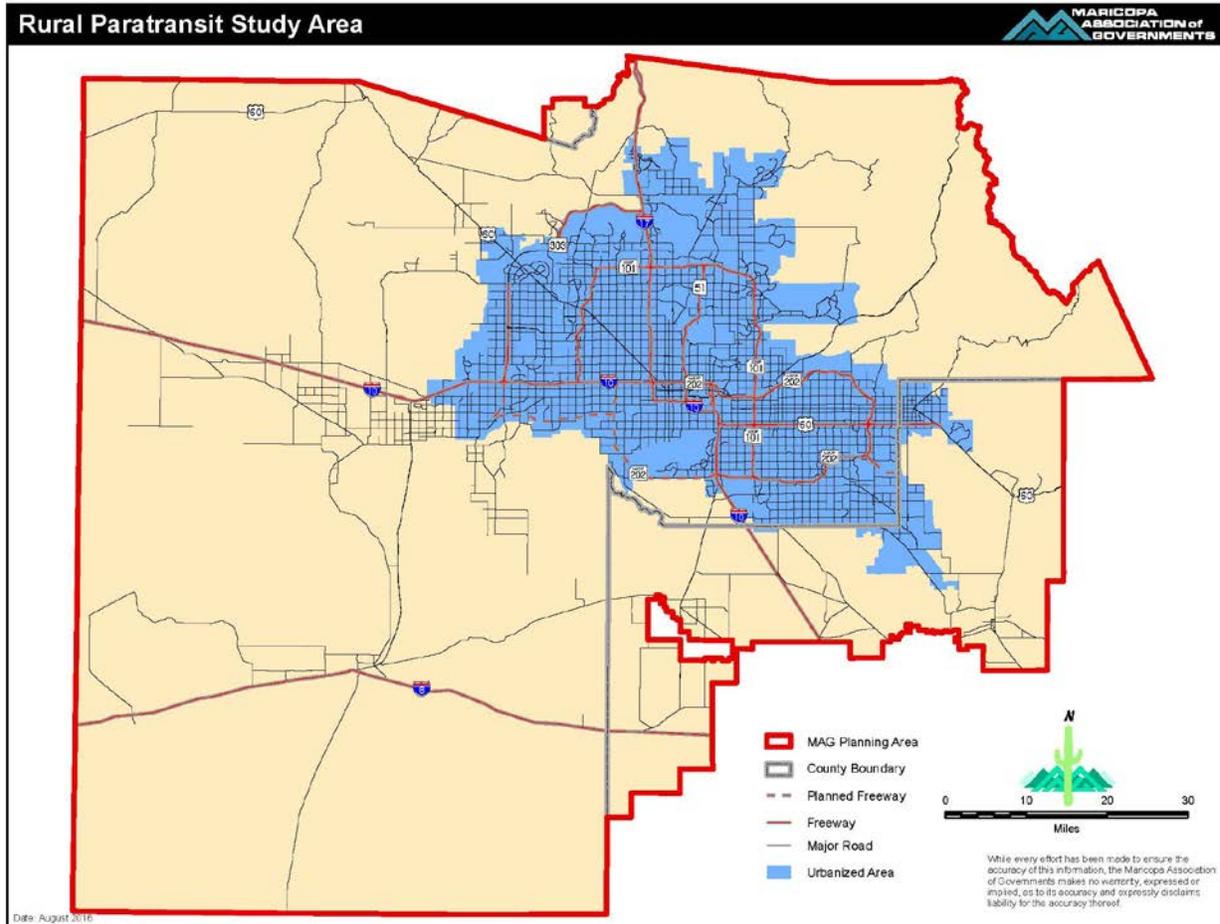
Along with LTAF II concerns, non-emergency transportation funds through the Arizona Health Care Cost Containment System (AHCCCS) have been threatened by budgetary restrictions. AHCCCS non-emergency transportation funding program was still in operation as of July 2017. There is general concern for rural services, however, as there has been recent consideration of requiring co-pays that will place a financial burden to those already under constraints.

A reduction of funding through AHCCS places a burden on paratransit providers, especially those in areas with limited alternatives far from the urban core.

Funding under Proposition 400 will end after 2025. MAG will be conducting a number of planning studies with an eye to develop a new regional transportation plan and programming for an extension of regional funding beyond 2025. One of those studies is an update of the Regional Transit Framework Study completed in 2010. This Rural Paratransit Needs Assessment Study (herein after "the Study") will compliment that larger effort. The Study will identify paratransit needs in the rural portion of the MAG planning area and identify basic lifeline services needed to address mobility needs and permit "aging in place" for older adults to remain in their communities. Boundaries for urbanized areas, referred to as UZAs, are established by the US Census Bureau. Federal Transit Administration funding is either urban or rural. The Study focuses on the portion of the MAG planning area outside of the UZA.

Activities of a number of paratransit providers operating in the study area and within close proximity were evaluated to identify populations served, service levels, gaps in service area, and future needs. The study area is shown as the tan colored area in **Figure 1** below.

Figure 1 – Vicinity Map



Stakeholder resources were identified at the beginning of the Study. This group included representatives from local advisory committees and commissions, local and regional older adult service organizations, university and community colleges as well as regional human service agencies. Members of the Stakeholder Group were interviewed during the data collection process to gather ongoing information about the current service in place and any needs currently not being met. The following local participants were helpful in the development of this project.

- Marc Pearsall Maricopa Association of Governments
- DeDe Gaisthea Maricopa Association of Governments
- Kathy Chandler Northwest Valley Connect
- Carrie Ward Freedom Express Wickenburg
- Phil Yabes City of Buckeye
- Kathy Valenzuela Town of Gila Bend
- Eddie Caine Central Association of Governments

- David Maestas City of Maricopa
- Olivia Guerrero Pinal-Gila Council for Senior Citizens
- Mike Meyer City of Coolidge, Central Arizona Regional Transit
- Martin Lucero City of Surprise
- Robert Antila Valley Metro/RPTA
- Evelyn Casuga Central Arizona College

EXISTING CONDITIONS REVIEW

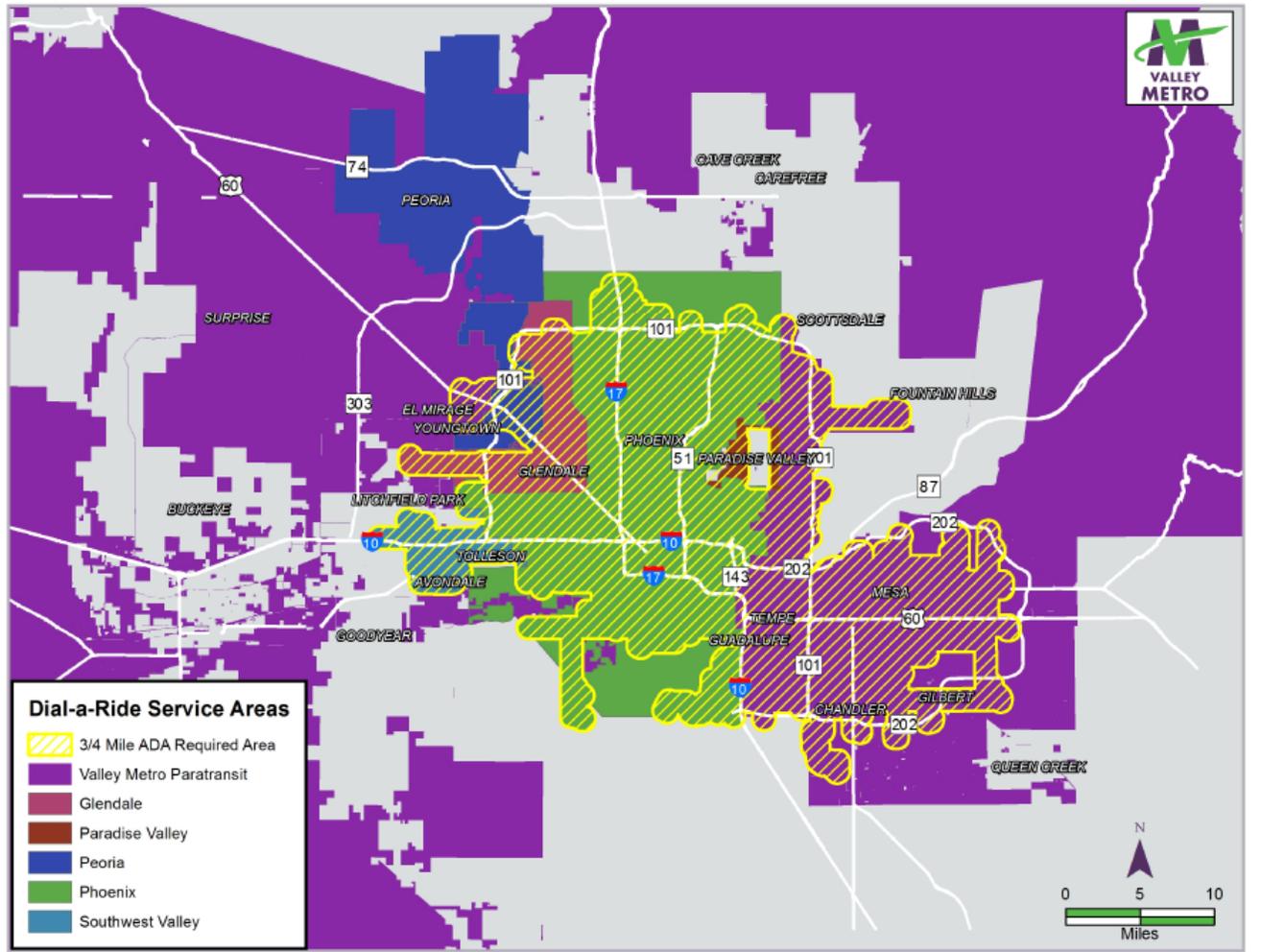
Existing Paratransit Services

Paratransit Services in the study area are provided through a number of sub-regional agencies. Steps have been taken to try to consolidate the number of paratransit services in the region to provide more seamless service. Improvement has been made, but there are still a number of various agencies involved. Services within Maricopa County are provided through Valley Metro and several local agencies including the Cities of Phoenix, Glendale, Peoria and the Salt River Pima-Maricopa Indian Community. Services in the Pinal County portion of the MAG planning area are independently provided through local agencies. In Maricopa County, services in the East Valley were consolidated into East Valley Dial-a-Ride, operated by Valley Metro, which served Mesa, Gilbert, Chandler, Tempe and Scottsdale. Northwest Valley Dial-a-Ride served Surprise, El Mirage, and Youngtown, as well as Sun City and Sun City West.

As of July 1, 2017, East Valley and Northwest Valley Dial-a-Rides were being consolidated as Valley Metro Paratransit. Southwest Valley Americans with Disabilities Act (ADA) paratransit serves portions of Litchfield Park, Tolleson, Avondale, and Goodyear It is operated by the City of Phoenix. Cross jurisdictional trips in this area are provided by Valley Metro. Peoria, Glendale, and Phoenix operate their own services. Rider eligibility varies between the various services. Some provide service to ambulatory older adults and individuals with disabilities. Others are restricted to those meeting criteria of the ADA which requires that “complimentary paratransit service be provided to those with disabilities who are traveling to and from locations that are within a ¾ mile radius of fixed route bus service”. Details of these providers are discussed in more detail in the balance of this section of the report.

Figure 2 below is a regional map depicting the various paratransit agencies and their coverage area within Maricopa County.

Figure 2 – Service Providers in Maricopa County

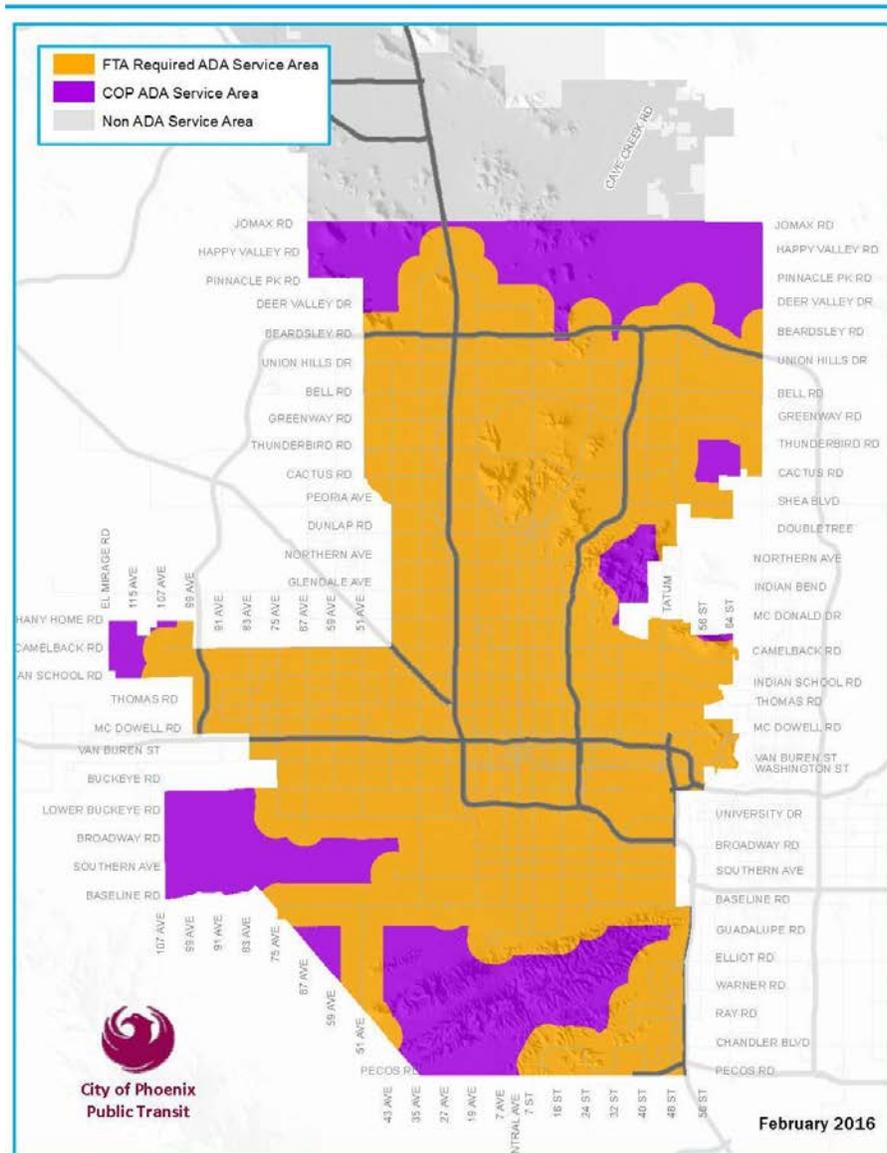


May 2017

City of Phoenix: Phoenix Dial-a-Ride serves those who are certified as ADA eligible within their Phoenix service area, and those in the Town of Paradise Valley who are within a ¾ mile radius of Valley Metro Route 44, which travels through Paradise Valley on Tatum Boulevard. Phoenix Dial-a-Ride annual boardings are 316,000. Jomax Road serves as the northern boundary of the Phoenix Dial-a-Ride service area; those residing within the Phoenix Municipal Planning Area (MPA) north of Jomax Road are not served. Population data provided by MAG for the study area shows that the rural portion of the Phoenix MPA (north of the UZA boundary) has a current population of 70,000 people.

Figure 3 shows the service area for Phoenix Dial-a-Ride.

Figure 3 – Phoenix Dial-a-Ride Service Area
City of Phoenix Dial-a-Ride Service Area

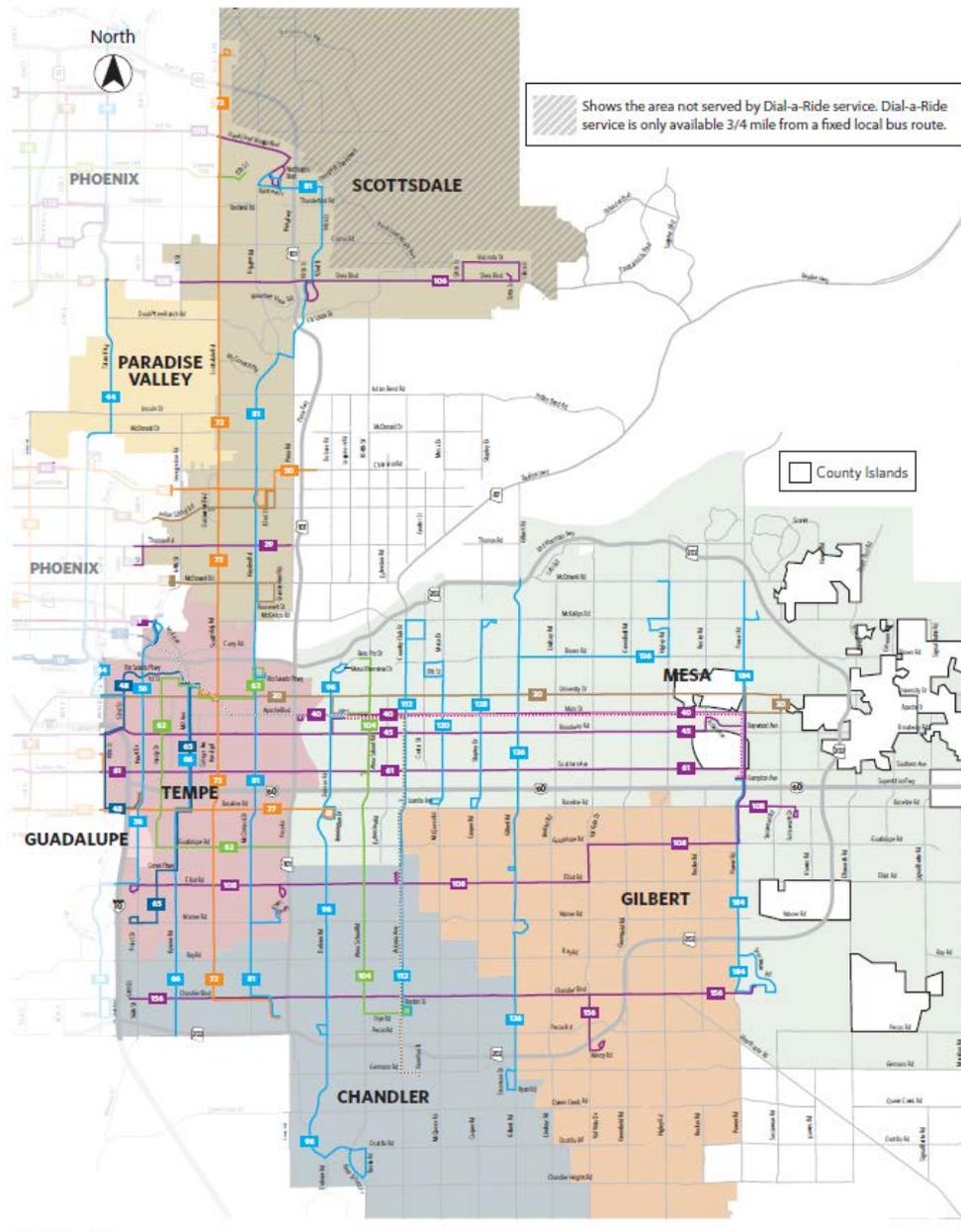


East Valley: Prior to the July 1, 2017 merger resulting in Valley Metro Paratransit, Scottsdale, Tempe, Mesa, Chandler, Guadalupe and Gilbert were served by East Valley Dial-a-Ride. This service is not limited to ADA certified riders with eligibility criteria by city as shown below:

- People who are ADA certified (Chandler, Gilbert, Mesa, Scottsdale, Tempe)
- Persons with disabilities (Non-ADA) (Chandler, Scottsdale, Tempe)
- Older adults age 65 and older (Chandler, Scottsdale, Tempe)

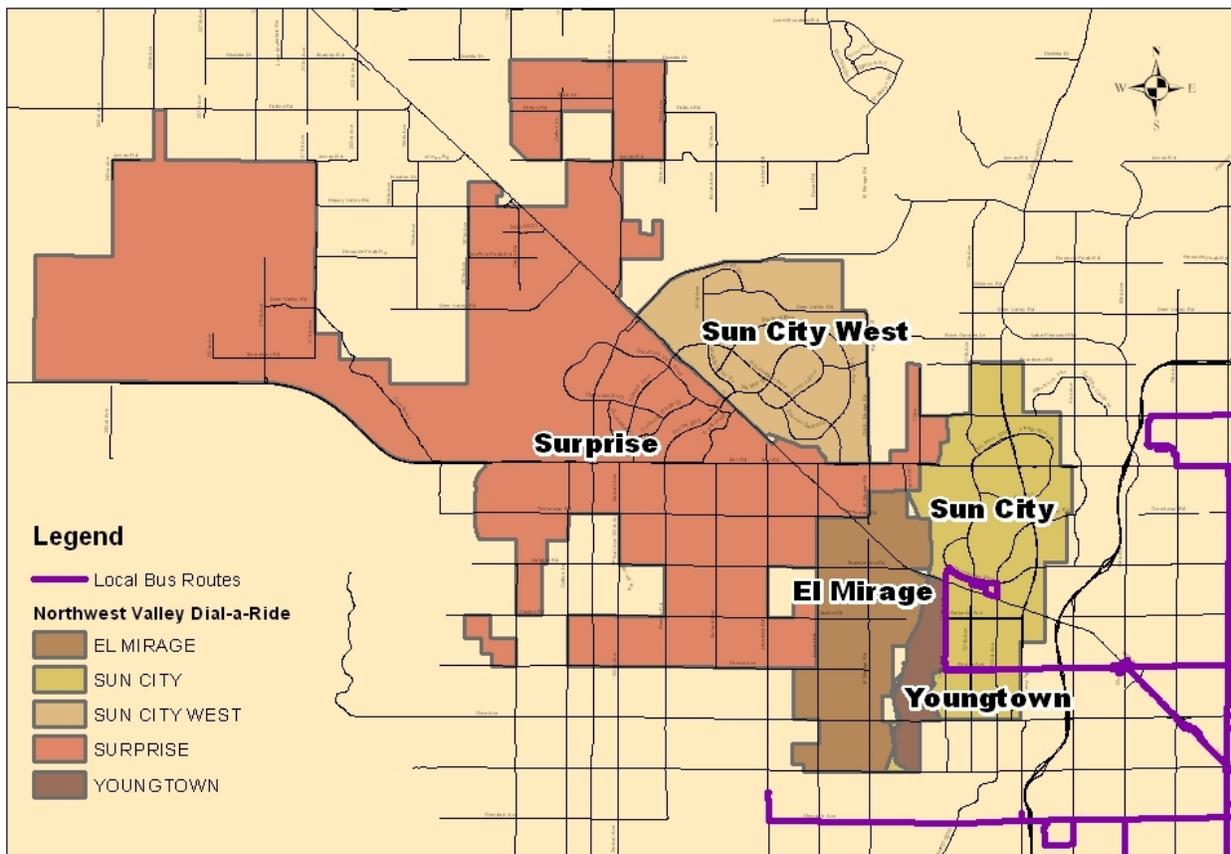
Based on first half statistics, East Valley Dial-a-Ride is expected to provide 283,000 annualized passenger boardings in 2017. **Figure 4** is a map depicting the East Valley Dial-a-Ride service area. Service for Carefree, Cave Creek, Fountain Hills and Queen Creek is not included in this service area, nor is a large portion of northern Scottsdale. While Apache Junction is primarily within the jurisdiction of Pinal County, a small portion of the City lies within Maricopa County. Apache Junction falls within the MAG planning area, and is also not served by East Valley Dial-a-Ride. The current population of the rural portions of the East Valley (including those communities not served by East Valley Dial-a-Ride) is 144,000 people.

Figure 4 – East Valley Dial-a-Ride Service Area



Northwest Valley Dial-a-Ride: This system serves Surprise, Youngtown, El Mirage and the unincorporated Maricopa County communities of Sun City and Sun City West. Service is also provided to other surrounding unincorporated areas of Maricopa County. This service is open to both ADA certified riders and older adults. In the City of Surprise, the service is open to all residents. Much of the Surprise MPA is outside of the urbanized area. The current population of the rural portion of the Surprise MPA is 28,640 people. Sun City, Sun City West, El Mirage and Youngtown are within the urbanized area. Based on current year to date data, annual boardings are projected to be 107,000. Ridership is not aggregated by rural or urban locations. The service area is shown in **Figure 5**.

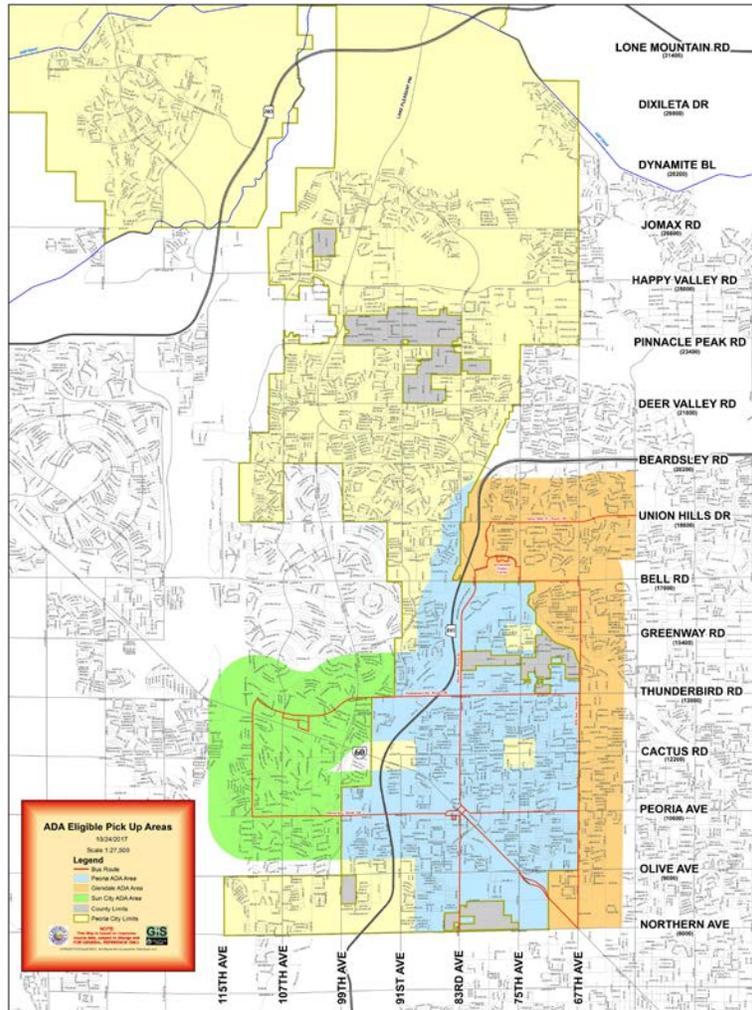
Figure 5 – Northwest Valley Dial-a-Ride
Northwest Valley Dial-a-Ride



Peoria Dial-a-Ride: Peoria Dial-a-Ride operates within the City of Peoria and also offers service to Boswell Hospital in Sun City, and Banner Thunderbird and Arrowhead hospitals in Glendale. They offer service to ADA certified, non-ADA older adults as well as the general public. While a significant percentage of their service area is within the

urbanized area, the northern portion (roughly described as north of SR 303L) is within the rural portion of the MAG region. The current population of the rural portion of Peoria is 17,620 people. Peoria’s annual boardings are 24,500, and their reporting does not differentiate between urban and rural portions of their service area. Peoria regularly requests Valley Metro to perform a number of paratransit trips on the City’s behalf. The Peoria Dial-a-Ride service area is shown in **Figure 6**.

Figure 6 – Peoria Dial-a-Ride



Glendale: Glendale Dial-a-Ride offers service to the general public as well as older adults and ADA certified riders. Trips must begin and end in the City of Glendale. Their service area is within the urbanized area.

Wickenburg Freedom Express: This service transports older adults age 60 and older anywhere within Wickenburg (and up to 5 miles out of town limits), from 9:00 AM to 4:00 PM, Monday through Friday. The program is operated by the Foundation for Senior

Living through the Wickenburg Community Action Program (CAP), a separate entity from the Town of Wickenburg. Riders must be able to get in and out of the van by themselves, although they can bring a cane or walker. The service initiated two years ago and has increased to over 13,600 boardings annually.

City of Maricopa Express Transit (COMET): Provides local demand response service within the City of Maricopa, and regional trips to Chandler and Casa Grande. Service is also provided to and from the Chandler Regional Hospital on Tuesdays and to and from Banner Casa Grande Hospital on Thursdays. COMET services have a total annual ridership of 26,000 boardings and the paratransit component of their service provides 6,400 boardings annually.

Salt River Pima-Maricopa Indian Community: Provides service for tribal members within the community and to destinations in Scottsdale, Tempe, and Mesa. Annual boardings within the Salt River Pima Maricopa Indian Community are 23,000. While about half of tribal lands are outside of the urbanized area, most of the tribal residential communities are located within the urbanized areas.

Gila River Indian Community (GRIC): GRIC operates service within their community for tribal members. Two Routes are provided. The Sacaton Route, based in the community of Sacaton, stops at the court house, the police station, the hospital, the Boys and Girls Club and residential areas. The West End Komatke Route serves a clinic, the District 6 multipurpose center, new residential areas and the Vee Quiva casino. The service began in 2016 with an FTA Section 5311 grant from ADOT and averages 5,200 boardings per year. Additional service is in demand if additional funds can be acquired

Buckeye: There are two services in Buckeye. Valley Metro Route 685 runs between Ajo, Gila Bend, Buckeye, and on to the Desert Sky Mall transit center. Within the MAG area there are two stops in Gila Bend, two stops in Buckeye and one stop in Ajo which is outside of the MAG region. The route has 20,000 annual boardings but the data is not aggregated by stop. Buckeye also has a local mobility service that operates out of their senior center serving both ADA eligible and non-ADA certified older adults. It takes people to the center, to various activities, and makes periodic trips into Phoenix for medical related needs. Annual boardings are 5,500.

Gila Bend: In addition to Valley Metro route 685, Gila Bend operates the *Solar Express*, a service through their senior center. They provide service to and from the senior center and the resource center, as well as transport for local medical and social service related trips. The service is also used for periodic excursions and trips to regional retail destinations in the Phoenix metro area. Home delivered meals are also provided through this service. Annual Boardings are 6,800.

Other Paratransit Options: RideChoice is a taxi discount program available to residents of Chandler, Fountain Hills, Gilbert, Mesa and Tempe who are at least 65 years of age and/or have qualifying disabilities. RideChoice participants receive up to \$100 of taxi service per month for either \$25 or \$30, depending on city of residence. Money can be added to a RideChoice account online or by mail. A number of providers are available to accommodate travelers. Service is available 24 hours a day, 7 days a week, 365 days a year. As noted earlier, portions of Chandler, Gilbert, Mesa and Scottsdale are outside of the urbanized area. There is also a RideChoice program in Apache Junction. After July 1, 2017, in addition to Valley Metro Paratransit, Valley Metro will offer a newly re-structured RideChoice in the East Valley and the Northwest Valley. Under the new structure, RideChoice is limited monthly for each user by number of trips rather than by dollars available. For each trip, the rider pays the first \$3 of the taxi meter rate. RideChoice covers the next \$15 of the meter. Any charges over \$18 on the meter are the responsibility of the rider. These details vary somewhat by jurisdiction.

Additionally, Scottsdale offers a taxi voucher program, Scottsdale Cab Connection. Residents may receive up to 16 vouchers per month with an 80 percent subsidy, up to \$10 per trip.

Market-driven options exist as well. There are a number of private for-profit operators providing taxi and non-emergency medical transport services. The genesis of ride services such as Uber and Lyft may well be game changers in the future. At the present time, these providers are focused on urban areas with limited resources in non-urbanized areas (although there are now a limited number of Uber providers in Casa Grande, for example).

Summary of Existing Transit Studies

A number of previous studies were reviewed as a part of this effort. They are summarized below.

Valley Metro Paratransit Study: In October of 2006, the Valley Metro/Regional Public Transportation Authority (RPTA) contracted for a comprehensive study of the areas paratransit services. At a “micro” level, the study developed information and provided recommendations to assist each of the paratransit programs in the region with operating services in the most efficient and effective way possible. At the “macro” level, the study considered alternative regional service designs and developed a recommended regional service plan for the area. Detailed reports containing observations and recommendations for each of the nine community-based paratransit programs were submitted to each community and paratransit program.

The study involved the community from the outset and throughout every phase of the project, which was facilitated through two working groups: a Technical Advisory Committee (TAC) and a Stakeholder Group. The TAC, comprising Valley Metro member agency staff members, met throughout the study to help set the goals and objectives, provide input on methodology and work tasks, review draft and final products, and provide overall guidance and input. The Stakeholder Group, comprising members of the public, particularly people with disabilities, met to provide input on Dial-a-Ride service issues and needs, as well as obtain consensus on preferred regional design alternative. The study team proposed policies including the service area, days and hours of operation, fares, reservation policies, and rider assistance policies.

Two surveys were conducted to get rider and broad community input, one was an on-line survey that requested community feedback and the other was an extensive rider telephone survey. These feedback help identified service issues, barriers and needs. Short-term and long-term elements were identified in the study. The task work proposed changes to the process in use to determine for eligibility for ADA paratransit service. The implementation plan addresses several cost effective related and supplemental services that could expand travel opportunities for riders with disabilities and older adults. The study was updated in 2015.

The MAG Regional Transit Framework Study (RTFS), completed in 2010, identified and prioritized needs for regional transit improvements to supplement the existing RTP through 2030, with consideration for longer range transportation needs through 2050. The analysis of land use, socioeconomic (population and employment) conditions, existing and planned transit service, and infrastructure, along with input from transit riders and nonriders, enabled MAG to identify transit needs, deficiencies, opportunities, and constraints. Three scenarios for transit services and facilities were then developed to address future travel needs – basic mobility, enhanced mobility, and transit choice.

Total population and its density affect the performance of and need for public transportation. All the peer regions, and the MAG region, operate bus and vanpool service. Data from the peer regions indicated that as transit revenue miles (supply) per capita increase, passenger boardings per capita (demand) also increase. MAG and its partners, Valley Metro Rail (METRO) and Valley Metro conducted a comprehensive public outreach process geared towards both transit riders and non-riders. The goal was to reach a broad range of citizens to obtain feedback on Maricopa County's current transit system, and on the types of regional transit service that the community would like to see. Public feedback helped to identify future transit needs and played a key role in defining regional transit deficiencies for the RTFS.

The RTFS was intended to identify improvements designed to attract new transit riders and improve transit service for existing customers. In general, the deficiencies of the public transportation system in Maricopa County fall within three overlapping categories: service area coverage, passenger convenience, and funding. In turn, the analysis of the transit deficiencies led the MAG study team to identify four categories of regional transit needs around which the recommended scenarios were developed: (i) new and expanded transit services, (ii) new service corridors, (iii) higher-speed travel opportunities, and (iv) new revenue sources.

Three regional transit scenarios were developed for 2030 to provide options for improving transit service in the MAG region. The scenarios build on the transit enhancements identified and are based on a defined level of financial investment. The first scenario (Basic Mobility) includes minimal service expansion with the same types and levels of services provided today and currently programmed in the RTP. The second scenario (Enhanced Mobility) assumed that the region funds transit service at a level comparable to the peer regions' average. Scenario III accomplished all of the elements in Scenario II, but included additional high-capacity transit corridors and a larger network of supergrid bus routes to serve more areas of the region with high-quality transit service. The transit service scenarios provided the community with three separate visions for the future. The MAG RTFS identified future transit needs for the entire county. Developed through a demand-based approach, the RTFS provided a blueprint for a better coordinated and integrated regional transit system. The RTFS is being updated in 2017-2018.

In 2013, the Maricopa Association of Governments (MAG) commissioned the Northwest Valley Local Transit System Study to assess mobility needs within and around the Northwest Valley. The study area included the communities of El Mirage, Glendale, Peoria, Sun City (Maricopa County), Sun City Festival (in the Town of Buckeye), Sun City Grand (in the City of Surprise), Sun City West (Maricopa County), Surprise, and Youngtown. Collectively, these communities have experienced significant population growth and transit needs. Public input, primarily through surveys and community workshops, provided the fundamental ingredient in assessing mobility needs along with the development of practical recommendations.

With an eye toward practicality from identifying needs during the public involvement process while working with an existing and/or proposed funding source, the recommended improvements were proposed to occur in phased near-, mid-, and long-term time frames. Near-term recommendations provided relatively inexpensive and easily-implementable tactics to enhance transit service within the Northwest Valley during the next five years, including but not limited to creating proposed six local circulators that could serve major destinations within the Northwest Valley, continuing

the Northwest Valley Dial-A-Ride (DAR) program and adjusting specific services where needed. Mid-term recommendations are intended to build upon the near-term service improvements and would be implemented within the next five to ten years. In addition to possible demand-based increases in circulator service, recommendations included extensions to key Valley Metro routes into the Northwest Valley to increase transit connectivity to the Metro Phoenix area. The long-term recommendations are intended to address population growth, while also complementing other transportation plans developed by communities in and near the Northwest Valley. In 2018, the City of Surprise will be engaging in a more focused transit needs study, featuring a capital, operations and financial plan for their community.

The Southeast Valley Transit System Study completed in 2015 analyzed transit services and ridership in transit-established and transit-aspiring communities within the southeast subarea of the MAG region. The study was a joint effort between MAG and Valley Metro to focus on areas like City of Tempe, City of Mesa, Town of Guadalupe, City of Chandler, Town of Gilbert, City of Apache Junction, Town of Queen Creek, City of Maricopa, and Town of Florence as well as parts of City of Phoenix, Maricopa County, Pinal County and the Gila River Indian Community. Through a process that was both data-driven and collaborative, this resulted in the identification of recommendations for optimizing the existing transit system, mid-term and long-term improvements to enhance a performance-based transit system throughout the Southeast Valley. The study resulted in a menu of concepts for (i) optimizing existing transit services, (ii) mid-term improvements within the next 10 years, and (iii) long-term improvements that would be anticipated in more than 10 years.

The concept for optimization of existing services was intended to be in the near-term. Concepts included increasing frequency of service, eliminating route deviations that reduce network efficiency, and modifying route structures that create overlap and duplication with other routes in the same area. For service expanding by 2025, mid-term planning included a project recommendation that would expand or fill in the gaps within the existing transit service network in the Southeast Valley. Service expansion would reach potential growth areas that are located on the fringe of the existing transit network. The long-term planning timeframe included project recommendations to extend transit services within the Southeast Valley to areas of future projected growth.

The Southwest Valley Local Transit System Study was completed in 2013, it identified local service areas that could effectively be served by flexible local service and extensions and service level increases in regional fixed route bus service to connect to those areas. The study included areas of Avondale, Goodyear, Tolleson, Litchfield Park, and Buckeye. Funding has not yet been identified for these improvements.

Comparison of Existing Service to Previous Studies

There have been some notable shifts in operations since previous transit studies were done. The Maricopa County Special Transportation Services (STS) discontinued operations in 2009 and the Sun Cities Area Transit Service (SCAT) ceased operations in 2010. Wickenburg Freedom Express began operations in 2015 as did Northwest Valley Connect in Sun City. Consolidation actions have resulted in East Valley Dial-a-Ride and Northwest Valley Dial-a-Ride. Still, most service expansion and extension has occurred within the urban portion of the MAG planning area.

EXISTING AND PROJECTED POPULATION TRENDS

Population within the MAG Region

As most transit service in the MAG planning area is within the urbanized area, the fact that over one half million people reside in the rural portion of the MAG region is significant. It speaks to the potential latent demand for transit service in the study area. **Table 1** below shows current and projected future population projections (year 2040 as estimated by the state demographer) for incorporated cities and towns, American Indian Nations and unincorporated county areas in and near the MAG planning area. The population projection for Pinal County includes the entire county and not just the portion within the MAG planning area. The growth rates within rural Pinal County outside of the MAG regional should be consistent with the portion within the MAG region. The last column shows annualized growth rates based on the projections.

Table 1: MAG Region Total Population Projections.

Areas of Influence	Total Projected Population & Growth Rate		
	2017	2040	Growth Rate
Avondale	81,400	103,800	1.1%
Buckeye	66,600	258,000	6.1%
Carefree	3,700	5,300	1.6%
Cave Creek	5,800	8,400	1.6%
Chandler	263,500	311,200	0.7%
Florence	27,800	48,200	2.4%
Fort McDowell	1,042	1,100	0.2%
Fountain Hills	24,200	30,400	1.0%
Gila Bend	2,300	4,100	2.5%
Gilbert	248,500	292,300	0.7%
Glendale	241,100	280,200	0.7%
Goodyear	85,200	192,900	3.6%
Mesa	477,400	597,200	1.0%
Paradise Valley	14,000	15,100	0.3%
Peoria	174,900	278,000	2.0%
Phoenix	1,584,600	2,082,500	1.2%
Queen Creek	36,800	64,100	2.4%
Salt River	6,700	7,600	0.5%
Scottsdale	242,700	308,500	1.0%
Surprise	130,200	295,200	3.6%
Unincorporated	292,700	552,700	2.8%
Wickenburg	7,400	12,400	2.3%
Youngtown	6,600	8,100	0.9%

Pinal County Areas	2017	2040	Growth Rate
Apache Junction	38,963	56,700	1.6%
Florence	27,827	48,150	2.4%
Maricopa	54,593	97,013	2.5%
Queen Creek	30,143	45,773	1.8%
Unincorporated	213,268	396,510	2.7%

Source: State Demographer Data available through MAG

While the preponderance of the regional population in 2040 will still be within the current urbanized area, the higher growth rates are found in areas at the suburban fringe and rural areas. This is where available vacant land exists, and where most of the “entitled” future developments are found. Assuming that traditional urban development standards continue to be followed, the latent demand for paratransit services in these areas will continue to increase.

MAG Region Rural Population

The total current population of the study area (the non-urbanized portion of the MAG planning area along with some areas within Pinal County) is 632,000. This population is projected to grow over the coming decades. Due to urbanization of the suburban areas, the boundaries of the rural areas will continue to shift. In total, the rural outlying areas within the MAG regional will have a higher population in the future than anticipated today.

Table 2: MAG Region Rural Population Projections.

Areas of Influence	Total Projected Population & Growth Rate		
Maricopa County	2017	2040	Growth Rate
Avondale	820	965	0.7%
Buckeye	55,000	67,023	0.9%
Carefree	2,420	2,803	0.6%
Cave Creek	4,430	4,490	0.1%
Chandler	22,830	23,209	0.1%
Fort McDowell	1,000	1,001	0.0%
Fountain Hills	59,640	61,071	0.1%
Gila Bend	2,450	3,749	1.9%
Gila River	11,910	12,121	0.1%
Gilbert	4,360	4,693	0.3%
Glendale	6,490	7,070	0.4%
Goodyear	12,760	13,067	0.1%
Mesa	28,670	29,358	0.1%
Peoria	17,620	18,142	0.1%
Phoenix	71,550	71,693	0.0%
Queen Creek	4,710	5,040	0.3%
Salt River	490	559	0.6%
Scottsdale	43,870	44,923	0.1%
Surprise	28,740	29,432	0.1%
Unincorporated	27,980	29,950	0.3%
Wickenburg	7,970	8,517	0.3%
Youngtown	2,640	2,975	0.5%
Pinal County Areas	2017	2040	Growth Rate
Apache Junction	19,500	24,001	0.9%
Florence	12,920	15,122	0.7%
Maricopa	56,550	72,101	1.1%
Queen Creek	2,121	2,233	0.2%
Unincorporated	20,387	28,639	1.5%

Source: CivTech, from provided MAG Socioeconomic Data

In review of the 2040 projected growth of the overall population, the rural portion of the MAG planning area areas are growing at a rate of 2.8% per year. Given this assumption, it would be assumed that the rural portion of the MAG planning area is estimated to have growth rate of over 2% per year. The anticipated increase of the rural population by just over 53,000 persons will yield a population of 583,947 by 2040. While it is difficult to state that these areas will remain rural beyond that time frame, the growth trends indicate that the rural population will increase within this time horizon. Using the future year trend maps allows for an adjustment to the areas which appear to become

more urban in nature while the rural boundaries extend further out. Because of the likely changes to urban and rural character, the growth projections are more modestly predicted at a linear rate of 0.44% per year for the rural areas which will have a demand for paratransit not likely serviced by other transit sources.

REVIEW OF THE SERVICE POPULATION

To further understand the rural area and its relationship to paratransit needs, information was gathered from available 2014 socioeconomic data. Specific information was sought on older adult households, low income households, and households without an automobile in areas without service or that appear to be underserved. Such populations are primary generators of demand for paratransit services, especially in areas with little or no available fixed route or rail transit service. Cities within the MAG region without notable service population or with service matching demand include El Mirage, Fort McDowell Yavapai Nation, Guadalupe, Litchfield Park, Paradise Valley, Tempe and Tolleson. These areas were not carried forward for further consideration, as they either were totally within the UZA, or are currently providing basic lifeline services.

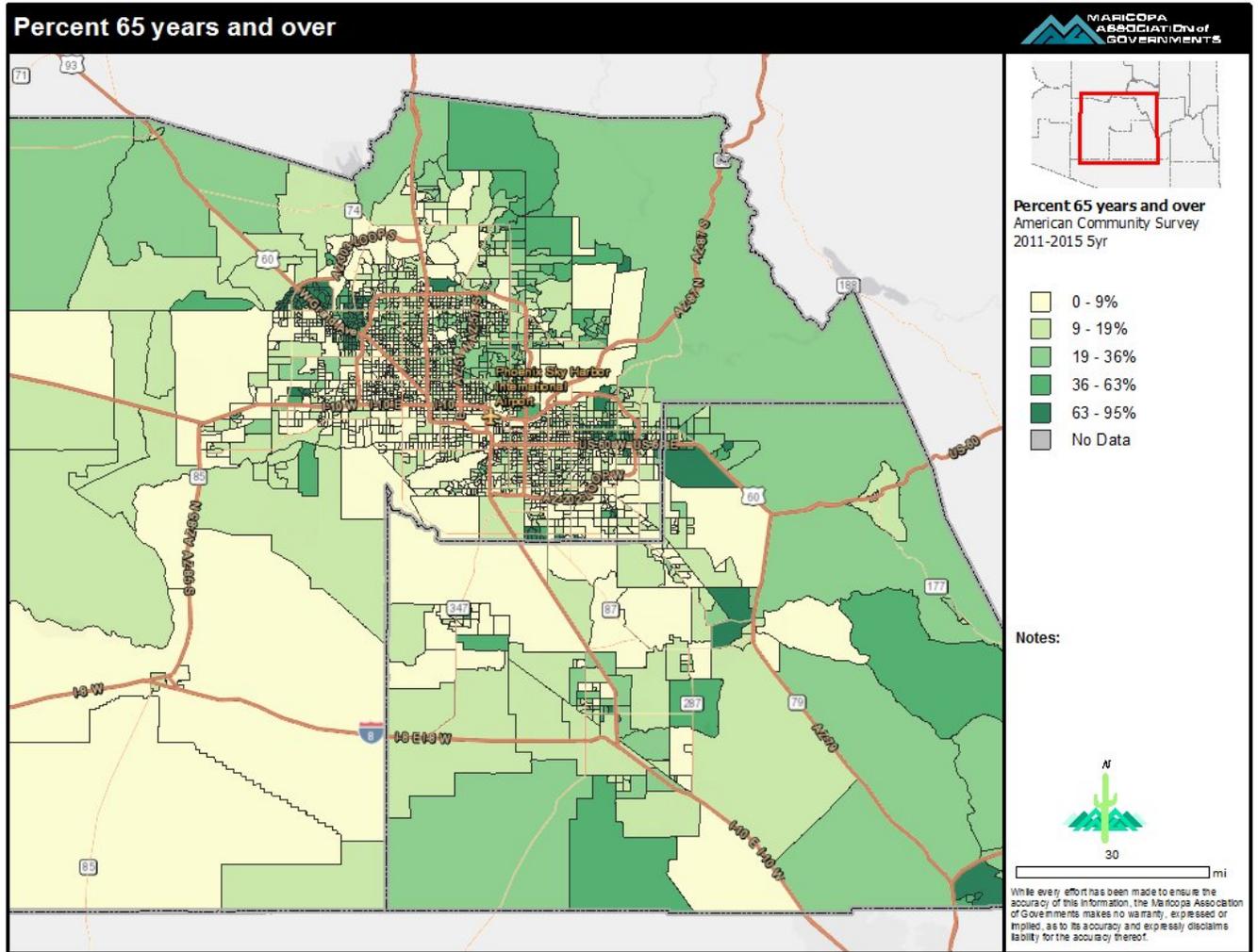
Figures 7 through 9 display maps provided by MAG Mapping Services with data for the above three categories for the Maricopa and Pinal County portions of the MAG planning area. Significant clusters of the three criteria are described below. Significant clusters are found in the urban core but not noted since this scope focuses on the rural areas.

Older Adult population clusters are found in Wickenburg, Aguila, Fountain Hills, Sun City, New River and the area in the northeast edge of the Phoenix MPA, the southern part of Goodyear, the Merrill Ranch area of Florence, and areas in and east of Apache Junction. Minor clusters exist in the Tonopah area, and on the Gila River Indian Community.

Below poverty level households are found in Wickenburg, the New River area, and the southeast valley including Apache Junction. Modest levels are found on the Gila River Indian Community, the Fort McDowell Yavapai Nation, the Aguila area, San Tan Valley, Maricopa and Wittman.

The Non-Vehicle households are predominantly found in Wickenburg, Tonopah, Gila Bend, Buckeye, the Gila River Indian Community and the Fort McDowell Yavapai Nation. Surprisingly, the data shows a cluster east of I-17 in the Anthem area. This information is further summarized in Table 3 following the provided mapping by region.

Figure 7 – Households Over Age 65 in Study Area.



Date: 6/21/2017

Figure 8 – Households Below Poverty Level in Study Area

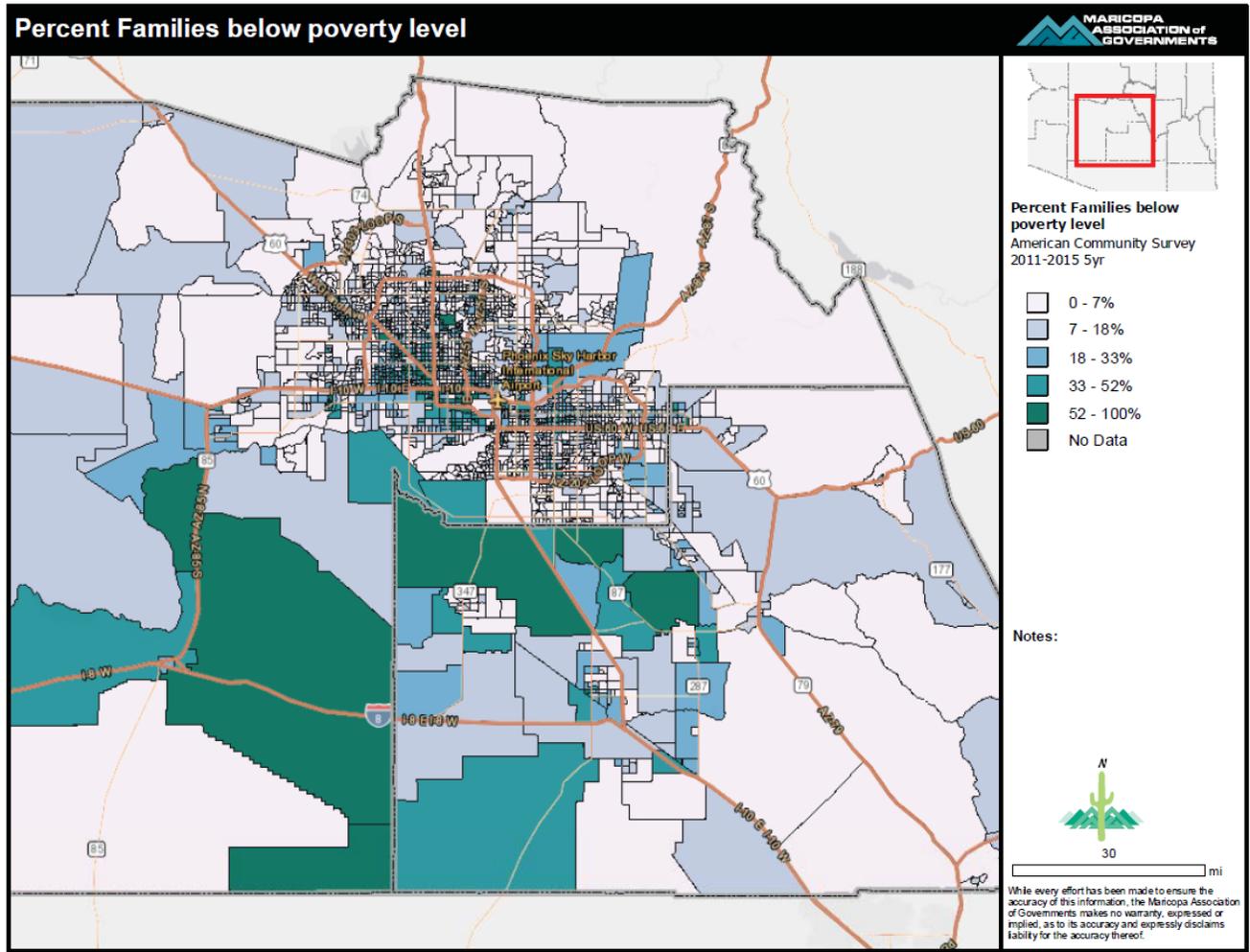


Figure 9 – Non-Vehicle Households in Study Area

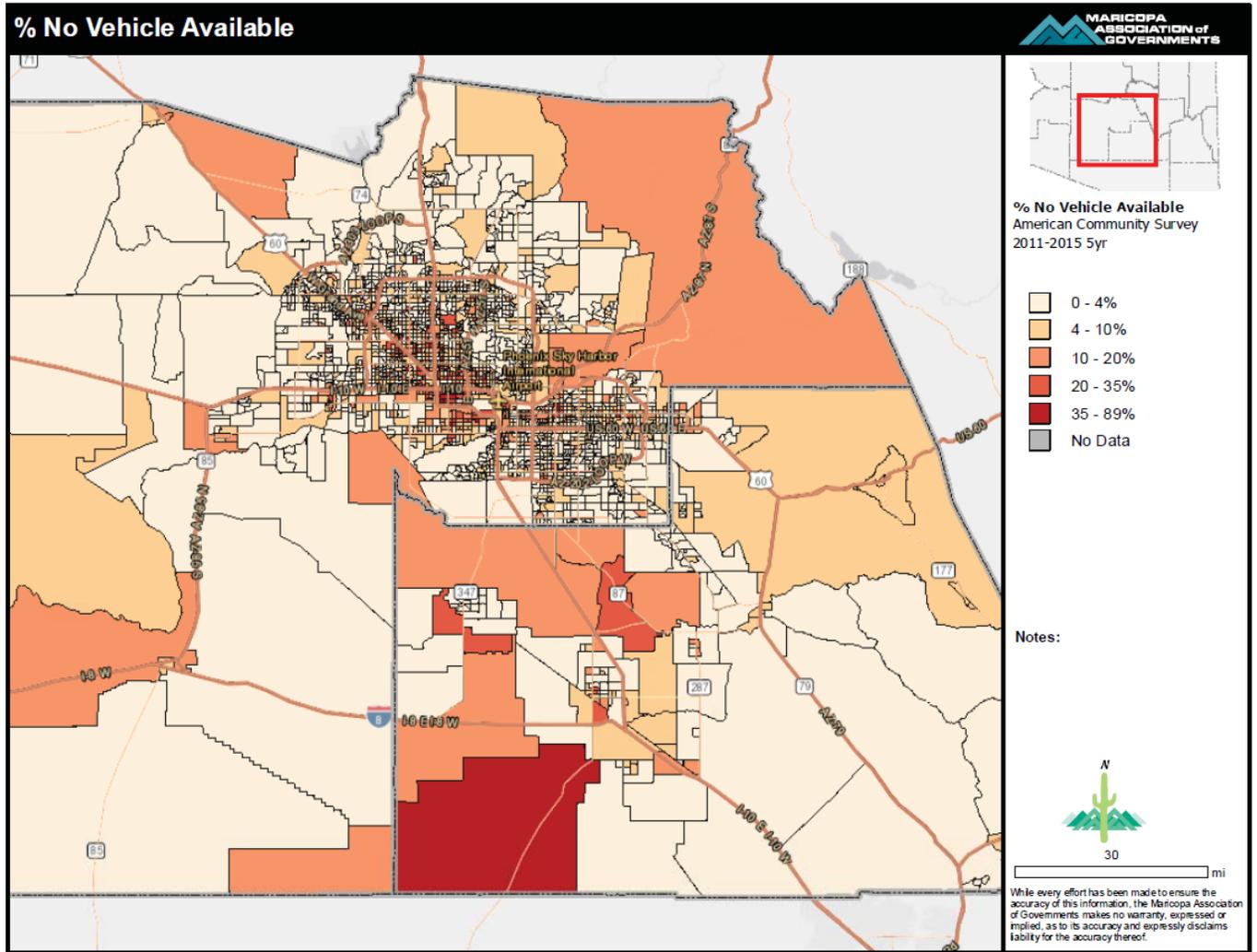


Table 3: Existing Population of Elderly, Non-Vehicle Households & Low Income

Maricopa County	65yrs.+	Non-Veh.	Low Income
Avondale	5,269	1,156	14,562
Buckeye	4,986	547	7,586
Carefree	1,872	41	333
Cave Creek	1,340	25	60
Chandler	16,275	1,855	84,950
Fort McDowell	84	24	387
Fountain Hills	5,565	155	10,120
Gila Bend	155	20	570
Gilbert	10,595	810	64,295
Glendale	19,510	3,050	80,235
Goodyear	4,685	285	18,215
Mesa	63,380	6,740	165,910
Peoria	20,765	795	54,400
Phoenix	116,015	27,565	515,700
Queen Creek	1,070	45	6,485
Salt River	972	233	1,912
Scottsdale	42,065	2,055	100,645
Surprise	18,460	565	38,230
Unincorporated	55,503	13,305	18,187
Wickenburg	1,985	160	2,480
Youngtown	970	10	2,110
Pinal County Areas			
Apache Junction	11,130	1,198	8,691
Florence	5,381	230	2,831
Maricopa	4,313	122	3,702
Queen Creek	2,161	120	2,598
Unincorporated	40,441	9,694	13,251

Source: CivTech, from Census Transportation Planning Products

While the population of elderly, below poverty level, and non-vehicle households exist in higher quantities in the urban core, there are a variety of transit service options available to residents. In addition; those residing within the urbanized area are closer to services. By 2040, there will have been decennial census surveys done in 2020, 2030 and 2040. While the urban boundaries of the region will most likely expand, future conditions on the ground will not dramatically change regardless of boundaries as suggested in the earlier section discussing the future population projection.

POTENTIAL RIDERSHIP DEMAND ESTIMATION

A demand estimation tool was developed using a process identified in National Center for the Transit Research Report (#21177060-NCTR-NDSU08, August 2016). This tool was used to predict rural demand response transit services using socioeconomic data and previous levels of service. Results of the NCTR report showed that in addition to total population, demographic characteristics are important. Ridership was found to significantly increase when the percentage of the population comprised of older adults or people without access to a vehicle increased. The table below shows results of applying this technique to the study area in a summary fashion based on the municipal planning areas, populations, and presumed previous and current levels of service in those areas. Areas known to have existing service were accounted for thus allowing a prediction of the current latent paratransit demand.

Table 4: Estimation of Existing Unmet Need Ridership Potential

Maricopa County Areas	Rural Pop	65yrs. +	Non-Veh.	Annual Ridership
Avondale	820	5,269	1,156	524
Buckeye	55,000	4,986	547	15,776
Carefree	2,420	1,872	41	40,932
Cave Creek	4,430	1,340	25	6,514
Chandler	22,830	16,275	1,855	18,920
Fort McDowell	1,000	84	24	46,190
Fountain Hills	59,640	5,565	155	58,420
Gila Bend	2,450	155	20	1,112
Gilbert	4,360	10,595	810	1,286
Glendale	6,490	19,510	3,050	3,282
Goodyear	12,760	4,685	285	3,762
Mesa	28,670	63,380	6,740	16,195
Peoria	17,620	20,765	795	8,224
Phoenix	71,550	116,015	27,565	24,504
Queen Creek	4,710	1,070	45	1,305
Salt River	490	972	233	445
Scottsdale	43,870	42,065	2,055	29,469
Surprise	28,740	18,460	565	15,082
Unincorporated	27,980	55,503	13,305	73,907
Wickenburg	7,970	1,985	160	20,174
Youngtown	2,640	970	10	1,441

Pinal County Areas	Rural Pop	65yrs. +	No Veh.	Annual Ridership
Apache Junction	19,500	11,130	1,198	36,553
Florence	12,920	5,381	230	11,985
Maricopa	56,550	4,313	122	14,197
Queen Creek	2,121	2,161	120	1,003
Unincorporated	20,387	40,441	9,694	39,661
Grand Total				490,864

The predicted, additional annual ridership from the estimation tool is roughly 490,864 boardings. Based on a per trip gross cost of \$33 (FY 2017-2018 Valley Metro Paratransit Cost), the gross annual cost of accommodating all of those predicted trips would be \$16.2 million, or about 11% of the non-rail annual transit expenditures.

The estimation tool was used to project ridership in the 2040 horizon. While much of the non-urbanized MAG area may well be urbanized by then (especially areas like Buckeye, Goodyear and Surprise), it is presumed that new development further out beyond the current edges of the metropolitan area will be added to the new non-urbanized mix, so that portion of demand should remain fairly constant. It was also assumed that the same level of service currently being provided would continue in the areas where paratransit is available. Table 5 indicates the anticipated, additional paratransit demand in 2040 increases slightly to 493,170 boardings.

Table 5: Estimation of Future 2040 Unmet Need Ridership Potential

Maricopa County Areas	Rural Pop	65yrs. +	Non-Veh.	Annual Ridership
Avondale	965	5,758	1,263	592
Buckeye	67,023	5,449	598	18,861
Carefree	2,803	2,046	45	64,602
Cave Creek	4,490	1,464	27	7,505
Chandler	23,209	17,786	2,027	6,142
Fort McDowell	1,001	92	26	964
Fountain Hills	61,071	6,082	169	65,100
Gila Bend	3,749	169	22	1,664
Gilbert	4,693	11,579	885	1,411
Glendale	7,070	21,321	3,333	3,591
Goodyear	13,067	5,120	311	3,997
Mesa	29,358	69,264	7,366	18,227
Peoria	18,142	22,693	869	9,201
Phoenix	71,693	126,785	30,124	25,915
Queen Creek	5,040	1,169	49	1,411
Salt River	559	1,062	255	552
Scottsdale	44,923	45,970	2,246	34,179
Surprise	29,432	20,174	617	17,089
Unincorporated	29,950	60,656	14,540	90,011
Wickenburg	8,517	2,169	175	26,009
Youngtown	2,975	1,060	11	1,774
Pinal County Areas	Rural Pop	65yrs. +	Non-Veh.	Annual Ridership
Apache Junction	24,001	12,163	1,309	53,678
Florence	15,122	5,881	251	15,763
Maricopa	72,101	4,713	133	18,416
Queen Creek	2,233	2,362	131	1,104
Unincorporated	28,639	44,195	10,594	23,144
Grand Total				510,903

Comparing the results of the two tables indicates areas where unmet needs have shifted from one location within the study area to another. The areas with the largest increase in latent demand are located in Buckeye, Surprise and Wickenburg. The areas with the largest reduction in rural population and therefore unmet paratransit demand are located in Apache Junction and the unincorporated areas of Pinal County.

FINANCIAL REVIEW

The *2015 National Transit Summary and Trends* report from the National Transit Database (NTD) provides an overview of national levels of transit funding. Transportation overall used 2% of the total federal budget in 2015. Of that, the \$12 billion Federal Transit Administration budget constituted .3% of the total federal budget.

Sample NTD funding sources for transit operating costs came from fares (33%), generated directly by the operator (12%) local funding (24%), state funding (23%) and federal funds (8%). In Arizona, there is no current dedicated state revenue source for transit.

The MAG *Draft 2018-2022 Transportation Improvement Program* includes \$692.6 million for non-rail transit expenditures during the five-year period. This includes federal, regional and local funds. Funds are aggregated by activity type, sponsoring jurisdiction, funding sources, and program year, but not by urban and non-urban designation. There is, however, \$1.18 million for bus replacement by Valley Metro, specifically noted as rural.

Based on a per-trip gross cost of \$33 (assumed using actual costs for Valley Metro Paratransit beginning July 1, 2017), the gross annual cost of accommodating all of the 493,170 additional annual predicted trips in today's dollars using the demand estimation tool previously described would be \$16.275 million, or about 11% of the non-rail annual transit expenditures. Assuming a rate of inflation of 2% per year, the cost per gross trip will increase to approximately \$41.00. An additional \$20.220 million would be required in 2040 to provide service to meet all projected latent demand.

Using a taxi voucher system or an entrepreneurial service like Uber or Lyft, could reduce the cost of additional needed rural paratransit service. Such services are sparse in rural areas; however, as the population densities do not encourage the spread of such services. By 2040, the environment for such services may change, but concerns regarding ADA accessibility guidelines would prompt a closer look in the future.

SUMMARY OF SERVICE DEFICIENCIES

Since previous studies were done, some positive steps have occurred in the region's paratransit services. East Valley Dial-a-Ride is a step toward regionalization. Consolidation of East Valley Dial-a-Ride and Phoenix Dial-a-Ride could add impetus to regionalization. The West Valley still has significant separation of smaller services in spite of the development of Northwest Valley Dial-a-Ride.

In Pinal County, a transit development plan is underway to design a transit system and apply for FTA Section 5307 funds. Eloy will implement a transit study later in 2018. Following the Eloy study, there are tentative plans to proceed with a county wide effort looking at possible connections between Casa Grande, Maricopa, Florence, Coolidge and Eloy. The City of Maricopa will also be engaging in a new Rural Transit Demand Study in 2018. The Central Arizona Regional Transit Service (CART) operated by the City of Coolidge currently operates between Coolidge, Florence, Central Arizona College and Casa Grande. Maricopa's Comet Service provides very limited connections to medical services in Chandler and Casa Grande.

The Pinal-Gila Council for Senior Citizens conducted a community needs assessment survey in early 2017. They mailed out 2,758 surveys and received back 1,011. Of these, 677 were completed in Pinal County. When asked what services were most needed by older adults in their communities, "Transportation to and from medical appointments, pharmacy, etc." ranked #2, right after home delivered meals. "Transportation to and from grocery stores" ranked #8.

The Valley Metro 2008 Regional Paratransit Study identified a number of actions that would greatly facilitate the transition of this area to a truly regionalized paratransit system. Some of the key actions include:

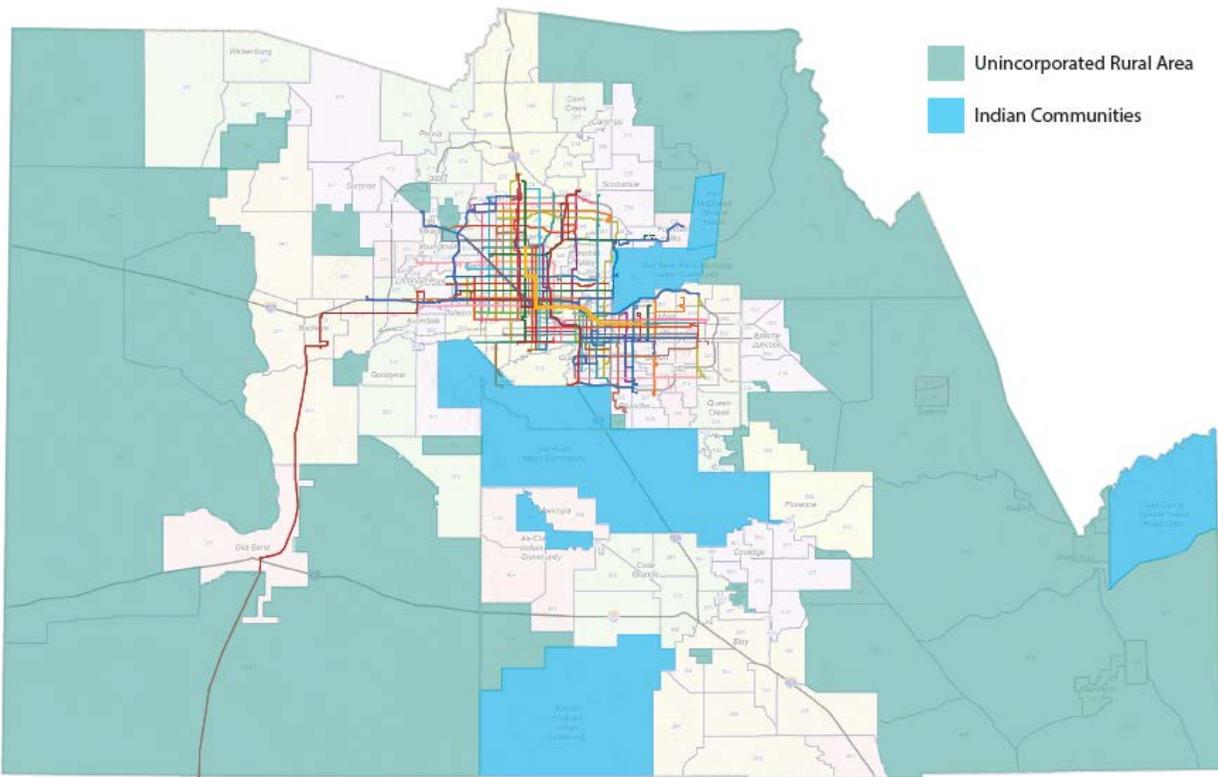
- A regional cost allocation model
- A regional centralized call center
- A regional mobility manager
- Uniform scheduling and ride matching software
- Standardized vehicle to facilitate use and maintenance
- Expanded compatible radios, GPS and Automatic Vehicle Locating (AVL) software for all vehicles
- A revised and expanded rider guide
- Expanded taxi subsidy and mileage reimbursement programs (including vendors such as Uber and Lyft)
- Transit/travel training

Some movement to address these areas has occurred, but primarily only on the local level. Progress on those recommendations is summarized in Table 6 below. The needs identified in the 2008 study still exist as of 2017.

**Table 6: Implementation Plan Proposed –
2008 Valley Metro Regional Paratransit Study**

MILESTONE TASKS	NOT COMPLETED	PARTIAL COMPLETION	COMPLETE
Create Regional Committee on Accessible Transportation	✓		
Refine Regional Paratransit Cost Allocation Model	✓		
Program the Required Capital and Operating Funding			✓
Obtain Necessary Vehicles, Equipment, and Software		✓	
Create Regional Paratransit “Call Center”	✓		
Select and Contract with Service Providers		✓	
Revise Public Information and Market New Regional Paratransit System		✓	
In-Person ADA Paratransit Eligibility Determination Process			✓
Travel Training Programs		✓	
Free Fare Fixed Route Program			✓
Taxi-based Programs			✓
Paratransit-to-fixed Route Feeder Service		✓	

Transit is still seen as primarily an urban service and often neglects rural areas. Paratransit is largely seen as a support service to feed and supplement fixed route transit. While this is a critical task, it also identifies one of the largest service deficiencies. The lack of extensions of fixed route service to exurban and rural locations within the MAG planning area reduces the potential of success for rural paratransit. More routes, similar to Valley Metro route 685, the only regional bus route currently connecting remote and rural areas with the urban core, would help in this regard. Paratransit can provide additional riders to the fixed route service if both are in place. Transit travel training needs to be implemented in the rural portions of the MAG planning areas, so paratransit users can become comfortable using fixed route bus service to expand their mobility range beyond that of paratransit. The size of the current transit system compared to the overall area of the MAG planning area is shown in **Figure 10**.

Figure 10 – Comparison of Fixed Route Service to MAG Planning Area

East Valley Dial-a-Ride's implementation was expedited when compared to the consolidation of service in the West Valley. This may have occurred due to the contract service being operated by private companies. Once the decision to consolidate service was made, the changes were achieved through procurement of private providers and/or contract modifications to existing turn-key service. Paratransit Services in Surprise, Youngtown and El Mirage (Northwest Valley Dial-a-Ride) are privately operated today while Peoria and Glendale are operated by municipal departments. Moving from individual service sectors to a regional service can be perceived as challenging since it creates changes in management and employment options.

One option to move towards the successful implementation of the goals presented in past studies would be identifying transit corridors of regional significance. Once identified, establishing a minimum level of baseline fixed route service along these corridors (similar to but more robust than Valley Metro Route 685 discussed previously) will become the building block to be followed by a baseline level of paratransit in the communities served. Connecting Maricopa, Sacaton, Florence, Queen Creek and San Tan Valley, Apache Junction, Wickenburg, Buckeye and the far north valley can help bring this region together more cohesively. Expanding services to and in the Southwest and Northwest Valley, as far as Tonopah and Aguila is needed in the future as well.

The current Valley Metro system provides significant urban service but does not adequately serve the rural areas of need. Implementing a basic lifeline level of service in all rural areas to meet safety and mobility needs is likely a higher priority than complete regionalization and technological coordination.

Pinal County hopes to move to a voter approved regional transportation fund in the fall of 2017. A successor program to the Proposition 400 funded RTP in Maricopa County will be needed as well in the coming years prior to 2025. While new regional roadway corridors are needed in Pinal County, Maricopa County (with the exception of I-11 and SR30) is now completing its freeway corridors. As the data in this report shows, there are currently more than 500,000 residents in the non-urbanized portion of the MAG planning area, and that population base is growing. As transit service matures, it is important to provide improved connections to the rural portions of the area.

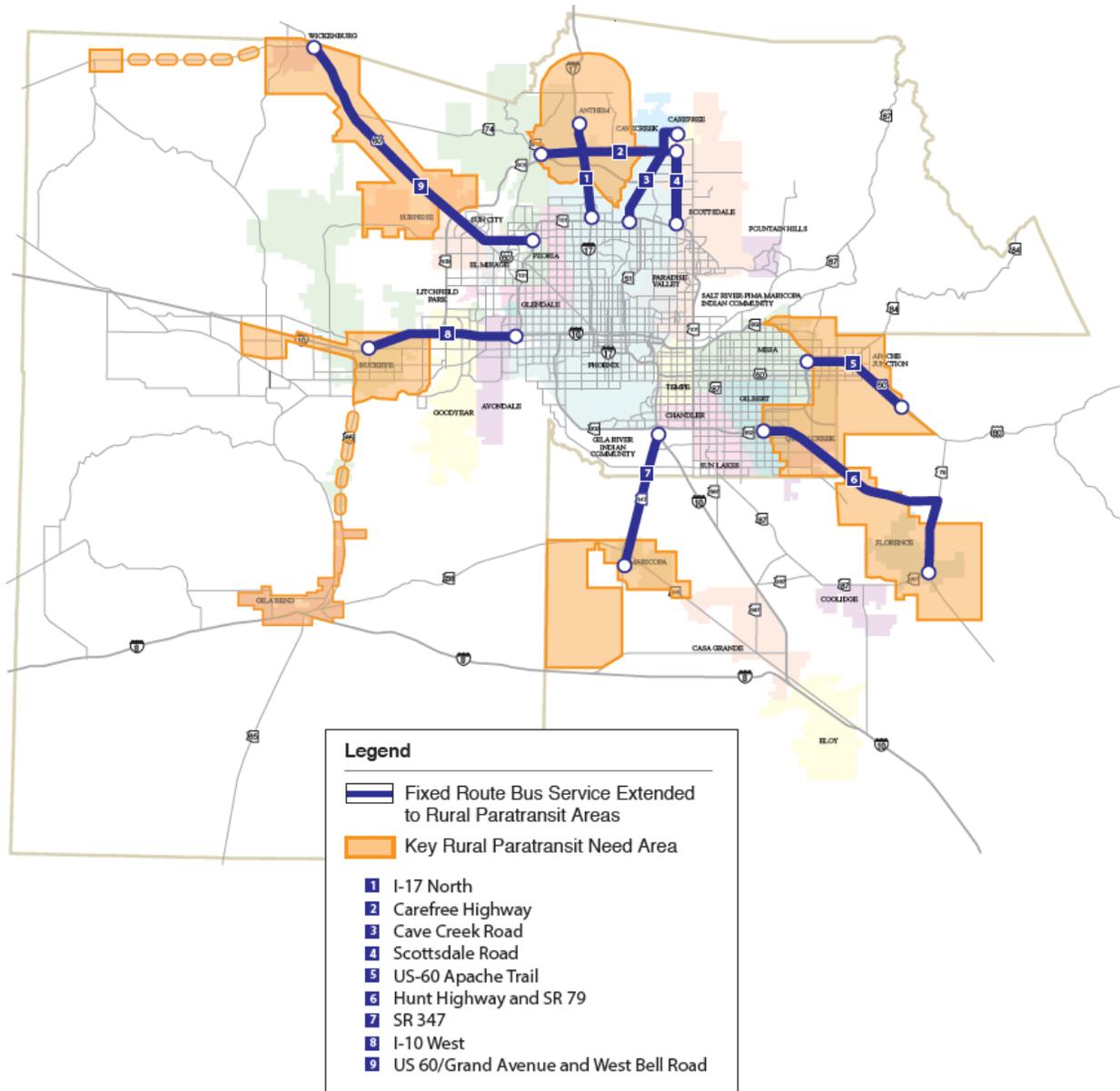
RECOMMENDATIONS

To address a higher level of transit demand in the non-urbanized portion of the MAG planning area, a number of recommendations may be considered. These include:

- Pursue the consolidation operational steps outlined in the previous *Regional Paratransit Study* done by Valley Metro.
- Identify priority fixed route service corridors extending from the existing Valley Metro system into the non-urbanized areas in MAG, to connect to local paratransit services, and on-demand services, providing regional connectivity.
- Establish a set-aside for local paratransit service, on-demand services and urban connectivity services for non-urbanized portions of the MAG area during the development of the next regional transportation plan and funding program.
- Develop a robust travel training program to prepare rural riders to effectively use the regional transit system that they will be connected to. This needs to be taken “on the road” to the rural communities. Perhaps this could be jointly sponsored by MAG, Valley Metro, ADOT and the Arizona Transit Association.
- Facilitate consistent single source service contact information. This can be achieved through a single call center and dispatch office, recommended in previous consolidation studies
- Implement uniform vehicle marking and “Branding” to create a unified service feel even if multiple operators are used.
- Provide shade, shelter, seating, and accurate wayfinding to attract senior and disabled riders.

Figure 11 illustrates the primary rural areas with paratransit deficiencies and proposed fixed route service corridors where bus service could be extended to these rural paratransit nodes, giving these areas not just local but regional mobility.

Figure 11 – Primary Rural Paratransit Need Areas & Recommended Regional Lifeline Service



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