



# Peoria Transit Implementation Plan

September 2015



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## **EXECUTIVE SUMMARY**

In 2013, the Maricopa Association of Governments (MAG) completed the Northwest Valley Local Transit System Study (NWVLTSS). The study identified short-, mid- and long-term transit service recommendations for the City of Peoria and surrounding communities.

In 2015, the City of Peoria requested the assistance of Valley Metro to develop a regionally connected local transit implementation plan to help guide the short-term and mid-term investments of transit services and capital improvements in the City. This implementation plan analyzed the various transit concepts outlined in MAG's NWVLTSS and considers other recently completed studies including the 2011 Peoria Multi-Modal Transportation Plan. The implementation plan identifies two routes as priorities for implementation, Route 83 – 83<sup>rd</sup> Avenue and a neighborhood circulator. The plan provides detailed cost estimates and capital requirements (passenger facilities needs and location, fleet, etc.), develops a service implementation schedule, and expands on the funding analysis.

## **SERVICE CONCEPTS AND ANALYSIS**

The NWVLTSS outlined six specific route proposals for the Northwest Valley that traverse or connect directly to Peoria. This Plan refined those proposals using the following factors: area-specific studies, Short-Range Transit Program (SRTP) evaluation methodology, transit-dependent population and operational analyses.

### **Area-Specific Studies**

In an effort to identify community preferences and analyze previous works pertinent to the project, this section lays the planning foundation by reviewing relevant plans and studies previously conducted for the City of Peoria, adjacent communities, and the region as a whole. The following plans and studies were reviewed as part of this effort:

- RPTA Comprehensive Arterial Bus Rapid Transit Planning Study, 2009
- MAG Regional Transportation Plan - 2010 Update, 2010
- MAG Regional Transit Framework Study, 2010 Peoria Multi-Modal Transportation Plan, 2011
- MAG Northwest Valley Local Transit System Study, 2013

## Short-Range Transit Program

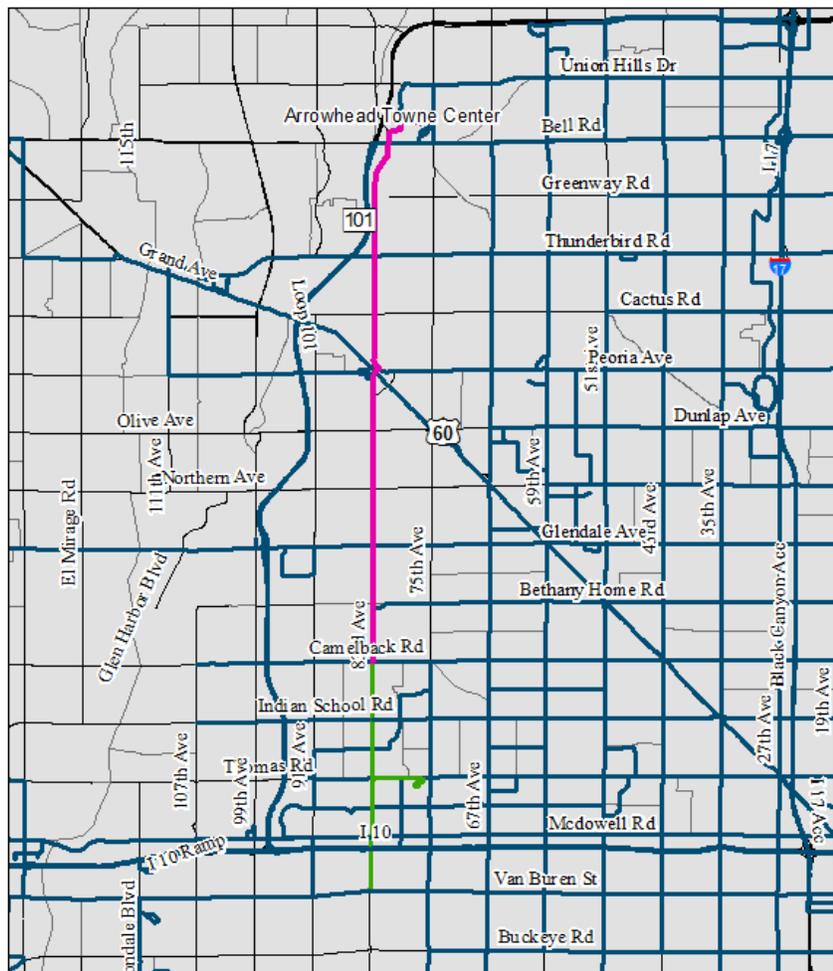
Beyond the studies, the Plan also reviewed the Short-Range Transit Program (SRTP). The SRTP documents future transit modifications and certifies corresponding funding commitments from Valley Metro and its member agencies for such modifications and associated capital improvements. The SRTP builds upon previous and ongoing Valley Metro efforts. The SRTP identifies regional and local transit service improvements programmed in the Transit Life Cycle Program (TLCP), as well as local operating budgets, for the next five years (FY16-FY20). The SRTP is based on input submitted by individual member agencies, as well as concepts developed by Valley Metro staff. The SRTP is intended to be

updated at a minimum every two years. The Plan incorporated service planning concepts identified in the SRTP and used the propensity estimation tool (boardings per revenue mile) of the SRTP to compare the productivity of different route proposals.

## Transit-Dependent Population Analysis

The plan evaluated concentrations of low-income population, minority population, zero and single-auto households, population density, and employment density in the City of Peoria. There is a series of maps within the full report detailing the concentration of each population within Peoria.

Figure ES1 Route 83 Proposed Route



### LEGEND

- Route 83 Extension
- All VM Routes
- 83 Existing



## Operational Analysis

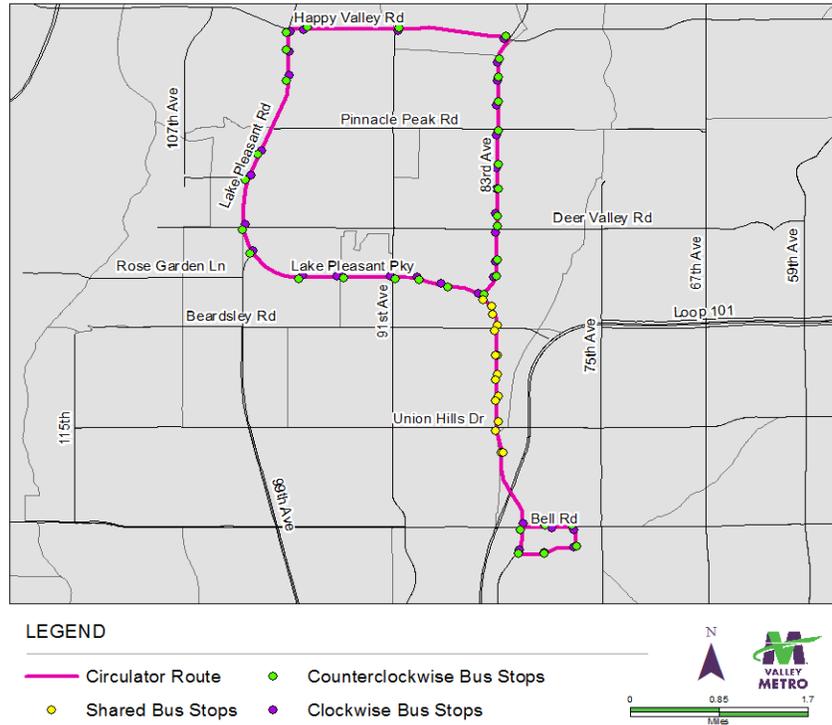
Staff reviewed and adjusted route options in Peoria from the various studies for their operational practicality and refined options to a shortlist of financially sustainable improvements based on route duplication, land use, fleet availability, and grid coverage.

## Prioritization of Recommendations

This analysis resulted in a recommendation to prioritize the advancement of the following improvements:

- **Phase I: Route 83** – Extension of route along 83<sup>rd</sup> Avenue from Camelback Road to Arrowhead Towne Center (see Figure ES1)
- **Phase II: Happy Valley Circulator** – A circulator area roughly bounded by Bell Road to the south, 75<sup>th</sup> Avenue to the east, Happy Valley Road to the north and 99<sup>th</sup> Avenue/Lake Pleasant Parkway to the west. (see Figure ES2)

Figure ES2 Happy Valley Option Route and Stops



## DETAILED TRANSIT OPERATIONS AND CAPITAL IMPLEMENTATION PLAN AND FUNDING STRATEGIES

Using the proposed routes to advance, staff created a detailed transit operations, capital, and implementation plan. The implementation of any new transit service requires a reasonable commitment by the sponsoring agencies to ensure that adequate funding is available to maintain the service for years to come. This funding commitment is necessary to help attract and retain passengers who, themselves, may make significant personal and financial commitments such as choosing a residence, job, or school along or near a particular transit service.

## Funding Sources

A review of potential funding strategies for supporting the transit service and capital recommendations through year 2020 and beyond was completed.

Potential funding sources considered include:

- Public Transportation Fund (PTF)
- Arizona Lottery Funds (ALF)
- Dedicated Sales Tax Revenue Fund
- Section 5307: Urbanized Area Formula Grants
- Passenger Fares
- Advertising Revenue
- Local Sources (e.g. sales tax, general fund)

## **Financial Plan**

A simplified capital and operating financial plan has been prepared to document projected revenues from the sources described above and existing and projected expenditures. The plan is illustrative building upon the currently funded service and the proposed service expansions of Route 83 – 83<sup>rd</sup> Avenue, the neighborhood circulator, and federal required Americans with Disabilities Act service.

### ***Passenger Facility Requirements***

Accompanying the proposed route improvements are passenger facilities, new passenger facilities may include bus stops, signs, benches, or bus bays. The estimated costs of passenger facility requirements are \$15,000 per mile, including bus shelters at arterial intersections and bus stop signs at minor streets. Bus stops are anticipated to be installed approximately every one-quarter mile. In addition to bus stop improvements, the City may also consider surrounding streetscape such as sidewalks or bicycle lanes to access transit services. These are planning level cost estimates that can vary city to city, so it is important to hone capital estimates for Peoria. Additionally, current infrastructure may exist at some proposed stop locations.

### ***Fleet Impacts***

In terms of expansion fleet, additional vehicles need to be considered at the time of implementation with a dedicated funding source. These purchases may be impacted by other services currently being operated, current spare fleet ratio, other planned or programmed services, or federal grant funding opportunities.

## **CONCLUSION**

Previous studies, as well as the Northwest Valley Local Transit System Study and the Short-Range Transit Program, served as the guide for transit service improvements within the City of Peoria. Refinements to those concepts through the Peoria Transit Implementation Plan (PTIP) resulted in one efficient and effective grid route and one neighborhood circulator out of five recommendations analyzed for implementation. The PTIP recommendations help meet the internal circulation needs of the community and allow for future regional connectivity.

The two recommendations are Route 83 – 83rd Avenue and the Happy Valley Circulator route. Table ES1 below depicts general characteristics of these recommendations, including the days, hours, and frequency of operations, gross operating costs, number of vehicles needed and fleet costs. This anticipates Route 83 implementation in FY18

and the Happy Valley Circulator implementation as funding is identified. Reducing or delaying the implementation of one service or another decrease transit accessibility within the City of Peoria but may help achieve a balanced and sustainable plan without additional funding resources.

**Table ES1: Proposed Transit Service Summary –  
General Characteristics of Prioritized Routes**

Route	Days of Service	Span of Service	Frequency	Annual Gross Operating Cost*	Fleet Required	Fleet Cost*
Route 83 - 83rd Avenue	Weekday	16 hours	30 min.	\$1,143,000	5	\$2.8M
	Saturday	16 hours	60 min.			
	Sunday	16 hours	60 min.			
Happy Valley Circulator	Weekday	12 hours	30 min.	\$674,000	5	\$890,000

\*FY16 dollars

Note: ADA paratransit service has been included in the financial model

## **INTRODUCTION**

In 2013, the MAG completed the Northwest Valley Local Transit System Study (NWVLTSS). The study identified short-, mid- and long-term transit service recommendations for the City of Peoria and surrounding communities.

MAG is a Council of Governments (COG) that serves as the regional planning and policy agency for the metropolitan Phoenix area. MAG is the regional air quality planning agency and metropolitan planning organization for transportation for all jurisdictions in Maricopa County. As such, MAG also oversees the programming of federal transportation funds.

Valley Metro serves as the transit system brand and operates transit services throughout the Valley. Valley Metro also provides short-, mid-, and long-range transit service planning efforts and programming of the regional sales tax and locally funded transit service. These agencies work in consort to advance transit in the region.

In 2015, the City of Peoria requested the assistance of Valley Metro to develop a regionally connected local transit implementation plan to help guide the short-term and mid-term investments of transit services and capital improvements in the City. This implementation plan analyzes the various transit concepts outlined in MAG's NWVLTSS and considers other recently completed studies including the 2011 Peoria Multi-Modal Transportation Plan. The implementation plan identifies two routes as priorities for implementation, Route 83 – 83<sup>rd</sup> Avenue and a neighborhood circulator. The plan provides detailed cost estimates and capital requirements (passenger facilities needs and location, fleet, etc.), develops a service implementation schedule, and expands on the funding analysis.

## **BACKGROUND**

The Peoria Transit Implementation Planning Study is designed to assist the City of Peoria in identifying transit service improvements. Located in the Northwest Valley, the City has experienced moderate growth over the last decade. As such, travel demand to and from the City has increased, particularly as suburban communities further north and northwest of the City have experienced their own growth. Therefore, the City is interested in exploring additional transit services and facilities to manage growing levels of travel demand and increase transportation capacity. Additionally, the City is identified in several regional planning studies as being served in the future by local transit service, as well as a form of high-capacity transit (HCT), such as bus rapid transit (BRT), light rail transit (LRT), or commuter rail that would link Peoria with downtown Phoenix.

This study concentrates on refining various local transit concepts within the City of Peoria. Commuter Express service and high-capacity transit have not been considered in this plan as they are identified elsewhere for improvements through other studies.

## **SERVICE CONCEPTS AND ANALYSIS**

This plan reviewed various sources of information to refine identified service concepts using the following factors:

- Area-specific studies
- Short-Range Transit Program (SRTP) evaluation methodology (which is derived from the Valley Metro Board-adopted Transit Standards and Performance Measures)
- Transit-dependent population analysis
- Operational analysis

### **Area-Specific Studies**

In an effort to identify community preferences and analyze previous works pertinent to the project, this section lays out the planning foundation by reviewing relevant plans and studies previously conducted for the City of Peoria, adjacent communities, and the region as a whole. The following plans and studies were reviewed as part of this effort:

- RPTA Comprehensive Arterial Bus Rapid Transit Planning Study, 2009
- MAG Regional Transit Framework Study, 2010
- MAG Regional Transportation Plan - 2010 Update, 2010
- Peoria Multi-Modal Transportation Plan, 2011
- MAG Northwest Valley Local Transit System Study, 2013

A relevant summary of each of these studies is provided in Appendix 1 in the sections below.

### ***Summary of Existing Studies and Plans***

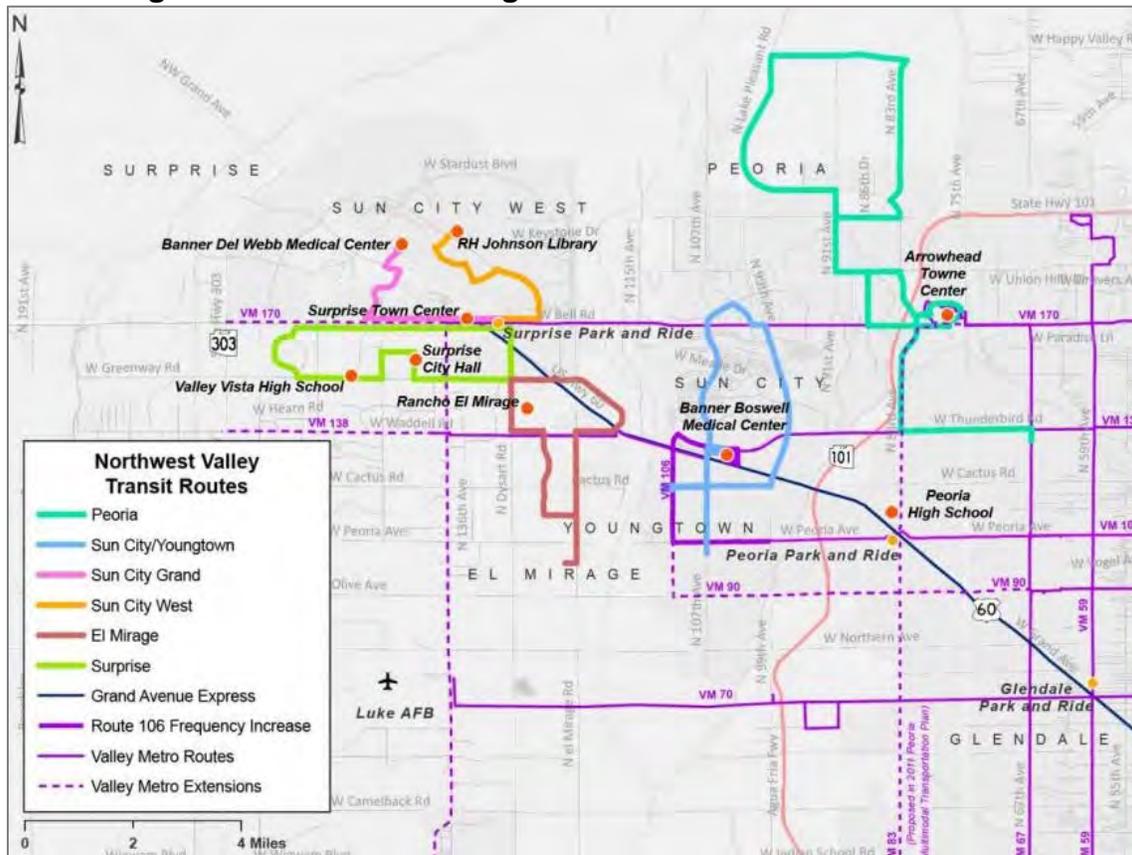
The review of previous and ongoing planning studies provides useful information in establishing the baseline alternatives upon which this plan will build. From the review of existing studies, several themes emerged that help inform the implementation of future local transit services, specifically, circulator routes, extensions of routes in surrounding areas, and furthering regional connectivity. These themes, as well as NWTSS recommendations, will be primary considerations as the plan progresses to the identification and evaluation of transit services.

Table 1 provides a summary of the reports reviewed throughout this memorandum.

**Table 1 Summary of Existing and Ongoing Planning Reports**

STUDY OR REPORT	DATE	FINDING, RECOMMENDATION, OR ACTION
<b>Regional Public Transit Authority Comprehensive Arterial Bus Rapid Transit Planning Study</b>	2009	The continuation of commuter-oriented express bus service in the Grand Avenue corridor is recommended rather than implementing arterial BRT service based on sporadic development patterns and adjacent land uses. The introduction of off-peak period trips is recommended in the long-term as dictated by demand.
<b>MAG Regional Transportation Plan</b>	2010	Identifies several transit improvements scheduled for implementation in Peoria by 2031 including the extension of Routes 90 and 138 and the provision of new Supergrid service on 83 <sup>rd</sup> /75 <sup>th</sup> and 99 <sup>th</sup> avenues.
<b>MAG Regional Transit Framework Study</b>	2010	Study evaluated three future service scenarios, concluding that the region must focus its efforts on developing a more coordinated and integrated regional transit system to meet the growing needs of Valley residents and bring system performance to the level of peer regions. Recommendations within Peoria include Major Investment Corridors along Grand Avenue, Bell Road, Loop 101/Agua Fria, and Peoria Avenue.
<b>Peoria Multi-Modal Transportation Plan</b>	2011	Recommends developing a multi-modal transportation center along 83 <sup>rd</sup> Avenue between Grand and Peoria avenues and adopting a phased approach to developing the facility as transit need and availability of services evolve over the planning horizon.
<b>MAG Northwest Valley Local Transit System Study</b>	2013	The NWVLTSS outlined six specific route improvements for the region that traverse or connect directly to Peoria. Recommends extending Routes 138 and 170 through Peoria to Surprise, increasing frequency on Route 106, establishing new service on 83 <sup>rd</sup> Avenue, and establishing HCT service in the Grand Avenue corridor. All of the long-term service recommendations for the Northwest Valley are depicted in Figure 1.

**Figure 1 NWVLTSS – Long-Term Service Recommendations**



As the progression of these plans has continued, several of these recommendations have been implemented. These include extension of Route 138 and transit service improvement to Route 106 within the City of Peoria particularly.

### Short-Range Transit Program

Beyond the studies, the Plan also reviewed the SRTP. The SRTP documents future transit modifications and certifies corresponding funding commitments from Valley Metro and its member agencies for such modifications and associated capital improvements. The SRTP builds upon previous and ongoing Valley Metro efforts. The SRTP identifies regional and local transit service improvements programmed in the Transit Life Cycle Program (TLCP), as well as local operating budgets, for the next five years (FY16-FY20). The SRTP is based on input submitted by individual member agencies, as well as concepts developed by Valley Metro staff. The SRTP is intended to be updated at a minimum every two years. The Plan used the propensity estimation tool (boardings per revenue mile) of the SRTP to compare the different route proposals. In addition to the NWVLTSS alternatives, the SRTP service concepts were used in developing the Plan. Additional information regarding the methodology utilized from the SRTP is included in Appendix 2.

## Transit-Dependent Population Analysis

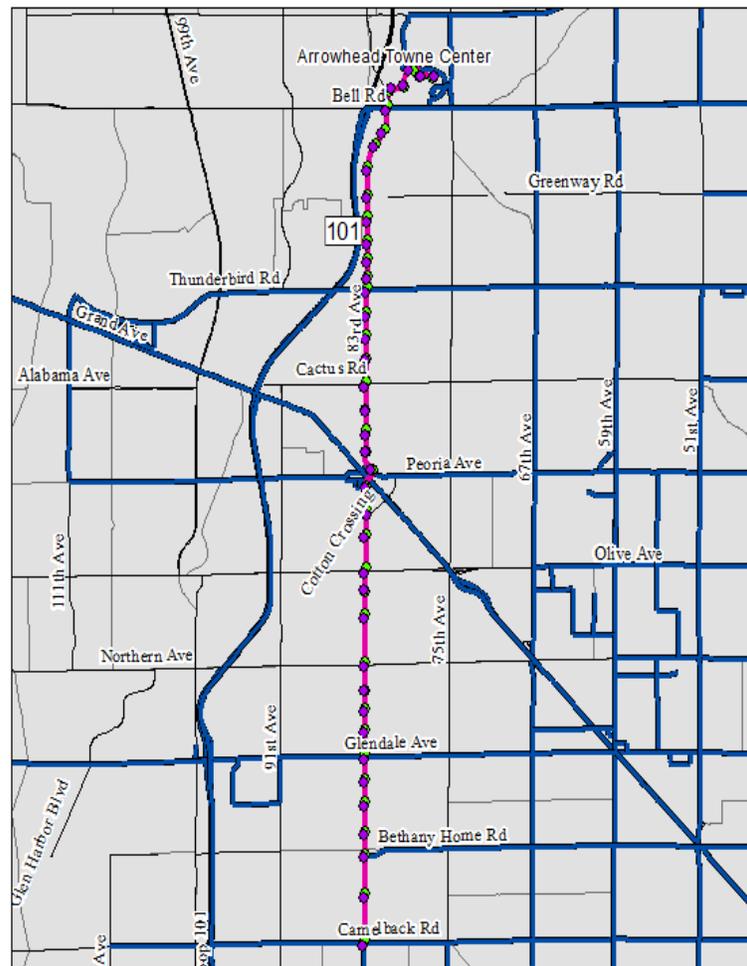
Regarding transit-dependent population analysis, the plan evaluated concentrations of low-income population, minority population, zero- and single-auto households, population density, and employment density. Appendix 3 depicts a series of maps detailing the concentration of each population within Peoria. Maricopa County average values are listed below each map.

## Route Descriptions

The following section provides a route-by-route breakdown for the recommended priorities: Route 83 - 83<sup>rd</sup> Avenue and the Happy Valley Circulator Appendix 4 outlines all analyzed improvements with additional details below. Vehicle routing, operating characteristics, and proposed stop locations are depicted for each route. Operating costs are listed within the

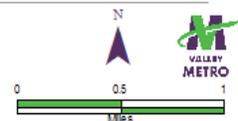
operating characteristics section for each route. Note these cost estimates are in FY2016 dollars and should be revisited for refinement approximately 6 months prior to the start of service. Costs per mile are updated annually to incorporate external influencing factors such as fuel prices and may affect these estimates. Costs were estimated using an assumed operator and contractor, either as currently operated (for route extensions) or Valley Metro operated (for new routes). Route concepts were selected from the plans and program considered above and evaluated using the methodology listed. Some routes were adjusted slightly based on the demographic analysis or the following operational analysis. As the City of Peoria continues to evolve and expand, route priorities or concepts may be altered to fit the future needs.

Figure 2 Route 83 Proposed Route and Stops



### LEGEND

- 83 Extension
- VM All Routes
- ◆ Southbound Bus Stops
- ◆ Northbound Bus Stops



## Route 83 – 83<sup>rd</sup> Avenue

### Vehicle Routing

The proposed extension for Route 83 is as follows:

- Route 83 Northbound: From 83<sup>rd</sup> Ave. and Camelback Rd., Route 83 will extend north along 83<sup>rd</sup> Ave.; North (left) at Market St.; slight right to continue North on 83<sup>rd</sup> Ave.; East on W. Campo Bello Dr.; North on W. Arrowhead Towne Center to Transit Center.
- Route 83 Southbound: Route will start at Arrowhead Towne Center; West on W. Campo Bello Dr.; slight left onto Market St.; South on 83<sup>rd</sup> Ave.; South along 83<sup>rd</sup> Ave. until Van Buren Str.

### Operating Characteristics

The extension service is proposed to launch October 2017 (or April 2018 depending the timeframe to acquire buses), operating Monday-Friday, 16 hours a day, at 30-minute frequency. On weekends, the route would operate 16 hours a day, at 60-minute frequency in alignment with the current operation of the route. The extension is approximately 169,600 additional annual operating miles. The extension equates to an approximate gross annual operating cost (FY16 dollars) of \$1,143,000<sup>1</sup> and a net cost of \$972,000 after fare recovery. This improvement will require four (4) additional vehicles and one spare, costing a total of approximately \$2,750,000.

### Projected Boardings

Route 83 is projected to have 1.68 boardings per revenue mile for the full extension.

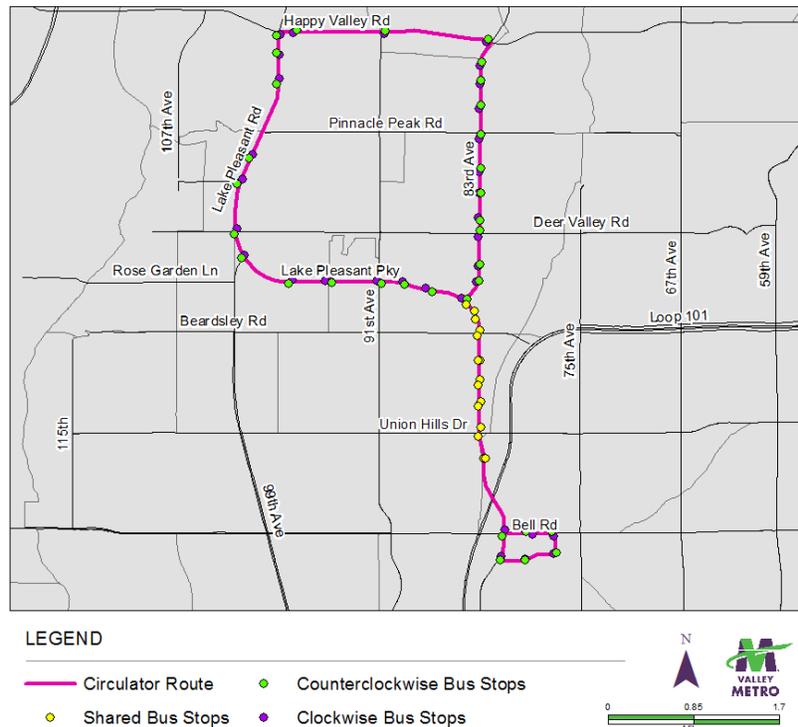
### Happy Valley Circulator

#### Vehicle Routing

The proposed routing for the Happy Valley Circulator is as follows:

- Happy Valley Circulator Clockwise: Starting at Bell Rd. and 83<sup>rd</sup> Ave., the Happy Valley Circulator Clockwise will

**Figure 3 Happy Valley Option Route and Stops**



<sup>1</sup> Note these costs assume that the last mile of Route 60 – Bethany Home, traveling along 83<sup>rd</sup> Avenue between Bethany Home Road and Glendale Avenue would be flexed over as part of the newly proposed Route 83 – 83<sup>rd</sup> Avenue. Route 83 is currently operated by the City of Phoenix and estimates were based on a route extension.

travel East along Bell Rd.; South on N. 77<sup>th</sup> Ave.; West on W. Paradise Ln.; North on N. 83<sup>rd</sup> Ave.; Where N. 83<sup>rd</sup> Ave. transitions to N. Lake Pleasant Pkwy., remain on route to travel West on Lake Pleasant Pkwy.; East on W. Happy Valley Rd.; South on N. 83<sup>rd</sup> Ave.; Turn South (left) to remain on N. 83<sup>rd</sup> Ave. to Bell Rd.

- Happy Valley Circulator Counterclockwise: Starting at W. Bell Rd. and N. 83<sup>rd</sup> Ave. travel South on N. 83<sup>rd</sup> Ave.; East on W. Paradise Ln.; North on N. 77<sup>th</sup> Ave.; West on W. Bell Rd.; North on N. 83<sup>rd</sup> Ave.; Where 83<sup>rd</sup> Ave. transitions to Lake Pleasant Pkwy., turn North (right) to stay on N. 83<sup>rd</sup> Ave.; West on W. Happy Valley Rd.; South on N. Lake Pleasant Pkwy.; South on N. 83<sup>rd</sup> Ave. to Bell Rd..

### **Operating Characteristics**

The service is proposed to launch after Route 83 is established and funding becomes available, operating Monday-Friday, 12 hours a day, at 30-minute frequency. The approximate number of annual operating miles is 164,400. This option equates to an approximate gross annual operating cost (FY16 dollars) of \$674,000 and a net cost of \$640,000 after fare recovery. This improvement will require four (4) vehicles and one spare, costing a total of approximately \$890,000.

### **Projected Boardings**

The program used to calculate boardings per revenue mile is unable to compute a figure for circulator routes.

### **Operational Analysis**

Throughout the planning process, staff adjusted each route for its operational practicality. The items analyzed include:

- **Route duplication** – Route duplication dilutes the route productivity of all overlapping routes. Through this analysis, several extensions were reconsidered. Particularly, circulator options were adjusted or eliminated in lieu of potentially higher coverage options. Furthermore, the analysis of the proposed Route 83 provided an opportunity to transfer a mile of Route 60 service along the same alignment to future transit operations, thus reducing potential future route duplication.
- **Land use** – Staff analyzed the concepts for conduciveness of transit within the land use of each corridor. Proposed routes such as the circulator and Route 83 provide services to higher density residential areas and commercial land uses that are more conducive to productive transit operation.
- **Fleet Availability** – A consideration with any implementation of service is the availability of vehicles to operate transit. Currently, Valley Metro and the City of Phoenix are evaluating future fleet needs in the next few years in anticipation of planned service changes. Typically, standard vehicle purchases require 18-24 months depending on the vehicle type and amenities included. A circulator vehicle typically requires about 12-18 months. The extension to Route 83 was unchanged from the initial SRTP schedule anticipating a potential of fleet

availability, while the Peoria Circulator route was particularly delayed in anticipation fleet purchasing timelines.

- **Grid Coverage** – As funding becomes available, it is noted that a mid-range recommendation to expand transit coverage to the full arterial grid system is advised. Recognizing limited funding availability and the hierarchy of system improvements, corridors should be continually evaluated upon the completion of the specific routes identified here. There is a level of importance of system connectivity. This can expand accessibility providing service to locations around the Valley. This can be as simple as a connection to another major transit service line or a regional service that can connect multiple other routes. Providing a connection between employment, shopping, medical, and education services with residential communities is imperative for the greater community to utilize the transit service. This coverage can also serve as a safety net for commuter service passengers or for delays on a transfer route during a trip. Ideally, the route options proposed in the SRTP and NWVLTSS would be implemented as scheduled. Recognizing that prioritization is needed, Route 83 would provide transfer opportunities to multiple cross-regional transit routes including Route 60 and Route 70, which provide a connection to the Valley Metro Rail. Either option would provide a connection to Desert Sky Mall Transit Center as well, a major regional transit facility within the Valley.

## **Early Action Improvements**

Beyond fixed-route transit services, Valley Metro offers a number of other transportation demand management (TDM) strategies capable of providing additional transportation options to residents of Peoria at little or no cost to the city. Valley Metro Commute Solutions and their <sharetheride.com> website is an important implementation partner for connecting to employers and communicating viable transit, carpool, vanpool, telework, walk, and bike options as the system expands and changes. Promoting <sharetheride.com> is a short-term solution to support connectivity to where fixed-route transit may not be warranted; it also helps establish a rider base that can be grown into fixed-route transit riders over time. Carpooling and vanpooling enables groups who ride together to save money on fuel, insurance, and maintenance. Vanpools function especially well for serving employers that have longer than average trip lengths or are relatively isolated from other development or activity centers and, hence, may be uneconomical to serve with traditional fixed-route transit.

## **Americans with Disabilities Act Service**

The Americans with Disabilities Act (ADA) of 1990 requires alternative transportation called “paratransit” that mirrors available public transit be provided for people with disabilities who are unable, because of a disability or disabilities, to independently use public transit for at least some trips. The federally mandated service area is three-fourths of a mile, at a minimum, on each side of each fixed-route and merged together such that all origins and destinations within the area would be served. The City of Peoria currently operates services throughout the city during most of the day.

Additional services may need to be provided as fixed-route service is expanded to serve outside those hours. Costs have been identified below to cover the required ADA service span as existing routes expand or new routes are added. To be eligible for ADA service, individuals must be unable because of a disability or disabling health condition to use Valley Metro buses and light rail independently for at least some trips. Valley Metro's process for determining ADA eligibility includes an application and an in-person eligibility assessment at the Valley Metro Mobility Center.

### **Prioritization of Recommendations**

This analysis resulted in a recommendation to prioritize the advancement of the following improvements:

- Phase I: Route 83 – Extension of route along 83<sup>rd</sup> Avenue from Camelback Road to Arrowhead Towne Center
- Phase II: Happy Valley Circulator – A circulator area roughly bounded by Bell Road<sup>2</sup> to the south, 75<sup>th</sup> Avenue to the east, Happy Valley Road to the north and 99th Avenue/Lake Pleasant Parkway to the west.

Further concepts have been identified as Future Improvements pending funding availability. These may be considered as funding becomes available and implemented earlier as feasible.

## **DETAILED TRANSIT OPERATIONS AND CAPITAL IMPLEMENTATION PLAN AND FUNDING STRATEGIES**

The implementation of any new transit service requires a reasonable commitment by the sponsoring agencies to ensure that adequate funding is available to maintain the service for many years. This funding commitment is necessary to help attract and retain passengers who may make significant personal and financial commitments such as choosing a residence, job, or school along or near a particular transit service.

### **Funding Sources**

This section provides a description of potential funding strategies for supporting the transit service and capital recommendations through year 2020 and beyond.

#### ***Public Transportation Fund (PTF)***

Transit revenues from Prop 400, the half-cent countywide sales tax originally authorized in 1986 and extended for 20 years in 2004, are deposited into the Public Transportation Fund (PTF) to support the projects programmed in the RTP. PTF funds can be spent on regional projects, including local and express fixed-route service and complementary paratransit service as mandated by the Americans with Disabilities Act (ADA). Local (non-ADA) Dial-a-Ride services and circulator/connector fixed-route services do not qualify for PTF funds. The funds are subject to change year over year depending on tax receipts collected and forecasted economic outlook. The Valley Metro Board of Directors is responsible for the PTF and must adhere to adopted policies; project

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<sup>2</sup> Note some circulator options travel just south of Bell Rd. along Paradise Ln. to serve the Peoria Sports Complex.

funding requests or changes would need to meet the adopted Valley Metro service standards and pass through the TLCP committee process<sup>3</sup> for Board approval.

### ***Arizona Lottery Funds (ALF)***

Arizona Lottery Funds (ALF) are revenues generated by the Arizona State Lottery for the support of public transportation services. The transportation fund was created as a part of the state implementation plan to meet ambient air quality standards as required by the Clean Air Act. Areas with a population of 300,000 or more are required to spend all of their ALF funds on public transit services. In March 2010, the state legislature repealed a large portion of money (\$22 million annually in Maricopa County out of \$34 million statewide) that has supported public transportation services in the Valley for 30 years. In late 2011, a judicial ruling restored the lottery funding for transportation and designated the funding to be passed to the PTF, which RPTA is the designated financial administrator. Funds are available to cities each year and require an annual application and accounting documentation to prove that funds were spent appropriately. Funds are variable and a standard flat allotment has been used for projection purposes in the model below.

### ***Dedicated Sales Tax Revenue Fund***

In 2005, Peoria voters approved a three-tenths cent sales tax increase dedicated to funding transportation projects and services in Peoria. This 20-year tax is dedicated to funding transportation projects and services including street, intersection, and bus system improvements. With assistance from Peoria staff, a standard allotment of \$1 million of this fund was used to project transit operations and capital improvement sources of funding.

### ***Section 5307: Urbanized Area Formula Grants***

This federal program provides grants to Urbanized Areas (those with a population of more than 50,000) for transit capital, planning, job access, and reverse commute projects. These funds can also be used for operating assistance for services that provide accessibility to jobs or reverse commute options. Funding for these types of projects is discretionary and awarded through a competitive process managed by the City of Phoenix, which is the region's designated recipient of federal funds. Capital funds under Section 5307 are programmed by MAG through the Transportation Improvement Program (TIP) and follow MAG's programming guidelines.

Classified as part of the Phoenix-Mesa UZA, Peoria is able to use 5307 funds for capital costs (15 percent local match) and may have to compete with other communities throughout the region for available funding. See Long-Range Improvements (page 17) for more information regarding currently approved funding of \$9,108,171 in federal, regional, and local funds over the FY15-FY17 period.

### ***Passenger Fares***

The fares collected from transit passengers represent another important source of funding for transit services. Although farebox recovery ratios vary between transit modes and even among individual routes, a five percent farebox recovery ratio was

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<sup>3</sup> This is an annual process and is initiated in the month of January.

assumed for circulator service and 15 percent recovery was assumed for local and express services. While these ratios are less than the observed averages in the Valley Metro FY14 Transit Performance Report, conservative estimates were intentionally utilized to prevent overestimating actual revenue.

### **Advertising Revenue**

Currently Peoria has an agreement with an advertising agency to install and maintain transit facilities, particularly bus stops and shelters. This agreement offsets capital and maintenance costs for the City of Peoria. According to the TCRP report *Practical Measures to Increase Transit Advertising Revenues (2009)*, sales of advertising in transit facilities and on vehicles generates approximately \$500 million in revenue to transit agencies each year, and the industry is well positioned to grow. Although, on average, accounting for less than five percent of transit agencies' operating funds, transit advertising allows communities to leverage transit infrastructure to help fund the continued operation of transit services. Peoria has effectively formed a partnership to augment bus stop infrastructure costs.

### **Financial Plan**

A simplified financial plan has been prepared to document projected revenues from the sources described above and existing and projected expenditures (Table 2 Financial Plan FY16-FY30). Note that all dollars in the financial plan are represented in year of expenditure. Costs are listed in FY16 dollars by route above in the Route Descriptions section (page 6; listed in numerical order by route number, see Operational Characteristics). Expenditures include operating and capital costs for the following existing and proposed transit services:

- Existing (total estimated annual cost of \$2,726,094 (FY16))
  - Route 67 – 67<sup>th</sup> Avenue
  - Route 106 – Peoria / Shea
  - Route 138 – Waddell / Thunderbird
  - Grand Avenue Limited
  - Express Route 573 – Northwest Valley / Downtown Express
  - Express Route 575 – Northwest Valley / Downtown Express
  - ADA services
  
- New Routes to be added
  - Route 83 – 83<sup>rd</sup> Avenue (FY18)
  - Additional ADA services

Using the revenue assumptions previously described, the financial plan is projected to remain in balance through Fiscal Year 2030 depicting annual operating, capital, and total revenues and expenditures for the transit services listed above.

An extension of the regional sales tax (Prop 400), set to expire in December 2025, may provide additional funding for transit service in Peoria. . Any such measure would need

to be eventually approved by voters. Peoria could request to initiate a reprogramming process through the regional committees identified above. The financial plan does not assume an extension of the regional sales tax.

**Table 2 Financial Plan FY16-FY30**

Revenue																
Type	Notes	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
AZ State Lottery <sup>1</sup>	Unpredictable source	\$461,893	\$461,893	\$461,893	\$461,893	\$461,893	\$461,893	\$461,893	\$461,893	\$461,893	\$461,893	\$461,893	\$461,893	\$461,893	\$461,893	\$461,893
PTF Operations <sup>2</sup>	Expires in FY26, potential extension yet to be determined	\$1,626,094	\$1,226,371	\$1,282,898	\$1,337,083	\$1,351,660	\$1,377,400	\$1,427,780	\$1,443,195	\$1,466,483	\$1,495,196	\$877,923	\$0	\$0	\$0	\$0
Dedicated Sales Tax Revenue Fund	1/3 cent sales tax; Assumes portion dedicated to transit	\$1,000,000	\$1,030,000	\$1,060,900	\$1,092,727	\$1,125,509	\$1,159,274	\$1,194,052	\$1,229,874	\$1,266,770	\$1,304,773	\$1,343,916	\$1,384,234	\$1,425,761	\$1,468,534	\$1,512,590
Passenger Fares	Assume 15% local and express fare recovery	\$243,914	\$229,428	\$379,783	\$393,531	\$401,507	\$411,330	\$425,029	\$433,667	\$443,676	\$454,694	\$369,015	\$376,135	\$383,469	\$391,022	\$398,802
Interest	Assumes 1% interest on previous year's local sales tax balance	\$0	\$14,652	\$29,501	\$41,830	\$45,143	\$48,376	\$51,536	\$54,650	\$57,656	\$60,555	\$63,344	\$66,175	\$60,053	\$53,656	\$46,970
Other	advertising, etc.															
ADA Complementary Paratransit <sup>4</sup>	TIP allocations	\$110,000	\$110,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
TLCP ADA Contribution	TLCP	\$222,100	\$228,100	\$234,300	\$240,600	\$247,100	\$253,800	\$260,700	\$267,700	\$274,900	\$282,300	\$282,300	\$282,300	\$282,300	\$282,300	\$282,300
Local DAR Service Contribution <sup>3</sup>	Estimated from previous expenditures	\$527,303	\$543,122	\$558,941	\$574,761	\$590,580	\$606,399	\$622,218	\$638,037	\$653,856	\$669,675	\$685,494	\$701,313	\$717,132	\$732,952	\$748,771
Carryover balance from previous year	Assumes balance from previous year is carried over	\$0	\$1,465,211	\$2,950,070	\$4,183,024	\$4,514,320	\$4,837,603	\$5,153,586	\$5,464,985	\$5,765,578	\$6,055,475	\$6,334,393	\$6,617,504	\$6,005,266	\$5,365,568	\$4,697,020
<b>Total Revenue</b>		<b>\$4,191,305</b>	<b>\$5,308,778</b>	<b>\$6,988,286</b>	<b>\$8,355,449</b>	<b>\$8,767,712</b>	<b>\$9,186,075</b>	<b>\$9,626,793</b>	<b>\$10,024,001</b>	<b>\$10,420,811</b>	<b>\$10,814,561</b>	<b>\$10,448,279</b>	<b>\$9,919,554</b>	<b>\$9,365,874</b>	<b>\$8,785,924</b>	<b>\$8,178,345</b>



Expenditures																
Type	Notes	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Operating																
Existing Services																
Express <sup>2</sup>		\$221,446	\$217,091	\$227,374	\$237,516	\$240,136	\$246,076	\$254,182	\$256,377	\$260,610	\$265,979	\$155,827	\$155,827	\$155,827	\$155,827	\$155,827
Circulator <sup>2</sup>		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Local <sup>2</sup>		\$1,404,648	\$1,009,280	\$1,055,525	\$1,099,567	\$1,111,524	\$1,131,324	\$1,173,598	\$1,186,819	\$1,205,873	\$1,229,217	\$722,096	\$722,096	\$722,096	\$722,096	\$722,096
DAR <sup>3</sup>		\$877,900	\$904,237	\$931,364	\$959,305	\$988,084	\$1,017,727	\$1,048,259	\$1,079,706	\$1,112,097	\$1,145,460	\$1,179,824	\$1,215,219	\$1,251,675	\$1,289,226	\$1,327,903
ADA <sup>2</sup>		\$222,100	\$228,100	\$234,300	\$240,600	\$247,100	\$253,800	\$260,700	\$267,700	\$274,900	\$282,300	\$169,100	\$169,100	\$169,100	\$169,100	\$169,100
Expansion Services																
Express		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Circulator		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Local		\$0	\$0	\$303,152	\$1,248,987	\$1,286,457	\$1,325,050	\$1,364,802	\$1,405,746	\$1,447,918	\$1,491,356	\$1,536,096	\$1,582,179	\$1,629,645	\$1,678,534	\$1,728,890
ADA	Estimated at 23% of fixed-route weekend expansion services	\$0	\$0	\$53,547	\$55,153	\$56,808	\$58,512	\$60,268	\$62,076	\$63,938	\$65,856	\$67,832	\$69,867	\$71,963	\$74,121	\$0
<b>Operations Total</b>		<b>\$2,726,094</b>	<b>\$2,358,708</b>	<b>\$2,805,262</b>	<b>\$3,841,128</b>	<b>\$3,930,109</b>	<b>\$4,032,489</b>	<b>\$4,161,808</b>	<b>\$4,258,424</b>	<b>\$4,365,336</b>	<b>\$4,480,168</b>	<b>\$3,830,775</b>	<b>\$3,914,288</b>	<b>\$4,000,306</b>	<b>\$4,088,904</b>	<b>\$4,103,816</b>
Capital																
Existing Services																
Fleet - Express <sup>2</sup>	Fleet replacement spread over 5 years	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fleet - Circulator <sup>2</sup>		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fleet - Local <sup>2</sup>	Fleet replacement spread over 4 years	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bus Stops	Net zero costs through advertising agreement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Expansion Services																
Fleet - Express		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fleet - Circulator		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Fleet - Local	Fleet omitted in expectation of a regional fleet purchase	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bus Stops	Net zero costs through advertising agreement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Capital Total</b>		<b>\$0</b>														
<b>Total Expenditures</b>		<b>\$2,726,094</b>	<b>\$2,358,708</b>	<b>\$2,805,262</b>	<b>\$3,841,128</b>	<b>\$3,930,109</b>	<b>\$4,032,489</b>	<b>\$4,161,808</b>	<b>\$4,258,424</b>	<b>\$4,365,336</b>	<b>\$4,480,168</b>	<b>\$3,830,775</b>	<b>\$3,914,288</b>	<b>\$4,000,306</b>	<b>\$4,088,904</b>	<b>\$4,103,816</b>
<b>Balance</b>		<b>\$1,465,211</b>	<b>\$2,950,070</b>	<b>\$4,183,024</b>	<b>\$4,514,320</b>	<b>\$4,837,603</b>	<b>\$5,153,586</b>	<b>\$5,464,985</b>	<b>\$5,765,578</b>	<b>\$6,055,475</b>	<b>\$6,334,393</b>	<b>\$6,617,504</b>	<b>\$6,005,266</b>	<b>\$5,365,568</b>	<b>\$4,697,020</b>	<b>\$4,074,530</b>

**Sources**

- <sup>1</sup>ALF Allocations FY15 Actuals
- <sup>2</sup>TLCP Bus Reports Adopted 2015-06-18
- <sup>3</sup>City of Peoria Comprehensive Annual Financial Report FY13
- <sup>4</sup>MAG TIP Peoria FY14-FY18 06/24/2015

**Notes**

3% Inflation rate used to determine \$YOE; revenues and expenditures shown in \$YOE  
 FY17 CPM rate is programmed to reduce per TLCP policies to reflect regional balancing

## Passenger Facility Requirements

Accompanying the proposed route improvements are passenger facilities, specifically bus stops. The plan analyzed future improvements based on the proposed new routes or route extensions. Note that stops must meet Americans with Disability Act (ADA) requirements; visit <https://www.access-board.gov/> to access the *Transportation Facilities Guidelines*. The Valley Metro Bus Stop Design Guidelines may also provide helpful guidance in the development of passenger facilities.

New passenger facilities identified by route above assume that major intersections of arterial streets would be provided with a more sophisticated bus stop facility such as a shelter, bench, trash, and sign. Bus stops between major arterial streets may suffice with simply signage improvements. Currently, the financial model assumes that an advertising company may construct facilities in a cooperative agreement for advertising space at transit stop facilities. Peoria has previously arranged for a similar agreement, most recently, with the Route 138 Thunderbird extension in 2014.

Typically, a shelter improvement is estimated to cost approximately \$10,000 while a bus stop sign is estimated at approximately \$1,000. Assuming bus stops are installed every one-quarter mile, improvements can be estimated at the planning level at approximately \$15,000 per mile of route alignment expansion. Note that existing facilities or a higher level of amenities may vary these estimates.

Peoria has also installed several bus stop bays alongside other roadway improvement projects. When these are constructed in combination with other projects, the costs are typically reduced. Additionally, development agreements can sometimes be negotiated for bus stop bays as new development is attracted to the City. Individually, a bus bay may cost approximately \$150,000. This is a highly variable estimate including estimated right of way (ROW) costs. Depending on the location of the infrastructure and other factors, ROW costs may greatly exceed this estimate. Without ROW, the approximate cost to construct a bus bay is \$50,000. Note that the City of Peoria has already constructed some of these facilities and a local determination of amenities and improvements is suggested for construction.

In addition to bus stop improvements, the City may also consider surrounding streetscape improvements, such as sidewalks or bicycle lanes to access transit services. These types of improvements are beyond the necessities of transit capital amenities; however, they can incentivize the use of transit and serve other benefits for the community including accessibility and safety.

## Fleet Impacts

Proposed service improvements require capital improvements and amenities alongside them to provide service and potentially increase the comfort of transit travel. Note that

items for advertising, bus stops, and expansion fleet have been omitted from the financial plan. This is due to the uncertainty of costs (i.e. a public/private agreement for bus stop construction in kind for advertising). In terms of expansion fleet, additional vehicles need to be considered at the time of implementation with a dedicated funding source. These purchases may be impacted by other services currently being operated, current spare fleet ratio, other planned or programmed services, or federal grant funding opportunities. Any implementation may be augmented by leasing vehicles should there be a need for vehicles more immediately than they may be manufactured. Ultimately, the variability of fleet and fleet purchases led to the exemption of these costs until implementation year of services is committed.

Standard buses (40' route fleet) typically have a replacement cycle of 12 years. Circulator vehicles (30' cutaways) have a replacement cycle of 8 years. After the initial purchase, replacement standard fleet may be programmed through the Regional Fleet Plan, applying for federal and regional funding opportunities. Circulator vehicles may be programed into the TLCP if funding is available.

### **Long-Range Improvements**

Other recommendations identified for implementation beyond the priorities listed include several route options identified previously through Prop 400, NWVLTSS, and other planning documents. Additional transit services should be considered upon the completion of the short-range recommendations pending sustainable funding sources.

In terms of capital facilities, higher degrees of amenities may be warranted where multiple routes intersect or larger passenger loads exist, for example, at a transit center. Express and commuter-oriented services may warrant a park-and-ride facility or added amenities to a joint-use parking lot. The City of Peoria currently has some transit facilities and is also undergoing a Transit Center and Park-and-Ride (PNR) Study to identify potential sites, amenities, and facilities for the future. Currently programmed in the TIP are funds for a PNR and transit center that were originally identified as part of the TLCP program update, shown in Table 3. As conditions change or future regional planning efforts are initiated, a needs assessment should be revisited. Approved funding for this project includes \$9,108,171 in federal, regional, and local funds over the FY15-FY17 period.

**Table 3 Grand/Peoria Park-and-Ride and Transit Center TIP Items<sup>4</sup>**

Phase	Funding	Federal	Regional	Local	Total
Regional park-and-ride (Grand/Peoria)	5307	\$5,247,239	\$1,311,811	\$0	\$6,559,050
Regional transit center (4-bay) Peoria	5307	\$2,039,296	\$509,825	\$0	\$2,549,121
<b>TOTAL</b>		<b>\$7,286,535</b>	<b>\$1,821,636</b>	<b>\$0</b>	<b>\$9,108,171</b>

Currently MAG oversees the programming of these federal funds per the MAG Federal Fund Programming Guidelines<sup>5</sup>; the Transportation Programming Guidebook<sup>6</sup> is also a helpful source for information about the regional programming of federal transit funds. **Appendix 5** outlines the general process for amending a project within the TLCP, TIP, and State Transportation Improvement Program (STIP).

## CONCLUSION

Previous studies as well as the Northwest Valley Local Transit System Study and the Short-Range Transit Program served as the guide for transit service improvements within the City of Peoria. Refinements to those concepts through the Peoria Transit Implementation Plan (PTIP) resulted in one efficient and effective grid route and one neighborhood circulator out of five recommendations analyzed for implementation. The PTIP recommendations help meet the internal circulation needs of the community and allow for future regional connectivity as funding becomes available. These transit services position the City to grow in the transit continuum.

The two recommendations are Route 83 – 83rd Avenue and the Happy Valley Circulator route.

<sup>4</sup> [TIP FY14-FY18 Highway and Transit Projects as Approved June 24, 2015](#)

<sup>5</sup> [MAG Federal Fund Programming Guidelines Approved 6-24-2015](#)

<sup>6</sup> [Transportation Programming Guidebook - FY 2016](#)

Table 4 below depicts general characteristics of these recommendations including the days, hours, and frequency of operations, gross operating costs, number of vehicles needed and fleet costs. This anticipates Route 83 implementation in FY18 and the Happy Valley Circulator implementation in FY20. Reducing or delaying the implementation of one service or another decrease transit accessibility within the City of Peoria but may help achieve a balanced and sustainable plan without additional funding resources. It is recommended that funding sources be secured for implementation of the refined concepts. Other improvements highlighted in the Plan may be implemented in the future, as funding is available.

**Table 4 Proposed Transit Service Summary – General Characteristics of Prioritized Routes**

Route	Days of Service	Span of Service	Frequency	Annual Gross Operating Cost*	Fleet Required	Fleet Cost*
Route 83 - 83rd Avenue	Weekday	16 hours	30 min.	\$1,143,000	5	\$2.8M
	Saturday	16 hours	60 min.			
	Sunday	16 hours	60 min.			
Happy Valley Circulator	Weekday	12 hours	30 min.	\$674,000	5	\$890,000

\*FY16 dollars

Note: ADA paratransit service has been included in the financial model

Annual gross operating costs are estimated using a rate per mile depending upon service type. These can vary annually due to fuel prices and other external factors; however, are typically assumed to increase with inflation each year. Fleet costs are estimated and depending on the type of vehicle, fleet will need to be replaced every 12 years approximately<sup>7</sup>.

<sup>7</sup> Fleet replacement schedules for circulator vehicles are estimated at 8 years.

## Appendix 1 Summaries of Area-Specific Studies

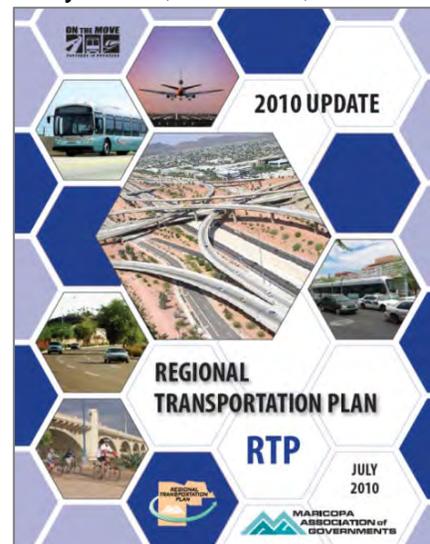
### ***Regional Public Transit Authority Comprehensive Arterial Bus Rapid Transit Planning Study, 2009***

The 2009 RPTA Comprehensive Arterial BRT Planning Study provides a vision for the Valley's future BRT network. As BRT service lacks a single definition, the study was commissioned to determine both the operational characteristics and appropriate level of capital treatments for each of the BRT corridors identified in the RTP that include Arizona Avenue, Grand Avenue, Scottsdale/Rural Road, South Central Avenue/Baseline Road, and Chandler Boulevard. Specific BRT elements explored include traffic signal priority, station design and spacing, vehicles, fare collection, and real-time passenger information.

Of particular interest to the City of Peoria are the recommendations for service in the Grand Avenue corridor. Based on the sporadic development patterns and adjacent land uses, the study recommends the continuation of commuter-oriented express bus service rather than the implementation of arterial BRT service. As demand for service in the off-peak direction is limited, the study contends that continuing peak-period, peak-direction express service is the most appropriate transit investment for the corridor, at least in the near and mid-term. In the long-term, the study recommends introducing some off-peak directional trips, as dictated by demand. While no right of way improvements are identified, the study does recommend implementing transit signal priority treatments where feasible to enhance transit's speed and viability as a commuting option within the corridor.

### ***MAG Regional Transportation Plan 2010 Update, 2010***

The RTP serves as the guiding vision for coordinated transportation investments in the greater Phoenix metropolitan region. The RTP outlines a series of mobility goals and actions over the next 20 years to improve transportation systems, facilities, and the movement of people and freight within and through the region. Among the transit service improvements identified, several new transit services and route extensions are expected to improve mobility options in the City of Peoria and surrounding municipalities. However, most of these projects occur in later phases of the RTP and are scheduled for implementation in the 2026-2031 range. Extensions of existing services are planned for Route 90 (Olive Avenue) from 67<sup>th</sup> Avenue West to Litchfield Road and Route 138 (Thunderbird Road) from 59<sup>th</sup> Avenue West to Litchfield Road by 2031. Service on new corridors includes Supergrid routes on 83<sup>rd</sup>/75<sup>th</sup> Avenue from Thomas Road to Beardsley Road (2025) and 99<sup>th</sup> Avenue from Buckeye Road to Bell Road (2031). Additionally, a new express route connecting Peoria to downtown Phoenix is



scheduled for implementation between 2026 and 2031. As these plans span 20 years, some of the planned long-range improvements are adjusted to reflect growing and developing communities at the time of implementation. The Supergrid route on 83<sup>rd</sup>/75<sup>th</sup> Avenue scheduled for operation in 2025 may be adjusted to fit the nearby region on either 75<sup>th</sup> Avenue or 83<sup>rd</sup> Avenue as deemed appropriate and approved by the appropriate committees, councils, and boards.

### ***MAG Regional Transit Framework Study, 2010***

The MAG Regional Transit Framework Study was developed to identify and prioritize regional transit improvements as a supplement to the RTP. It also features a longer planning horizon, considering long-range transportation needs through the year 2050. Through a careful analysis of socioeconomic conditions, land uses, existing/planned transit services, and several other criteria, a number of system deficiencies were identified. These deficiencies were grouped into the following three general categories: service area coverage, passenger convenience, and funding and seamless service. From these deficiencies, four categories of regional transit needs emerged. These include:

- new and expanded transit services
- new service corridors
- higher-speed travel opportunities
- new revenue sources

With these transit improvements in mind, three regional transit funding scenarios were developed for 2030, each building on the improvements identified in the RTP.

Within Peoria, some highlights of this study were major investment corridor recommendations in the following corridors:

- Grand Avenue
- Bell Road
- Loop 101/Agua Fria
- UP Yuma Corridor
- Dunlap Avenue/Peoria Avenue/Shea Boulevard

Note that all of these recommendations fell into Scenario II or Scenario III displaying Enhanced Mobility and Transit Choice, respectively. The corridors represent a general area, not a specific street, roadway, or railway. For example, the Grand Avenue service may be operated on Grand Avenue or another nearby roadway. Furthermore, the lengths of the corridors vary by scenario as well. Improvements range from Supergrid Routes, Regional Connector Routes, Express Routes, and Bus Rapid Transit (BRT) Routes to High-Capacity Transit (HCT) routes. Improvements identified beyond 2030 include options servicing North Peoria.

### ***Peoria Multi-Modal Transportation Plan, 2011***

The Peoria Multi-Modal Transportation Plan was developed to promote the creation of a balanced transportation system in Peoria, to examine how transit could better link Peoria to the rest of the Valley, and determine how transit could enhance the City's character and encourage smarter urban growth. As such, the plan reviewed existing and programmed transit services in Peoria, performed an analysis of current and future transit demand, and evaluated a number of potential service options with associated costs, ridership, and productivity estimates. This work resulted in several recommendations including:

- Extend Valley Metro services into Peoria rather than developing strictly local circulator services
  - Extend Route 138 (Thunderbird) west through Peoria
  - Develop a new route on 83<sup>rd</sup> Avenue
- Provide full service on existing routes and new transit services, as only certain trips (and no weekend service) currently operate in Peoria
- Use local revenues to offset state funding cuts to maintain Dial-a-Ride services in Peoria
- Improve bus stop facilities

### ***MAG Northwest Valley Local Transit System Study, 2013***

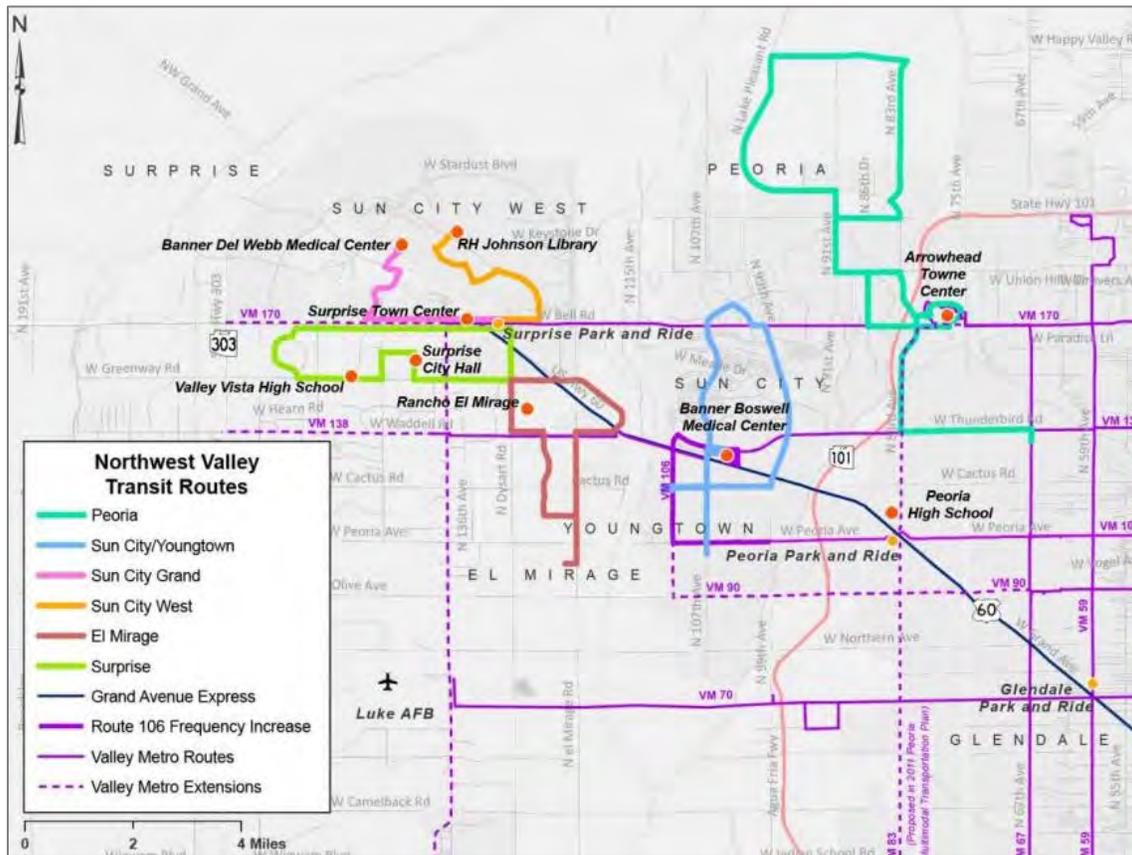
The MAG Northwest Valley Local Transit System Study (NWVLTSS) was developed with the intent to identify transit needs in the Northwest Valley while developing practical and sustainable transportation solutions in response to the growing population base of this region. The study identified several preferred transit priorities including improved access to local retail centers and healthcare centers via public transit, implementation of local circulators as a means of addressing intra-community needs, and improved transit service to destinations beyond the Northwest Valley, especially downtown Phoenix and Sky Harbor International Airport.

The NWVLTSS took a multi-pronged approach to identify the transit markets and needs in the Northwest Valley. The study approach was the following: data analysis (e.g. MAG travel demand model and demographic/socioeconomic analysis), public input (e.g. stakeholder meetings, online and in-person surveys), and community workshops by which residents and stakeholders could share their thoughts and perspectives on possible future transit service in the Northwest Valley.

Several transit improvements are recommended for implementation over the next five to ten years that would substantially improve mobility options in Peoria. These include the extensions of Routes 138 (Thunderbird Road) and 170 (Bell Road) to Surprise and increased frequencies on Route 106 (Peoria Avenue/Cactus Road). Additionally, a series of long-term transit improvements were also identified. These include establishing high-capacity transit service in the Grand Avenue corridor from Surprise to downtown Phoenix, implementing a local fixed-route bus service along 83rd Avenue

connecting Peoria to the Arrowhead Towne Center, and extending Route 90 west along Olive Avenue and north along 111th Avenue to the intersection with Peoria Avenue. All of the long-term service recommendations for the Northwest Valley are depicted in Figure 7.

**Figure 7 Northwest Valley Transit System Study – Long-Term Service Recommendations**



**Source:** MAG Northwest Valley Local Transit System Study, 2013

## Appendix 2 Short-Range Transit Program

The Short-Range Transit Program (SRTP) was collaboratively developed with member agencies, including Peoria, and documents future transit modifications and certifies corresponding funding commitments from Valley Metro and its member agencies for such modifications and associated capital improvements. The SRTP identifies transit service improvements needed during the next five years and builds upon previous and ongoing Valley Metro efforts. The SRTP identifies regional and local transit service improvements programmed in the Transit Life Cycle Program (TLCP), as well as local operating budgets, for the next five years (FY16-FY20). The SRTP is based on input submitted by individual member agencies, as well as concepts developed by Valley Metro staff. The SRTP is intended to be updated at a minimum every two years.

The SRTP is divided in two planning periods, the short-term (one to two years), known as 'production' years, and the long-term (three to five years), known as the 'development' years. Service improvements listed under production years must have committed funding sources and an implementation schedule. Service improvements under development years may not have committed funding and require further analysis.

For the "production" years, the SRTP analyzes all potential regionally funded modifications for the given fiscal years through a set of guiding principles and member agency feedback in order to program transit service changes for such fiscal years.

The SRTP evaluation methodology refers to the procedure taken by Valley Metro to identify service improvements over the next five years. The methodology builds upon previous and ongoing Valley Metro efforts, including Transit Life Cycle Program policies and Transit Standards and Performance Measures (TSPM). As part of TSPM efforts in December 2014, the Valley Metro RPTA Board adopted five performance measures to evaluate existing transit services:

- On-Time Performance
- Boardings per revenue mile
- Boardings per revenue hour
- Boardings per revenue trip
- Farebox Recovery

Based on the FY14 Transit Performance Report, routes that were within the top 25% or bottom 25% on any two of the five performance measures were identified for further evaluation. The quartiles are embedded in the SRTP guiding principles and are considered when prioritizing improvements by fiscal year.

The principles are used in significant service changes such as route extensions or new routes. The principles are not meant to analyze minor modifications such as schedule changes or weekend adjustments.

The Guiding Principles are split into two categories, existing and new service. The following is a matrix noting the different categories of evaluation:

	Financially Sustainable (Operations)	Financially Sustainable (Capital)	Current Transit Performance Threshold Quartiles	Route in Original Prop. 400 Plan	Supports Major High-Capacity Transit Investment	Future Performance
Existing Service	X	X	X		X	X
New Service	X	X		X	X	X

The SRTP used the following methodology to refine the local fixed-route service improvements<sup>8</sup>:

- **Adherence to Valley Metro Board-adopted service provision goals**
  - Implement services identified in the Regional Transportation Plan (RTP) in consideration of a performance-based system
  - Give high priority to services that focus on the transit-dependent populations
  - Provide transit service that is desirable as an alternate mode to automobile travel
  - Improve Valley Metro’s overall performance and promote the long-term financial stability of the agency
  - Promote expansion that builds existing services to meet standards and focuses new services in key areas, including the following:
    1. Higher population density
    2. Limited auto availability
    3. Low income
    4. Major activity centers
  
- **Performance in relation to the Transit Standards and Performance Measures Valley Metro Board adopted (TSPM) quartiles**
  - The quartiles serve as a tool for comparing and measuring the relative performance of individual services/operations by transit service-type category (e.g., Local and Key Local). The FY14 quartile metrics are provided below.

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<sup>8</sup> The circulator options were analyzed using a more suitable methodology for circulator service as the presented methodology is intended for fixed-route key local or local service.



**Table 6 SRTP Items Impacting Peoria**

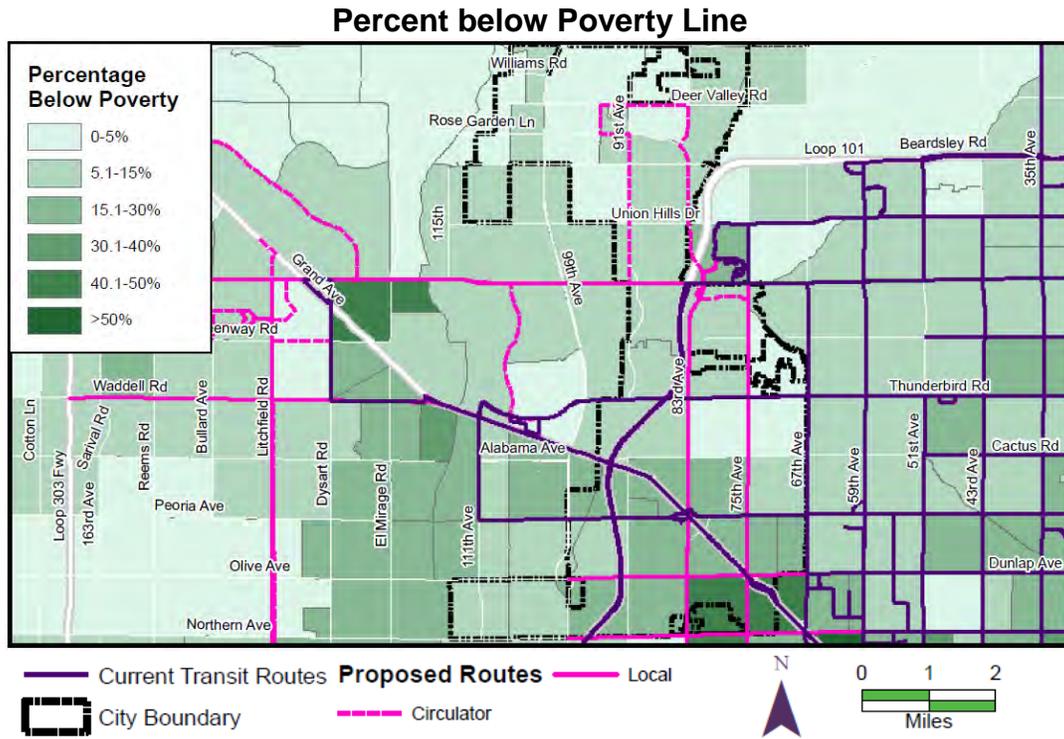
Route	Service Type	Requesting City/Town	Impacted City/Town	Change Type	Potential Service Change
83	Local	Peoria	Glendale, Phoenix, Peoria	Extension	Extend Route 83 to Arrowhead Town Center and remove duplication of service with Route 60
New	Circulator	Peoria	Peoria	New Route	Proposed Peoria Circulator to Connect to Arrowhead
80	Local	Peoria	Peoria, Glendale	Extension	Extend route 80 to 99th Avenue
90	Local	Peoria	Peoria	Extension	Extend Route 90 to 99th Avenue
170	Local	Surprise	Surprise, Glendale, Peoria, Maricopa County	Extension	Extend service to Surprise Civic Center <sup>9</sup>
75	Local	Valley Metro	Peoria, Glendale	Extension	Extend 75 to Arrowhead Town Center

The SRTP is divided in two planning periods, the short-term (one to two years), known as ‘production’ years, and the long-term (three to five years), known as the ‘development’ years. Service improvements listed under production years must have committed funding sources and an implementation schedule. Service improvements under development years may not have committed funding and require further analysis. Many of the options listed are currently in the development years of the SRTP. In addition to the NWVLTSS alternatives, the SRTP items are considered for implementation throughout the analysis and plan.

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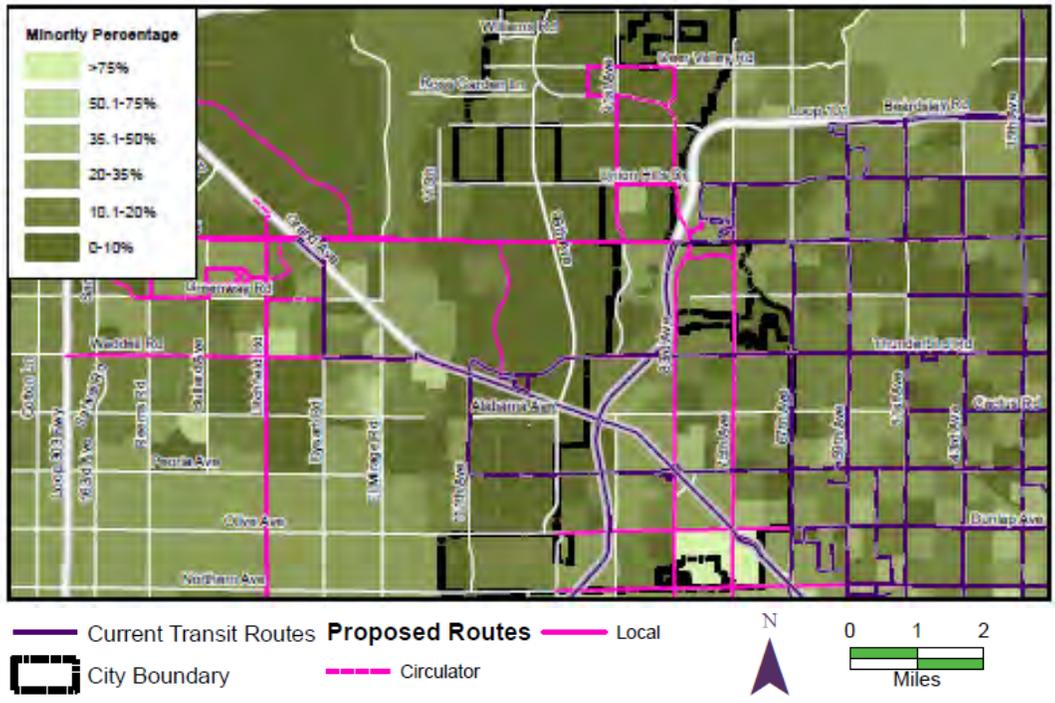
<sup>9</sup> Extension expected to be delayed until the Bell Road / Grand Avenue scheduled improvements have been completed. This may influence the anticipated change year.

## Appendix 3 Transit-Dependent Population Analysis



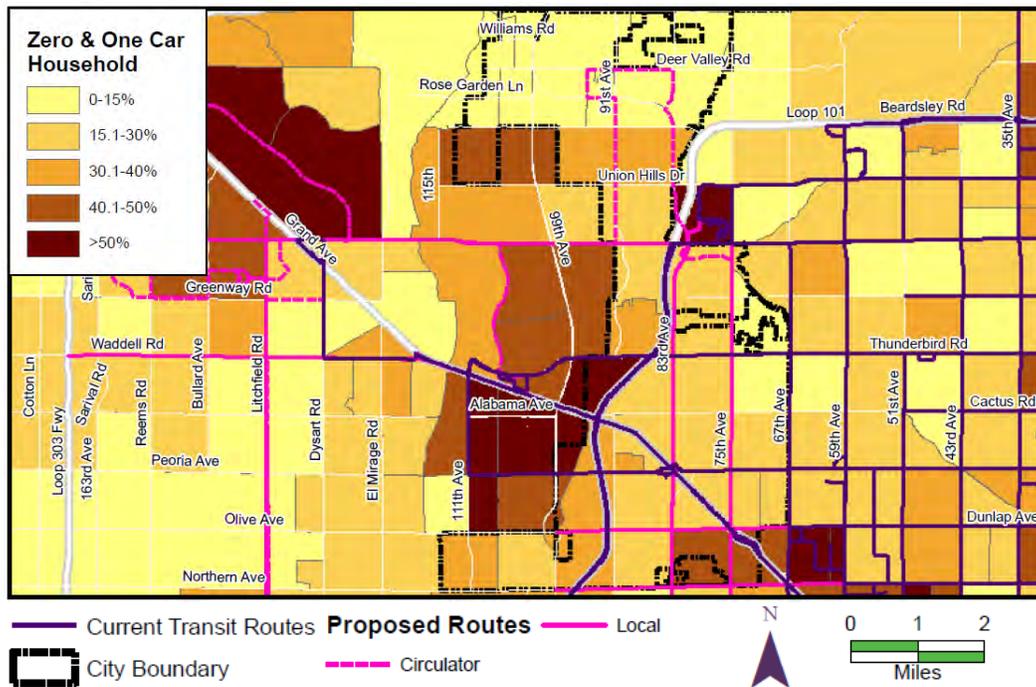
The Maricopa County average percent population below the poverty line is 26.2%.

### Minority Census Tracts



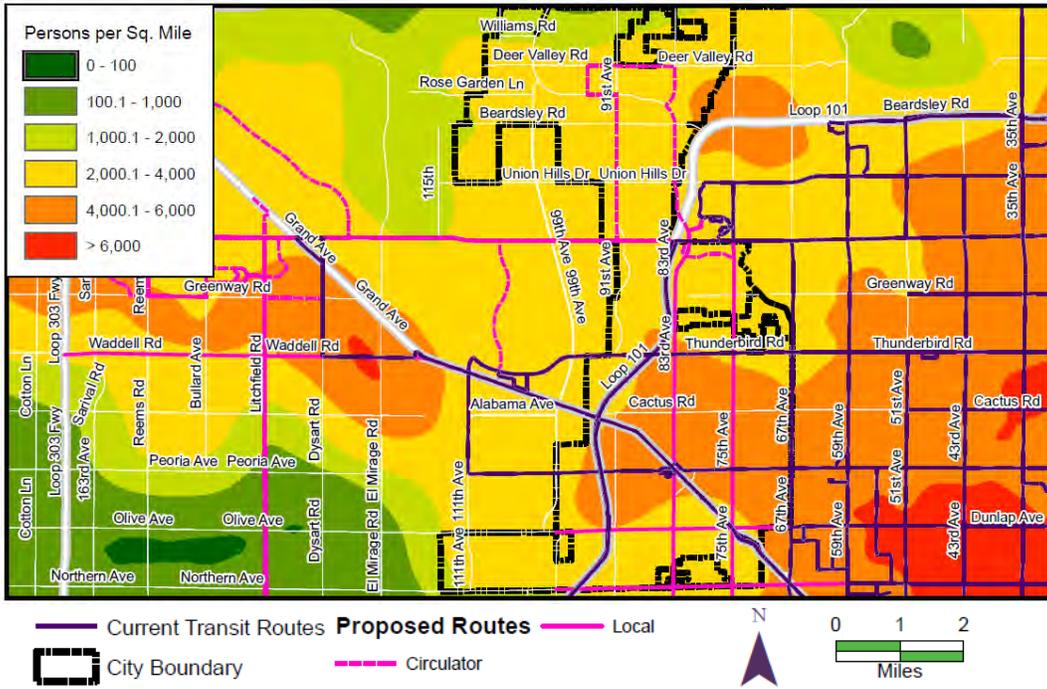
The Maricopa County average percent minority is 42.1%.

## Zero- and One-Car Households



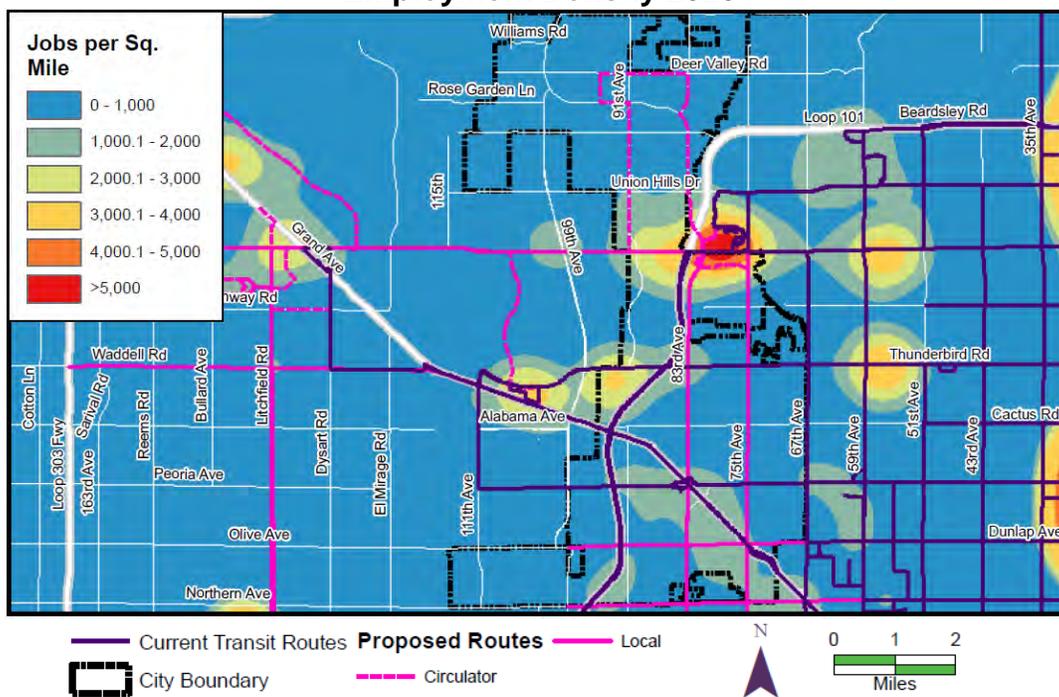
The Maricopa County average population within Zero- or One-Car Households is 27.4%.

## Population Density 2020



The Maricopa County average population density is 488.6 persons per square mile.

## Employment Density 2020



The Maricopa County average population density projected in 2020 is 250.7 jobs per square mile.

## Appendix 4 Route Descriptions

### Route 75 – 75<sup>th</sup> Avenue

#### Vehicle Routing

The proposed extension for Route 75 is as follows:

- Route 75 Northbound: From 75th Ave. and Camelback Rd., Route 75 will extend north just past Bell Rd.; west into Arrowhead Towne Center at the East Mall Entrance (traffic light); northwest on Inner Loop; south on driveway by Sears to the bus stop in front of the fountains.
- Route 75 Southbound from Arrowhead Transit Center: Route will exit east on Inner Loop; Exit east on East Mall Entrance; south on 75th Ave.; End at 75th Ave. and Lower Buckeye Rd.

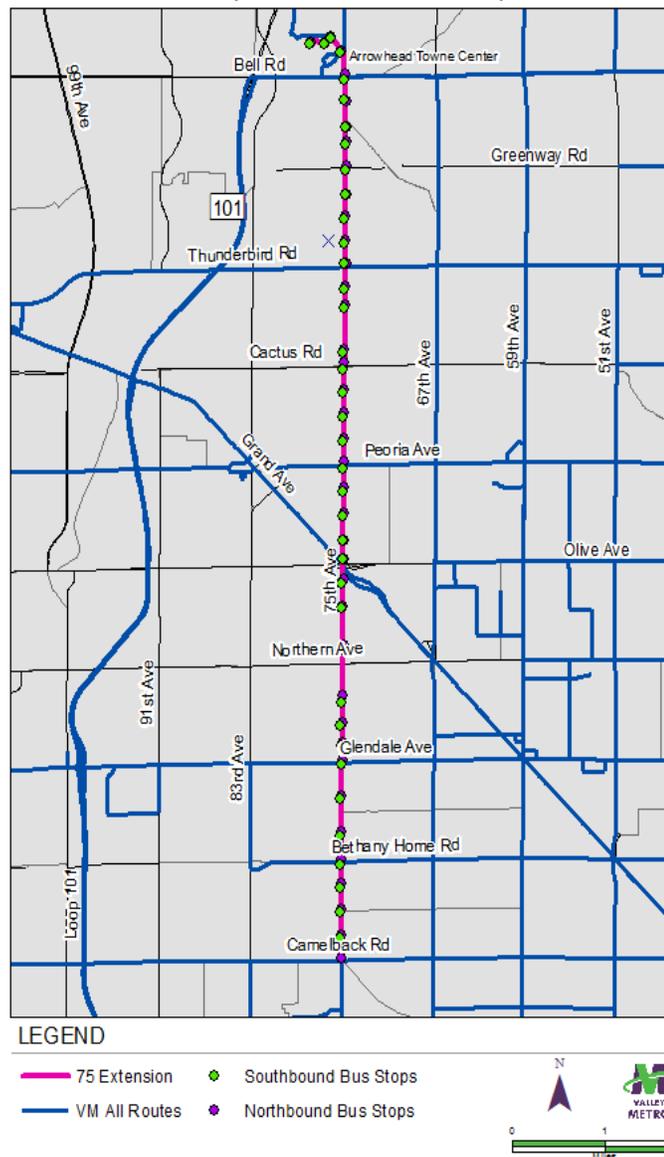
#### Operating Characteristics

The extension service is proposed to launch October 2019, operating Monday-Friday, 16 hours a day, at 30-minute frequency. On weekends, the route would operate 16 hours a day, at 60-minute frequency in alignment with the current operation of the route. The extension is approximately 182,900 additional annual operating miles. This equates to an approximate gross annual operating cost (FY16 dollars) of \$1,233,000 and a net cost of \$1,048,000 after fare recovery. This improvement will require five (5) additional vehicles and one spare, costing a total of approximately \$3,300,000. Note these vehicles may be interlined with Route 83 to potentially reduce the net fleet needs.

#### Projected Boardings

Route 75 extension is projected to have 1.94 boardings per revenue mile for the full extension.

**Route 75 Proposed Route and Stops**



## Route 90 – Dunlap Avenue/Cave Creek Road

### Vehicle Routing

The proposed extension for Route 90 is as follows:

- Route 90 Westbound: From 67<sup>th</sup> Ave. and Olive Ave., Route 90 will extend west along Olive until 99<sup>th</sup> Ave.
- Route 90 Eastbound: Route will begin at 99<sup>th</sup> Ave. and Olive Ave.; east along Olive Ave.; follow existing route starting at 59<sup>th</sup> Ave. and Dunlap Ave.

### Operating Characteristics

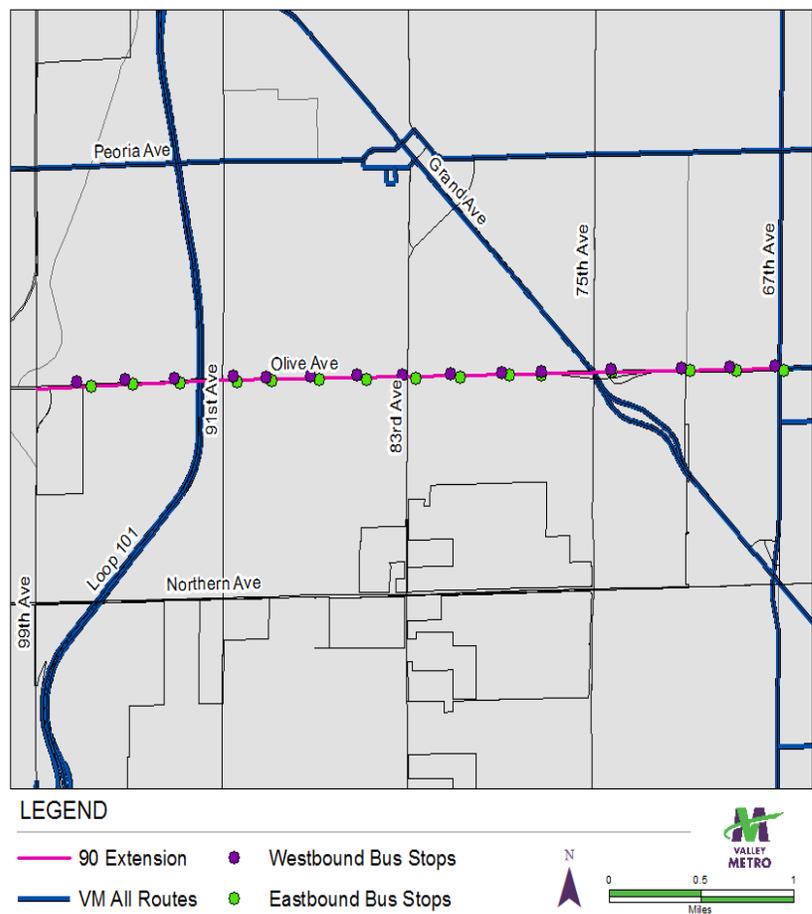
The extension service is proposed to launch October 2018, operating Monday-Friday, 16 hours a day, at 30-minute frequency. On weekends, the route would operate 15 hours a day, at 60-minute frequency in alignment with the current operation of the route.

The extension is approximately 78,000 additional annual operating miles. The extension equates to an approximate gross annual operating cost (FY16 dollars) of \$632,000 and a net cost of \$537,000 after fare recovery. This improvement will require one (1) additional vehicles and one spare, costing a total of approximately \$1,100,000.

### Projected Boardings

Route 90 extension is projected to have 1.74 boardings per revenue mile for the full extension.

Route 90 Proposed Route and Stops



## Route 170<sup>10</sup> – Bell Road

### Vehicle Routing

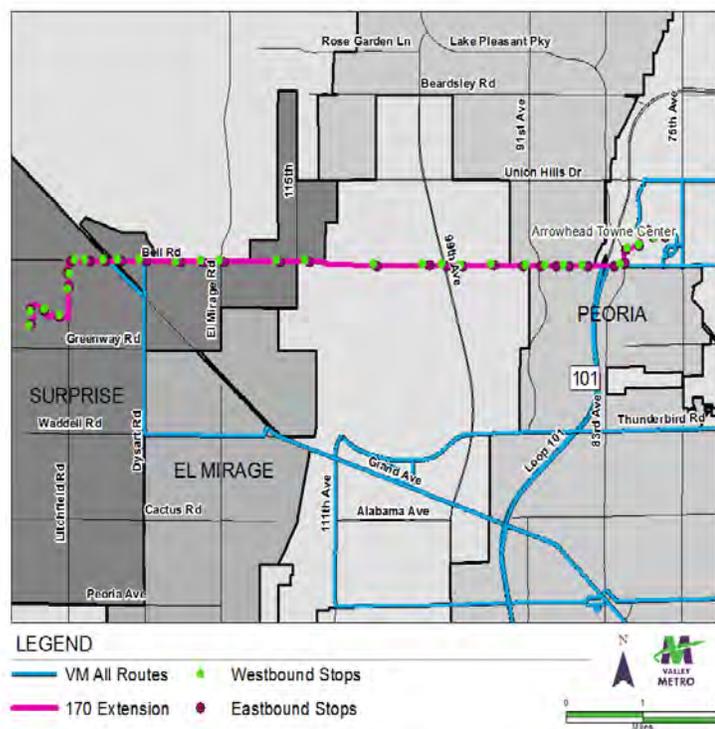
The proposed extension for Route 170 is as follows:

- Route 170 Westbound: from Arrowhead Towne Center, Route 170 will exit west on W. Campo Bello Drive; south on 83<sup>rd</sup> Ave.; West on Bell Rd.; South on Litchfield Rd.; West on Statler Street; North on W. Paradise Ln.; South on N. Civic Center Plaza; West on W. Tierra Buena Ln..
- Route 170 Eastbound: Route will begin at W. Tierra Buena Ln.; North on N. Civic Center Plaza; East on W. Paradise Ln.; East on Statler Street; North on Litchfield Rd.; East on Bell Rd.; North on 83<sup>rd</sup> Ave.; East on W. Campo Bello Drive; North on Arrowhead Towne Center; follow existing route starting in Arrowhead Towne Center.

### Operating Characteristics

The extension service is proposed to launch October 2018, operating Monday-Friday, 17 hours a day, at 30-minute frequency. On weekends, the route would operate 15 hours a day, at 60-minute frequency in alignment with the current operation of the route. The extension is approximately 30,500 additional annual operating miles within the City of Peoria. The extension equates to an approximate gross annual operating cost (FY16 dollars) of \$247,000 and a net cost of \$210,000 after fare recovery. This improvement will require two (2) additional vehicles and one spare, costing a total of approximately \$1,650,000.

Route 170 Proposed Route and Stops



### Projected Boardings

Route 170 extension is projected to have 1.3 boardings per revenue mile for the full extension.

<sup>10</sup> Route 170 is a regional extension through Peoria further into the West Valley. Vehicle routing, service parameters and projected boardings are considered for the entire route extension as proposed in the Short-Range Transit Program. Cost estimates and mileage are listed within the City of Peoria boundaries as the initial section for further expansion to occur as sponsored by surrounding jurisdictions.

**Appendix 5 Process to Amend Projects in Transit Lifecycle Program (TLCP),  
Transportation Improvement Program (TIP), and State Transportation  
Improvement Program (STIP)**

<b>Process to Amend TLCP</b>		
<b>Step</b>	<b>Product/Qualification</b>	<b>Approximate Period</b>
1. Jurisdiction requests TLCP project amendment to Valley Metro	<b>Product:</b> Proposal Letter	
2. Valley Metro requests TIP/STIP project amendment to MAG	<b>Product:</b> Proposal Letter <b>Qualification:</b> Request for TLCP project amendment	
3. Review Period	<b>Qualification:</b> Requests for project amendment	
4. Valley Metro Regional Transit Advisory Group	<b>Qualification:</b> Valley Metro Staff submittal	Two months; the TLCP amendment process occurs annually beginning in the month of January
5. Valley Metro Transit Management Committee	<b>Qualification:</b> Valley Metro Regional Transit Advisory Group acceptance	
6. Valley Metro RPTA Board of Directors	<b>Qualification:</b> Valley Metro Transit Management Committee acceptance	
7. Project amendment to TLCP	<b>Product:</b> TLCP amendment <b>Qualification:</b> Valley Metro RPTA Board of Directors acceptance	

Request for project changes that are regionally significant require both VM board acceptance and MAG Regional Council approval. Changes to the TIP require MAG Regional Council approval for inclusion in the statewide STIP. The MAG committee process takes approximately two months. Below the MAG Regional Council approval process is outlined.

<b>Process for Regional Council Approval and Inclusion in STIP</b>
1. MAG Transit Committee Reviews request and recommends approval
2. MAG Transit Review Committee Reviews request and recommends approval
3. MAG Management Committee Reviews request and recommends approval
4. MAG Transportation Policy Committee reviews request and recommends approval
5. MAG Regional Council Reviews request and approves changes
6. ADOT submits request to FHWA and FTA for inclusion of changes in the statewide STIP.
7. City of Phoenix applies for grant. MAG concurs grant application.

