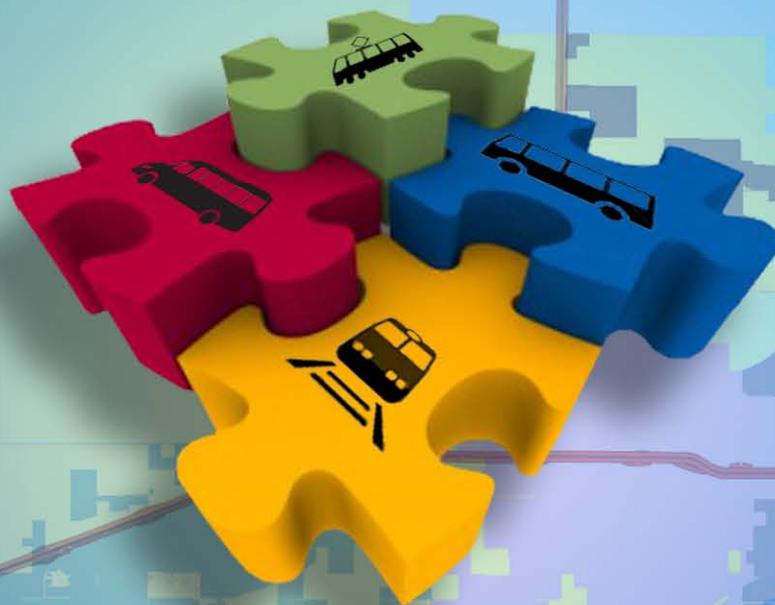


# Southwest Valley Local Transit System Study

## WORKING PAPER 3: EXISTING AND FUTURE CONDITIONS



Avondale | Buckeye | Goodyear | Litchfield Park  
Tolleson | West Phoenix | Maricopa County

Submitted to:



APRIL 2012

Submitted by:

**URS**

**WORKING PAPER 3:  
EXISTING AND FUTURE CONDITIONS  
SOUTHWEST VALLEY LOCAL TRANSIT SYSTEM STUDY**

Prepared by



April 2012





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## 1.0 INTRODUCTION

The Maricopa Association of Governments (MAG) Southwest Valley Local Transit System Study (SWVLTSS) will assess the transit service needs within the southwest subarea of the MAG region. The Study Area includes portions of the City of Phoenix, City of Avondale, City of Goodyear, City of Tolleson, City of Litchfield Park, Town of Buckeye, and unincorporated Maricopa County. As identified in Figure 1, this area will be evaluated to identify a transit system plan that outlines short-, mid-, and long-term goals to improve transit service within the Study Area.

This Working Paper provides an overview of the existing conditions and future growth potential of each jurisdiction within the Southwest Valley including an analysis of:

- Demographics;
- Land Use;
- Travel Patterns and Markets;
- Transportation Characteristics; and
- Transit Service.

### 1.1 STUDY AREA OVERVIEW

As identified in Figure 1, the SWVLTSS Study Area includes portions of the City of Phoenix (West Phoenix), City of Tolleson (Tolleson), City of Avondale (Avondale), City of Goodyear (Goodyear), City of Litchfield Park (Litchfield Park), and the Town of Buckeye (Buckeye) as well as parts of unincorporated Maricopa County (Maricopa County). The Study Area is located approximately eight miles west of downtown Phoenix. The eastern boundary is located near the 67<sup>th</sup> Avenue alignment in West Phoenix and extends to the Hassayampa River west of the Town of Buckeye. Camelback Road is the northern boundary of the Study Area and it extends south between the Estrella and Maricopa Mountains to just south of the Union Pacific Railroad (UPRR) tracks near the Maricopa/Pinal Counties border west of the City of Maricopa.

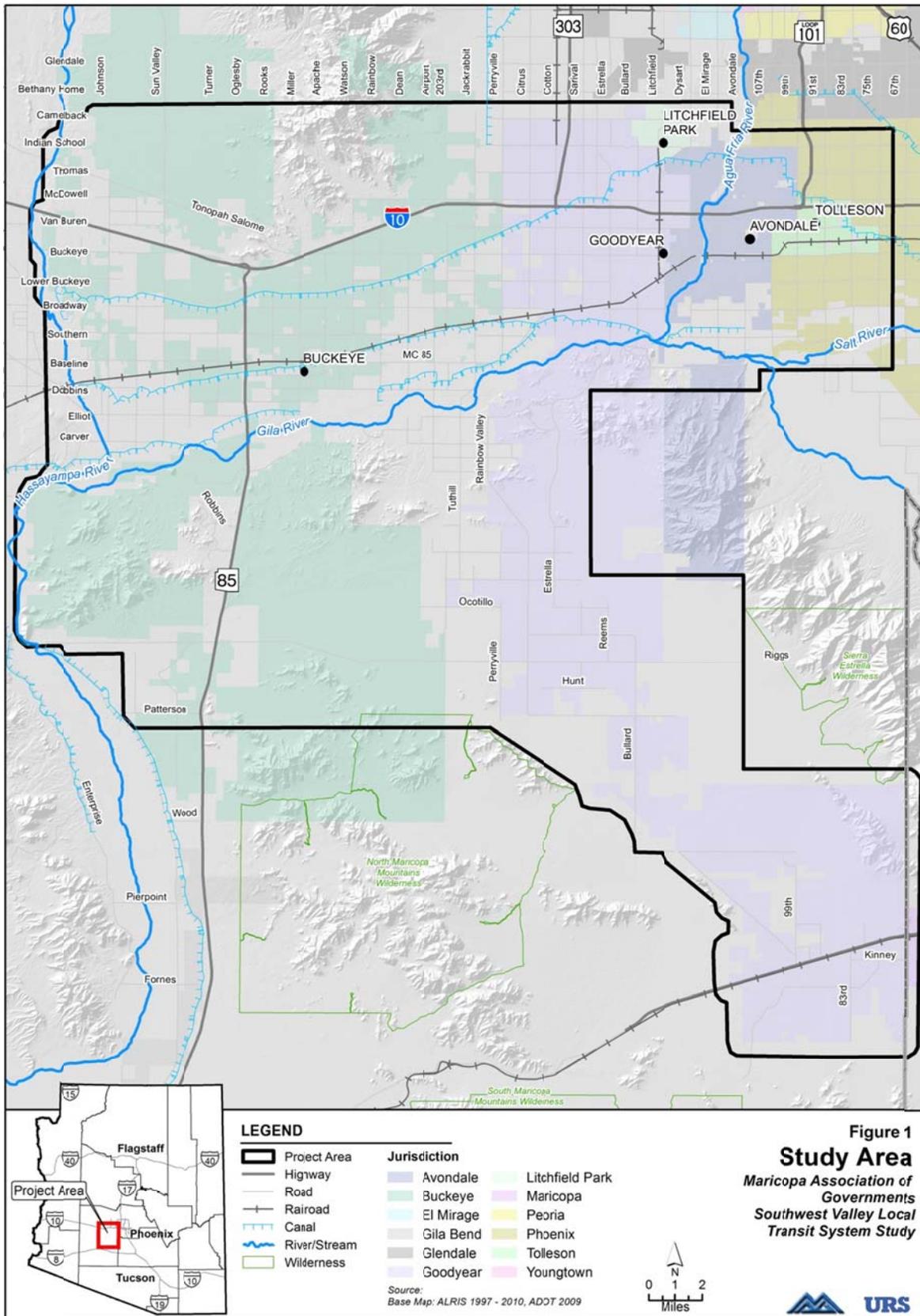
Unincorporated Maricopa County comprises nearly 40% of the Study Area, while the Town of Buckeye encompasses the largest jurisdictional portion at nearly 30% of the total. Table 1 breaks down the acreage of each jurisdiction located within the Study Area.

**Table 1 Study Area Breakdown by Acre**

Jurisdiction	Number of Acres	Percent of Total	2010 Census Population	2010 Population/Acre
Phoenix	15,770	3.5%	98,825	6.27
Tolleson	3,330	0.7%	6,172	1.85
Avondale	16,249	3.6%	75,588	4.65
Goodyear	111,785	24.6%	65,173	0.58
Litchfield Park	2,052	0.5%	5,065	2.47
Buckeye	130,923	28.9%	47,612	0.36
Unincorporated County Land	173,629	38.3%	31,188	0.18
<b>Total</b>	<b>453,738</b>	<b>100%</b>	<b>329,623</b>	<b>0.73</b>

Source: MAG, 2007 and U.S. Census Bureau, 2011.

Note: These numbers include only the portions of each jurisdiction within the study area.





## 2.0 RELEVANT PREVIOUS STUDIES AND MUNICIPAL GENERAL PLANS

Local and regional transportation and transit studies and plans that are relevant to the Southwest Valley and the MAG region including local municipal general plans were reviewed to understand the full context of planning efforts surrounding the Study Area. Table 2 provides a summary of the studies and plans that were reviewed, with additional detail on each study following. These studies and plans offer insight on the history, growth, and future potential of the Southwest Valley Study Area.

**Table 2 Relevant Studies and Municipal General Plans Summary**

Study or Plan	Date	Application to SWVLTSS	Notes
<b>Relevant Previous Transportation Studies</b>			
Avondale Circulator (MAG, Avondale)	Completed 2010	<ul style="list-style-type: none"> <li>Plan for circulator service in Avondale implemented in 2011 and now part of baseline conditions for SWVLTSS.</li> </ul>	Recommendations have been implemented.
Avondale Transit Center Site Selection Study (MAG, Avondale)	Completed 2010	<ul style="list-style-type: none"> <li>Evaluated locations of future transit center and PnR in the Avondale City Center based on analysis of bus service and City plans.</li> </ul>	Requires funding to advance design and construction.
City of Avondale Draft Transportation Plan Update	Ongoing	<ul style="list-style-type: none"> <li>Recommendations to address roadway congestion, safety, and transit service</li> </ul>	Expect adoption in 2012.
Goodyear Neighborhood Circulator Study (Goodyear)	Completed 2009	<ul style="list-style-type: none"> <li>Circulator service recommendations for Goodyear.</li> </ul>	Funding required to implement service.
Yuma West Corridor Development Plan (MAG)	Completed 2010	<ul style="list-style-type: none"> <li>Feasibility analysis of commuter rail corridor through the Study Area.</li> </ul>	Funding required to advance planning.
Commuter Rail System Study (MAG)	Completed 2010	<ul style="list-style-type: none"> <li>Analysis of operating scenarios and priorities for commuter rail in the MAG region.</li> </ul>	Recommendations included as part of overall analysis for Phoenix-Tucson passenger rail study (ongoing).
Regional Transit Framework Study (MAG)	Completed 2010	<ul style="list-style-type: none"> <li>Provides overall framework for evaluating regional transit priorities; regional context for SWVLTSS.</li> </ul>	Study is key reference point for planning transit in MAG region.
Phoenix West AA/EIS (METRO)	Ongoing	<ul style="list-style-type: none"> <li>Potential high capacity transit corridor from downtown Phoenix to West Phoenix could provide options to Southwest Valley residents.</li> </ul>	Ongoing.
Regional Transportation Plan 2010 Update (MAG)	Completed 2010	<ul style="list-style-type: none"> <li>Outlines programmed transit investments for the MAG region.</li> <li>SW Valley planned service includes BRT from I-10 to Buckeye; rural routes to Gila Bend; Supergrid service west to Avondale; light rail extension to 79<sup>th</sup> Avenue.</li> </ul>	Ongoing evaluation against forecasted revenues. In some cases planned service has been delayed.



Study or Plan	Date	Application to SWVLTSS	Notes
Transit Life Cycle Program (RPTA)	Ongoing	<ul style="list-style-type: none"> <li>Budget process to align forecasted/budgeted revenues with transit investments.</li> </ul>	Ongoing evaluation against forecasted revenues. In some cases service has been eliminated or delayed.
Sustainable Transit and Land Use Integration Study (MAG)	Ongoing	<ul style="list-style-type: none"> <li>Provide recommendations on integrating transportation and land use planning to enhance the transit-readiness of corridors and increase productivity.</li> </ul>	Ongoing.
Central Phoenix Framework Study (MAG)	Ongoing	<ul style="list-style-type: none"> <li>Includes the area east of SR-101; will develop framework for multimodal transportation network.</li> </ul>	Ongoing.
I-10 Hassayampa Valley Framework Study (MAG)	Completed 2007	<ul style="list-style-type: none"> <li>Regional roadway framework for West Valley; context for SWVLTSS.</li> </ul>	Planning reference.
I-8 and I-10 Hidden Valley Framework Study (MAG)	Completed 2009	<ul style="list-style-type: none"> <li>Regional roadway framework for West Valley; context for SWVLTSS.</li> </ul>	Planning reference.
Regional Paratransit Study (RPTA)	Completed 2008	<ul style="list-style-type: none"> <li>Recommendations to improve paratransit service and promote regional consistency.</li> </ul>	Planning reference.
Regional Transit System Study (RPTA)	Completed 2003	<ul style="list-style-type: none"> <li>Recommended future regional transit system plan including components for Southwest Valley. Methodology also of interest.</li> </ul>	Planning reference.
City of Phoenix HCT Corridor Study	Completed 2009	<ul style="list-style-type: none"> <li>Recommended the I-10, SR 101, Thomas Road, and Buckeye Road corridors as high capacity transit corridors that would serve the southwest valley.</li> </ul>	Planning reference
<b>Relevant General Plans</b>			
City of Phoenix	Adopted 2001	<ul style="list-style-type: none"> <li>The Circulation element provides support for a multi-modal transportation system.</li> <li>The Village of Maryvale is developing a Village Core Plan that will include an assessment of transit-oriented development.</li> </ul>	In the process of being updated. A draft document was released in late 2010.
City of Tolleson	Adopted 2005	<ul style="list-style-type: none"> <li>The City shows support for alternative transportation systems including future Commuter Rail and BRT services.</li> </ul>	Planning reference.
City of Avondale	Adopted 2002	<ul style="list-style-type: none"> <li>The Circulation element shows strong support for future transit service.</li> <li>The ongoing 2030 update provides transit supportive land use changes in the I-10 corridor, along Avondale Blvd, and areas to the south.</li> </ul>	In the process of being updated. A draft has been released and is available for comment as of January 2012.
City of Goodyear	Adopted 2003	<ul style="list-style-type: none"> <li>Identifies SR-303 alignment throughout the Study Area.</li> <li>Goal B of the Circulation element acknowledges a desire to improve internal transit service.</li> <li>Identifies support for a neighborhood circulator service.</li> </ul>	Planning reference.



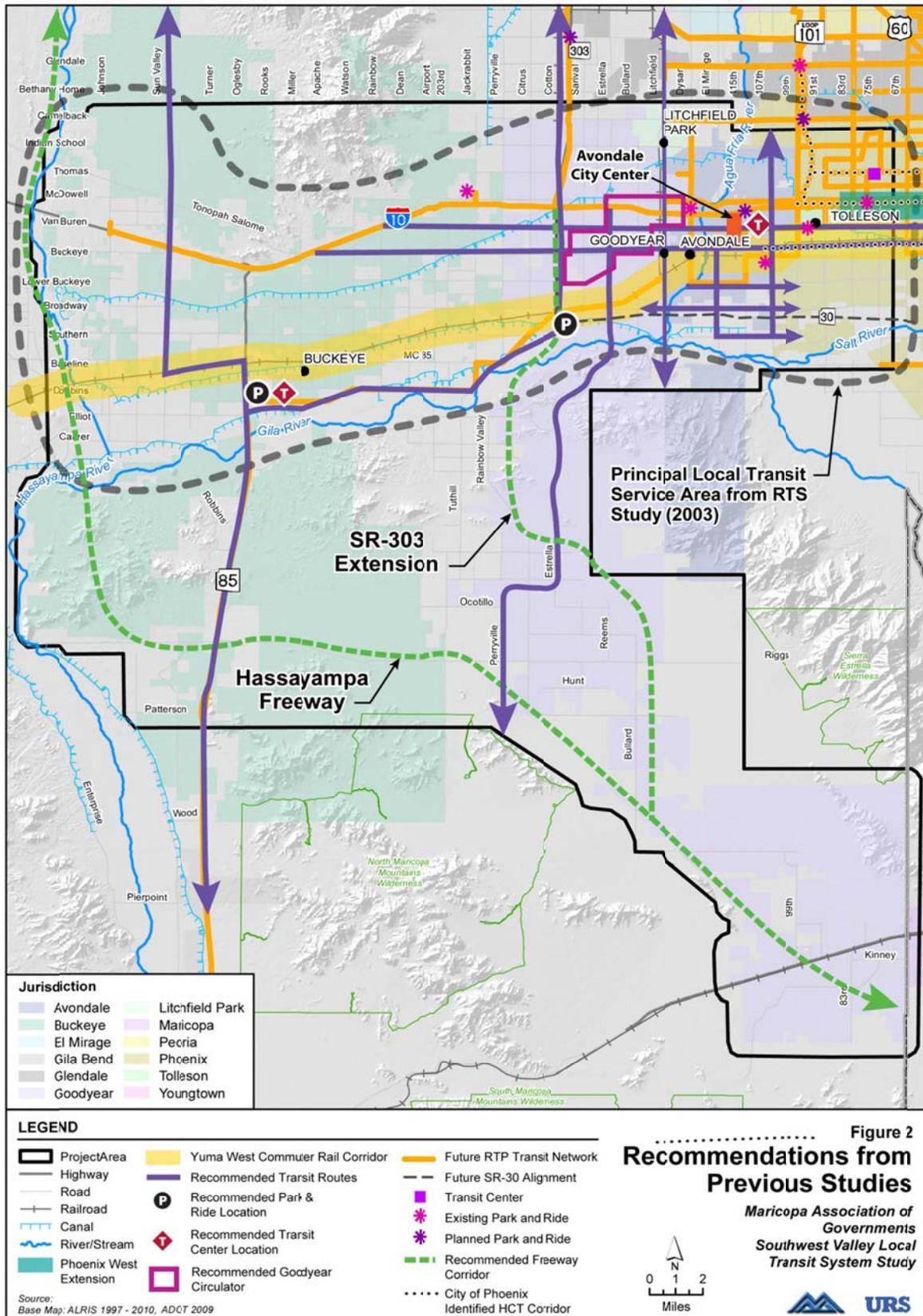
Study or Plan	Date	Application to SWVLTSS	Notes
City of Litchfield Park	Adopted 2010	<ul style="list-style-type: none"> <li>Identifies and supports the need to work with adjacent jurisdictions in regards to improving local transit service.</li> </ul>	Planning reference.
Town of Buckeye	Adopted 2008	<ul style="list-style-type: none"> <li>Shows support for localized transit service.</li> <li>The Circulation element recognizes the necessity for a multi-modal transportation system and recommends the creation of a transit master plan.</li> </ul>	Planning reference.
Maricopa County Comprehensive Plan	Adopted 2002	<ul style="list-style-type: none"> <li>Provides support for regional coordination toward creating a multi-modal transportation system.</li> </ul>	Planning reference.

Source: Project Team, 2011.

The summarized studies and general plans helped to identify recommended projects, outside of the MAG RTP throughout the Southwest Valley Study Area. These recommendations will provide a starting point for this local transit system study to evaluate and analyze additional future transit needs and include:

- **Proposed Hassayampa Freeway** recommended in the MAG I-10 Hassayampa Valley Framework Study (2007)
- **Proposed SR-303 Extension** recommended in the MAG I-8 and I-10 Hidden Valley Framework Study (2009)
- **Yuma West Commuter Rail Corridor** recommended in the MAG Regional Transit Framework Study (2010) and the MAG Yuma West Commuter Rail Corridor Development Plan and Commuter Rail System Study (2010)
- **Future Transit Routes** recommended in the MAG Regional Transit Framework Study (2010) and the Avondale Transportation Plan (2006)
- **Avondale City Center** proposed in the Avondale City Center Specific Area Plan (2008) as well as in the 2030 Avondale General Plan Update (ongoing).
- **Avondale Transit Center** identified in the Avondale City Center Specific Area Plan (2008) as well as the Avondale Transit Site Selection Study (2010).
- **Goodyear Park-and-Ride** recommended as part of Scenario III in the MAG Regional Transit Framework Study (2010) to be operational by 2030.
- **Buckeye Park-and-Ride and Transit Center** recommended as part of Scenario III in the MAG Regional Transit Framework Study (2010) to be operational by 2030.
- **Goodyear Neighborhood Circulator** pilot route was recommended by the Goodyear General Plan (2003) and supported in the City of Goodyear Neighborhood Circulator Study (2009).
- **Phoenix West Extension** recommended and supported in the MAG 2010 RTP Update (2010) as well as in the Phoenix West Extension Alternatives Analysis/ Environmental Impact Statement (ongoing). The Phoenix West Extension is scheduled to be operational by 2021.

Figure 2 illustrates previously recommended projects and their location throughout the Southwest Valley Study Area.

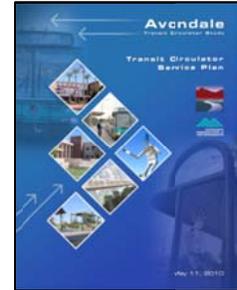




## 2.1 LOCAL TRANSIT PLANS

### 2.1.1 Avondale Circulator Study

The Avondale Transit Circulator Study developed recommendations for future local transit service in Avondale. This study identified future options for circulator routes to connect local population and employment centers, existing and planned transit facilities, retail centers, and public facilities. Community input was a key component and a public survey was administered in order to understand public opinion to help develop conceptual alternatives for evaluation. The following objectives guided the study process, with the ultimate purpose of the study being to identify a recommended route for future circulator service:



- Conduct a comprehensive, market-based evaluation of transit circulator needs in Avondale
- Ensure the study results are coordinated with on-going regional transit plans and studies
- Define a phased implementation plan that allows Avondale to expand transit circulator service over time, in coordination with development trends and available revenues
- Develop a sound financial plan that identifies capital and operating costs and potential sources of revenue
- Foster widespread community support for transit circulator service through effective public involvement

In support of the final recommendations, the study focused on identifying existing characteristics of Avondale and peer city operating systems. Through this background research an alternatives development process was developed to create a broad range of conceptual options. Five conceptual alternative routes were developed and evaluated focusing on how they served different purposes, communities, and activity centers throughout Avondale. The recommended route was adopted by the City of Avondale and started service in July 2011 and included a 14-mile route with daily 30 minute service operating between 5:30am and 9:00pm.

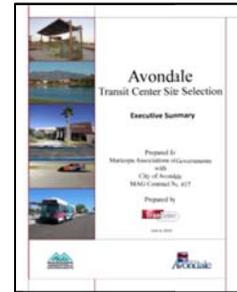
This study is a recent example of an approach that directly served a Southwest Valley community and addressed internal circulation needs as well as set the stage for linking local transit service with the regional system in the future. This study provided an initial step in realizing a portion of the overall goal for the Southwest Valley of increase transit service within the Study Area.



### 2.1.2 Avondale Transit Center Site Selection Study

The Avondale Transit Center Site Selection Study identified a template for the development of a transit center and park and ride facility in Avondale. This study reviewed and analyzed the existing and future conditions relative to transit activities in Avondale in addition to:

- Implementing a public involvement plan;
- Developing a site selection process;
- Completing NEPA CE for two sites;
- Performing a detailed site evaluation and conceptual design; and
- Exploring funding options for a financial plan for implementation and operation.

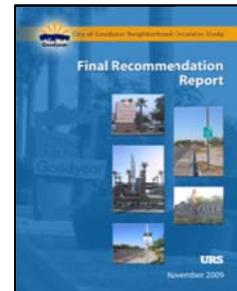


The City of Avondale is growing year by year and needs to address transit services for both local and commuter operations. Thus, the development of a transit center and associated park and ride facility fits within the master planned guidelines of the Avondale City Center.

If realized, the recommendations in this study will provide the City of Avondale and the Southwest Valley Study Area another Transit Center and Park and Ride location. This option will further connect the Southwest Valley with regional transit access and allow improved circulation throughout the Study Area.

### 2.1.3 City of Goodyear Neighborhood Circulator Study

The City of Goodyear Neighborhood Circulator Study explored neighborhood circulator options in the City of Goodyear. Two contributing factors to the development of this study included gathering public input to gauge resident's interest and recommendations and background information derived from interviews conducted with peer cities that operate successful circulator services. Results of these interviews as well as those from a public survey led to the Final Circulator Service Plan. The final plan recommended a starter route, operations plan, and funding opportunities to implement a circulator service. Recommendations included:



- Potential federal funding opportunities
- A one-way Pilot Route that connects activity centers, existing transit service, and residents.
- Operation of the Pilot Route as a fixed route service with deviation for ADA certified individuals
- Mobile circulator bus stop signs and flag-stop zones should be identified along the route
- Establish a minimum age requirement for children riding alone
- Operate smaller shuttle style vehicles
- Hire a local private contractor to initiate service
- Provide for expansion when appropriate



Because the City of Goodyear is a community within the Southwest Valley Study Area, implementation of a circulator service would help to enhance local transit service within the Study Area and provide improved local connectivity within, through, and around the City of Goodyear.

#### **2.1.4 Avondale Transportation Plan**

Adopted in 2006, the Avondale Transportation Plan is undergoing an update that is expected to be completed in 2012. This plan documents findings and recommendations for projected travel demand, future network deficiencies, and improved circulation elements throughout the City by 2026. Focused on the Avondale Northern Planning Area which spans from Indian School Road south to the Gila River between 99<sup>th</sup> Avenue and Dysart Road, this plan defines short- and long-term transportation needs based on projected future growth scenarios. In addition, the Avondale Transportation Plan not only identifies future projects in areas of need, but identifies means for funding those projects.

The Transit element of this plan reflects Avondale's desire to provide an efficient transit system that offers residents adequate mode choice options that will reduce overall congestion throughout the City. In addition to planned transit routes identified in the MAG RTP, the Transit Plan proposes new routes along Lower Buckeye Road, Broadway Road, Southern Avenue, and 107<sup>th</sup> Avenue to provide improved connectivity and circulation to the southern portion of the Transportation Plan Study Area as future growth patterns dictate. Additional recommendations identified in the Transit Plan include:

- Initiate loop bus routes within the City to improve internal circulation;
- Develop and implement spacing requirements for locating bus stops and pull out bays with accessible sidewalk connections for new developments;
- Coordinate with Cities of Phoenix, Goodyear, Glendale, and Buckeye as well as MAG for regional transit system planning efforts; and
- Pursue location and funding options for a transit station along the UPRR corridor and a possible Park and Ride facility in south Avondale.

## **2.2 REGIONAL TRANSIT PLANS**

### **2.2.1 Yuma West Commuter Rail**

The MAG Yuma West Commuter Rail Corridor Development Plan explores the feasibility of commuter rail service to enhance mobility in the southwestern metropolitan Phoenix region. This study assumes that commuter rail would share existing UPRR right-of-way that extends west from downtown Phoenix through Buckeye to Arlington. It includes an evaluation of the existing and future conditions of the Yuma West Corridor, a conceptual operating plan for commuter rail service, cost estimates, and an implementation strategy.

The Yuma West Commuter Rail corridor bisects the Southwest Valley Study Area and passenger rail along the corridor would enhance commuter options for Southwest Valley residents.



### **2.2.2 Commuter Rail System Study**

The MAG Commuter Rail System Study is an overall evaluation of a system of commuter rail corridors in the MAG region. The purpose of this study was to define a network of corridors and the necessary elements needed to implement commuter rail service in the MAG region and northern Pinal County. The Commuter Rail System Study evaluates potential commuter rail links to the East and West Valley as well as offers recommendations for an optimized commuter rail system within the region.

### **2.2.3 Regional Transit Framework Study**

The MAG Regional Transit Framework Study (RTFS) was a study designed to establish a technical framework to guide transit investments and decisions within the MAG region to 2030 and beyond. The study involved a comprehensive evaluation of transit services in the MAG region and several peer regions. Information collected included population density, funding initiatives, ridership, operating expenses, and planned transit service. Based on this information, a list of deficiencies in the MAG region was identified which led to the development of three transit mobility scenarios to address those deficiencies. The purpose of the RTFS was to understand the region's transit needs and deficiencies with the goal of identifying high-leverage transit investments that can attract a significant number of new passengers while improving transit service for existing patrons.

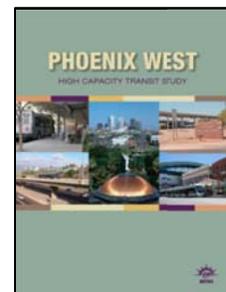
This study resulted in a list of deficiencies throughout the MAG region for which three alternate mobility scenarios were identified:

- **Basic Mobility** – Continuation of the RTP
- **Enhanced Mobility** – Concentrated Expansion
- **Transit Choice** – Growth Expansion

Regional growth scenarios were identified for parts of the Southwest Valley, most of which were included as part of the Transit Choice Scenario. Regional Supergrid and Express Bus service were identified as future service enhancements to serve the Study Area.

### **2.2.4 Phoenix West Alternatives Analysis and Environmental Impact Statement (AA/EIS)**

Valley Metro Rail, Inc. (METRO) is examining high capacity transit options in west Phoenix as part of the Phoenix West AA/EIS. The Study Area is bound by Loop 101 to the west, Thomas Road to the north, 7th Street to the east, and Buckeye Road to the south. The study is evaluating potential Light Rail Transit (LRT) and Bus Rapid Transit (BRT) options along the I-10 corridor, which extends west from the existing LRT service, generally along the I-10 freeway. The purpose of this study is to determine a locally preferred alternative (LPA) for either a LRT or BRT alignment that will connect the existing LRT service to west Phoenix. To date, the Phoenix West Extension AA/EIS has completed the majority of the Alternatives Analysis process and awaiting approval of the LPA. Upon approval, the LPA will move forward into the EIS portion of the analysis where it will be evaluated for potential federal funding opportunities.



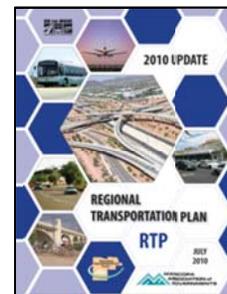


One of the principal recommendations from this study is to recognize the need for an enhanced local transit system in the southwest valley to connect with the regional transit network. The Phoenix West Extension would provide the Southwest Valley Study Area with its only high capacity transit connection to the rest of the regions multi-modal transportation network.

## 2.3 REGIONAL TRANSPORTATION PLANS

### 2.3.1 Regional Transportation Plan Update 2010

The MAG Draft RTP 2010 Update identifies funded transportation improvements to the year 2031 in Maricopa County. The funding source for the RTP comes from Proposition 400, a voter-approved half-cent sales tax that divides monies between freeway/highway, arterial street, and transit projects. The purpose of the MAG RTP Update is to address both capital improvements and operational activities for the regional transportation system. This plan addresses the balance between program costs and available revenues.



Recommendations from this regional planning update focus on region-wide transportation and transit improvements. Planned transit improvements identified for the Study Area in this update include:

- Freeway BRT/Express Service along I-10 to Buckeye
- Rural Routes connecting to Gila Bend
- Supergrid Service to Avondale
- Phoenix West LRT Extension to West Phoenix
- Identified as an illustrative corridor in the RTP, a corridor along SR 101 would connect the Phoenix West end of line north to Westgate City Center at the intersection of Glendale Avenue and SR 101.

The MAG RTP 2010 Update outlines regionally planned transportation and transit improvements out to the year 2031.

### 2.3.2 RPTA Transit Life Cycle Program

The RPTA Transit Life Cycle Program (TLCP) is designed to implement transit projects identified in the MAG RTP. As defined in the TLCP, the program meets the requirements of state legislation requiring RPTA to conduct a budget process that ensures the estimated cost of the public transit system does not exceed the total amount of revenues expected to be available. The majority of funding for the TLCP comes from the Proposition 400 sales tax extension in addition to federal transit funds and other local sources.

Within the Southwest Valley, projects identified for future funding include:

- Freeway BRT/Express Service along I-10
- Supergrid routes serving West Phoenix, Tolleson, Avondale and Litchfield Park
- Phoenix West LRT Extension to West Phoenix



### **2.3.3 Sustainable Transportation and Land Use Integration Study**

This study was initiated in early 2011 by MAG with the objective of promoting better integration of transportation and land use planning throughout the region. As a follow-up to the MAG Regional Transit Framework Study, this study is focusing on a number of key objectives including developing a viable set of “sustainable transportation” strategies for the MAG region and defining the specific role of transit in providing a sustainable transportation system. The study will culminate with the identification of options and recommendations for enhancing the land use/transportation connection and developing land use patterns and densities to support the various forms of high capacity transit. The study includes detailed analysis of a range of transit corridors throughout the region, a determination of “transit readiness” based upon current and forecast transit productivity, and evaluation of a range of transit network scenarios to gauge and illustrate the effectiveness of identified land use/transportation sustainability strategies. The study will identify and illustrate possible “pathways” for the evolution of transit investments and services based on economic, land use and demographic change.

It is anticipated the this study will provide valuable input to the Southwest Valley Transit Study in terms of illustrating the effectiveness and viability of strategies to strengthen the land use/transportation connection, identifying the desired components of sustainable development patterns, and demonstrating the benefits relating to transit productivity. This will assist in identification of viable transit investments and services based upon existing and projected community conditions (land use, connectivity, and demographics near stops and stations and throughout the various communities), as well the service characteristics of the available transit modes and resulting ridership productivity.

### **2.3.4 Central Phoenix Framework Study**

The Central Phoenix Framework Study encompasses much of the metropolitan core of the MAG region and is bounded by SR-101 to the west and north and by SR-202 and the Gila River Indian Community to the south. This study will build upon the results of the previous regional framework with a goal to identify and develop an environmentally sustainable multimodal transportation network. In addition, the goal of the Central Phoenix Framework is to determine and prioritize capacity, operational and safety improvements, and form a framework for regional connections and roadways within the Study Area.



To date, the study has completed the Existing and Future Conditions review and hosted focus groups to help determine and identify issues opportunities throughout the Study Area. Focus groups centered on the following areas:

- Public Safety
- Commercial Interests
- Economic and Downtown Development



- Transit, Bike and Pedestrian Interests
- Sustainability and Livability

The project Study Area for the Central Phoenix Framework Study overlaps the SWVLTSS Study Area in West Phoenix. Issues and opportunities that are identified through this effort will help to understand those same issues within the Southwest Valley Study Area.

### **2.3.5 I-10 Hassayampa Valley Framework Study**

The MAG Interstate 10-Hassayampa Valley Roadway Framework Study is one of multiple studies initiated by MAG to create a transportation network to accommodate future growth in the area in the next 30-50 years. The purpose of the study is to identify key north-south and east-west roads that would provide access throughout the Study Area and preserve I-10 as a primary travel corridor for passenger and freight traffic. In addition, the study also identifies major intersections in the Study Area, opportunities for alternative transportation modes, available funding options, and the identification of future corridors so right-of-way could be preserved.

The study recommends several improvements within the SW Valley Study Area. The roadway section identifies a variety of improvements, in addition to the RTP, on I-10, SR-85, and SR-303L. It also identifies two new proposed freeways within the Study Area: Hassayampa Freeway and an extension of SR-30 west to the Hassayampa Freeway. The transit section of this study recognizes the need to provide an efficient connection between the Hassayampa Valley and the central region, proposed to be accomplished by providing Bus Rapid Transit on I-10, SR-30, and SR-303L and commuter rail on the existing UPRR. A freight rail connector was identified west of the White Tank Mountains connecting the BNSF (along Grand Avenue, near SR-74) with the UPRR (west of the Palo Verde Nuclear Generating Station).

### **2.3.6 I-8 and I-10 Hidden Valley Framework Study**

The MAG Hidden Valley Framework Study is the second of a series of framework studies that address transportation issues in the rapidly developing areas of the region. The Hidden Valley Study established a conceptual network of roadways with varying classifications within an approximate 2,000 square mile area that includes parts of Maricopa and Pinal Counties. This area is bounded generally by the Gila River on the north, I-8 on the south and, 459<sup>th</sup> Avenue on the west, and I-10 on the east. In addition to developing a network of north-south, east-west roadways, and identifying potential funding sources, the study also examined opportunities for incorporating alternative transportation modes including, bus, light rail, and commuter rail.

This study recommends several improvements within the Study Area including several new freeways and parkways and identifies approximate locations of new arterials. Recommended features include:

- Scenic ways with enhanced wildlife crossings
- HOV lanes
- Freeway transit and parkway bus transit corridors connecting major activity centers
- Enhanced transit corridors through Goodyear and Maricopa



- Future Commuter Rail Corridor
- Future Freight Corridor connecting UPRR and BNSF lines

Improvements identified throughout Hidden Valley Study Area would directly impact the Southwest Valley Study Area; improvements are identified in Goodyear, Avondale, Buckeye and West Phoenix.

### **2.3.7 RPTA Regional Paratransit Study**

The RPTA Regional Paratransit Study is a comprehensive analysis of the MAG region's paratransit services. The intent of this study was to:

- Assess the paratransit programs in the region and identify Americans with Disabilities Act (ADA) and non-ADA operational issues and needs.
- Propose operational recommendations to reduce costs and improve service levels to meet ADA and non-ADA transportation needs.
- Define the operational and administrative characteristics of a regional paratransit program.
- Identify potential benefits and challenges of developing a regional program.

Recommendations from this study included a detailed implementation plan for regional paratransit service as well as supplemental services. Specifically for the Southwest Valley Study Area, these recommendations include modifications to the operations of the existing Southwest Valley ADA Service. Modifications include the implementation of a regional call center, scheduling center and dispatch service in lieu of separate localized operations. ADA service policies and operation practices would be standardized throughout the region. However, these improvements would build upon the existing Southwest Valley ADA Service.

### **2.3.8 Regional Transit System Study**

This study developed a regional financially constrained multi-modal transit system plan for the future year (2030), including transit components for the Southwest Valley. It identified transit service areas, transit service types and intensities, routes, and facility needs. It formed the basis for the Prop 400 transit program. Its ideas for the Southwest Valley as well as its methodologies for analysis are of interest to the current study.

### **2.3.9 City of Phoenix High Capacity Transit Corridor Study**

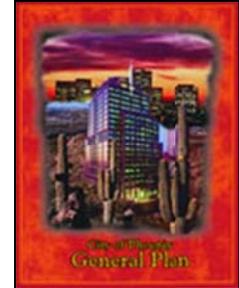
The City of Phoenix High Capacity Transit Corridor Study identified 21 corridors located throughout Phoenix to evaluate as potential high capacity transit corridors. The study conducted a multi-level screening process based on concentrations of population and employment, ridership potential, economic development potential, and regional connectivity. Based on the results of that analysis, each corridors was characterized as an Upper, Middle, or Lower Tier corridor for high capacity transit service. Within the southwest valley study area, four corridors were identified as having potential for high capacity transit service. The I-10 and Thomas Road corridors were characterized in the Upper Tier corridors while Buckeye Road and the SR 101 corridors were identified as Middle Tier corridors.



## 2.4 RELEVANT GENERAL PLANS

### 2.4.1 City of Phoenix

Adopted in December of 2001 and ratified in 2002, the purpose of the Phoenix General Plan is to provide widespread guidance for the growth and redevelopment of the City.



The Plan's Land Use Element identifies the Southwest Valley Study Area as being located within 2 of the City's 14 urban villages; Estrella and Maryvale. Within Phoenix, the Study Area is mostly identified as Open Space in the Estrella Village with more single family residential and commercial land uses within Maryvale. Proposed land uses for Estrella include a majority of industrial growth to fill in where vacant parcels currently exist south of I-10 to Lower Buckeye Road. Residential developments and limited commercial uses are expected to occur south of Lower Buckeye Road. Land uses in Maryvale are expected to continue developing with residential and commercial uses with the primary village core located between 75<sup>th</sup> and 83<sup>rd</sup> Avenues south of Thomas Road. In addition to future and existing land use, the Land Use Element also identifies the creation of transit oriented development as a city-wide goal in an effort to promote safe and convenient access to buses and trains to promote ridership.

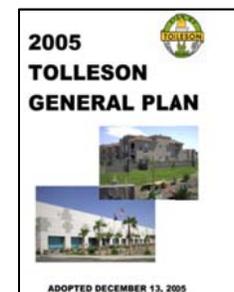
The Plan's Circulation Element provides general support for a multi-modal transportation system. The plan states that an effective multi-modal system should allow for movement of goods and people safely and efficiently throughout the City, especially into, and between, the urban village cores. The City recognizes the importance of developing an integrated, comprehensive, multi-modal transportation plan for the state.

Within the Maryvale village, the development of a Maryvale Core Plan has been underway since 2010 and is scheduled for completion in 2012. This planning effort has included assessment of transit-oriented development in coordination with transit planning in West Phoenix.

The Phoenix General Plan is in the process of being updated, and a draft plan was released in late 2010.

### 2.4.2 Tolleson

The City of Tolleson General Plan was adopted in December of 2005 as a long-range planning tool for establishing the goals and development policies of the community for the future.



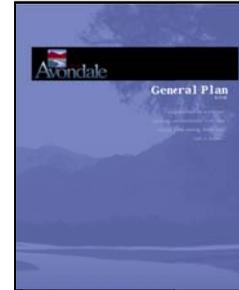
According to the plan, the existing land use is mostly agriculture/vacant and industrial uses with a concentration of residential use surrounding the Van Buren Street and 91<sup>st</sup> Avenue intersection. The plan's future land use map shows considerable development throughout the City. Most major intersections have proposed commercial uses while the residential section is shown as likely to expand. The majority of the land south of the UPRR is identified as industrial development. Areas of expansion are identified as Growth Areas in the City plan and are suitable for planned multimodal transportation and infrastructure expansion.



The City of Tolleson shows support for alternative transportation systems including future commuter rail service in the Transportation Chapter of the General Plan. The chapter also references the MAG High Capacity Transit Study and where it states the existing UPRR could be used for possible commuter rail service. In addition, the Transportation Chapter notes that the Town would support future Bus Rapid Transit service as well as a potential high capacity transit line along I-10 that would serve Tolleson commuters.

### **2.4.3 City of Avondale**

The City of Avondale's General Plan was originally adopted in 1990 and was updated in June 2002. The plan is designed to provide guidance to City decision-makers in order to help achieve the desired relationships between land use, transportation, quality of life, the environment, and economic prosperity sought after by both residents and businesses alike.



The City of Avondale land use designations throughout the Southwest Valley Study Area include residential and commercial uses as well as open space and public facilities. The section of the corridor immediately surrounding I-10 is distinguished as commercial and mixed-use with large sections labeled 'Employment' which includes some industrial uses. The area of the city south of Van Buren Street, surrounding the UPRR, transforms into varying densities of residential land use with a commercial and employment corridor identified along 115<sup>th</sup> Avenue (Avondale Boulevard).

The Circulation Element of the Avondale General Plan ties together land use and transportation planning efforts to ensure that the City develops the necessary infrastructure elements to facilitate regional travel. This element includes goals, objectives and policies that the City will use as a base for future infrastructure development. Avondale shows strong support for future transit service by being involved with regional transportation issues as well as trying to create partnerships with both the Arizona Department of Transportation (ADOT) and MAG. These partnerships will help enhance opportunities to develop non-vehicular travel options by providing mass transit opportunities. In addition, the plan identifies the need to consider locations for future transit centers, noting one possible location at the intersection of Dysart and Buckeye roads.

The City began the process of updating the 2002 document in 2009 to plan for growth through 2030. According to the draft General Plan 2030 document, some specific transportation and land use issues necessitated this update including:

- Land use changes in the I-10 corridor, Avondale Blvd, and areas to the south;
- The proposed SR-30 freeway alignment; and
- Future commuter rail and light rail planning.

One of the most significant changes identified in the draft update addresses the link between public health and the built environment. One of concepts identified in this effort focused on creating transit hubs and ensuring close access to transit in the future. The plan identifies transit-oriented development as a need in the future. The General Plan 2030 is on schedule to be finalized and adopted in fall 2012.



**Avondale City Center Specific Plan** – Adopted in 2008, the Avondale City Center Specific Plan presents a vision for the central area of Avondale immediately south of I-10 along Avondale Boulevard. The City Center Plan presents a mixed use, pedestrian-oriented approach to development within the core of Avondale between I-10 and Van Buren Street. The City Center will represent a typical Central Business District organized into a series of smaller blocks and incorporate an urban grid system. The site is planned as an easily accessible focal point for the community that will lend itself to transit-oriented development.

#### **2.4.4 City of Goodyear**

The City of Goodyear General Plan was updated and adopted in May of 2003. The plan provides the foundation for the elements and implementation program that will guide growth and development decisions within the City’s municipal planning area. Goodyear has a vision of an adaptable community that strives to maintain its traditional values while creating a unique blend of opportunities within the community.



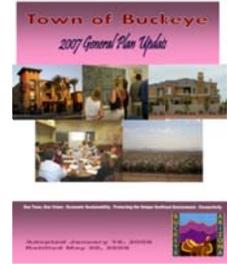
The Southwest Valley Study Area encompasses the majority of the city excluding only the portion surrounding the Estrella Mountains. The most prevalent land uses in the immediate vicinity of I-10 between Dysart Road and Pebble Creek Parkway include light and general industrial use with some community commercial designations around major intersections. The areas west of Pebble Creek Parkway are mostly residential developments with commercial corners spread throughout. The General Plan also identifies the proposed SR-303L alignment that crosses through the Study Area along the Cotton Lane/171<sup>st</sup> Avenue alignment.

Goal B in the Circulation Element acknowledges a desire to link the Goodyear community internally (and externally) with adequate transit service to meet the needs of its residents, workforce, and visitors by extending the existing transit system and incorporating facility improvements (City of Goodyear 2003). The general goals, objectives and policies found in the Circulation element serve as a guide to promote and extend vehicular, transit and non-motorized movement throughout the City. These goals and policies show support for transit service improvements throughout both the City and region. In support of the Goodyear Neighborhood Circulator Study (Section 2.1.3), the Circulation Element also states that the City should evaluate the cost of public benefit of a community or sub-community-wide circulator system which would improve circulation throughout the Study Area.



### 2.4.5 Town of Buckeye

The Town of Buckeye General Plan was adopted in January of 2008. Buckeye has a vision of connectivity for the future, and that vision includes reducing automobile dependency throughout the community by offering alternative modes of transportation and encouraging transit oriented development. The plan’s purpose is to be visionary and dynamic in order to evolve to meet changing regional needs.



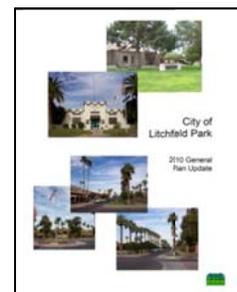
The Town of Buckeye land use designations include various levels of residential use, a combination of commercial and employment areas as well as mixed use development and open space. Downtown Buckeye is located between Apache and Miller roads and the General Plan identifies the vacant land to the immediate west of downtown as the “Downtown Expansion Area” where it sees opportunities to maximize both economic development as well as employment opportunities associated with the UPRR railroad.

One of the main goals of the Buckeye General Plan is to maintain mobility by developing a balanced transportation system that meets community needs. In an effort to achieve this goal, the plan supports the implementation of future transit services throughout the town. The Circulation Element reinforces these same policies by recognizing the necessity of a multimodal transportation system. This section of the plan recommends that the City create a transit master plan that can work towards identifying routes and modes for an integrated system as well as to establish areas of transit oriented development throughout primary travel corridors.

**Town of Buckeye Transportation Master Plan** – Based on projected growth identified in the Town of Buckeye General Plan, the Transportation Master Plan is a combination of recommended projects that will help shape and support the development patterns of the town in the future. In addition to shaping the future transportation network throughout the Town of Buckeye, this master plan identifies a Transit Element that focuses on a future system planned to serve the growing residential and commercial demand of the Town. The Transit Element identifies a future planned transit network throughout Buckeye that includes Commuter Rail, Express, Local, and Circulator routes in addition to identifying locations for future park-and-rides and transit center locations.

### 2.4.6 City of Litchfield Park

The City of Litchfield Park updated its General Plan in May 2010. The purpose of the plan is to identify community goals and designate the proposed general distribution, location and extent of such uses of land and other measures to satisfy city needs.



The City of Litchfield Park is located north of the Cities of Goodyear and Avondale covering approximately 3.5 square miles. The majority of Litchfield Park is comprised of low and medium density land uses and open space designations. While the Litchfield Park General Plan does not



specifically identify high capacity transit, a City objective is to interact and work with adjacent jurisdictions, MAG and other public agencies to help promote public transit and other multi-modal transportation opportunities.

#### **2.4.7 Maricopa County Comprehensive Plan**

The Maricopa County Comprehensive Plan was adopted in August of 2002. The Plan takes into consideration the planning activities over the entire unincorporated county and seeks to create strong vibrant communities within Maricopa County by providing a guide for decision makers concerning growth and development.

Due to the vast area governed by Maricopa County, the land use designations under the Comprehensive Plan determine generalized land use, development or preservation concepts not specific to land use or density. It is a goal of the Comprehensive Plan to integrate transportation planning and land use.

The Transportation Element of the Maricopa County Comprehensive Plan includes regional coordination toward creating a multimodal transit system. An efficient multimodal system will need to include development patterns that will help advance alternative modes of travel. It is the position of the Plan to encourage transit oriented development and multimodal transit alternatives in an effort to develop a seamless transportation system that serves regional travel needs.





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### 3.0 SOCIOECONOMIC CONDITIONS AND LAND USE

An analysis of the existing and future conditions in the Study Area provides an understanding of the baseline conditions and future growth potential for the participating jurisdictions in this study. The review of socioeconomic and land use projections highlights current characteristics of the Southwest Valley and suggests how planned growth may influence future transit service developments.

#### 3.1 DEMOGRAPHICS

A review of existing and future population and employment growth trends was conducted to understand the demographic and socioeconomic characteristics throughout the Southwest Valley. Due to the timing of this study, both MAG data and available US Census data were used for this analysis. MAG data are organized by Traffic Analysis Zones (TAZs) within the Study Area while the US Census data are broken down by census blocks.

##### 3.1.1 Population

According to Census data, Maricopa County had a 2010 population of 3,817,117 people while the Southwest Valley Study Area had a 2010 population of nearly 330,000 people. Within the Study Area, West Phoenix accounts for the majority of the 2010 population with approximately 30% of the total. Avondale, Goodyear and Buckeye also comprise significant portions of the Study Area 2010 population with 23%, 20%, and 14%, respectively. Table 3 identifies the total population of the Southwest Valley Study Area as defined by the 2010 Census.

**Table 3 Southwest Valley Study Area Existing Population – 2010 Census**

Jurisdiction	2010 Census Population	Percent of Total
West Phoenix	98,825	30%
Tolleson	6,172	2%
Avondale	75,588	23%
Goodyear	65,173	20%
Litchfield Park	5,065	2%
Buckeye	47,612	14%
Unincorporated County Land	31,188	9%
<b>Total</b>	<b>329,623</b>	<b>100%</b>

Source: US Census Bureau, 2011.

Transit use correlates to some existing household characteristics including median age, median household income, and zero and one auto households. Data for this information are not yet available through the 2010 Census. However, the US Census Bureau provides estimates through the American Community Survey (ACS). The ACS produces data based on a five year time period that provides intercensal estimates for population characteristics. As shown in Table 4, the percentage of the households in Tolleson with zero or one automobile is the highest among Southwest Valley jurisdictions at 55%. Portions of Phoenix and Litchfield Park also have over 40% of their households with zero or one automobile, suggesting those jurisdictions are more transit dependent. In addition to having the highest percentage of households with zero or one automobile, Tolleson also represents the community with the lowest median household income



and youngest median age, both below the average across Maricopa County. These characteristics further indicate a potential ridership base for transit service.

**Table 4 Southwest Valley Housing Characteristics: 2006 – 2010 ACS\***

Jurisdiction	Total Number of Households	Median Age (Years)	Median Household Income (2010\$)	Zero and One Auto Households	Percent of Households with ≤ 1 Auto
Phoenix	515,701	31.6	\$48,823	240,623	47%
Tolleson	1,833	26.4	\$33,904	1,012	55%
Avondale	21,402	28.5	\$60,907	7,465	35%
Goodyear	18,217	33.4	\$76,221	5,224	29%
Litchfield Park	2,341	43.0	\$73,996	1,003	43%
Buckeye	13,193	28.2	\$62,046	4,415	33%
Maricopa County	1,382,002	34.1	\$55,054	604,796	44%

Source: US Census Bureau, 2011b.

\*Note – Data in this table are not clipped to the Study Area and includes information from across each entire jurisdiction.

Current MAG population estimates are based on 2005 MAG population data, and projects growth throughout the entire MAG region to reach over 4.2 million people by 2010. This study will utilize MAG projections for years 2020 and 2030 to help identify future transit needs throughout the Study Area. These projected socioeconomic numbers are based on official estimates derived from the 2005 special census conducted for Maricopa County. Updated MAG projections based on the recent 2010 Census is not yet available. MAG projections for the Southwest Valley Study Area estimated the 2010 population to be over 350,000 people, which is reasonably similar to the 2010 Census data (Table 3). The primary difference between the 2010 projections by MAG and the actual 2010 Census data is the rate of population growth within unincorporated areas. Table 5 provides the population projections for the region and the jurisdictions represented in the Study Area.

**Table 5 Southwest Valley Study Area Population Growth – MAG Projections**

Jurisdiction	2005	2010 (Projection)	2020 (Projection)	2030 (Projection)
MAG Region	3,681,025	4,216,499	5,230,300	6,135,000
West Phoenix	76,113	100,519	117,469	122,747
Tolleson	5,596	6,696	8,311	8,775
Avondale	63,872	75,938	87,484	89,791
Goodyear	43,750	65,219	148,837	240,534
Litchfield Park	4,593	5,783	7,090	7,284
Buckeye	20,193	48,272	121,938	208,759
Maricopa County	32,038	51,435	121,741	216,845
<b>Total</b>	<b>246,156</b>	<b>353,862</b>	<b>612,872</b>	<b>894,734</b>

Source: MAG, 2007.

Regarding overall transit supportive population densities, there is a variety of national research indicating situations where transit can be most productive.



The four D's (Density, Diversity, Design and accessibility to concentrated regional Destinations) were found to be able to promote transit ridership at the residential end. Of the four D-factors, density in the transit corridor and the intensity of the concentration at the destination end of the corridor are viewed as most significant. For density, a variety of thresholds are available from different surveys and researches.

A research focusing on the New York region (Pusharkev & Zupan, 1977) recommends a density of at least four dwelling units per acre for viable minimal (bus) transit service. A different research recommends seven to 15 dwelling units per acre to support local bus service (USDOT / Snohomish County Transportation Authority, 1989).

Further, the research study of Ross and Dunning (1997) reports an almost three-fold increase in transit mode share when densities are greater than six dwelling units per acre.

An analysis of the 1995 Nationwide Personal Transportation Study (NPTS) found that the public transit share for all trips was as follows:

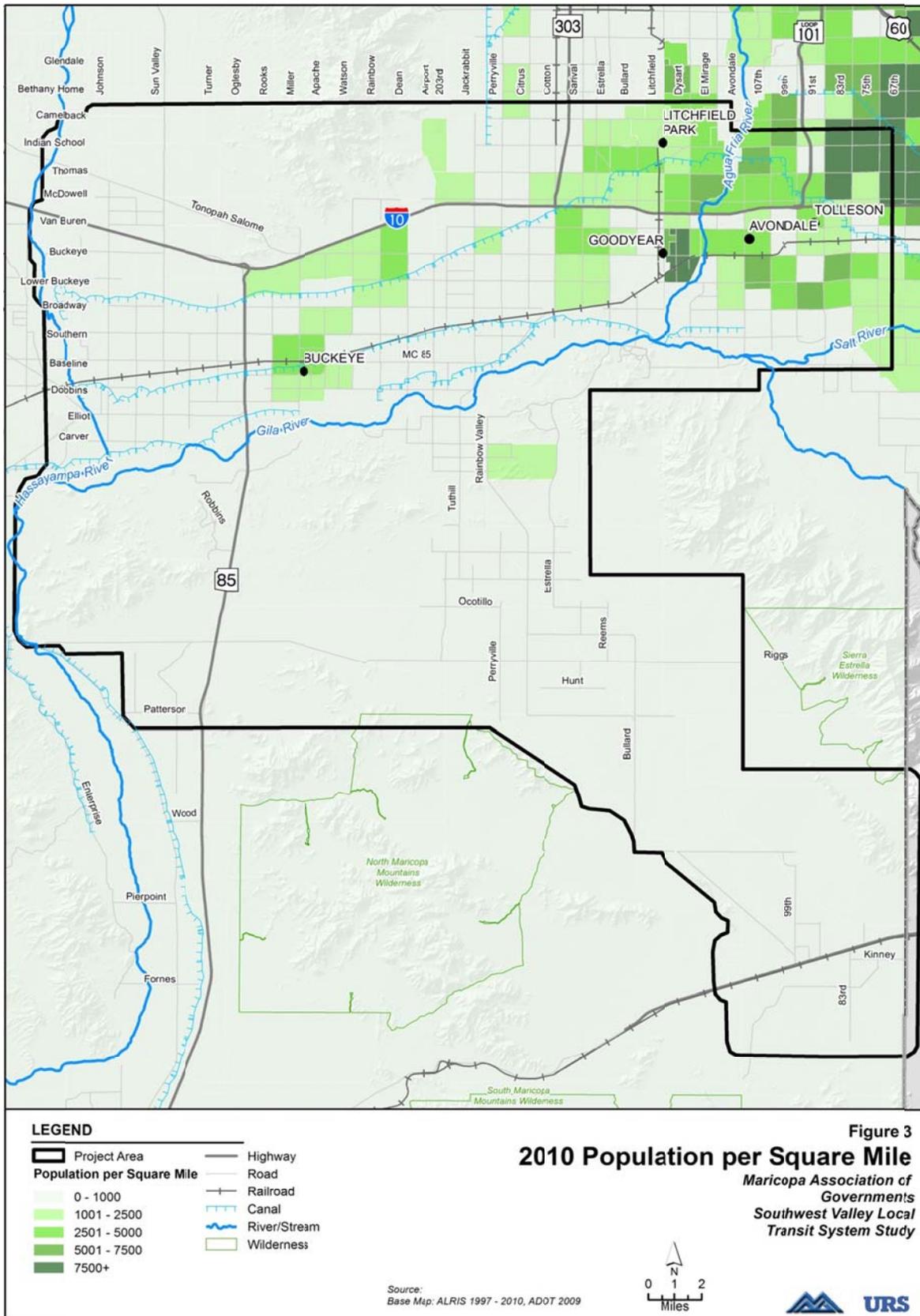
- 2.9% for all densities between 250 and 1,000 persons per square mile
- 3.1% for all densities between 1,000 and 4,000 persons per square mile
- 3.0% for all densities between 4,000 and 10,000 persons per square mile
- 11% for all densities above 10,000 persons per square mile

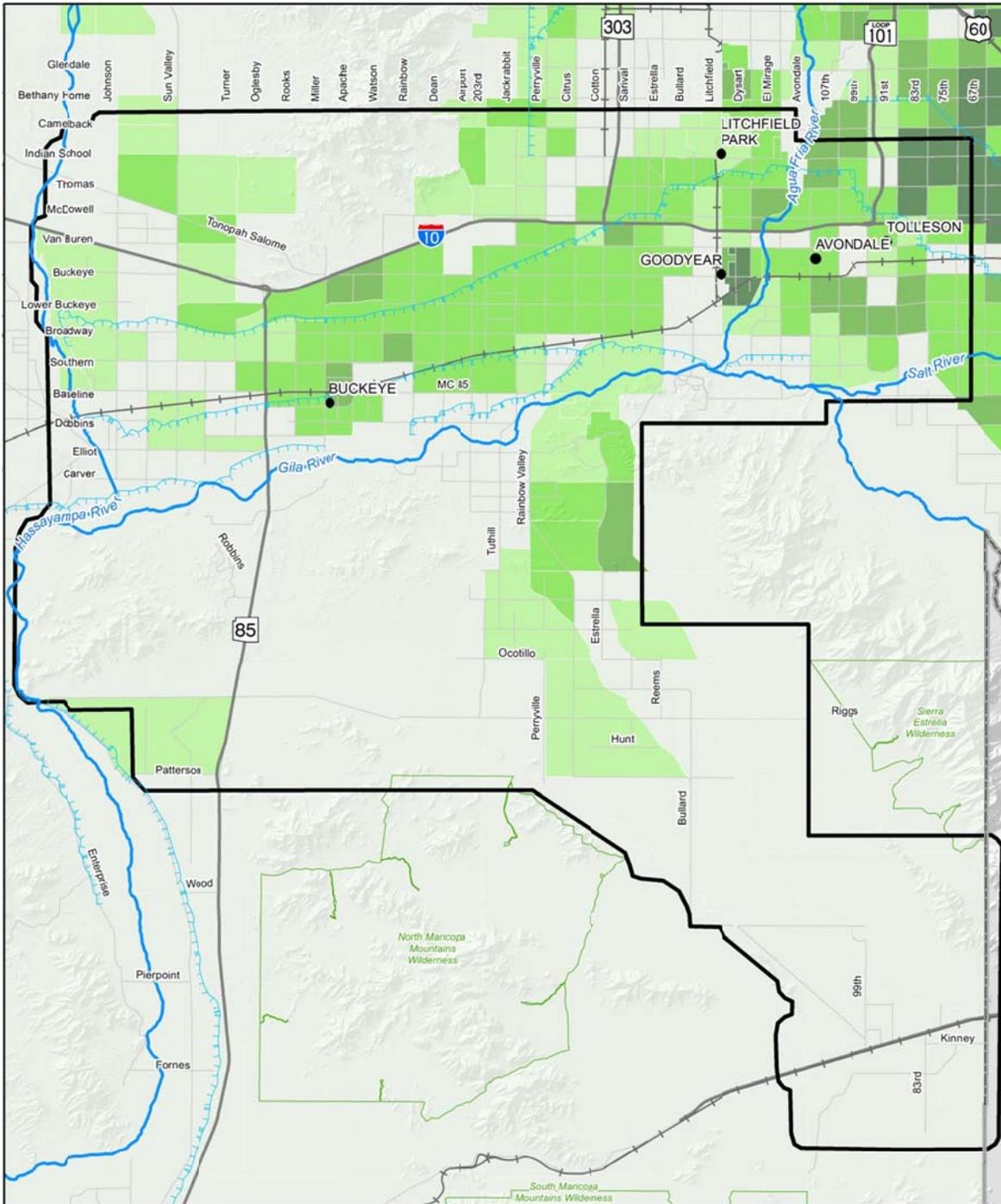
The significant increase in transit mode share that occurs when densities are greater than 10,000 persons per square mile is related to average residential dwelling unit densities greater than six units per acre.

Holtzclaw (2002) presents study findings showing that doubling the density results in a 25% reduction in vehicle miles traveled. But, only a fraction of this reduction is due to more transit use.

With the above said, it is important to keep in mind the importance of the proximity of the residential density to transit facilities.

Figure 3 and Figure 4 illustrate the 2010 and 2030 population density throughout the Southwest Valley Study Area.





**LEGEND**

- |  |              |
|--|--------------|
| Project Area                           | Highway      |
| Population per Square Mile<br>0 - 1000 | Road         |
| 1001 - 2500                            | Railroad     |
| 2501 - 5000                            | Canal        |
| 5001 - 7500                            | River/Stream |
| 7500+                                  | Wilderness   |

**Figure 4**  
**2030 Population per Square Mile**  
Maricopa Association of Governments  
Southwest Valley Local Transit System Study

Source: ALRIS 1997 - 2010, ADOT 2009





### 3.1.2 Employment

According to MAG data, employment in the Southwest Valley Study Area grew nearly 75% between 2005 and 2010 to over 110,000 jobs (see Table 5). Future employment growth in the Study Area is expected to occur most dramatically in Buckeye by 2030.

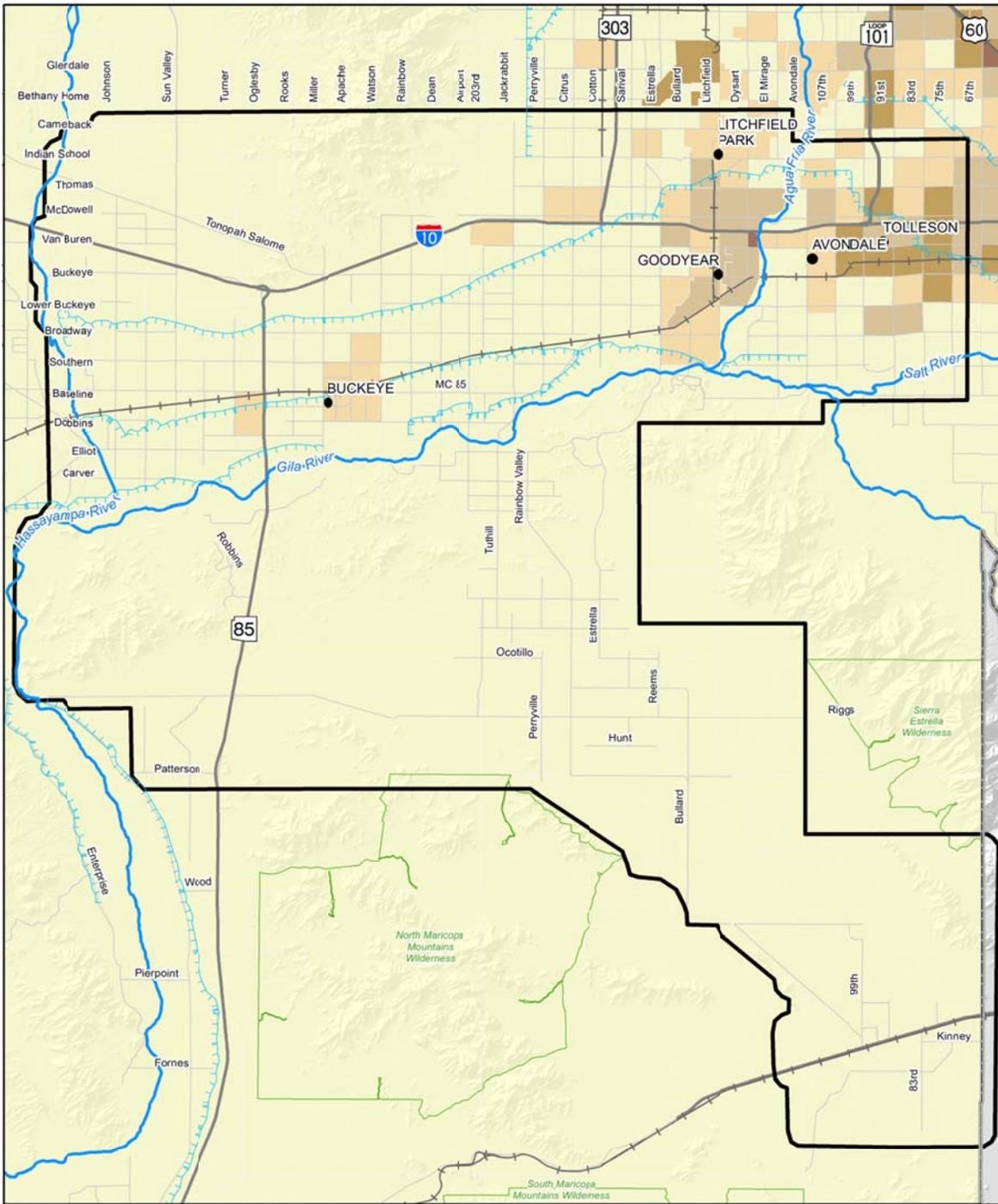
Areas of future employment growth are expected to occur throughout the Southwest Valley Study Area. Particular growth areas include the portions of Goodyear and Buckeye located south of I-10 to the Gila River. In addition, the southernmost portion of Goodyear is expected to experience increased employment surrounding the UPRR railroad line just west of the Maricopa/Pinal County border. Note that 2010 data identified in Table 6 are derived from an estimate based on 2005 information and does not reflect current 2010 employment data from the US Census.

**Table 6 Southwest Valley Study Area Employment Growth – MAG Data**

Jurisdiction	2005	2010 (Projection)	2020 (Projection)	2030 (Projection)
MAG Region	1,747,532	2,157,424	2,788,101	3,378,800
West Phoenix	14,263	24,026	34,754	42,636
Tolleson	11,031	14,155	17,567	19,591
Avondale	11,493	19,082	32,197	42,218
Goodyear	14,995	26,395	64,597	105,324
Litchfield Park	1,275	1,798	2,572	3,607
Buckeye	5,642	15,979	34,696	67,752
Maricopa County	7,166	13,450	34,399	69,190
<b>Total</b>	<b>65,864</b>	<b>114,885</b>	<b>220,781</b>	<b>350,318</b>

Source: MAG, 2007.

The distribution of existing and planned employment is illustrated in Figure 5 and Figure 6.



**LEGEND**

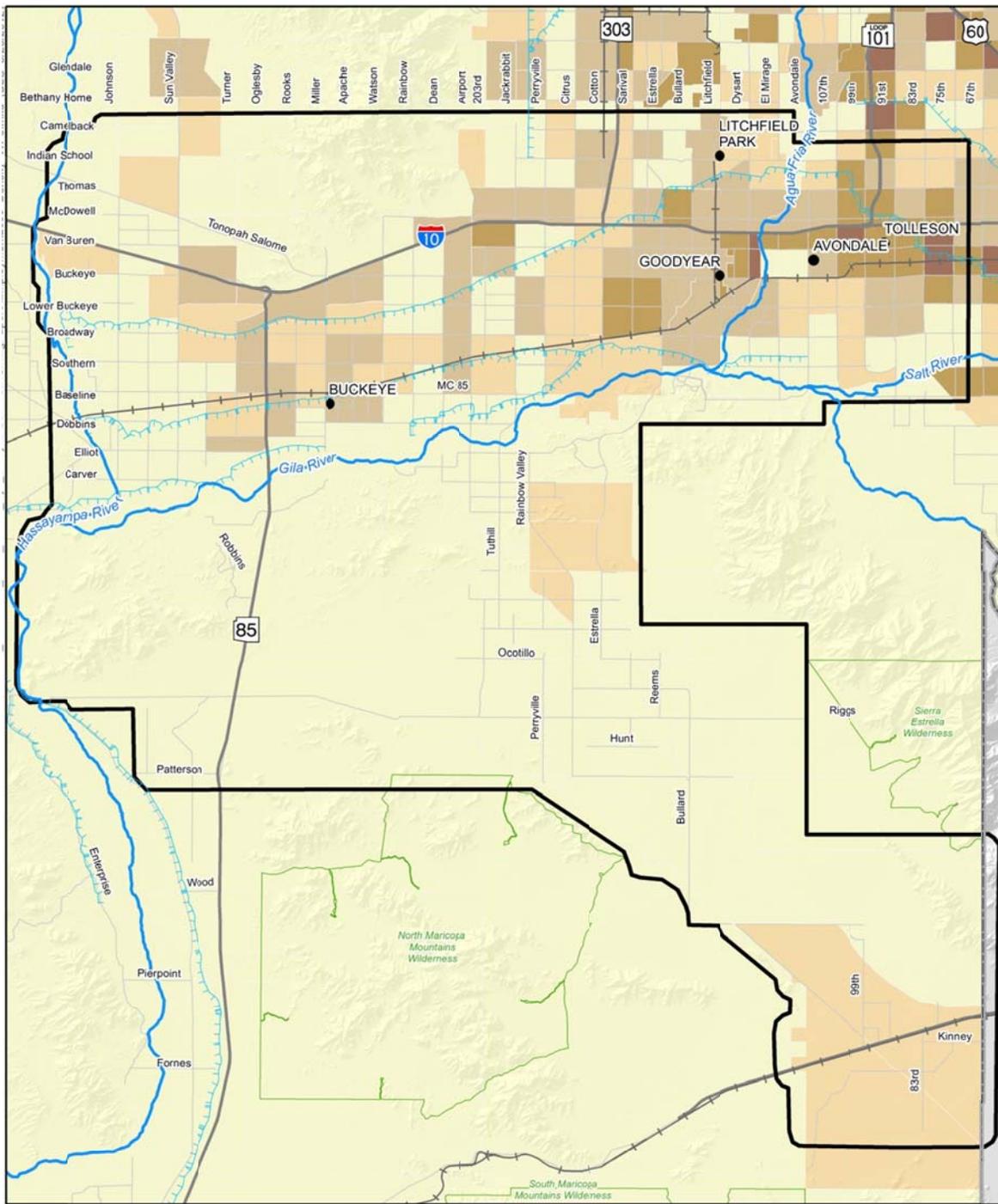
- |                            |              |
|----------------------------|--------------|
| Project Area               | Highway      |
| Employment per Square Mile | Road         |
| 0 - 500                    | Railroad     |
| 501 - 1000                 | Canal        |
| 1001 - 2500                | River/Stream |
| 2501 - 5000                | Wilderness   |
| 5000+                      |              |

**Figure 5**  
**2010 Employment per Square Mile**

Maricopa Association of  
Governments  
Southwest Valley Local  
Transit System Study

Source:  
Base Map: ALRIS 1997 - 2010, ADOT 2009





LEGEND

- Project Area
- 0 - 500
- 501 - 1000
- 1001 - 2500
- 2501 - 5000
- 5000+
- Highway
- Road
- Railroad
- Canal
- River/Stream
- Wilderness

Figure 6  
2030 Employment per Square Mile

Maricopa Association of Governments  
Southwest Valley Local Transit System Study

Source: Base Map: ALRIS 1997 - 2010, ADOT 2009





### 3.2 LAND USE

Land use indicates the potential for transit ridership as well as employment or activity center destinations. Land use policies that are compatible with transit, such as transit-oriented development, would promote the success of an enhanced transit network throughout the Southwest Valley.

#### 3.2.1 Existing and Future Land Uses

The Southwest Valley contains a variety of existing land uses throughout the project Study Area, as identified in Figure 7. Table 7 summarizes the existing land uses located throughout the Study Area as well as the future land uses. Other than Vacant land (32%), the most prevalent existing land use throughout the Study Area is Open Space/Recreation comprising nearly 30% of the total area. The other significant existing land use is Agriculture, with 19% of the total land area.

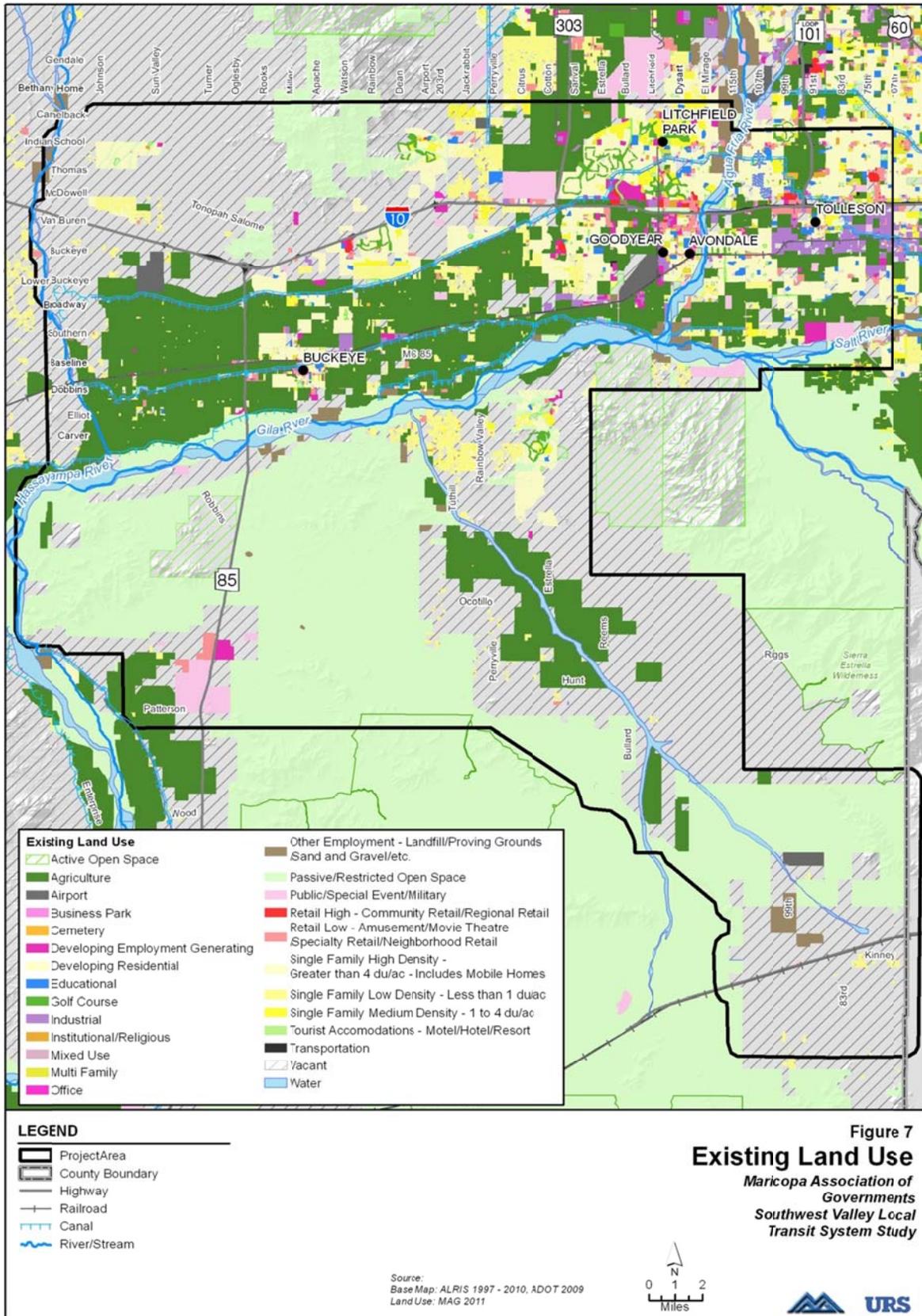
Future land use information is based on data collected from MAG and adopted plans. The data represent land use at the projected build-out point for the Study Area when all planning efforts have been realized and there is no vacant land, not necessarily what the future will look like in 2030. The majority of the undeveloped and vacant land is projected to develop as residential land uses. Other significant land use growth is projected for Commercial, Office, and Industrial land uses.

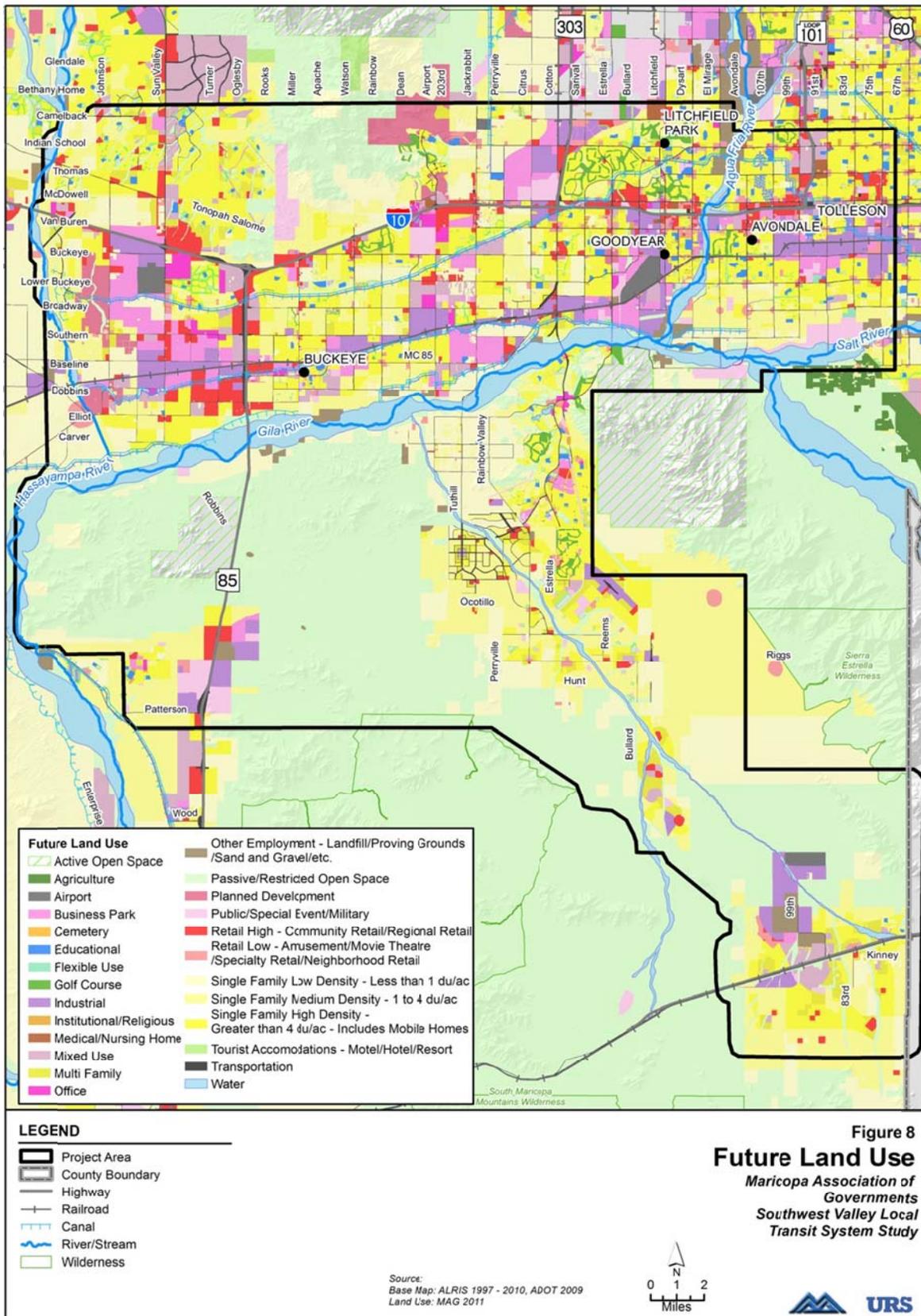
Figure 8 shows the future land uses and development patterns throughout the Study Area.

**Table 7 Southwest Valley Study Area Existing and Future Land Use**

Land Use Category	Existing Land Use		Future Land Use (Build-out)	
	Acres	Percent of Total	Acres	Percent of Total
Agriculture	83,882	19%	384	<1%
Residential (<1 du/acre)	11,371	3%	54,699	12%
Residential (1 – 4 du/acre)	3,882	<1%	74,465	17%
Residential (>4 du/acre)	20,603	5%	59,774	13%
Multi Family	980	<1%	10,921	2%
Commercial	8,481	2%	24,516	5%
Developing	13,187	3%	5,963	1%
Industrial	3,783	<1%	17,811	4%
Mixed Use	0	0%	8,551	2%
Office	299	<1%	17,091	4%
Open Space / Recreation	130,304	29%	142,786	32%
Public / Private Institutions	8,417	2%	12,175	3%
Transportation / Parking	4,845	1%	6,688	1%
Water	14,631	3%	14,656	3%
Vacant	145,814	32%	0	0%
<b>Total</b>	<b>450,479</b>	<b>100%</b>	<b>450,479</b>	<b>100%</b>

Source: MAG, 2009a; MAG, 2009b.

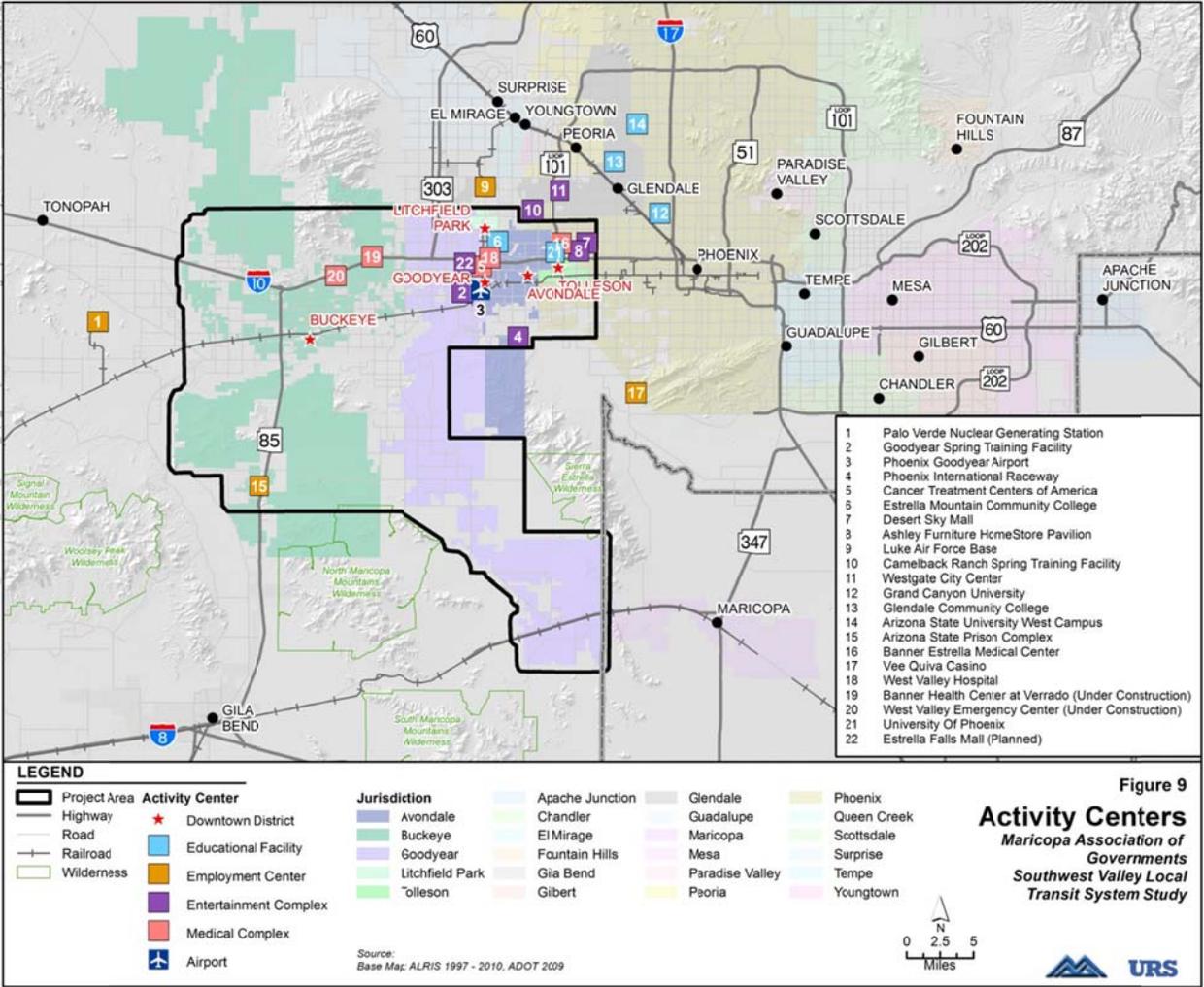




**3.2.2 Activity Centers**

Regional and local destinations throughout the Southwest and West Valley that have the potential to generate transit ridership have been identified as activity centers and have been categorized as downtown districts, educational facilities, entertainment complexes, or medical complexes.

Figure 9 identifies the locations of the prominent activity centers throughout the West and Southwest Valley.





## 4.0 TRAVEL PATTERNS AND MARKETS

The analysis of travel patterns within the Southwest Valley Study Area are based on the existing and future demographic growth in the area. An analysis of person trips per square mile was conducted to understand existing and future travel markets.

This section provides an overview of the travel patterns within the MAG region and the Southwest Valley Study Area, how they are predicted to change over time both in quantity and spatially, and what that means for this transit study. This section is divided into two parts.

- Travel Patterns Quantitative Summary
- Travel Patterns Spatial Assessment

### 4.1 TRAVEL PATTERNS QUANTITATIVE SUMMARY

Table 8 summarizes key findings from an analysis of MAG regional travel model data for the years 2010 and 2031. A brief discussion of salient results in Table 8 is provided below.

**Table 8 Travel Patterns Summary**

Travel Analysis		Purpose	
		All Trips	Work Trips
1	Growth in Regional Trips: 2010 to 2031	57%	57%
2	Growth in Study Area Trips: 2010 to 2031	165%	165%
3	Growth in Trips within the Study Area: 2010 to 2031	208%	257%
4	Growth in Trips exported from the Study Area: 2010 to 2031	90%	93%
5	Growth in Trips imported to the Study Area: 2010 to 2031	128%	119%
6	Ratio of Study Area Trips to Region in 2010	9%	9%
7	Ratio of Study Area Trips to Region in 2031	15%	15%
8	Study Area Trips within the Study Area in 2010	60%	41%
9	Study Area Trips exported to the Region in 2010	24%	37%
10	Study Area Trips imported from the Region in 2010	16%	22%
11	Study Area Trips within the Study Area in 2031	70%	55%
12	Study Area Trips exported to the Region in 2031	17%	27%
13	Study Area Trips imported from the Region in 2031	13%	18%

Source: MAG, 2011c; MAG, 2011d.

The regional trip making is estimated to increase by nearly 60% between 2010 and 2031 – from nearly 15 million per weekday to well over 23 million per weekday. This is generally proportional to the increase in population and employment in that timeframe. The growth in trips in the Study Area – i.e., trips for which at least one trip end is in the Study Area, is estimated at 165% by 2031. This compares to the Study Area population growth of 153% and employment growth of 205% over that same timeframe. In essence, the Study Area is projected to grow faster than the region as a whole through 2031.

In 2010, about 60% of Study Area total trips for all purposes and 40% of the total work trips stayed within the Study Area. Both percentages are estimated to increase in the future (to 70% of all purposes and 55% of total work trips by 2031) as more Study Area travel is satisfied within

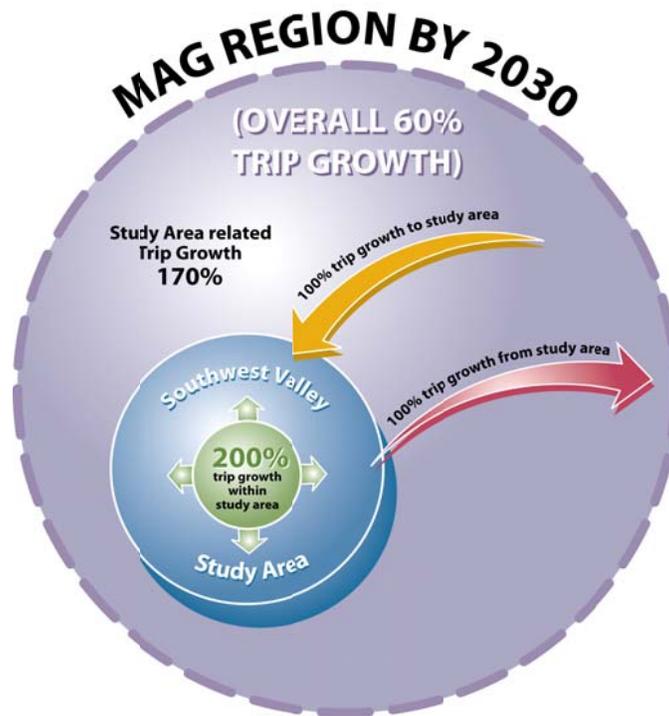


the Study Area. However, the Study Area remains a net exporter of trips to the region, and this is expected to continue to be more pronounced for work trips than for all trips.

The most prominent travel growth related to the Study Area is for fully internal trips – both trip ends within the Study Area. These are estimated to increase by over 200% by 2031 for all trip purposes. Exported trips are estimated to increase by approximately 90% and imported trips will increase by nearly 130%. Work trip percentages are slightly different – an increase of nearly 260% for fully internal work trips, 90% for exported work trips and 120% for imported work trips.

In summary, the Study Area’s travel characteristics are estimated to grow much faster than the region’s especially for fully internal trips, although the Study Area remains more of an exporter of trips than an importer. Figure 10 shows schematically some of the key values presented in Table 8.

**Figure 10** Travel Patterns within the MAG Region



#### 4.2 TRAVEL PATTERNS SPATIAL ASSESSMENT

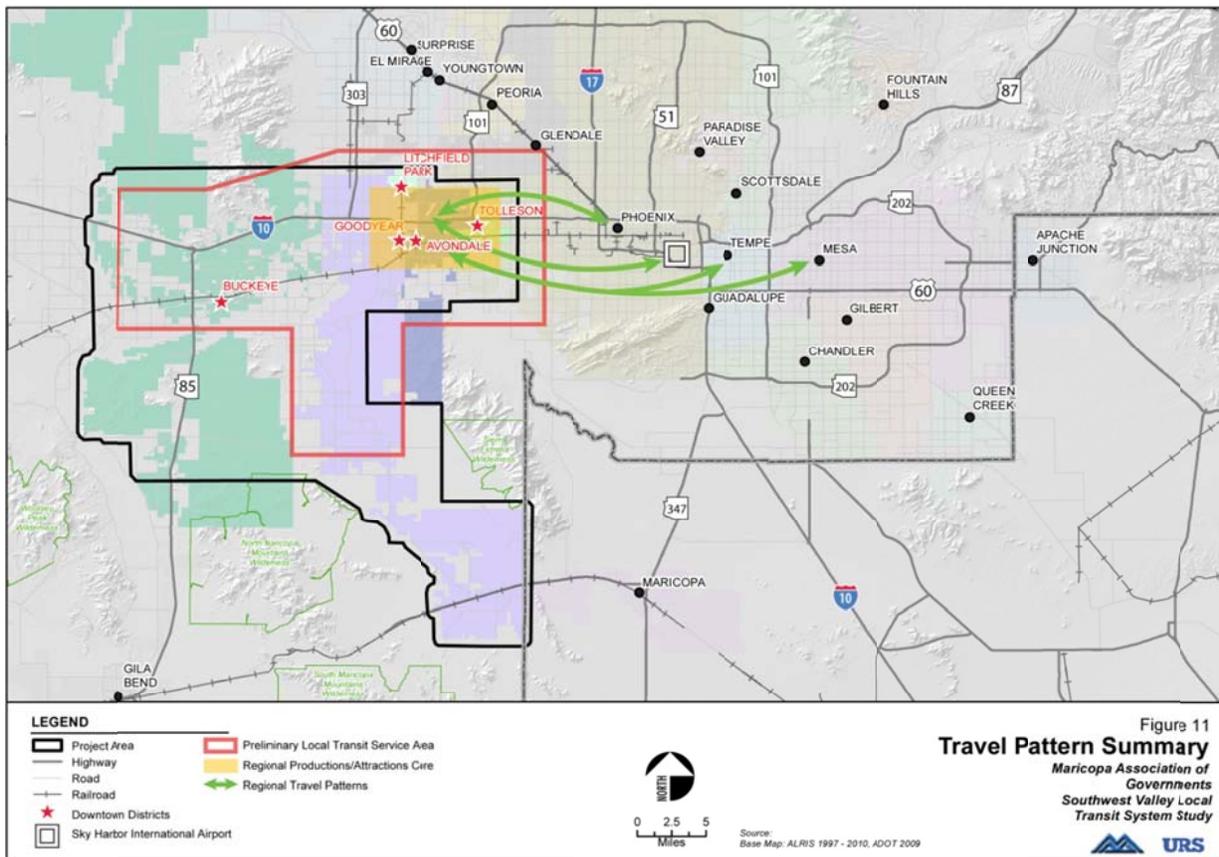
Figure 12 to Figure 35 present a wealth of information that use GIS color density maps to show the spatial characteristics of the quantitative information summarized above. The maps are presented in two sets of 12 maps each – for all trips (all purposes) then for work trips. There are three basic types of maps with two trip aspects – Productions or Attractions – then with two planning years – 2010 and 2031, for a total of 12 maps in each set. Each map set of two (2010 and 2031) has a definition of the value shown in the density representation followed by a brief interpretive summary of the results. The map types are listed below (one set all trips and one set work trips).



1. Regional Productions – 2010 and 2031
2. Regional Attractions – 2010 and 2031
3. Study Area Productions for Fully Internal Trips – 2010 and 2031
4. Study Area Attractions for Fully Internal Trips – 2010 and 2031
5. Study Area Productions for Trips Exported to Rest of Region – 2010 and 2031
6. Study Area Attractions for Trips Imported from Rest of Region – 2010 and 2031

In general the regional travel patterns suggest further densification of trip ends in the central parts of the Valley as well as a spreading out of trip ends, especially in the northwest and southwest parts of the region. The maps of greatest relevance to this study are those showing the increased number of trips that are fully internal to the Study Area and the maps showing the trip interchanges between the Study Area and the rest of the region. The fully internal trips extend their coverage farther to the west within the Study Area along its northern reaches, and also to the south along its eastern reach. The trip exchange between the Study Area and the rest of region is most intense to and from areas near the northeast corner of the Study Area. While fully internal trips occur throughout the Study Area in the future, the “interchange” trips are largely anchored in the northeast part of the Study Area where the existing and future transit services are already provided or planned. Figure 11 illustrates key travel patterns involving the Southwest Valley Study Area.

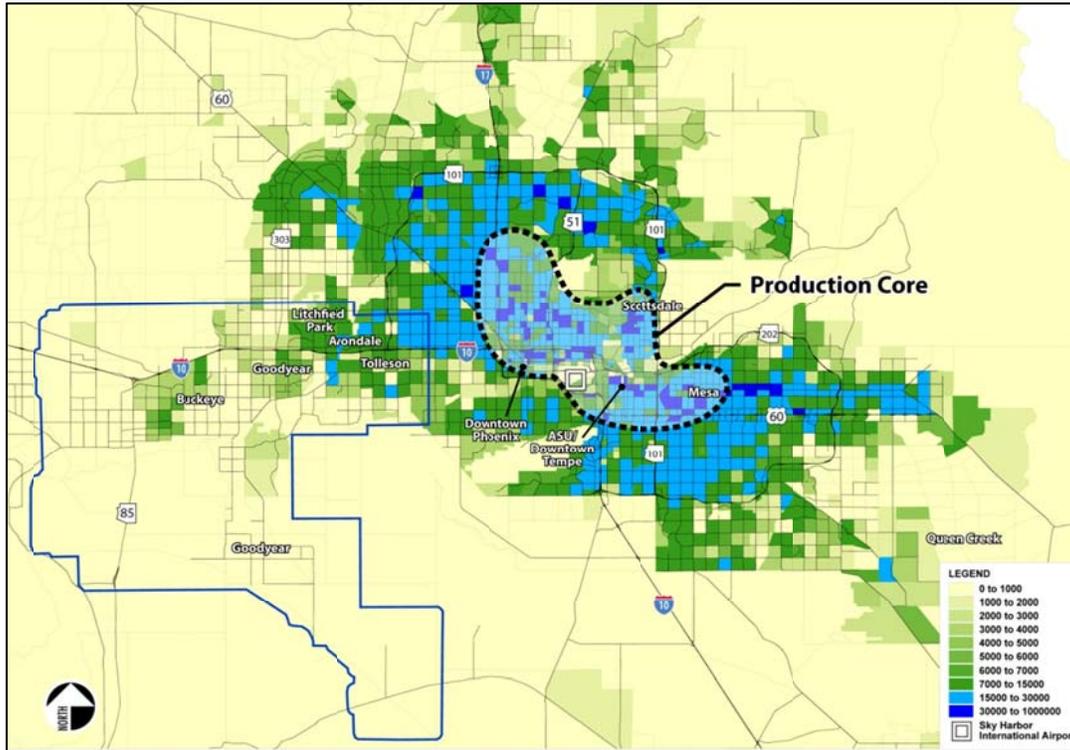
**Figure 11 Southwest Valley Travel Patterns Summary**



Source: Project Team, 2011.

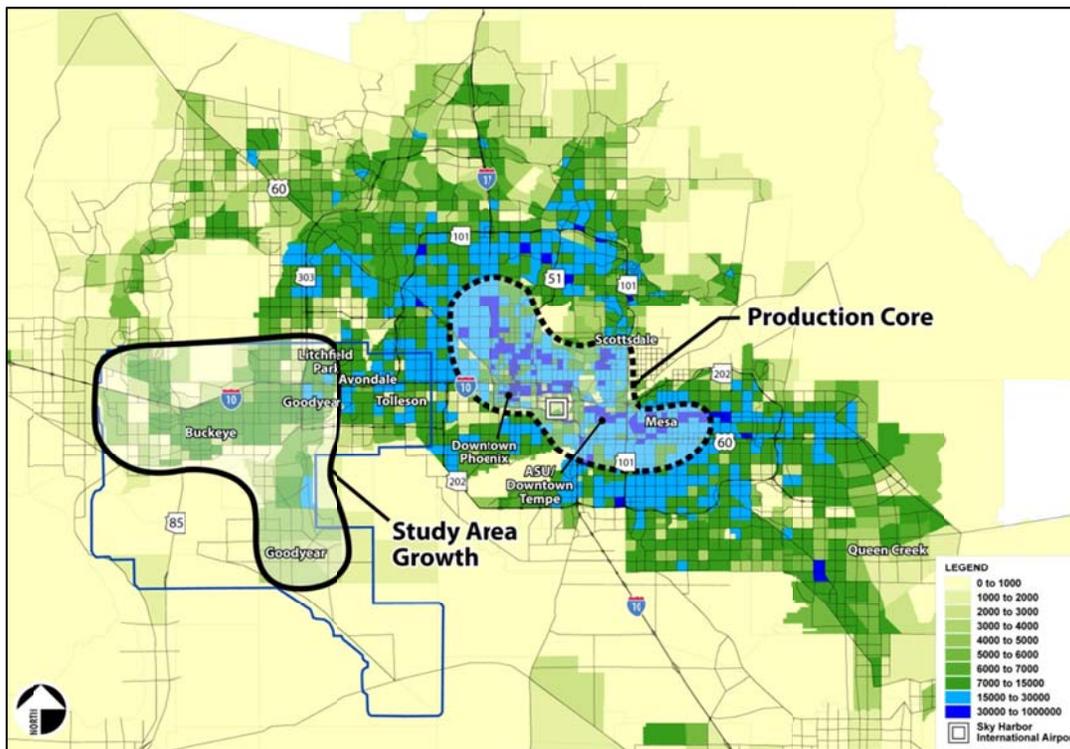


Figure 12 Total Trips –Regional Trip Productions per Square Mile (2010)



Source: MAG, 2011c.

Figure 13 Total Trips – Regional Trip Productions per Square Mile (2031)



Source: MAG, 2011d.



#### **4.2.1 Regional Trip Productions per Square Mile (2010)**

According to MAG data, the total number of productions within the MAG region in 2010 was nearly 15 million trips. As illustrated in Figure 12, the highest trip producing areas of the region are located within the extents bounded by the SR-101L and SR-202L freeways. Within those limits, the densest areas of trip production include:

- Downtown Phoenix;
- Central Avenue Corridor;
- Mesa;
- Downtown Tempe/Arizona State University; and
- Scottsdale.

Within the Southwest Valley Study Area, the most dense trip production area is in the northeast in the vicinity of the SR-101/I-10 freeway junction. There are an elevated number of trip productions also near each town core; however, the majority of the Study Area has a very low trip production density.

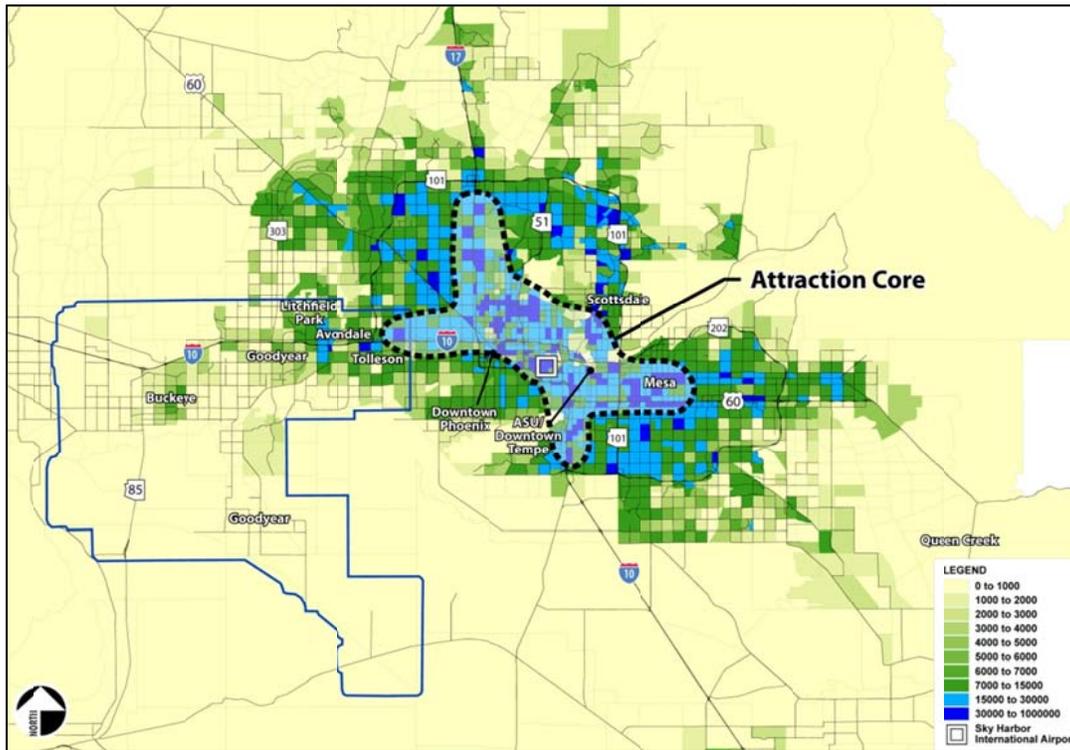
#### **4.2.2 Regional Trip Productions per Square Mile (2031)**

According to MAG data, the projected total number of productions within the MAG region in 2031 is expected to be over 23 million trips. As illustrated in Figure 13, it is expected that there will be an increased number of productions originating on the periphery in the west, northwest, northeast and southeast of the MAG region. Although future growth is anticipated, the densest areas of trip production are expected to remain consistent with 2010.

However, within the Southwest Valley increased trip productions are expected to occur along I-10 to the west into the Town of Buckeye and south into the southern portions of Goodyear. The densest areas of trip production are expected to remain in the northeast portion of the Study Area.

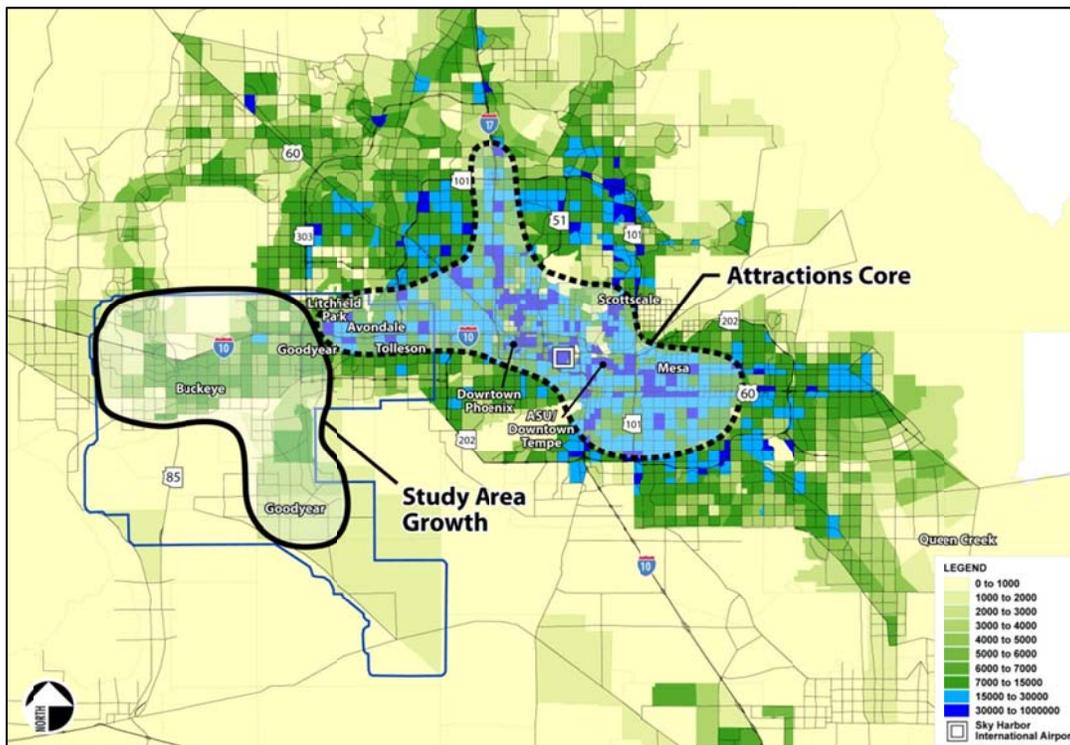


Figure 14 Total Trips – Regional Trip Attractions per Square Mile (2010)



Source: MAG, 2011c.

Figure 15 Total Trips – Regional Trip Attractions per Square Mile (2031)



Source: MAG, 2011d.



#### **4.2.3 Regional Trip Attractions per Square Mile (2010)**

In 2010 the total number of trip attractions within the MAG region complemented the trip productions at nearly 15 million trips. As identified in Figure 14, the highest trip attracting areas of the MAG region were located within the borders of the SR-101 and SR-202 freeways. Within those areas, the densest number of trip attractions included the following destination points:

- Downtown Phoenix;
- Central Avenue Corridor;
- Scottsdale;
- Scottsdale Airport;
- Phoenix Sky Harbor Airport; and
- I-17 Corridor throughout North Phoenix

Within the Study Area, similar to the trip production analysis, the most dense trip attraction areas are located in the northeast portion of the Southwest Valley near Goodyear and Avondale. Additionally, there are also an increased number of trip attractions located in the vicinity of Buckeye south of the SR-85/I-10 interchange.

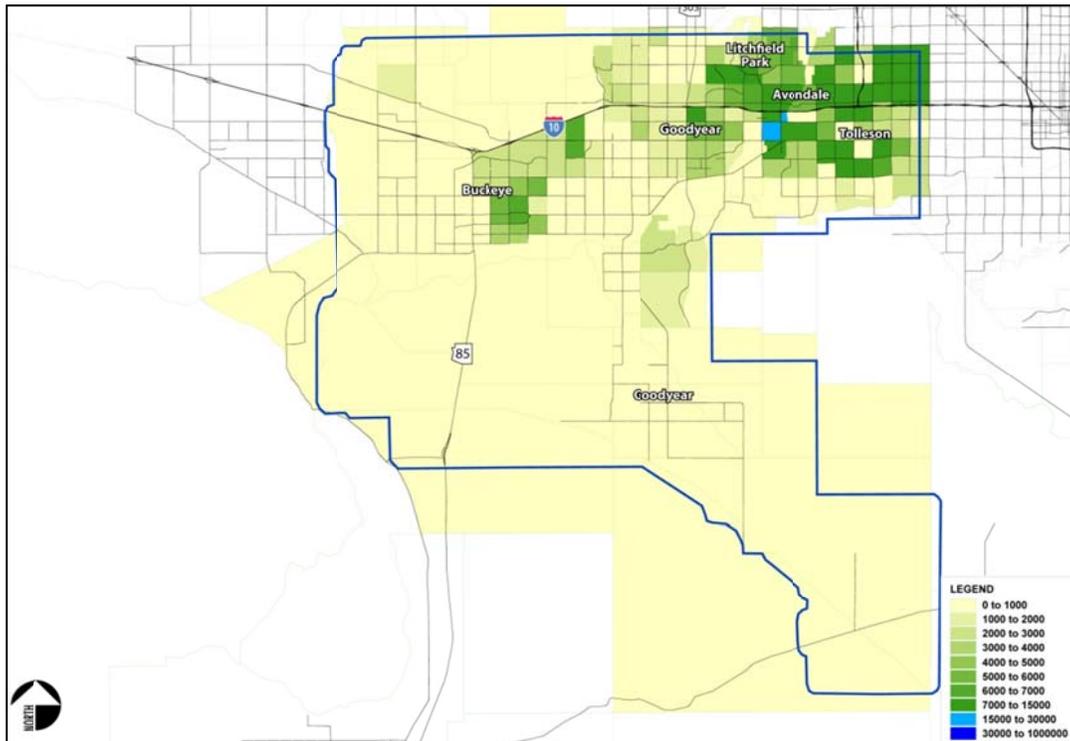
#### **4.2.4 Regional Trip Attractions per Square Mile (2031)**

The projected number of total trip attractions within the MAG region in 2031 is expected to be over 23 million trips. As illustrated in Figure 15, similar to trip productions, an overall increase in trip attractions is expected to occur to destinations to the west, northwest, and southeast. However, the growth in total trip attractions is not expected to be as dense as the growth analyzed for trip productions in 2031. Regionally, the areas of highest trip attraction density are expected to remain consistent with 2010 data and extend along I-10 to the west.

Within the Study Area, increased trip attractions are expected to occur along I-10 to the west into Buckeye and extend south through Goodyear. The densest trip attraction areas are expected to be located in the northeast portion of the Study Area, consistent with 2010.

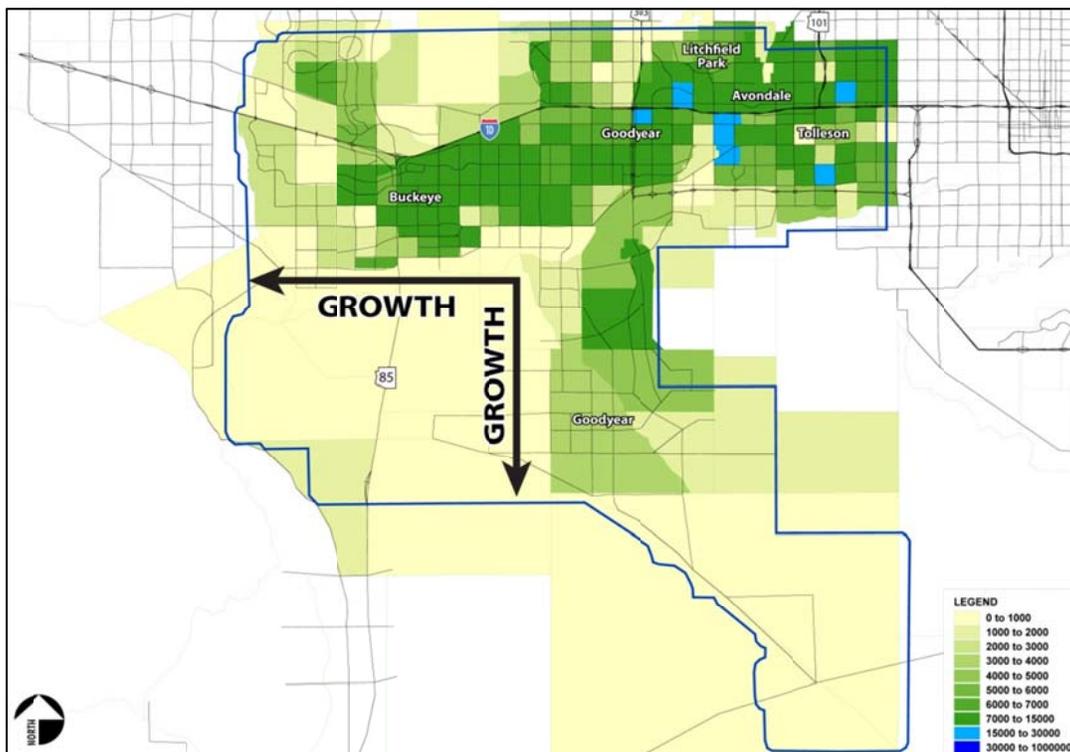


Figure 16 Total Trips – Internal Study Area Trip Productions per Square Mile (2010)



Source: MAG, 2011c.

Figure 17 Total Trips – Internal Study Area Trip Productions per Square Mile (2031)



Source: MAG, 2011d.



#### **4.2.5 Internal Study Area Trip Productions per Square Mile (2010)**

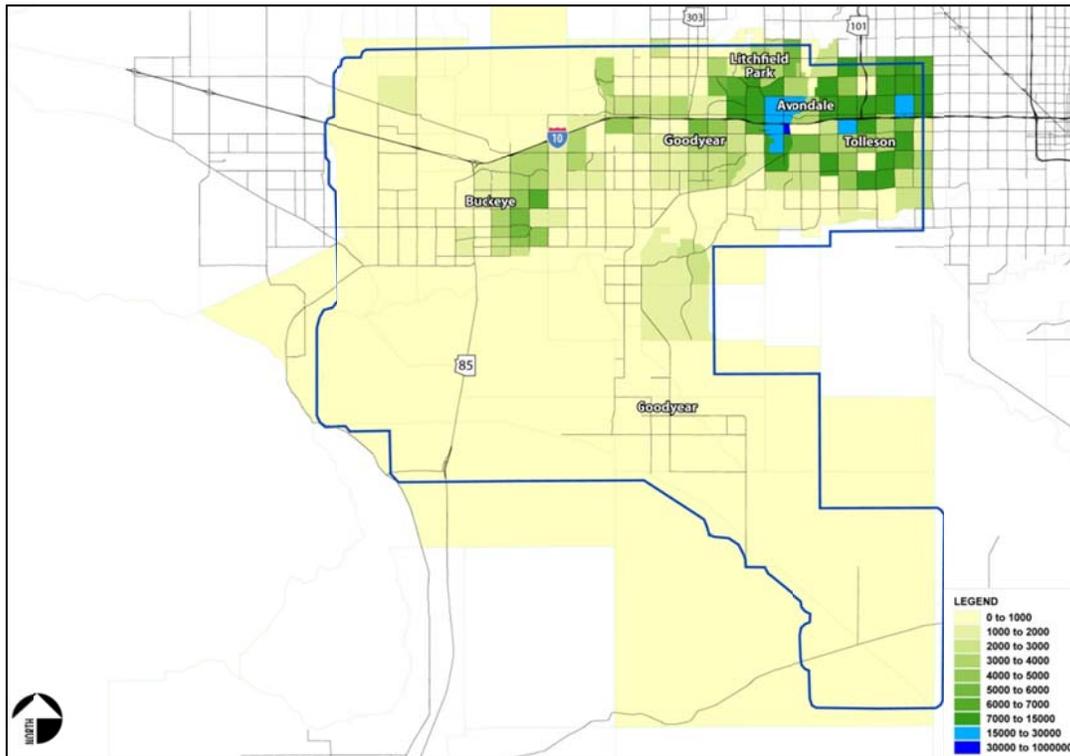
According to MAG data, the total number of 2010 trip productions within the Southwest Valley Study Area was over 750,000 trips for trips wholly within the Study Area. As identified in Figure 16, the majority of those trips were produced in the northeast portion of the Study Area. The 2010 trip production analysis also showed an increase in trip productions in Buckeye near the SR-85/I-10 interchange. The southern portion of the Southwest Valley Study Area did not produce a large amount of overall trips per square mile in 2010.

#### **4.2.6 Internal Study Area Trip Productions per Square Mile (2031)**

In 2031, the projected number of total trips produced in the Southwest Valley Study Area is expected to be over 2.3 million trips wholly within the Study Area. As shown in Figure 17, the trip production density throughout the Southwest Valley is expected to increase west along I-10 and in the areas in the south of Avondale and Goodyear. The northeast portion of the Study Area is only expected to increase slightly in overall density by 2031. However, there are 'hot spots' along I-10 that are expected to increase in overall density that surround planned growth areas as identified in Municipal General Plans and Special Area Plans.

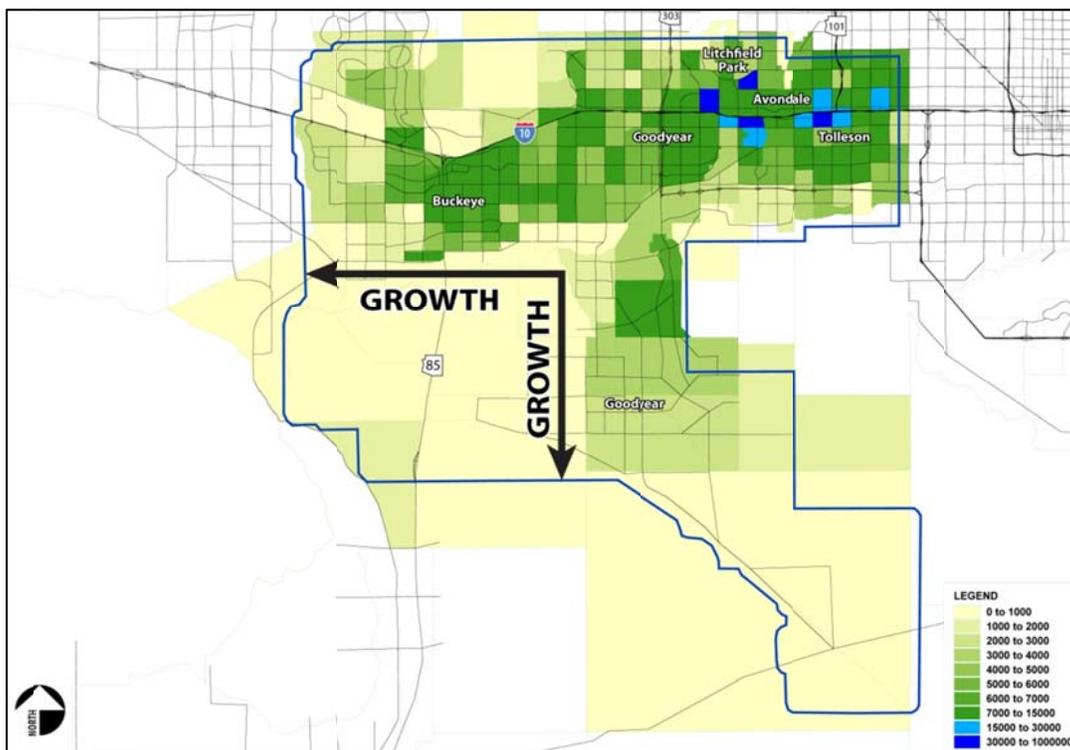


Figure 18 Total Trips – Internal Study Area Trip Attractions per Square Mile (2010)



Source: MAG, 2011c.

Figure 19 Total Trips – Internal Study Area Trip Attractions per Square Mile (2031)



Source: MAG, 2011d.



#### **4.2.7 Internal Study Area Trip Attractions per Square Mile (2010)**

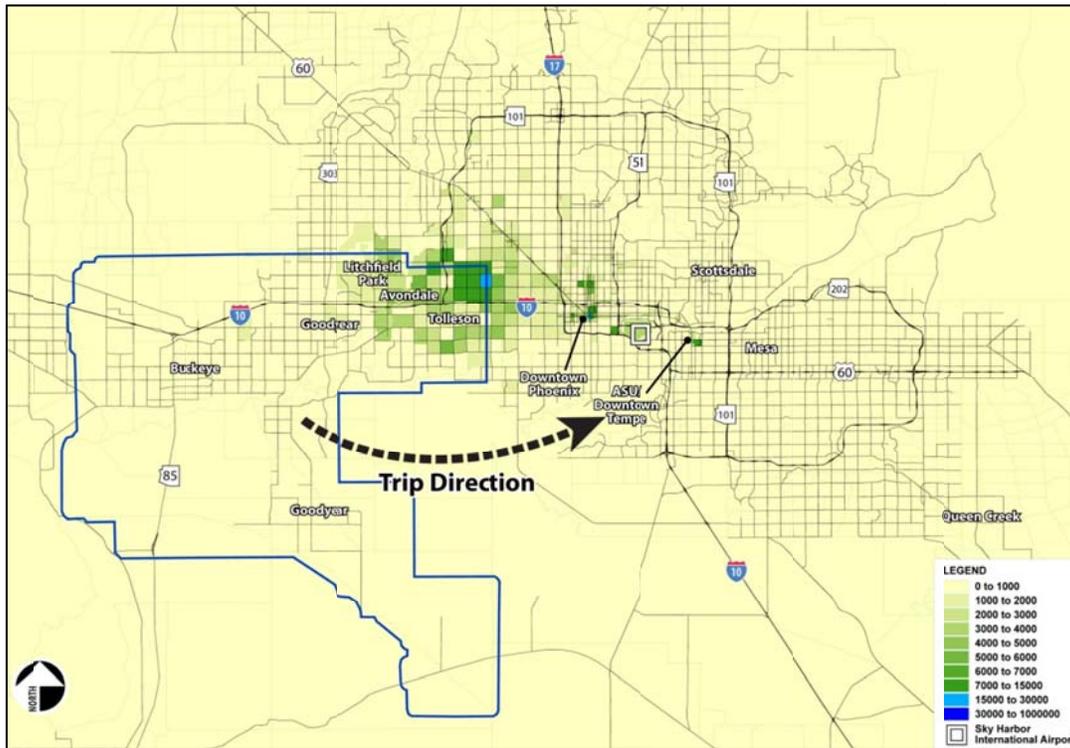
In 2010, MAG data identified that over 750,000 total trip attractions occurred within the Southwest Valley Study Area for those trips wholly within the Study Area. As identified in Figure 18, the majority of those attractions were located in the northeast portion of the Study Area. A few areas of increased trip attraction density are located along I-10. However, when comparing total internal trip production density to total internal trip attraction density throughout the Study Area the trip attraction density is less.

#### **4.2.8 Internal Study Area Trip Attractions per Square Mile (2031)**

MAG data project that by 2031 the total number of trip attractions within the Southwest Valley Study Area will grow to over 2.3 million trips wholly within the Study Area. As shown in Figure 19, growth is expected to occur west along I-10 and include two or three high density areas near Tolleson, Avondale, and Goodyear. Trip attraction density is expected to increase over 2010 levels and is anticipated to grow in the vicinity of Buckeye and southern Goodyear. However, the northeast portion of the Study Area is expected to remain the densest in terms of trip attractions per square mile.

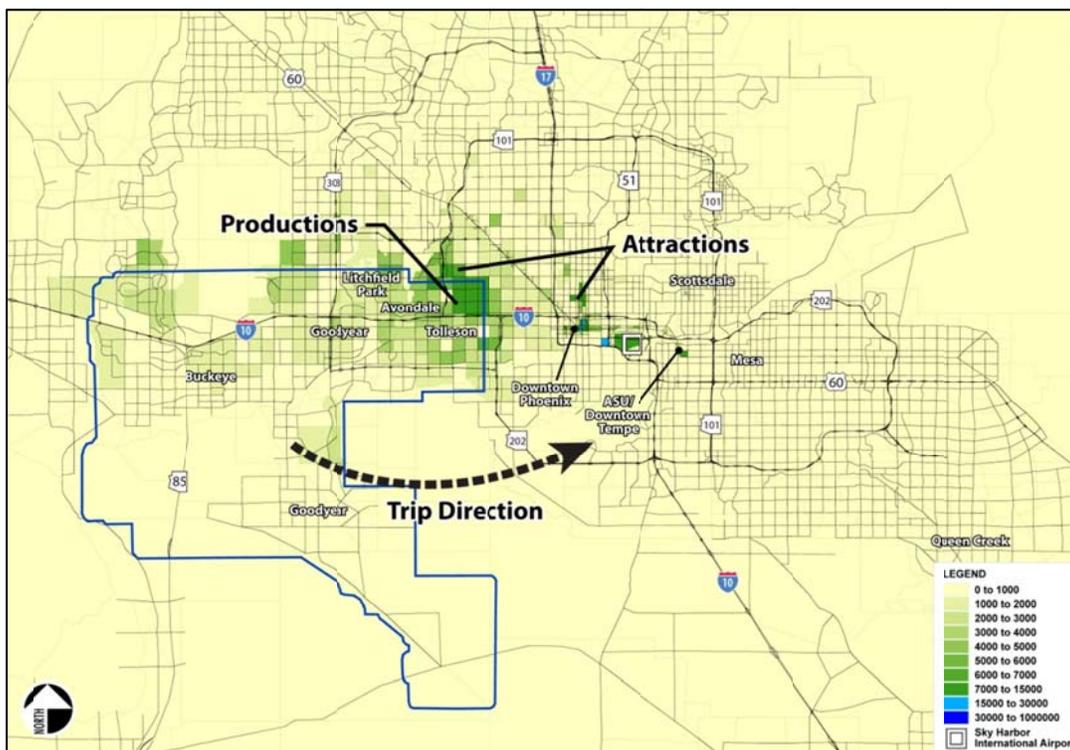


Figure 20 Total Trips per Square Mile Originating within the Study Area (2010)



Source: MAG, 2011c.

Figure 21 Total Trips per Square Mile Originating within the Study Area (2031)



Source: MAG, 2011d.



#### **4.2.9 Total Trips per Square Mile Originating within the Study Area (2010)**

According to 2010 MAG trip data, the number of trips generated within the Southwest Valley Study Area that were destined for areas outside the Study Area was over 310,000 total trips. As illustrated in Figure 20, the majority of those trips were generated in the northeast portion of the Study Area. In 2010, very little trip production occurred throughout the rest of the Southwest Valley.

The most frequent destinations throughout the MAG region that originated in the Southwest Valley included:

- Downtown Phoenix;
- Central Avenue Corridor;
- Phoenix Sky Harbor Airport; and
- Arizona State University.

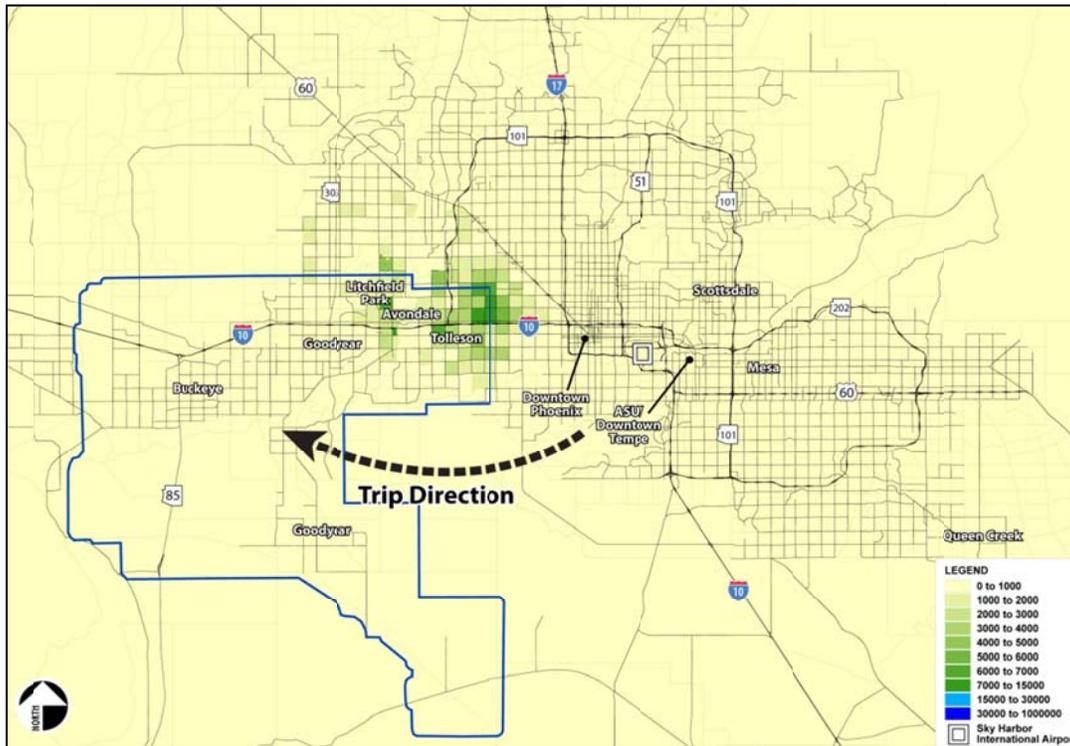
Otherwise the majority of the remaining trips generated within the Study Area remained in the immediate vicinity of the Southwest Valley.

#### **4.2.10 Total Trips per Square Mile Originating within the Study Area (2031)**

Future trip patterns do not identify much change in overall trip growth by 2031. While the overall number of trips generated within the Study Area that were destined for areas outside the Southwest Valley are expected to increase to almost 600,000 trips, Figure 21 shows that the destinations of those trips remain the same as 2010. Similar to 2010 data, the northeast portion of the Study Area is expected to remain as the core area for trips produced in the future.

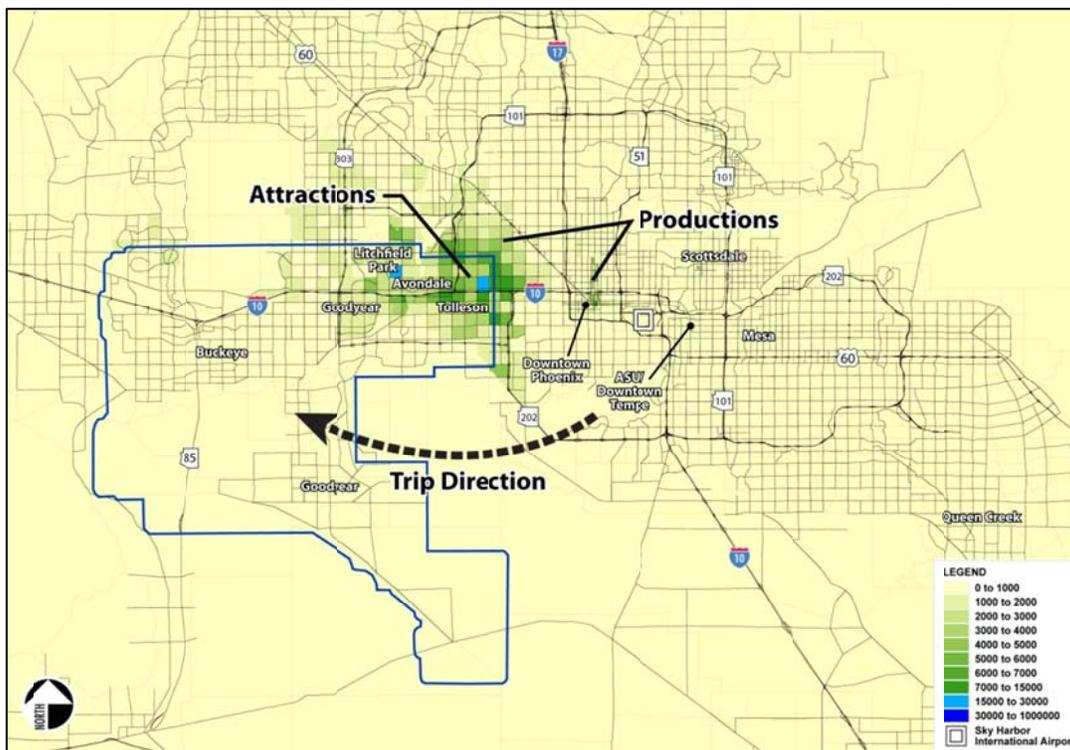


Figure 22 Total Trips per Square Mile Originating outside the Study Area (2010)



Source: MAG, 2011c.

Figure 23 Total Trips per Square Mile Originating outside the Study Area (2011)



Source: MAG, 2011d.



#### **4.2.11 Total Trips per Square Mile Originating outside the Study Area (2010)**

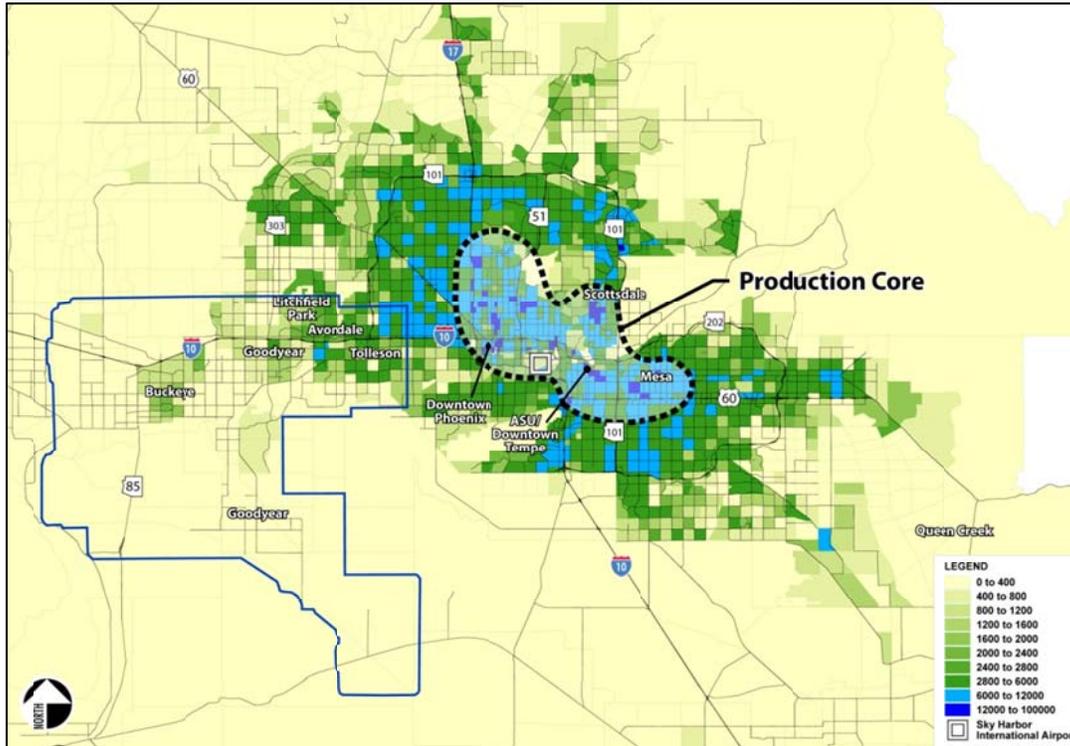
In 2010, the total number of trips that were destined for areas within the Southwest Valley that were produced in areas outside of the Study Area was almost 200,000 trips. As shown in Figure 22, the core trip attraction area of the Southwest Valley is the northeast section, comparable to trip productions in the same year. The most production occurs adjacent to the Study Area with no regional increased production density throughout the MAG region for trips attracted to the Study Area.

#### **4.2.12 Total Trips per Square Mile Originating outside the Study Area (2031)**

2031 projections expect in excess of 455,000 trips to be attracted the Southwest Valley Study Area that originates outside the Study Area limits. Figure 23 shows that the concentration of trip attractions remains in the northeast section of the Study Area with an increased overall density in the future. Additionally, a reverse commuter travel pattern is identified between areas in and around Downtown Phoenix and the Southwest Valley Study Area in the future.

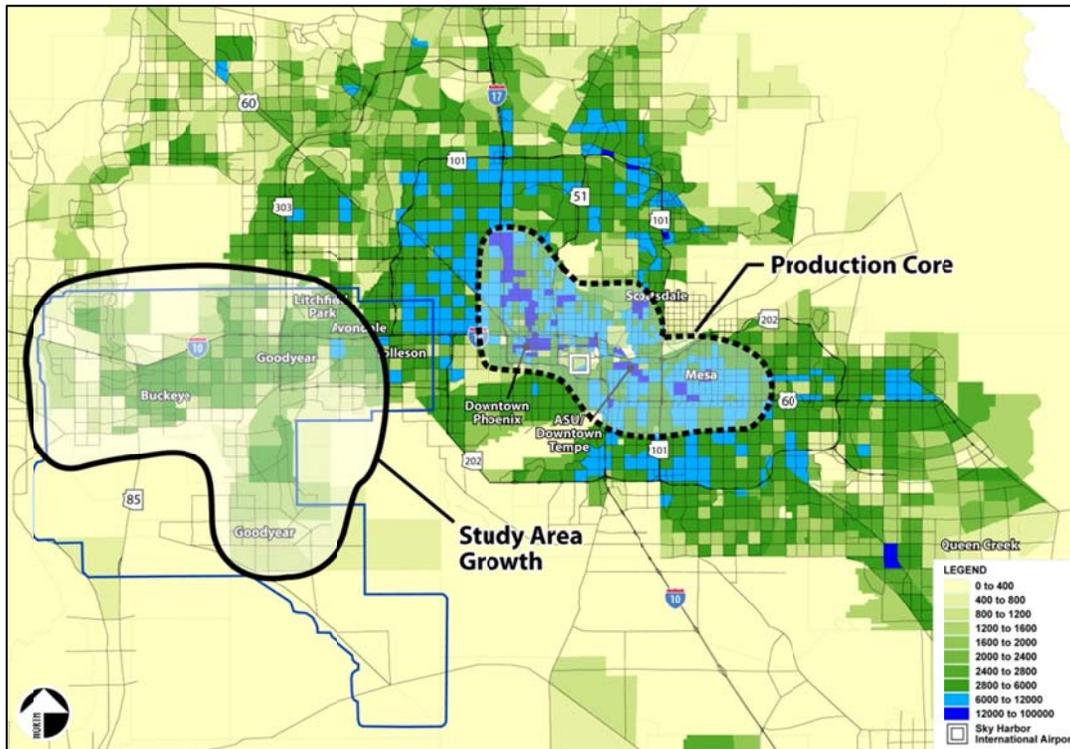


Figure 24 Work Trips – Regional Trip Productions per Square Mile (2010)



Source: MAG, 2011c.

Figure 25 Work Trips – Regional Trip Productions per Square Mile (2031)



Source: MAG, 2011d.



#### **4.2.13 Regional Work Trip Productions per Square Mile (2010)**

According to MAG data, the total number of work trip productions within the MAG region in 2010 was over 4.7 million trips. As illustrated in Figure 24, the highest work trip producing areas of the region are located within the boundaries of the SR-101 and SR-202 freeways. Similar to the total trip production analysis in Section 4.2.1, the densest areas of work trip production include:

- Downtown Phoenix;
- Central Avenue Corridor;
- Scottsdale; and
- Downtown Tempe/Arizona State University.

Within the Southwest Valley Study Area, the most dense work trip production area is in the northeast section including parts of Avondale and Goodyear. There are an elevated number of work trip productions also located near the Buckeye town core, south of the SR-85/I-10 interchange.

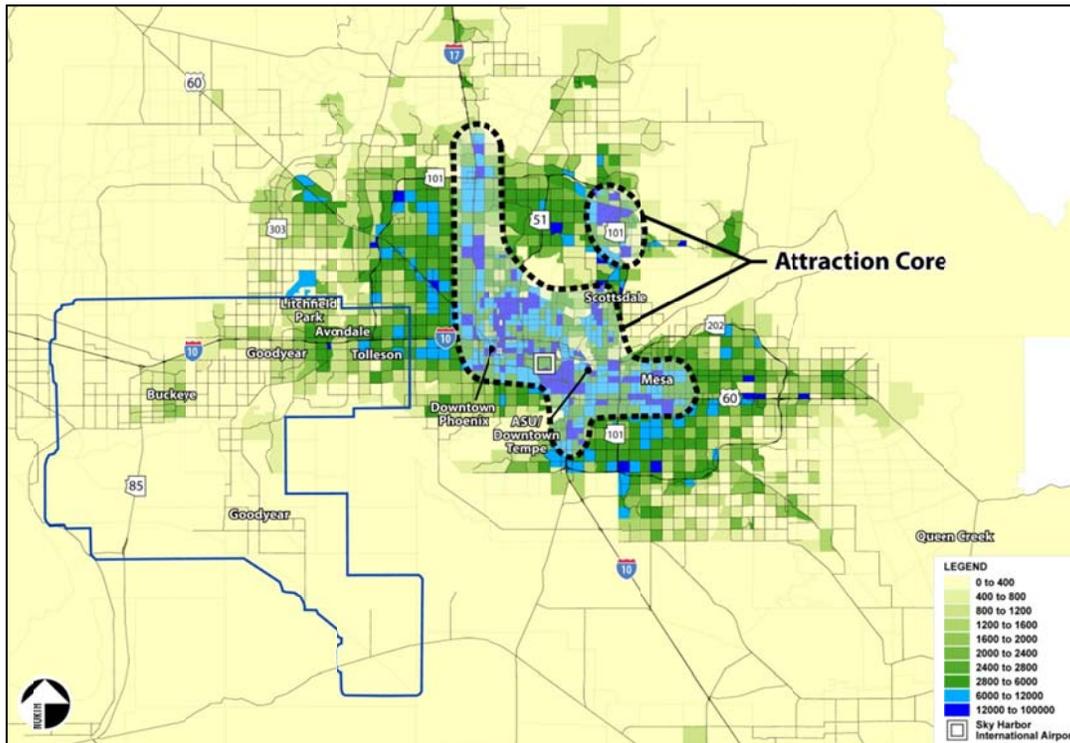
#### **4.2.14 Regional Work Trip Productions per Square Mile (2031)**

According to MAG data, the projected total number of work trip productions within the MAG region in 2031 is expected to be over 7.4 million trips. As illustrated in Figure 25, it is expected that there will be an increased number of number of work trip productions on the periphery in the west, northwest, and southeast of the MAG region. Although future growth is anticipated, the densest areas of work trip production are expected to remain in Phoenix, Scottsdale, Tempe, and Mesa.

However, within the Study Area increased work trip productions are expected to spread along I-10 to the west and into the southern portions of Goodyear and Avondale. The densest areas of work trip production with the Study Area are anticipated to remain in the northeast section.

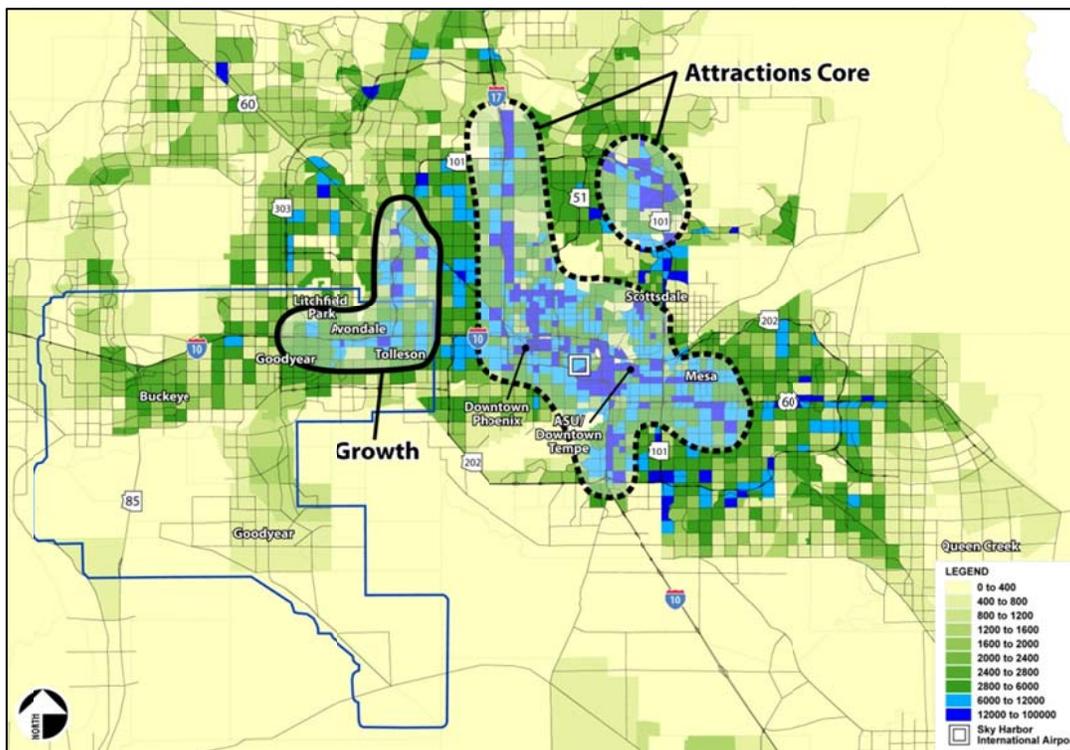


Figure 26 Work Trips – Regional Trip Attractions per Square Mile (2010)



Source: MAG, 2011c.

Figure 27 Work Trips – Regional Trip Attractions per Square Mile (2031)



Source: MAG, 2011d.



#### **4.2.15 Regional Work Trip Attractions per Square Mile (2010)**

In 2010 the total number of work trip attractions within the MAG region was over 4.7 million trips. As identified in Figure 26, the highest work trip attraction densities throughout the MAG region are located within the SR-101 and SR-202 freeways, with very few attractions located west of the SR-101 freeway. Within those areas, the densest number of work trip attractions is located in:

- Downtown Phoenix;
- Central Avenue Corridor;
- I-17 Corridor;
- Scottsdale Airport;
- Downtown Tempe; and
- Mesa.

Within the Study Area, similar to work trip productions, the most dense work trip attraction areas are located in the northeast portion of the Southwest Valley near Goodyear and Avondale. Additionally, there are also an increased number of trip attractions located in the vicinity of Buckeye south of the SR-85/I-10 interchange.

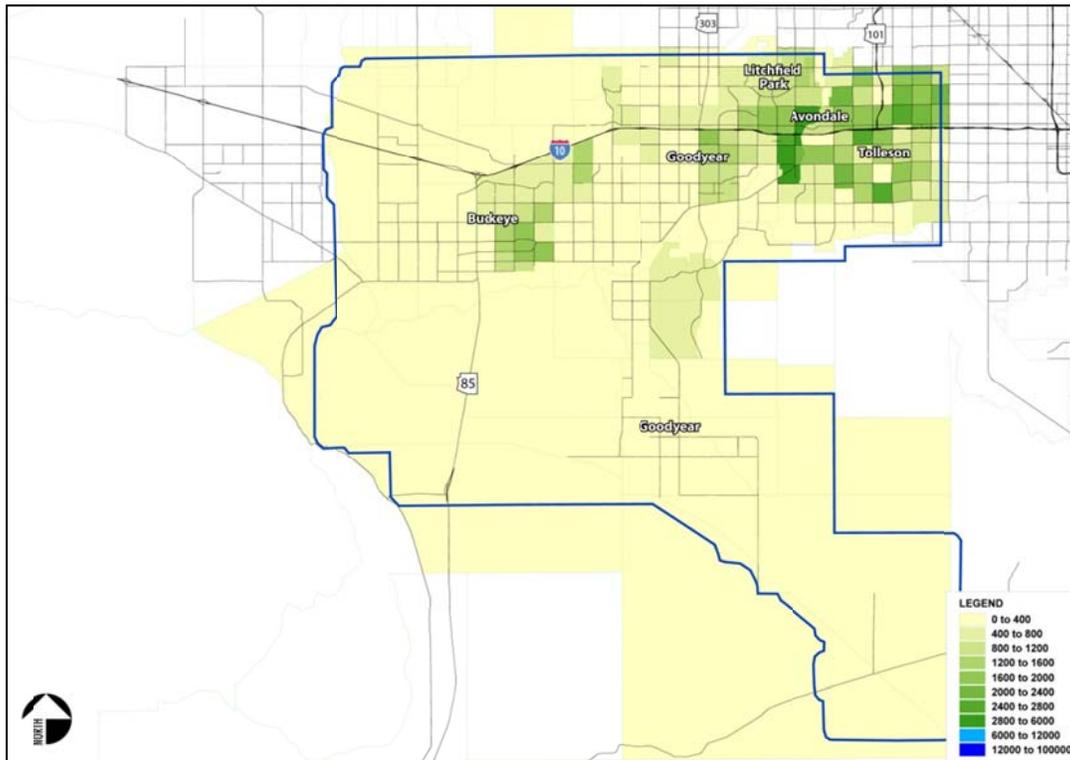
#### **4.2.16 Regional Work Trip Attractions per Square Mile (2031)**

The projected number of total work trip attractions within the MAG region in 2031 is expected to be over 7.4 million trips. As illustrated in Figure 27, an overall increase in work trip attractions is expected to occur along the SR-101 freeway, northwest along US 60 and west along I-10. Regionally, the areas of highest work trip attraction density are expected to remain consistent with 2010 data.

Within the Southwest Valley, increased work trip attractions are expected to occur west along I-10 into Buckeye and north along the SR-101 corridor. The densest work trip attraction areas are expected to be located in the northeast portion of the Study Area, consistent with 2010.

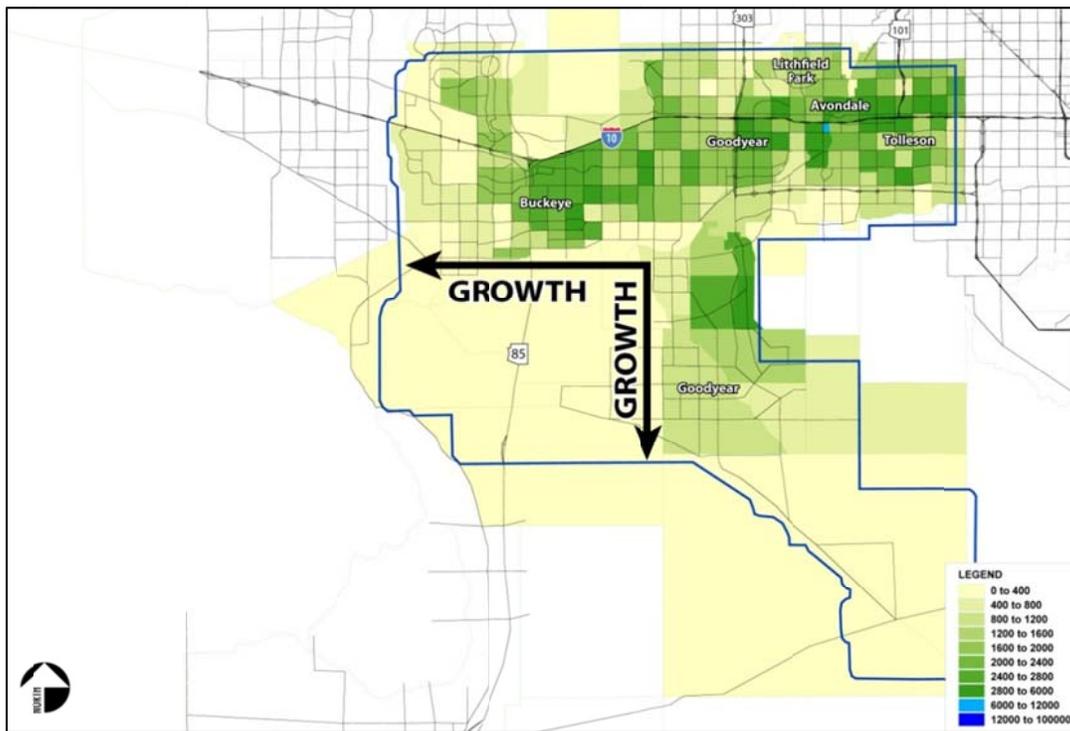


Figure 28 Work Trips – Internal Study Area Trip Productions per Square Mile (2010)



Source: MAG, 2011c.

Figure 29 Work Trips – Internal Study Area Trip Productions per Square Mile (2031)



Source: MAG, 2011d.



#### **4.2.17 Internal Study Area Work Trip Productions per Square Mile (2010)**

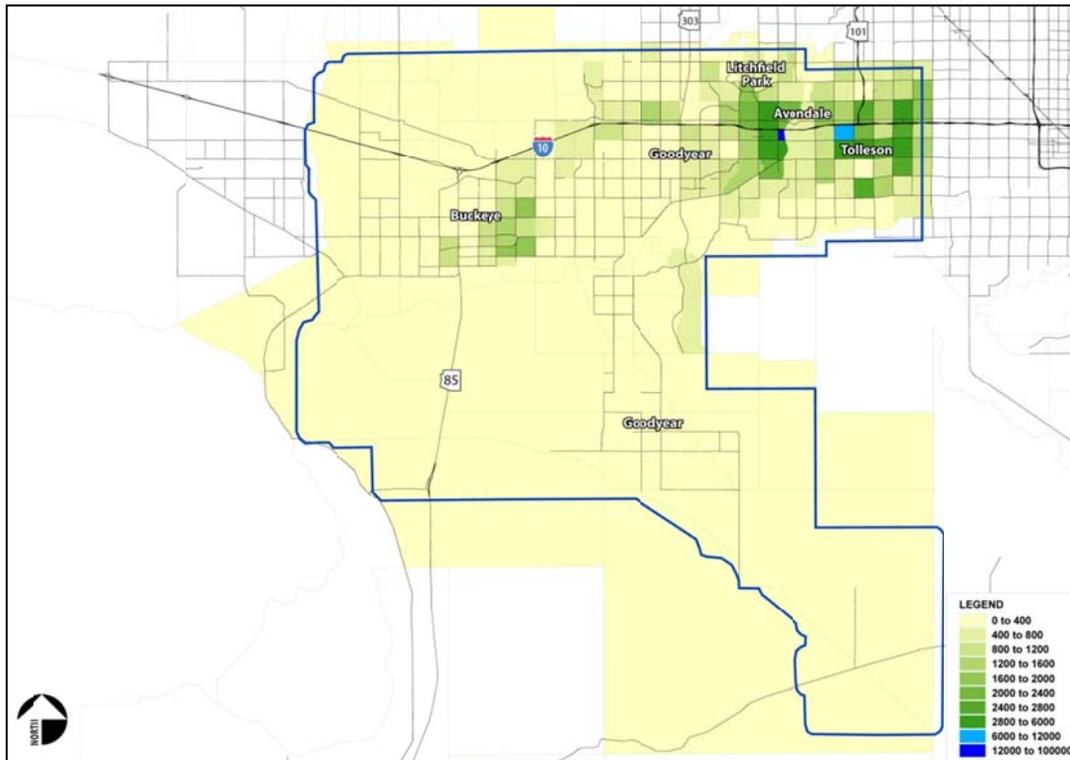
According to MAG data, the total number of 2010 work trip productions within the Southwest Valley Study Area was over 170,000 trips for those wholly within the Study Area. As identified in Figure 28, the majority of those work trips were produced in the northeast portion of the Study Area. The 2010 work trip production analysis also showed an increase in work trip productions in Buckeye. The southern portion of the Southwest Valley Study Area did not produce a large amount of overall work trips per square mile in 2010.

#### **4.2.18 Internal Study Area Work Trip Productions per Square Mile (2031)**

In 2031, the projected number of work trips produced in the Southwest Valley Study Area is expected to be over 615,000 trips for those wholly within the Study Area. As shown in Figure 29, the work trip production density throughout the Southwest Valley is expected to increase west along I-10 and in the areas to the south of Avondale and Goodyear. The northeast portion of the Study Area is not expected to increase in overall density in 2031.

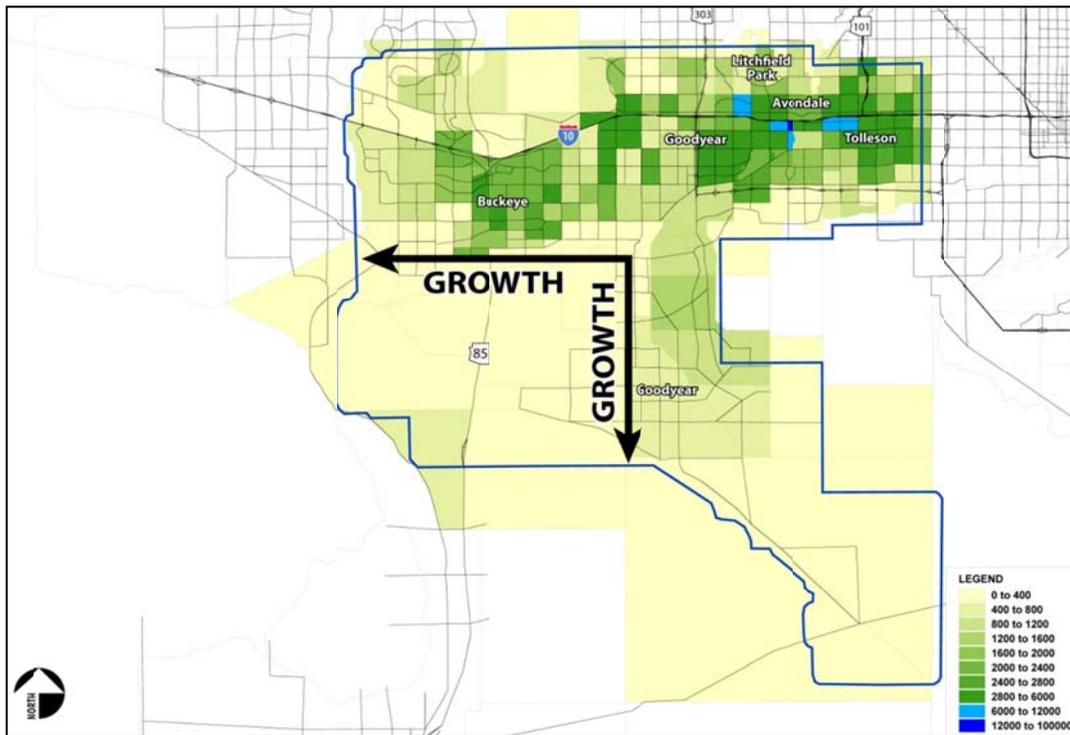


Figure 30 Work Trips – Internal Study Area Trip Attractions per Square Mile (2010)



Source: MAG, 2011c.

Figure 31 Work Trips – Internal Study Area Trip Attractions per Square Mile (2031)



Source: MAG, 2011d.



#### **4.2.19 Internal Study Area Trip Attractions per Square Mile (2010)**

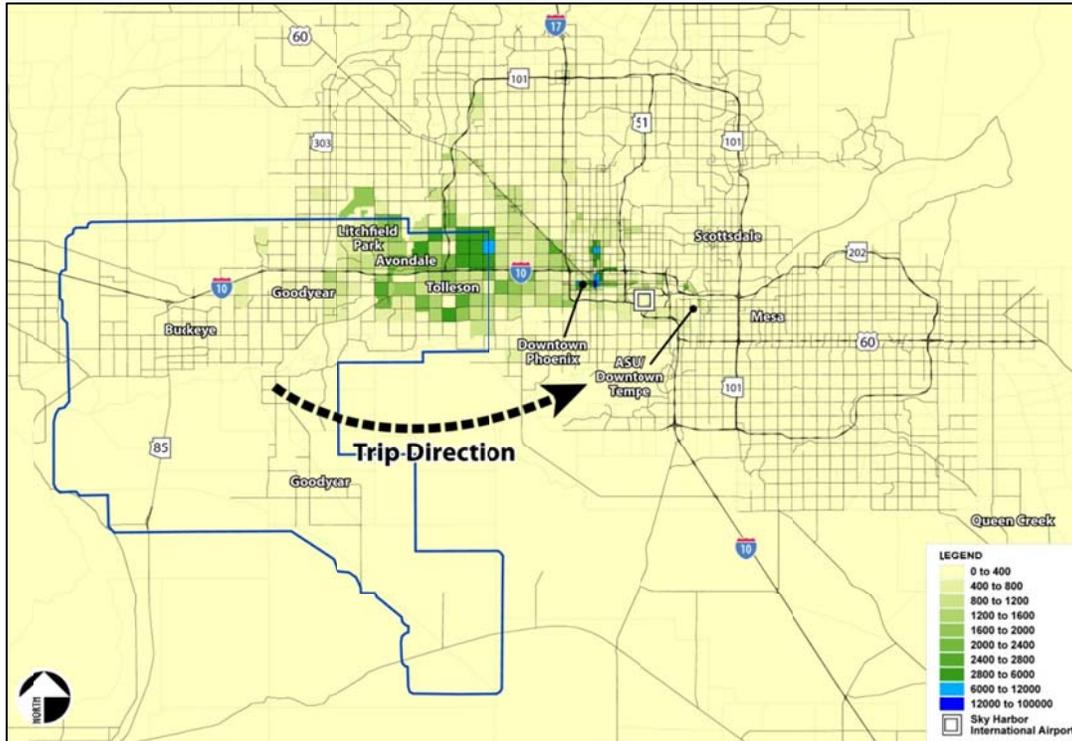
In 2010, MAG data identified that over 170,000 work trip attractions occurred within the Southwest Valley Study Area for work trips wholly within the Study Area. As identified in Figure 30, the majority of those work trip attractions were located in the northeast portion of the Study Area near the city centers of Tolleson, Avondale, and Goodyear. However, when comparing the amount of internal work trip production density to the amount of work trip attraction density throughout the Study Area the trip attraction density is much less.

#### **4.2.20 Internal Study Area Trip Attractions per Square Mile (2031)**

MAG data project that by 2031 the total number of work trip attractions within the Southwest Valley Study Area will increase to over 615,000 trips for those wholly within the Study Area. As shown in Figure 31, growth is expected to occur west along I-10 and include high density work trip attraction locations near Goodyear and Avondale. Overall work trip attraction density is expected to spread across the Study Area into the vicinity of Buckeye and southern Goodyear. However, the northeast portion of the Study Area is expected to remain the densest area of the Southwest Valley in terms of work trip attractions per square mile.

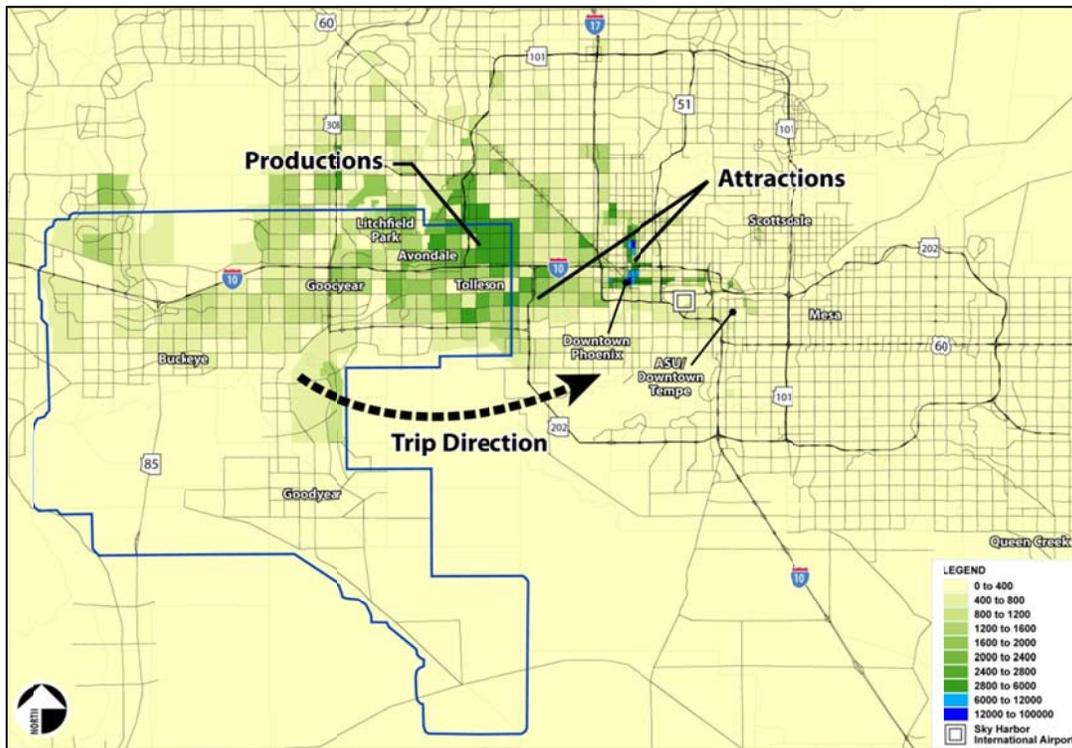


Figure 32 Work Trips per Square Mile Originating within the Study Area (2010)



Source: MAG, 2011c.

Figure 33 Work Trips per Square Mile Originating within the Study Area (2031)



Source: MAG, 2011d.



#### **4.2.21 Work Trips per Square Mile Originating within the Study Area (2010)**

According to 2010 MAG trip data, the number of work trips generated within the Southwest Valley Study Area that were destined for areas outside the Study Area were nearly 160,000 trips. As illustrated in Figure 32, the majority of those trips were generated in the northeast portion of the Study Area. In 2010, very little work trip production occurred throughout the rest of the Southwest Valley. When compared to the total trip analysis in Section 4.2.9, the work trip density is much greater than that of the total trip density.

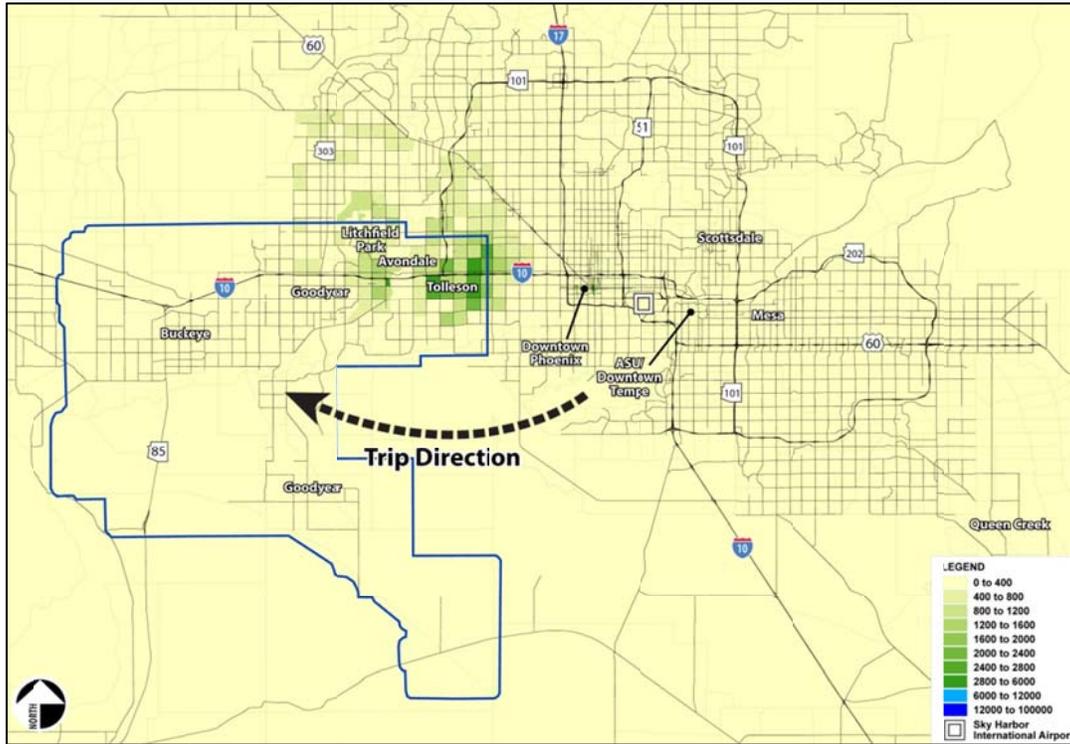
The most frequent destinations throughout the MAG region that originated in the Southwest Valley included downtown Phoenix, Central Avenue corridor, and areas in the immediate vicinity of the Study Area boundary such as Luke Air Force base.

#### **4.2.22 Work Trips per Square Mile Originating with the Study Area (2031)**

Future trip patterns identify an overall growth by 2031 with the total number of work trips generated in the Study Area destined for other places expected to increase to over 300,000 trips. Figure 33 shows that work trip attractions outside the Southwest Valley Study Area spread to include the SR-303 corridor and north along SR-101 in the future. When compared to the trends identified in the total trip analysis in Section 4.2.10, the patterns of work trip growth demonstrate that people are willing to travel farther for work trips compared to all trips.

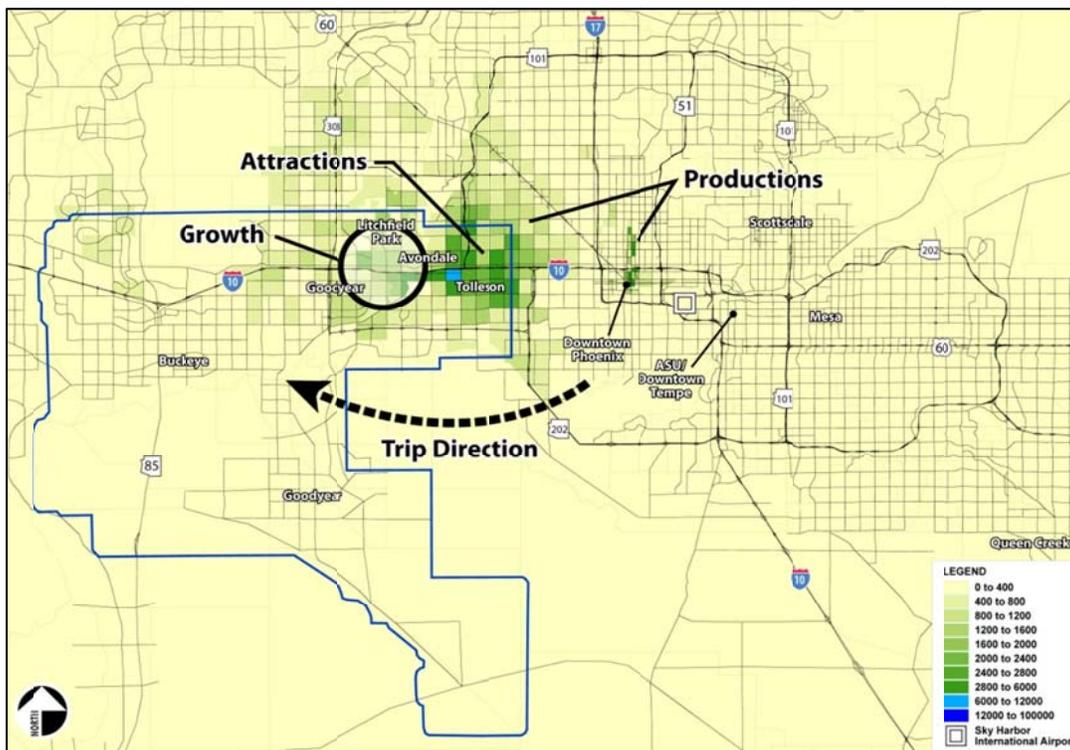


Figure 34 Work Trips per Square Mile Originating outside the Study Area (2010)



Source: MAG, 2011c.

Figure 35 Work Trips per Square Mile Originating outside the Study Area (2031)



Source: MAG, 2011d.



#### **4.2.23 Work Trips per Square Mile Originating outside the Study Area (2010)**

In 2010, the total number of work trips that were destined for areas within the Southwest Valley that were produced in areas outside of the Study Area was over 90,000 trips. As shown in Figure 34, the core work trip attraction area of the Southwest Valley is the northeast section. The most work trip production occurs adjacent to the Study Area with some showing a reverse commute tendency from downtown Phoenix.

#### **4.2.24 Work Trips per Square Mile Originating outside the Study Area (2031)**

2031 projections expect over 200,000 work trips to be attracted to the Southwest Valley Study Area that originates outside the Study Area limits. Figure 35 shows that the concentration of work trip attractions remains in the northeast section of the Study Area with a slight increase west along I-10 and an increase in overall density by 2031. Additionally, work trip productions are expected to increase along the SR-101 corridor as well as new growth in the Central Avenue corridor and downtown Phoenix which identify a growth in the reverse commute travel pattern in the future.



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## 5.0 TRANSPORTATION AND TRANSIT SERVICE

An inventory of the current transportation and transit systems throughout the Study Area was conducted to assess conditions and identify current or anticipated areas of need.

### 5.1 ROADWAY/HIGHWAY CHARACTERISTICS

#### 5.1.1 Existing Roadway Network

The current roadway/highway network throughout the Southwest Valley includes an interstate highway, various state routes and local arterial and collector roads. I-10 provides regional east-west access throughout the Southwest Valley, and is the main connection to downtown Phoenix. SR-85 is a state route that provides north-south access in the Study Area and connects I-10 to Gila Bend and south to the Arizona/Mexico border. SR-303 also provides north-south access, and currently connects I-10 north into the Cities of Glendale and Surprise. A southern extension is planned for SR-303 and is identified in Phase 5 of the MAG RTP 2010 Update.

The remainder of the existing roadway network throughout the Southwest Valley is considered local arterial and collector roads that provide local circulation to commercial and residential areas of the Study Area. Additionally, there are numerous arterial crossings of the Gila River, Salt River, and Agua Fria River located throughout the Study Area. These crossings not only constrain automobile circulation, but also can affect the ability to locate local bus routes.

#### 5.1.2 Programmed Network Improvements

Based on the MAG 2010 RTP Update, multiple roadway/highway improvements are identified for the Southwest Valley. In an effort to relieve expected highway congestion, I-10 will be widened to up to ten general purpose lanes near West Phoenix and to four general purpose lanes west of SR-85. In addition, HOV lanes will be along I-10 to extend from West Phoenix to SR-303. SR-303 is programmed to extend south to the Southern Avenue alignment and connect with the future SR-30, also known as the I-10 reliever. When built, the SR-30 would consist of six general use lanes, and provide an alternative route to I-10 for residents who live in the Southwest Valley. The SR-303 southern extension and the SR-30 freeway are programmed for Phase V (2026 – 2031) of the MAG 2010 RTP Update.

Various regionally funded improvements are also programmed for the arterial streets throughout the Southwest Valley. The MAG Arterial Life Cycle Program extends through FY 2026 and is designed to implement arterial street improvement projects throughout the MAG region.

In addition to major arterials, Arizona Parkways are proposed for Sun Valley Parkway, Turner Parkway, McDowell Parkway, Yuma Parkway, Southern Avenue, Cotton Lane, and the Sonoran Valley Parkway. The Arizona Parkway concept includes indirect left-turn movements at intersections which increases the overall capacity of the parkway. Several west valley agencies have started this planning process by required dedicated right-of-way along the parkway alignments.

#### 5.1.3 Travel Characteristics

In addition to roadway conditions and improvements, it is also important to understand the travel time, level of congestion and expected increase of congestion along I-10, the future



SR-30, and SR-238. Analysis of these roadways may help determine the potential transit ridership demand within the Study Area.

To provide a general indicator of highway congestion, current travel characteristics in the Study Area were calculated using the MAG Regional Travel Demand Model in TransCAD. Volume-to-Capacity (V/C) levels indicate the amount of traffic congestion on a given section of road at a given time based on the amount of traffic that a roadway experiences compared to the roadway's capacity. The closer the projected volume is to the roadway's capacity, the more congestion within the segment resulting in slower travel times and increased delay. For planning purposes and for categorizing congestion levels, this model can assign volumes greater than capacity. Congestion levels are assigned as follows:

- Little to No Congestion –  $V/C < 0.80$ ;
- Moderate Congestion –  $V/C = 0.80 - 1.20$ ; and
- Severe Congestion –  $V/C > 1.20$ .

The daily V/C ratios provide a good approximation of the roadway operation. Peak period and peak hour operations are more dependent of intersection operations involving much more detailed operational analyses. In general, roadway segments which operate with a daily V/C of 0.80 and less will operate with an acceptable level of service during the peak hours, or level of service C or better. Roadway segments which operate with a daily V/C of 0.80 to 1.20 will typically operate with a level of service D or E, which is typically the upper threshold for agencies in an urban area. Daily V/C ratios above 1.20 will generally operate with poor or failing levels of service during the peak hours.

The existing traffic generally travels from west to east during the AM peak hour and from the east to the west during the PM peak hour. Currently, the largest employment attractors are in the central Phoenix metropolitan area, which attracts home-work based trips.

### 5.1.3.1 Daily Volumes

Table 9 compares the 2010 daily traffic volumes to the 2030 projected daily traffic volumes along highway routes within the Study Area. Table 9 also displays the projected 2030 V/C for the study freeways.

**Table 9 Southwest Valley Highway Volumes (2010 – 2030)**

Route	Description	2010 Total Daily Volume	2030 Total Daily Volume	Yearly Growth Rate	2030 V/C
I-10	339 <sup>th</sup> Avenue to SR-85	34,000	100,400-121,200	6.6%	0.80-0.89
I-10	SR-85 to SR-303	34,000-70,000	134,100-196,800	5.3%	0.74-1.07
I-10	SR-303 to SR-101	75,800-131,200	154,900-242,200	3.1%	0.71-0.95
I-10	SR-101 to 67 <sup>th</sup> Avenue	191,700-214,000	228,200-251,100	0.9%	0.91-1.08
SR-85	I-10 to MC 85	10,000-11,800	31,800-56,900	6.0%	0.72-1.34
SR-85	MC 85 to Patterson Road	8,700-11,800	19,700-34,800	4.2%	0.36-0.79
SR-303	Camelback Road to I-10	17,400-20,800	124,700-157,600	10.3%	0.65-0.83
SR-303	I-10 to SR-30	-	108,100-120,200	-	0.57-0.65
SR-101	Camelback Road to I-10	112,400-131,400	171,200-195,500	2.1%	0.61-0.85
SR-30	SR-303 to 67 <sup>th</sup> Avenue	-	79,100-155,200	-	0.40-0.85

Source: ADOT, 2011.



As shown in Table 9, moderate growth within the Study Area is anticipated to occur between 2010 and 2030. The traffic on highways is expected to grow at a rate of 0.9% to 10.3% per year. In general, the higher yearly growth rate represents roadway expansion opportunities. The construction of SR-303 to a freeway will significantly increase its capacity. Additional general purpose lane additions to I-10 within the Study Area will also increase the capacity of I-10. The construction of SR-30 as a freeway will add capacity for the overflow of I-10 traffic within the Study Area.

The 2030 V/C ratios indicate that the added freeway corridors and upgrades to existing facilities will result in moderate congestion along most of the highways within the Study Area. SR-85 near I-10 may have severe congestion in 2030.

Table 10 summarizes the existing daily traffic volumes to the 2030 projected daily traffic volumes along arterial routes within the Study Area.

**Table 10 Southwest Valley Arterial Volumes (2010 – 2030)**

Route	Description	2010 Total Daily Volume	2030 Total Daily Volume
<b>East-West Corridors</b>			
McDowell Rd.	Jackrabbit Tr. to SR-303	3,900 <sup>(1)</sup> -5,400 <sup>(1)</sup>	6,400-32,000
McDowell Rd.	SR-303 to SR-101	3,900 <sup>(1)</sup> -29,100 <sup>(1)</sup>	5,300-45,600
McDowell Rd.	SR-101 to 67 <sup>th</sup> Ave.	16,100 <sup>(3)</sup> -25,600 <sup>(3)</sup>	12,100-31,600
Van Buren St.	Jackrabbit Tr. to Cotton Ln.	1,800 <sup>(1)</sup> -3,000 <sup>(1)</sup>	6,500-15,500
Van Buren St.	Cotton Ln. to 99 <sup>th</sup> Ave.	6,900 <sup>(1)</sup> -24,500 <sup>(1)</sup>	7,000-23,300
Van Buren St.	99 <sup>th</sup> Ave. to 67 <sup>th</sup> Ave.	8,800 <sup>(5)</sup> -12,300 <sup>(5)</sup>	13,900-20,100
Lower Buckeye Rd.	Miller Rd. to Jackrabbit Tr.	600 <sup>(2)</sup> -800 <sup>(2)</sup>	10,000-20,300
Lower Buckeye Rd.	Jackrabbit Tr. to Cotton Ln.	800 <sup>(2)</sup> -1,200 <sup>(1)</sup>	13,300-18,100
Lower Buckeye Rd.	Cotton Ln. to Estrella Pkwy.	800 <sup>(1)</sup> -1,100 <sup>(2)</sup>	1,500-8,400
Lower Buckeye Rd.	MC-85 to 99 <sup>th</sup> Ave.	4,600 <sup>(2)</sup> -8,400 <sup>(3)</sup>	5,900-16,400
Lower Buckeye Rd.	99 <sup>th</sup> Ave. to 67 <sup>th</sup> Ave.	11,300 <sup>(2)</sup> -15,600 <sup>(5)</sup>	14,200-19,700
Broadway Rd.	SR-85 to Jackrabbit Tr.	900 <sup>(2)</sup> -4,500 <sup>(2)</sup>	14,800-27,500
Broadway Rd.	Jackrabbit Tr. to Cotton Ln.	500 <sup>(1)</sup> -900 <sup>(1)</sup>	12,600-18,900
Broadway Rd.	MC-85 to 99 <sup>th</sup> Ave.	100 <sup>(2)</sup> -7,200 <sup>(3)</sup>	3,600-14,200
Broadway Rd.	99 <sup>th</sup> Ave. to 67 <sup>th</sup> Ave.	6,200 <sup>(3)</sup> -11,100 <sup>(3)</sup>	8,900-14,000
MC-85	SR-85 to Jackrabbit Tr.	4,200 <sup>(2)</sup> -8,700 <sup>(5)</sup>	11,200-23,700
MC-85	Jackrabbit Tr. to Cotton Ln.	12,000 <sup>(2)</sup> -12,600 <sup>(2)</sup>	41,400-53,600
MC-85	Cotton Ln. to Lower Buckeye Rd.	7,800 <sup>(5)</sup> -18,200 <sup>(2)</sup>	20,600-34,500
MC-85	Lower Buckeye Rd. to 99 <sup>th</sup> Ave.	14,300 <sup>(3)</sup> -23,900 <sup>(1)</sup>	15,500-32,400
MC-85	99 <sup>th</sup> Ave. to 67 <sup>th</sup> Ave.	22,100 <sup>(2)</sup> -22,400 <sup>(2)</sup>	23,500-29,300
<b>North-South Corridors</b>			
91 <sup>st</sup> Ave.	Camelback Rd. to I-10	12,200 <sup>(5)</sup> -25,100 <sup>(3)</sup>	16,100-33,000
91 <sup>st</sup> Ave.	I-10 to Broadway Rd.	5,300 <sup>(2)</sup> -20,400 <sup>(5)</sup>	16,400-32,700
91 <sup>st</sup> Ave.	Broadway Rd. to Baseline Rd.	3,500 <sup>(5)</sup> -4,300 <sup>(5)</sup>	10,700-25,500
99 <sup>th</sup> Ave.	Camelback Rd. to I-10	10,900 <sup>(1)</sup> -14,000 <sup>(1)</sup>	13,800-42,900
99 <sup>th</sup> Ave.	I-10 to Broadway Rd.	14,500 <sup>(5)</sup> -29,000 <sup>(1)</sup>	26,900-49,900
99 <sup>th</sup> Ave.	Broadway Rd. to Southern Ave.	2,500 <sup>(2)</sup>	12,100-19,900
107 <sup>th</sup> Ave.	Camelback Rd. to I-10	8,200 <sup>(1)</sup> -18,300 <sup>(1)</sup>	10,200-37,300
107 <sup>th</sup> Ave.	I-10 to Broadway Rd.	5,800 <sup>(1)</sup> -19,900 <sup>(5)</sup>	13,800-33,900
Avondale Blvd.	Thomas Rd. to I-10	11,400 <sup>(1)</sup> -18,000 <sup>(4)</sup>	10,600-23,100



Route	Description	2010 Total Daily Volume	2030 Total Daily Volume
Avondale Blvd.	I-10 to Southern Ave.	4,200 <sup>(5)</sup> -26,100 <sup>(1)</sup>	9,900-36,500
Dysart Rd.	Camelback Rd. to I-10	31,800 <sup>(5)</sup> -36,300 <sup>(5)</sup>	24,900-41,500
Dysart Rd.	I-10 to Broadway Rd.	21,600 <sup>(4)</sup> -40,100 <sup>(5)</sup>	12,900-51,900
Litchfield Rd.	Camelback Rd. to I-10	24,800 <sup>(5)</sup> -28,800 <sup>(5)</sup>	18,300-41,900
Litchfield Rd.	I-10 to Yuma Rd.	15,500 <sup>(2)</sup> -19,600 <sup>(5)</sup>	10,300-29,800
Pebble Creek Pkwy.	Indian School Rd. to I-10	14,700 <sup>(4)</sup>	22,200-38,000
Pebble Creek Pkwy.	I-10 to MC-85	28,300 <sup>(4)</sup>	7,100-28,200
Pebble Creek Pkwy.	MC-85 to Cotton Ln.	10,600 <sup>(5)</sup>	49,100-51,500
Verado Way	I-10 to MC-85	7,500 <sup>(5)</sup>	13,800-29,600
Watson Rd.	I-10 to Broadway Rd.	5,900 <sup>(2)</sup> -16,500 <sup>(5)</sup>	11,100-42,600

Source: ADOT, 2011. (1): 2005 Traffic Counts; (2): 2006 Traffic Counts; (3): 2007 Traffic Counts; (4): 2008 Traffic Counts; (5): 2011 Traffic Counts

In general, arterials within the study area north of I-10 are projected to experience limited increase in traffic volumes while arterials south of I-10 experience higher growth. Arterials east of 83<sup>rd</sup> Avenue are projected to experience limited increase in traffic volumes while arterials west of 83<sup>rd</sup> Avenue experience higher growth.

Traffic volumes on arterials are projected to increase as development occurs south of I-10 and west of 83<sup>rd</sup> Avenue. Existing arterials will require widening and future sections will be built in order to accommodate the new traffic volumes generated by new development. New high capacity roadways like MC-85, SR-85, and the extension of SR-303 will assist in relieving the arterial network south of I-10.

The arterial network within the Study Area consists of major arterials spaced generally at mile intervals. In addition to major arterials, Arizona Parkways are proposed for Sun Valley Parkway, Turner Parkway, McDowell Parkway, Yuma Parkway, Southern Avenue, Cotton lane, and the Sonoran Valley Parkway. The Arizona Parkway concept includes indirect left-turn movements at intersections which increases the overall capacity of the parkway. This added capacity will assist in reducing the travel time to motorists and will assist the overall arterial roadway network.

It is anticipated that many of the arterials and parkways will experience moderate congestion in 2030. Roadways approaching freeways will experience additional delay during the peak hours. The arterials immediately adjacent to the freeways will also experience additional delay during the peak hours as they will accommodate any freeway overflow.

## 5.2 EXISTING AND PLANNED TRANSIT SERVICE

The existing and planned services that are financially constrained to the RTP were analyzed. Transit services that are currently provided or planned for future implementation throughout the Southwest Valley Study Area include: fixed route bus, LRT, demand response services, and transit passenger facilities.

### 5.2.1 Existing Fixed Route Bus Service

Fixed route bus services within the Southwest Valley Study Area include local bus, circulators, regional connectors, and express bus service as illustrated on Figure 36.



## Local Bus

Local bus routes provide mainline transit service throughout the MAG region. Within the Southwest Valley Study Area, local bus service is provided seven days a week and ranges in hours of operation between 5:00am and 11:30pm on weekdays and 6:00am and 9:30pm on weekends. Eight local bus routes currently serve some portion of the Southwest Valley Study Area.

Of the local routes that currently serve the Study Area, weekday peak frequency ranges between 15 and 30 minutes, with one route, 17A, operating at 60 minute headways. In addition, the trunks and branches on the western end of Routes 3, 29, and 41 also provide 60 minute service. The coverage area for local service in the Southwest Valley extends west to Litchfield Road and south to Lower Buckeye Road.

## Circulators

Circulator services are fully funded by individual cities and provide residents with access to various activity centers throughout the community. Two circulator routes currently operate in the northeastern quadrant of the Study Area. The MARY Circulator provides 60 minute frequency to the City of Phoenix Maryvale Village located in West Phoenix and operates between approximately 5:00am and 8:30pm on weekdays and 6:00am and 6:00pm on weekends. The Avondale ZOOM Circulator offers 30 minute frequency to the City of Avondale between roughly 5:30am and 9:00pm on weekdays and does not operate on the weekends. The City is exploring options to begin operating Saturday service in July 2012.

## Regional Connectors

Regional connectors provide both fixed stop as well as flexible stop service from the rural areas of Maricopa County to the more urbanized areas. The only regional connector that operates in the Southwest Valley Study Area is the Gila Bend Regional Connector, which provides service between Gila Bend, Arizona and the Desert Sky Transit Center at 75<sup>th</sup> Avenue and Thomas Road in West Phoenix.

## Express Bus

Express bus routes provide weekday peak period commuter service between cities throughout the MAG region and downtown Phoenix. Four express routes, 560, 562, 563, and 573 travel through the Study Area, however only three, 560, 562, and 563 provide service to Study Area residents. These routes utilize I-10 as the primary connection to downtown Phoenix and the Southwest Valley. Route 560 is planned to be removed from operation starting in July 2012.

Table 11 identifies the routes, headways, service span, and days of service of all the current Fixed Route Bus Service throughout the Study Area. Figure 36 illustrates the coverage area of the existing transit service in the Southwest Valley.



**Table 11 Existing Fixed Route Bus Service**

Route	Description	Weekday			Saturday		Sunday	
		Peak Headway (min)	Base Headway (min)	Service Span (hr)	Base Headway (min)	Service Span (hr)	Base Headway (min)	Service Span (hr)
<b>Local Bus</b>								
3	Van Buren Street	15	15/30/60	18	30/60	16.5	30/60	15
13	Buckeye Road	30	30	16.5	60	15	60	15
17	McDowell Road	15	15/30	18	30	15.5	30	15.5
17A	Avondale	60	60	14.5	60	13.5	60	13.5
29	Thomas Road	10	20/30/60	18.5	30	15.5	30	15.5
41	Indian School Road	15	15/30/60	18	30	16	30	16
60	Bethany Home Road	30	30	16	60	15	60	15
67	67 <sup>th</sup> Avenue	30	30	16	60	15	60	15
<b>Circulators</b>								
MARY	Maryvale	60	60	14	60	12	60	12
ZOOM	Avondale	30	30	15.5	N/A	N/A	N/A	N/A
<b>Regional Connector</b>								
685	Gila Bend/Ajo Regional Connector	5 NB/5 SB Daily Trips			2 NB/2 SB Daily Trips		N/A	
<b>Express Bus</b>								
560	Avondale Express	2 AM Inbound/2 PM Outbound			N/A		N/A	
562	Goodyear/Downtown Express	3 AM Inbound/3 PM Outbound			N/A		N/A	
563	Buckeye Express	2 AM Inbound/2 PM Outbound			N/A		N/A	

Source: Valley Metro, 2011d.

### Ridership Trends

Fiscal Year (FY) system-wide ridership data were obtained from the Regional Public Transportation Authority (RPTA), as identified in Table 12. Average weekday ridership was identified for each local route or portions of routes that serve the communities of Avondale, Tolleson, Goodyear, Litchfield Park, and Buckeye in some capacity. Local ridership information for the City of Phoenix was not included because the available data do not break out ridership for the West Phoenix portion of the Study Area. Therefore, the information presented depicts local route ridership trends solely occurring within the Southwest Valley communities. Average weekday boardings for individual routes were analyzed in order to understand ridership trends including the number of revenue miles and passengers per revenue mile. Route modifications to the RPTA bus route network were implemented in July 2011. Thus, ridership data reflect some routes that have been eliminated from service.

**Table 12 Southwest Valley Average Weekday Ridership Trends (2008 – 2011)**

Route	FY 2008 - 2009			FY 2009 - 2010			FY 2010 - 2011		
	Passengers	Revenue Miles	Passengers/Rev. Mile	Passengers	Revenue Miles	Passengers/Rev. Mile	Passengers	Revenue Miles	Passengers/Rev. Mile
<b>Local Bus</b>									
3	147	354	0.4	99	334	0.3	226	251	0.9
17A	103	322	0.3	272	303	0.9	318	301	1.1
29A*	128	242	0.5	143	228	0.6	11	14	0.8
41A**	177	295	0.6	66	157	0.4	N/A	-	-
131*	303	450	0.7	204	391	0.5	164	334	0.5
<b>Circulators</b>									
MARY	2,692	1,384	2.0	2,979	1,397	2.1	1,327	632	2.1
ZOOM	N/A	-	-	N/A	-	-	N/A	-	-
<b>Regional Connector</b>									
685	45	610	0.1	46	640	0.1	56	628	0.1
<b>Express Bus</b>									
560	68	101	0.7	57	101	0.6	72	99	0.7
562	115	102	1.1	131	110	1.2	156	107	1.5
563	No data – Route added in January 2012								

\* Denotes routes that were eliminated from service in FY 10-11

\*\* Denotes routes that were eliminated from service in FY 09-10

Note: Routes identified do not include those routes that only serve the Phoenix portion of the Study Area

Source: Valley Metro, 2009; Valley Metro, 2010; Valley Metro, 2011a.

As shown in Table 12, transit network modifications eliminated three routes that served the Southwest Valley over the past three fiscal years. Route 41A operated along Indian School Road in Avondale and was eliminated in FY 09-10, and Route 29A operated along Thomas Road in Avondale and was eliminated in FY 10-11. Route 131 was a local route that provided 80 minute service through and around the communities of Avondale, Goodyear, Litchfield Park, West Phoenix, and Tolleson. It was eliminated from service in July 2011, but was replaced in Avondale with the Avondale ZOOM Circulator that provides 30 minute service

Table 13 compares average weekday ridership of the first four full months of the FY 11-12 transit network that serves the Study Area to the same four months in FY 10-11 in order to identify the most recent ridership trends throughout the Southwest Valley.

**Table 13 Recent Ridership Trends throughout the Southwest Valley**

Route	Average Weekday Ridership August 2010 – November 2010	Average Weekday Ridership August 2011 – November 2011	% Change 2010-2011
<b>Local Bus</b>			
3	185	348	88%
17A	335	350	4%
<b>Circulators</b>			
MARY	1,402	1,232	-12%
131/ZOOM*	183	334	83%
<b>Regional Connector</b>			
685	56	53	-5%
<b>Express Bus</b>			
560	81	84	5%
562	145	163	12%

\* Route 131 operated at 80 minute service in 2010; ZOOM operates at 30 minutes service in 2011

Note: Routes identified do not include those routes that only serve the Phoenix portion of the Study Area

Source: Valley Metro, 2011b.



The most recent data show that ridership on fixed route service that serves the Southwest Valley communities in some capacity, not including Phoenix has increased in 2011. The upward ridership trend associated with Avondale and Tolleson on Route 3 could be attributed to the introduction of the Van Buren Supergrid route in July 2010. Prior to July 2010, Route 3 (Van Buren) operated only within Phoenix while a separate route, 3A, provided service along Van Buren Street in Avondale and Tolleson. The Van Buren Supergrid route effectively combined these service areas into one regional route that connects residents in Avondale and Tolleson to Phoenix without a route transfer. Monthly ridership data show a slow uptick in ridership along the Van Buren Supergrid in August and September of 2010. As residents became aware of the new modification, ridership nearly doubled as shown in Table 13. A similar trend may occur between routes 17 and 17A when the McDowell Road Supergrid is implemented in Phase II of the MAG 2010 RPT Update as described in 5.2.2 Planned Transit Service.

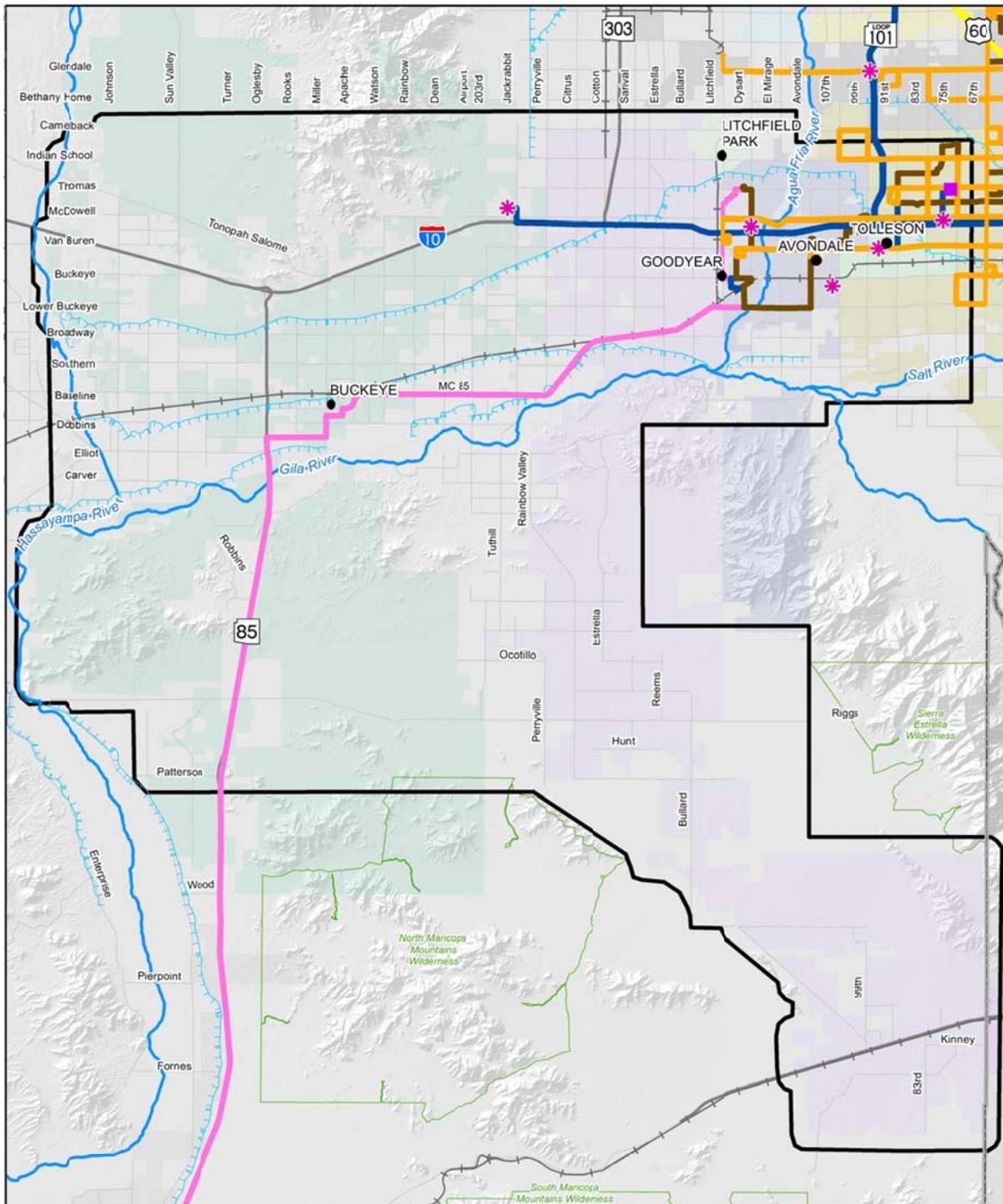
To further understand the need throughout the Southwest Valley, the ridership trend along Route 131 in 2010 and the Avondale ZOOM Circulator in 2011 provides a snapshot. In 2010, Route 131 served solely Southwest Valley cities at approximately 80-minute frequency. In July 2011 the Avondale ZOOM Circulator was introduced, which provides 30-minute service throughout the City of Avondale. Although the ZOOM is a new service, ridership has been growing since service began and suggests that greater frequency will attract riders.

To further support the idea that more frequent service improves local ridership, a comparison of the MARY Circulator was conducted over a three month span during 2009, 2010, and 2011. The MARY Circulator was operating at 30-minute service in 2009, and was reduced to 60-minute service in July 2010. As illustrated in Table 14, ridership along MARY decreased over 60% due to the reduction in frequency.

**Table 14 Average Weekday Ridership along MARY Circulator (2009 – 2011)**

	August '09 – October '09 (30-minute frequency)	August '10 – October '10 (60-minute frequency)	August '11 – October '11 (60-minute frequency)	% Change 2009 - 2011
<b>MARY</b>	3,230	1,423	1,196	-63%

Source: Valley Metro, 2009; Valley Metro, 2010; Valley Metro, 2011b.



**LEGEND**

- Project Area
- Existing Route
- Existing Local
- Existing Circulator
- Existing Limited
- Existing Express
- Existing Regional
- Transit Center
- Existing Park and Ride
- Highway
- Road
- Railroad
- Canal
- River/Stream
- Wilderness

**Jurisdiction**

- Avondale
- Buckeye
- El Mirage
- Gila Bend
- Glendale
- Goodyear
- Litchfield Park
- Maricopa
- Peoria
- Phoenix
- Tolleson
- Youngtown

Source: ALRIS 1997 - 2010, ADOT 2009

**Figure 35**  
**Existing Transit Network**

Maricopa Association of Governments  
Southwest Valley Local Transit System Study





## 5.2.2 Planned Fixed Route Bus Service

### Local Bus (Supergrid)

The RTP identifies a total of ten supergrid routes that are planned to serve the Southwest Valley in some capacity by 2031. Similar to the existing transit network, these planned supergrid routes are primarily located in the northeast section of the Study Area. Supergrid routes will offer a consistent level of service and improved passenger access throughout all jurisdictions within the MAG region. Table 15 identifies the planned supergrid routes for the Southwest Valley as well as their planned implementation phase in the RTP, headways, and service span. This information only identifies RTP funded service, and these service levels may be enhanced through locally raised funds. In addition, the planned supergrid routes and operating scenarios listed are subject to change and modification.

### Express Bus

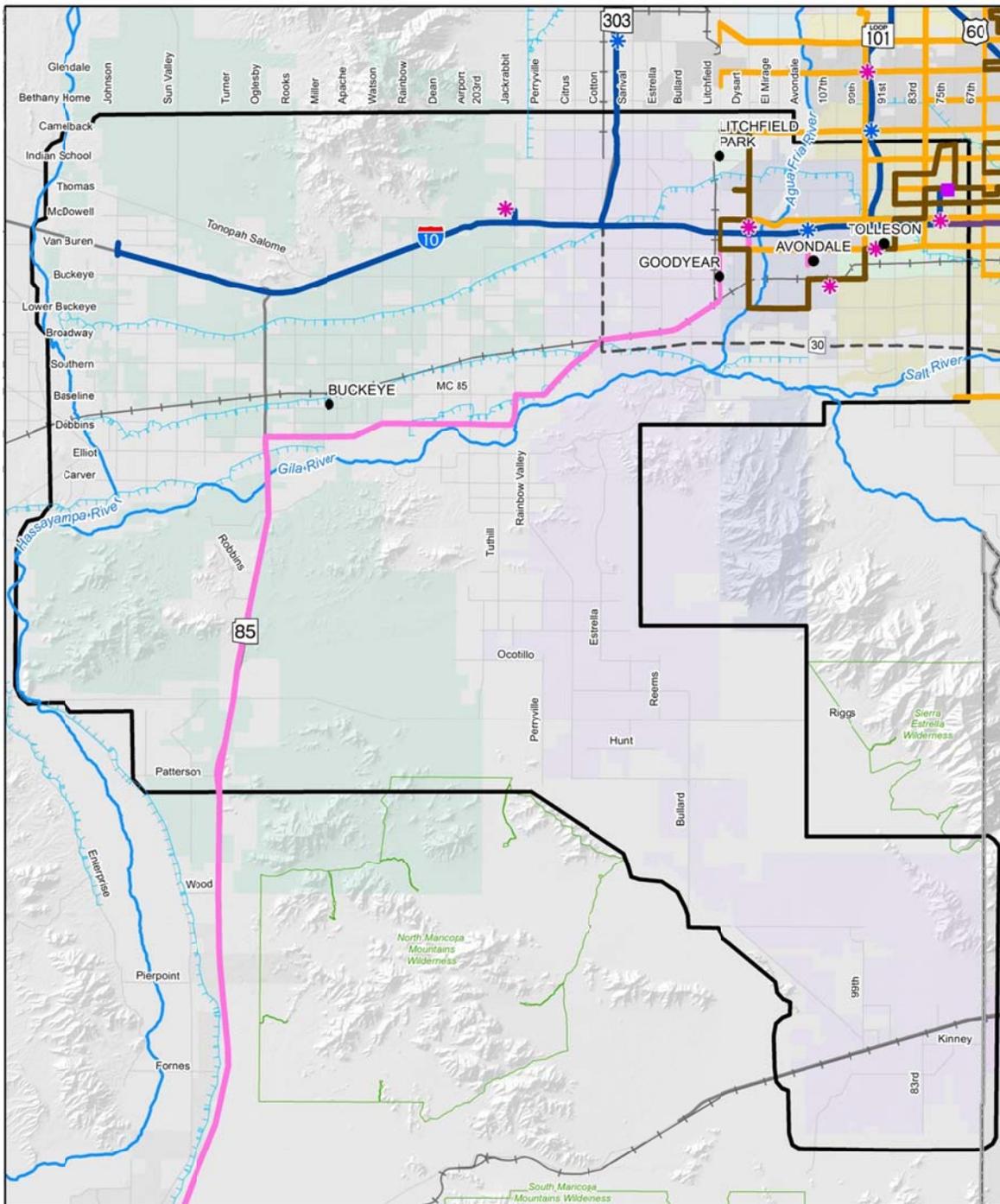
The RTP identifies two planned express bus routes that will serve the Southwest Valley by 2031. The Buckeye Express will operate in January 2012 and the Loop 303 Express is scheduled to be implemented in Phase V (2026-2031) of the MAG RTP. Table 15 identifies the planned express routes including their implementation phase and total number of weekday trips.

**Table 15** Planned Supergrid and Express Bus Service

Route	RTP Phase	Weekday			Saturday		Sunday	
		Peak Headway (min)	Base Headway (min)	Service Span (hr)	Base Headway (min)	Service Span (hr)	Base Headway (min)	Service Span (hr)
<b>Supergrid</b>								
McDowell Road	II ('11-'15)	15	30	18	30	17	30	17
Thomas Road	V ('26-'31)	15	30	18	30	17	30	17
Van Buren Street	IV ('21-'25)	15	30	19	30	18	30	18
Indian School Road	V ('26-'31)	15	30	18	30	17	30	17
Camelback Road	IV ('21-'25)	15	30	19	30	17	30	17
Baseline Road	II ('11-'15)	15	30	18	30	17	30	17
Buckeye Road	V ('26-'31)	30	30	18	30	15	30	15
Dysart Road	V ('26-'31)	30	30	18	30	15	30	15
83 <sup>rd</sup> /75 <sup>th</sup> Avenue	IV ('21-'25)	30	30	18	30	16	30	16
99 <sup>th</sup> Avenue	V ('26-'31)	30	30	17	30	15	30	15
<b>Express Bus</b>								
Loop 303 Express	V ('26-'31)	8 Weekday Peak Trips			-	-	-	-

Source: MAG, 2010; Valley Metro, 2011c.

Figure 37 illustrates the RTP planned transit network scheduled to serve the Southwest Valley Study Area.



**LEGEND**

- |                     |                        |                     |                 |
|---------------------|------------------------|---------------------|-----------------|
| Project Area        | Transit Center         | <b>Jurisdiction</b> | Litchfield Park |
| <b>Future Route</b> | Existing Park and Ride | Avondale            | Maricopa        |
| Future Circulator   | Planned Park and Ride  | El Mirage           | Peoria          |
| Future Local        | Highway                | Gila Bend           | Phoenix         |
| Future Express      | Road                   | Glendale            | Tolleson        |
| Future Light Rail   | Railroad               | Goodyear            | Youngtown       |
| Future Regional     | Canal                  |                     |                 |
| Future Highway      | River/Stream           |                     |                 |
|                     | Wilderness             |                     |                 |

**Figure 37**  
**Planned Transit Network**

Maricopa Association of Governments  
Southwest Valley Local Transit System Study

Source:  
Base Map: ALRIS 1997 - 2010, ADOT 2009





### **5.2.3 High Capacity Transit**

High capacity transit (HCT), including LRT, refers to service that can carry large numbers of passengers per mile, per hour, typically at higher travel speeds than local buses. Currently, there is no HCT service provided in the Southwest Valley. However, the MAG 2010 RTP Update identifies an 11-mile HCT extension west along I-10 that would connect downtown Phoenix to the West Valley at the 79<sup>th</sup> Avenue Park and Ride. The most recent update identifies fiscal year of operation for the Phoenix West Extension as 2021.

### **5.2.4 Demand Responsive Service**

Demand response service, also known as dial-a-ride or paratransit service, provides door-to-door service for persons with a disability who are unable to access the existing bus system. While not federally mandated, some providers offer this service to seniors (age 65 and over) who may not qualify for ADA service or to the general public where local bus service does not exist. Unlike local and express bus service, demand response service does not necessarily include a predetermined route. Demand response riders are transported door to door or curb to curb based on mobility needs, provided that both locations are within the service area.

There are two demand response service providers that serve areas of the Southwest Valley. The City of Phoenix provides dial-a-ride service to the eastern portion of the Study Area, and the Southwest Valley ADA Service provides demand response service to ADA certified residents in the communities of West Phoenix, Tolleson, Avondale, Litchfield Park, and Goodyear. Dial-a-ride services will be modified in the future to correspond with any fixed route service expansion.

### **5.2.5 Transit Passenger Facilities**

#### **Transit Centers**

The only existing transit center in the Southwest Valley Study Area is located in at 79<sup>th</sup> Avenue and Thomas Road in the vicinity of Desert Sky Mall. There are no other transit centers programmed in the Southwest Valley.

#### **Park-and-Ride Facilities**

Five existing park-and-ride facilities are located within the Southwest Valley Study Area that provide access to either local bus, express bus, and circulator services, or a combination of the aforementioned. The existing park-and-rides are located in Phoenix, Tolleson, Avondale, Goodyear, and Buckeye. An additional locally funded park-and-ride is planned for implementation in FY 2015 in the City of Avondale at the intersection of I-10 and 115<sup>th</sup> Avenue.

Figure 37 illustrates the locations of all the existing and planned transit facilities throughout the Southwest Valley.

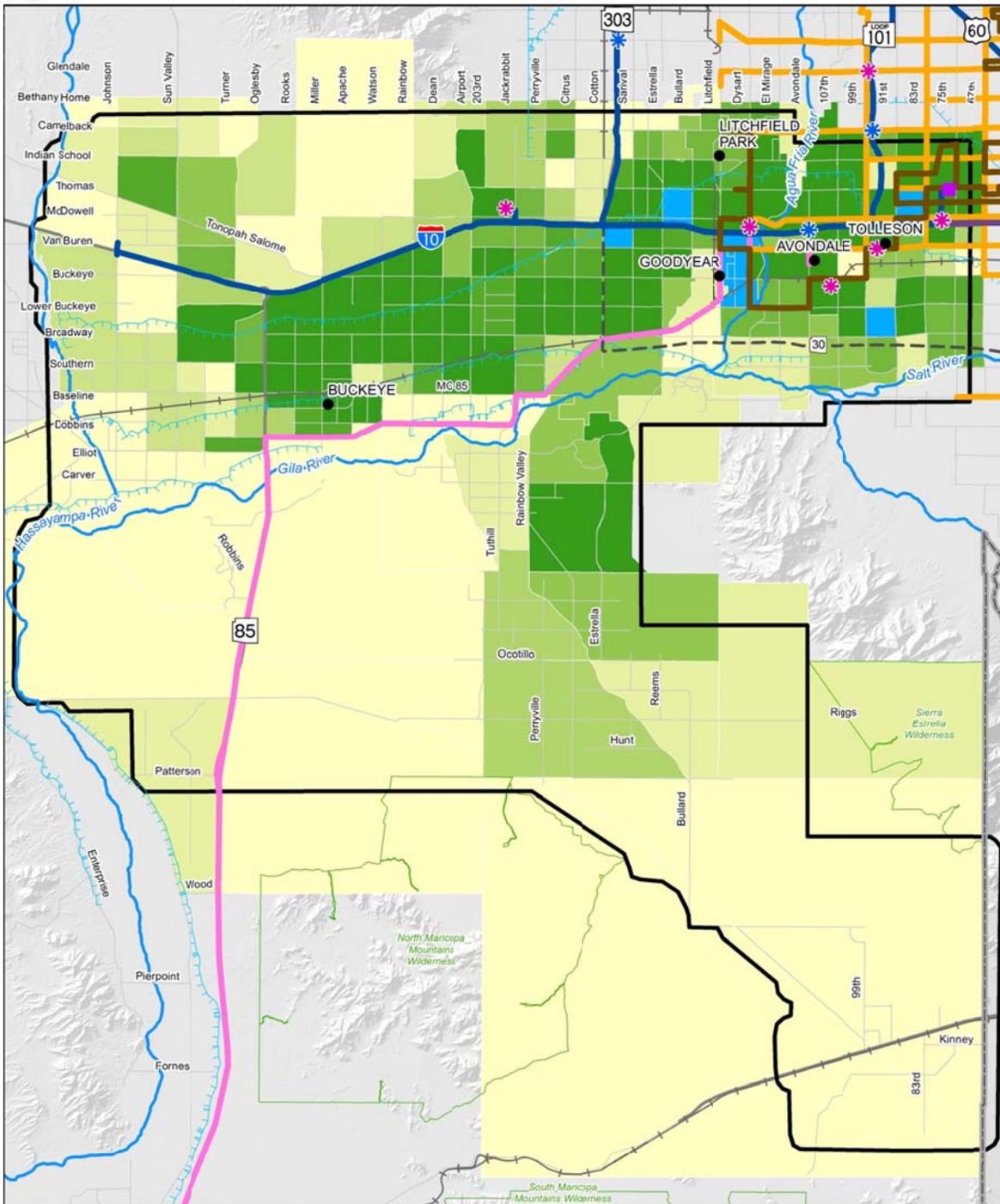


## 6.0 CONCLUSIONS AND NEXT STEPS

The analysis of existing and future conditions suggests some conclusions about the travel demand in the Study Area and potential transit needs. Conclusions include:

- Existing population, employment, and transit services are clustered in the northeastern quadrant of the Study Area.
- Growth in population, employment, and the associated trips is expected to occur disproportionately within the Study Area (as compared with the entire region).
- Projected population and employment (through 2031) will be located generally along the I-10 corridor west to Buckeye, and south along SR-85 and to Rainbow Valley.
- The primary trip exchange between the Study Area and the larger region remains between the northeastern part of the Study Area and the adjacent areas, as well as to regional activity centers.
- The most notable change in trip patterns is expected to be the growth in internal trips (i.e., trips that both originate and end within the Study Area). This would be consistent with the anticipated land use changes that would increase both in residential population and employment within the Study Area.
- Existing and planned transit in the Study Area is concentrated in the northeastern corner of the Study Area and not operated at high frequency. Changes in frequency of service have adversely impacted ridership.

Figure 38 identifies the projected service area deficiencies within the Southwest Valley by overlaying the projected 2031 trip ends with planned transit service. Both existing and planned transit service are concentrated in the northeastern portion of the study area. By 2031, where travel patterns are anticipated to spread to the west and south, the planned transit network does not provide coverage in those growth areas. The next step in the study is to further investigate local travel patterns to identify alternatives to efficiently serve transit needs in the future. The assessment of transit needs will be based on the data collected, community goals and stakeholder input, and projected deficiencies.



**LEGEND**

- Project Area
- Transit Center
- Future Circulator
- Future Local
- Future Express
- Future Light Rail
- Future Regional
- Future Highway
- Existing Park and Ride
- Planned Park and Ride
- Highway
- Road
- Railroad
- Canal
- River/Stream
- Wilderness

**Study Area Trip Predictions Per Square Mile**

- 0 to 1000
- 1001 to 2000
- 2001 to 3000
- 3001 to 4000
- 4001 to 5000
- 5001 to 6000
- 6001 to 7000
- 7001 to 15000
- 15001 to 30000
- 30001 to 100000

Source: ALRIS 1997 - 2010, ADOT 2009

**Figure 38**  
**2031 Internal Trip Origins**

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