SHORT RANGE TRANSIT PROGRAM
FY 2009/10 – 2014/15

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SHORT RANGE TRANSIT PROGRAM:
FY 2009/10 – FY 2014/15

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EXECUTIVE SUMMARY

WHY A SHORT RANGE TRANSIT PROGRAM?

The Short Range Transit Program (SRTP) identifies those regional transit service and capital improvements programmed in the Transit Life Cycle Program (TLCP) during the next five years (Fiscal Years [FY] 2009/10 to 2014/15) and provides support for regional transit projects contained in the Maricopa Association of Governments Regional Transportation Plan (MAG RTP). Regional transit service and capital improvements programmed in the TLCP are funded by the transit portion of the half-cent sales tax put in place by voter approval of Proposition 400 in 2004. Some local jurisdictions in the region provide local funding for additional transit services and capital improvements beyond what is identified in the TLCP.

Objectives of the SRTP include:

- document transit service performance from the previous fiscal year;
- maintain an inventory of the region's transit capital infrastructure; and,
- identify considerations for service adjustments and capital facility needs based on the programmed regional transit investments identified in the RTP and TLCP.

WHAT IS THE RELATIONSHIP OF THE SHORT RANGE TRANSIT PROGRAM TO OTHER REGIONAL TRANSIT PROGRAM DOCUMENTS AND PROCESSES?

The SRTP is an interrelated component of a multi-part annual regional transit implementation program. The core components of the program include the following:

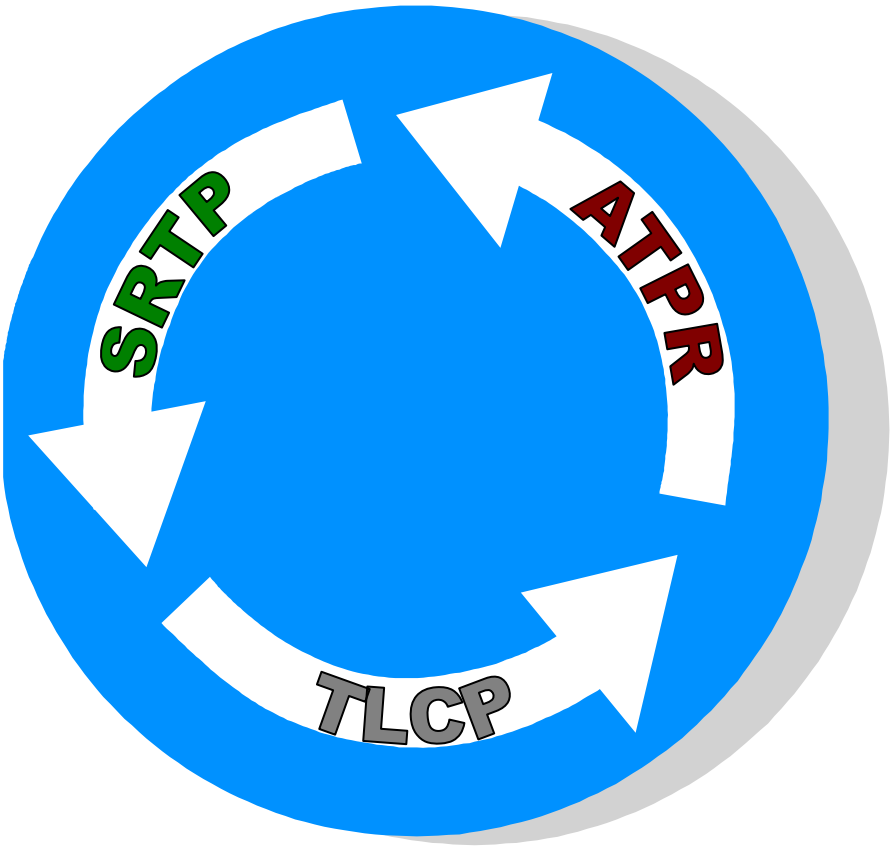
- Annual Transit Performance Report (ATPR)
- Short Range Transit Program (SRTP)
- Transit Life Cycle Program (TLCP)

The core components function in a circular relationship with one serving input into or affecting the other. Starting with the ATPR, system and route performance data is documented for each transit mode in the region. Performance data from the ATPR is carried forward into the SRTP to provide context for potential service and capital facility considerations for existing and near-term (next five years) regional transit investments identified in the TLCP. The SRTP provides an opportunity for local jurisdictions and agencies to request potential amendments to project definitions within the TLCP. Potential amendments may include adjusting a planned route pattern or reassigning regional capital funds from one capital project (such as a PNR) to another. For example, the planned location of a PNR facility may be less beneficial than an alternative site.

The considerations identified in the SRTP will be carried forward to the TLCP process for potential inclusion in the official annual TLCP update. However, all potential project adjustments are subject to approval through the regionally adopted TLCP policies.

Completing the circular relationship, the service planning and budgetary decisions made in the annual SRTP and TLCP updates, potentially impact the performance of the regional transit system. Figure ES-1 illustrates the relationship of the core components of the annual regional transit program process.

Figure ES-1: Regional Transit Program Process



WHAT ARE THE CHARACTERISTICS OF THE REGION?

The 2005 population[1] for the MAG region is estimated to be nearly 3.7 million. By 2020, overall population is anticipated to rise about 42%. The largest increases are expected to occur in the outlying areas of Maricopa County; however, in terms of absolute population, more than half of the 2020 population is projected to live near the core of the urbanized area in locations such as Phoenix, Glendale, Scottsdale, and Tempe. Employment in Maricopa County in 2005 was estimated at 1.7 million. A nearly 60% increase is anticipated by 2020 with the highest Major characteristics of passengers[2] using the region's transit system include:

- 80% of passengers live in households with four or fewer individuals
- 71% of passengers have an annual household income of $35,000 or less
- 51% of passengers live in households with no vehicles
- 71% of passengers are employed and 27% are students

[1] Source: Maricopa Association of Governments, Socioeconomic Projections of Population, Housing, & Employment by Municipal Planning Areas and Regional Analysis Zones, May 2007.
[2] Source: Valley Metro Regional Public Transportation Authority 2007 Origin-Destination Survey, Draft Final Report, 2008.

WHAT TRANSIT SERVICES AND FACILITIES ARE PROVIDED IN THE REGION?

Transit Services

A summary of services currently provided in the region is presented in Table ES-2. Figures ES-2 and ES-3 display the local, express, and RAPID bus routes. Table ES-3 is an Annual Efficiency and Effectiveness Report Card that compares the major FY 2007 performance features (boardings, revenues, operating costs, and farebox recovery ratio) with regional targets.

Table ES-1: Transit Services in the Region

Fixed Route	
Number routes Total	63 local[1] 24 express[1] 4 RAPID 1 light rail line 1 arterial bus rapid transit (BRT)[2] 18 shuttle 2 regional connectors 113
Number vehicles	994
Hours of Operation: - Local/shuttles and circulators - Express and RAPID - Regional connector	 Weekdays: Generally 5:00 AM-10:00 PM weekdays Weekends: Hours of service somewhat reduced Peak hours on weekdays only Limited number of daily stops Limited number of daily stops
Paratransit (Dial-a-Ride)	
9 systems or services:	- East Valley Dial-a-Ride - Phoenix Dial-A-Ride - El Mirage - Southwest Valley ADA - Glendale - Sun Cities (SCAT) - Paradise Valley ADA - Surprise - Peoria Operating hours, service eligibility requirements, transfer policies, fares vary by provider.
Vanpool	
Valley Metro Vanpool Program	Provides vans to groups of 6-15 commuters who share in the monthly cost of the van through payment of an equitable monthly fee.
Light Rail[1]	
Route: Hours of operation:	20 miles within portions of Phoenix, Tempe, and west Mesa Weekdays: 4:00 AM to midnight Weekends: 5:00 AM to 3:00 AM

[1]Some of these routes are 100 percent locally funded, and some are funded with a mix of regional and local funding sources.
[2]METRO light rail and arterial BRT began revenue operations in late December 2008.

Figure ES-2: Local Routes Map—July 2009

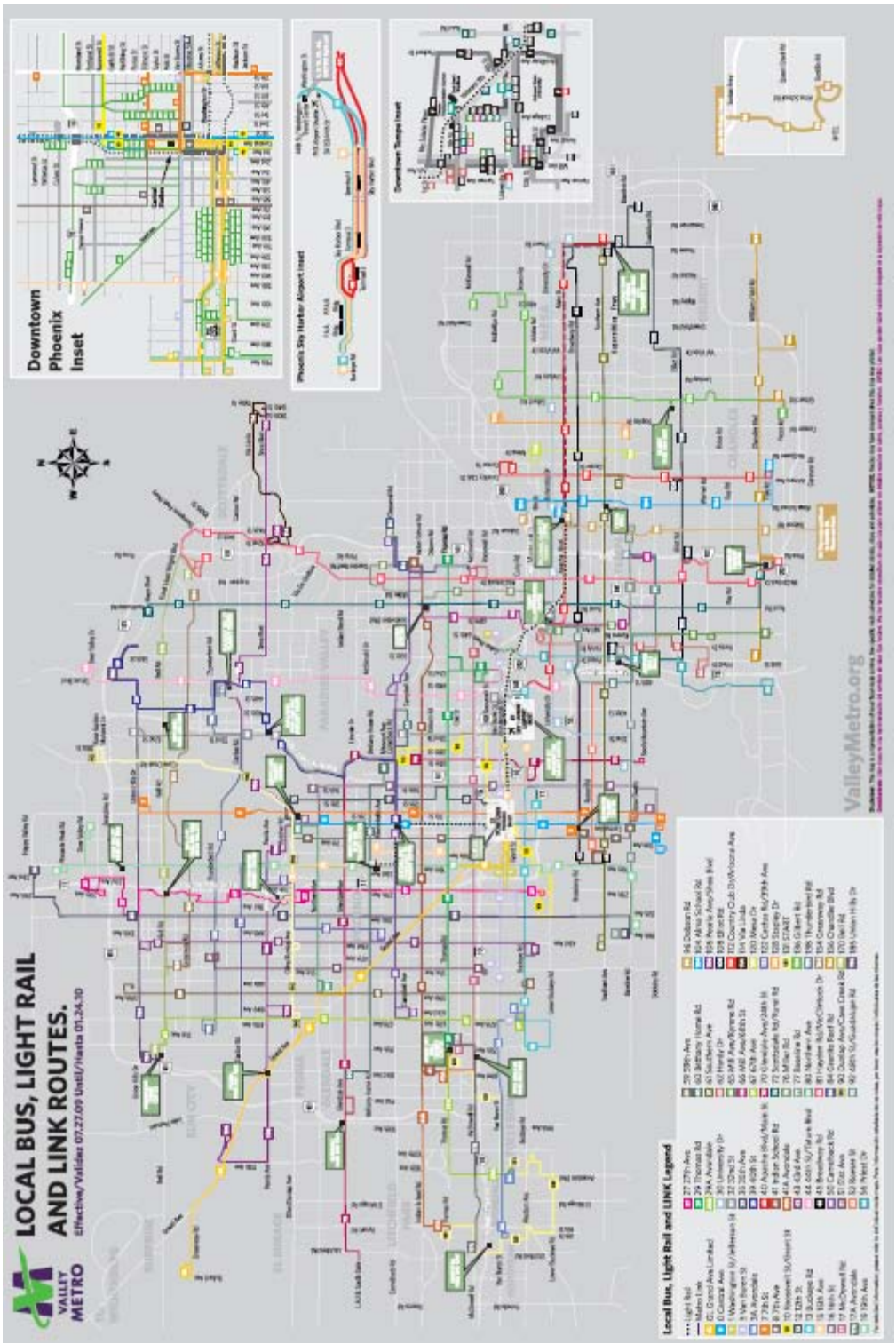


Figure ES-3: Express & RAPID Routes Map—July 2009

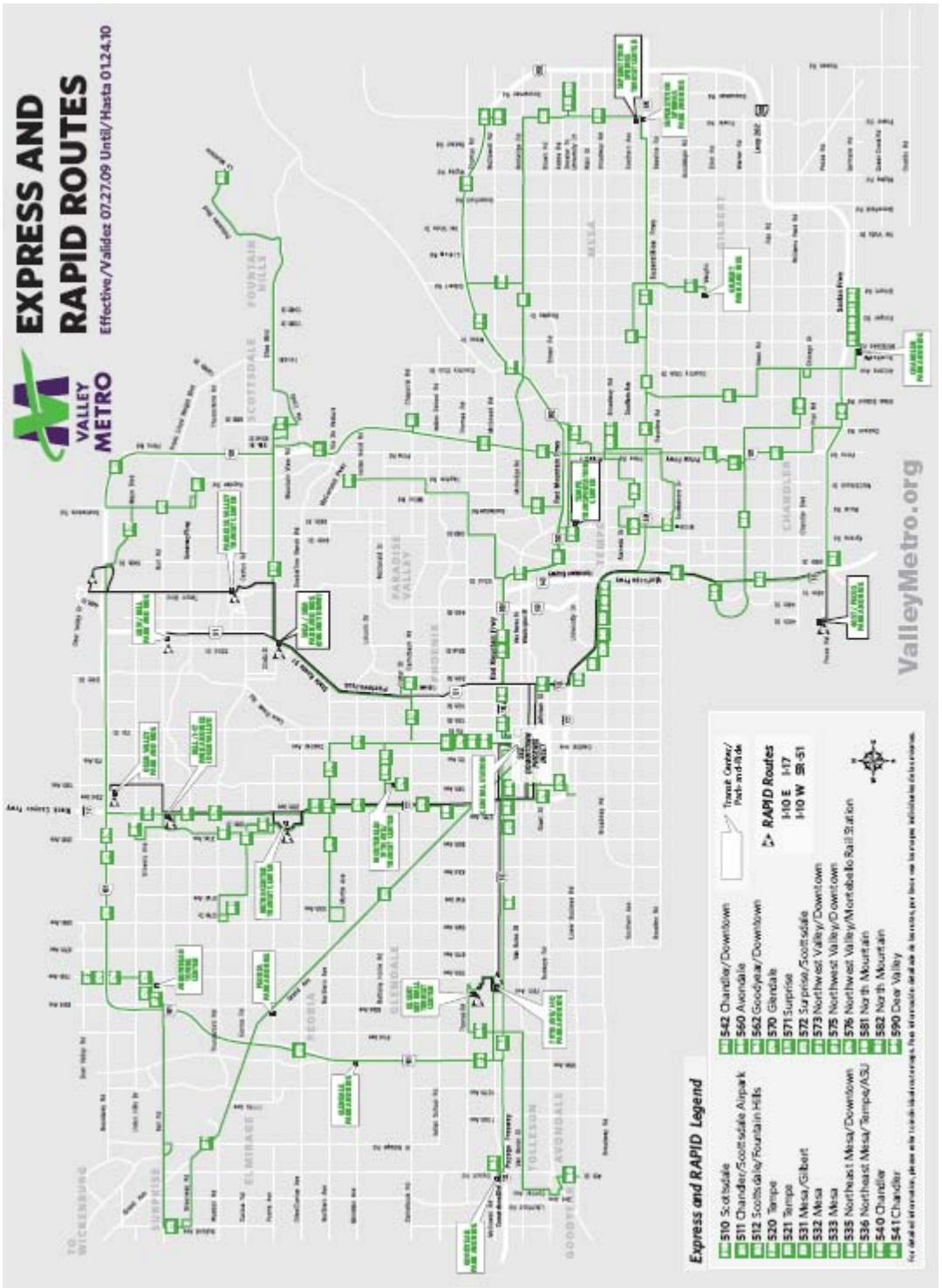


Table ES-2: Annual Efficiency & Effectiveness Report Card

FIXED ROUTE BUS, SYSTEMWIDE	TARGET	ACTUAL FY 2008
Cost Efficiency/ Effectiveness		
Farebox Recovery Ratio[1]	25%	22.4%
Operating Cost per Boarding	$2.49	$3.05
Subsidy per Boarding	$1.88	$2.37
Operating Cost per Revenue Mile	$5.32	$5.61
Average Fare	$0.72	$0.68
Service Effectiveness		
Annual Increase in Total Boardings	3%	3.50%
Annual Increase in Boardings; Weekday, Saturday, Sunday	3%	3.40%
Avg. Boardings per Revenue Mile	2.1	1.84

PARATRANSIT	TARGET	ACTUAL FY 2008
Cost Efficiency/ Effectiveness		
Farebox Recovery Ratio[1]	5%	4.00%
Operating Cost per Boarding	$30.61	$35.33
Subsidy per Boarding	$29.12	$33.90
Operating Cost per Revenue Hour	$53.92	$59.04
Service Effectiveness		
Annual Increase in Total Boardings	--	-2.05%
Boardings per Revenue Hour	1.76	1.67
ADA On-time Performance	90%	94.73%

[1] Farebox recovery ratio = % of operating costs covered by passenger revenues.

[2] Based on annual telephone survey of % of respondents rating rider satisfaction as "excellent" or good".

[3] METRO light rail began operations in December 2008, so there is minimal data available for FY 2008.

TBD = To Be Determined NA = Not Available

RAIL[3]	TARGET	ACTUAL FY 2008
Cost Efficiency/Effectiveness		
Farebox Recovery Ratio[1]	25%	N/A
Operating Cost per Boarding	TBD	N/A
Subsidy per Boarding	TBD	N/A
Operating Cost per Revenue Mile	TBD	N/A
Average Fare	TBD	N/A
Service Effectiveness		
Annual Increase in Total Boardings	N/A	N/A
Boardings Avg. Weekday	26,090	N/A
Boardings Avg. Sat.	20,800	N/A
Boardings Avg. Sun./Holiday	11,267	N/A
Boardings per Vehicle Revenue Mile	3.94	N/A
Boardings per Revenue Mile	8.04	N/A
Safety Incidents per 100,000 Vehicle Miles	N/A	N/A
Security Incidents per "x" Boardings	N/A	N/A
On-time Performance	95%	N/A
Miles between failures	25,000	N/A
Customer Satisfaction[2]	89%	N/A

VANPOOL	TARGET	ACTUAL FY 2008
Cost Efficiency/Effectiveness		
Farebox Recovery Ratio[1]	100%	111.30%
Operating Cost per Boarding	$1.82	$1.69
Subsidy per Boarding	$0	-$0.19
Operating Cost per Revenue Mile	$0.49	0.45
Average Fare	$1.96	$1.88
Service Effectiveness		
Annual Increase in Total Boardings	0%	1,418,466
Boardings per Revenue Hour	0.27	0.6
Net Van Pool Starts	24	44

Capital Facilities

Transit capital facilities support daily transit operations. The region's inventory of transit infrastructure includes passenger facilities such as transit centers, park-and-rides and bus stops. In addition, other capital facilities such as maintenance and operations centers aren't directly utilized by passengers, but provide vital functions that ensure service quality and reliability. The major capital transit facilities in the region are listed in Table ES-3.

Table ES-3: Capital Facilities in the Region

Passenger & Support Facilities		
On-Street Passenger		7,626 bus stops; 3,236 shaded bus stops (natural and shelters); 1146 with bench only 15 BRT stops in Mesa Main Street Corridor[1] 28 LRT stops in Phoenix, Tempe, Mesa[1]
Park-and-Ride	Existing:	21 publicly-owned 29 joint-use with agreement with private property owners 50 facilities with 7,540 spaces
	Planned[2]:	11 publicly-owned
Transit Centers	Existing:	15 existing
	Planned[2]:	4 new 8 to be expanded
Maintenance & Operations Facilities		
	Existing:	5 fixed route/demand response facilities 1 light rail[1]
	Planned[2]:	2 new 3 upgrades to existing 1 light rail
Roadway Enhancements		
High Occupancy Vehicle (HOV) Lanes		
	Existing:	152 lane miles
	Under construction:	42 lane miles (SR 51 and Loop 101)
	Planned[2]:	461 lane miles
HOV Direct Access Ramps (Freeway to Arterials)	Existing:	3 along I-10
HOV Direct Access Ramps (Freeway to Freeway)	Existing:	7
Arterial Street Improvements		
- Queue jumpers (bus priority access)		3 on Arizona Avenue in Chandler (existing)
- Arterial BRT limited stop with transit signal priority		1 on Main Street & Power Road in Mesa[1]
- Arterial BRT (planned)[2]		1
Regional Transit Fleet		
Fixed Route		994 vehicles
Light Rail[1]		50 vehicles

[1]Operations begin late 2008 concurrent with initiation of the METRO light rail line and arterial BRT operations.
[2]As shown in the 20-year MAG RTP.

WHAT REGIONAL TRANSIT INVESTMENTS ARE PLANNED IN THE NEXT 5 YEARS?

Planned Regionally Funded Transit Services

Regional transit service investments planned for implementation in the next five years include a full range of transit modes. New Supergrid routes, express bus routes, arterial Bus Rapid Transit (BRT) service and an extension to the region's light rail line will be implemented to serve growing demand for public transportation alternatives. In addition, limited regional funding will be available to reimburse local jurisdictions and agencies for expenses associated with Americans with Disabilities Act (ADA) transportation services. There are several routes in the transit system that are funded by local jurisdictions. These routes are not discussed at length in this report. Many routes that are operated as part of the Supergrid are locally funded. Some segments are scheduled to be regionally funded in the future, and some are not.

Several key facts about the planned regional transit operations investments between FY 2010 and FY 2015 are identified below:

- Two supergrid routes, one express/BRT routes, and one light rail extension are included as improvements.
- Of these, one supergrid route is a totally new service.
- Regional funding of the supergrid services will provide weekday peak period frequencies of 15 minutes and off-peak frequencies of 30 minutes during the off-peak for all but three of the routes.
- One local bus route (Table 5-2) was programmed in the FY 2009 TLCP Update to be regionally funded in FY 2010. This route, Gilbert Rd, was initiated in July 2009, but only on a partial level. One express route that was implemented in July 2008 at service level below the level identified in the TLCP. For this route, the Papago Freeway Connector (Goodyear to Downtown Express), full implementation is being delayed until a park-and-ride facility is available in Buckeye.

Chapter 5 of the SRTP provides detailed initial planning considerations for each of the routes programmed for regional funding through FY 2015. Examples of considerations identified in the SRTP include:

- Consider re-organizing existing local services where the implementation of new regionally funded bus routes will result in service duplications or where new transit connections will be provided.
- Consider retaining short-term use capital infrastructure, such as an interim park-and-ride facility, necessary to support new regionally funded transit services.

Table ES-4 provides a summary of the planned transit operations investments by initial fiscal year of regional funding.

Table ES-4: Planned Regional Operations Investments

Initial Fiscal Year Regional Funding	Routes
2010	1 supergrid 0 express/BRT
2011	0 supergrid 1 express/BRT
2012	0 supergrid 0 express/BRT
2013	0 supergrid 0 express/BRT
2014	1 supergrid 0 express/BRT
2015	0 supergrid 0 express/BRT
Total 2010-2015	**2 supergrid** **1 express/BRT** **0 light rail extension**

Source: Valley Metro Transit Life Cycle Program Update, 2009.

Planned Regionally Funded Capital Improvements

A summary of the transit capital improvements planned between FY 2010 and 2015 is presented in Table ES-5. Table ES-6 identifies the regional funds programmed in the FY 2009 TLCP Update for regional bus stop construction and upgrades.

Table ES-5: Regionally Funded Transit Facility Investments FY 2010 through FY 2015

Facility	Pre-Design (FY)	Design (FY)	Land (FY)	Construction/ Open (FY)
Happy Valley Rd & I-17 Park-and-Ride	2009	2009	2009	2010
Grand/Surprise Park-and-Ride	2009	2009	2009	2010
Central Station Transit Center Rehabilitation / Expansion	2009	2010	NA	2010
Country Club Dr & US 60 (Superstition Freeway) Park-and-Ride	2009	2009	2009	2010
South Tempe Transit Center	2009	2010	2010	2011
East Buckeye Park-and-Ride	2009	2010	2009	2011
Scottsdale Rd & Loop 101 Park-and-Ride	2010	2010	2010	2011
South Chandler Transit Center	2012	2013	2013	2014
Downtown Chandler Transit Center	2012	2013	2013	2014
19th Ave & Camelback Rd Transit Center	2012	2013	2013	2014

Source: 2009 Valley Metro Transit Life Cycle Program Update

.

Table ES-6: Regional Bus Stop Funding FY 2009 through FY 2014

TLCP Fiscal Year	TLCP Programmed Funding[1]
2010	$287,895
2011	$300,562
2012	$313,787
2013	$323,201
2014	$332,897
2015	$342,884
Total	**$7,362,289**

Source: 2009 Valley Metro Transit Life Cycle Program Update
[1] Funding subject to change based on annual budget.

Key facts about the programmed transit facility investments include:

- Planned capital investments/improvements for the fiscal years 2010 through 2015 include five transit centers, five park-and-ride facilities and new/upgraded regional bus stops. Improvements include expansion and/or rehabilitation of four transit centers.
- Several of the facilities programmed in the FY 2009 TLCP Update for implementation in FY 2009 have been delayed to FY 2010. Two transit facility improvements are programmed to open in FY 2010, including some of those delayed from FY 2009. The two facilities programmed for completion in FY 2009 will not be open for service until at least FY 2010.
- Some transit facility investments in the TLCP have multiple funding sources. These could include monies from Federal grants and/or local funding from jurisdictions, as well as regional funding.

Planned Regionally Funded Transit Vehicle Acquisitions

A total of 125 transit vehicles are programmed for services planned to be implemented through FY 2015. Fixed route buses, account for 35 of the vehicles which is significantly less than anticipated at this point last year due to the decline in forecasted revenues. The fixed route fleet acquired in FY 2008 and FY 2009 was the same as originally planned in the TLCP, however, eight fixed route buses purchased for expansion of the Gilbert Road and Power Road routes will not be used for those service expansions since the revised TLCP has delayed the start of new services to later years. Instead, pending discussions with FTA and with approval, the buses may be used to replace older buses that have reached the end of their useful life and would have been replaced either this year or next year. A standard 12-year transit bus fleet replacement cycle is assumed. Table ES-7 summarizes the planned acquisition of regional transit vehicles to support service expansion. The acquisition year identified in the table corresponds with the year that the vehicle will be put into service; however, vehicles are generally purchased in the previous fiscal year. For example, if a vehicle is programmed to go into service in FY 2011, it will be programmed for purchase during FY 2010. Because of the success of the Vanpool program, 25 new vehicles are planned for acquisition each year to support expansion.

Table ES-7: Planned Regional Expansion Vehicles

Fiscal Year For Acquisition	Fixed Route	Paratransit	Rural	Vanpool
2011	19	0	0	25
2012	0	0	0	25
2013	5	0	4	25
2014	6	0	0	25
2015	5	0	0	25
Total	**35**	**0**	**4**	**125**

Source: RPTA, 2009

Planning Considerations for Regionally Funded Transit Investments

Specific initial planning considerations for each of the regionally funded improvements are identified in Chapter 5 of this plan. The planning considerations range from providing adequate capacity for vehicles at transit facilities to retaining interim passenger parking capacity for new transit services.

Transit Planning Process Recommendations

The SRTP includes recommendations to guide the regional transit planning process. Recommendations include implementing thresholds for identifying when a regionally funded transit service is eligible for frequency adjustments (to exceed the programmed regional funding budget) and additional planning studies that the RPTA may wish to consider.

Service Level Thresholds

- The service planning process for implementation of new transit services and capital facilities should be launched at the completion of each year's SRTP update. This timeline provides an opportunity to utilize the transit service and capital considerations identified in the annual SRTP update to initiate the planning process and improve integration of local and regional transit planning efforts.
- A measurable process should be employed to determine when a regionally funded bus route has reached a performance level that warrants improved service frequency (not to exceed the programmed regional funding budget). It is recommended that the process integrate the following RPTA adopted efficiency and effectiveness performance targets and regional service level standards:
  - Must meet or exceed 2.1 passenger boardings per revenue mile or
  - Have three or more consecutively sequenced trips that regularly (at least 3 of 5 weekdays for the same trip for a period of 6 consecutive or non-consecutive months within a 12 month period) exceed the applicable passenger bus load standard:
    - Local bus = 125%
    - Express bus = 100%
  - If overcrowding (exceeding the applicable load standard) occurs on less than three consecutive trips, schedule or vehicle assignment adjustments should be considered before implementing additional service.

Additional Planning Studies

- Service Thresholds for Regionally Funded Services and Facilities. In addition to the thresholds identified herein for improving regionally funded bus route service frequency, other thresholds should be developed. The thresholds should apply to other service types (e.g., arterial BRT, LRT, etc.) and other service parameters as well as facilities (park-and-rides, transit centers, etc.). Currently, LRT operations are funded entirely by the local jurisdictions in which they operate. Thresholds may provide regional benefits such as a more efficient regional transit system, which will increase the likelihood of positive results from mandatory efficiency and effectiveness audits.
- Regional Transit Safety and Security Implementation Plan. This study would prioritize implementation of strategic measures identified in the Regional Safety and Security Plan (November 2006). The 2006 plan identifies potential safety and security vulnerabilities but does not provide a prioritized schedule for implementing the identified mitigation measures.

- Comprehensive Regional Bus Stop Inventory. The region's last comprehensive bus stop inventory was completed in 2002. An up to date and comprehensive regional bus stop inventory will provide more accurate and reliable information for on-going regional and local planning activities as well as for passenger uses such as the on-line trip planner.

Transit Funding

Based on the estimated sources of revenues and programmed expenditures through FY 2014/15 there are several years that expenditures exceed revenues. Many regional transit service and capital investments are dependent upon the ability to maintain adequate cash flow to be implemented as identified in this plan. The TLCP includes financing through the issuance of bonds to maintain positive cash flows. RPTA issued $100.075 million bonds (par amount) in FY 2009 for the transit program, of which approximately $47.65 million was for the bus program. Par amount refers to the face value of the bond. Based on the FY 2009 TLCP Update, one additional bond issuances of approximately $54 million is planned for FY 2011 to provide a positive annual cash flow for the bus program through the period identified in this plan.

The HCT program has a separate financing strategy to address cash for these projects.

Changes in the level of estimated revenues or expenditures could either positively or negatively affect the programmed implementation schedules and scope of the projects identified herein. Through the annual TLCP update process, estimates for short and long range revenues and expenditures are reviewed to determine the financial fitness of the regional transit program. Appropriate finance strategies and other actions are considered annually to maintain a reasonable and sustainable finance plan.

1.0 SHORT RANGE TRANSIT PROGRAM INTRODUCTION

This Short Range Transit Program (SRTP) proposes transit service and capital improvements for implementation in Fiscal Years (FY) 2009/10 to 2014/15. In addition, the plan evaluates existing service, costs, and trends based on past performance and identifies current and projected funding levels and revenue sources. This report provides substantial transit-related input into the transportation improvements identified in MAG's Regional Transportation Plan (RTP). The plan also serves as an important resource guide for anyone interested in transit in the Phoenix Metropolitan area.

The report is organized as follows:

- Chapter 1, Introduction—Purpose of the SRTP; Valley Metro RPTA and member cities background information; transit funding initiatives, relationship to other plans; regional demographics; transit passenger characteristics; and transit and equity.
- Chapter 2, Transit Service Evaluation—Service goals and standards of fixed route service as well as a presentation of the performance and service characteristics for each transit mode.
- Chapter 3, Existing Transit Capital Infrastructure—Passenger and support facilities; maintenance and operations facilities; roadway enhancements; and regional transit fleet.
- Chapter 4, Transportation Demand Management—Important characteristics of the regional rideshare and trip reduction programs.
- Chapter 5, Regionally Funded Short Range Transit Improvements—presents the current operations and capital improvements over the next five years and discussion of mode, corridor, and area specific studies and system-based studies that are on-going and planned for completion in the short range.
- Chapter 6, Regional Transit Funding—presents the current capital and operating revenue sources and amounts and projections over the next five years as well as the transit life cycle plan operating capital and administration budgets.
- Chapter 7, Cost Savings through Service Reductions—presents the service reduction recommendations made to the Valley Metro Operations and Capital Committee (VMOCC) in August 2009.
- Chapter 8, Recommendations—presents the combined recommendations of the Cost Savings through Service Reductions, the TLCP and the SRTP.

The SRTP is produced by Valley Metro Regional Public Transportation Authority (RPTA) on behalf of the MAG member cities and organizations: Apache Junction, Arizona Department of Transportation, Avondale, Buckeye, Carefree, Citizens Transportation Oversight Committee, Chandler, El Mirage, Fort McDowell Yavapai Nation, Fountain Hills, Gila Bend, Gila River Indian Community, Gilbert, Glendale, Goodyear, Guadalupe, Litchfield Park, Maricopa County, Mesa, Paradise Valley, Peoria, Phoenix, Queen Creek, Salt River Pima-Maricopa Indian Community, Scottsdale, Surprise, Tempe, Tolleson, Wickenburg, and Youngtown.

Note that funding for public transportation comes from a variety of local, regional, and federal sources. Some sources are dedicated solely to transportation, so funding projections can be fairly reliable; however, the future of funding from other sources remains uncertain. As a result, this report is intended to be as flexible as possible to accommodate change. Projects may be shifted from one year to another or eliminated completely, depending on the availability of funding for transit programs.

Nothing herein should be assumed to commit the appropriation of funds by any level of government. While every attempt has been made to present a transit program of reasonable expectations, realization of future programs and projects is entirely subject to future appropriations by local, state, and federal governments.

1.1 REGIONAL PUBLIC TRANSPORTATION AUTHORITY/VALLEY METRO AND MEMBER CITIES—BACKGROUND AND TRANSIT FUNDING INITIATIVES

RPTA's history, creation, other major public transit milestones as well as transit funding initiatives in the Valley are summarized in Table 1-1.

Public transit in the Phoenix Metropolitan Area comprises several systems where much of the service is planned and operated by local cities. The cities of Glendale, Mesa, Phoenix, Scottsdale, and Tempe provide for fixed route service in their jurisdictions. The RPTA often assists other communities with planning and operating service. Many fixed routes cross municipal boundaries; therefore, intergovernmental agreements have been developed among neighboring communities to jointly provide this service.

Paratransit (or Dial-a-Ride [DAR]) services are provided individually by the following cities: El Mirage, Glendale, Peoria, Phoenix, Sun Cities, and Surprise. The communities of Chandler, Gilbert, Mesa, Scottsdale, and Tempe coordinate, manage, and fund the East Valley DAR which allows residents to travel beyond the boundaries of their individual communities. RPTA also funds a successful vanpool program in partnership with area employers. In addition, Valley Metro Rail (METRO) completed construction of the first 20 miles of light rail transit (LRT) and serves the cities of Phoenix, Tempe, and Mesa. LRT operations are funded entirely by the local cities participating in METRO. LRT operations were begun in late December 2008.

1.2 RELATIONSHIP TO OTHER PLANS

The SRTP provides a description of current operating and capital conditions and also forecasts operating and capital plans for the next five years. This report incorporates public transit plans from several sources and in turn feeds into other regional plans. Plans that feed into the SRTP include the transit element of the Transportation Improvement Program (TIP), RPTA's Master Facilities Plan, local area transportation plans, and the Transit Performance Report (TPR). The Transit Life Cycle Program (TLCP) feeds into the SRTP, and the SRTP then feeds into the next TLCP. Regional transit service and capital improvements programmed in the TLCP are funded by the transit portion of the half-cent sales tax put in place by voter approval of Proposition 400 in 2004. Some local jurisdictions in the region provide local funding for additional transit services and capital improvements beyond what is identified in the TLCP. The SRTP identifies near term regional transit service and capital facility implementation considerations for regional transit projects contained in the MAG RTP and RPTA's TLCP.

1.3 REGIONAL DEMOGRAPHICS

Maricopa County comprises 25 cities and towns and three Indian communities. MAG's 2005 population estimate for the county is nearly 3.7 million (Table 1-2). Overall population is expected to rise about 42% by 2020. The largest increases are anticipated to occur in the outlying areas of the county in municipalities such as Buckeye, Goodyear, Queen Creek and Surprise. In terms of absolute population, more than half of the 2020 population is projected to live near the heart of the urbanized area of the county in locations such as Phoenix, Glendale, Scottsdale, and Tempe.

Employment in the county is expected to increase at a higher rate than population (or almost 60%) by 2020. Employment is anticipated to increase in all areas; however, the highest employment growth rates are anticipated in outlying areas such as Avondale, Buckeye, El Mirage, Gila Bend, Gilbert, Goodyear, Peoria, Queen Creek, Salt River Pima-Maricopa Indian Community, and Surprise.

Table 1-1: Public Transit Milestones

Year	Initiative Passed?	Event
1985	✔	Maricopa County voters approved Proposition 300, which created a half-cent sales tax to fund freeway construction and provide $5 million (inflated annually) as seed money for development of regional transit service. The proposition also created RPTA and allowed RPTA to receive RARF funding through 2005. RPTA's mission was to develop a regional transit plan, find dedicated transit funding sources, and develop and operate a regional transit system.
1989		The first regional transit plan, Valtrans, was proposed to be funded by a half-cent sales tax dedicated solely to transit. The initiative failed because many voters believed the plan was too big and expensive.
1989	✔	Scottsdale passed a dedicated transportation sales tax to help fund transit projects in their community.
1993	N/A	RPTA Board adopted Valley Metro as identity for the regional transit system to give buses a more recognizable identity and help unify public transit services in the Valley.
1994		County voters defeated a proposition for a half-cent sales tax for emergency funding for freeway construction and an additional quarter-cent sales tax for transit to implement a regional bus system and conduct rail-transit studies. Most voters indicated they wanted transit and freeway funding to be kept separate and, while they were in favor of the proposed transit plans, they were opposed to tax increases.
1996	✔	Tempe passed a dedicated half-cent transit sales tax to help fund bus improvements and a rail study in their community. Many indicated that Tempe needs public transit and should lead the way in improving air quality and relieving traffic congestion.
1997		Phoenix voters narrowly defeated a half-cent sales tax that would have provided a number of transit improvements.
1997		Scottsdale voters defeated the "Transit Plus" Plan to relieve congestion in Scottsdale.
1998	✔	Mesa passed a quality-of-life sales tax. Portions of this tax are used to generate transportation funds.
1998	✔	State legislature provided transit funding through HB 2565 by allocating a portion of vehicle license tax revenues to the Local Transportation Assistance Fund (LTAF) for distribution to cities, town, and counties. ADOT also allocates secondary LTAF funds from sale of multi-state and bingo lottery tickets up to $18 million per year in proportion to each county's population.
1999		Chandler residents did not approve a 3/8 cent Transportation Improvement Program which included a transit component.
2000	✔	State legislature extended HB 2565 (1998) and modified it with SB 1556. This is known as LTAF II. LTAF II is still in effect.
2000	✔	Phoenix passed a 0.4-cent dedicated transportation sales tax to help fund transit projects included in the Transit 2000 Plan for bus and light rail.
2001	✔	Glendale passed a dedicated transportation sales tax to help fund transit projects in their community.
2004	✔	Maricopa County voters approved Proposition 400, reauthorizing the half-cent sales tax passed in 1985. Proposition 400 extended the tax to 2025 and increased the amount of funding for public transportation from about 2% to more than 33% of total sales tax revenues (or approximately $2.8 billion over the 20 year life of the RTP). These local funds, expected to be matched by Federal transit funds, are to provide a range of bus and light rail transit improvements. Among the improvements include: • A "Supergrid" fixed route bus system providing consistent levels of service throughout the region; • Bus rapid transit (BRT) service on the region's freeway network and selected arterials; • More than 27 miles of light rail transit or other high capacity transit route extensions to the 30 miles being funded from other sources.

Table 1-2: Population and Employment (2005-2020)

Municipal Planning Area (MPA)	Population			Employment		
	2005	2020	% Change 2005-2020	2005	2020	% Change 2005-2020
Avondale	70,160	105,989	51.1%	12,315	37,776	206.7%
Buckeye	32,735	218,591	567.8%	8,672	57,297	560.7%
Carefree	3,654	5,816	59.2%	2,669	3,992	49.6%
Cave Creek	4,845	7,815	61.3%	2,602	4,666	79.3%
Chandler	236,073	282,991	19.9%	86,732	168,141	93.9%
County Area	80,661	107,441	33.2%	24,051	39,281	63.3%
El Mirage	31,935	38,620	20.9%	2,858	9,276	224.6%
Fountain Hills	24,347	33,331	36.9%	7,492	11,569	54.4%
Fort McDowell	824	1,037	25.8%	1,228	1,647	34.1%
Gila Bend	2,118	3,950	86.5%	1,077	2,760	156.3%
Gila River	2,742	2,941	7.3%	4,334	7,612	75.6%
Gilbert	178,708	285,819	59.9%	56,292	117,984	109.6%
Glendale	257,891	315,055	22.2%	88,172	156,508	77.5%
Goodyear	47,520	174,521	267.3%	15,794	73,622	366.1%
Guadalupe	5,555	5,982	7.7%	1,033	1,467	42.0%
Litchfield Park	6,787	10,305	51.8%	1,710	3,200	87.1%
Mesa	486,296	565,693	16.3%	174,909	275,236	57.4%
Paradise Valley	14,136	15,224	7.7%	5,769	7,707	33.6%
Peoria	141,441	236,154	67.0%	34,631	87,968	154.0%
Phoenix	1,510,177	1,990,450	31.8%	811,513	1,108,031	36.5%
Queen Creek	19,879	55,529	179.3%	4,021	22,213	452.4%
Salt River	6,822	7,308	7.1%	5,977	25,587	328.1%
Scottsdale	234,515	269,266	14.8%	181,652	232,832	28.2%
Surprise	93,356	268,359	187.5%	16,289	81,423	399.9%
Tempe	165,740	191,881	15.8%	176,688	219,543	24.3%
Tolleson	6,491	9,646	48.6%	12,340	19,854	60.9%
Wickenburg	9,606	13,311	38.6%	5,055	8,921	76.5%
Youngtown	6,011	7,275	21.0%	1,657	1,988	20.0%
County Total	**3,681,025**	**5,230,300**	**42.1%**	**1,747,532**	**2,788,101**	**59.5%**

Source: Maricopa Association of Governments, *Socioeconomic Projections of Population, Housing, & Employment by Municipal Planning Areas and Regional Analysis Zones*, May 2007.

The remainder of this section focuses on those demographic groups that tend to be more transit dependent than the general population. Figure 1-1 displays the concentrations in the county where people aged 60 and older live. According to the 2000 Census, the average in the county is 50.55 persons per square mile. Higher concentrations generally live along a wide diagonal band stretching from about the Loop 303 and Beardsley Road in the northwest valley to about the Loop 202 (Santan Freeway) and Guadalupe Road in the southeast valley. The highest concentrations (>2,000 per square mile) live in the far northwest valley near Surprise, Sun City, Youngtown, and Peoria and in the far southeast valley near east Mesa. This is not surprising given the numbers of age-restricted communities found in these outlying portions of the valley.

Figure 1-2 shows areas where people with disabilities live. The county average is 94.2 residents with a disability per square mile (according to the 2000 Census). The map indicates that these residents live in higher concentrations almost everywhere throughout the county, with the exception of the northeast, far north, far west, southwest, and far south portions of the county. The highest concentrations (>3,000 per square mile) reside mostly in the following areas: 1) Generally in the area near I-10 from 75th Avenue to SR 51 in Phoenix;

2) Southeastern portion of Glendale; 3) Vicinity of I-17 from Thomas Road to Glendale Avenue in Phoenix; and 4) East and central Mesa in an area roughly bounded by Loop 101, University Drive, Greenfield Road, and Southern Avenue.

Locations of high concentrations (>50% of a census tract) of minority populations are presented in Figure 1-3. Minority population is defined as the 2000 Census total population minus "white not of Hispanic origin" population. With the exception of three Native American communities that are located mainly in the outer portions of the region, most minorities live in the central, southern, and southwestern portions of Maricopa County.

Table 1-3 shows the languages spoken at home by numbers of people living in the State of Arizona, Maricopa County, and the MAG member agencies. Nearly ¼ of the county's population speaks a language other than English at home, according to the 2000 Census. The largest numbers of those speaking other languages, by far, reside in the City of Phoenix (388,445). Other municipalities with large numbers of people speaking languages other than English in their homes include: 1) Mesa (68,629); 2) Glendale (45,818); 3) Chandler (35,359); and 4) Tempe (32,092).

Figure 1-4 displays locations of families per square mile living in poverty in the Maricopa Region according to the 2000 Census. The average number of families per square mile in the county is 6.68. The map indicates that the areas with higher concentrations of low-income households than the county as a whole are generally located in the central portion of the county; however, there are numerous instances of these households in the east, west, and south sections of the county. The highest concentrations of families living in poverty (>400 per square mile) are generally in three areas: 1) Vicinity of the I-10 freeway between about 67th Avenue and the SR-51 freeway; 2) Near the Loop 202 (Red Mountain Freeway) from approximately the SR-51 freeway to 48th Street; and 3) Vicinity of the I-17 freeway between about Thomas and Bethany Home Roads. It is important to note that, according to the MAG *Regional Transportation Plan (RTP), 2007 Update*, the transit improvements listed in the plan serve 97% of low-income communities in the region compared to only 88% of non-low income communities.

1.4 TRANSIT PASSENGER CHARACTERISTICS

According to an origin/destination survey conducted in 2007 by RPTA[3], the following major characteristics of riders using the system were noted:

- 80% live in a household with four or fewer individuals.
- 71% have a household income of $35,000 or less.
- 51% reside in a household with no vehicle. This compares to 6% of the general population households having no vehicle.
- 71% are employed (52% work full time and 19% work part time); 27% are students.
- Trips destination breakdown: 37% home; 27% work; 7% shopping.
- Ridership by mode: 97% local bus; 1.2% express bus; and 1.8% RAPID bus.

[3] Valley Metro Regional Public Transportation Authority 2007 Origin-Destination Survey Final Report, 2008.

Table 1-3: Language Spoken at Home
Arizona, Maricopa County, and MAG Member Agencies

Area	Total Population Age 5 yrs and over	# English Only	# Language Other Than English
Arizona	4,752,724	3,523,487	1,229,237
Maricopa County	2,832,694	2,148,696	683,998
Apache Junction *	29,132	26,908	2,224
Avondale	32,425	19,688	12,737
Buckeye**	5,824	4,134	1,690
Carefree	2,853	2,646	207
Cave Creek	3,565	3,213	352
Chandler	160,549	125,190	35,359
El Mirage	6,581	2,688	3,893
Fountain Hills	19,272	17,618	1,654
Gila Bend	1,762	791	971
Gila River *	10,067	7,117	2,950
Gilbert	98,362	86,140	12,222
Glendale	200,276	154,458	45,818
Goodyear	17,507	14,109	3,398
Guadalupe	4,703	497	4,206
Litchfield Park	3,626	3,367	259
Mesa	364,927	296,298	68,629
Paradise Valley	12,987	11,708	1,279
Peoria *	100,275	86,617	13,658
Phoenix	1,207,309	818,864	388,445
Queen Creek *	3,979	3,027	952
Salt River	5,853	4,499	1,354
Scottsdale	192,638	170,555	22,083
Surprise	28,662	22,590	6,072
Tempe	149,719	117,627	32,092
Tolleson	4,572	1,643	2,929
Wickenburg	4,823	4,237	586
Youngtown	2,921	2,485	436

*Census data shown is for entire jurisdiction, including areas outside of Maricopa County.
**Does not reflect adjustment to Buckeye's population to include the group quarters population of the Lewis Prison.

Source: Census 2000 Demographic Profile DP-2, prepared by MAG and Arizona Department of Economic Security, June 2002.

1.5 TRANSIT AND EQUITY

The basic principles of the Title VI of the Civil Rights Act and the Executive Order on Environmental Justice involve:

- Preventing or lessening effects on minority populations and low-income populations.
- Ensuring public involvement by all communities affected by the transportation decision-making process.
- Ensuring that benefits are not concentrated in one area or population.

Title VI states:

"No person in the United States shall, on the grounds of race, color, or national origin be excluded from participating in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance."

Executive Order 12898 states:

"Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

Public transit complies with Title VI and Executive Order 12898 by making sure that investments and changes benefit all populations equally, preventing and lessening the effects on minority and low-income populations, and involving minority and low-income populations in the public input process. Valley Metro complies with these principles.

Figure 1-1: Population Concentration Age 60 and Over

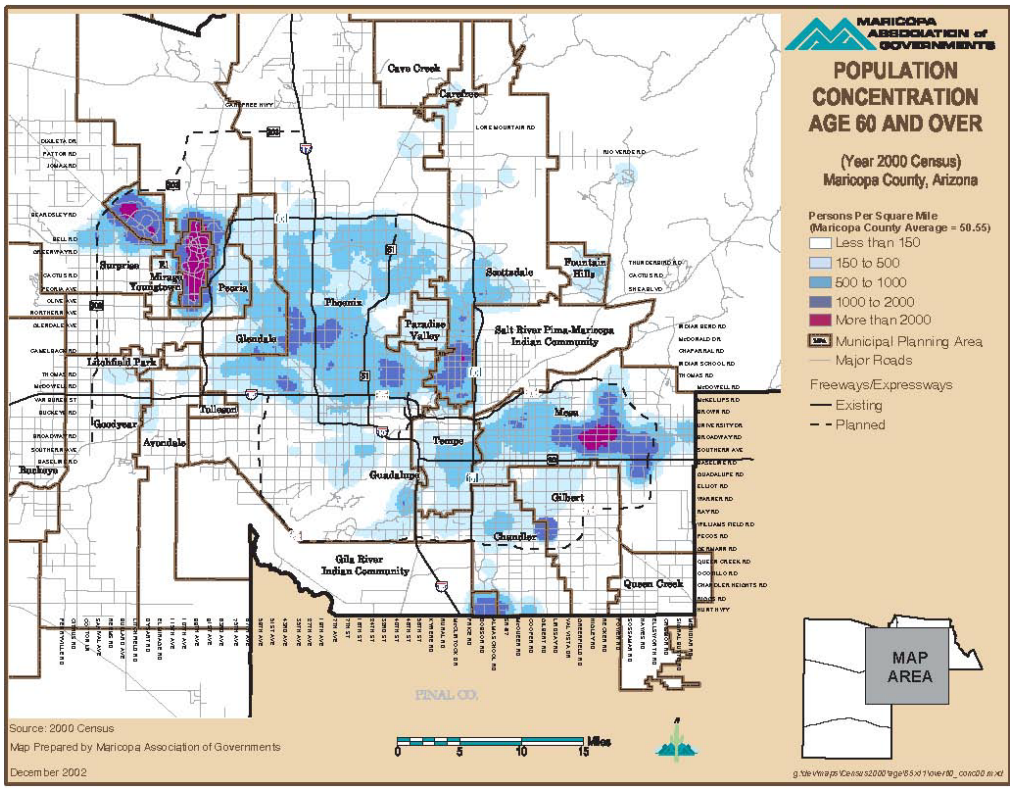


Figure 1-2: Population Age 5 and Over With Disability

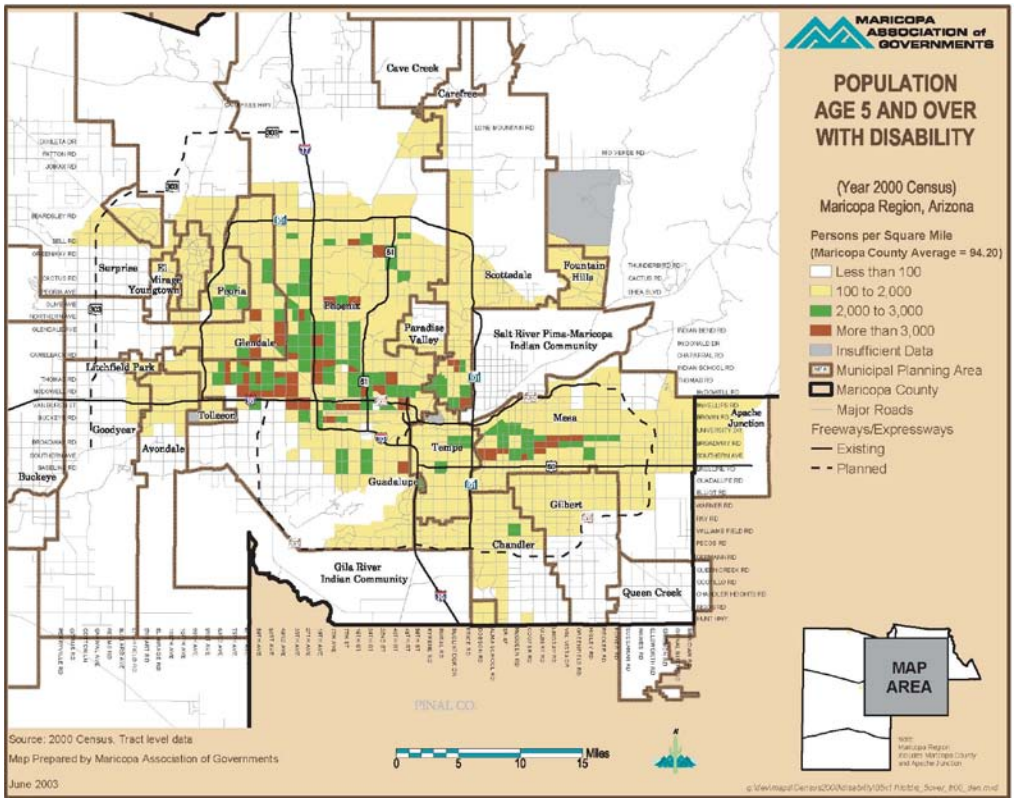


Figure 1-3: Minority Population

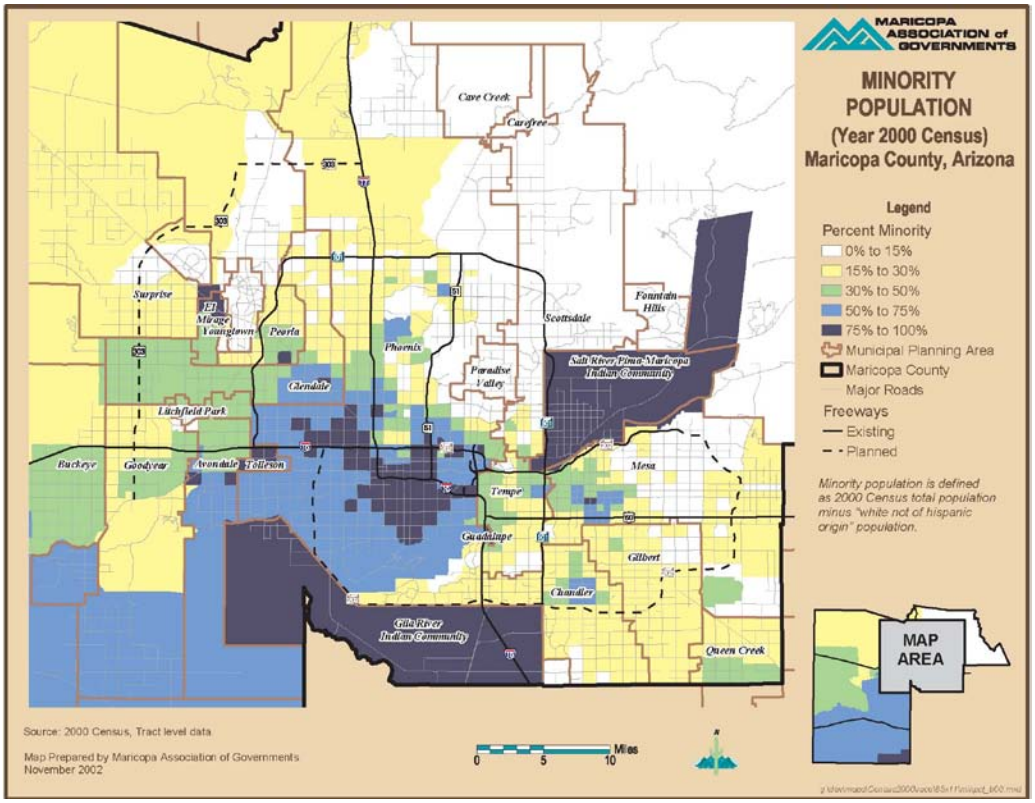
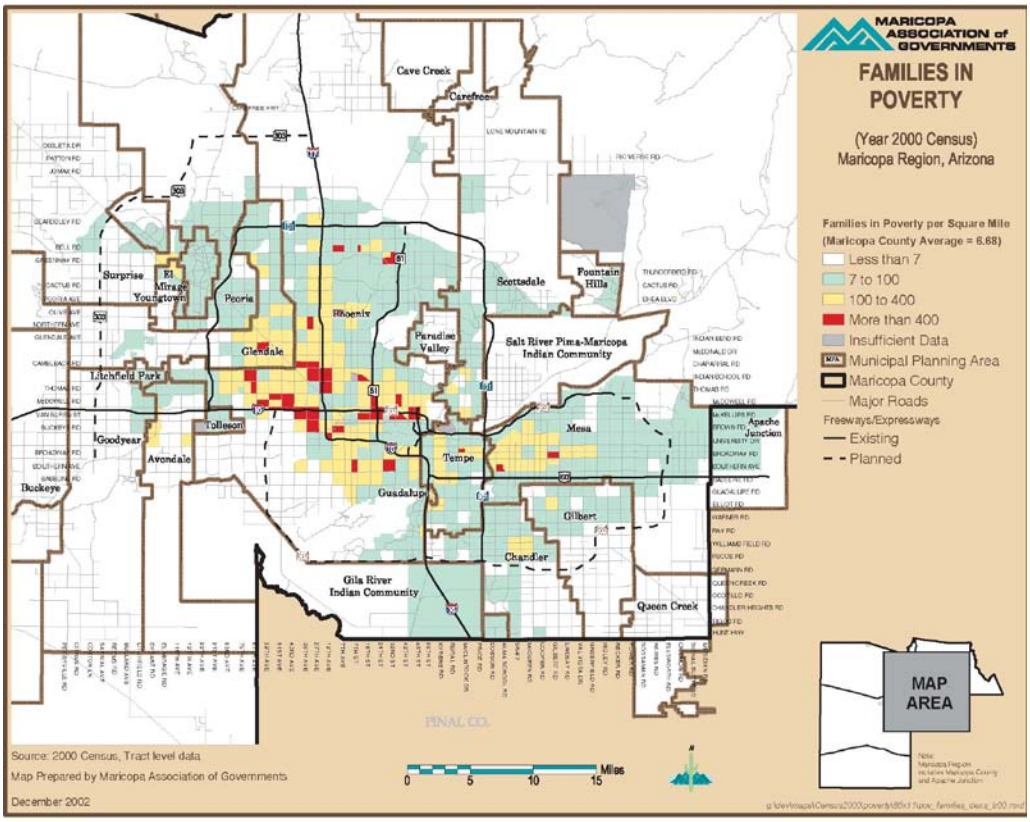


Figure 1-4: Families in Poverty



2.0 TRANSIT SERVICE EVALUATION

Public transportation services in the region are provided through interagency cooperation and coordination. Transit planning, operations, and capital acquisition are the joint responsibility of many separate agencies and municipalities in the region. The Regional Public Transportation Authority (RPTA) helps to coordinate these activities. This chapter includes a summary of the regional transit system describing the performance characteristics of each mode. Table 2-1 reflects the FY 2008 performance statistics for the system as a whole (all modes). This chapter also includes service goals and standards, a description of the service characteristics, performance statistics, and a vehicle inventory for the fixed route, shuttle/circulator, dial-a-ride, regional connector, and vanpool services provided in the region.

Table 2-1: FY 2008 System Data

Total Boardings	Total Wheelchair Boardings	Total Vehicle Miles	Total Revenue Miles	Total Vehicle Hours
62,535,665	1,469,713	47,391,584[1]	40,968,457l[2]	3,312,810
Total Revenue Hours	**Operating Cost**	**Capital Cost**	**Total Cost**	
2,644,854	$218,245,890	n/a	n/a	
Total Passenger Revenues	**Percent On-Time Performance**	**Vehicle Accidents**	**Farebox Recovery Ratio**	
$45,165,446	90,98%	102	20.69%	
Boardings Per Revenue Hour	**Boardings Per Revenue Mile**	**Operating Cost Per Boarding**	**Operating Cost Per Revenue Hour**	**Operating Cost Per Revenue Mile**
23.64	1.52	$3.49	$82.51	$5.33

[1] Fixed Route vehicle miles were corrected after the FY 07/08 Transit Performance Report (TPR) was issued.
[2] Fixed Route revenue miles were corrected after the FY 07/08 Transit Performance Report
n/a = data not available

A comparison of major ridership, financial, and other major statistics for the five-year period FY 2004 -- FY 2008 is shown in Table 2-2. Over the five-year period, boardings and passenger revenues increased about 11% and 40%, respectively. However, operating costs increased nearly 39% in the same period. This resulted in only an approximate 1% increase in the farebox recovery ratio. The farebox recovery ratio is the percentage of operating costs covered by passenger revenues.

For more detailed information, refer to Appendix A – 2008 System Data for performance data by jurisdiction, by mode, by paratransit system and by individual fixed route. Appendix B – 1995 to 2008 System Data presents various performance data by mode over a 14 year period.

Table 2-2: Comparison of System-wide Data for Five-Year Period—2004 and 2008

General	FY 2004	FY 2008	5 Years (FY 2004-2008) % Change
Vehicle Revenue Miles	38,702,600	40,968,457	5.8%
Vehicle Revenue Hours	2,545,286	2,644,854	3.9%
Revenue Miles Per Hour	15.21	15.49	1.9%
Ridership	**FY 2004**	**FY 2008**	**5 Years (FY 2004-2008) % Change**
Total Boardings	56,390,033	62,535,665	10.9%
Boardings Per Revenue Mile	1.46	1.53	4.8%
Boardings Per Revenue Hour	22.15	23.64	6.7%
Financial	**FY 2004**	**FY 2008**	**5 Years (FY 2004-2008) % Change**
Farebox Recovery Ratio	20.49%	20.69%	1%
Operating Costs	$157,015,827	$218,245,890	39%
Passenger Revenues	$32,165,507	$45,165,446	40.4%
Operating Cost Per Boarding	$2.78	$3.49	25.3%
Fare Revenue Per Boarding	$0.57	$0.72	26.6%
Subsidy Per Boarding	$2.21	$2.77	25%
Operating Cost Per Revenue Hour	$61.69	$82.52	33.8%
Operating Cost Per Revenue Mile	$4.06	$5.33	31.3%

2.1 SERVICE GOALS AND STANDARDS

The RPTA Board of Directors approved service goals and standards on April 19, 2008. These targets (see Table 2-3) were developed as part of the Efficiency and Effectiveness Study and include targets for fixed route, systemwide, fixed route, route level, paratransit and for light rail transit.

2.2 FIXED ROUTE

2.2.1 Service Characteristics

During FY 2008, fixed route transit service was provided in a 660 square mile service area and served residents in the communities of Avondale, Chandler, El Mirage, Fountain Hills, Gilbert, Glendale, Goodyear, Guadalupe, Mesa, Paradise Valley, Peoria, Phoenix, Scottsdale, Sun City, Surprise, Tempe, and Tolleson. There were sixty-five (65) local, twenty four (24) express, eighteen (18) shuttle/circulators, four (4) RAPID routes, two (2) rural routes, one (1) BRT line and one (1) rail line operated throughout the region on weekdays (see Figures 2-1 and 2-2). Weekday hours vary considerably, but most local routes operate from about 5:00 am to about 10:00 pm. Express and RAPID service operate during peak hours on weekdays only. Most local routes operate on weekdays, Saturdays, Sundays and holidays throughout most of the region. Weekend hours of service also vary by route, but are generally somewhat reduced from the weekday level. However, the light rail line now runs until 3.00 am on Friday and Saturday night.

Table 2-3: Efficiency and Effectiveness Performance Measures Targets

Fixed Route Bus, Systemwide	Target
Cost Efficiency/Effectiveness	
Farebox Recovery Ratio[1]	25%
Operating Cost per Boarding	$2.49
Subsidy (Net Opg Cost) per Boarding	$1.88
Cost per Revenue Mile	$5.32
Average Fare	$0.72
Service Effectiveness	
Total Boardings (Number)	--
Total Boardings[2]	3%
Boardings Avg. Weekday, Sat., Sun.[2]	3%
Boardings per Revenue Mile	2.1
Safety Incidents per 100,000 Vehicle Miles	1.2
Security Incidents per 100,000 Boardings	0
Complaints per 100,000 Boardings	28
On-time Performance	90%
Miles between Mechanical Failures	23,400
Customer Satisfaction[3]	89%

Fixed Route Bus, Route Level	Target
Cost Efficiency/Effectiveness	
Farebox Recovery Ratio[1]	25%
Operating Cost per Boarding	$2.32
Subsidy (Net Opg Cost) per Boarding	$1.75
Cost per Revenue Mile	$4.96
Service Effectiveness	
Total Boardings (Number)	--
Total Boardings[2]	3%
Boardings Avg. Weekday, Sat., Sun.[2]	3%
Boardings per Revenue Mile	2.1
Boardings per Revenue Hour (Express Bus)	TBD
On-time Performance	90%
Miles between Mechanical Failures	23,400

Vanpool	Target
Cost Efficiency/Effectiveness	
Farebox Recovery Ratio[1]	106%
Operating Cost per Boarding	$1.82
Subsidy (Net Opg Cost) per Boarding	$0.00
Cost per Revenue Mile	$0.49
Average Fare	$1.96
Total Boardings (Number)	---
Boardings per Revenue Mile	0.27
Increase in Net Vanpools	24

Rail[4]	Target
Cost Efficiency/Effectiveness	
Farebox Recovery Ratio[1]	25%
Operating Cost per Boarding	TBD
Subsidy (Net Opg Cost) per Boarding	TBD
Cost per Revenue Mile	TBD
Average Fare	TBD
Service Effectiveness	
Total Boardings (Number)	7,827,000
Boardings Avg. Weekday	26,090
Boardings Avg. Sat.	N/A
Boardings Avg. Weekday Sun./Holiday	N/A
Boardings per Vehicle Revenue Mile	3.94
Boardings per Revenue Mile	8.04
Safety Incidents per 100,000 Vehicle Miles	N/A
Security Incidents per "x" Boardings	N/A
On-time Performance	95%
Miles between Failures	25,000
Customer Satisfaction[3]	89%

Paratransit	Target
Cost Efficiency/Effectiveness	
Farebox Recovery Ratio[1]	5%
Operating Cost per Boarding	$30.61
Subsidy (Net Opg Cost) per Boarding	$29.12
Operating Cost per Revenue Hour	$53.92
Average Fare	TBD
Service Effectiveness	
Total Boardings (Number)	--
Total Boardings[2]	3%
Boardings Avg. Weekday, Sat., Sun.[2]	3%
Boardings per Revenue Hour	1.76
Percent No Shows	5%
On-time Performance	90%
Miles between Mechanical Failures	TBD
Customer Satisfaction[3]	90%

TBD = To Be Determined
N/A = Not Available

[1]Farebox recovery ratio = % of operating costs covered by passenger revenues.
[2]% increase in boardings compared to previous year.
[3]Based on annual telephone survey of % of respondents rating rider satisfaction as “excellent” or “good”.
[4]Light rail starter line began operations in December 2008.

Figure 2-1: Local Routes Map for July 2009

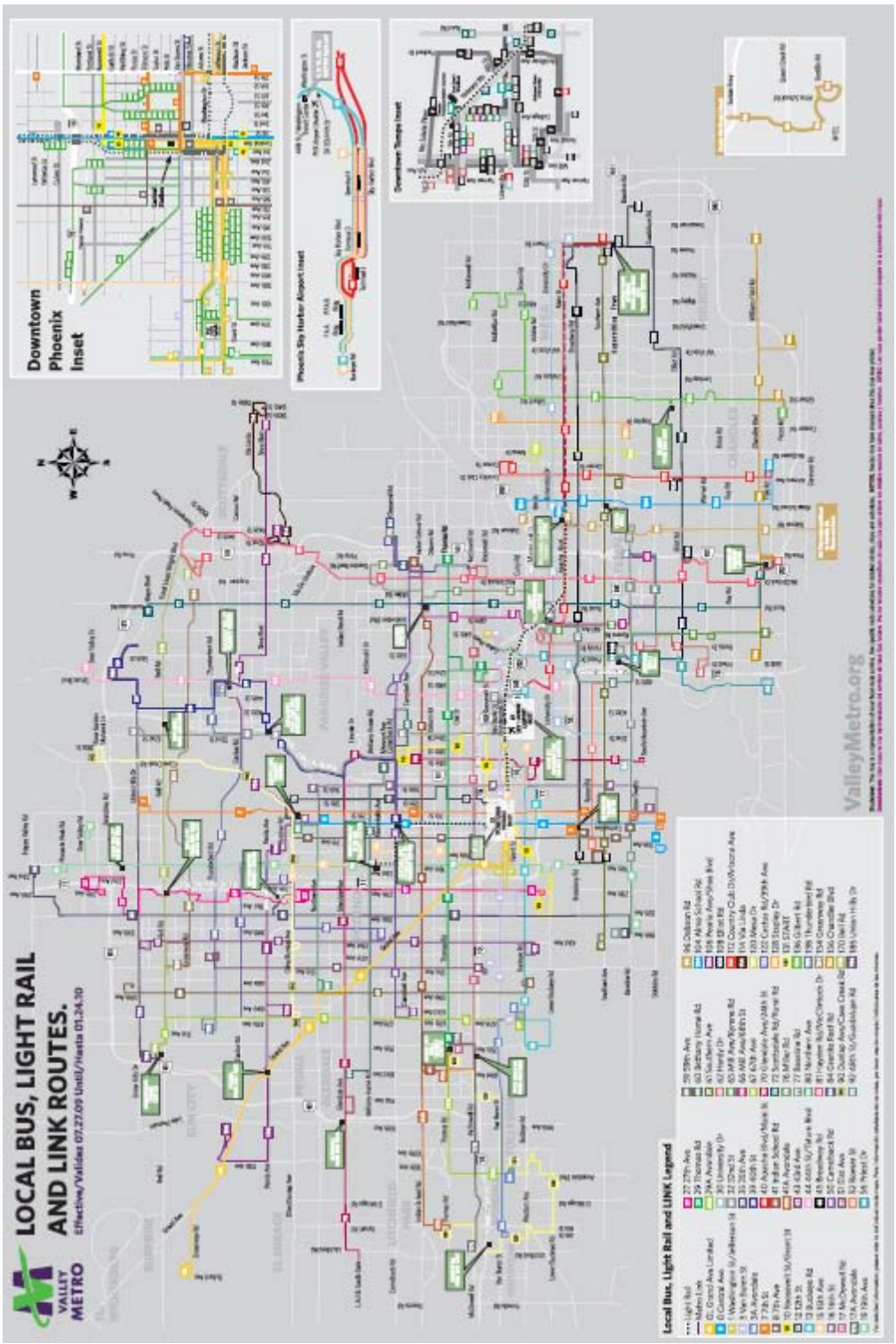
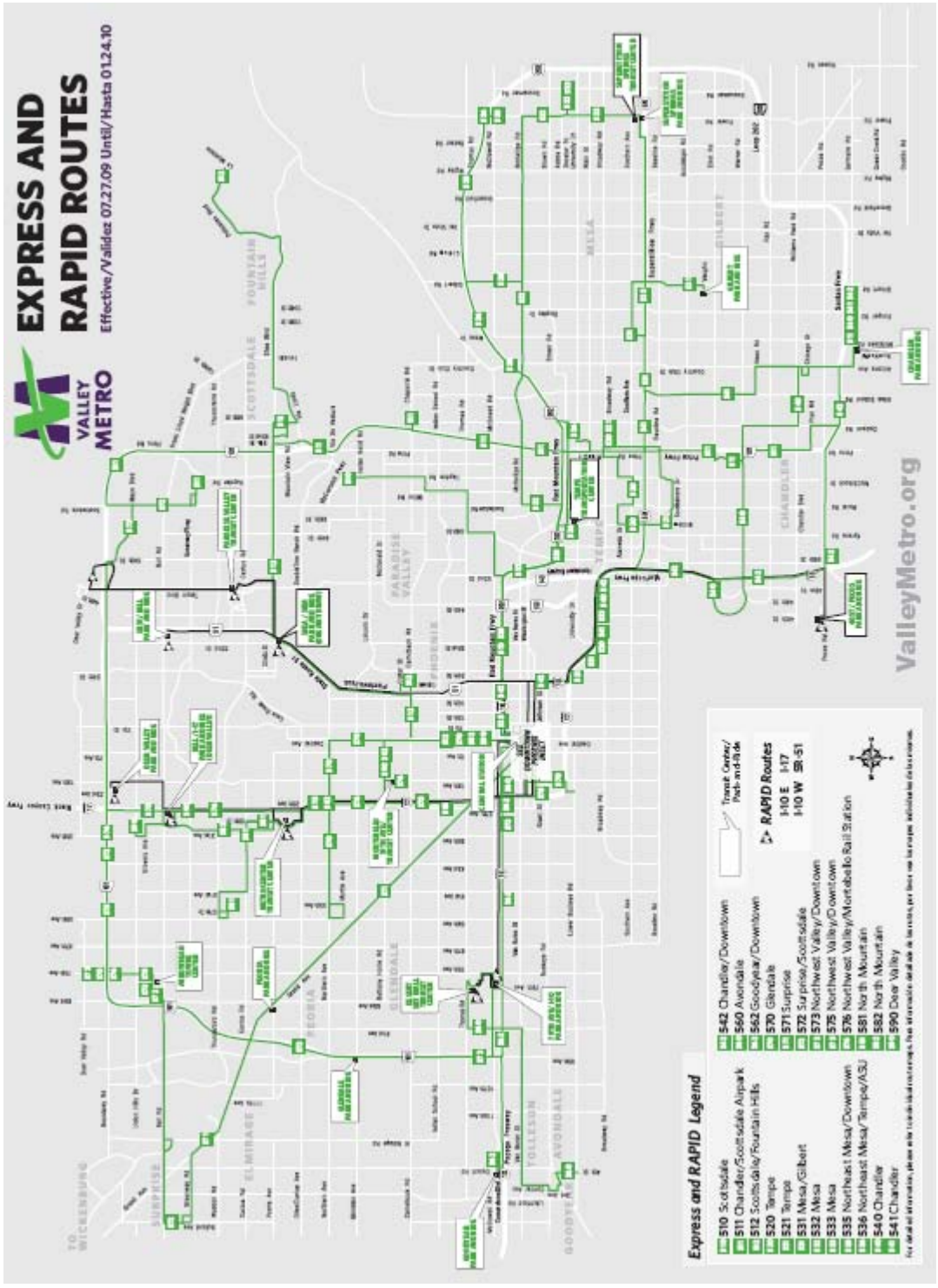


Figure 2-2: Express & RAPID Routes Map for July 2009



2.2.2 Funding Sources

Funding for these routes is provided by Avondale, Chandler, Gilbert, Glendale, Goodyear, Mesa, Peoria, Phoenix, Scottsdale, Sun City, Surprise, Tempe, Tolleson and the Regional Public Transportation Authority. The Cities of Glendale, Mesa, Phoenix, Scottsdale and Tempe each have some form of dedicated sales tax for public transportation. Most of these communities are using general funds to support transit services.

Some State funding is also available for transit through the Local Transportation Assistance Fund (LTAF II). The LTAF II funding is in the form of multistate lottery game and instant bingo game monies along with a portion of the State Highway Fund's Vehicle License Tax monies. The State distributes the funds to the RPTA, Metropolitan Planning Organizations (MPOs), and cities, towns and counties not represented by a RPTA or MPO.

RPTA receives a portion of the 0.5% Maricopa County sales tax for transportation approved by voters in November 2003. The City of Avondale is designated by the federal government as a "small urbanized area" and receives some federal assistance for transit operations.

2.2.3 Private Contractors

During FY 2008, the local and express routes described in this report were provided by five private contractors. The five contractors are Veolia Phoenix, First Transit, Veolia RPTA, ValuTrans and Veolia Tempe. These transit operators are under contract to the City of Phoenix, the City of Tempe and the RPTA and provide service throughout the region. The City of Phoenix contracts with Veolia Phoenix and First Transit for fixed route service. The RPTA has a service contract with Veolia RPTA and ValuTrans, and the City of Tempe contracts with Veolia Tempe.

Many routes are funded by multiple government agencies, usually based on the miles of service provided in each jurisdiction.

2.2.4 Comparison of Fixed Route Performance Data

A comparison of major data for fixed route service is displayed in Table 2-4 for FY 2004, 2007, and 2008. In FY 2008, RPTA began reporting shuttle/circulator and rural connector data in with fixed route service. So, to provide an equal comparison, these two modes were also combined in the other FY data as applicable. Note that rural connector service did not begin until March 2005 during FY 2006.

Between FY 2007 and 2008, fixed route boardings increased slightly 3.4%. The total boardings have also increased about 16% since FY 2004. Revenues increased about 11% and 40%, respectively, in the one- and five-year periods of comparison. Operating costs increased nearly 20.4% between FY 2007 and FY 2008. These costs also increased almost 23% over the previous five years. This all resulted in the farebox recovery ratio increasing slightly more than 16.5% in the one-year period and about 24.7% during the five-year period of comparison.

Appendix C – Trends provides annual boardings, revenue miles of service provided, and boardings per mile from 1985 to 2008. The increase in transit service and the resulting increases in ridership over the years are clearly apparent.

Not all data for FY 2009 is available at the time of preparation of this SRTP. However, Table 2-5 provides available statistics on boardings and revenue miles for FY 2009.

Table 2-4: Comparison of Fixed Route[1] Data—2004, 2007 and 2008

General	FY 2004	FY 2007	FY 2008	1 Year (FY 07-08) % Change	5 Years (FY 04-08) % Change
Vehicle Revenue Miles	25,885,061	28,902,813	27,830,645	-3.7%	7.5%
Vehicle Revenue Hours	1,812,653	1,966,138	1,988,847	1.2%	9.7%
Revenue Miles Per Hour	14.28	14.70	13.99	-4.8%	-2.0%
Ridership	**FY 2004**	**FY 2007**	**FY 2008**	**1 Year (FY 07-08) % Change**	**5 Years (FY 04-08) % Change**
Total Boardings	51,815,468	58,184,596	60,153,649	3.4%	16.1%
Boardings Per Revenue Mile	2.0	2.01	2.16	7.4%	8.0%
Boardings Per Revenue Hour	28.59	29.59	30.25	2.2%	5.8%
Financial	**FY 2004**	**FY 2007**	**FY 2008**	**1 Year (FY 07-08) % Change**	**5 Years (FY 04-08) % Change**
Farebox Recovery Ratio	23.1%	24.2%	3.06%	16.5%	24.7%
Operating Costs	$126,955,128	$152,662,789	$182,809,441	20.4%	44.8%
Operating Cost Per Boarding	2.45	2.62	3.06	16.5%	24.7%
Fare Revenue	$29,284,245	$37,000,313	$41,091,397	11.1%	40.3%
Fare Revenue Per Boarding	$0.57	$0.64	$0.68	7.4%	20.9%
Subsidy Per Boarding	$1.88	$1.99	$2.37	19.4%	25.9%
Operating Cost Per Revenue Hour	$70.04	$77.65	$92.42	19.%	32.%
Operating Cost Per Revenue Mile	$4.90	$5.28	$6.60	25.%	34.7%

[1]Fixed Route includes local, supergrid, shuttle/circulator and rural routes.

Table 2-5: Annual Boardings and Revenue Miles—FY 2009

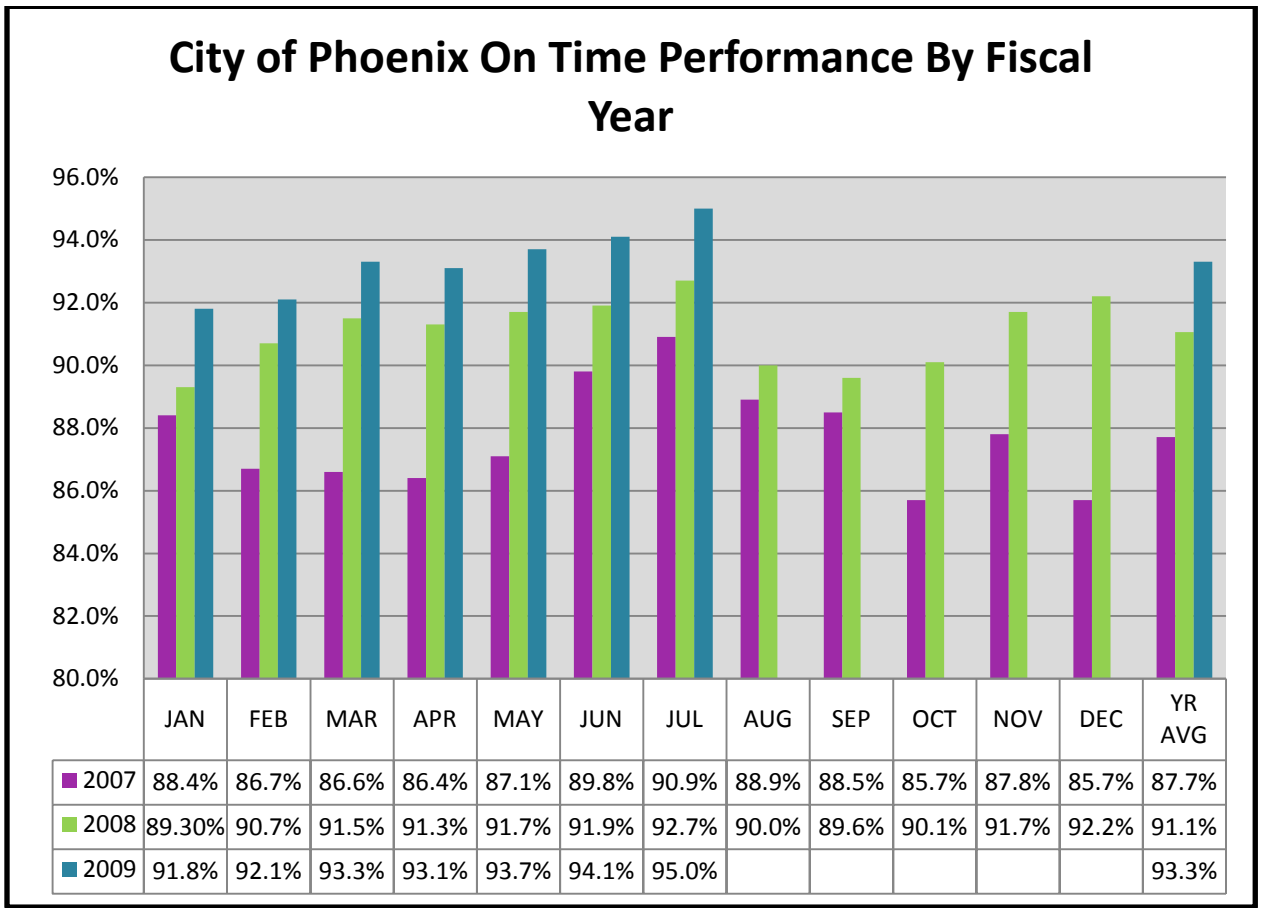
Ridership Statistic	Number
Boardings	71,251,667
Revenue Miles	33,406,055
Boardings Per Revenue Mile	2.13

Source: RPTA, *Annual Ridership Report for FY 2009,* as derived from farebox data.

2.2.5 Fixed Route On Time Performance

The Vehicle Management System allows for very accurate measurement of the System's schedule adherence. The position of each bus is tracked throughout the day using global positioning satellites and compared to the published schedule. Figure 2-3 presents the on time performance for City of Phoenix contractors by month for the past three years. Similar data for City of Tempe and RPTA were not available.

Figure 2-3: On Time Performance for City of Phoenix Fixed Route Service



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR AVG
2007	88.4%	86.7%	86.6%	86.4%	87.1%	89.8%	90.9%	88.9%	88.5%	85.7%	87.8%	85.7%	87.7%
2008	89.30%	90.7%	91.5%	91.3%	91.7%	91.9%	92.7%	90.0%	89.6%	90.1%	91.7%	92.2%	91.1%
2009	91.8%	92.1%	93.3%	93.1%	93.7%	94.1%	95.0%						93.3%

2.2.6 Fixed Route Vehicle Inventory

In June 2008 the Regional Transit System had 994 vehicles available to provide fixed route service. The City of Glendale had 8 vehicles; the City of Phoenix operated 574 vehicles; the City of Scottsdale had 8 vehicles; the City of Tempe had 198 vehicles and the RPTA had 198 vehicles available to provide fixed route service.

2.2.7 Arterial Bus Rapid Transit Service

The Regional Transportation Plan calls for arterial bus rapid transit service in several corridors. The first corridor will be Main Street in Mesa from Superstition Springs Mall Transit Center and Park-and-Ride to the east end of line light rail station at Sycamore and Main Street. This new type of service will have a separate identity known as LINK Bus Service. It will be provided by new articulated buses with a different paint scheme to identify it as a connection (or "LINK") to light rail service. To provide faster service, LINK buses will stop less often, approximately once every mile. On weekdays the service will be operated every 15 minutes during peak hours, and every 30 minutes during off-peak hours. Service will be available from about 4:30 am to approximately 10:30 pm. The service will also operate on Saturdays and Sundays. Implementation of this Mesa Main Street LINK service began in December 2008 concurrent with the opening of the light rail starter line. Future corridors for this type of service include Arizona Avenue, Chandler Boulevard, South Central Avenue and Scottsdale/Rural Road. Arizona Ave, is set to begin operations in FY 2011, including 20 stations constructed by the RPTA.

2.3 HIGH CAPACITY / LIGHT RAIL TRANSIT

METRO light rail began revenue operations in December 2008. Valley Metro Rail (METRO) is the regional agency responsible for the planning, design, construction and operation of this high capacity transit mode. The 20-mile METRO starter line operates through the cities of Phoenix, Tempe, and Mesa. Frequency and hours of train service are:

Weekdays (M – Th):	Fridays:	Saturdays	Sundays
4 – 6 AM 20 min	4 – 6 AM 20 min	4:30 – 6 AM 20 min	4:30 – 12 AM 20 min
6 AM – 7 PM 10 min	6 AM – 7 PM 10 min	6 AM – 7 PM 15 min	
7 PM – 12 AM 20 min	7 PM – 3 AM 20 min	7 PM – 3 AM 20 min	

The 20-year RTP includes an additional 57 miles of high capacity transit in six corridors planned to connect with the initial system:

- Northwest
- Central Mesa
- Tempe South
- Glendale
- I-10 West
- Northeast Phoenix

Figure 2-4 displays the initial LRT alignment as well as future high capacity transit corridors and scheduled opening dates. A detailed schedule for completion of the corridors included in the RTP is presented in Figure 2-5.

2.4 SHUTTLE AND CIRCULATOR

Several cities provide shuttle services (usually in their downtown areas) and / or neighborhood circulator service. The City of Phoenix operates DASH in the downtown and State Capitol area, and ALEX, a neighborhood circulator in the Ahwatukee/Desert Foothills area. The City of Tempe provides FLASH Forward and Back and FLASH to University in the downtown Tempe and Arizona State University area. Tempe also provides the Orbit routes to serve residential areas and connect them to local destinations such as shopping areas, other neighborhoods, major bus routes, schools and multi-generational centers. The Orbit Routes include Mercury, Venus, Earth, Mars and Jupiter. The City of Glendale operates GUS I, GUS II, in the neighborhoods surrounding downtown Glendale. The GUS III serves as a connection between the other GUS circulators and several senior centers, the Glendale Main Library, Glendale Community College, and the Glendale Adult Center along with various shopping centers. The City of Scottsdale operates a trolley service with a Downtown and a Neighborhood route. All of these shuttle/neighborhood circulators are free except for Glendale's GUS services which charge a $0.25 fare.

Beginning in FY 2007, RPTA combined shuttle and circulator service data with the fixed route service data, so performance information about these services is included in Table 2-4. Data for the individual shuttle and circulator routes is combined with fixed route and is shown in Appendix A – 2008 System Data.

Figure 2-4: High Capacity Transit Corridors

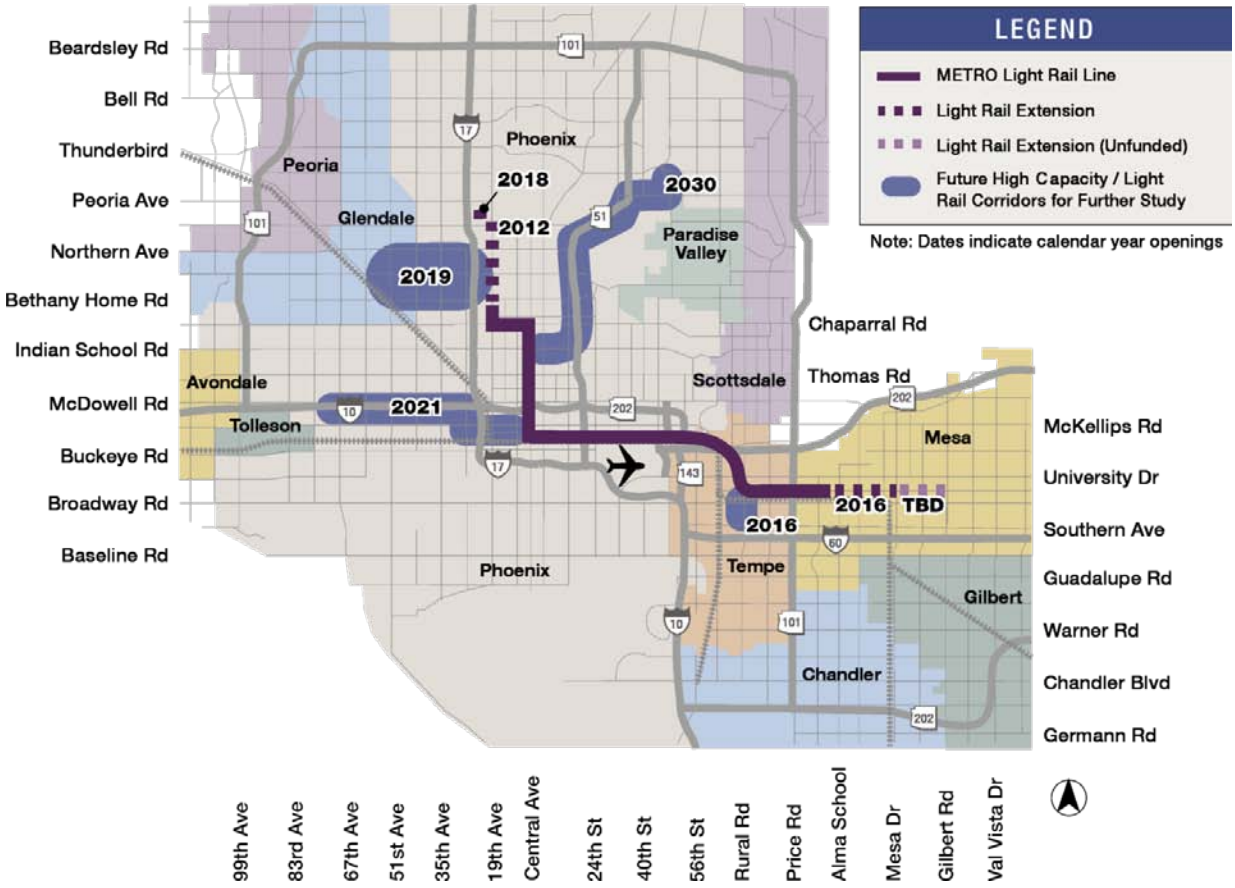
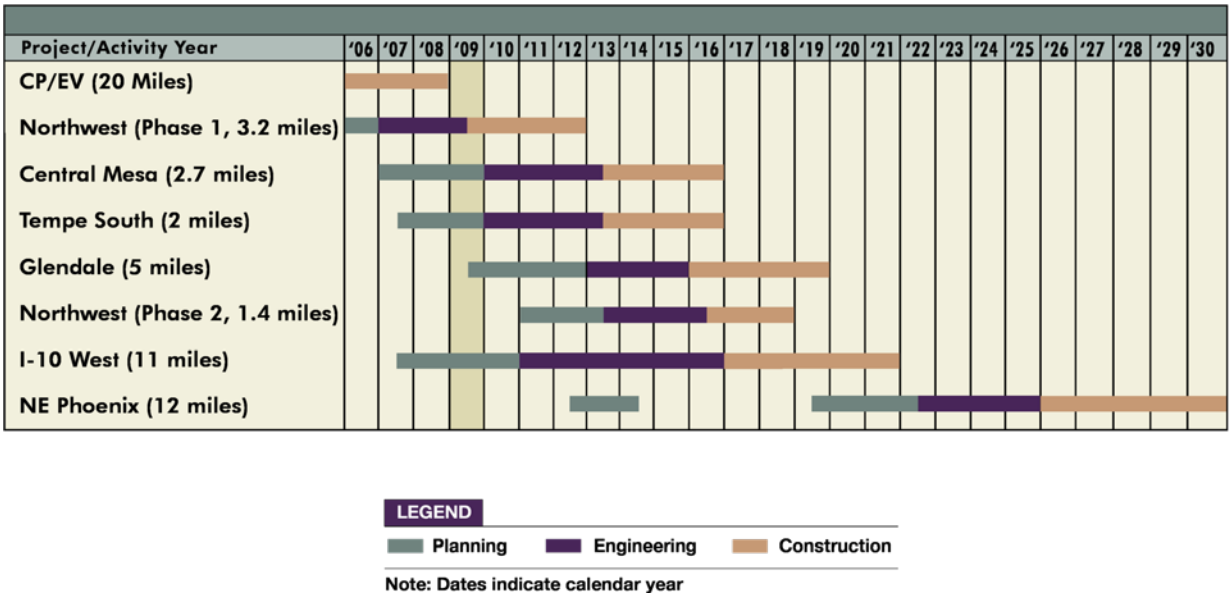


Figure 2-5: High Capacity Transit Corridors—Schedule



2.5 REGIONAL CONNECTORS

The RPTA provides two Regional Connector services. Route 660 – Wickenburg Connector provides service between Wickenburg and Arrowhead Towne Center in Glendale, and Route 685 – Gila Bend Regional Connector providing service between Ajo, Gila Bend, Buckeye and the Desert Sky Mall in Phoenix. Beginning in FY 2007, RPTA combined regional connector service data with the fixed route service data.

2.6 PARATRANSIT

There are ten different paratransit systems in the region with a variety of service characteristics and eligibility criteria. Some are open to the general public, some serve only elderly and persons with disabilities and other paratransit systems are only available to Americans with Disabilities Act eligible persons only.

Table 2-6 presents the major statistics for paratransit, or Dial-a-Ride, services in the region for FY 2004, 2007, and 2008. Some FY 2007 data was not collected on a systemwide basis for paratransit, so the table includes only the available data. Many individual services in the region reported data for FY 2007. The available data by specific service is included in Appendix A.

Paratransit boardings decreased 2% between FY 2007 and FY 2008 and about 13% between FY 2004 and FY 2008. At the same time, operating costs increased about 8% and 31% over the same periods, respectively. Passenger revenues decreased slightly (less than 1%) over the previous year. However, they increased slightly by about 2% over the previous five-year period. The farebox recovery ratio decreased about 8% from the previous year and a 22% decrease compared to FY 2004.

2.7 VANPOOL

Vanpools are organized rideshare arrangements, much like large carpools, in which 6-15 riders who have similar origins and destinations collectively agree to commute in a single vehicle. Vehicles for this type of service may be owned or leased by one of the commuters in the group, a company, or by a third party representative. In the Valley Metro Vanpool Program all vanpool vans are owned by the agency and procured using federal funding or fare returns from active vanpools.

Valley Metro Vanpool Program vehicles are fully insured, and maintained full size vans which offer a reliable, safe, efficient, and economical alternative to driving alone. Valley Metro provides vans to groups of 6 – 15 commuters who then share in the monthly cost of the van by paying an equitable monthly fare.

Valley Metro has provided vanpool services to residents and employers in Maricopa County for twenty two years, and VPSI has served as the vanpool contractor for the majority of those years. VPSI contracts with Valley Metro to provide regional services including billing, administration, insurance, vehicle maintenance, and National Transit Database Reporting.

Performance data for vanpool for fiscal years 2004, 2007, and 2008 is displayed in Table 2-7. Between FY 2007 and 2008, boardings increased nearly 4.2%. Between FY 2004 and 2008 boardings jumped by almost 52%. In addition, operating costs climbed nearly 9% in the same one year period and about 29% during the previous five years. However, revenues rose as well with an almost 5% increase in one year and a nearly 69% increase during the previous five years. The farebox recovery ratio in FY 2007 fell by more than 3%. However, between in FY 2004 and FY 2008, the farebox recovery ration had grown by 34%.

Table 2-6: Comparison of Paratransit Data—2004, 2007 and 2008

General	FY 2004	FY 2007	FY 2008	1 Year (FY 07-08) % Change	5 Years (FY 04-08) % Change
Vehicle Revenue Miles	8,052,626	n/a	7,533,814	n/a	-6.4%
Vehicle Revenue Hours	551,554	532,031	540,907	1.7%	-1.9%
Revenue Miles Per Hour	14.60	n/a	13.93	n/a	-4.6%
Ridership	**FY 2004**	**FY 2007**	**FY 2008**	**1 Year (FY 07-08) % Change**	**5 Years (FY 04-08) % Change**
Total Boardings	1,034,742	922,790	903,868	-2.1%	-12.6%
Boardings Per Revenue Mile	0.13	n/a	0.12	n/a	-6.6%
Boardings Per Revenue Hour	1.88	1.73	1.67	-3.7%	-10.9%
Financial	**FY 2004**	**FY 2007**	**FY 2008**	**1 Year (FY 07-08) % Change**	**5 Years (FY 04-08) % Change**
Farebox Recovery Ratio	5.2%	4.4%	4.0%	-8.3%	-22.0%
Operating Costs	$24,333,403	$29,505,513	$31,936,477	8.2%	31.2%
Operating Cost Per Boarding	$23.52	$31.97	35.33	10.5%	50.2%
Fare Revenue	$1,263,195	$1,302,579	$1,292,611	-0.8%	2.3%
Fare Revenue Per Boarding	$1.22	$1.41	$1.43	1.3%	17.1%
Subsidy Per Boarding	$22.30	$30.56	$33.90	10.9%	52.1%
Operating Cost Per Revenue Hour	$44.12	$55.46	$59.04	6.5%	33.8%
Operating Cost Per Revenue Mile	$3.02	n/a	$4.24	n/a	40.3%

n/a = data not available.

Table 2-7: Comparison of Vanpool Data—2004, 2007 and 2008

General	FY 2004	FY 2007	FY 2008	1 Year (FY 07-08) % Change	5 Years (FY 04-08) % Change
Vehicle Revenue Miles	3,568,488	5,264,469	5,603,997	6.4%	57.4%
Vehicle Revenue Hours	89,212	131,612	115,100	-12.5%	29.0%
Revenue Miles Per Hour	40.0	40.0	48.69	21.7%	21.7%
Ridership	**FY 2004**	**FY 2007**	**FY 2008**	**1 Year (FY 07-08) % Change**	**5 Years (FY 04-08) % Change**
Total Boardings	975,156	1,418,466	1,478,148	4.2%	51.6%
Boardings Per Revenue Mile	0.27	.027	0.26	-2.1	-3.7%
Boardings Per Revenue Hour	10.93	10.78	12.84	19.2%	17.5%
Financial	**FY 2004**	**FY 2007**	**FY 2008**	**1 Year (FY 07-08) % Change**	**5 Years (FY 04-08) % Change**
Farebox Recovery Ratio	82.78%	115.0%	111.26%	-3.3%	34.4%
Operating Costs	$1,940,161	$2,305,045	$2,499,972	8.5%	28.8%
Operating Cost Per Boarding	$1.99	$1.63	$1.69	4.1%	-15.1%
Fare Revenue	$1,606,046	$2,650,738	$2,718,438	4.9%	69.26%
Fare Revenue Per Boarding	$1.65	$1.87	$1.88	.7%	13.94%
Subsidy Per Boarding	$.34	$-0.24	$-0.19	-21.9%	-155.9%
Operating Cost Per Revenue Hour	$24.75	$17.51	$21.72	24%	-.1%
Operating Cost Per Revenue Mile	$0.54	$0.44	$0.45	-1.9%	16.7%

n/a = not available.

3.0 EXISTING & PLANNED TRANSIT CAPITAL INFRASTRUCTURE

The provision of transit service in an area that is nearly 660 square miles (.75 mile buffer for ADA service area) requires the acquisition, development and maintenance of appropriate capital infrastructure. Such infrastructure is not limited to vehicles, but also includes passenger facilities, maintenance facilities, and specific roadway enhancements. In an effort to assist in the identification of future capital needs, this chapter identifies the region's existing capital infrastructure and quantifies its utilization.

3.1 PASSENGER AND SUPPORT FACILITIES

3.1.1 On-Street Passenger Facilities

The August 8, 2008 update of the Regional Bus Stop Database administered by the City of Phoenix reports that there are 7,626 bus stops throughout the region. 43 percent, or 3,236 of these stops include passenger shelters and 1,146 stops consist of a bench only. Recognizing that lack of bus stop shelters and other amenities can be a major disincentive to public use of the transit system, Valley Metro RPTA and its member agencies continually work to improve these passenger facilities based on available funding. Bus stop improvements are achieved through a combination of public and private funds. These include local municipal funds, regional sales tax funds, Federal Transit Administration funds, developer fees, and advertising and bench contracts with Viacom Outdoor Systems Advertising. Advertising shelter and bench locations are developed, improved, and maintained by the individual contractor.

In addition to bus stops, there are 15 designated BRT bus stops located along the Main St. corridor in Mesa and 28 LRT stops located along the light rail alignment in Phoenix, Tempe, and Mesa. Both of these services began operation in December of 2008.

3.1.2 Park-and-Ride Facilities

Existing Park-and-Ride Facilities

Region-wide, there are a total of 50 park-and-ride facilities providing 7,540 automobile spaces. Of these facilities, 21 are publicly owned and operated. The remaining 29 park-and-ride facilities are joint-use. The joint use facilities have an informal agreement with private property owners and are established for shared parking arrangements.

Recognizing that long term access to shared use facilities based on informal agreements is problematic, Valley Metro RPTA and its members have undertaken the development of publicly owned regional park-and-ride lots. These lots, which are identified in the MAG Park & Ride Plan and the Regional Transportation Plan (RTP), will be developed over the next twenty years and will be supported by the Bus Rapid Transit (BRT) and express bus networks identified in the RTP. Table 3-1 identifies the existing facilities, including the location, capacity (when available), and routes served, while Figure 3-1 illustrates the location of publicly owned existing and planned park-and-rides.

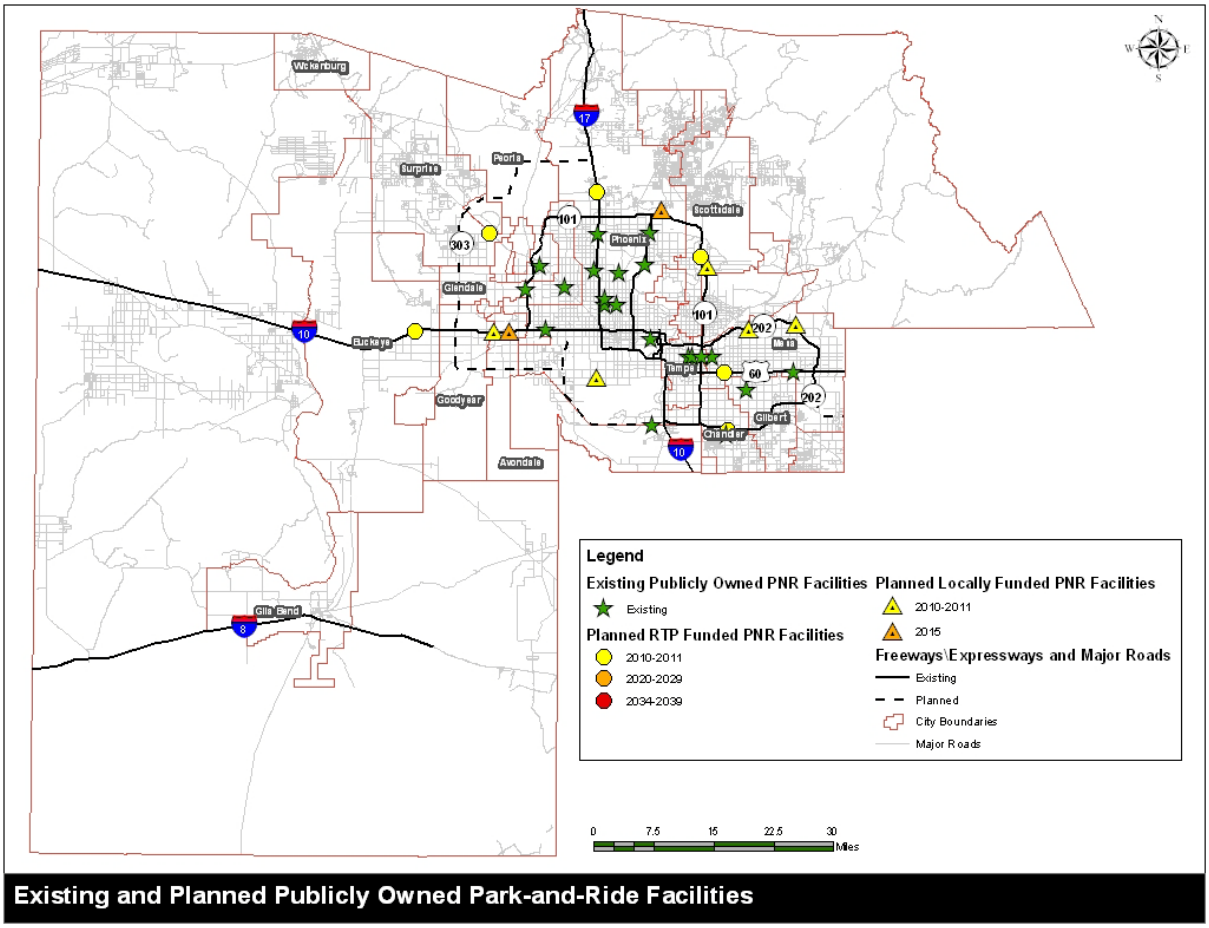
Planned Park-and-Ride Facilities

A total of 11 park-and-ride facilities are planned and identified in Table 3-2. The location of planned park-and-ride facilities is subject to change based on findings of individual site planning and design processes. In addition, the projected facility opening dates may also change based on the availability of funding, local priorities or other variables. Several park-and-rides have been postponed due to a lack of funding. Figure 3-1 depicts the location of existing and planned park-and-ride facilities.

Table 3-1: Existing Park-and-Ride Facilities

Park-and-Ride Facility	Location	City	Capacity	Routes Served
Publicly Owned Facilities				
Tumbleweed PNR	Hamilton and Germann (Arizona Ave./Loop 202)	Chandler	460	511,540,541,542
Gilbert PNR	Ash and Page	Gilbert	250	531, 136
Glendale City Lot	59th Ave & Myrtle Ave	Glendale	109	59, 570, GUS I & II, Grand Ave Limited
Glendale PNR	7111 N 99th Ave	Glendale	388	70, 573
Superstition Springs PNR	Power Rd & US-60	Mesa	200	533, LINK
Main St & Sycamore Transit Center & PNR	Main St & Sycamore St	Mesa	802	30, 40, 45, 96, 104, LINK, METRO
Peoria PNR East	Jefferson St & 84th Ave	Peoria	82	Grand Ave Limited,
Spectrum Mall Transit Center & PNR	Montebello Ave & 19th Ave	Phoenix	794	15, 19, 60, 576, Light Rail
Central & Camelback Transit Center & PNR	Central Ave & Camelback Rd	Phoenix	135	0, 39, 50, 512, 570, 582, 590, Light Rail
19th Ave & Camelback PNR	19th Ave & Camelback Rd	Phoenix	410	19, 50, Light Rail
Washington & 38th St PNR	Washington St & 38th St	Phoenix	189	1, 32, Light Rail
Bell/SR-51 PNR	SR-51 & Bell Rd	Phoenix	377	39,170, SR-51 RAPID
Shea & SR-51 PNR	Shea Blvd & SR-51	Phoenix	370	32, 512, SR-51 RAPID
Deer Valley Park and Ride	Bell & I-17	Phoenix	350	27, 170, 582, 590, I-17 RAPID
40th St & Pecos PNR	Pecos Rd & 40th St	Phoenix	562	I-10 East RAPID, ALEX
79th Ave & I-10 PNR	79th Ave & I-10	Phoenix	607	17, 560, I-10 West RAPID
Metrocenter Transit Center & PNR	off I-17 between Peoria & Dunlap Ave	Phoenix	215	27, 35, 90, 106, 122, 581, 582, I-17 RAPID
Sunnyslope Transit Center & PNR	3rd St & Dunlap Ave	Phoenix	45	0, 8, 12, 16, 80, 90, 106
Loop 101 & Apache Blvd[1]	Loop 101 & Apache Blvd	Tempe	693	40, 511, Orbit, Light Rail
McClintock Dr & Apache Blvd	McClintock Dr & Apache Blvd	Tempe	300	40, 81, Light Rail
Apache & Dorsey PNR	Apache Blvd & Dorsey Ln	Tempe	190	40, Orbit, Light Rail
Joint-Use Facilities				
Donnie Hale Park	4th St & Jessie May Way	Avondale	N/A	131
Carl's Jr.	Warner Rd & Alma School Rd	Chandler	N/A	104, 151
Food City Plaza	Arizona Ave & Ray Rd	Chandler	N/A	112, 541
City Lot	Chicago St & Arizona Ave	Chandler	N/A	104, 112, 540, 541
Shopping Center	Thunderbird Rd & 51st Ave	Glendale	N/A	51, 138, 581
Arrowhead Church of Joy	75th Avenue & Rose Garden Ln	Glendale	N/A	572, 573, 575, 576
East Mesa Service Center	Decatur St & Power Rd	Mesa	N/A	30, 532, 533
South Center Shopping Plaza	Gilbert Rd & Southern Ave	Mesa	N/A	531, 136
Fry's Market	Recker Rd & McKellips Rd	Mesa	N/A	532
Confederate Air Force	Greenfield Rd & McKellips	Mesa	N/A	532
Cactus Square	32nd & Cactus Rd	Phoenix	N/A	32, 106, 138
Deer Valley Community Center	19th Ave & Utopia	Phoenix	N/A	19, I-17 RAPID
First Indian Baptist Church	Greenway Rd & 29th Ave	Phoenix	N/A	27, 154
Greenway Village Square	35th Ave & Greenway Rd	Phoenix	N/A	35, 154
Mountain View Lutheran Church	48th St & Cheyenne St	Phoenix	N/A	56, 540, ALEX
Paradise Valley Community College	32nd St & Union Hills Dr	Phoenix	N/A	32, 90, 186
Safeway Shopping Center	7th St & Thunderbird Rd	Phoenix	N/A	7, 138
Paradise Valley Transit Center	Windrose & Tatum Blvd	Phoenix	N/A	39, 44, 106, 138, SR-51 RAPID
Chaparral Park	Hayden Rd & Jackrabbit Rd	Scottsdale	N/A	81, 510
Costco (Hayden Rd)	83rd Pl & Butherus Dr	Scottsdale	N/A	81, 170
Miller Plaza	Montecito Ave & Miller Rd	Scottsdale	N/A	50, 76, 510
Trinity Church	Hayden Rd & McCormick Pkwy	Scottsdale	N/A	81, 510
Surprise Aquatic Center	Bullard & Tierra Buena Ln	Surprise	N/A	571
Big Lots	McKellips Rd & Scottsdale Rd	Tempe	N/A	72, 532, Orbit
Cobblestone Village	Warner Rd & McClintock Dr	Tempe	N/A	81, 540
Costco	Priest Dr & Elliot Rd	Tempe	N/A	56, 108
Grace Community Church	Southern Ave & Dorsey Ln	Tempe	N/A	61, 520, Orbit
Target Shopping Center	McClintock & Baseline Rd	Tempe	N/A	77, 81, 521
Tolleson City Offices	96th Ave & Van Buren St	Tolleson	N/A	131, 560

Figure 3-1: Existing and Planned Publicly Owned Park-and-Rides



Existing and Planned Publicly Owned Park-and-Ride Facilities

Table 3-2: Planned Publicly Owned Park-and-Ride Facilities

Park-and-Ride Facility/ Year of Implementation*	Prop 400 Funded	Location*	City	Routes Served
Avondale (FY 2014)	No	I-10 & Avondale Blvd	Avondale	- Papago Freeway Connector (FY 2009) - Buckeye Express (FY 2015)
East Buckeye (FY 2011)	Yes	I-10 & Verrado Way	Buckeye	- Papago Freeway Connector (FY 2009) - Buckeye Express (FY 2015)
Arrowhead (FY 2013)[1]	Yes	Bell Rd & 75th Ave	Glendale	- Local Routes 67, 170 & 186 - Express Routes 572, 573, 575 & 576 - Peoria Express (FY 2014)
Dysart & I-10 (FY 2010)	No	Dysart & I-10	Goodyear	- Papago Freeway Connector (FY 2009)
Country Club/US 60 (FY 2011)	Yes	Country Club Dr & US 60	Mesa	- Apache Junction Express (FY 2011) - Superstition Springs Express (FY 2019)
Power Rd & Loop 202 (FY 2012)	No	Power Rd & Loop 202	Mesa	- Power Road Supergrid (FY 2010) - Red Mountain Express (FY 2009) - Red Mountain Freeway Connector (FY 2019)
Gilbert Rd & Loop 202 (FY 2012)	No	Gilbert Rd & Loop 202	Mesa	- Route 136 - Red Mountain Express (FY 2009) - Red Mountain Freeway Connector (FY 2019)
Happy Valley/I-17 (FY 2010)	Yes	Happy Valley Rd & I-17	Phoenix	- I-17 RAPID - Black Canyon Freeway Connector (FY 2016) - Anthem Express (FY 2018) - North I-17 Express (FY 2022)
Scottsdale/101 (FY 2012)	Yes	Cactus Rd & Loop 101	Scottsdale	- 511 - Pima Express (FY 2013)
Mustang Transit Center & PNR (FY 2015)	No	Shea Blvd & 90th St	Scottsdale	- Routes 81, 106, 512, 511 - Pima Express (FY 2013)
Grand/Surprise (FY 2010)	Yes	Grand Ave & Bell Rd	Surprise	- Route 571 - Surprise-Scottsdale Express - Grand Avenue Limited (FY 2013 Expansion) - Bell Road Supergrid (FY 2019) - Loop 303 Express (FY 2023)

[1]Facility was switched with the Peoria/Grand Park-and-Ride
* Year of implementation and location is subject to change.

3.1.3 Passenger Transfer Facilities & Major Park-and Rides

Existing Transit Centers

Transit center facilities are developed to facilitate convenient passenger transfers between buses or other modes of transportation, where two or more routes or modes come together. Eleven transit centers are currently operated in the region, and four additional LRT transit centers began operations in December of 2008. The amenities and services available at each transfer facility vary, with a majority of the facilities in the region providing services such as public transit information kiosks, the sale of fare media, and other relevant customer services. The transit center at both the Main St and Sycamore and the Tempe Transportation Center also have a public toilet for use by transit riders. Table 3-3 provides specific information about each transfer facility and major park-and-ride. Figure 3-2 illustrates the locations of existing and planned transit center facilities.

Valley Metro RPTA provided information on a total of twelve future transit centers are identified as shown in Table 3-4. However, in Table 3-4, the transit center at 19th/Ave and Camelback could be amended and reallocated to other City of Phoenix projects. There is a current facility at this location, and the allocated funding for this project may need to be redistributed. Figure 3-2 illustrates the future transit centers in the MAG region.

3.2 MAINTENANCE AND OPERATIONS FACILITIES

Transit operations and maintenance (O&M) facilities are essential public assets that support the delivery of transit services. These facilities serve multiple purposes including functioning as operating bases, vehicle service and fueling centers, employee training centers and administrative offices. O&M facilities are often designed to meet the specialized needs of the services that the facilities are planned to support.

3.2.1 Existing Publicly Owned Transit Only Operations and Maintenance Facilities

Dedicated publicly owned transit O&M facilities provide long term operating efficiencies through reduced local cost of ownership. Capital development funds available through the Federal Transit Administration's formula and discretionary grant programs can be leveraged to fund a significant portion of the capital costs associated with constructing dedicated transit O&M facilities. By owning a facility funded through federal tax revenues, a local community can reduce fixed operating costs associated with facility leasing.

Table 3-3: Passenger Facilities and Transit Centers—FY 2008

Central Station

300 N. Central Ave
Phoenix

Route / Daily Round Trips	Mon-Fri	Sat	Sun
0	77	30	30
3	64	29	29
7	39	28	28
8	34	29	29
10	37	13	13
12	25	15	15
15	34	16	16
Grand Avenue Limited	4	--	--
560	2	--	--
571	3	--	--
I-10 W RAPID	14	--	--
I-10 E RAPID	15	--	--
SR-51 RAPID	15	--	--
I-17 RAPID	25	--	--
METRO light Rail	106	115	60
Dial-a-Ride Service			
Total	494	275	220

Ownership: City of Phoenix
Completed: 1997
Project Size: 2.8 acres
Facilities: A 4,000 square foot building with a police office, two evaporative cooled open air colonnades totaling 500 lineal feet, shade trees, children's play area, information kiosk, public restrooms, drinking fountains, bicycle racks, telephones, and a gated display area for vintage transit vehicles. Services provided at Central Station include ticket and pass sales, transit information, lost and found, and push cart vending.

Sunnyslope Transit Center

8927 N. 3rd Street
Phoenix

Route / Daily Round Trips	Mon-Fri	Sat	Sun
0	34	30	30
8	34	29	29
12	25	15	15
16	46	29	29
80	34	15	15
90	32	17	17
106	34	29	29
Dial-a-Ride Service			
Total	239	164	164

Ownership: City of Phoenix
Completed: 1989
Project Size: 1.8 acres
Facilities: Two cool tower shelters, eleven other shelters, shaded seatwall, driver's restroom, extensive landscaping with over 140 large arid region trees, bicycle racks, and 45 parking spaces

Metrocenter Mall Transit Center

9415 N. Metro Parkway
Phoenix

Route / Daily Round Trips	Mon-Fri	Sat	Sun
27	43	29	29
35	32	28	28
90	34	30	30
106	16	29	29
122	3	14	14
581	4	--	--
582	9	--	--
I-17 RAPID	9	--	--
Dial-a-Ride Service			
Total	176	130	130

Ownership: Leased land
Completed: 1984
Project Size: 24,700 square feet
Facilities: Construction upgrades include installation of 184 parking shade canopies, passenger shade structures enhancements, ADA upgrades, landscaping, video surveillance system, new site lighting, existing water line upgrades, and security kiosk

Table 3-3: Passenger Facilities and Transit Centers—FY 2008 (cont'd)

Paradise Valley Mall Transit Center

4623 E. Paradise Village Parkway N.
Phoenix

Route / Daily Round Trips	Mon-Fri	Sat	Sun
39	34	20	20
44	33	20	20
106	34	29	29
138	33	15	15
SR-51 RAPID	2	--	--
Dial-a-Ride Service			
Total	155	92	92

Ownership: Leased land
Completed: 1990
Project Size: Approximately 1 acre
Facilities: Two large cool tower shelters, four other shelters, driver's restroom, over 50 large arid region trees, drinking fountains, telephone, bicycle racks, and 100 shared parking spaces

Loloma Station

7084 E. 2nd Street
Scottsdale

Route / Daily Round Trips	Mon-Fri	Sat	Sun
41	64	33	29
66	40	39	35
72	67	41	37
Downtown Trolley	60	60	60
Neighborhood Trolley	43	43	43
Dial-a-Ride Service			
Total	274	216	204

Ownership: City of Scottsdale
Completed: 1997
Project Size: 1.8 acres
Facilities: Four shelters, trees, ticket sales, information, public restrooms, bicycle racks, bicycle lockers, clock tower and telephones

Desert Sky Mall Transit Center

7611 W. Thomas Road
Phoenix

Route / Daily Round Trips	Mon-Fri	Sat	Sun
29	66	29	29
29 A	15	15	--
17	59	29	29
41	61	30	30
41A	15	13	--
131	11	--	--
560	2	--	--
I-10 W RAPID	13	--	--
685	5	2	--
Dial-a-Ride Service			
Total	247	118	88

Ownership: Leased land
Completed: 1989
Project Size: 900 square feet
Facilities: One shelter, shade trees, information kiosk, and bicycle racks.

Arizona Mills Mall

5000 Arizona Mills Circle
Tempe

Route / Daily Round Trips	Mon-Fri	Sat	Sun
56	51	39	34
77	53	40	35
92	51	39	35
108	38	19	18
Dial-a-Ride Service			
Total	193	137	122

Ownership: Private
Completed: 1997
Project Size: 1,000 square feet
Facilities: One bus bays one artist-designed bus shelter, drinking fountain, information kiosk and a bicycle rack.

Table 3-3: Passenger Facilities and Transit Centers—FY 2008 (cont'd)

Ed Pastor Transit Center

10 W. Broadway
Phoenix

Route / Daily Round Trips	Mon-Fri	Sat	Sun
0	77	29	29
7	39	28	28
8	34	29	29
45	47	33	33
52	34	21	21
Dial-a-Ride Service			
Total	231	140	140

Ownership: City of Phoenix
Completed: 2003
Project Size: 4.5 acres
Facilities: 300' long passenger shade canopy; pedestrian plaza; ample landscaping and seating; art features rehabilitation of historic building that now houses transit security, customer service-ticketing, public restrooms and drinking fountains

Chandler Fashion Center Transit Plaza

3334 W. Frye Road
Chandler

Route / Daily Round Trips	Mon-Fri	Sat	Sun
72	61	38	34
81	24	0	0
156	36	32	31
Dial-a-Ride Service			
Total	121	70	65

Ownership: City of Chandler
Completed: 2004
Project Size: 0.5 acres
Facilities: Two 40-foot passenger shelters, benches, bicycle rack, and drinking fountains

Tempe Transportation Center

200 E 5th Street
Tempe

Route / Daily Round Trips	Mon-Fri	Sat	Sun
62	52	40	35
65	39	39	34
66	40	39	35
72	67	42	37
76	35	14	14
92	51	39	35
536	5	--	--
Orbit	282	260	260
METRO light rail	106	115	60
Dial-a-Ride Service			
Total	677	588	510

Ownership: City of Tempe
Completed: 2008
Project Size: 40,000 square feet
Facilities: Thirteen bus shelters, ticket/information counter, public restrooms, retail spaces, drinking fountains, information kiosks and bicycle racks.

Arrowhead Towne Center

Glendale

Route / Daily Round Trips	Mon-Fri	Sat	Sun
67	31	27	14
170	35	33	14
186	33	33	15
572	6	--	--
573	6	--	--
575	3	--	--
576	5	--	--
660	4	2	--
Dial-a-Ride Service			
Total	128	97	43

Ownership: Private
Completed: 1994
Project Size: 1,000 square feet
Facilities: Four bus bays used for layover purposes only on outer road, shade trees and sitting area in boarding area near mall, lighting, easy access to mall restroom facilities and food court.

Table 3-3: Passenger Facilities and Transit Centers—FY 2008 (cont'd)

Montebello / 19th Ave Transit Cetner

1825 W. Montebello
Phoenix

Route / Daily Round Trips	Mon-Fri[1]	Sat[2]	Sun
15	34	16	16
19	61	28	28
60	32	15	15
576	6	--	--
METRO light rail	106	115	60
Dial-a-Ride Service			
Total	239	174	119

Ownership: City of Phoenix
Completed: 2008
Project Size: 1.8 acres
Facilities: Six bus shelters, four bike racks, information kiosk and shade trees.

Central Ave / Camelback Transit Center

5 W. Camelback Road
Phoenix

Route / Daily Round Trips	Mon-Fri[1]	Sat[2]	Sun
0	51	30	30
39	35	28	25
50	33	33	15
METRO light rail.	106	115	60
Dial-a-Ride Service			
Total	239	174	119

Ownership: City of Phoenix
Completed: 2008
Project Size: 1.25 acres
Facilities: Five bus shelters, four bike racks, information kiosk and shade trees

44th St / Washington Transit Center

4349 E. Washington Street
Phoenix

Route / Daily Round Trips	Mon-Fri[1]	Sat[2]	Sun
1	33	15	15
3	64	29	29
13	29	15	15
32	33	15	15
44	6	15	15
METRO light rail	106	115	60
Dial-a-Ride Service			
Total	241	202	144

Ownership: City of Phoenix
Completed: 2008
Project Size: 3.2 acres
Facilities: Three bus shelters, four bike racks, information kiosk, security operations center and shade trees.

Sycamore / Main St Transit Center

1804 W. Main St
Mesa

Route / Daily Round Trips	Mon-Fri[1]	Sat[2]	Sun
30	35	18	--
40	42	40	40
45	32	15	--
96	44	34	34
104	31	16	--
LINK	46	18	18
METRO light rail	106	115	60
Dial-a-Ride Service			
Total	241	202	144

Ownership: City of Mesa
Completed: 2008
Project Size: 3.2 acres
Facilities: Three bus shelters, four bike racks, information kiosk, security operations center and shade trees.

[1]Monday-Friday on bus routes is compared to Monday to Thursday on METRO light rail.
[2]Saturday on bus routes is compared to Friday and Saturday on METRO light rail.

Figure 3-2: Existing and Planned Transfer Facilities and Major Park-and-Rides

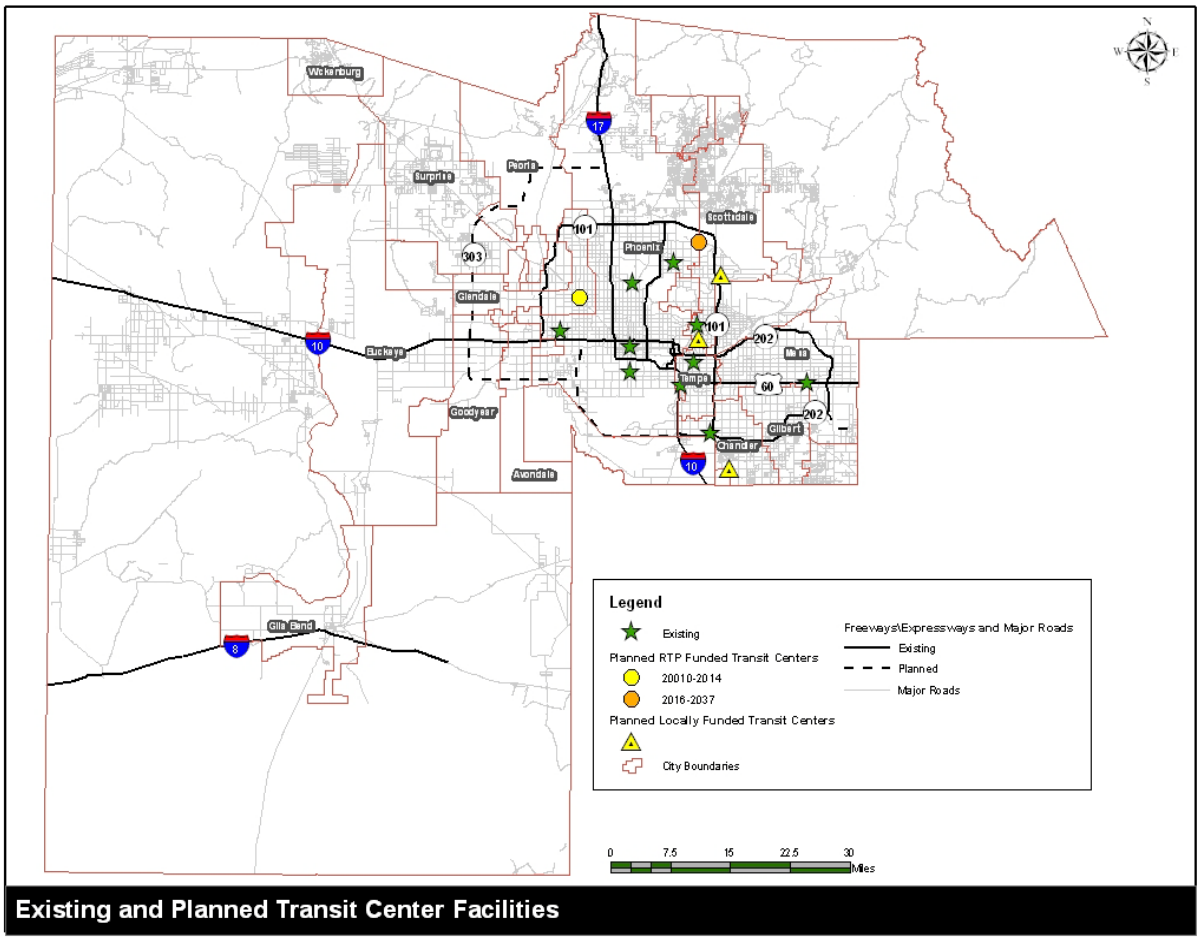


Table 3-4: Planned Transit Centers and Transit Center Improvements

Transit Center/ Year of Implementation	Prop 400 Funded	Location	City	Routes Served (Existing and Planned)
Downtown Chandler (FY 2014)	Yes	Chandler Blvd & Arizona Ave	Chandler	- Routes 112, 156 - Arizona Avenue LINK (FY 2011) - Santan Express (FY 2018) - Chandler Blvd Arterial BRT (FY 2024)
South Chandler Transit Center (FY 2014)	No	Alma School Rd & Chandler Heights Rd	Chandler	- Routes TBD
Glendale/Grand (FY 2013)	Yes	Glendale Ave & Grand Ave	Glendale	- Routes 59, 70 - Grand Avenue Limited - Glendale Urban Shuttle (GUS) - Light Rail Extension
Bell/101 (FY 2013)	Yes	Bell Rd & 83rd Ave	Glendale	- Routes 67, 170, 186, 575, 576 - Arrowhead Downtown Express - Surprise-Scottsdale Express - 83rd/75th Avenue Supergrid (FY 2023) - West Loop 101 Connector (FY 2009) - Loop 303 Express (FY 2023)
Main St/Sycamore	No	Main St & Sycamore St	Mesa	- 30, 40, 45, 96, 104 - Main St Arterial BRT (FY 2009) - Light Rail
Mesa Downtown (FY 2016)	Yes	Main St & Center St	Mesa	- Routes 45, 104, 112, 120 - Main St Arterial BRT - Main St Supergrid (FY 2009) - Light Rail Extension
19th Ave/Camelback[1] (FY 2014)	Yes	19th Ave & Camelback Rd	Phoenix	- Routes 19, 50, 50 Limited - Light Rail
Skysong Transit Center (FY 2015)	No	Scottsdale Rd & McDowell Rd	Scottsdale	- Routes 17, 72, - Neighborhood Connector
Mustang Transit Center & PNR (FY 2015)	No	Shea Blvd & 90th St	Scottsdale	- Routes 81, 106, , 512 - East Loop 101 Connector (FY 2009) - Pima Express (FY 2013)
South Tempe (FY 2014)	Yes	Guadalupe Rd & McClintock Rd	Tempe	- Routes 66, 81, 92 - East Loop 101 Connector (FY 2009)
Planned Transit Center Improvements				
Metrocenter Upgrades (FY 2016)	Yes	Metrocenter Pkwy (Metrocenter Mall parking lot)	Phoenix	- Routes 15 (replaces Red Line FY 2009), 27, 35, 90,106, 122, - Express 570 (scheduled to discontinue in FY 2013), 581, - I-17 RAPID - Black Canyon Fwy Connector (2016) - North I-17 Express (2022)
Central Station Upgrades (FY 2011)	Yes	Central Ave & Van Buren St	Phoenix	- Routes 0, 3, 8, 10, 12, 15, 27 - Express 560 - Grand Ave Limited - I-10 West RAPID - Light Rail.

[1]This transit center may have funding allocated to other City of Phoenix projects.
Source: Valley Metro RPTA

The region's current dedicated transit and maintenance facilities support fixed route bus, demand response (dial-a-ride) and light rail operations. There are five regional publicly owned fixed route/demand response facilities and one light rail transit (LRT) facility (Table 3-5 and Figure 3-3). These facilities are dedicated to serve transit operations and do not support other fleet operations such as municipal public works fleet vehicles. The existing O&M facilities within the region have been strategically located to provide reasonable operating efficiencies.

3.2.2 Planned Operations and Maintenance Facilities

To support the planned expansion of the regional transit system as outlined in the RTP, two additional dedicated O&M facilities are planned and funded. These facilities include a new regional heavy maintenance facility and a new fixed route bus facility. Additionally, funding is identified in the RTP for regional O&M facility upgrades at two facilities: Phoenix South Division and RPTA Mesa (includes funding for upgrades to the fixed route and demand response sections of the facility). However, funding for these facilities has been postponed to a year outside the SRTP. However, the future facilities and their associated implementation years are described in Table 3-6. Additional funding for three other facilities were originally identified in the RTP to support regional rural bus service, vanpool service and Phoenix Dial-a-Ride. These facilities have also been postponed to a year outside of the regional Transit Life Cycle Program (multi-year implementation plan for transit component of the RTP). In addition, the RTP includes a new light rail O&M facility; however, the programmed year for completion has not been determined. Table 3-6 shows the planned O&M facilities.

Table 3-5: Existing Publicly Owned Operations and Maintenance Facilities

Facility	Contractor	Vehicle Capacity	Modes Served	Primary Functions
Phoenix South Division 2225 W Lower Buckeye Phoenix	Veolia	250	Fixed Route & DASH Shuttle	Heavy Vehicle Maintenance, LNG and Diesel Fueling, Cleaning, and Painting. Operator Dispatch and Regional Radio Support.
Phoenix North Division 2010 W Desert Cove Phoenix	Veolia	150	Fixed Route	Vehicle Maintenance, LNG and Diesel Fueling, Vehicle Cleaning, and Operator Dispatch
Phoenix West Division 79th Avenue & Van Buren St. Phoenix	First Transit	250	Fixed Route	Vehicle Maintenance, CNG, LNG, and Diesel Fueling, Vehicle Cleaning and Operator Dispatch
Tempe/Scottsdale 2050 W. Rio Salado Parkway Tempe	Veolia	250	Fixed Route	Vehicle Maintenance, LNG fueling, Vehicle Cleaning, and Operator Dispatch
RPTA Mesa 3320 N. Greenfield Rd. Mesa	Veolia	250	Fixed Route, Demand Response	Vehicle Maintenance, Fueling, Cleaning, and Operator Dispatch
Metro Rail 48th & Washington Sts. Phoenix	METRO	100	Light Rail	Vehicle Maintenance, Cleaning, and Operator Dispatch

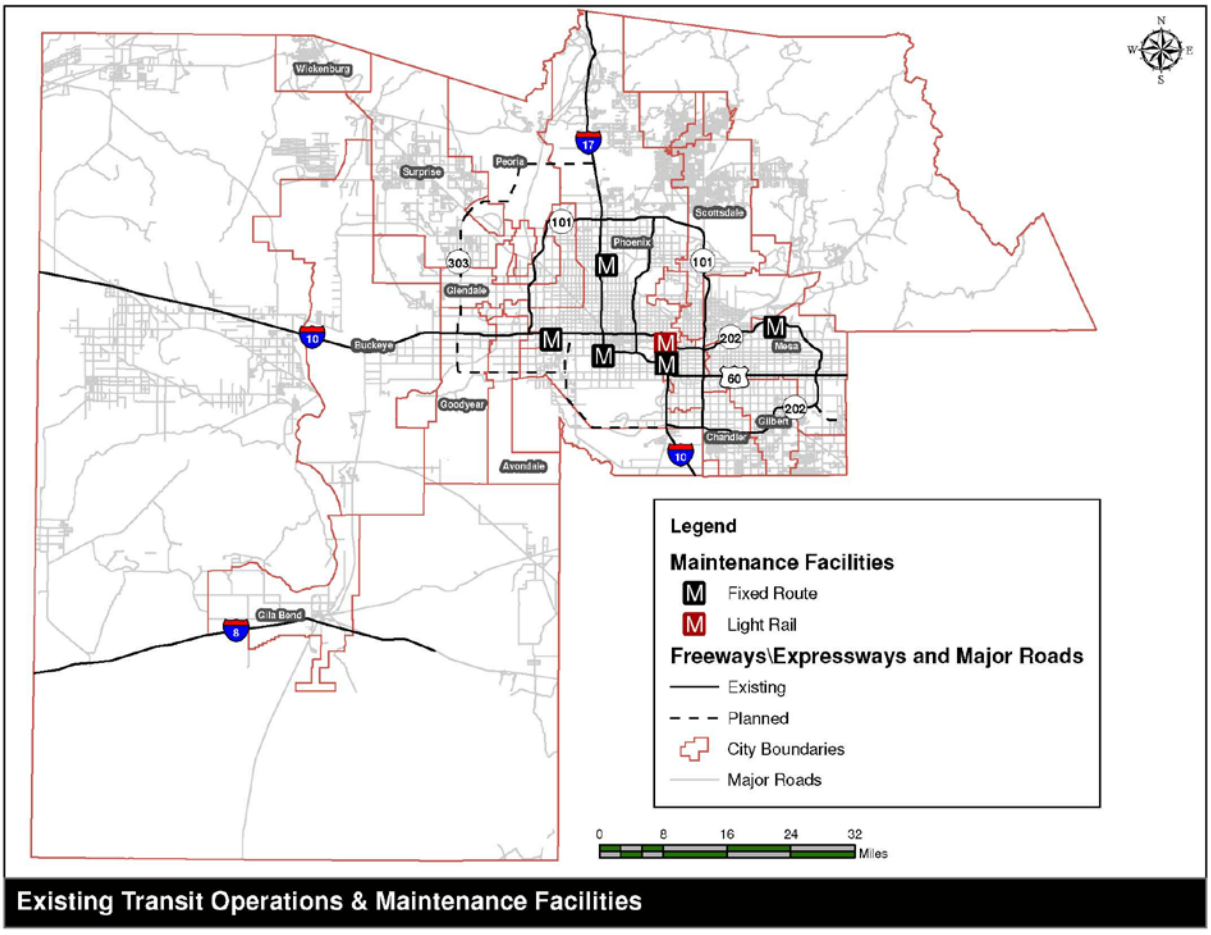
Sources: Valley Metro FY 2009 Transit life Cycle program Update, 2009
Regional Public Transportation Authority
City of Phoenix Public Transit Department
Veolia Transportation – Phoenix

Table 3-6: Planned Publicly Owned Operations and Maintenance Facilities

Facility	Modes Served	Programmed Year Complete
New Heavy Maintenance – Fixed Route Bus	Fixed Route	2026
New Fixed Route Bus	Fixed Route	2042
Phoenix South Division Rehabilitation	Fixed Route	2029
RPTA Mesa Fixed Route Upgrades/Rehabilitation	Fixed Route	2029
RPTA Dial-a-Ride	Demand Response	2020
Phoenix Dial-a-Ride	Demand Response	2034
Rural Routes	Rural	2034
Vanpool Facility	Vanpool	2038
Metro Light Rail Facility	Light Rail	TBD

Source: Valley Metro FY 2009 Transit life Cycle program Update, 2009

Figure 3-3: Existing Operations and Maintenance Facilities



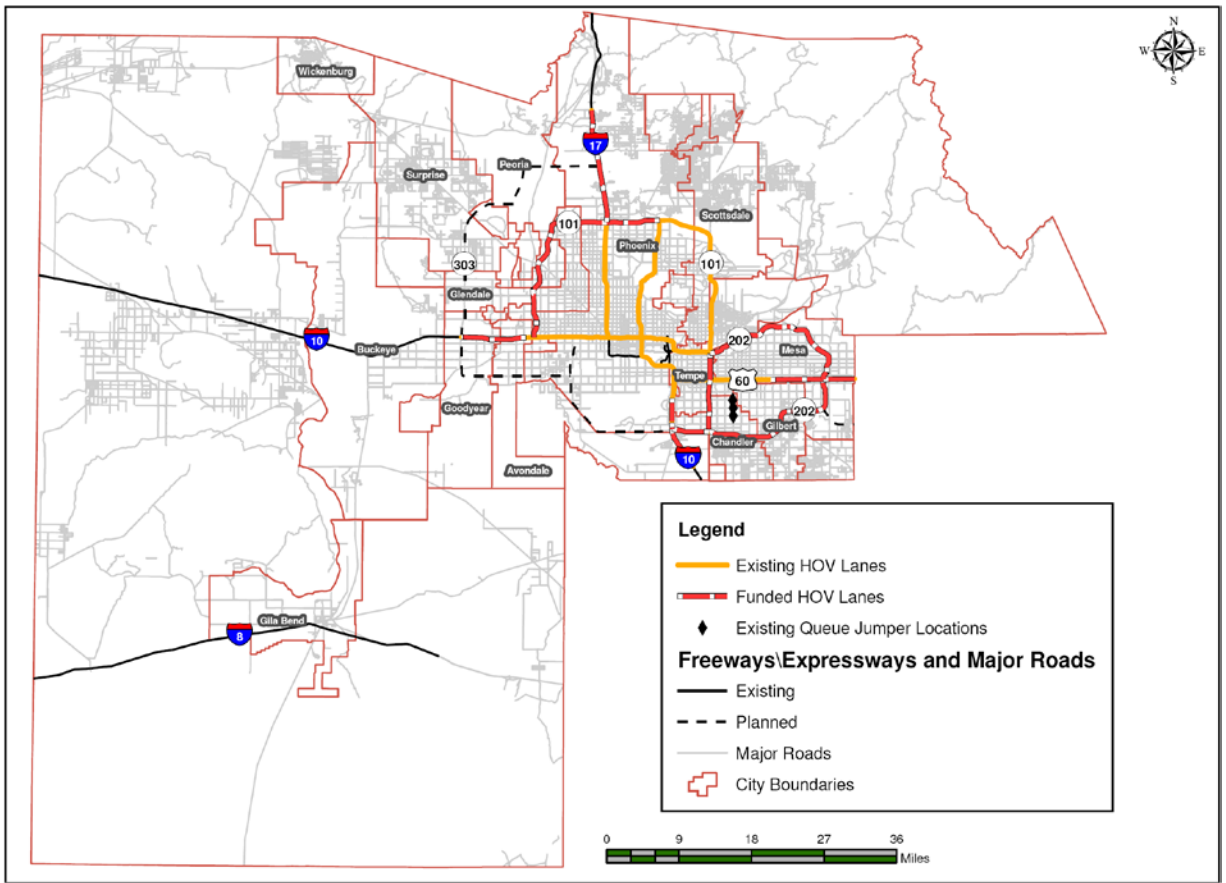
3.3 ROADWAY ENHANCEMENTS

3.3.1 Existing and Planned HOV Lanes and Ramps

Since passage of the first countywide half-cent sales tax for transportation in 1985, MAG and the Arizona Department of Transportation (ADOT) have worked together on a program of constructing HOV lanes on many of the new regional freeways. In some places, such as I-10, the HOV lanes were built concurrently with the original general purpose lanes. On other freeways, HOV lanes have been added after the general purpose lanes opened. As an example, HOV lanes were retrofitted to portions of I-17 (Black Canyon Highway), the oldest freeway in Maricopa County.

Currently, segments of I-10, I-17, SR-51, US-60 and SR-202 have one HOV lane in each direction, located to the inside of the general traffic lanes and marked with regulatory signs and painted diamonds. The HOV lanes are restricted to vehicles with two or more occupants during peak hours: Monday through Friday from 6:00 AM to 9:00 AM and 3:00 PM to 7:00 PM. Motorcycles, certain alternative-fueled vehicles and a limited number of hybrid vehicles are also permitted to use the lanes at all times. During off-peak hours, HOV lanes are open to all vehicles. Figure 3-4 shows the existing and planned HOV facilities in addition to the arterial bus queue jumper locations.

Figure 3-4: HOV Facilities and Queue Jumpers



Existing and Planned HOV Facilities and Arterial Bus Queue Jumpers

HOV lanes are intended to encourage carpooling/vanpooling and bus ridership. Many existing express and freeway BRT routes use the lanes, and more will do so as they come on line during the 20-year life cycle of the RTP.

Table 3-7 shows that approximately 194 lane miles (i.e., 97 centerline miles) of HOV lanes currently exist on regional freeways in Maricopa County. Nearly all existing HOV lane segments currently support express bus or RAPID operations during peak periods. This table was updated in October 2007 when the regional council approved the modifications to that planned HOV lanes. In October 2009, the regional council will alter these approved HOV lanes. But at the time of print, these numbers were still current.

The MAG freeway system has three local service interchanges that offer direct access to and from the HOV lanes for carpools and buses. All are located along I-10, at:

- 79th Avenue, providing an eastbound on-ramp and a westbound off-ramp connecting the I-10 HOV lanes with the 79th Avenue park-and-ride lot.
- 5th Avenue/3rd Avenue, providing a westbound on-ramp and an eastbound off-ramp connecting the I-10 HOV lanes with these north-south links to downtown Phoenix.
- 3rd Street, providing an eastbound on-ramp and a westbound off-ramp between the I-10 HOV lanes and this north-south collector street serving downtown Phoenix.

Table 3-7: Existing and Planned Freeway HOV Lanes

Route	From	To	Approximate Lane Miles	Status of HOV Lanes
I-10	SR-303L	Sarival Ave	3	Planned RTP Phase II[1]
	Sarival Ave	SR-101L	18	Programmed FY 2008-09
	SR-101L	Chandler Blvd	52	Existing
	Chandler Blvd	Riggs Rd	14	Programmed FY 2010
I-17	Begin I-17	I-10 "stack"	14	Planned RTP Phase III[2]
	I-10 "stack"	SR-101L	28	Existing
	SR-101L	SR-74	18	Programmed FY 2008
	SR-74	Anthem Way	10	Planned RTP Phase IV[3]
SR-51	I-10	Shea Blvd	20	Existing
	Shea Blvd	SR-101L	12	Under construction
US-60	I-10	Power Rd	34	Existing
	Power Rd	Meridian Rd	12	Planned RTP Phase III
SR-101	I-10	Grand Ave	20	Planned RTP Phase III
	Grand Ave	I-17	24	Planned RTP Phase IV
	I-17	Tatum Blvd	16	Planned RTP Phase II
	Tatum Blvd	Princess Dr	10	Programmed FY 2008
	Princess Dr	Red Mtn Fwy	30	Under construction
	Red Mtn Fwy	Santan Fwy	20	Programmed FY 2008
SR-202	I-10/SR-51	Pima Fwy	18	Existing
	Pima Fwy	Gilbert Rd	12	Programmed FY 2009
	Gilbert Rd	Higley Rd	10	Planned RTP Phase III
	Higley Rd	Val Vista Dr	42	Planned RTP Phase IV
	Val Vista Dr	I-10/Pecos Rd	24	Planned RTP Phase II
Total Existing Lane Miles			***152***	
Total Planned Lane Miles			***461***	

Sources: MAG Regional Transportation Plan (November 25, 2003), MAG RTP 2007 Update (July 2007), MAG 2007 Annual Report on the Status of the Implementation of Proposition 400 (August 2007), MAG Transportation Improvement Program Fiscal Years 2008-2012.
[1]Phase II: Fiscal Years 2011 through 2015
[2]Phase III: Fiscal Years 2016 through 2020
[3]Phase IV: Fiscal Years 2021 through 2026

The regional freeway network also contains direct ramps connecting one HOV lane to another at the following system (directional, freeway-to-freeway) interchanges:

- I-10/SR-51/SR-202: From I-10 east to SR-202, SR-202 to I-10 west, I-10 west to SR-51, and SR-51 to I-10 east.
- I-10/US-60: From I-10 east to US-60, and US-60 to I-10 west.

Additional infrastructure investments such as crossover lanes (similar to SR51 & Shea Blvd), and transit slip ramps would further improve transit operations by reducing overall passenger travel time and operating expenses.

3.3.2 Arterial Street Improvements

There are no transit priority facilities that currently exist on arterial streets in the MAG region, with the exception of three queue jumpers that allow transit buses priority access through signalized traffic intersections. The queue jumpers were constructed by the City of Chandler to function in both directions of travel on Arizona Avenue at Elliot Road, Warner Road and Ray Road.

Each queue jumper lane, signed for “Bus and Bike Only” approaching a signalized intersection, allows buses to bypass the queue of vehicles waiting at the intersection. When a bus is stopped at the signal, a special indication is provided to give the bus a four-second head start (“queue jump”) before the onset of the green signal. The queue jumper may be used in conjunction with a far side bus stop. Chandler uses a special camera configuration connected to a 16-phase signal cabinet to detect only 40-foot buses, while preventing bicycles and autos (which have a separate right turn lane) from triggering the queue jump. Local buses are currently taking advantage of the travel time savings provided by the queue jumpers.

Bus Rapid Transit (BRT) service is funded in the RTP for a limited number of arterial street corridors. In December 2008 the first route began service from the Main Street/Sycamore light rail station to Superstition Springs Mall, using Main Street and Power Road. To enhance operating speeds of the Main Street BRT service, the RPTA and City of Mesa will install bus priority systems at signalized intersections along Main Street, and at the intersections of Power Road with Broadway Road and Southern Avenue. BRT buses will have the ability to extend or recall the green signal phase through the use of special hardware and software connections with the traffic signal network.

The second arterial BRT route will operate primarily along Arizona Avenue and Country Club Drive, from the Chandler Park and Ride at Germann and Hamilton Roads to the Sycamore and Main Street METRO station. This route is scheduled to begin operation in July 2010. Additional arterial BRT routes are scheduled to enter service beginning in FY 2014. However, it the budget projected shortfalls may delay the start of the Scottsdale Rd, BRT. Related street improvements for each arterial BRT corridor have not yet been identified, but could include queue jumpers, transit signal priority or other bus priority treatments.

4.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) involves strategies to reduce automobile travel demand or to redistribute the demand so that it does not occur only during peak commute periods. Its purpose is to provide cost-effective alternatives to increasing capacity. TDM can defer and reduce the need to expand roads and parking facilities, and provide other potential benefits such as reduced traffic accidents, energy conservation, improve air quality through reduced auto emissions and improved mobility for non-drivers. TDM can create more sustainable transportation through achievement of sustainability objectives such as resource conservation, equity, environmental protection, efficient land use, and public involvement.

Valley Metro provides or administers a number of TDM services in the region, known collectively as the Business Services or Rideshare Program. Services include:

1. ShareTheRide.com (an online ride-match service)
2. Vanpool program
3. Trip reduction program—employer assistance
4. Clean Air Campaign—promote alternatives to reduce traffic congestion and air pollution
5. Transit education and outreach programs
6. Transportation Coordinator Alliances—assistance
7. Alternative work schedules/telecommute program—assistance
8. Safe Routes to Schools
9. Bike Safety Education

Each of these services is described below.

4.1 SHARETHERIDE.COM

This free online service (ShareTheRide.valleymetro.org) facilitates finding others who are interested in sharing the ride to work in a carpool or vanpool or even someone a person can bike with to work. The service maintains a data base of persons throughout the valley and their work trip origin/destination locations and schedules and matches them to others making similar work trips. Valley Metro is the rideshare agency for the Phoenix metropolitan area and is responsible for overseeing this service. This matching service can also complement individual employer's in-house ride-matching services and help them comply with Maricopa County's mandated Trip Reduction Program.

4.2 VANPOOL PROGRAM

In addition to facilitating ridesharing vanpools with vans owned by others, Valley Metro has a vanpool program in which the agency owns vans that were procured using federal funds or fare returns from active vanpools. The vehicles are fully insured and maintained and offer vans to groups of 6 to 15 commuters who then share in the monthly cost of the van by paying an equitable monthly fee that covers all van costs, including insurance and maintenance. Additional information about this program may be found in Chapter 2.

4.3 TRIP REDUCTION PROGRAM ASSISTANCE

The Maricopa County Environmental Division administers the mandated Trip Reduction Program (TRP) for employers and schools in the county with 50 or more employees and/or students at one site. The region's goal is to reduce employers' and schools' single occupant vehicle (SOV) trips and/or miles traveled to the work site by 10% a year for a total of five years, and by 5% for the next three additional years, with an overall target of reaching a 60% rate of SOV travel at each work site.

The RPTA is under contract with Maricopa County to provide training, technical support, and promotional support to organizations affected by the TRP. Valley Metro's Business Services team provides free on-site support to help employers develop commuting solutions for employees. Among the services provided are: training including a series of standard workshops, special topical workshops, one-on-one assistance with conducting surveys, writing TRP plans, developing and implementing trip reduction strategies, rideshare matching, and a full service vanpool program.

4.4 CLEAN AIR CAMPAIGN

Originally launched in 1987 by the Phoenix Chamber of Commerce, the goal of the Clean Air Campaign is to reduce air pollution and traffic congestion. The Clean Air Campaign comprises a variety of sponsors who have gathered together in a public/private partnership and hold events to promote use of alternative modes. Each year Valley Metro hosts an event honoring individuals and organizations for their significant efforts in reducing air pollution and traffic congestion and presents each of them with a Clean Air Campaign Award.

4.5 TRANSIT EDUCATION PROGRAM

Valley Metro presents transit education programs to a variety of audiences including senior citizens, persons with disabilities, refugee organizations, social services, and other related organizations. Valley Metro also has a school outreach program that includes classroom presentations tailored to the specific audience. The program offers students and teachers an opportunity to learn about transportation choices and how to safely travel on the Valley Metro transit system. The transit educators provide various fun and educational materials for students and a teacher's packet full of useful transit trips. Field trip coordinators are available to assist in planning group trips and itineraries and to provide other useful information. A "Free Group Field Trip All Day Pass" (Free Pass) is available to eligible preschool through 8th grade groups.

4.6 TRANSPORTATION COORDINATOR ALLIANCES—ASSISTANCE

As part of the regional rideshare program, Valley Metro provides assistance to transportation coordinator alliances (TCA). TCA's are organized by geographic areas and offer transportation coordinators the opportunity to share ideas and problem solve in a supportive group environment.

4.7 ALTERNATIVE WORK SCHEDULES/TELECOMMUTE PROGRAM—ASSISTANCE

Alternative work schedules usually consist of a compressed work week where employees have the option to work more hours per day but fewer days within a one or two-week period. Telecommuting is a flexible work option allowing employees to work at a location other than their main office (most commonly their own home). Valley Metro provides assistance, resource materials, marketing, and sample information to employers who want to implement or expand telecommuting or compressed work weeks programs. These programs benefit both employer and employee through:

- Employer Primary Benefits
  - Continuity of operations planning
  - Help to achieve trip reduction goals
  - Increase worker productivity
  - Decrease absenteeism
  - Improve employee morale
  - Decrease overhead and operating costs
  - Provide a great retention and recruitment tool

- Employee Primary Benefits
  - Decrease stress
  - Eliminate or reduce commute time and expenses
  - Increase job satisfaction
  - Decrease work related expenses
  - Provide better work/life balance

4.8 SAFE ROUTES TO SCHOOLS

Working in partnership with local and tribal governments, school districts, healthcare and corporate/community organizations, the *Statewide Safe Routes to School (SRTS) Support Center Project* will provide integrated programs to develop safe routes for children to walk and bike to school and instill in students lifelong skills regarding healthy and active life choices, traffic safety and travel injury prevention. This two (2) year program will:

- Provide Arizona curriculum-aligned program support to 17-21 pilot schools statewide, including transportation, safety, GIS-based mapping, health, and air quality curriculums.
- Support the roll-out of Maricopa County-wide *Safe Routes to School (SRTS) Support Center,* previously funded by a federal Transportation Enhancements.
- Add new curriculums and modify existing ones to fit the target audiences.
- Teach and promote use of student-friendly web-based program support and reporting tools through statewide and e-learning workshops and/or webinars.
- Provide a statewide purchasing program and central outreach for partnerships with health, business and community organizations and to secure underwriting for student incentives & safety equipment for crossing guards.
- Utilize the same nonprofit organization to provide any services outside Maricopa County to ensure the enabling legislative mandates are followed.
- Train schools to match parents with “school-pools” to improve school traffic flow and air quality during peak-hour drive times.

4.9 BIKE SAFETY EDUCATION

Valley Metro is requesting continued funding for our Regional Bicycle & Pedestrian Safety Education Program. Valley Metro has benefitted from the current Transportation Enhancement (TE) funding awarded in 2007 – Round XV (15). This grant has allowed us to leverage limited local staffing and time; Valley Metro RPTA has provided additional staff and helped promote and incentivize safer walking and cycling practices. Before schools end classes for the summer break and before students return in late summer, funding from the current grant will allow us to modify public service announcements and air them across 3/4 of Arizona and through our local access channels. Updating the Valley Metro website capabilities continues, with links to local efforts and contacts. MAG and Valley Metro RPTA are also working to develop an interactive bike trip planner that will benefit the entire Phoenix Metropolitan region.

5.0 REGIONALLY FUNDED SHORT RANGE TRANSIT IMPROVEMENTS

Regionally funded transit operations and capital improvements through Fiscal year 2026 are identified in the FY 2009 Transit Life Cycle Program Update (TLCP). The TLCP identifies basic operational characteristics for all regionally funded transit service (operations) improvements as well as programmed funding and implementation schedules for all Public Transportation Fund (PTF) funded capital improvements. A summary of the improvements programmed for implementation between FY 2009/2010 and 2014/15 is provided in this chapter. In addition, technical considerations for route adjustments, phased service implementation strategies and schedule/service coordination alternatives are provided for each operation and capital improvement programmed for implementation during this same time period.

5.1 REGIONALLY FUNDED TRANIST OPERATING IMPROVEMENTS

5.1.1 Funded Regional Transit Operating Improvements FY 2010 through FY 2015

Planned regionally funded transit operations improvements between FY 2009/2010 and FY 2014/2015 include new bus routes and the provision of regional funding for existing locally funded bus routes. Table 5-1 lists the 3 bus routes and one light rail extension that will be impacted by regional transit funding between FY 2009/2010 and FY 2014/2015. Several planned routes in the RTP have been delayed due to fiscal constraints. Budget availability has been impacted by lower than anticipated sales tax revenues which have impacted routes region wide.

5.2 COMPARISON OF FUNDED OPERATING IMPROVEMENTS AND IMPLEMENTATION (FY 2010)

One local bus route (Table 5-2) was programmed in the FY 2009 TLCP Update to begin regional funding in FY 2010. This route, Gilbert Rd, was initiated but only on a partial level. One express route that was implemented in July 2008 at service level below the level identified in the TLCP. Full implementation this route, the Papago Freeway Connector (Goodyear to Downtown Express), is being delayed until a park-and-ride facility is available in Buckeye.

5.3 CONSIDERATIONS FOR REGIONALLY FUNDED TRANSIT OPERATING IMPROVEMENTS (FY 2010 through FY 2015)

Regionally funded transit operating improvements identified in the FY 2009 TLCP Update for FY 2009/2010 through FY 2014/2015 will create opportunities to optimize existing locally and regionally funded transit services. In some cases new regionally funded bus routes will result in service duplications providing an opportunity to re-prioritize local transit investments for enhanced transit connectivity or expanding local services to new areas. In other cases considerations must be made for providing adequate capital infrastructure, such as park-and-ride facilities, necessary to support new regionally funded transit services. Table 5-3 provides a summary of initial planning considerations for each route planned for regional funding through FY 2014/2015.

Table 5-1: Regionally Funded Transit Operations Investments FY 2010 and FY 2015

Route	Initial Fiscal Year of Regional Funding	Weekday				Weekend		
		Peak Headway (min)	Base Headway (min)	Service Span (hr)	No. of Daily Trips	Base Headway (min)	Service Span (hr)	No. of Daily Trips
Supergrid								
Gilbert Road	2010	30	30	17	68	30	17	68
Power Road	2014	30	30	17	68	30	16	64
Express/BRT								
Arizona Avenue Arterial BRT	2011	Two-way	---	---	40	---	---	---
Light Rail								
Northwest Extension (Phase I)	2014	10	20	20	180	20	20	120

Source: 2009 Valley Metro Transit Life Cycle Program Update

Table 5-2: Comparison of Funded Operating Improvements and Implementation (FY 2010)

Route	Route Number	Implementation Date	TLCP Funded Daily Weekday/Weekend Trips	Implemented Daily Weekday/Weekend Trips	Implementation
Papago Frwy Connector *(renamed Goodyear / Downtown)*	562	July 2008	8 / 0	6 / 0	Partial
Gilbert Road	136	July 2009	68 / 68 Gilbert 68 / 68 Mesa	56 / 43 Gilbert 47 / 24 Mesa	Partial

Source: 2009 Valley Metro Transit Life Cycle Program Update and July 2009 Valley Metro Bus Book

Table 5-3: Considerations for Regionally Funded Transit Operations Investments
FY 2010 through FY 2015

Route	Year (FY)	Existing Route	Description	Route Pattern Variance	Service Variance	Considerations
156 - Chandler Blvd	2010	Yes	Desert Foothills Pkwy to ASU Polytechnic	No	Increase peak headway to 15 minutes.	Will increase in peak headway be desired on entire length of route? Phoenix portion is locally funded.
136 - Gilbert Rd	2010	Yes	McDowell Rd to Riggs/Val Vista	Extend south to Riggs Rd and Val Vista (Basha HS). Extend north to McDowell Rd. Map does not include Boeing extension.	Increased service span and increased mid-day headways in Mesa.	Service levels to the Boeing facility in Mesa should be coordinated with Boeing.
184 - Power Rd	2014	No	Thomas Rd to Rittenhouse Rd	New Route	New Route	Future Connection to Red Mtn PNR Consider route deviations to Mesa Community College Red Mention Campus, Superstition Springs PNR and Airport Terminal (coordinate with ASU for possible end-of-line PNR). Duplication with existing local routes serving Power Rd: (30) University, (40) Main/Apache, (45) Broadway, (61) Southern, (108) Elliot, (440) LINK Main St and (533) Mesa Express. Consider extending all Route 30 trips east to Multi-Generation Center and moving Route 533 east end-of-line to Superstition Springs PNR. Consider terminating Route 40 at Power Rd and Baywood. Route 40 savings could potentially be applied towards adding some limited stop trips to Route 184 providing a quick connection between LINK Main St BRT and the ASU Polytechnic campus.
LINK Arizona Ave / Country Club Dr (Dedicated BRT)	2011	No	Ocotillo and Alma School to Sycamore and Main LRT Station	New Route	40 total trips each weekday	Connection to future South Chandler Transit Center. Consider coordinating service schedule/number of daily trips with Arizona Ave/Country Club Dr Supergrid route programmed for 2012. Consider providing service to the Chandler tumbleweed PNR.
LRT Northwest Extension Phase I	2014	Yes	19th Ave and Bethany Home to Main St and Sycamore	Extend LRT north on 19th Ave to Dunlap Ave	None	Consider terminating some trips of the I-17 express / RAPID routes at Dunlap & 19th Ave LRT Station.

Source: HDR | S.R. Beard & Associates, 2008 PNR = Park-and-Ride TC = Transit Center

It is recommended that the service planning process facilitated by the RPTA for the implementation of new transit services and capital facilities be launched at the completion of each year's Short Range Transit Program (SRTP) update. This timeline provides an opportunity to utilize the transit service and capital considerations identified in the annual SRTP update to initiate the planning process and improve the integration of local and regional transit planning efforts. Participation in the service planning process is voluntary for RPTA member agencies; however, it is recommended that member agencies directly affected by service or capital considerations contribute to the process.

The SRTP provides an opportunity for local jurisdictions and agencies to request potential amendments to project definitions within the TLCP. Potential amendments may include adjusting a planned route pattern or reassigning regional capital funds from one capital project (such as a PNR) to another. For example, the planned location of a PNR facility may be less beneficial than an alternative site. The considerations identified in the SRTP will be carried forward to the TLCP process for potential inclusion in the official annual TLCP update. However, all potential project adjustments are subject to approval through the regionally adopted TLCP policies. The route considerations at the end of the SRTP provide a guideline for future route adjustments.

5.3.1 Transit Ridership Projections for New Regionally Funded Routes

Basic ridership projections have been developed for the regionally funded routes planned for implementation through FY 2014/2015. Ridership projections are based on a five year maturity rate, in which routes are expected to have a level of performance (boardings/mile) consistent with service previously operated in the corridor or adjacent corridors by the fifth year of operation. Ridership projections are calculated based upon an assumption of maintaining the same performance level (boardings/mile) for pre-existing revenue miles. New or additional revenue miles are assumed to be half as productive as the existing service in year one with a target of achieving base year performance (boardings/mile) for the entire route in year five. In cases that a route doesn't already exist in the corridor, a system-wide performance factor (boardings/mile) is assumed as the route's performance goal but is adjusted by a factor linked to population and employment.

The ridership adjustment factor is based on a density scale that compares the transit service area population and employment density to the service area population and employment density of the planned bus route. The service area is determined by a .25 mile buffer around the existing transit system network for local and express bus service independently. Supergrid routes are compared to existing local service area densities and Express routes are compared to existing express (excluding RAPID) service area densities. One point is assigned to every percentage point difference from the system average. Scores below zero indicate routes that are likely to perform below system averages for ridership. Density scores above zero indicate routes that are likely to perform above system averages for ridership. Table 5-4 provides an example of the density score for the Power Rd Supergrid Route.

Table 5-4: Example of the Density Score for Power Road Supergrid Route

	Projected 2010 Population Density	Projected 2010 Employment Density	Density Score
Density Scale Regional Local Bus Service Area	4,003	2,232	NA
Power Rd Supergrid	2,411	1,428	NA
Overall Density Score (% difference)	-66	-56	**-122**

Source: HDR | S.R. Beard & Associates, 2007

Using the methodology described above, ridership projections for each new regionally funded route through FY 2014/2015 is provided in Table 5-5. The ridership projections are developed using basic assumptions of existing transit performance, projected population density, and projected employment density. The projections are provided as estimates only; actual ridership may vary.

5.3.2 Regionally Funded Service Adjustments and Preliminary Thresholds

The TLCP provides flexibility to implement regionally funded transit services below the full funding level. This flexibility provides an opportunity to implement new routes at a service level consistent with expected passenger demand enabling new routes to build ridership and potentially be more likely to perform better in a mandatory service efficiency and effectiveness audit.

To be consistent with the RPTA adopted efficiency and effectiveness performance measure targets, it is recommended that a measureable process be employed to determine when a phased implementation route (defined as a route that was implemented with an initial service level lower than the TLCP programmed service level for the same route) is eligible for regionally funded service level adjustments based on performance. It is assumed that service levels on a regionally funded route could be increased at the affected jurisdiction's expense if the route does not yet reach the performance measure for additional regional funding.

Table 5-5: Ridership Estimates for New Regionally Funded Routes Through FY 2014/2015

Route	Year 1 Projected Annual Ridership	Year 3 Projected Annual Ridership	Year 5 Projected Annual Ridership
Supergrid			
Gilbert Road	227,436	330,221	433,005
Power Road	155,410	233,115	310,820
Express/BRT			
Arizona Avenue Arterial BRT	61,936	92,904	123,873

Source: 2009 Valley Metro Transit Life Cycle Program Update PAR Documents

A methodology that utilizes RPTA adopted efficiency and effectiveness performance measure targets and regional service level standards are recommended. For supergrid bus routes, the adopted efficiency and effectiveness performance measure target for passenger boardings per revenue mile (2.1) and the regional local bus standard for passenger load ratio (125%) are recommended for considering increased service levels. The passenger load ratio is a measure of the passenger count at a route's max load point divided by the number of seats provided in the vehicle. This standard has been documented in previous editions of the regional Short Range Transit Plan. Both of these variables provide a reasonable measure of passenger demand. The proposed application of the measures would require a supergrid route to meet or exceed 2.1 passenger boardings per revenue mile or have three or more consecutively sequenced trips that regularly (at least 3 of 5 weekdays for the same trip for a period of 6 consecutive or non-consecutive months within a 12 month period) exceed the regional local bus passenger load standard of 125%. If supergrid route overcrowding (exceeding 125% passenger load) occurs on less than three consecutive trips, schedule adjustments or vehicle assignment should be considered before implementing additional service.

For express/arterial BRT routes, the adopted efficiency and effectiveness performance measure target for passenger boardings per revenue mile (2.1) and the regional express bus standard for passenger load ratio (100%) are recommended for considering increased service levels. The proposed application of the measures would require an express/arterial BRT route to meet or exceed 2.1 passenger boardings per revenue mile or have three or more consecutively sequenced trips that regularly (at least 3 of 5 weekdays for the same trip for a period of 6 consecutive or non-consecutive months within a 12 month period) exceed the regional express bus passenger load standard of 100%. If express/arterial BRT route overcrowding (exceeding 100% passenger load) occurs on less than three consecutive trips, schedule or vehicle assignment adjustments should be considered before implementing additional service.

5.4 CAPITAL IMPROVEMENTS

5.4.1 Funded Regional Transit Facility Improvements FY 2010 through FY 2015

Planned regionally funded transit capital improvements between FY 2009/2010 and FY 2014/2015 include transit centers (5), park-and-ride facilities (5), and bus stops. Several planned transit centers, park-and-rides and maintenance and operations facilities have been postponed because of projected revenues shortfalls from the regional sales tax. However, the remaining capital facilities investments include expansion and rehabilitation of some existing facilities as well as new facilities. Table 5-6 summarizes the 10 regionally funded transit facilities programmed for funding between FY 2009/2010 and FY 2014/2015.

Table 5-6: Regionally Funded Transit Facility Investments FY 2010 and FY 2015

Facility	Pre-Design (FY)	Design (FY)	Land (FY)	Construction/ Open (FY)
Happy Valley Rd & I-17 Park-and-Ride	2009	2009	2009	2010
Grand/Surprise Park-and-Ride	2009	2009	2009	2010
Central Station Transit Center Rehabilitation / Expansion	2009	2010	NA	2010
Country Club Dr & US 60 (Superstition Freeway) Park-and-Ride	2009	2009	2009	2010
South Tempe Transit Center	2009	2010	2010	2011
East Buckeye Park-and-Ride	2009	2010	2009	2011
Scottsdale Rd & Loop 101 Park-and-Ride	2010	2010	2010	2011
South Chandler Transit Center	2012	2013	2013	2014
Downtown Chandler Transit Center	2012	2013	2013	2014
19th Ave & Camelback Rd Transit Center	2012	2013	2013	2014

Source: 2009 Valley Metro Transit Life Cycle Program Update

In addition to major passenger and operations maintenance facilities the TLCP identifies regional funds for bus stop construction and upgrade throughout the region. An application and project prioritization process has been established by the RPTA to administer regional capital funds programmed for bus stop improvements. Table 5-7 provides an annual summary of the level of regional funding programmed for bus stop improvements between FY 2009/20010 and FY 2014/2015 based on the FY 2009 TLCP Update.

Table 5-7: Regional Bus Stop Funding FY 2010 through FY 2015

TLCP Fiscal Year	TLCP Programmed Funding[1]
2010	$287,895
2011	$300,562
2012	$313,787
2013	$323,201
2014	$332,897
2015	$342,884
Total	**$7,362,289**

[1]Funding subject to change based on annual budget
Source: 2009 Valley Metro Transit Life Cycle Program Update

5.4.2 Comparison of Funded Transit Facility Investments and Implementation (FY 2010)

Several of the facilities programmed in the FY 2009 TLCP Update for implementation in FY 2010 are projects that were delayed to FY 2010 as the facilities were not constructed in the original programmed year. Five regionally funded transit facility improvements are programmed for opening in FY 2010 (including facilities delayed from FY 2009). Based upon current project status, completion of all five facilities programmed for completion in FY 2009 will not be open for service until at least FY 2011. See Table 5-8 for the current project status of each regionally funded transit facility through FY 2015.

5.4.3 Considerations for Regionally Funded Transit Facility Investments FY 2010 through FY 2015

Regionally funded transit capital improvements support both locally and regionally funded transit operations. Additionally some transit facility investments in the TLCP have multiple funding sources themselves. These could include monies from Federal grants and/or local funding from jurisdictions, as well as regional funding.

The capital improvements identified in the FY 2009 TLCP Update for FY 2009/2010 through FY 2014/2015 will create opportunities to optimize transit operations and route connections. Table 5-8 provides a summary of initial planning considerations for each regionally funded capital improvement planned through FY 2014/2015. The American Recovery and Reinvestment Act of 2009 will fund several park-and-ride and facility improvements. The Act will provide funding for many "shovel ready" projects throughout the region. However, most of the considerations identified are related to providing adequate capacity for vehicles at transit facilities.

5.4.4 Funded Regional Transit Expansion Vehicles: FY 2010 through FY 2015

To support fixed route service expansion through FY 2015, the TLCP identifies the acquisition of 125 vehicles between FY 2010 and 2015. The TLCP fleet expansion plan provides for the acquisition of vehicles in the fiscal year prior to service need. For existing routes that are programmed to be supported by PTF funding, the existing fleet already assigned to the route is considered in the fleet expansion plan. For example, the Arizona Ave Dedicated BRT route is programmed to receive nine additional vehicles for service expansion in FY 2011. Table 5-9 provides a summary of the regionally funded fleet expansion plans for fixed route, paratransit, rural connectors and vanpools. A standard 12-year transit bus fleet replacement cycle is assumed. The detailed (by route) fixed route fleet expansion requirements for new and expanded services programmed to be implemented between FY 2010 and 2015 are summarized in Table 5-10.

Table 5-8: Considerations for Regionally Funded Transit Facility Investments
FY 2010 through FY 2015

Facility	Programmed Opening Year (FY)[1]	Current Project Status[2]	General Location[3]	Existing Facility	Considerations
Happy Valley Rd & I-17 Park-and-Ride	2010	Preferred site selected and design is in progress	Happy Valley Rd & I-17	No	$5.5 million in ARRA[4] funds allocated. Consider inclusion of bus stop space for potential connecting routes: I-17 RAPID, Route 35, Deer Run Circulator, Black Canyon Freeway Connector (FY 2016), Anthem Express (FY 2018) and North I-17 Express (FY 2022).
Grand/Surprise Park-and-Ride	2010	Site selection and pre-design process in progress	Bell Rd & Grand Ave	No	Consider inclusion of bus stop space for potential connecting routes: Route 571, Route 572, Grand Ave Limited RTP Expansion (2013), Bell Rd Supergrid (2019) and Loop 303 Express (FY 2023).

Facility	Programmed Opening Year (FY)[1]	Current Project Status[2]	General Location[3]	Existing Facility	Considerations
Central Station Rehabilitation / Expansion	2010	Project has not been formally initiated	Central Ave & Van Buren St	Yes	$5.0 million in ARRA funds allocated Consider inclusion of bus stop space for potential connecting routes: DASH, Route 0, Route 3, Route 8, Route 10, Route 12, Route 15, Route 27, Route 560, Route 562, Route 571, Route 573, Route 575, Grand Ave Limited, I-10 West RAPID and Light Rail.
Downtown Chandler Transit Center	2010	Site selection process in progress	Chandler Blvd & Arizona Ave	No	Consider inclusion of bus stop space for potential connecting routes: Route 112 (AZ Ave/Country Club Supergrid), Route 156 (Chandler Blvd Supergrid), Arizona Ave Dedicated BRT (2011), San Tan Express (2018) and Chandler Blvd Dedicated BRT (2024). Facility may also be served by Route 104 until route extends south to Ocotillo Rd in 2014.
Country Club Dr & US 60 (Superstition Freeway) Park-and-Ride	2010	Site selection process in progress	Country Club Dr & US 60	No	$9.4 million in ARRA funds allocated Consider inclusion of bus stop space for potential connecting routes: Apache Junction Express (FY 2011) and Superstitions Springs Express (FY 2019). Route 61, Route 531 Gilbert Express, Route 112 (AZ Ave/Country Club Supergrid), Arizona Ave Dedicated BRT (2011), and Superstition Freeway Connector (FY 2012) may also be considered to serve the facility depending upon the site selected.
Scottsdale Rd & Loop 101 Park-and-Ride	2011	Site selection and pre-design process in progress	Scottsdale Rd & Loop 101 (Pima Frwy)	No	$5.0 million in ARRA funds allocated
East Buckeye Park-and-Ride	2011	Preferred site selected	I-10 & Verado Way	No	Consider inclusion of bus stop space for potential connecting routes: 562 and Buckeye Express (2015).
South Tempe Transit Center	2014	Site selection and pre-design process in progress	5th St and College Ave	No	None. Facility has already been designed and constructed.
19th Ave & Camelback Rd Transit Center	2014	Project has not been formally initiated	19th Ave & Camelback Rd	No	Location already has PNR facility and PNR facility is located with .75 miles of proposed site near 19th Ave & Montebello. Consider applying programmed funds to another passenger facility. The City of Phoenix is the benefactor of the programmed regional funds for this facility.
3rd Ave and Camelback Park and Ride Facility	2010	Site Selection and pre-design process in progress	Central Ave/3rd Ave to 7th Ave	No	1.4 Million ARRA[4] funds allocated
Montebello/19th Ave / Camelback, Central Ave/ Camelback	2010	Site selection and pre-design process in progress for shade canopy Installation	Montebello/ 19thAve 19th Ave /Camelback Central/Camelback	Yes	$2.5 million ARRA[4] funds allocated

Source: 2009 Valley Metro Transit Life Cycle Program Update PAR Documents
[1]Year of opening subject to change
[2]Current status as of November 2009
[3]Location is subject to change based on site availability and other variables
[4]ARRA stands for The American Recovery and Reinvestment Act of 2009.

Table 5-9: Planned Regional Expansion Vehicles

Fiscal Year For Acquisition	Fixed Route	Paratransit	Rural	Vanpool
2011	19	0	0	25
2012	0	0	0	25
2013	5	0	4	25
2014	6	0	0	25
2015	5	0	0	25
Total	**35**	**0**	**4**	**125**

Source: RPTA, 2009

Table 5-10: Planned Regional Fixed Route Transit Vehicles FY 2010 through FY 2015

Route	FY Service Implemented	Planned Regional Expansion Vehicles (Fiscal Year Acquired)				
		FY10	FY11	FY12	FY13	FY14
Arizona Ave Dedicated BRT	2011	9				
Power Rd	2013				6	
City of Phoenix General Local Buses Expansion	---	10		5		5
Total		19	0	5	6	5

Source: RPTA, 2008

5.4.5 Comparison of Funded Regional Fixed Route Transit Vehicles and Implementation (FY 2010)

Fixed route fleet requirements for regionally funded service expansion are calculated based on the availability of existing fleet, federally required fleet ratios and a mathematical formula that considers route length, peak headway and an average operating speed. Variances in these variables result in differences between estimated fleet requirements and actual fleet requirements. Fixed route fleet acquired for service expansion in FY 2009 and FY 2010 was more than the estimated quantity of vehicles identified in the TLCP. However, additional fleet had been acquired because expected of service extensions, but they were postponed. The additionally acquired fleet may be used to replace older vehicles, pending conservation with and approval by FTA. A benefit of acquiring more vehicles is they might assist in replacing older vehicles with more efficient ones. Table 5-11 provides a comparison of planned regional fixed route transit expansion vehicles and actual vehicles acquired for service expansion in FY 2009 and FY 2010.

Table 5-11: Comparison of Planned Regional Fixed Route Transit Expansion Vehicles and Vehicles Acquired (FY 2009 and FY 2010)

Route	Fixed Route Expansion Vehicles					
	TLCP Fleet Plan			Actual Vehicles Acquired		
	40' Bus	60' Bus	Total	40' Bus	60' Bus	Total
Main Street BRT	0	7	7	0	10	10
Gilbert Road[1]	2	0	2	2	0	2
Power Road[1]	6	0	6	8	10	6
Total	**8**	**7**	**15**	**8**	**10**	**18**

[1]Fleet was acquired for expected service expansions, but declining revenues have resulted in delaying expansions. Fleet acquired may be used to replace older fleet that is eligible for retirement pending discussions with and approval by FTA.
Source: RPTA, 2009

5.5 REGIONAL PLANNING STUDIES AND RELATED PROJECTS

Specialized planning studies and related projects may be necessary to support short range and long range transit planning processes to help identify potential regional transit opportunities, constraints, strategies and refinements. RPTA is currently working on the Regional Comprehensive Arterial BRT Study to define the region's arterial BRT program, which is funded by regional Public Transportation Fund (PTF) revenues; however investments in additional studies or planning related projects may be beneficial. Other regional studies and planning related projects that are recommended for consideration by the region include the following:

- Service Thresholds for Regionally Funded Services and Facilities: Section 5.1.5 of this document provides recommendation for determining when a regionally funded bus route has reached a performance level that warrants improved service frequency. The development of thresholds for other service types (arterial BRT, LRT, etc.) and other service parameters as well as facilities (park-and-rides, transit centers, etc.) may help in implementing an efficient regional transit system that increases the likelihood of positive results from the mandatory efficiency and effectiveness audits.
- Regional Transit Safety and Security Implementation Plan: The purpose of this study is to prioritize the implementation of strategic measures identified in the Regional Safety and Security Plan (November 2006). The 2006 plan identifies potential transit safety and security vulnerabilities but does not provide a prioritized schedule to implement the mitigating measures identified.
- Comprehensive Regional Bus Stop Inventory: A comprehensive bus stop inventory of the entire region was last completed in 2002. Regular updates of the bus stop inventory have not consistently included the entire region's stock of bus stop locations/facilities. A comprehensive regional bus stop inventory will provide more accurate information for regional and local operations and facility planning, and more reliable passenger information.

6.0 REGIONAL TRANSIT FUNDING

Regional public transit services are provided in the region through multiple funding sources including regional sales tax collections, passenger fares, state sources and federal grants. Local funding sources including municipal general fund allocations and local sales tax collections also contribute significantly towards fulfilling some of the elements of the regional transit system. While local contributions serve as an important component of the regional transit system, this chapter is limited to the revenue and expenditure estimates associated with the regional transit service and capital investments identified in the Transit Life Cycle Program (TLCP).

6.1 REGIONAL FIXED ROUTE BUS & PARATRANSIT FUNDING

6.1.1 Revenues

Regional transit revenues in the TLCP allocated for fixed route bus and paratransit investments can be classified into five general revenue categories. The revenue categories include:

- *Public Transportation Fund (PTF)* – Regional transportation sales tax approved by voters as part of Proposition 400 in November 2004.
- *Regional Area Road Fund (RARF)* – Funds generated from the regional transportation sales tax provided for regional transit planning, operations and related activities.
- *Federal Allocations* – Federal allocations are awarded to the region through multiple federal programs including formula distributions that are based on the region's population, on-going transit investments and transit system performance and discretionary investments that are awarded on a limited basis. Included in the federal allocations are funds from the *American Recovery and Reinvestment Act (AARA).* It was an economic stimulus package passed by Congress in February of 2009. The region received around $39 million dollars.
- *Passenger Fares* – Revenues generated through assessed user fees.
- *Interest* – Includes interest earned on the annual operating reserve and year-end cash balance.

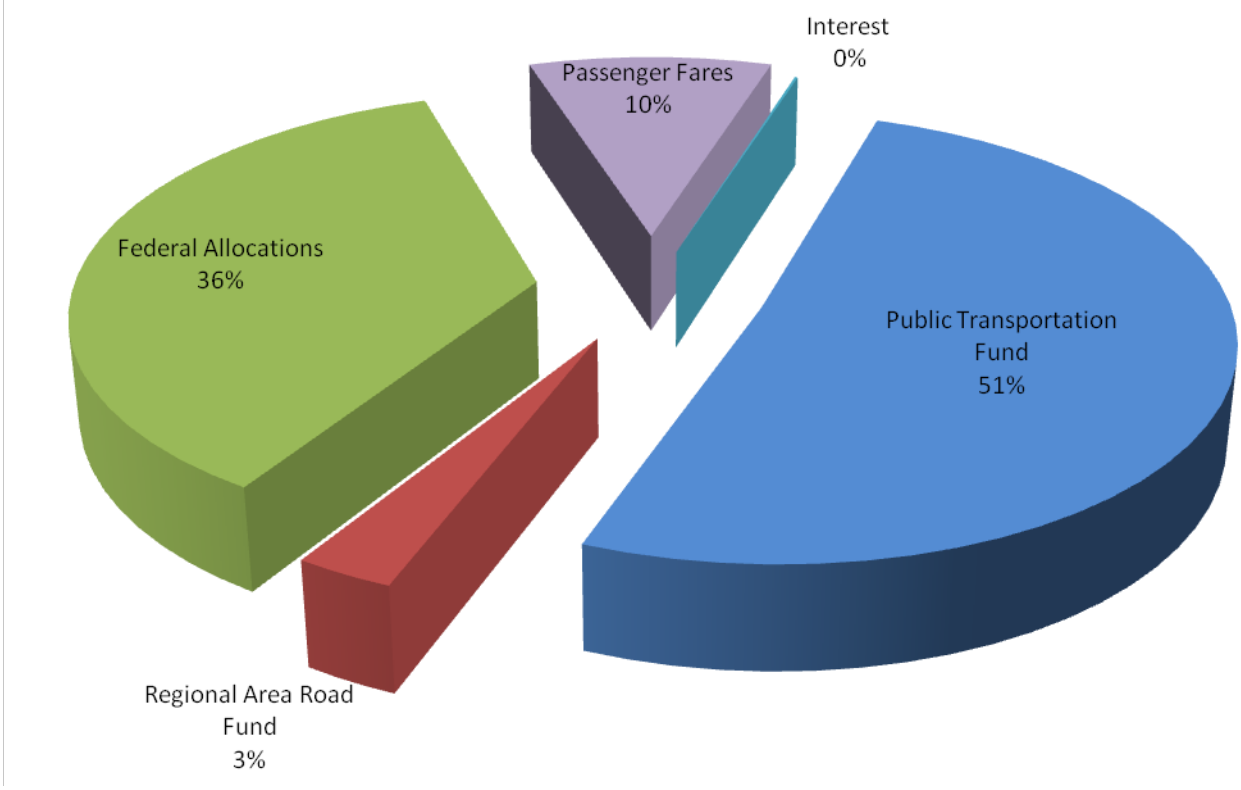
The TLCP is updated on an annual basis to determine reasonable estimates for future year revenues. Table 6-1 identifies the projected revenues summarized by the five general categories described above for FY 2009/10 through FY 2014/15. Figure 6-1 illustrates the total revenues by category for the same time period. The revenue estimates represent the most recent updated information for the region based on the FY 2009 TLCP Update.

Table 6-1: Estimated Regional Fixed Route & Paratransit Revenues (in $millions)

Revenue Category	FY 2010	FY 2011	FY2012	FY2013	FY 2014	FY 2015	Total
Public Transportation Fund	$66.30	$69.64	$74.87	$80.83	$87.18	$93.71	**$472.53**
Regional Area Road Fund	$4.36	$4.45	$4.56	$4.69	$4.83	$4.98	**$27.87**
Federal Allocations	$85.45	$48.02	$47.78	$48.55	$52.31	$52.98	**$335.09**
Passenger Fares	$14.34	$14.28	$14.96	$15.19	$15.97	$16.33	**$91.07**
Interest	$0.05	$0.19	$0.08	$0.22	$0.12	$0.51	**$1.17**
Total	**$170.50**	**$136.58**	**$142.24**	**$149.49**	**$160.41**	**$168.51**	**$927.73**

Source: 2009 RPTA TLCP Update

Figure 6-1: Estimated RPTA Regional Fixed Route & Paratransit Revenues FY 2010 - FY 2015



Source: 2009 RPTA TLCP Update

6.1.2 Expenditures

Regional transit expenditures in the TLCP allocated for fixed route bus and paratransit investments can be classified into seven general expenditure categories. The expenditure categories include:

- *Regional Bus Operations* – Regional bus operations includes PTF funded fixed route bus service (Supergrid, Express, Arterial BRT, Rural Connectors), operations contingency, annual contributions to the operating reserve and regional safety and security.
- *Paratransit Operations* – Includes regional funding for ADA reimbursements and allocations for Sun Cities Area Transit (SCAT).
- *RPTA Planning & Administration* – Expenditures associated with on-going regional transit planning and agency administration.
- *Regional Services* – Expenditures for regional transit customer service, Bus Book production and other regional based programs.
- *Transit Vehicles* – Includes regional purchases for expansion and replacement of fixed route bus, paratransit, and vanpool vehicles. Other elements in this category include vehicle contingency and vehicle upgrades (Intelligent Transportation System/Vehicle Management Systems [ITS/VMS], fareboxes, etc.).

- *Dedicated BRT ROW* – Regional investments in purchasing and upgrading right-of-way for arterial bus rapid transit operations
- *Capital Facilities* – Regional capital investments for passenger facilities (park-and-rides, transit centers and bus stops), operations and maintenance facilities, and capital contingency.

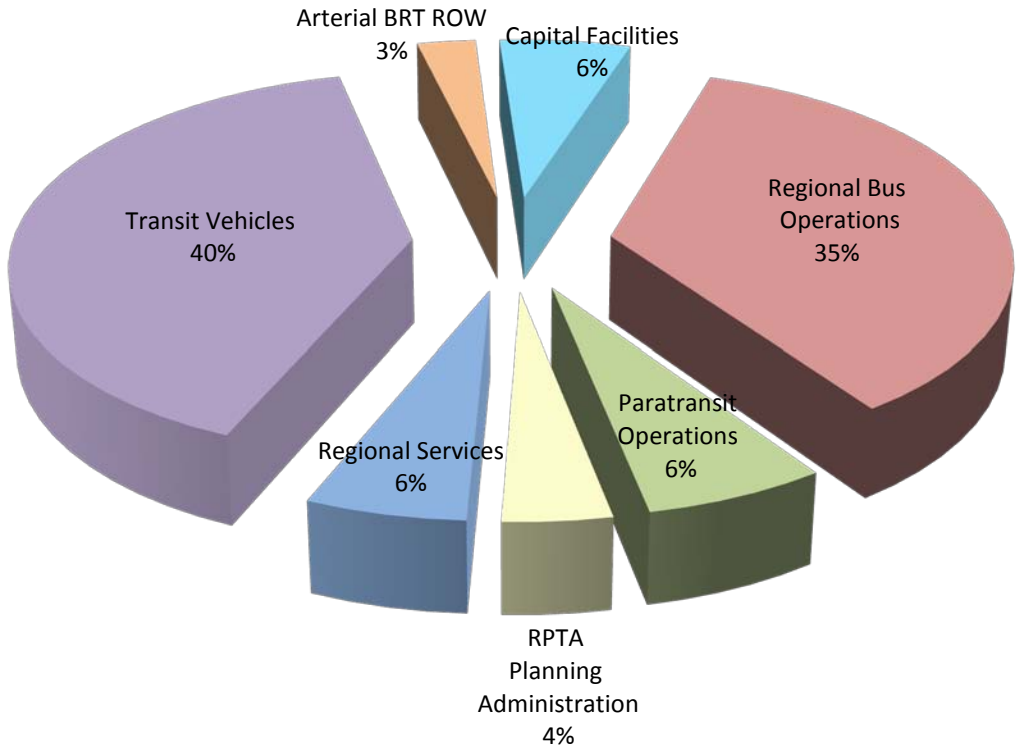
The TLCP is updated on an annual basis to determine reasonable estimates for future year expenditures. Table 6-2 identifies the projected expenditures summarized by the seven general categories described above for FY 2009/10 through FY 2014/15. Figure 6-2 illustrates the total expenditures by category for the same time period. The expenditure estimates represent the most recent updated information for the region based on the FY 2009 TLCP Update.

Table 6-2: Estimated Regional Fixed Route & Paratransit Expenditures (in $millions)

Revenue Category	FY 2010	FY 2011	FY2012	FY2013	FY 2014	FY 2015	Total
Regional Bus Operations	$47.06	$51.56	$54.68	$56.13	$59.68	$61.68	**$330.79**
Paratransit Operations	$8.38	$8.79	$9.43	$10.17	$10.95	$11.76	**$59.48**
RPTA Planning & Administration	$5.54	$5.66	$5.80	$5.97	$6.15	$6.33	**$35.45**
Regional Services	$8.16	$8.32	$8.53	$8.78	$9.05	$9.32	**$52.16**
Transit Vehicles	$77.12	$82.90	$59.70	$45.84	$61.94	$44.96	**$372.46**
Arterial BRT ROW	$12.35	$12.89	$0.00	$0.00	$0.00	$0.00	**$25.24**
Capital Facilities	$34.23	$5.19	$0.57	$5.03	$8.25	$3.33	**$56.60**
Total	**$192.65**	**$175.10**	**$138.50**	**$131.72**	**$155.82**	**$137.38**	**$932.18**

Source: 2009 RPTA TLCP Update

Figure 6-2: Estimated RPTA Regional Fixed Route & Paratransit Expenditures (in $millions)



Source: 2009 RPTA TLCP Update

6.2 REGIONAL HIGH CAPACITY TRANSIT CAPITAL FUNDING

6.2.1 Revenues

High capacity transit (HCT) includes modes such as light rail transit, modern streetcar, or bus rapid transit normally traveling in exclusive or semi-exclusive lanes. Regional transit revenues in the TLCP allocated for high capacity transit capital investments can be classified into four general revenue categories. While a regional service, HCT operations costs are funded from local jurisdictions served by an HCT route. The HCT capital program revenue categories include:

- *Public Transportation Fund (PTF)* – Regional transportation sales tax approved by voters in November 2004.
- *Federal Allocations* – Federal allocations awarded to the region through multiple federal programs.
- *Local* – Local municipal contributions.
- *Interest* – Includes interest earned on year-end cash balance.

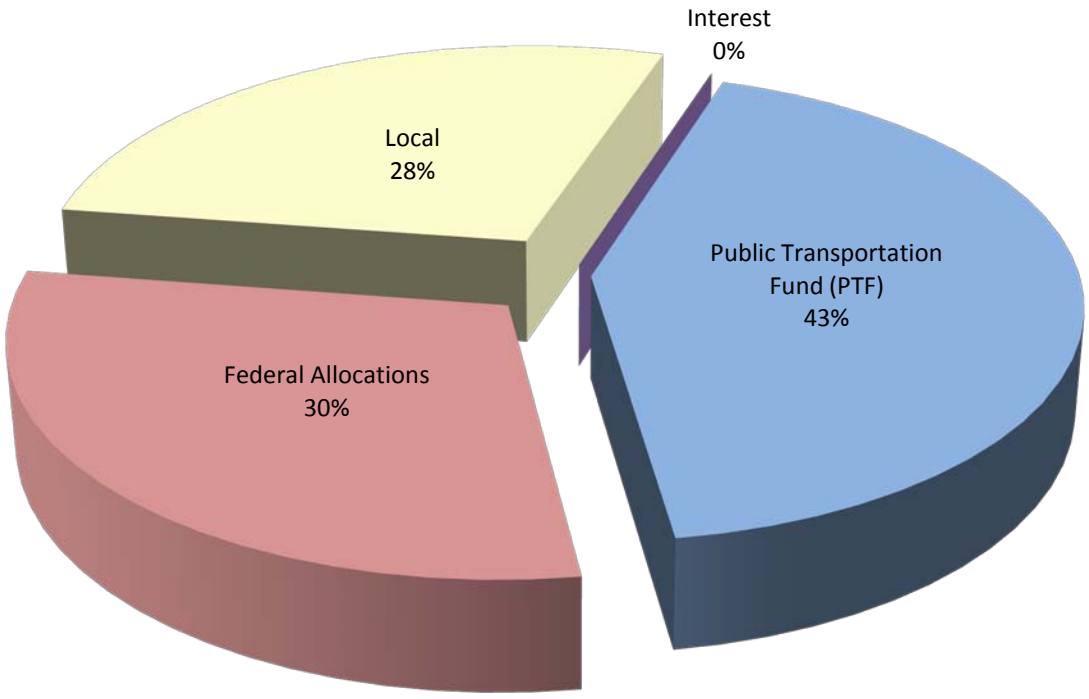
Table 6-3 identifies the projected revenues summarized by the four HCT capital revenue categories for FY 2009/10 through FY 2014/15. Figure 6-3 illustrates the total revenues by category for the same time period. The revenue estimates represent the most recent updated information for the region based on the FY 2009 TLCP Update.

Table 6-3: Estimated Regional HCT Capital Revenues (in $millions)

Revenue Category	FY 2010	FY 2011	FY2012	FY2013	FY 2014	FY 2015	Total
Public Transportation Fund (PTF)	$50.53	$53.05	$57.02	$61.58	$66.41	$71.38	**$359.97**
Federal Allocations	$0.95	$7.60	$25.30	$48.16	$78.81	$89.42	**$250.24**
Local	$83.68	$63.09	$42.42	$13.00	$14.52	$16.49	**$233.20**
Interest	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	**$0.00**
Total	**$135.16**	**$123.73**	**$124.74**	**$122.74**	**$159.73**	**$177.29**	**$843.41**

Source: 2009 RPTA TLCP Update

Figure 6-3: Estimated Regional HCT Capital Revenues FY 2010 - FY 2015



Source: 2009 RPTA TLCP Update

6.2.2 Expenditures

Regional high capacity transit (HCT) capital expenditures in the TLCP can be classified into four general revenue categories. The expenditure categories include:

- *HCT Guideway Extensions* – Includes right-of-way acquisition, construction, materials, vehicles and other elements associated with developing a new operable HCT corridor or corridor extension.
- *Reimbursements* – Issuances to local jurisdictions to reimburse local investments for regional expenditures associated with the construction of the Central Phoenix East Valley Light Rail Starter Line.
- *Studies & Design Criteria* – Ongoing studies and design work.
- *Systemwide Support Infrastructure* – Regional expenditures required to develop and maintain an operable HCT system.

Table 6-4 identifies the projected expenditures summarized by the four HCT capital expenditure categories for FY 2009/10 through FY 2014/15. Figure 6-4 illustrates the total expenditures by category for the same time period. The expenditure estimates represent the most recent updated information for the region based on the FY 2009 TLCP Update.

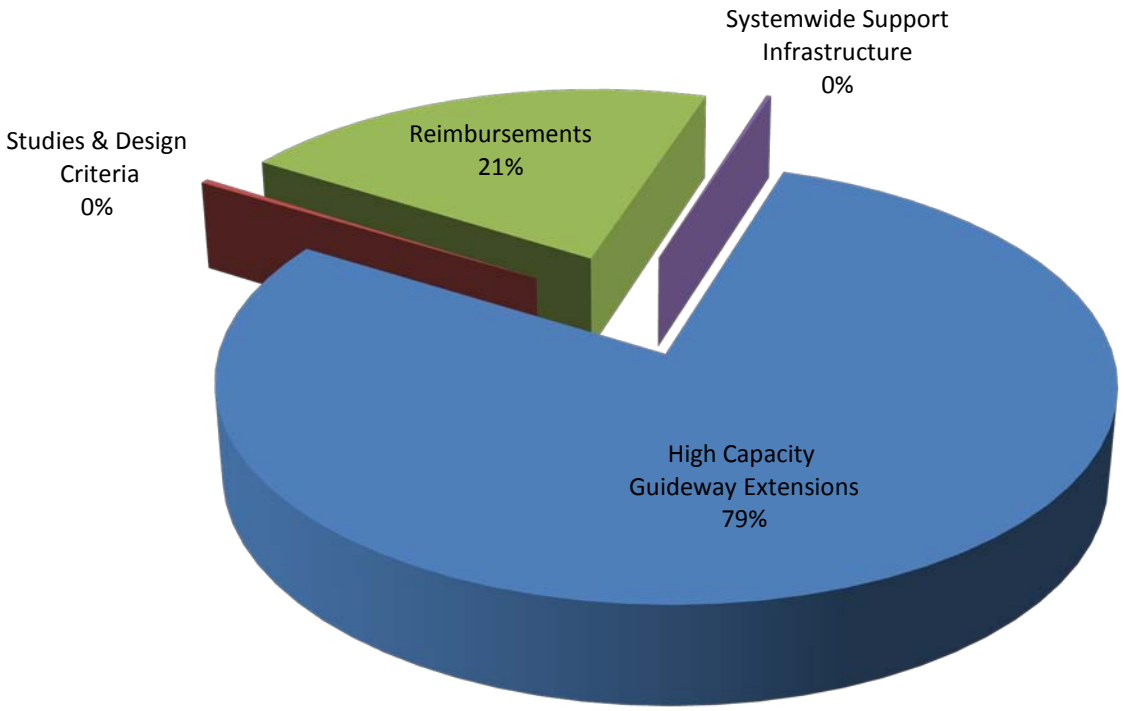
Table 6-4: Estimated Regional HCT Capital Expenditures (in $millions)

Expenditure Category	FY 2010	FY 2011	FY2012	FY2013	FY 2014	FY 2015	Total
HCT Guideway Extensions	$98.55	$91.26	$88.09	$104.44	$174.26	$161.77	**$718.37**
Reimbursements	$61.05	$53.20	$11.34	$19.62	$36.57	$7.24	**$189.02**
Studies & Design Criteria	$0.78	$0.78	$0.79	$0.81	$0.00	$0.00	**$3.16**
Systemwide Support Infrastructure*	$0.59	$0.36	$0.39	$0.00	$0.53	$0.00	**$1.87**
Total	**$160.97**	**$145.60**	**$100.61**	**$124.86**	**$211.36**	**$169.01**	**$912.42**

Source: 2009 RPTA TLCP Update

* While no expenses are attributed to this category in FY 2009/10 through FY 2014/15, expenses are programmed in future years

Figure 6-4: Estimated Regional HCT Capital Expenditures FY 2010 - FY 2015



Source: 2009 RPTA TLCP Update

6.3 REGIONAL TRANSIT FINANCING

Based on the estimated sources of revenues and programmed expenditures through FY 2014/14 there are several years that expenditures exceed revenues. Many regional transit service and capital investments are dependent upon the ability to maintain adequate cash flow to be implemented as identified in this plan. The TLCP includes financing through the issuance of bonds to maintain positive cash flows. RPTA issued $100.075 million bonds (par amount) in FY 2009 for the transit program, of which approximately $47.65 million was for the bus program. Par amount refers to the face value of the bonds. Based on the FY 2009 TLCP Update, one additional bond issuances of approximately $54 million is planned for FY 2011 to provide a positive annual cash flow for the bus program through the period identified in this plan. The HCT program has a separate financing strategy to address cash flow for these projects.

Changes in the level of estimated revenues or expenditures could either positively or negatively affect the programmed implementation schedules and scope of the projects identified herein. Through the annual TLCP update process, estimates for short and long range revenues and expenditures are reviewed to determine the financial fitness of the regional transit program. Appropriate finance strategies and other actions are considered annually to maintain a reasonable and sustainable finance plan.

7.0 COST SAVINGS THROUGH SERVICE REDUCTIONS RECOMMENDATIONS

As a part of the Proposition 400 transportation tax referendum, the Arizona Legislature required that a performance audit be performed on the transit service paid for by public transportation funds. To provide a basis for measuring the performance of the regional transit system, Valley Metro RPTA authorized a Service Efficiency and Effectiveness Study (SEES) to develop uniform standard for collecting data and measuring performance, and to develop performance targets for the region. The Board approved this study in April 2007. Using the structure provided by the SEES, two Annual Transit Performance Reports (FY 2008 and FY 2009) have been prepared and accepted by the Board since that time.

7.1 COST SAVINGS THROUGH SERVICE REDUCTIONS RECOMMENDATIONS

7.1.1 Cost Savings

The results of the Transit Performance Reports need to be evaluated with respect to whether or not transit investments are considered worthwhile. This report makes that evaluation and recommends actions that are in keeping with good stewardship of Public Transportation Funds provided through the county-wide sales tax for transportation.

This exercise has taken on added significance as Valley Metro RPTA is faced with revenue shortfalls caused by the downturn in the economy. To that end, RPTA staff has identified potential cost savings through transit service adjustments. The cost savings could assist the agency in addressing the projected county-wide sales tax revenue shortfall which is the result of a decline in both the regional and national economies.

Following the recommendations of the SEES helps ensure that potential service adjustments adhere to best planning practices, and will not adversely impact the operational efficiency of the regional transit system. To that end, planning staff have evaluated currently operating routes using the performance measures identified in the Service Effectiveness and Efficiency Study (SEES) which have been adopted by the RPTA Board. Use of the measures has allowed staff to identify underperforming routes. The evaluation was conducted for all Valley Metro Routes, but recommendations for service changes or terminations has been limited to just those routes funded or partially funded by RPTA. The results of this analysis are discussed below. See Appendix D for additional details.

7.2 LOCAL ROUTE IDENTIFICATION

The first step in the process of identifying the least productive routes was to list all of the local routes in the system with their boardings per mile performance. This was done for weekday, Saturday, and Sunday data. These lists were then ranked from high to low according to boardings per mile to identify the routes that fell into the bottom quartile of system performance. Once these rankings were determined, further analysis was focused on those routes that are funded or partially funded by RPTA. The results of this process for Weekday Local Routes are shown in Table 1. RPTA funded routes that appear in the bottom quartile of the weekday system include:

- Route 81—Hayden/McClintock
- LINK
- Route 156—Chandler Boulevard
- Grand Avenue Limited

The performance of local routes on both Saturday and Sunday were identified using the same process. Table 2 presents the results for Saturday service and Table 3 presents the results for Sunday service. Routes funded or partially funded by RPTA that fall in the bottom quartile for Saturday service include:

- LINK
- Route 136—Gilbert Road
- Route 156—Chandler Boulevard

RPTA-funded routes in the bottom quartile for Sunday service include:

- LINK
- Route 96—Dobson
- Route 156—Chandler Boulevard

7.2.1 Local Route Recommendations

It appears that no drastic action is needed with these underperforming local routes. Many are new routes or routes recently upgraded to regional Supergrid route levels of service which take some time to mature. The SEES recommends that new routes be given two years to mature before being considered for alteration or termination under the performance measures. Therefore it is simply recommended that these local routes continue to be monitored over time. It is further recommended that for each of the routes identified for continued monitoring, Valley Metro consider what marketing resources are available that could enhance these routes' visibility with the traveling public.

7.3 EXPRESS/RAPID ROUTE IDENTIFICATION METHODOLOGY

A similar process was used for express and RAPID routes, although boardings per trip was used as a more appropriate measure of productivity for commuter oriented service. The following routes fall into the bottom quartile of this type of service:

- Route 511—Chandler/Scottsdale Airpark Express
- Route 520—Tempe Express
- Route 536—Northeast Mesa/Tempe/ASU Express
- Route 570—Glendale Express
- Route 572—Surprise/Scottsdale Express
- Route 576—Northwest Valley/Montebello Express
- Route 582—North Mountain Express

7.3.1 Express/RAPID Route Analysis

As with the local routes, once the lowest performing quartile of express routes was identified, a closer look was taken at the average daily boardings. Boardings per trip were used instead of boardings per mile, as a better indicator of performance for peak-hour commuter-oriented service. Unlike the local routes, in some cases the express route data were then broken down into boardings per individual trip to gain a better understanding of what is happening with these routes.

7.3.2 Express/RAPID Route Recommendations

In developing recommendations, planning staff gave special consideration to routes that have operated for less than two years. This is in line with the Service Effectiveness and Efficiency Study (SEES) recommendation that a new route be given two years to mature before being considered for alteration or termination under the performance measures. The maturation recommendation recognizes that new routes take time to build ridership, especially in areas where little or no transit service previously existed.

Based on the previously discussed service performance evaluation the planning staff recommend that the following routes be considered for termination:

- Route 520—Tempe Express
- Route 570—Glendale Express
- Route 582—North Mountain Express

Elimination of these three routes could result in an annual cost saving of $717,000.

Despite the two-year maturation recommendation of the SEES, another recommendation resulting from this analysis is to consider the elimination of the four reverse commute trips on Route 572 (Surprise/Scottsdale Express). The amount of cost savings that would be realized may be minimal since dead heading would increase with the loss of the revenue reverse commute trips. To minimize the resulting dead heading, interlining of this route with Rt. 511 should be explored.

Planning staff also recommends identifying what marketing resources are available for the promotion of new express routes to increase their visibility to the traveling public. Several of these routes include features that have not previously existed in the region (i.e. bi-directional service, suburb to suburb commuting, arterial BRT, etc.). Educating the public on these new travel options could go a long way to increasing the use of these services by the travelling public.

Table 7-1: Estimated Annual Savings from Service Reductions

Route	Contractor	Rate per Mile	Daily Miles	Annual Miles	Annual Cost	Farebox Revenue	Estimated Annual Net Savings
Route 520—Tempe Express	Veolia Tempe	$5.82	156.3	39,856.5	$232,000	$23,000	**$209,000**
Route 570—Glendale Express	First Transit	$8.21	74.1	18,895.5	$155,000	$16,000	**$139,000**
Route 582—N Mountain Express	Veolia Phoenix	$11.05	145.5	37,102.5	$410,000	$41,000	**$369,000**
							$717,000

8.0 RECOMMENDATIONS

In response to declining sales tax revenues resulting from the regional and national economic downturn in 2008 and 2009, Valley Metro RPTA undertook an evaluation of the Transit Life Cycle Program (TLCP). This evaluation sought to bring the operating and capital programs back in balance with anticipated revenues. The result of this evaluation was a series of operating and capital recommendations that affect projects identified in the previous Short Range Transit Program (SRTP). Affected investments and their recommended phasing are detailed below.

8.1 OPERATIONAL INVESTMENTS

This postponement of bus routes sought to bring the output of future service back in balance with anticipated revenues. This table includes information from the TCLP 2009 update (approved by the Valley Metro Board of Directors in June 2009 as a "placeholder," pending additional work by the TLCP working group to be completed in December 2009). The implementation years change with every new update of the TLCP.

Table 8-1: TLCP Operations Adjustments

Route	Original Implementation Year	Revised Implementation Year
Supergrid		
Gilbert Rd	2010	2010
Power Rd	2010	2014
Baseline Rd	2011	2016
Arizona Ave/Country Club Dr	2012	2016
University Dr	2012	2016
Camelback Rd	2013	2020
Elliot Rd	2013	2020
Broadway Rd	2013	2020
Alma School Rd	2014	2026
McDowell Rd/Mckellips Rd	2014	2026
Dysart Rd	2015	2029
Hayden/McClintock	2015	2029
Peoria/Shea	2015	2029
Arterial BRT		
Arizona Ave BRT	2010	2010
Scottsdale/Rural BRT	2014	2026
South Central Express	2015	2029
Limited Express		
Grand Ave Limited	2013	2020
Freeway Express Bus		
Apache Junction Express	2011	2016
Superstition Freeway Connector	2012	2016
Buckeye Express	2013	2020
Pima Express	2013	2020
Peoria Express	2014	2026

Source: HDR | S.R. Beard & Associates, 2009

8.2 CAPITAL INVESTMENTS

The projected revenue shortfall also impacts the capital program. To balance annual cash flow, passenger capital facility projects will be delayed up to 18 years in chronological order of previously programmed implementation year. However, some facilities have not been delayed as result of a pre-existing intergovernmental agreement to fund the project or the project is supported with American Recovery and Reinvestment Act (ARRA) funds. A standard 12-year transit bus fleet replacement cycle is assumed.

8.2.1 Park and Rides

Table 8-2: TLCP Capital Facilities Adjustments

Facility	Original Implementation Year	Revised Implementation Year
Price/202	2009	2009
Grand/Surprise	2009	2009
Happy Valley PNR (ARRA)[1]	2010	2010
Country Club Dr/US 60 PNR (ARRA)[1]	2010	2000
East Buckye	2011	2011
Glendale/Grand	2013	2020
Peoria/Grand	2013	2020
Camelback/101	2015	2029

[1]ARRA stands for American Recovery and Reinvestment Act
Source: HDR | S.R. Beard & Associates, 2009

8.2.2 Transit Centers

It is recommended that the implementation of the South Tempe, downtown Chandler, and South Chandler Transit Centers (TC) be delayed to 2014. However, the transit center at 19th/Ave and Camelback and 44th St/Cactus could be amended and reallocated to two other City of Phoenix projects. There are current facilities at these locations, and the allocated funding for these projects may need to be redistributed. Even though the transit center at 44th St and Cactus has moved beyond the scope of this Short Range Transit Plan, it is important to be aware of because up until this year, it was within the allotted time frame. The other remaining TC originally identified to be implemented within the current SRTP horizon is delayed beyond the current planning horizon year.

Table 8-3: TLCP Transit Center Capital Facilities Adjustments

Transit Center	Original Implementation Year	Revised Implementation Year
South Tempe 4-bay	2009	2014
19th Ave Camelback 6-bay[2]	2009	2014
Downtown Chandler 4-bay	2009	2014
South Chandler(formerly Chandler Mall TC)	2010	2014
Mesa Downtown (6-bay)	2011	2016
Metrocenter TC Rehab	2011	2016
Central Station Rehab (ARRA)[1]	2013	2010
Glendale/Grand 4-bay	2013	2020
Peoria 4-bay	2015	2029
44/Cactus 6-bay[2]	2015	2029
Scottsdale 4-bay	2015	2029

[1]ARRA stands for American Recovery and Reinvestment Act
Source: HDR | S.R. Beard & Associates, 2009
[2]These transit centers may have funding allocated to other City of Phoenix projects.

8.2.3 Operations and Maintenance Facilities

It is recommended that all O&M facilities originally identified to be implemented within the SRTP planning horizon be delayed.

Table 8-4: TLCP Operations and Maintenance Facilities Adjustments

Facility	Original Implementation Year	Revised Implementation Year
Phoenix Heavy	2014	2026
Rehab-Mesa	2015	2029
Rehab Phoenix-South	2015	2029

Source: HDR | S.R. Beard & Associates, 2009

8.2.4 BRT Right-of-Way Improvements

Only those right of way improvements associated with the Arizona Avenue/Country Club Drive BRT are recommended for implementation within the SRTP planning horizon.

Table 8-5: TLCP Bus Rapid Transit (BRT) Right of Way Adjustments

Right of Way	Original Implementation Year	Revised Implementation Year
Arizona Ave BRT (ARRA)[1]	2011	2011
Scottsdale/Rural BRT	2014	2026

[1]ARRA stands for American Recovery and Reinvestment Act
Source: HDR | S.R. Beard & Associates, 2009

8.3 PERFORMANCE AUDIT

As a part of the Proposition 400 transportation tax referendum, the Arizona Legislature required that a performance audit be performed on the transit service paid for by public transportation funds. To provide a basis for measuring the performance of the regional transit system, the Valley Metro RPTA authorized a Service Efficiency and Effectiveness Study (SEES) to develop uniform standard for collecting data and measuring performance, and to develop performance targets for the region. The Board approved this study in April 2007. Using the structure provided by the SEES, two Annual Transit Performance Reports (FY 2008 and FY 2009) have been prepared and accepted by the Board since that time.

To take the process one step further, the results of the Transit Performance Reports (TPR) were evaluated with respect to whether or not transit investments are considered worthwhile. An evaluation of Valley Metro transit routes was undertaken to investigate their performance. The routes examined are paid for by regional PTF funds, however, several routes also include local funding for portions of routes. This exercise took on added significance as RPTA and its operating partners are faced with revenue shortfalls caused by the downturn in the economy. To that end, RPTA staff attempted to identify potential cost savings through transit service adjustments. The cost savings could assist the agency in addressing the projected county-wide sales tax revenue shortfall which is the result of a decline in both the regional and national economies.

Planning staff followed the recommendations of the SEES to ensure that potential service adjustments adhered to best planning practices, and would not adversely impact the operational efficiency of the regional transit system. Using the performance measures allowed staff to identify underperforming routes. While the evaluation was conducted for all Valley Metro Routes, recommendations for service changes have been limited to those routes funded or partially funded by RPTA that fall within the bottom quartile of all service within that category. The recommendations of the Cost Savings/Service Adjustments Report (which is included in Appendix D) are summarized below.

8.4 LOCAL ROUTE RECOMMENDATIONS

Based on the analysis, it was determined that no action was needed in regards to the identified underperforming local routes. Many are new routes or routes recently upgraded to regional Supergrid route levels of service which take some time to mature. The SEES recommends that new routes be given two years to mature before being considered for alteration or termination under the performance measures. Therefore it is simply recommended that these local routes continue to be monitored over time. It is further recommended that for each of the routes identified for continued monitoring, Valley Metro consider what marketing resources are available that could enhance these routes' visibility with the traveling public.

8.5 EXPRESS/RAPID ROUTE RECOMMENDATIONS

In developing recommendations, planning staff gave special consideration to routes that have operated for less than two years. This is in line with the Service Effectiveness and Efficiency Study (SEES) recommendation that a new route be given two years to mature before being considered for alteration or termination under the performance measures. The maturation recommendation recognizes that new routes take time to build ridership, especially in areas where little or no transit service previously existed.

Based on the service performance evaluation the planning staff recommend that the following routes be considered for termination:

- Route 520—Tempe Express
- Route 570—Glendale Express
- Route 582—North Mountain Express

Despite the two-year maturation recommendation of the SEES, another recommendation resulting from this analysis is to consider the elimination of the four reverse commute trips on Route 572 (Surprise/Scottsdale Express). The amount of cost savings that would be realized may be minimal since dead heading would increase with the loss of the revenue reverse commute trips. To minimize the resulting dead heading, interlining of this route with Rt. 511 should be explored.

Planning staff also recommends identifying what marketing resources are available for the promotion of new express routes to increase their visibility to the traveling public. Several of these routes include features that have not previously existed in the region (i.e. bi-directional service, suburb to suburb commuting, arterial BRT, etc.). Educating the public on these new travel options could go a long way to increasing the use of these services by the travelling public.

APPENDIX A

Table A-1: FY 2008 Regional Transit System Data

FY 2008 System Data					
System	Total Boardings	Total Wheelchair Boardings	Total Vehicle Miles	Total Revenue Miles	Total Vehicle Hours
Fixed Route	60,153,649	1,277,206	32,755,717	27,830,645	2,536,553
Dial-a-Ride	903,868	192,507	9,031,870	7,533,814	661,158
Vanpool	1,478,148	n/a	5,603,997	5,603,997	115,100
Total System	**62,535,665**	**1,469,713**	**47,391,584**	**40,968,457**	3,312,810
System	Total Revenue Hours	Operating Cost	Capital Cost	Total Cost	
Fixed Route	1,988,847	$183,809,441	n/a	n/a	
Dial-a-Ride	540,907	$31,936,477	n/a	n/a	
Vanpool	115,100	$2,499,972	n/a	n/a	
Total System	**2,644,854**	**$2,499,972**			
System	Total Passenger Revenues	Percent On-Time Performance	Vehicle Accidents	Farebox Recovery Ratio	
Fixed Route	$41,091,397	92.07%	102	22.36%	
Dial-a-Ride	$1,292,611	89.90%	n/a	4.05%	
Vanpool	$2,781,438	n/a	n/a	111.00%	
Total System	**$45,165,446**		102	**20.69%**	
System	Boardings Per Revenue Hour	Boardings per Revenue Mile	Operating Cost per Boarding	Operating Cost per Revenue Hour	Operating Cost per Revenue Mile
Fixed Route	30.24	2.16	$3.06	$92.42	$6.60
Dial-a-Ride	1.67	0.26	$35.33	$59.04	$4.24
Vanpool	12.84	.26	$1.69	$21.72	$0.45
Total System	**23.64**	**1.52**	**$3.49**	**$82.52**	**$5.33**

Table A-2: Operations and Performance Data for FY 2004 through FY 2008

Revenue Miles

System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	27,081,486	26,914,322	27,504,359	28,766,992	32,755,717	13.87%	20.95%
Dial-a-Ride	8,052,626	7,623,118	7,865,367	n/a	7,533,814	n/a	-6.44%
Vanpool	3,568,488	3,900,162	4,717,293	5,253,578	5,603,997	6.67%	57.04%
Total System	**38,702,600**	**38,437,602**	**40,087,019**	**34,020,570**	**45,893,528**	**34.90%**	**18.58%**

Revenue Hours

System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	1,904,520	1,829,438	1,973,510	1,966,138	1,988,847	1.16%	4.43%
Dial-a-Ride	551,554	546,078	532,887	532,031	540,907	1.67%	-1.93%
Vanpool	89,212	97,504	117,932	131,612	115,100	-12.55%	29.02%
Total System	**2,545,286**	**2,473,020**	**2,624,329**	**2,629,781**	**2,644,854**	**0.57%**	**3.91%**

On-Time Performance

System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	91.0%	92.5%	90.7%	91.5%	92.1%	0.66%	1.21%
Dial-a-Ride	92.8%	93.5%	94.9%	95.4%	89.9%	-5.77%	-3.13%
Vanpool	-----	-----	-----	-----	-----	-----	-----
Total System	**91.9%**	**93.0%**	**92.8%**	**93.5%**	**91.0%**	**-2.62%**	**-0.98%**

Total Boardings

System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	54,380,135	56,981,696	58,855,322	58,184,595	60,153,649	3.38%	10.62%
Dial-a-Ride	1,034,742	1,063,600	938,879	922,790	903,868	-2.05%	-12.65%
Vanpool	975,156	1,025,136	1,270,416	1,418,466	1,478,148	4.21%	51.58%
Total System	**56,390,033**	**59,070,432**	**61,064,617**	**60,525,851**	**62,535,665**	**3.32%**	**10.90%**

Wheelchair Boardings

System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	198,388	218,400	224,671	251,738	277,206	10.12%	39.73%
Dial-a-Ride	172,896	185,275	186,603	n/a	n/a	-----	-----
Vanpool	-----	-----	304	-----	-----	-----	-----
Total System	**371,284**	**403,675**	**411,578**	**251,738**	**277,206**	**10.12%**	**-25.34%**

Boardings Per Revenue Mile							
System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	2.00	2.10	2.14	2.01	1.84	-8.46%	-8.00%
Dial-a-Ride	0.13	0.14	0.12	n/a	0.12	n/a	-7.69%
Vanpool	0.27	0.26	0.27	0.27	0.26	-3.70%	-3.70%
Total System	**1.46**	**1.54**	**1.54**	**1.77**	**1.36**	**-23.16%**	**-6.85%**

Boardings Per Revenue Hour							
System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	28.59	30.99	29.99	29.59	30.25	2.23%	5.81%
Dial-a-Ride	1.88	1.95	1.76	1.73	1.67	-3.47%	-11.17%
Vanpool	10.93	10.51	10.77	10.78	12.84	19.11%	17.47%
Total System	**22.15**	**23.88**	**23.27**	**23.02**	**23.64**	**2.69%**	**6.73%**

Safety Incidents Per 100,000 Boardings							
System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	n/a	n/a	n/a	n/a	0.17	n/a	n/a
Dial-a-Ride	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Vanpool	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total System					**0.17**		

Security Incidents Per 100,000 Boardings							
System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	n/a	n/a	n/a	n/a	0.14	n/a	n/a
Dial-a-Ride	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Vanpool	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total System					**0.14**		

Operating Expenses							
System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	$130,742,263	$126,860,874	$134,522,499	$152,662,789	$183,809,441	20.40%	40.59%
Dial-a-Ride	$24,333,403	$27,961,152	$26,805,994	$29,505,513	$31,936,477	8.24%	31.25%
Vanpool	$1,940,161	$1,702,112	$2,158,282	$2,305,045	$2,499,972	8.46%	28.85%
Total System	**$157,015,827**	**$156,524,138**	**$163,486,775**	**$184,473,347**	**$218,245,890**	**18.31%**	**39.00%**

Total Passenger Revenue							
System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	$29,996,266	$32,841,189	$31,899,646	$37,000,313	$41,091,397	11.06%	36.99%
Dial-a-Ride	$1,263,195	$1,244,350	$1,307,546	$1,302,579	$1,292,611	-0.77%	2.33%
Vanpool	$1,606,046	$1,791,450	$2,328,632	$2,650,738	$2,781,438	4.93%	73.19%
Total System	**$32,865,507**	**$35,876,989**	**$35,535,824**	**$40,953,630**	**$45,165,446**	**10.28%**	**37.43%**

Farebox Recovery Ratio							
System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	23.62%	26.92%	24.59%	24.24%	22.36%	-7.76%	-5.33%
Dial-a-Ride	5.19%	4.45%	4.88%	4.41%	4.05%	-8.16%	-21.97%
Vanpool	82.78%	105.25%	107.89%	115.00%	111.26%	-3.25%	34.40%
Total System	**27.98%**	**27.58%**	**28.11%**	**22.20%**	**0.21%**	**-99.07%**	**-99.26%**

Operating Cost Per Boarding							
System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	$2.45	$2.26	$2.32	$2.62	$3.06	16.79%	24.90%
Dial-a-Ride	$23.52	$26.29	$28.55	$31.97	$35.33	10.51%	50.21%
Vanpool	$1.99	$1.66	$1.70	$1.63	$1.69	3.68%	-15.08%
Total System	**$2.78**	**$2.65**	**$2.68**	**$3.05**	**$3.49**	**14.43%**	**25.54%**

Net Operating Cost Per Boarding							
System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	$1.87	$1.65	$1.75	$1.99	$2.37	19.10%	26.74%
Dial-a-Ride	$22.30	$25.12	$27.16	$30.56	$33.90	10.93%	52.02%
Vanpool	$0.34	-$0.09	-$0.13	-$0.24	-$0.19	-20.83%	-155.88%
Total System	**$2.20**	**$2.04**	**$2.10**	**$2.37**	**$2.77**	**16.88%**	**25.91%**

Operating Cost Per Revenue Mile							
System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	$4.90	$4.74	$4.96	$5.31	$5.61	5.65%	14.49%
Dial-a-Ride	$3.02	$3.67	$3.41	n/a	$4.24	n/a	40.40%
Vanpool	$0.54	$0.44	$0.46	$0.44	$0.45	2.27%	-16.67%
Total System	**$4.06**	**$4.07**	**$4.09**	**$5.40**	**$3.49**	**-35.37%**	**-14.04%**

Fare Revenue Per Boarding							
System	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	Percent Change FY 2007-2008	Percent Change FY 2004-2008
Fixed Route	$0.58	$0.61	$0.57	$0.64	$0.68	6.25%	17.24%
Dial-a-Ride	$1.22	$1.17	$1.39	$1.41	$1.43	1.42%	17.21%
Vanpool	$1.65	$1.75	$1.83	$1.87	$1.88	0.53%	13.94%
Total System	**$0.58**	**$0.61**	**$0.58**	**$0.68**	**$0.72**	**5.88%**	**24.14%**

APPENDIX B

Table B-1: Operations and Performance Data for FY 1995 through FY 2007

Boardings								
Fiscal Year	Fixed Route	% Change From Previous Year	Dial-a-Ride	% Change From Previous Year	Vanpool	% Change From Previous Year	Total	% Change From Previous Year
1995	34,979,080		795,019				35,774,099	
1996	35,028,406	0.14%	970,983	22.13%			35,999,389	0.63%
1997	35,141,668	0.32%	959,400	-1.19%			36,101,068	0.28%
1998	36,377,705	3.52%	938,659	-2.16%			37,316,364	3.37%
1999	37,366,572	2.72%	919,886	-2.00%			38,286,458	2.60%
2000	37,496,804	0.35%	968,120	5.24%			38,464,924	0.47%
2001	40,250,847	7.34%	1,023,700	5.74%			41,274,547	7.30%
2002	45,277,131	12.49%	1,023,885	0.02%	917,070		47,218,086	14.40%
2003	51,510,536	13.77%	1,029,378	0.54%	941,682	2.68%	53,481,596	13.27%
2004	54,362,135	5.54%	1,034,742	0.52%	975,156	3.55%	56,372,033	5.40%
2005	57,881,656	6.47%	1,063,600	2.79%	1,025,138	5.13%	59,970,394	6.38%
2006	58,855,322	1.68%	938,879	-11.73%	1,270,416	23.93%	61,064,617	1.82%
2007	58,184,595	-1.14%	922,790	-1.71%	1,418,466	11.65%	60,525,851	-0.88%
2008	55,475,543	-4.66%	903,868	-2.05%	1,478,148	4.21%	57,857,559	-4.41%
% Change 1995 - 2008		**58.60%**		**13.69%**		**n/a**		**61.73%**

Revenue Miles								
Fiscal Year	Fixed Route	% Change From Previous Year	Dial-a-Ride	% Change From Previous Year	Vanpool	% Change From Previous Year	Total	% Change From Previous Year
1995	13,664,992		5,213,388				18,878,380	
1996	14,331,831	4.88%	5,775,167	10.78%			20,106,998	6.51%
1997	14,740,186	2.85%	5,507,665	-4.63%			20,247,851	0.70%
1998	16,198,218	9.89%	5,699,540	3.48%			21,897,758	8.15%
1999	16,226,425	0.17%	5,581,523	-2.07%			21,807,948	-0.41%
2000	18,039,016	11.17%	6,100,013	9.29%			24,139,029	10.69%
2001	20,633,013	14.38%	6,852,797	12.34%			27,485,810	13.86%
2002	24,106,344	16.83%	7,034,138	2.65%	3,364,956		34,505,438	25.54%
2003	26,357,307	9.34%	7,185,339	2.15%	3,639,578	8.16%	37,182,224	7.76%
2004	27,081,486	2.75%	8,052,626	12.07%	3,568,488	-1.95%	38,702,600	4.09%
2005	26,914,322	-0.62%	7,623,118	-5.33%	3,900,162	9.29%	38,437,602	-0.68%
2006	27,371,759	1.70%	7,865,367	3.18%	4,717,293	20.95%	39,954,419	3.95%
2007	28,766,992	5.10%	7,699,590	-2.11%	5,253,578	11.37%	41,720,160	4.42%
2008	32,755,717	13.87%	7,533,814	-2.15%	5,603,997	6.67%	45,893,528	10.00%
% Change 1995 - 2008		**139.71%**		**44.51%**		**n/a**		**143.10%**

Boardings Per Revenue Mile								
Fiscal Year	Fixed Route	% Change From Previous Year	Dial-a-Ride	% Change From Previous Year	Vanpool	% Change From Previous Year	Total	% Change From Previous Year
1995	2.6		0.2				1.9	
1996	2.4	-7.69%	0.2	0.00%			1.8	-5.26%
1997	2.4	0.00%	0.2	0.00%			1.8	0.00%
1998	2.2	-8.33%	0.2	0.00%			1.7	-5.56%
1999	2.3	4.55%	0.2	0.00%			1.7	0.00%
2000	2.1	-8.70%	0.2	0.00%			1.6	-5.88%
2001	1.9	-9.52%	0.1	-50.00%			1.5	-6.25%
2002	1.9	0.00%	0.1	0.00%	0.27		1.5	0.00%
2003	2.0	5.26%	0.1	0.00%	0.26	-3.70%	1.6	6.67%
2004	2.0	0.00%	0.1	0.00%	0.27	3.85%	1.6	0.00%
2005	2.1	5.00%	0.1	0.00%	0.26	-3.70%	1.7	6.25%
2006	2.1	0.00%	0.1	0.00%	0.27	3.85%	1.5	-10.59%
2007	2.0	-4.76%	0.1	0.00%	0.27	0.00%	1.8	16.45%
2008	2.1	7.00%	0.1	0.00%	0.26	-3.70%	1.4	-23.16%
% Change 1995 - 2008		**-17.69%**		**-50.00%**		**n/a**		**-28.42%**

Operating Costs								
Fiscal Year	Fixed Route	% Change From Previous Year	Dial-a-Ride	% Change From Previous Year	Vanpool	% Change From Previous Year	Total	% Change From Previous Year
1995								
1996								
1997								
1998	$61,579,208		$11,811,483				$73,390,691	
1999	$65,686,899	6.67%	$13,523,191	14.49%			$79,210,090	7.93%
2000	$74,743,277	13.79%	$15,606,135	15.40%			$90,349,412	14.06%
2001	$96,207,450	28.72%	$18,359,527	17.64%			$114,566,977	26.80%
2002	$109,819,956	14.15%	$21,517,640	17.20%	$1,976,964		$133,314,560	16.36%
2003	$124,341,810	13.22%	$23,496,877	9.20%	$1,873,665	-5.23%	$149,712,352	12.30%
2004	$130,742,263	5.15%	$24,333,403	3.56%	$1,940,161	3.55%	$157,015,827	4.88%
2005	$126,860,874	-2.97%	$27,961,152	14.91%	$1,702,112	-12.27%	$156,524,138	-0.31%
2006	$134,522,499	6.04%	$26,805,994	-4.13%	$2,158,282	26.80%	$163,486,775	4.45%
2007	$152,662,789	13.48%	$29,505,513	10.07%	$2,305,045	6.80%	$184,473,347	12.84%
2008	$183,809,441	20.40%	$31,936,477	8.24%	$2,499,972	8.46%	$218,245,890	18.31%
% Change 1998 - 2008		**198.49%**		**170.38%**		**n/a**		**197.38%**

Operating Costs Per Boarding								
Fiscal Year	Fixed Route	% Change From Previous Year	Dial-a-Ride	% Change From Previous Year	Vanpool	% Change From Previous Year	Total	% Change From Previous Year
1995	$1.46							
1996	$1.51	3.42%						
1997	$1.67	10.60%						
1998	$1.69	1.20%						
1999	$1.76	4.14%	$14.13					
2000	$1.99	13.07%	$16.12	14.08%				
2001	$2.39	20.10%	$17.93	11.23%				
2002	$2.44	2.09%	$21.02	17.23%	$2.16		$2.82	
2003	$2.45	0.41%	$22.83	8.61%	$1.99	-7.87%	$2.85	1.06%
2004	$2.45	0.00%	$23.52	3.02%	$1.99	0.00%	$2.78	-2.46%
2005	$2.22	-9.39%	$26.29	11.78%	$1.66	-16.58%	$2.65	-4.68%
2006	$2.32	4.50%	$28.55	8.60%	$1.70	2.41%	$2.68	1.13%
2007	$2.62	12.93%	$31.97	11.98%	$1.63	-4.12%	$3.05	13.81%
2008	$3.06	16.79%	$35.33	10.51%	$1.69	3.68%	$3.49	14.43%
% Change 1995 - 2008		**109.59%**		**n/a**		**n/a**		**n/a**

Total Revenue								
Fiscal Year	Fixed Route	% Change From Previous Year	Dial-a-Ride	% Change From Previous Year	Vanpool	% Change From Previous Year	Total	% Change From Previous Year
1995								
1996								
1997								
1998	$19,188,643		$1,024,347				$20,212,990	
1999	$19,759,452	2.97%	$1,107,043	8.07%			$20,866,495	3.23%
2000	$23,033,517	16.57%	$1,386,709	25.26%			$24,420,226	17.03%
2001	$26,650,087	15.70%	$1,224,283	-11.71%			$27,874,370	14.14%
2002	$24,441,819	-8.29%	$1,282,289	4.74%	$1,905,774		$27,629,882	-0.88%
2003	$26,930,430	10.18%	$1,259,045	-1.81%	$1,533,316	-19.54%	$29,722,791	7.57%
2004	$29,996,266	11.38%	$1,263,195	0.33%	$1,606,046	4.74%	$32,865,507	10.57%
2005	$32,841,189	9.48%	$1,244,350	-1.49%	$1,791,450	11.54%	$35,876,989	9.16%
2006	$31,899,646	-2.87%	$1,307,546	5.08%	$2,328,632	29.99%	$35,535,824	-0.95%
2007	$37,000,313	15.99%	$1,302,579	-0.38%	$2,650,738	13.83%	$40,953,630	15.25%
2008	$39,295,207	6.20%	$1,292,611	-0.77%	$2,781,438	4.93%	$43,369,256	5.90%
% Change 1998 - 2008		**104.78%**		**26.19%**		**n/a**		**114.56%**

Revenue Per Boarding								
Fiscal Year	Fixed Route	% Change From Previous Year	Dial-a-Ride	% Change From Previous Year	Vanpool	% Change From Previous Year	Total	% Change From Previous Year
1995	$0.54							
1996	$0.55	1.85%						
1997	$0.55	0.00%						
1998	$0.53	-3.64%	$1.09				$0.54	
1999	$0.53	0.00%	$1.26	15.60%			$0.56	3.70%
2000	$0.61	15.09%	$1.43	13.49%			$0.63	12.50%
2001	$0.68	11.48%	$1.20	-16.08%			$0.68	7.94%
2002	$0.56	-17.65%	$1.25	4.17%	$0.48		$0.56	-17.65%
2003	$0.55	-1.79%	$1.22	-2.40%	$0.61	27.08%	$0.54	-3.57%
2004	$0.58	5.45%	$1.22	0.00%	$0.61	0.00%	$0.56	3.70%
2005	$0.60	3.45%	$1.17	-4.10%	$0.57	-6.56%	$0.58	3.57%
2006	$0.57	-5.00%	$1.39	18.80%	$0.55	-3.51%	$0.56	-3.45%
2007	$0.64	12.28%	$1.41	1.44%	$0.54	-1.82%	$0.65	16.07%
2008	$0.68	6.25%	$1.43	1.42%	$0.53	-1.85%	$0.72	10.77%
% Change 1995 - 2008		**25.93%**		**n/a**		**n/a**		**n/a**

Farebox Recovery Ratio								
Fiscal Year	Fixed Route	% Change From Previous Year	Dial-a-Ride	% Change From Previous Year	Vanpool	% Change From Previous Year	Total	% Change From Previous Year
1995	31.3%							
1996	36.4%	16.29%						
1997	33.2%	-8.79%						
1998	31.2%	-6.02%	8.7%					
1999	30.2%	-3.21%	8.2%	-5.75%				
2000	30.8%	1.99%	8.9%	8.54%				
2001	28.4%	-7.79%	6.7%	-24.72%			24.8%	
2002	23.0%	-19.01%	6.0%	-10.45%	96.4%		20.7%	-16.53%
2003	22.3%	-3.04%	5.4%	-10.00%	122.1%	26.66%	36.5%	76.33%
2004	23.6%	5.83%	5.2%	-3.70%	120.8%	-1.06%	28.0%	-23.29%
2005	26.9%	13.98%	4.5%	-13.46%	114.1%	-5.55%	27.6%	-1.43%
2006	24.6%	-8.55%	4.9%	8.89%	107.9%	-5.43%	28.1%	1.81%
2007	24.2%	-1.63%	4.4%	-10.20%	115.0%	6.58%	22.2%	-21.00%
2008	22.4%	-7.44%	4.1%	-6.82%	111.3%	-3.22%	20.7%	-6.76%
% Change 1995 - 2008		**-28.43%**		**n/a**		**n/a**		**n/a**

On Time Performance								
Fiscal Year	Fixed Route	% Change From Previous Year	Dial-a-Ride	% Change From Previous Year	Vanpool	% Change From Previous Year	Total	% Change From Previous Year
1995								
1996								
1997								
1998	87.0%		8.7%					
1999	93.0%	6.90%	8.2%	-5.75%				
2000	89.7%	-3.55%	8.9%	8.54%				
2001	88.8%	-1.00%	6.7%	-24.72%			24.8%	
2002	92.4%	4.05%	6.0%	-10.45%			20.7%	-16.53%
2003	92.5%	0.11%	5.4%	-10.00%	122.1%		36.5%	76.33%
2004	91.9%	-0.65%	5.2%	-3.70%	120.8%	-1.06%	28.0%	-23.29%
2005	92.5%	0.65%	4.5%	-13.46%	114.1%	-5.55%	27.6%	-1.43%
2006	90.7%	-1.95%	4.9%	8.89%	107.9%	-5.43%	28.1%	1.81%
2007	91.5%	0.88%	4.4%	-10.20%	115.0%	6.58%	22.2%	-21.00%
2008	92.1%	0.66%	4.1%	-6.82%	111.3%	-3.22%	20.7%	-6.76%
% Change 1998 - 2008		**5.86%**		**n/a**		**n/a**		**n/a**

APPENDIX C

Table C-1: Fixed Route Transit Service Historical Trends since FY 1985

Fiscal Year	Annual Boardings	Revenue Miles of Service	Boardings Per Mile
1985	16,501,219	7,592,893	2.2
1986	17,487,296	8,331,290	2.1
1987	19,327,298	9,275,347	2.1
1988	21,035,796	10,524,537	2.0
1989	25,000,896	10,824,442	2.3
1990	28,642,983	11,664,511	2.5
1991	31,063,899	11,503,650	2.7
1992	32,227,853	11,904,888	2.7
1993	32,194,122	12,029,150	2.7
1994	33,252,295	12,462,098	2.7
1995	34,227,244	13,365,761	2.6
1996	35,028,406	13,664,992	2.6
1997	35,141,668	14,331,831	2.5
1998	36,377,705	14,740,186	2.5
1999	37,366,572	16,198,218	2.3
2000	37,496,804	18,039,016	2.1
2001	40,194,501	21,221,858	1.9
2002	45,277,131	24,106,344	1.9
2003	50,510,536	26,357,307	1.9
2004	54,013,410	26,672,410	2.0
2005	56,361,933	27,427,972	2.1
2006	58,855,322	27,504,359	2.1
2007	58,184,595	28,766,992	2.0
2008	60,153,649	32,755,717	1.8

APPENDIX D

Valley Metro Regional Public Transportation Authority

Cost Savings Recommendations
Through Service Adjustments

As a part of the Proposition 400 transportation tax referendum, the Arizona Legislature required that a performance audit be performed on the transit service paid for by public transportation funds. To provide a basis for measuring the performance of the regional transit system, the Valley Metro Regional Public Transportation Authority (RPTA) authorized a Service Efficiency and Effectiveness Study (SEES) to develop uniform standard for collecting data and measuring performance, and to develop performance targets for the region. The Board approved this study in April 2007. Using the structure provided by the SEES, two Annual Transit Performance Reports (FY 2008 and FY 2009) have been prepared and accepted by the Board since that time.

To take the process one step further, the results of the Transit Performance Reports need to be evaluated with respect to whether or not transit investments are considered worthwhile. This report makes that evaluation and recommends actions that are in keeping with good stewardship of Public Transportation Funds provided through the county-wide sales tax for transportation.

This exercise has taken on added significance as Valley Metro RPTA is faced with revenue shortfalls caused by the downturn in the economy. To that end, RPTA staff has identified potential cost savings through transit service adjustments. The cost savings could assist the agency in addressing the projected county-wide sales tax revenue shortfall which is the result of a decline in both the regional and national economies.

Following the recommendations of the SEES helps ensure that potential service adjustments adhere to best planning practices, and will not adversely impact the operational efficiency of the regional transit system. To that end, planning staff have evaluated currently operating routes using the performance measures identified in the Service Effectiveness and Efficiency Study (SEES) which have been adopted by the RPTA Board. Use of the measures has allowed staff to identify underperforming routes. The evaluation was conducted for all Valley Metro Routes, but recommendations for service changes or terminations have been limited to just those routes funded or partially funded by RPTA.

Local Route Identification Methodology

The first step in the process of identifying the least productive routes was to list all of the local routes in the system with their boardings per mile performance. This was done for weekday, Saturday, and Sunday data. These lists were then ranked from high to low according to boardings per mile to identify the routes that fell into the bottom quartile of system performance. Once these rankings were determined, further analysis was focused on those routes that are funded or partially funded by RPTA. The results of this process for Weekday Local Routes are shown in Table 1. RPTA funded routes that appear in the bottom quartile of the weekday system include:

- Route 81—Hayden/McClintock
- LINK
- Route 156—Chandler Boulevard
- Grand Avenue Limited

The performance of local routes on both Saturday and Sunday were identified using the same process. Table 2 presents the results for Saturday service and Table 3 presents the results for Sunday service. Routes funded or partially funded by RPTA that fall in the bottom quartile for Saturday service include:

- LINK
- Route 136—Gilbert Road
- Route 156—Chandler Boulevard

RPTA-funded routes in the bottom quartile for Sunday service include:

- LINK, Route 96—Dobson
- Route 156—Chandler Boulevard

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TABLE 1

Service Evaluation Process

Weekday Local: Sorted By Route

Route	Revenue Miles	Average Daily Boardings					Boardings Per Mile
		January 09	February 09	March 09	April 09	May 09	
0	2,008.5	6,610	6,403	5,978	6,135	5,841	3.08
1	725.2	761	706	659	658	666	0.95
3	1,786.7	6,408	6,425	6,265	6,149	5,910	3.49
3A	339.2	165	151	151	201	182	0.50
7	2,021.1	5,710	5,659	5,356	5,480	4,997	2.69
8	1,180.5	3,141	3,032	2,752	2,923	2,817	2.48
10	1,164.2	3,216	3,188	3,013	3,349	3,036	2.71
12	588.6	2,311	2,232	2,038	2,195	2,116	3.70
13	928.4	1,189	1,162	1,138	1,122	1,021	1.21
15	1,215.1	3,649	3,656	3,483	3,563	3,406	2.92
16	1,698.4	5,042	5,030	4,950	4,934	4,421	2.87
17	2,374	8,719	8,636	8,267	8,434	8,106	3.55
17A	308	134	139	166	203	153	0.52
19	2,905.8	9,776	9,874	9,493	9,743	9,343	3.32
27	1,544.1	5,085	5,260	4,937	4,906	4,634	3.22
29	2,447.0	11,368	11,416	10,760	11,486	10,453	4.53
29A	231.2	146	170	189	148	141	0.69
30	2,311.1	3,519	3,484	3,256	3,299	2,860	1.42
32	1,233.1	2,324	2,388	2,199	2,343	2,168	1.85
35	2,264.4	7,385	7,487	6,986	7,082	6,728	3.15
39	1,148.9	1,067	1,109	1,097	1,041	998	0.92
40	1,746.8	2,379	2,372	2,204	2,245	2,113	1.30
41	2,621.8	10,041	10,241	9,727	9,953	9,375	3.76
41A	282.8	197	194	229	304	225	0.81
43	1,098.5	3,365	3,284	3,010	3,159	2,982	2.88
44	1,518.7	3,082	3,065	2,976	2,983	2,633	1.94
45	2,469.7	5,280	4,992	4,819	4,680	4,293	1.95
50	1,695.6	6,916	6,865	6,534	6,507	6,127	3.89
51	621.4	1,362	1,398	1,343	1,383	1,279	2.18
52	681.4	1,028	1,038	889	955	856	1.40
56	1,211.7	1,999	2,126	2,058	2,210	2,057	1.72
59	1,603.3	3,063	3,149	3,013	3,110	2,944	1.91
60	1,089.4	3,231	3,207	3,081	3,045	3,017	2.86
61	3,129.0	6,691	6,642	6,103	6,424	5,857	2.03
62	1,059.7	1,514	1,592	1,481	1,517	1,344	1.41
65	702.6	982	1,021	1,002	1,010	840	1.38

Route	Revenue Miles	Average Daily Boardings					Boardings Per Mile
		January 09	February 09	March 09	April 09	May 09	
66	1,261.2	1,180	1,287	1,193	1,235	1,043	0.94
67	1,195.3	2,577	2,750	2,576	2,549	2,434	2.16
70	2,919.0	8,375	8,241	7,920	8,195	7,858	2.78
72	3,779.5	5,071	5,792	5,551	5,459	4,687	1.41
76	932.7	636	693	617	668	539	0.68
77	1,433.2	2,894	3,063	2,910	3,099	2,753	2.05
80	539.7	1,970	1,965	1,979	1,966	1,839	3.60
81	2,866.1	2,927	3,117	3,165	3,132	2,867	1.06
84	200.9	70	69	47	36	30	0.25
90	1,167.8	3,402	3,475	3,398	3,382	3,214	2.89
92	1,433.4	1,940	2,012	1,901	1,899	1,692	1.32
96	1,474.1	1,916	2,026	1,937	2,045	1,873	1.33
104	883.4	1,502	1,545	1,445	1,480	1,421	1.67
106	1,951.6	4,187	4,289	4,242	4,152	4,000	2.14
108	972.5	806	811	828	790	684	0.81
112	586.1	1,684	1,591	1,583	1,630	1,486	2.72
114	238.0	124	130	128	132	126	0.54
120	256.1	499	499	497	446	458	1.87
122	515.6	700	622	520	564	473	1.12
128	301.2	412	435	406	416	354	1.34
131	439.3	340	339	308	316	282	0.72
136	730.4	783	809	832	825	685	1.08
138	1,087.1	1,500	1,629	1,614	1,597	1,517	1.45
154	1,110.1	1,151	1,200	1,153	1,126	1,034	1.02
156	2,152.3	1,382	1,455	1,410	1,436	1,341	0.65
170	1,417.0	3,604	3,494	3,275	3,226	2,977	2.34
186	1,241.8	1,572	1,749	1,794	1,774	1,820	1.40
7L	120.2	252	216	192	236	188	1.80
GAL	259.4	107	103	106	106	97	0.40
LINK	1,224.0	782	834	971	1,055	750	0.72

System Average
2.17

TABLE 1 (Continued)

Service Evaluation Process

Weekday Local: Sorted By Boardings Per Mile

Route	Revenue Miles	Average Daily Boardings					Boardings Per Mile
		January 09	February 09	March 09	April 09	May 09	
29	2,447.0	11,368	11,416	10,760	11,486	10,453	4.53
50	1,695.6	6,916	6,865	6,534	6,507	6,127	3.89
41	2,621.8	10,041	10,241	9,727	9,953	9,375	3.76
12	588.6	2,311	2,232	2,038	2,195	2,116	3.70
80	539.7	1,970	1,965	1,979	1,966	1,839	3.60
17	2,374	8,719	8,636	8,267	8,434	8,106	3.55
3	1,786.7	6,408	6,425	6,265	6,149	5,910	3.49
19	2,905.8	9,776	9,874	9,493	9,743	9,343	3.32
27	1,544.1	5,085	5,260	4,937	4,906	4,634	3.22
35	2,264.4	7,385	7,487	6,986	7,082	6,728	3.15
0	2,008.5	6,610	6,403	5,978	6,135	5,841	3.08
15	1,215.1	3,649	3,656	3,483	3,563	3,406	2.92
90	1,167.8	3,402	3,475	3,398	3,382	3,214	2.89
43	1,098.5	3,365	3,284	3,010	3,159	2,982	2.88
16	1,698.4	5,042	5,030	4,950	4,934	4,421	2.87
60	1,089.4	3,231	3,207	3,081	3,045	3,017	2.86
70	2,919.0	8,375	8,241	7,920	8,195	7,858	2.78
112	586.1	1,684	1,591	1,583	1,630	1,486	2.72
10	1,164.2	3,216	3,188	3,013	3,349	3,036	2.71
7	2,021.1	5,710	5,659	5,356	5,480	4,997	2.69
8	1,180.5	3,141	3,032	2,752	2,923	2,817	2.48
170	1,417.0	3,604	3,494	3,275	3,226	2,977	2.34
51	621.4	1,362	1,398	1,343	1,383	1,279	2.18
67	1,195.3	2,577	2,750	2,576	2,549	2,434	2.16
106	1,951.6	4,187	4,289	4,242	4,152	4,000	2.14
77	1,433.2	2,894	3,063	2,910	3,099	2,753	2.05
61	3,129.0	6,691	6,642	6,103	6,424	5,857	2.03
45	2,469.7	5,280	4,992	4,819	4,680	4,293	1.95
44	1,518.7	3,082	3,065	2,976	2,983	2,633	1.94
59	1,603.3	3,063	3,149	3,013	3,110	2,944	1.91
120	256.1	499	499	497	446	458	1.87
32	1,233.1	2,324	2,388	2,199	2,343	2,168	1.85
7L	120.2	252	216	192	236	188	1.80
56	1,211.7	1,999	2,126	2,058	2,210	2,057	1.72
104	883.4	1,502	1,545	1,445	1,480	1,421	1.67
62	1,059.7	1,514	1,592	1,481	1,517	1,344	1.41
72	3,779.5	5,071	5,792	5,551	5,459	4,687	1.41

Route	Revenue Miles		Average Daily Boardings					Boardings Per Mile
			January 09	February 09	March 09	April 09	May 09	
186	1,241.8		1,572	1,749	1,794	1,774	1,820	1.40
52	681.4		1,028	1,038	889	955	856	1.40
65	702.6		982	1,021	1,002	1,010	840	1.38
128	301.2		412	435	406	416	354	1.34
96	1,474.1	■	1,916	2,026	1,937	2,045	1,873	1.33
92	1,433.4		1,940	2,012	1,901	1,899	1,692	1.32
40	1,746.8	■	2,379	2,372	2,204	2,245	2,113	1.30
13	928.4		1,189	1,162	1,138	1,122	1,021	1.21
122	515.6		700	622	520	564	473	1.12
136	730.4	■	783	809	832	825	685	1.08
81	2,866.1	■	2,927	3,117	3,165	3,132	2,867	1.06
154	1,110.1		1,151	1,200	1,153	1,126	1,034	1.02
1	725.2		761	706	659	658	666	0.95
66	1,261.2		1,180	1,287	1,193	1,235	1,043	0.94
39	1,148.9		1,067	1,109	1,097	1,041	998	0.92
41A	282.8		197	194	229	304	225	0.81
108	972.5		806	811	828	790	684	0.81
131	439.3		340	339	308	316	282	0.72
LINK	1,224.0	■	782	834	971	1,055	750	0.72
29A	231.2		146	170	189	148	141	0.69
76	932.7		636	693	617	668	539	0.68
156	2,152.3	■	1,382	1,455	1,410	1,436	1,341	0.65
114	238.0		124	130	128	132	126	0.54
17A	308		134	139	166	203	153	0.52
3A	339.2		165	151	151	201	182	0.50
GAL	259.4	■	107	103	106	106	97	0.40
84	200.9		70	69	47	36	30	0.25

System Average 2.20

= Bottom Quartile

■ Funded or Partially Funded by RPTA

TABLE 2

Service Evaluation Process

Saturday: Sorted By Route

Route	Revenue Miles	Average Daily Boardings					Boardings Per Mile
		January 09	February 09	March 09	April 09	May 09	
0	937.4	2,717	2,429	2,163	2,548	2,114	2.55
1	305.5	321	307	307	330	242	0.99
3	817.3	3,210	3,330	3,082	2,961	3,001	3.81
3A	339.2	184	189	202	77	130	0.46
7	1,331.2	2,732	2,687	2,559	2,585	2,485	1.96
8	1,006.9	1,765	1,835	1,809	1,652	1,677	1.74
10	473.7	1,118	1,129	952	977	990	2.18
12	346.2	644	616	547	561	513	1.66
13	470.3	456	509	496	409	449	0.99
15	553.9	1,942	1,978	1,905	1,814	1,817	3.41
16	1,057.3	2,872	3,098	3,021	2,483	2,728	2.69
17	1,227	4,404	4,380	4,110	4,001	3,921	3.39
17A	287	72	97	83	61	45	0.25
19	1,355.8	5,227	5,362	5,139	4,833	4,945	3.76
27	1,319.1	3,079	3,195	2,823	2,705	2,789	2.21
29	1,121.6	5,138	5,165	5,113	4,536	4,430	4.35
29A	200.3	95	89	91	112	98	0.48
30	1,366.7	1,646	1,629	1,393	1,374	1,313	1.08
32	563.5	1,034	1,042	1,025	974	924	1.77
35	1,521.5	4,487	4,449	4,286	3,899	3,908	2.76
39	953.1	781	751	697	642	691	0.75
40	1,654.0	1,489	1,730	1,791	1,707	1,671	1.01
41	1,354.9	5,052	5,205	5,255	5,077	4,431	3.69
41A	254.5	128	134	87	47	81	0.37
43	517.0	1,567	1,453	1,466	1,278	1,285	2.73
44	934.7	1,646	1,719	1,684	1,547	1,422	1.72
45	1,489.0	2,514	2,330	2,532	2,220	2,205	1.59
50	914.2	3,503	3,426	3,141	3,059	2,996	3.53
51	316.5	506	526	486	430	438	1.51
52	413.3	363	409	329	293	332	0.84
56	920.7	1,430	1,567	1,576	1,608	1,511	1.67
59	540.7	1,466	1,246	1,246	1,250	1,475	2.47
60	518.5	1,817	1,729	1,615	1,299	1,496	3.07
61	2,041.5	3,346	3,413	3,186	3,242	3,171	1.60
62	822.9	769	774	793	798	665	0.92
65	695.3	509	490	577	547	424	0.73

Route	Revenue Miles	Average Daily Boardings					Boardings Per Mile
		January 09	February 09	March 09	April 09	May 09	
66	1,269.5	736	805	688	673	741	0.57
67	474.5	1,530	1,548	1,484	944	866	2.69
70	1,895.7	4,501	4,369	4,305	3,960	3,937	2.22
72	2,335.8	2,823	3,158	3,091	2,982	2,769	1.27
76	932.7	357	317	335	327	278	0.35
77	785.1	1,452	1,737	1,485	1,405	1,372	1.90
80	241.7	883	896	927	706	781	3.47
81	979.8	1,005	1,121	1,226	1,070	1,033	1.11
84	200.9	33	103	8	16	9	0.17
90	1,013.5	2,085	2,062	1,957	1,984	1,876	1.97
92	1,093.1	1,076	1,019	1,098	959	1,012	0.94
96	1,134.1	1,307	1,279	1,327	1,261	1,190	1.12
104	205.8	446	461	356	414	409	2.03
106	1,288.8	2,268	2,417	2,311	2,172	2,171	1.76
108	695.7	363	410	378	412	391	0.56
114	238.0	54	55	52	40	50	0.21
120	128.1	154	186	155	149	159	1.25
122	451.2	203	172	187	178	299	0.46
128	156.2	273	229	163	176	195	1.33
136	456.8	333	322	321	286	294	0.68
138	494.1	928	991	921	819	670	1.75
154	522.4	590	616	666	640	476	1.14
156	1,950.6	919	891	870	859	842	0.45
170	1,231.8	2,207	2,316	2,186	2,206	1,986	1.77
186	556.0	1,116	1,152	982	731	958	1.78
LINK	484.1	335	328	359	354	299	0.69

System Average
1.80

TABLE 2 (Continued)

Service Evaluation Process

Saturday: Sorted By Boardings Per Mile

Route	Revenue Miles	Average Daily Boardings					Boardings Per Mile
		January 09	February 09	March 09	April 09	May 09	
29	1,121.6	5,138	5,165	5,113	4,536	4,430	4.35
3	817.3	3,210	3,330	3,082	2,961	3,001	3.81
19	1,355.8	5,227	5,362	5,139	4,833	4,945	3.76
41	1,354.9	5,052	5,205	5,255	5,077	4,431	3.69
50	914.2	3,503	3,426	3,141	3,059	2,996	3.53
80	241.7	883	896	927	706	781	3.47
15	553.9	1,942	1,978	1,905	1,814	1,817	3.41
17	1,227	4,404	4,380	4,110	4,001	3,921	3.39
60	518.5	1,817	1,729	1,615	1,299	1,496	3.07
35	1,521.5	4,487	4,449	4,286	3,899	3,908	2.76
43	517.0	1,567	1,453	1,466	1,278	1,285	2.73
16	1,057.3	2,872	3,098	3,021	2,483	2,728	2.69
67	474.5	1,530	1,548	1,484	944	866	2.69
0	937.4	2,717	2,429	2,163	2,548	2,114	2.55
59	540.7	1,466	1,246	1,246	1,250	1,475	2.47
70	1,895.7	4,501	4,369	4,305	3,960	3,937	2.22
27	1,319.1	3,079	3,195	2,823	2,705	2,789	2.21
10	473.7	1,118	1,129	952	977	990	2.18
104	205.8	446	461	356	414	409	2.03
90	1,013.5	2,085	2,062	1,957	1,984	1,876	1.97
7	1,331.2	2,732	2,687	2,559	2,585	2,485	1.96
77	785.1	1,452	1,737	1,485	1,405	1,372	1.90
186	556.0	1,116	1,152	982	731	958	1.78
32	563.5	1,034	1,042	1,025	974	924	1.77
170	1,231.8	2,207	2,316	2,186	2,206	1,986	1.77
106	1,288.8	2,268	2,417	2,311	2,172	2,171	1.76
138	494.1	928	991	921	819	670	1.75
8	1,006.9	1,765	1,835	1,809	1,652	1,677	1.74
44	934.7	1,646	1,719	1,684	1,547	1,422	1.72
56	920.7	1,430	1,567	1,576	1,608	1,511	1.67
12	346.2	644	616	547	561	513	1.66
61	2,041.5	3,346	3,413	3,186	3,242	3,171	1.60
45	1,489.0	2,514	2,330	2,532	2,220	2,205	1.59
51	316.5	506	526	486	430	438	1.51
128	156.2	273	229	163	176	195	1.33
72	2,335.8	2,823	3,158	3,091	2,982	2,769	1.27

Route	Revenue Miles		Average Daily Boardings January 09	February 09	March 09	April 09	May 09	Boardings Per Mile
120	128.1		154	186	155	149	159	1.25
154	522.4		590	616	666	640	476	1.14
96	1,134.1	■	1,307	1,279	1,327	1,261	1,190	1.12
81	979.8	■	1,005	1,121	1,226	1,070	1,033	1.11
30	1,366.7		1,646	1,629	1,393	1,374	1,313	1.08
40	1,654.0	■	1,489	1,730	1,791	1,707	1,671	1.01
1	305.5		321	307	307	330	242	0.99
13	470.3		456	509	496	409	449	0.99
92	1,093.1		1,076	1,019	1,098	959	1,012	0.94
62	822.9		769	774	793	798	665	0.92
52	413.3		363	409	329	293	332	0.84
39	953.1		781	751	697	642	691	0.75
65	695.3		509	490	577	547	424	0.73
LINK	484.1	■	335	328	359	354	299	0.69
136	456.8	■	333	322	321	286	294	0.68
66	1,269.5		736	805	688	673	741	0.57
108	695.7		363	410	378	412	391	0.56
29A	200.3		95	89	91	112	98	0.48
3A	339.2		184	189	202	77	130	0.46
122	451.2		203	172	187	178	299	0.46
156	1,950.6	■	919	891	870	859	842	0.45
41A	254.5		128	134	87	47	81	0.37
76	932.7		357	317	335	327	278	0.35
17A	287		72	97	83	61	45	0.25
114	238.0		54	55	52	40	50	0.21
84	200.9		33	103	8	16	9	0.17

System Average 1.80

= Bottom Quartile

■ Funded or Partially Funded by RPTA

TABLE 3

Service Evaluation Process

Sunday: Sorted By Route

Route	Revenue Miles	Average Daily Boardings					Boardings Per Mile
		January 09	February 09	March 09	April 09	May 09	
0	937.4	1,578	1,641	1,434	1,535	1,484	1.64
1	337.7	181	192	198	227	194	0.59
3	817.3	2,095	2,243	2,202	2,056	1,989	2.59
7	1,331.2	1,654	1,709	1,810	1,811	1,722	1.31
8	1,006.9	1,161	1,059	1,057	1,034	1,104	1.08
10	473.7	687	708	711	737	719	1.50
12	346.2	357	405	443	403	405	1.16
13	470.3	409	283	334	297	364	0.72
15	553.9	1,220	1,230	1,319	1,263	1,241	2.27
16	1,057.3	1,995	1,867	2,010	1,769	1,783	1.78
17	1,226.7	2,570	2,893	2,909	2,862	2,909	2.31
19	1,355.8	3,499	3,683	3,700	3,400	3,342	2.60
27	1,319.1	2,110	2,271	2,292	2,112	1,990	1.63
29	1,121.6	3,358	3,522	3,585	3,370	3,349	3.06
30	372.0	181	182	163	173	153	0.46
32	563.5	578	606	696	662	655	1.13
35	1,521.5	3,151	3,238	3,273	3,077	2,985	2.07
39	953.1	483	448	493	441	451	0.49
40	1,654.0	1,057	1,189	1,445	1,273	1,212	0.75
41	1,354.9	3,012	3,095	3,397	2,915	2,885	2.26
43	517.0	899	879	922	808	883	1.70
44	934.7	993	1,046	1,170	1,060	992	1.13
45	961.8	878	838	848	715	766	0.84
50	914.2	2,183	2,224	2,394	2,240	2,188	2.46
51	316.5	315	299	314	305	304	0.97
52	413.3	234	243	199	209	220	0.53
56	839.8	850	900	1,044	1,043	991	1.15
59	540.7	867	856	1,041	881	818	1.65
60	518.5	1,099	1,184	1,143	1,100	945	2.11
61	1,795.0	2,121	2,038	2,222	1,983	2,161	1.17
62	719.6	551	474	541	474	467	0.70
65	622.1	277	328	378	304	299	0.51
66	1,136.1	463	479	554	531	496	0.44
72	2,100.0	1,906	2,232	2,392	2,217	2,138	1.04
76	372.8	148	150	122	111	127	0.35
77	745.4	869	898	1,004	964	886	1.24
80	241.7	487	416	623	507	557	2.14

Route	Revenue Miles	Average Daily Boardings					Boardings Per Mile
		January 09	February 09	March 09	April 09	May 09	
81	867.1	660	772	772	720	743	0.85
84	200.9	30	25	7	11	8	0.08
90	1,013.5	1,340	1,451	1,305	1,324	1,285	1.32
92	981.0	642	751	755	665	620	0.70
96	1,170.1	756	773	803	802	820	0.68
106	1,114.2	1,516	1,565	1,564	1,458	1,438	1.35
108	240.4	140	143	128	137	118	0.55
114	245.1	38	39	44	42	32	0.16
122	451.2	89	143	91	101	112	0.24
138	494.1	629	619	681	575	561	1.24
154	522.4	347	428	462	401	368	0.77
156	1,950.6	567	560	540	545	587	0.29
170	1,129.3	1,533	1,615	1,546	1,541	1,430	1.36
186	556.0	492	575	694	527	657	1.06
LINK	484.1	217	176	272	221	198	0.45

System Average
1.30

TABLE 3 (Continued)

Service Evaluation Process

Sunday: Sorted By Boardings Per Mile

Route	Revenue Miles	Average Daily Boardings					Boardings Per Mile
		January 09	February 09	March 09	April 09	May 09	
29	1,121.6	3,358	3,522	3,585	3,370	3,349	3.06
19	1,355.8	3,499	3,683	3,700	3,400	3,342	2.60
3	817.3	2,095	2,243	2,202	2,056	1,989	2.59
50	914.2	2,183	2,224	2,394	2,240	2,188	2.46
17	1,226.7	2,570	2,893	2,909	2,862	2,909	2.31
15	553.9	1,220	1,230	1,319	1,263	1,241	2.27
41	1,354.9	3,012	3,095	3,397	2,915	2,885	2.26
80	241.7	487	416	623	507	557	2.14
60	518.5	1,099	1,184	1,143	1,100	945	2.11
35	1,521.5	3,151	3,238	3,273	3,077	2,985	2.07
16	1,057.3	1,995	1,867	2,010	1,769	1,783	1.78
43	517.0	899	879	922	808	883	1.70
59	540.7	867	856	1,041	881	818	1.65
67	474.5	768	839	781	758	743	1.64
0	937.4	1,578	1,641	1,434	1,535	1,484	1.64
27	1,319.1	2,110	2,271	2,292	2,112	1,990	1.63
70	1,820.5	2,786	2,752	2,846	2,785	2,745	1.53
10	473.7	687	708	711	737	719	1.50
170	1,129.3	1,533	1,615	1,546	1,541	1,430	1.36
106	1,114.2	1,516	1,565	1,564	1,458	1,438	1.35
90	1,013.5	1,340	1,451	1,305	1,324	1,285	1.32
7	1,331.2	1,654	1,709	1,810	1,811	1,722	1.31
138	494.1	629	619	681	575	561	1.24
77	745.4	869	898	1,004	964	886	1.24
61	1,795.0	2,121	2,038	2,222	1,983	2,161	1.17
12	346.2	357	405	443	403	405	1.16
56	839.8	850	900	1,044	1,043	991	1.15
32	563.5	578	606	696	662	655	1.13
44	934.7	993	1,046	1,170	1,060	992	1.13
8	1,006.9	1,161	1,059	1,057	1,034	1,104	1.08
186	556.0	492	575	694	527	657	1.06
72	2,100.0	1,906	2,232	2,392	2,217	2,138	1.04
51	316.5	315	299	314	305	304	0.97
81	867.1	660	772	772	720	743	0.85
45	961.8	878	838	848	715	766	0.84
154	522.4	347	428	462	401	368	0.77

Route	Revenue Miles		Average Daily Boardings January 09	February 09	March 09	April 09	May 09	Boardings Per Mile
40	1,654.0		1,057	1,189	1,445	1,273	1,212	0.75
13	470.3		409	283	334	297	364	0.72
92	981.0		642	751	755	665	620	0.70
62	719.6		551	474	541	474	467	0.70
LINK	484.1		217	176	272	221	198	0.45
96	1,170.1		756	773	803	802	820	0.68
1	337.7		181	192	198	227	194	0.59
108	240.4		140	143	128	137	118	0.55
52	413.3		234	243	199	209	220	0.53
65	622.1		277	328	378	304	299	0.51
39	953.1		483	448	493	441	451	0.49
30	372.0		181	182	163	173	153	0.46
66	1,136.1		463	479	554	531	496	0.44
76	372.8		148	150	122	111	127	0.35
156	1,950.6		567	560	540	545	587	0.29
122	451.2		89	143	91	101	112	0.24
114	245.1		38	39	44	42	32	0.16
84	200.9		30	25	7	11	8	0.08

System Average 1.31

= Bottom Quartile

Funded or Partially Funded by RPTA

TABLE 4

Service Evaluation Process

Weekday Express: Sorted By Route

Route	Revenue Trips	Average Boardings Per Trip					Boardings Per Trip
		January 09	February 09	March 09	April 09	May 09	
SR51	28	722	745	715	742	693	25.84
I-10 East	31	916	917	898	827	854	28.46
I-10 West	27	736	743	739	759	688	27.15
I-17	44	1,259	1,277	1,217	1,231	1,178	28.01
510	4	86	87	99	99	89	23.00
511	8	51	47	44	49	53	6.10
512	4	73	80	81	88	78	20.00
520	8	114	110	105	108	101	13.45
521	13	224	231	218	233	218	17.29
531	15	304	315	310	315	293	20.49
532	8	152	155	146	144	142	18.48
533	10	393	382	381	381	354	37.82
535	6	195	146	136	142	132	25.03
536	10	4	31	29	32	26	2.44
540	8	198	215	201	193	181	24.70
541	10	316	292	275	272	232	27.74
542	6	83	145	153	166	180	24.23
560	4	75	80	78	23	70	16.30
562	6	256	121	89	55	87	20.27
570	4	47	50	47	15	50	10.45
571	6	128	106	156	122	143	21.83
572	12	89	87	98	33	128	7.25
573	12	181	206	227	199	159	16.20
575	6	277	122	162	171	152	29.47
576	10	65	41	22	25	27	3.60
581	6	110	108	103	109	99	17.63
582	8	105	107	108	106	88	12.85
590	8	138	135	128	126	114	16.03

System Average 21.56

TABLE 4 (Continued)

Service Evaluation Process

Weekday Express: Sorted By Boardings Per Trip

Route	Revenue Trips		Average Boardings Per Trip					Boardings Per Trip
			January 09	February 09	March 09	April 09	May 09	
533	10		393	382	381	381	354	37.82
575	6		277	122	162	171	152	29.47
I-10 East	31		916	917	898	827	854	28.46
I-17	44		1,259	1,277	1,217	1,231	1,178	28.01
541	10		316	292	275	272	232	27.74
I-10 West	27		736	743	739	759	688	27.15
SR51	28		722	745	715	742	693	25.84
535	6		195	146	136	142	132	25.03
540	8		198	215	201	193	181	24.70
542	6		83	145	153	166	180	24.23
510	4		86	87	99	99	89	23.00
571	6		128	106	156	122	143	21.83
531	15		304	315	310	315	293	20.49
562	6		256	121	89	55	87	20.27
512	4		73	80	81	88	78	20.00
532	8		152	155	146	144	142	18.48
581	6		110	108	103	109	99	17.63
521	13		224	231	218	233	218	17.29
560	4		75	80	78	23	70	16.30
573	12		181	206	227	199	159	16.20
590	8		138	135	128	126	114	16.03
520	8		114	110	105	108	101	13.45
582	8		105	107	108	106	88	12.85
570	4		47	50	47	15	50	10.45
572	12		89	87	98	33	128	7.25
511	8		51	47	44	49	53	6.10
576	10		65	41	22	25	27	3.60
536	10		4	31	29	32	26	2.44

System Average 21.56

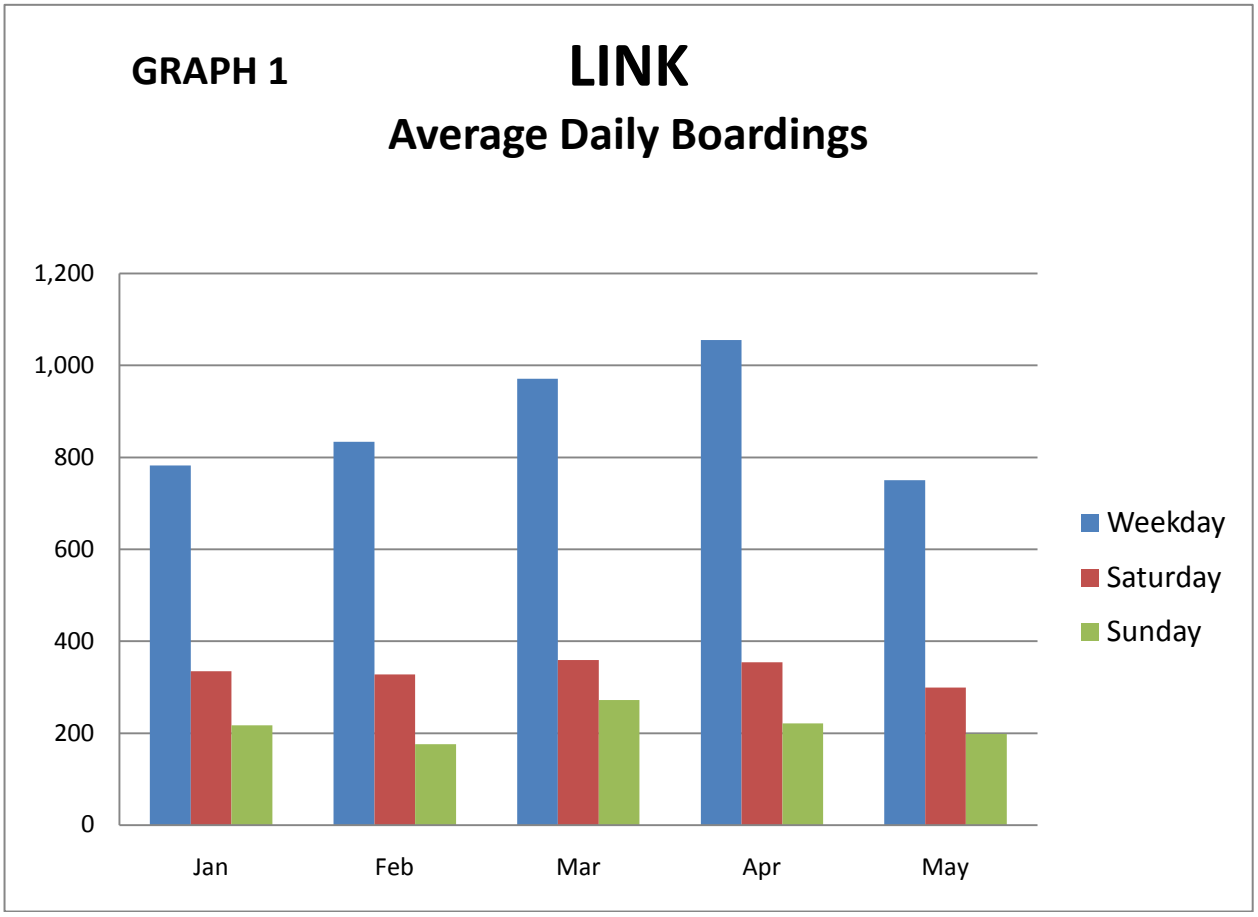
= Bottom Quartile

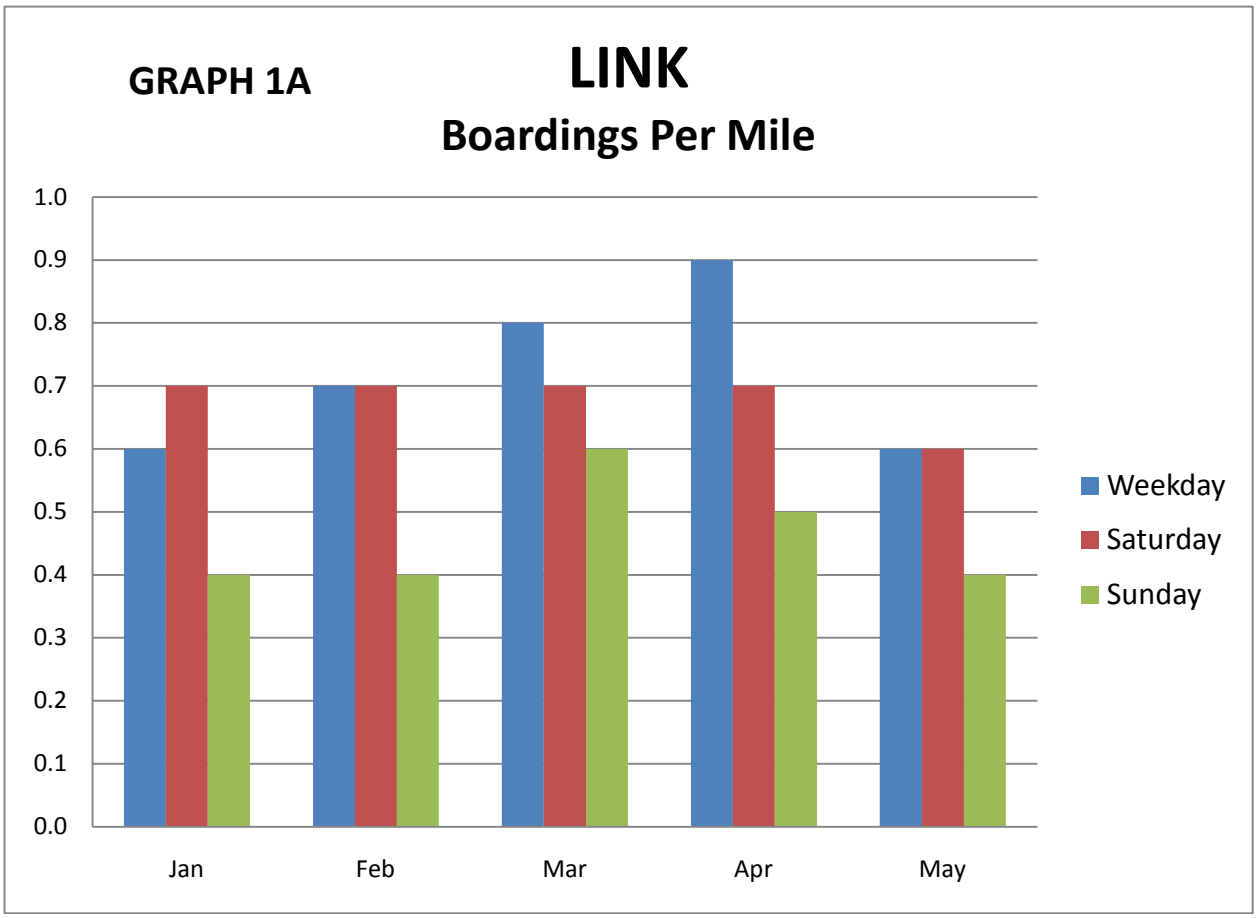
Funded or Partially Funded by RPTA

Local Route Analysis

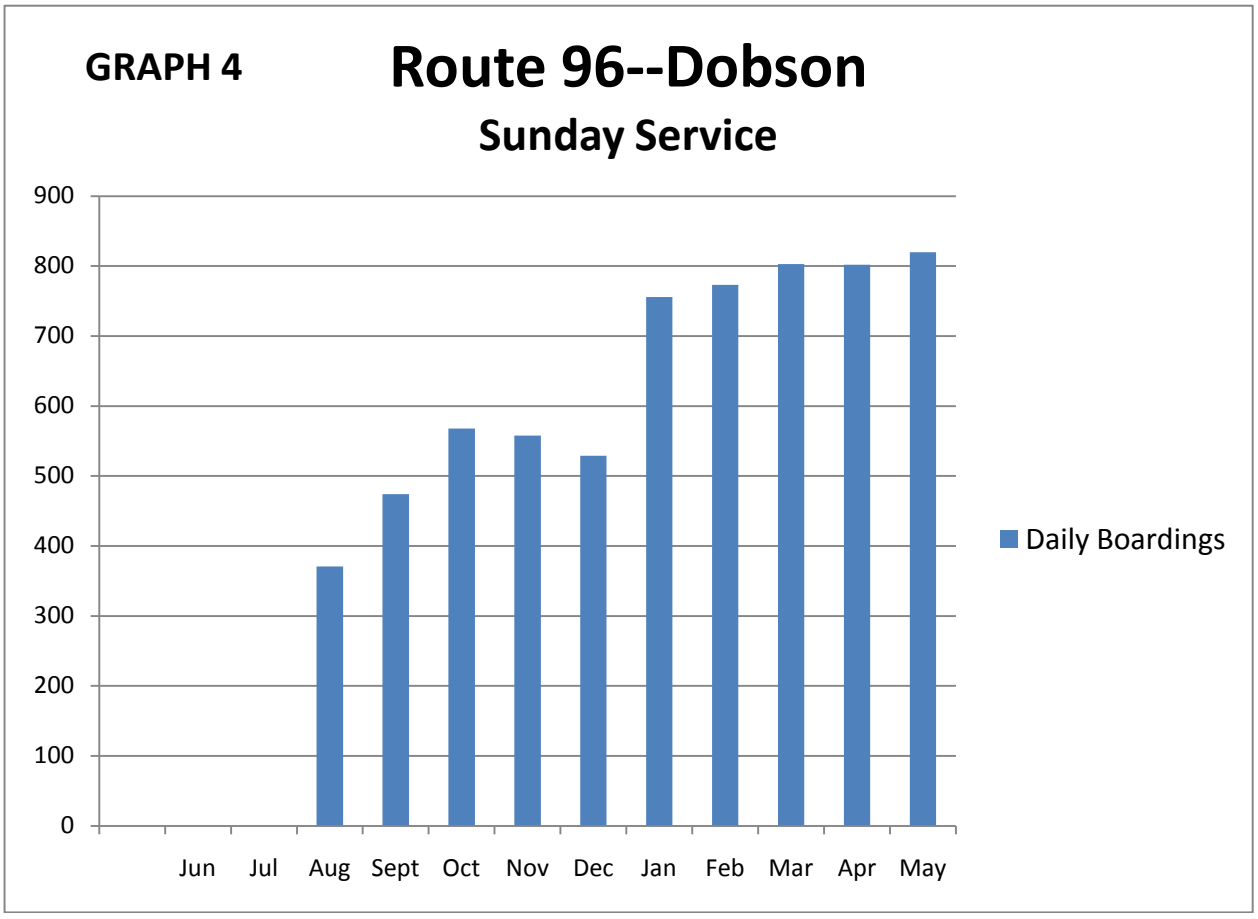
Once the underperforming local routes were identified, a closer look was taken at both average daily boardings and boardings per mile. Graphs were developed for these two performance indicators for each route. For routes that have been operating for some time, graphs were developed showing annual boardings for a five year period to show ridership trends.

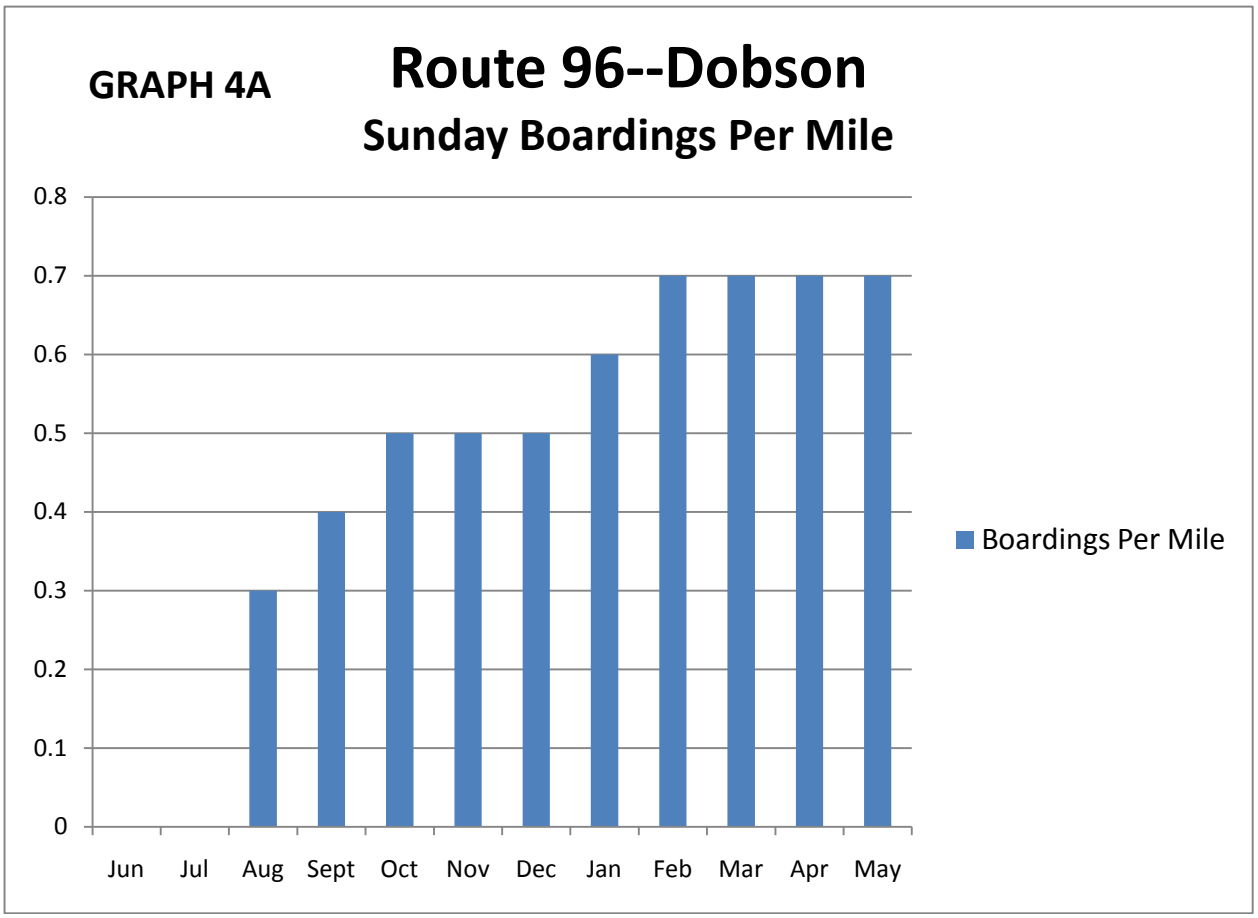
LINK: Graph 1 presents average daily boardings for LINK weekday, Saturday, and Sunday service from its implementation at the end of December through May 2009. Graph 1A presents boarding per mile data for the LINK over the same time period. Since LINK is a new route, and the ridership indicators appear to be trending upwards, it is recommended that this route's performance continue to be monitored.



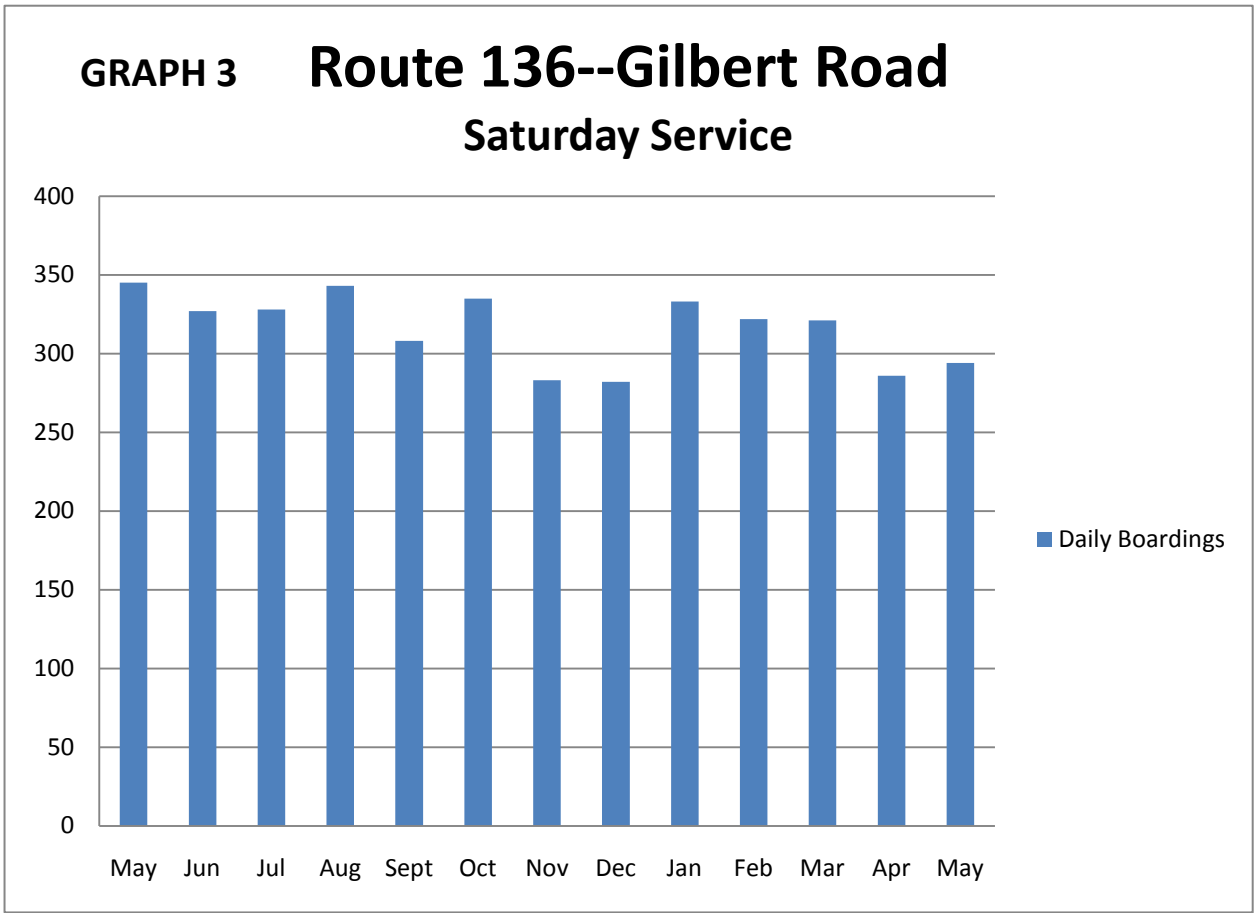

GRAPH 1A
LINK
Boardings Per Mile
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Jan
Feb
Mar
Apr
May
Weekday
Saturday
Sunday

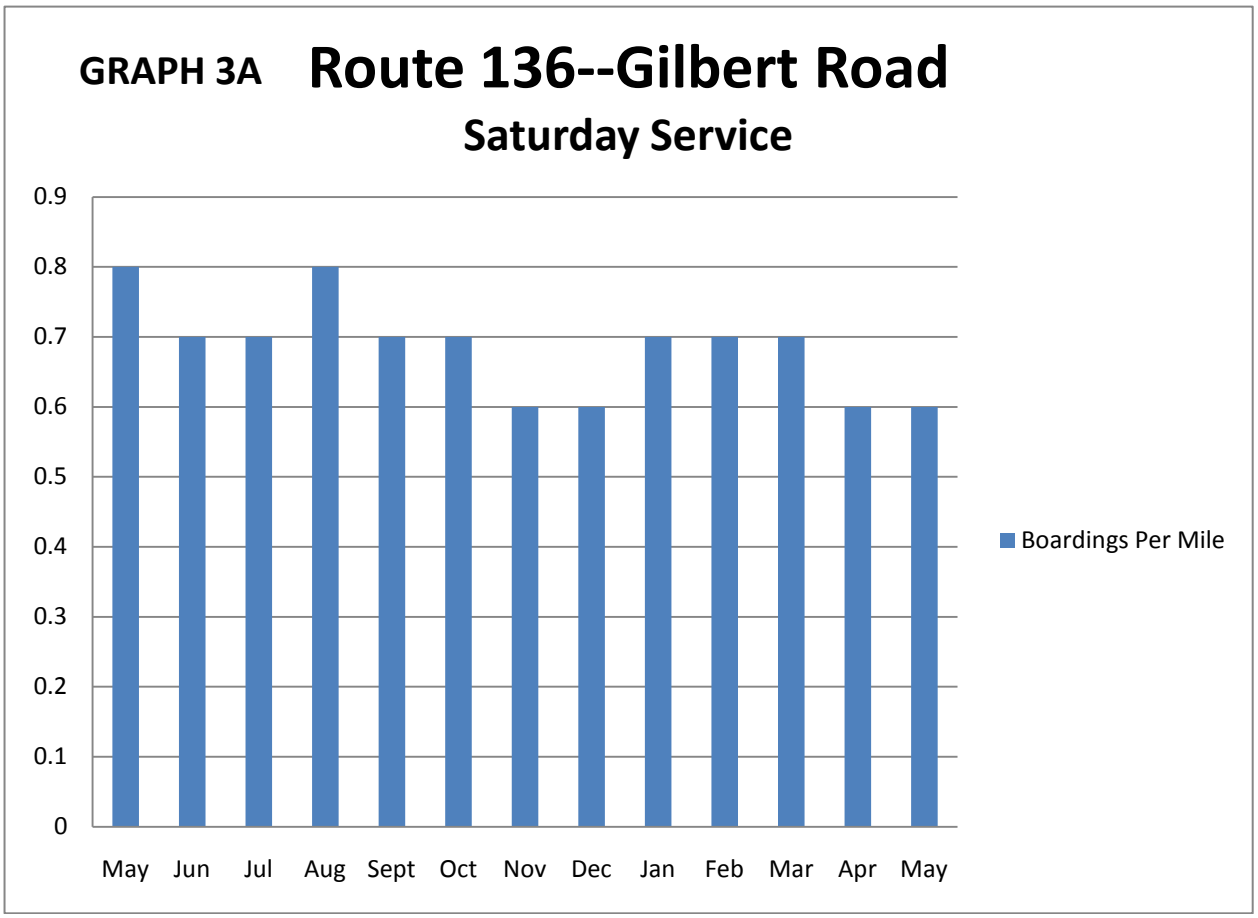
Route 96—Dobson: This route appears to be performing fairly well on weekdays and Saturdays. However, Route 96 falls into the bottom quartile for Sunday performance. Graph 4 shows the average daily Sunday boarding from its implementation in August 2008 through May 2009. Graph 4A shows the boarding per mile data for the same time period. Both indicators show an upward trend and therefore no action is recommended other that continued monitoring.

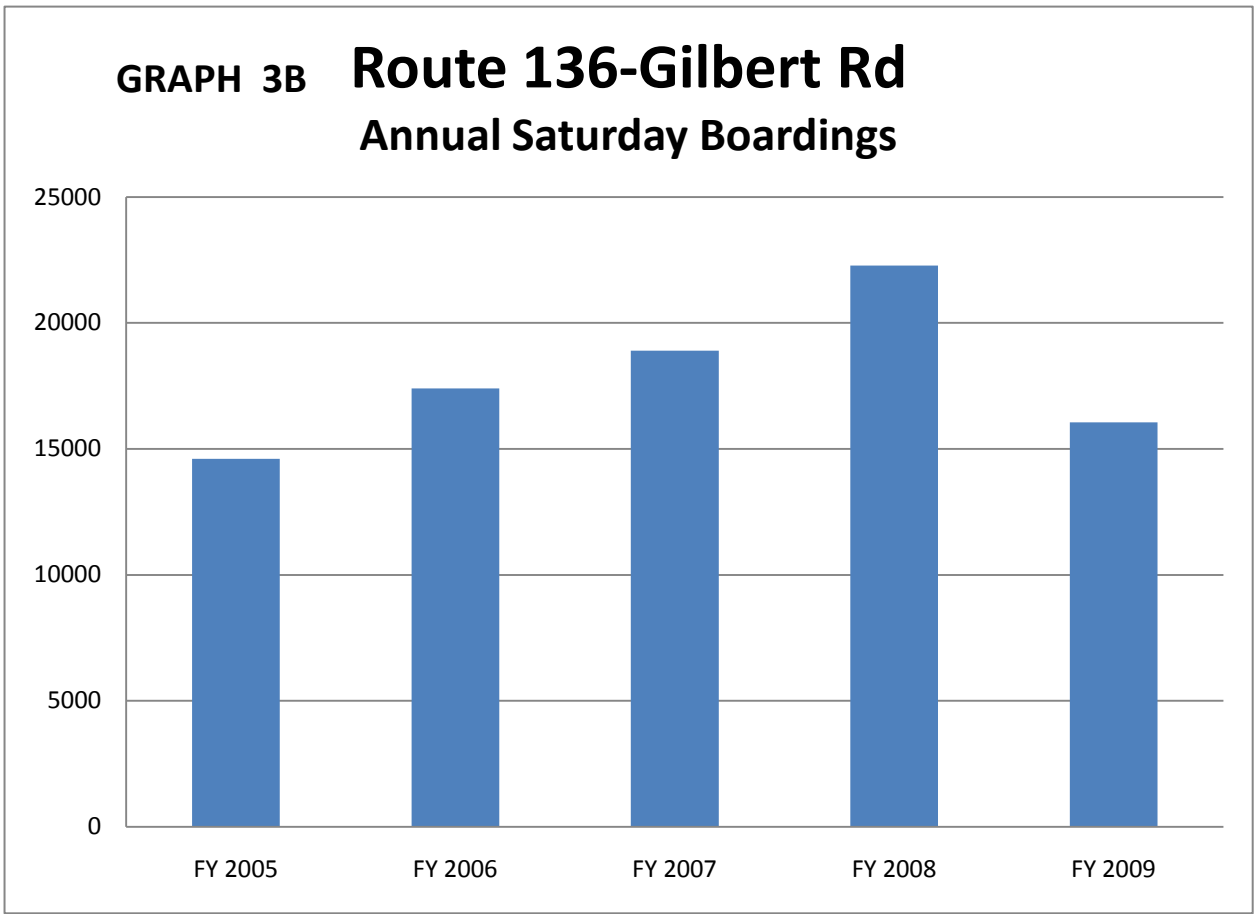



GRAPH 4A
Route 96--Dobson
Sunday Boardings Per Mile
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Jun
Jul
Aug
Sept
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Boardings Per Mile

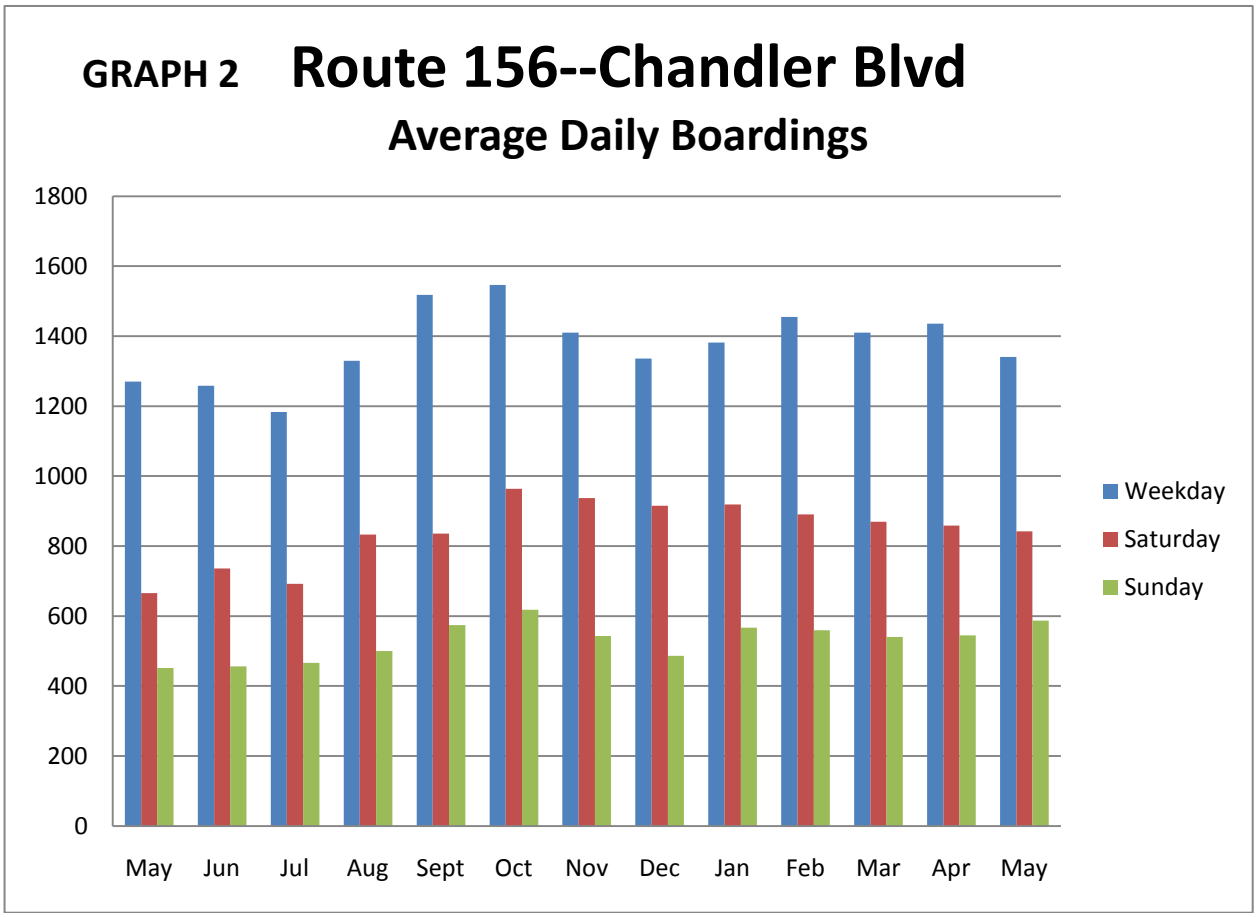
Route 136—Gilbert Road: This route only appeared in the bottom quartile for Saturday service. Graph 3 and Graph 3A show average Saturday boardings and average Saturday boardings per mile respectively. Annual boarding data is presented in Graph 3B. The data for Saturday Route 136 indicate that it may be too early to make any changes, but the service should continue to be watched.

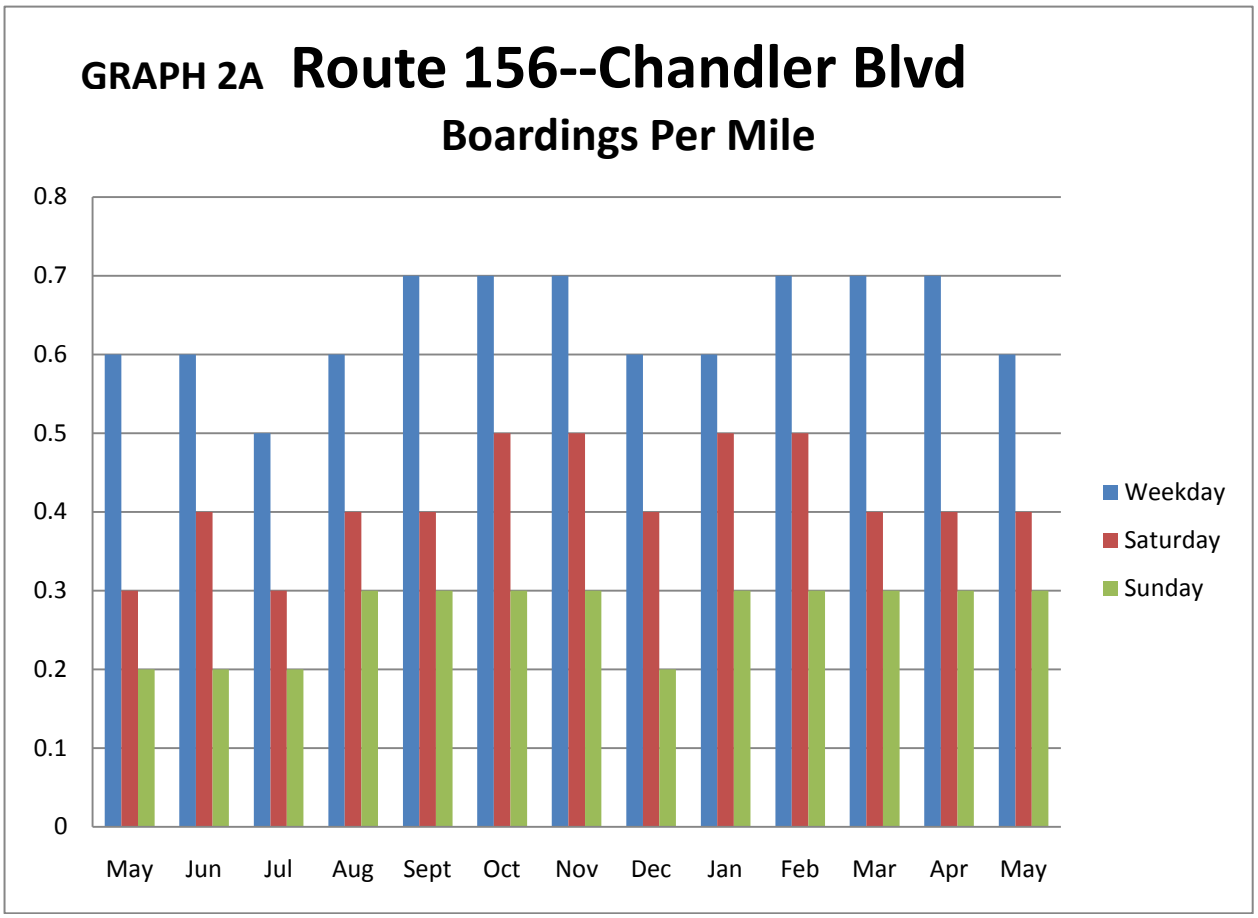


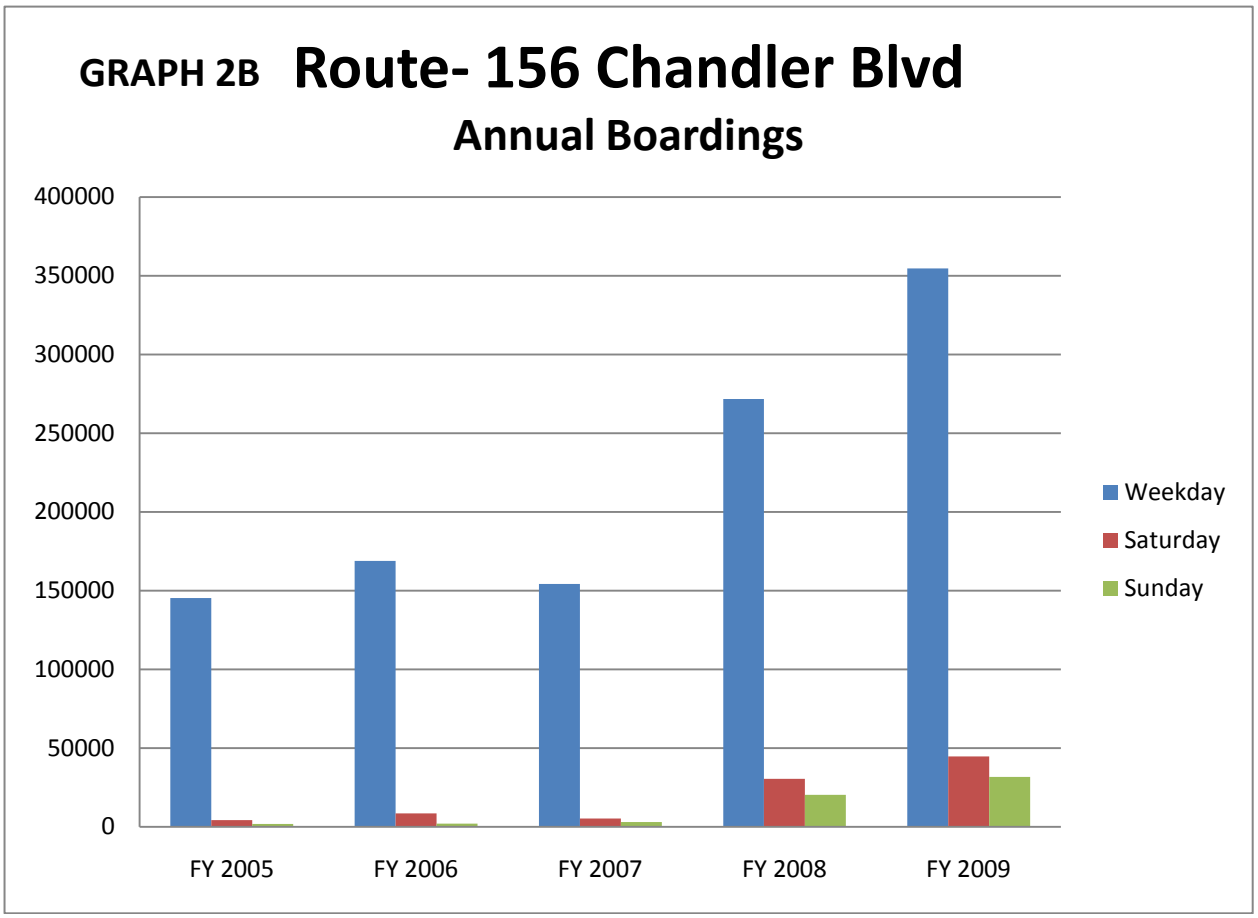

GRAPH 3A
Route 136--Gilbert Road
Saturday Service
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
May
Jun
Jul
Aug
Sept
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Boardings Per Mile


GRAPH 3B
Route 136-Gilbert Rd
Annual Saturday Boardings
25000
20000
15000
10000
5000
0
FY 2005
FY 2006
FY 2007
FY 2008
FY 2009

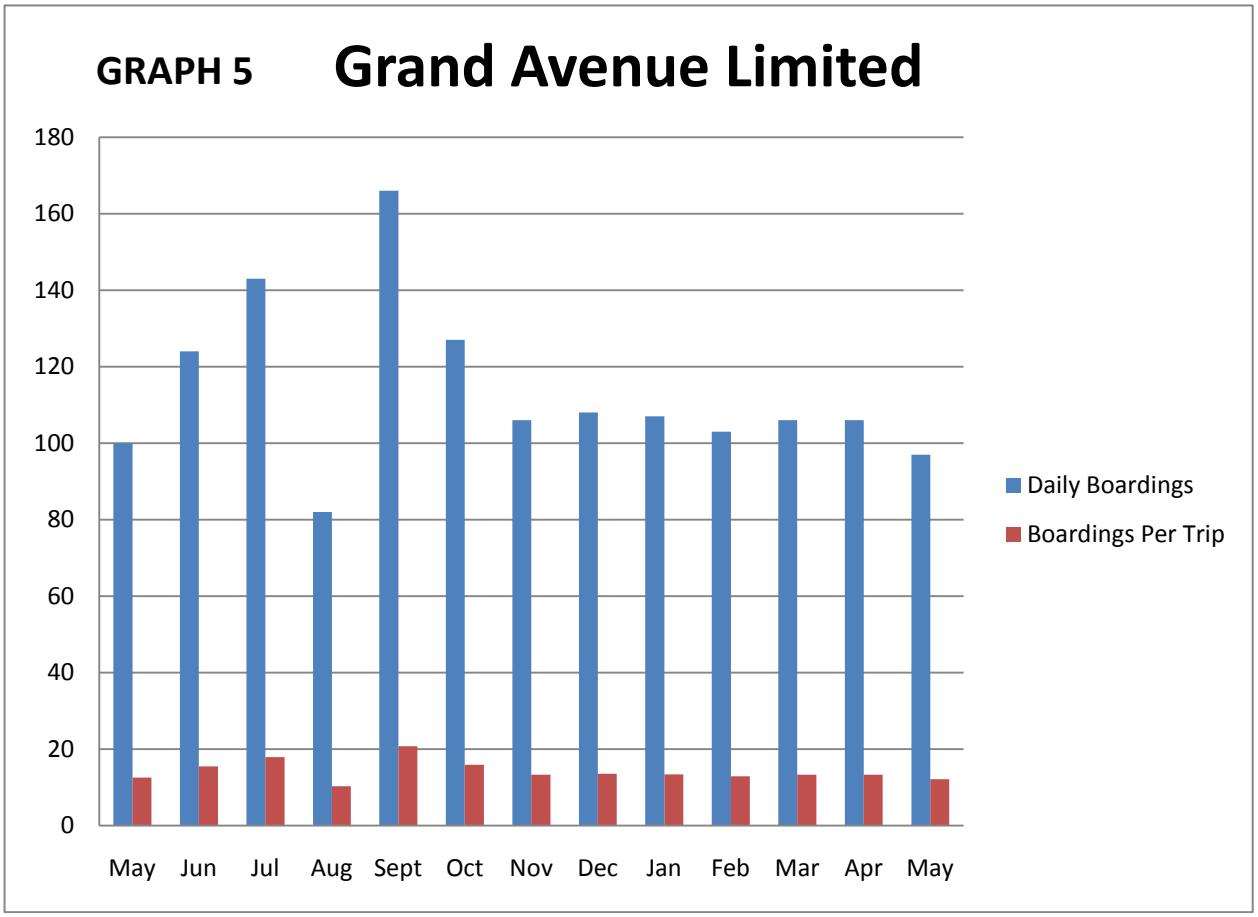
Route 156—Chandler Boulevard: Average daily boardings for a twelve month period are presented in Graph 2. Boarding per mile data for Route 156 are presented in Graph 2A. Annual boarding data are presented in Graph 2B. The data for this route indicate that progress is being made with ridership generally trending upwards. Continued monitoring is recommended.

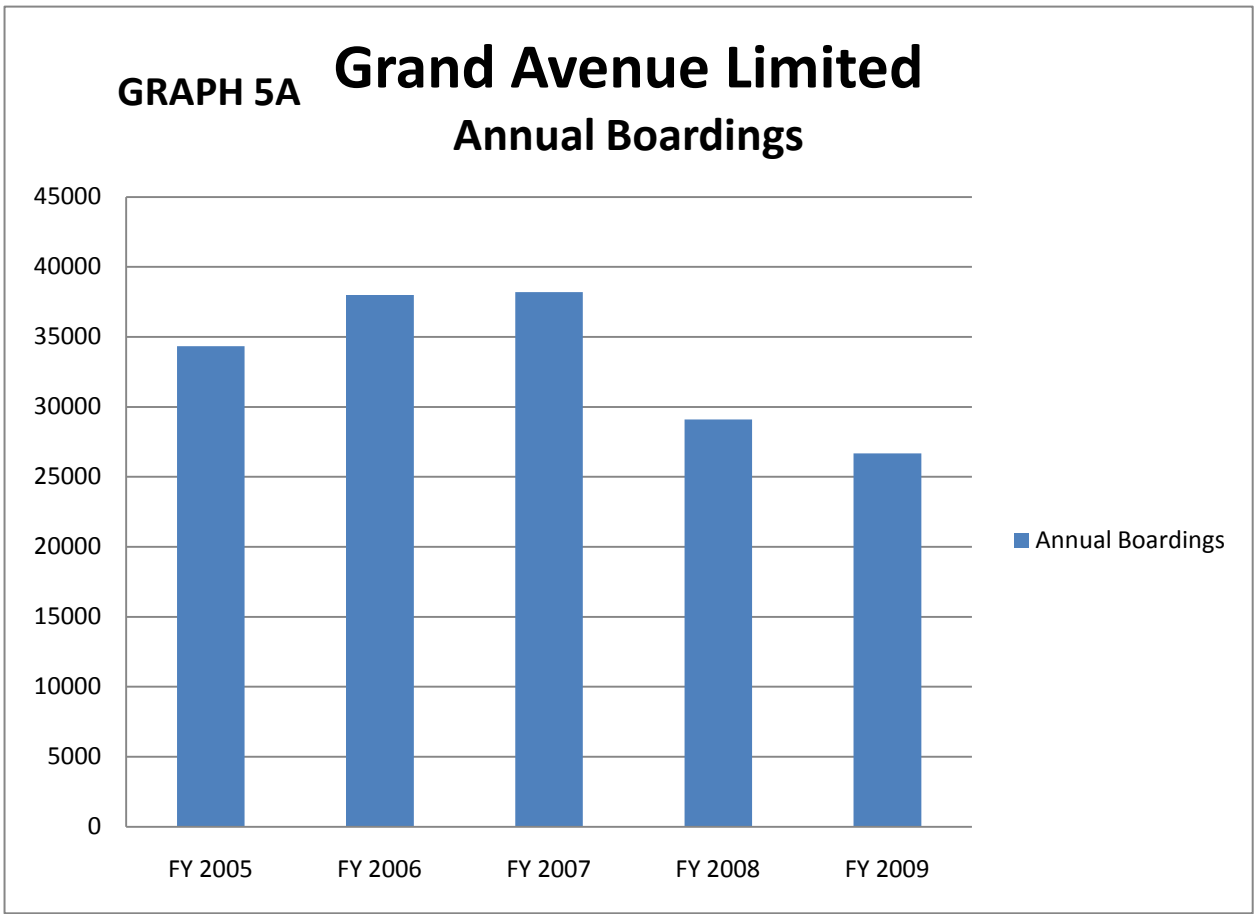



GRAPH 2A Route 156--Chandler Blvd
Boardings Per Mile
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
May
Jun
Jul
Aug
Sept
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Weekday
Saturday
Sunday


GRAPH 2B Route- 156 Chandler Blvd
Annual Boardings
400000
350000
300000
250000
200000
150000
100000
50000
0
FY 2005
FY 2006
FY 2007
FY 2008
FY 2009
Weekday
Saturday
Sunday

Grand Avenue Limited: Although Grand Avenue Limited is technically a local route, the peak period only operation suggest that analysis of its boarding per trip data would provide a better picture of its performance. Graph 5 presents both average daily boardings and boarding per trip data over a thirteen month period. Annual boarding data is presented in Graph 5A. While not exactly trending upwards, the data does seem to be stabilizing. Grand Avenue Limited should also continue to be watched.




GRAPH 5A
Grand Avenue Limited
Annual Boardings
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
FY 2005
FY 2006
FY 2007
FY 2008
FY 2009
Annual Boardings

Local Route Recommendations

It appears that no drastic action is needed with these underperforming local routes. Many are new routes or routes recently upgraded to regional Supergrid route levels of service which take some time to mature. The SEES recommends that new routes be given two years to mature before being considered for alteration or termination under the performance measures. Therefore it is simply recommended that these local routes continue to be monitored over time. It is further recommended that for each of the routes identified for continued monitoring, Valley Metro consider what marketing resources are available that could enhance these routes' visibility with the traveling public.

Express / RAPID Route Identification Methodology

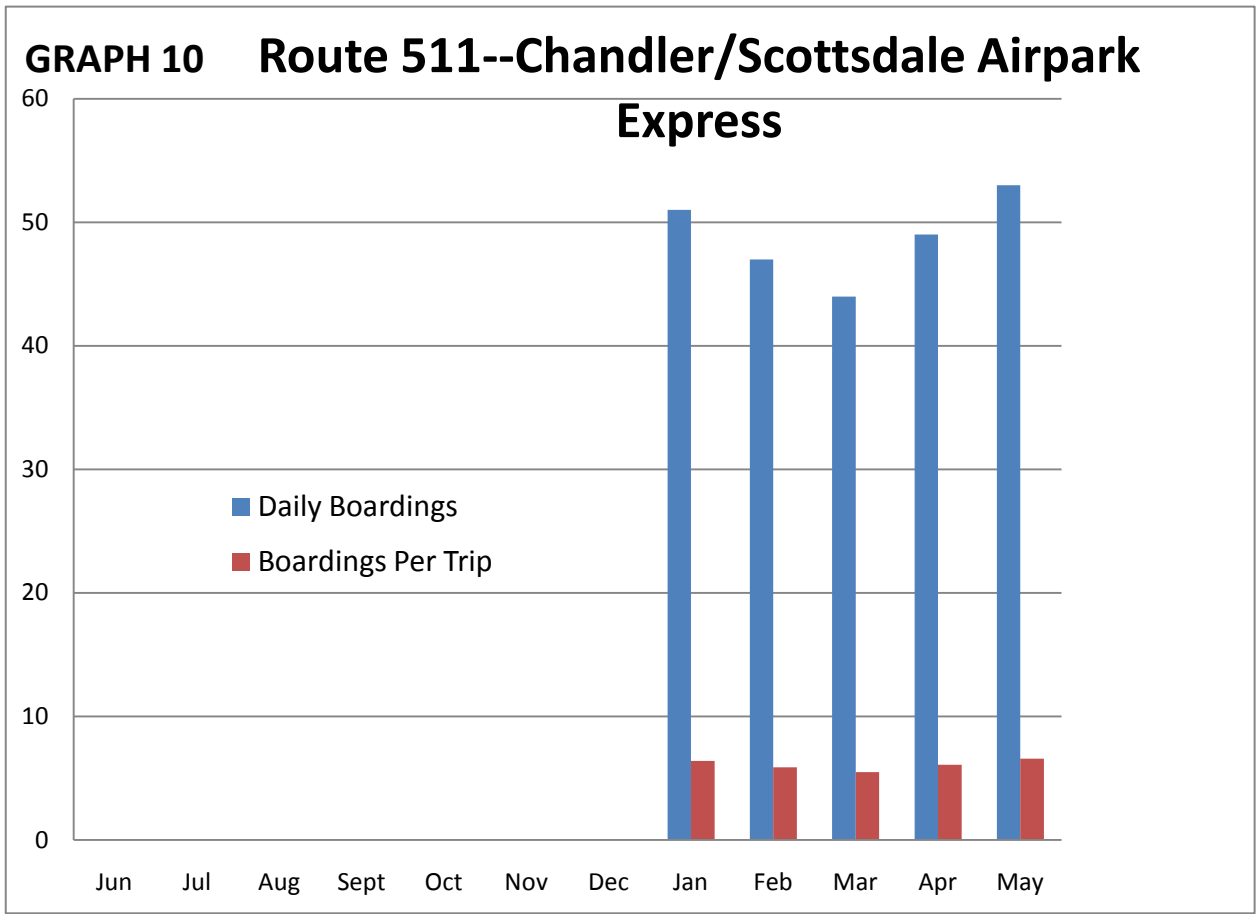
A similar process was used for express and RAPID routes, although boardings per trip was used as a more appropriate measure of productivity for commuter oriented service. The following routes fall into the bottom quartile of this type of service:

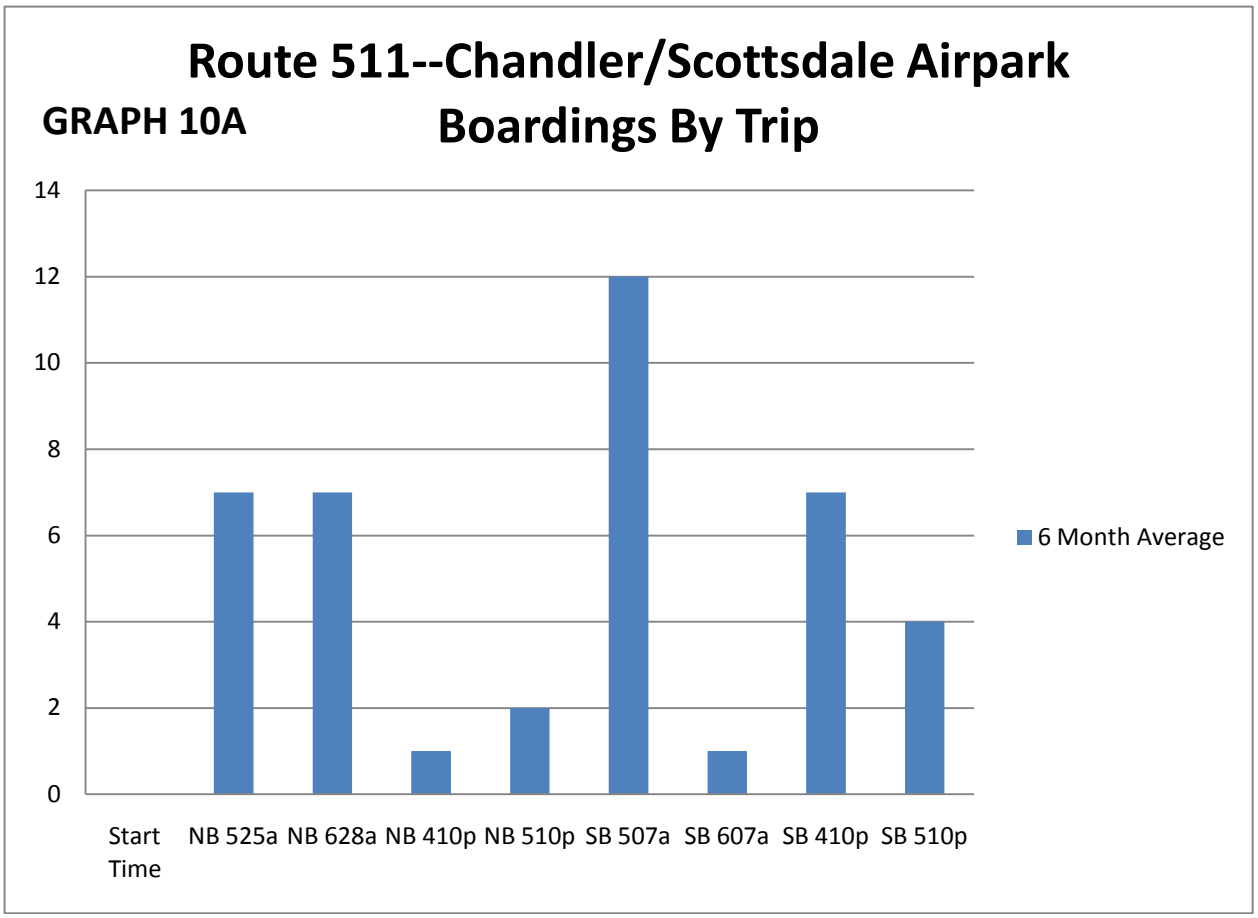
- Route 520—Tempe Express
- Route 582—North Mountain Express
- Route 570—Glendale Express
- Route 572—Surprise/Scottsdale Express
- Route 511—Chandler/Scottsdale Airpark Express
- Route 576—Northwest Valley/Montebello Express
- Route 536—Northeast Mesa/Tempe/ASU Express

Express / RAPID Route Analysis

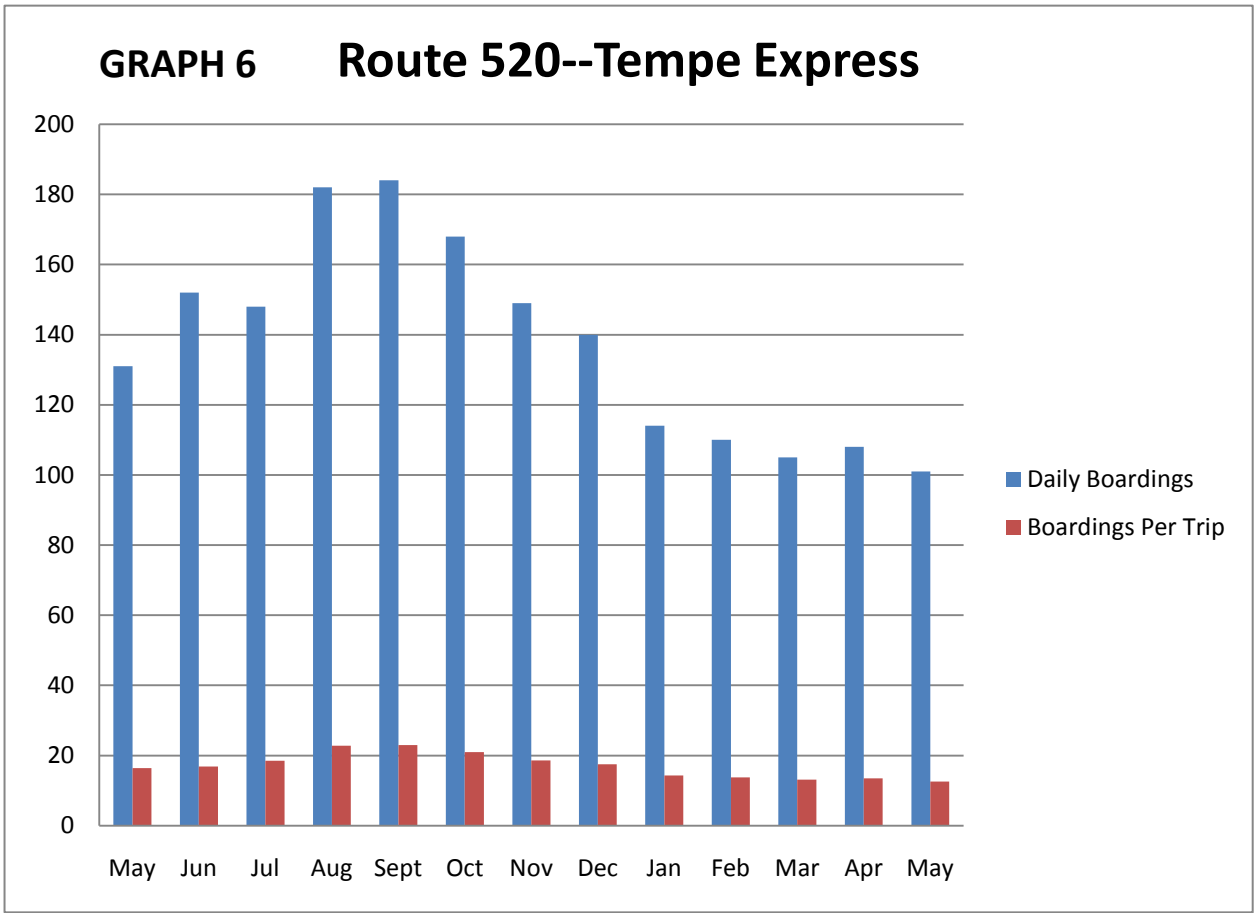
As with the local routes, once the lowest performing quartile of express routes was identified, a closer look was taken at the average daily boardings. Boardings per trip were used instead of boardings per mile, as a better indicator of performance for peak-hour commuter-oriented service. Unlike the local routes, in some cases the express route data were then broken down into boardings per individual trip to gain a better understanding of what is happening with these routes.

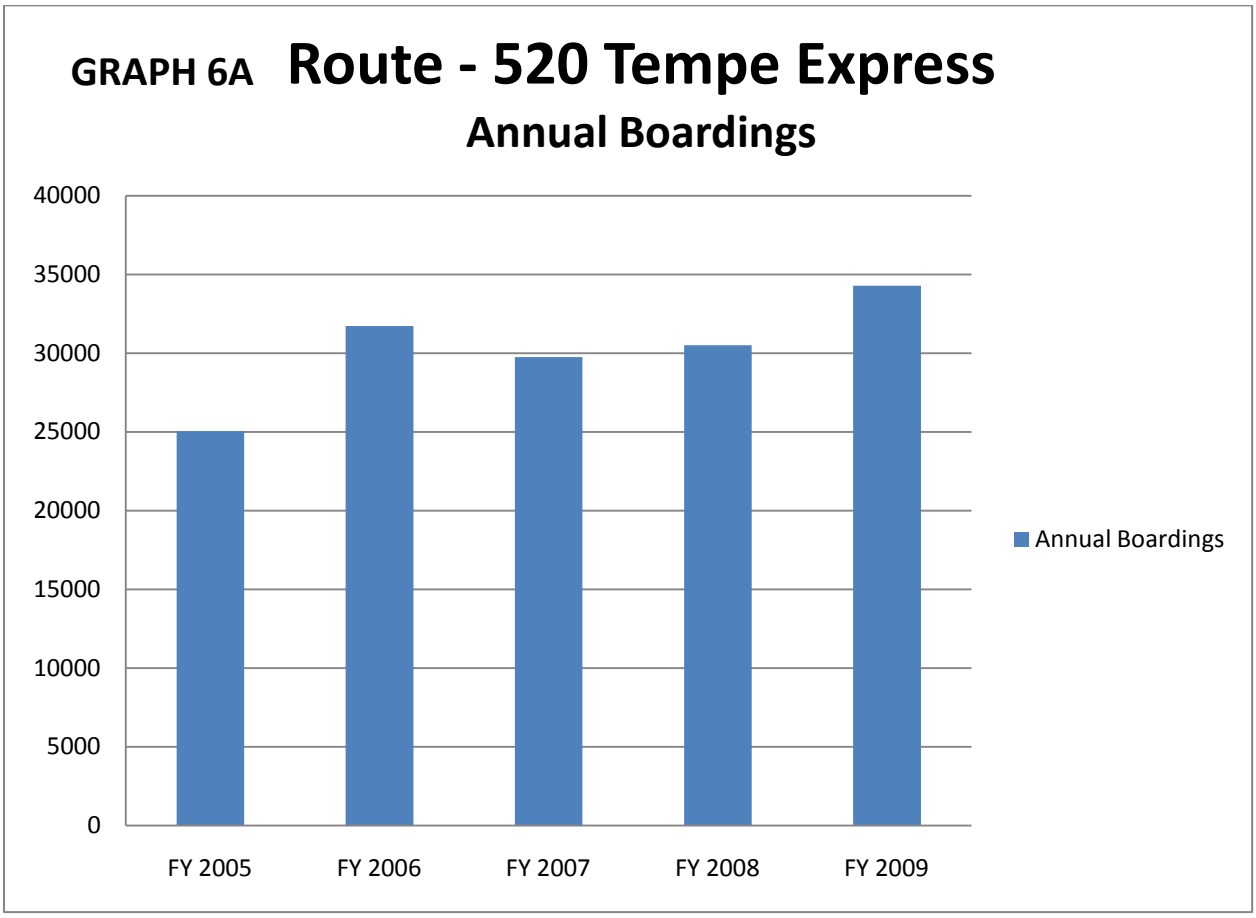
Route 511—Chandler/Scottsdale Airpark Express: This route was implemented in December 2008. Although ridership is low, graph 10 shows that the numbers are trending upward. This route operates bi-directionally during the morning and afternoon peak commute periods. Graph 10A shows that some a.m. southbound trips, and some p.m. northbound trips have almost no ridership. This suggests a significant directional travel demand bias in the corridor. Another factor affecting ridership includes the impact of the Loop 101 HOV lane construction project which has been underway in this corridor since 2008. Since this corridor has operated for less than a year, staff is not recommending adjustments at this time. Staff does recommend that Valley Metro consider what marketing resources are available to enhance this route's visibility, especially its connection to light rail. Staff also recommends that additional trips be added to the route to allow the service to better address travel demand in the corridor. A mid-day southbound trip should be considered. This would provide greater travel flexibility for express bus riders who use Route 540, 541, or 542 for their morning commute but need a connection back to the Chandler Park & Ride if they need to leave work mid day. It is also recommended that a stop be added at the Chandler Fashion Center/Transit Center to provide access to this major employment center and significant transit transfer location (connections to Routes 72, 81, and 156).


GRAPH 10
Route 511--Chandler/Scottsdale Airpark Express
60
50
40
30
20
10
0
Daily Boardings
Boardings Per Trip
Jun
Jul
Aug
Sept
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May

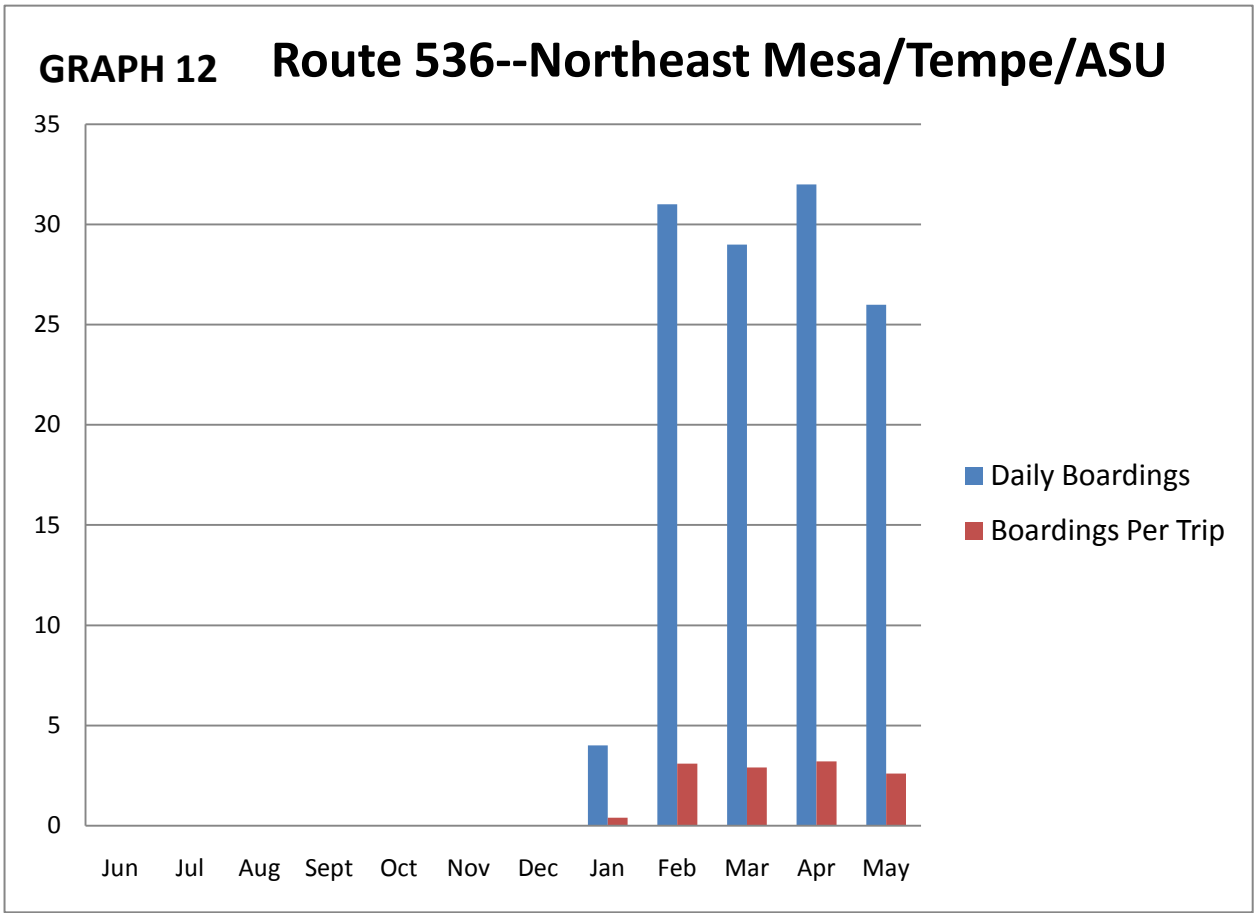

Route 511--Chandler/Scottsdale Airpark
GRAPH 10A
Boardings By Trip
14
12
10
8
6
4
2
0
Start Time
NB 525a
NB 628a
NB 410p
NB 510p
SB 507a
SB 607a
SB 410p
SB 510p
6 Month Average

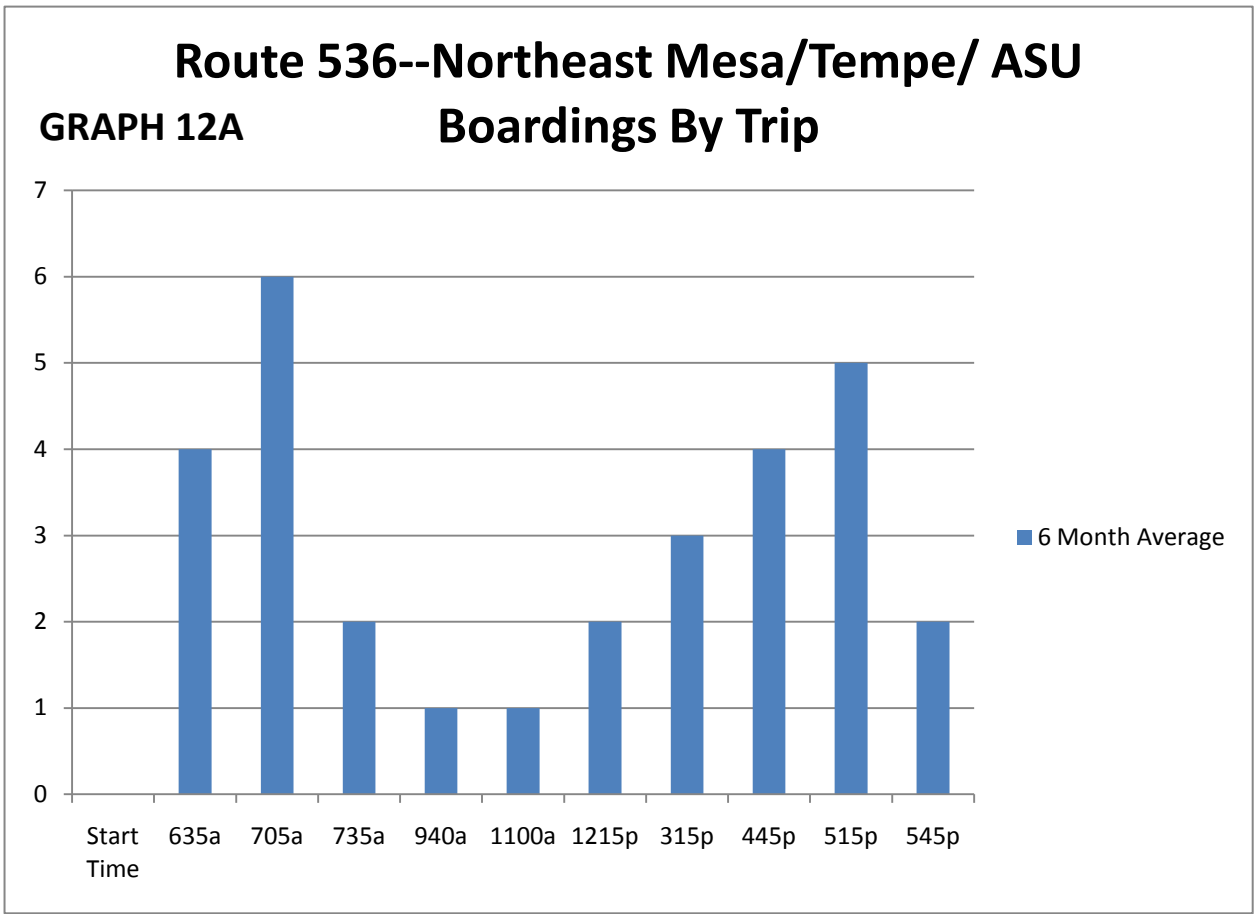
Route 520—Tempe Express: This route is showing a downward trend for the last several months. Graph 6 shows that average daily boardings and boardings per trip are declining, particularly since the implementation of light rail. Annual boarding data are presented in Graph 6A. The downward trend clearly corresponds to the opening of the METRO light rail line linking Mesa, Tempe and Phoenix. This likely indicates that some Route 520 riders have shifted to using light rail. Likely reasons for the shift include greater service frequency on light rail which addresses a greater range of trip needs, and access to three METRO park & ride lots immediately north of the current Rt. 520 alignment. Staff is recommending that this route be terminated.



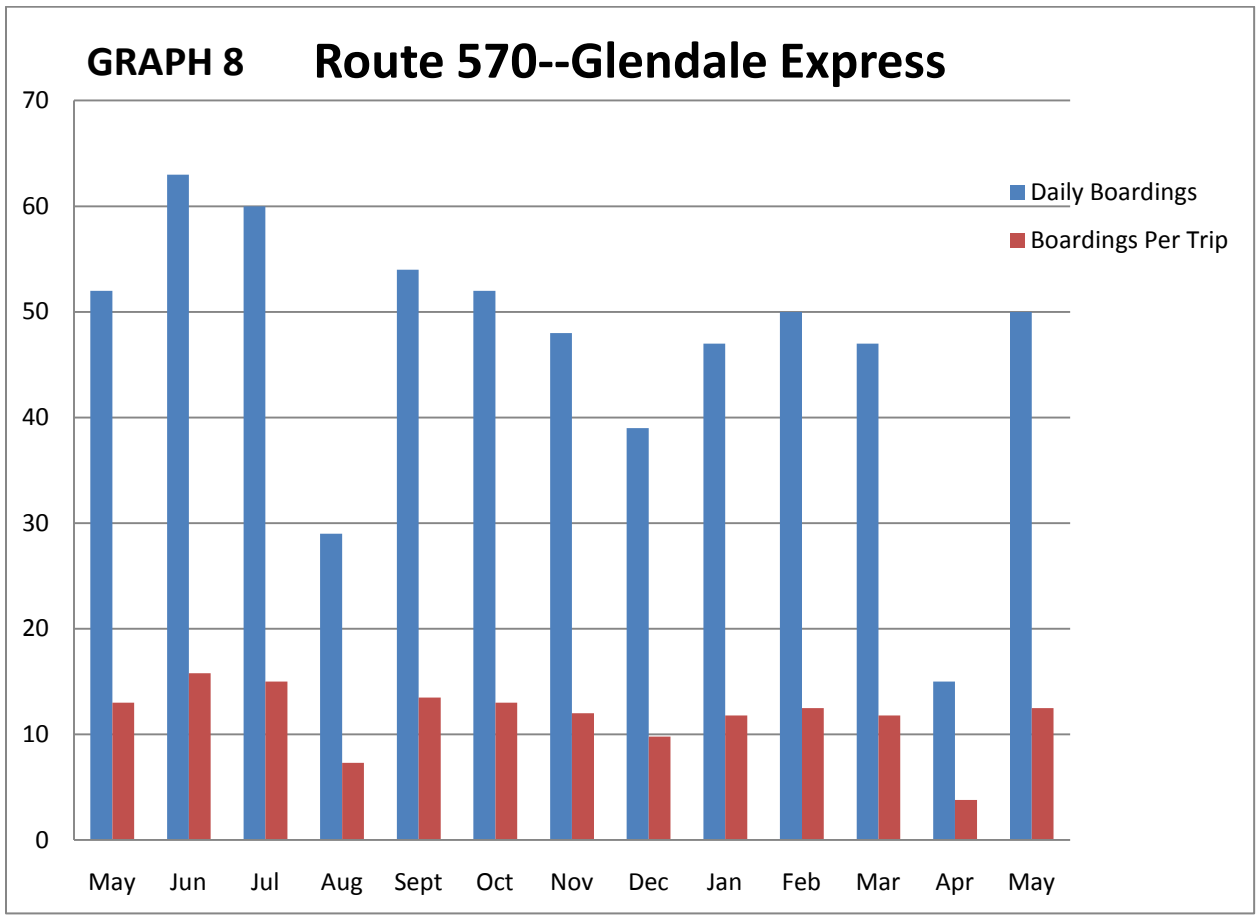

GRAPH 6A Route - 520 Tempe Express
Annual Boardings
40000
35000
30000
25000
20000
15000
10000
5000
0
FY 2005
FY 2006
FY 2007
FY 2008
FY 2009
Annual Boardings

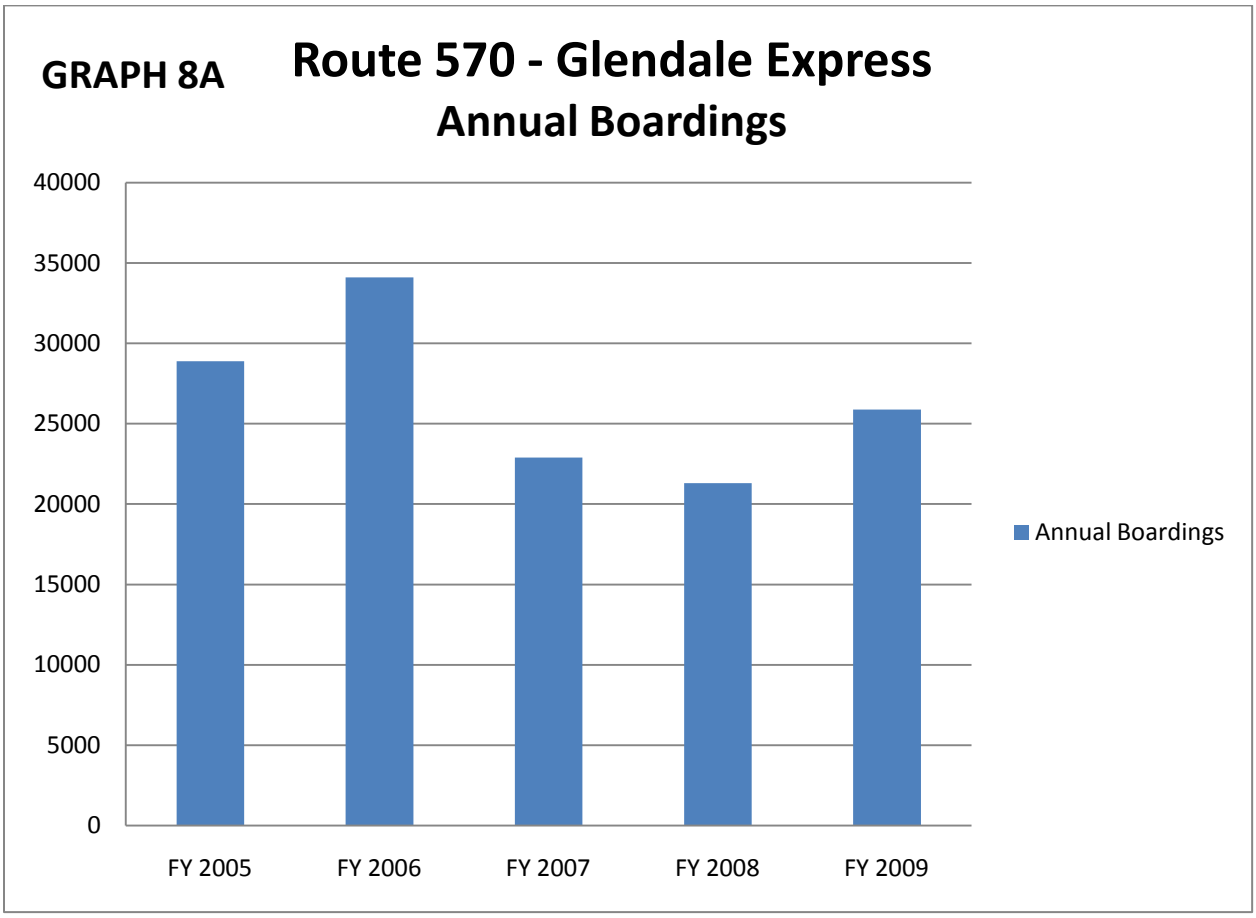
Route 536—Northeast Mesa/Tempe/ASU: Graph 12 shows that this route averages fewer than five boardings per trip. Graph 12A indicates that some trips are averaging only one rider per trip. This route is also one that was implemented in December, 2008. Valley Metro should consider what marketing resources are available that could enhance this route's visibility with the traveling public. Since this route serves the ASU Tempe campus—a major regional activity center—it is also recommended that a survey be conducted of university faculty, staff and students to identify whether or not the current schedule addresses their trip needs. Results of this survey would provide the agency with guidance on possible schedule modifications that may better address travel needs in this corridor.



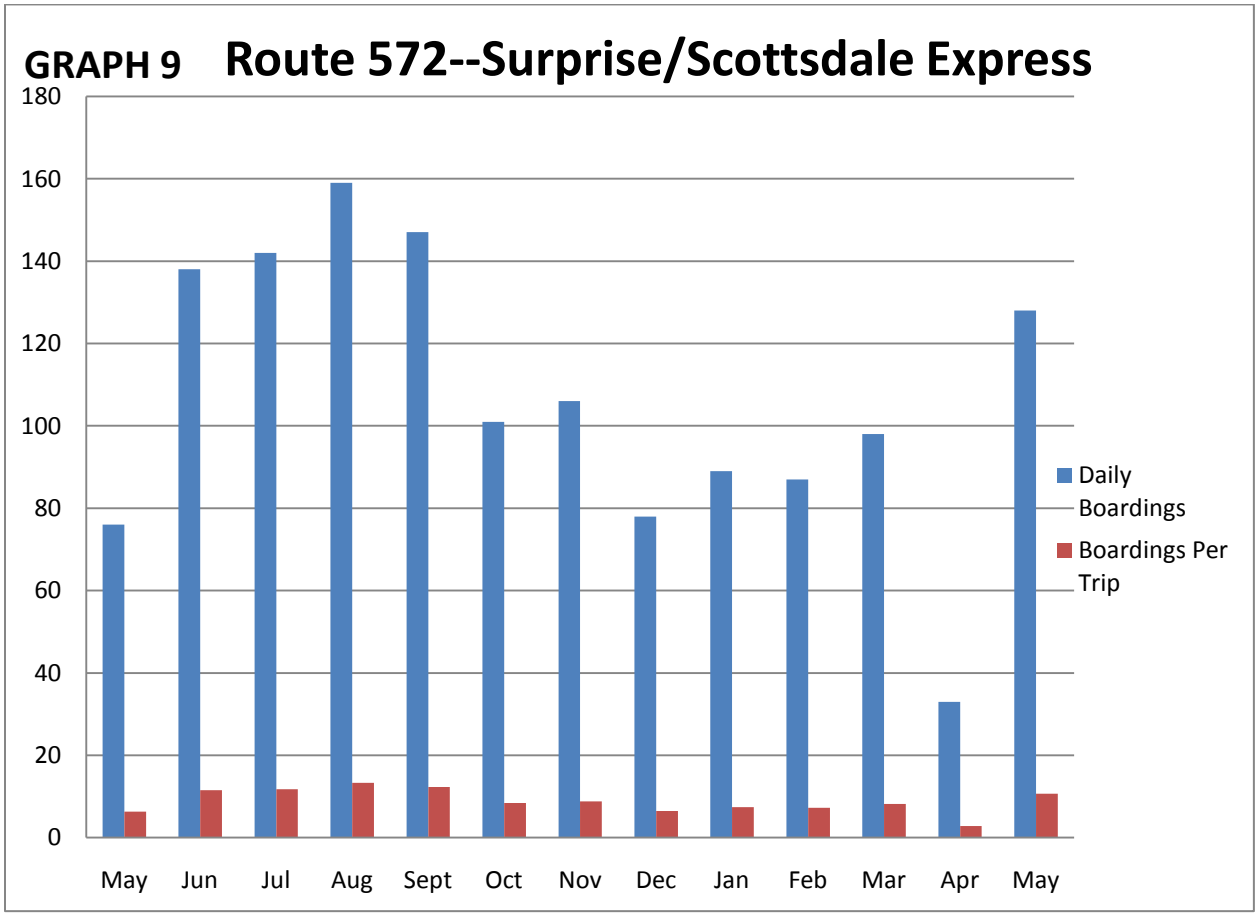

Route 536--Northeast Mesa/Tempe/ ASU
GRAPH 12A
Boardings By Trip
7
6
5
4
3
2
1
0
Start Time
635a
705a
735a
940a
1100a
1215p
315p
445p
515p
545p
6 Month Average

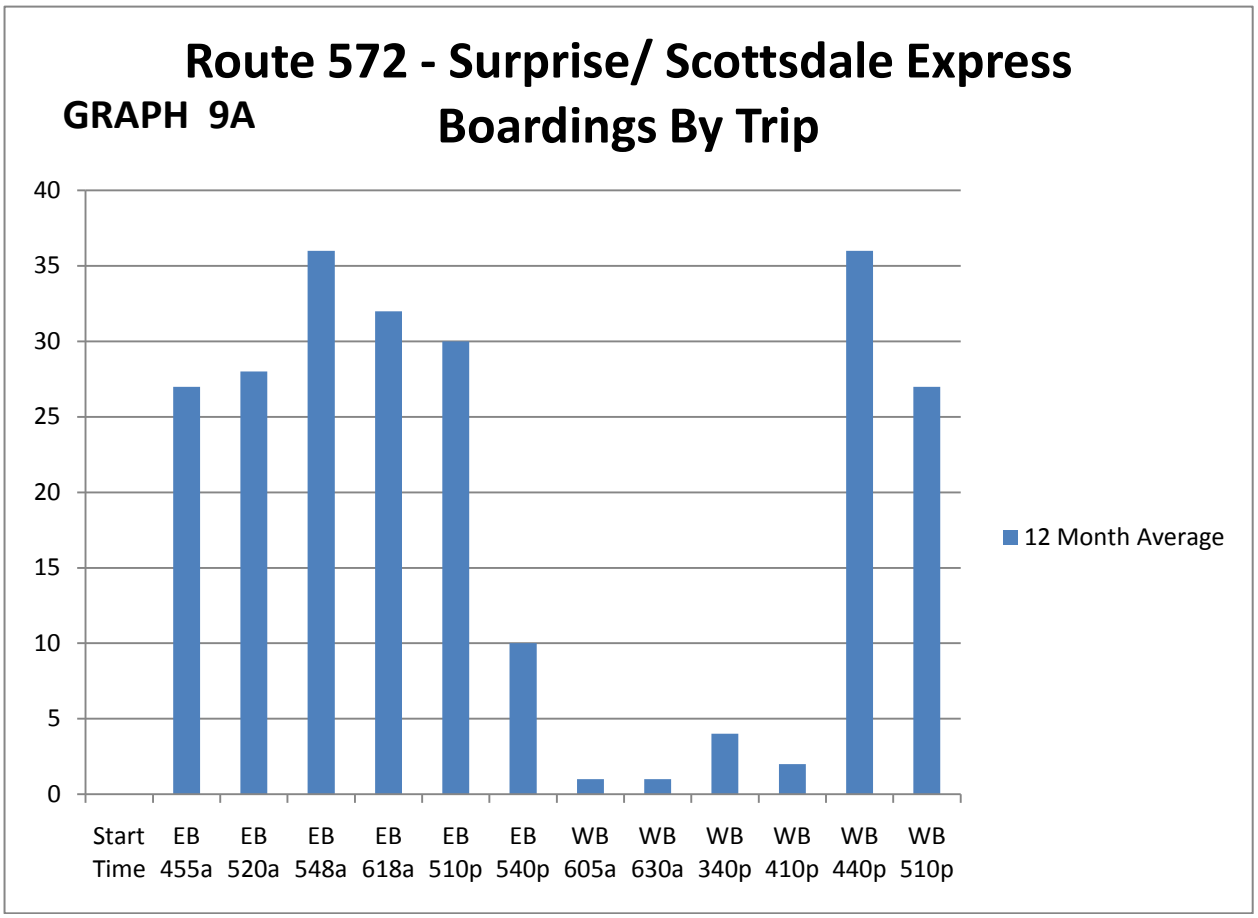
Route 570—Glendale Express: This is another older route that is not performing particularly well. Graph 8 shows that boardings per trip average a little over 10. The overall system average is about 21.5. Annual boardings data are presented in Graph 8B. For part of its route, the Glendale Express competes with Route 80 which operates in the Northern Avenue corridor. Express riders seeking a faster trip to central Phoenix have the option of utilizing the Grand Avenue Limited which provides both a shorter and faster trip due to its routing and limited number of stops. Staff recommends termination of the Glendale Express, and further recommends adding one in-bound and one out-bound trip to the Grand Avenue Limited.



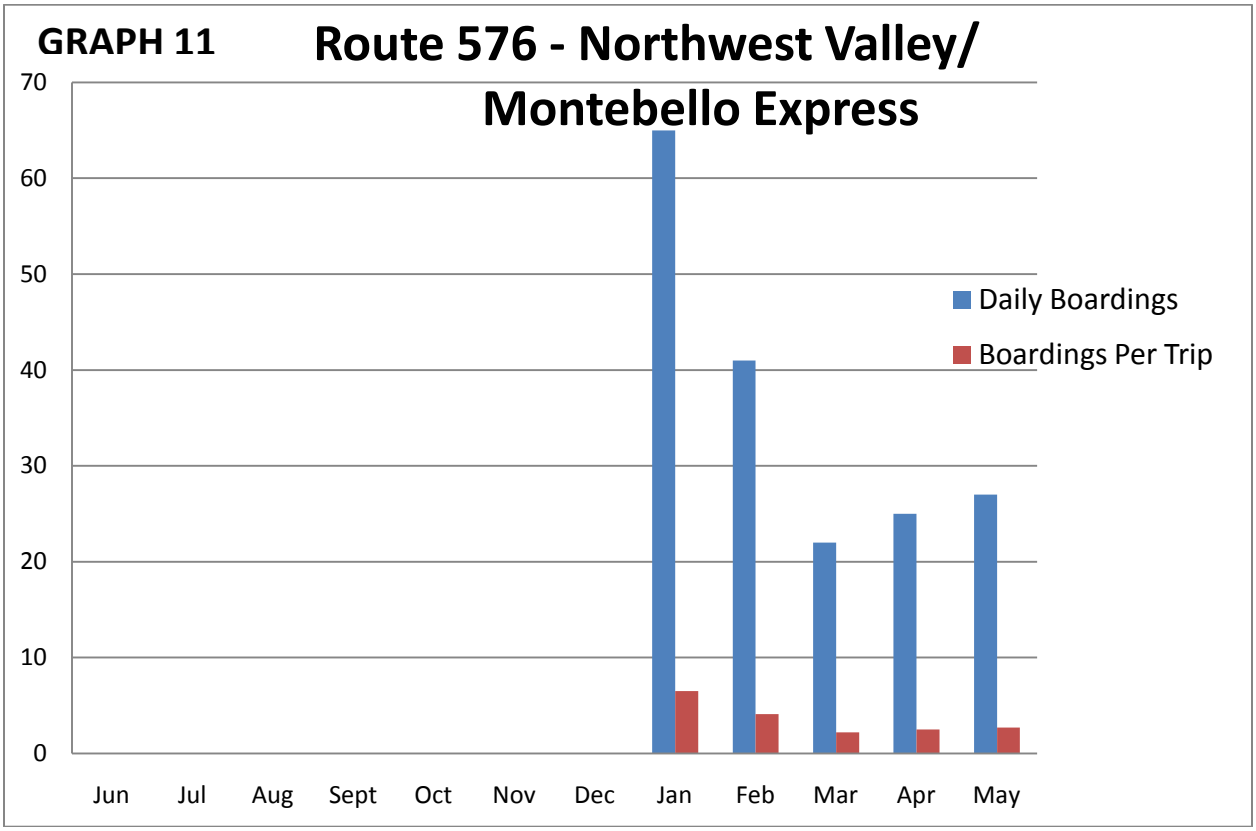

GRAPH 8A
Route 570 - Glendale Express
Annual Boardings
40000
35000
30000
25000
20000
15000
10000
5000
0
FY 2005
FY 2006
FY 2007
FY 2008
FY 2009
Annual Boardings

Route 572—Surprise/Scottsdale Express: Graph 9 indicates that this route is attracting only about 10 boardings per trip on average. This route was implemented in July 2008 and includes some reverse commute trips. In order to find out what going on with this route, Graph 9A was developed to show average boarding per individual trip. It shows that some trips are doing fairly well, but that the reverse commute westbound morning and early afternoon trips are performing poorly. Staff recommends that the reverse commute trips for this route be eliminated and that additional peak direction trips be considered for this route. To avoid costs associated with the excessive dead heading that would result, staff further recommends that the feasibility of interlining this route with Route 511 be evaluated.

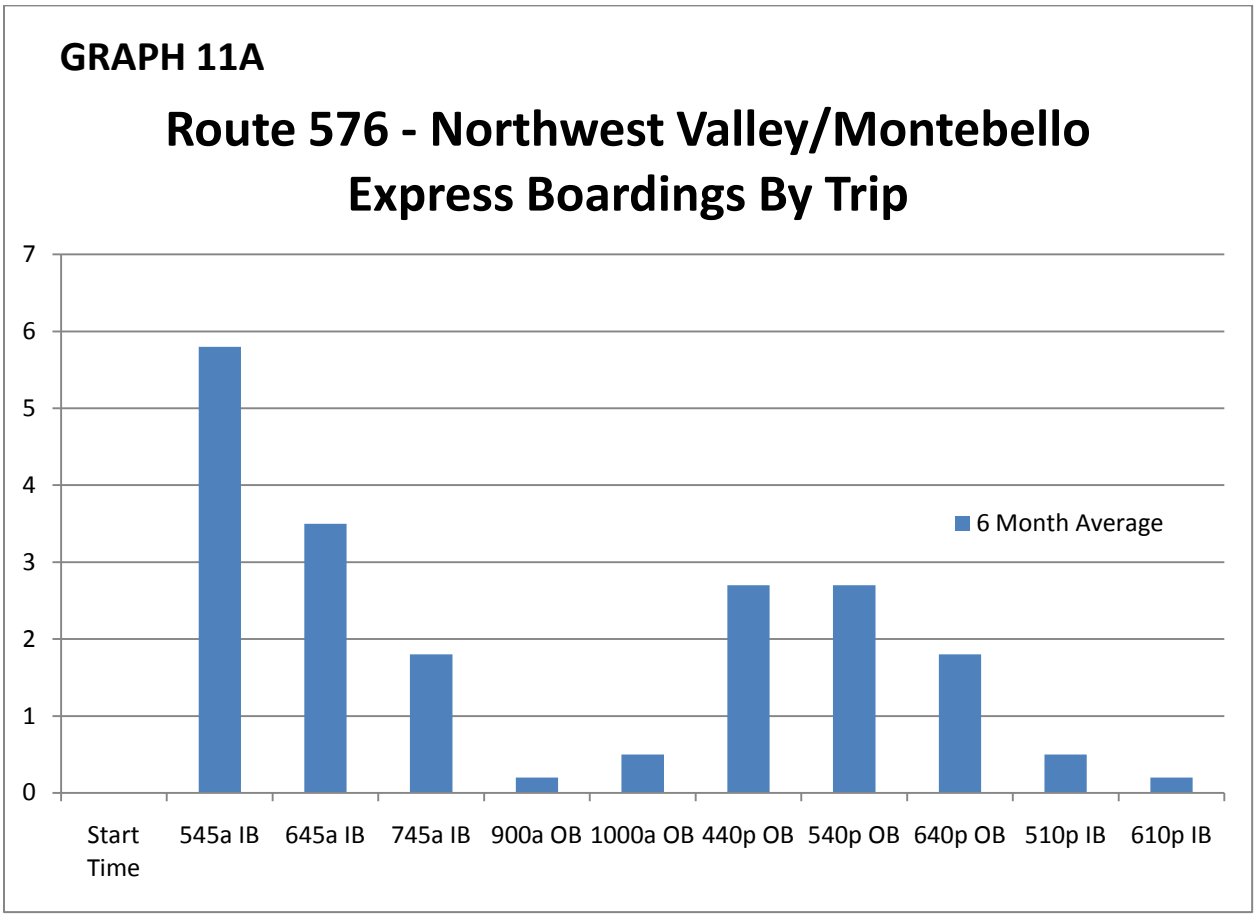



Route 572 - Surprise/ Scottsdale Express
GRAPH 9A
Boardings By Trip
40
35
30
25
20
15
10
5
0
Start Time
EB 455a
EB 520a
EB 548a
EB 618a
EB 510p
EB 540p
WB 605a
WB 630a
WB 340p
WB 410p
WB 440p
WB 510p
12 Month Average

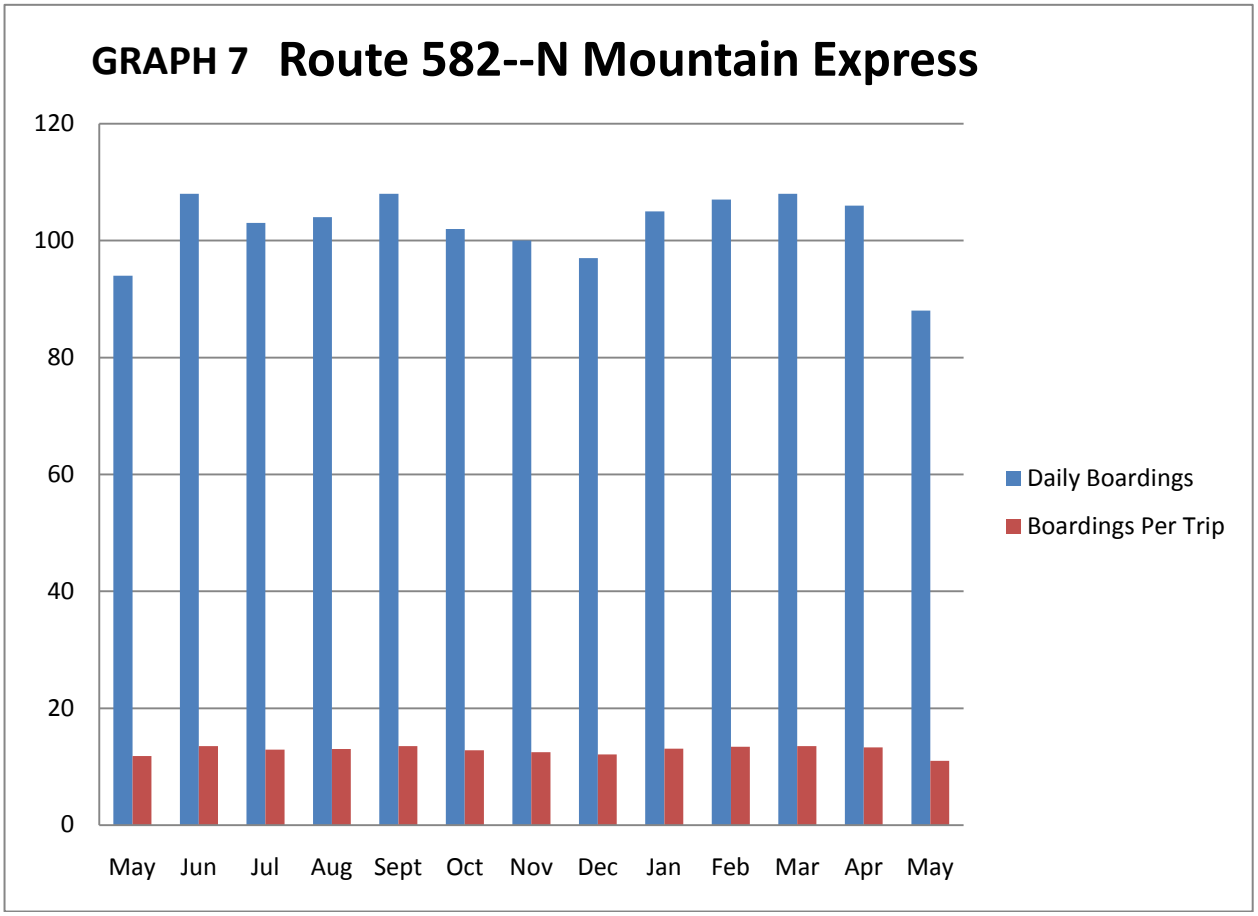
Route 576—Northwest Valley/Montebello Express: This route was also implemented in December 2008. Graph 11 shows that average boardings and boardings per trip are very low, and Graph 11A shows that the reverse commute trips have almost no riders. Although this route is less than two years old, elimination of reverse commute trips should be considered. Additional peak direction trips should be considered if fleet is available. Staff further recommends the addition of a stop at the I-17/Bell Road Park & Ride as this would address additional peak travel needs within the corridors of I-17, Camelback (through connection to METRO light rail), and north Central Avenue (through connection to METRO light rail).

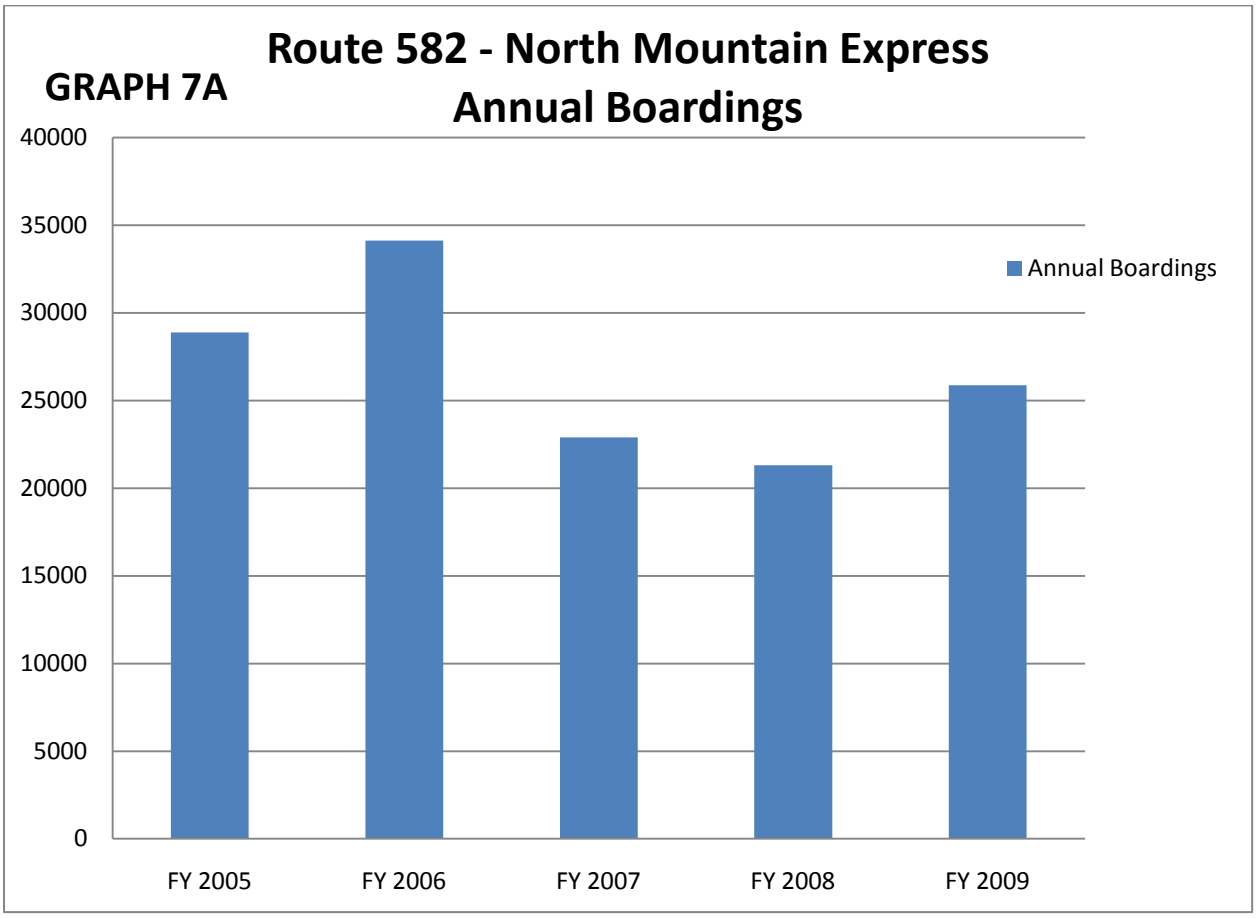


GRAPH 11A


Route 576 - Northwest Valley/Montebello
Express Boardings By Trip
7
6
5
4
3
2
1
0
6 Month Average
Start Time
545a IB
645a IB
745a IB
900a OB
1000a OB
440p OB
540p OB
640p OB
510p IB
610p IB

Route 582—North Mountain Express: Graph 7 shows that this older route has performed poorly for some time. Although the route attracts approximately one hundred riders per day, it averages only around 10 or 12 boarding per trip. The overall system average is about 21.5. Annual boarding data presented in Graph 7B also indicate a decline in ridership over time. This trend reflects the impact of competing express service, such as Route 590 and the I-17 RAPID. Both of these routes generally operate within this same commute corridor and offer faster commute options to central Phoenix. Since these competing travel options apparently better address commute travel demand within the corridor, the planning staff recommends termination of Rt. 582. To help alleviate the impact of this, staff also recommends that a stop at the Bell Road Park & Ride be considered for Rt. 576. This would address any Rt. 582 riders seeking to access employment centers along north Central Avenue through a connection to METRO Light Rail at the Montebello Station at 19th Avenue.




GRAPH 7A
Route 582 - North Mountain Express
Annual Boardings
40000
35000
30000
25000
20000
15000
10000
5000
0
FY 2005
FY 2006
FY 2007
FY 2008
FY 2009
Annual Boardings

Express/RAPID Route Recommendations

In developing recommendations, planning staff gave special consideration to routes that have operated for less than two years. This is in line with the Service Effectiveness and Efficiency Study (SEES) recommendation that a new route be given two years to mature before being considered for alteration or termination under the performance measures. The maturation recommendation recognizes that new routes take time to build ridership, especially in areas where little or no transit service previously existed.

Based on the previously discussed service performance evaluation the planning staff recommend that the following routes be considered for termination:

- Route 520—Tempe Express
- Route 582—North Mountain Express
- Route 570—Glendale Express

Elimination of these three routes could result in an annual cost saving of $717,000.

Despite the two-year maturation recommendation of the SEES, another recommendation resulting from this analysis is to consider the elimination of the four reverse commute trips on Route 572 (Surprise/Scottsdale Express). The amount of cost savings that would be realized may be minimal since dead heading would increase with the loss of the revenue reverse commute trips. To minimize the resulting dead heading, interlining of this route with Rt. 511 should be explored.

Planning staff also recommends identifying what marketing resources are available for the promotion of new express routes to increase their visibility to the traveling public. Several of these routes include features that have not previously existed in the region (i.e. bi-directional service, suburb to suburb commuting, arterial BRT, etc.). Educating the public on these new travel options could go a long way to increasing the use of these services by the travelling public.

Estimated Annual Savings From Service Reduction

Route	Contractor	Rate Per Mile	Daily Miles	Annual Miles	Annual Cost	Farebox Revenue	Estimated Annual Net Savings
Route 520--Tempe Express	Veolia Tempe	$5.82	156.3	39,856.5	$232,000	$23,000	$209,000
Route 570--Glendale Express	First Transit	$8.21	74.1	18,895.5	$155,000	$16,000	$139,000
Route 582--N Mountain Express	Veolia Phoenix	$11.05	145.5	37,102.5	$410,000	$41,000	$369,000
							$717,000