

# Draft Short Range Transit Program

FY 2008/09 – 2013/14

Prepared for:  
Regional Public Transportation Authority





# DRAFT SHORT RANGE TRANSIT PROGRAM

FY 2008/09 – 2013/14

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# DRAFT SHORT RANGE TRANSIT PROGRAM: FY 2008/09 – FY 2013/14

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	1
WHY A SHORT RANGE TRANSIT PROGRAM? .....	1
WHAT IS THE RELATIONSHIP OF THE SHORT RANGE TRANSIT PROGRAM TO OTHER REGIONAL TRANSIT PROGRAM DOCUMENTS AND PROCESSES? .....	1
WHAT ARE THE CHARACTERISTICS OF THE REGION? .....	2
WHAT TRANSIT SERVICES AND FACILITIES ARE PROVIDED IN THE REGION? .....	3
WHAT REGIONAL TRANSIT INVESTMENTS ARE PLANNED IN THE NEXT 5 YEARS? .....	8
1.0 SHORT RANGE TRANSIT PROGRAM INTRODUCTION.....	13
1.1 REGIONAL PUBLIC TRANSPORTATION AUTHORITY/VALLEY METRO AND MEMBER CITIES—BACKGROUND AND TRANSIT FUNDING INITIATIVES .....	14
1.2 RELATIONSHIP TO OTHER PLANS .....	14
1.3 REGIONAL DEMOGRAPHICS.....	14
1.4 TRANSIT PASSENGER CHARACTERISTICS .....	17
1.5 TRANSIT AND EQUITY.....	19
2.0 TRANSIT SERVICE EVALUATION .....	22
2.1 SERVICE GOALS AND STANDARDS .....	23
2.2 FIXED ROUTE .....	23
2.2.1 Service Characteristics.....	23
2.2.2 Funding Sources.....	27
2.2.3 Private Contractors .....	27
2.2.4 Comparison of Fixed Route Performance Data .....	27
2.2.5 Fixed Route On Time Performance.....	28
2.2.6 Fixed Route Vehicle Inventory.....	29
2.2.7 Arterial Bus Rapid Transit Service .....	29
2.3 HIGH CAPACITY TRANSIT .....	30
2.4 SHUTTLE AND CIRCULATOR.....	30
2.5 REGIONAL CONNECTORS .....	32
2.6 PARATRANSIT.....	32
2.7 VANPOOL.....	32
3.0 EXISTING & PLANNED TRANSIT CAPITAL INFRASTRUCTURE .....	35
3.1 PASSENGER AND SUPPORT FACILITIES .....	35
3.1.1 On-Street Passenger Facilities .....	35
3.1.2 Park-and-Ride Facilities.....	35
3.1.3 Passenger Transfer Facilities & Major Park-and Rides .....	39
3.2 MAINTENANCE AND OPERATIONS FACILITIES .....	39
3.2.1 Existing Publicly Owned Transit Only Operations and Maintenance Facilities .	39
3.2.2 Planned Operations and Maintenance Facilities .....	46
3.3 ROADWAY ENHANCEMENTS .....	47
3.3.1 Existing and Planned HOV Lanes and Ramps .....	47
3.3.2 Arterial Street Improvements.....	50
4.0 TRANSPORTATION DEMAND MANAGEMENT.....	50
4.1 SHARETHERIDE.COM .....	50
4.2 VANPOOL PROGRAM.....	50
4.3 TRIP REDUCTION PROGRAM ASSISTANCE .....	50
4.4 CLEAN AIR CAMPAIGN.....	51

4.5	TRANSIT EDUCATION PROGRAM.....	51
4.6	TRANSPORTATION COORDINATOR ALLIANCES—ASSISTANCE .....	51
4.7	ALTERNATIVE WORK SCHEDULES/TELECOMMUTE PROGRAM—ASSISTANCE ..	51
5.0	REGIONALLY FUNDED SHORT RANGE TRANSIT IMPROVEMENTS.....	53
5.1	REGIONALLY FUNDED TRANSIT OPERATING IMPROVEMENTS.....	53
5.1.1	Funded Regional Transit Operating Improvements FY 2009 through FY 2014 .....	53
5.2	Comparison of Funded Operating Improvements and Implementation (FY 2009) .....	53
5.3	Considerations for Regionally Funded Transit Operating Improvements FY 2010 through FY 2014 .....	53
5.3.1	Transit Ridership Projections for New Regionally Funded Routes .....	59
5.3.2	Regionally Funded Service Adjustments and Preliminary Thresholds.....	60
5.4	CAPITAL IMPROVEMENTS .....	62
5.4.1	Funded Regional Transit Facility Improvements FY 2009 through FY 2014 ....	62
5.4.2	Comparison of Funded Transit Facility Investments and Implementation (FY 2009) .....	63
5.4.3	Considerations for Regionally Funded Transit Facility Investments FY 2010 through FY 2014.....	63
5.4.4	Funded Regional Transit Expansion Vehicles: FY 2009 through FY 2014.....	63
5.4.5	Comparison of Funded Regional Fixed Route Transit Vehicles and Implementation (FY 2009) .....	66
5.5	REGIONAL PLANNING STUDIES AND RELATED PROJECTS.....	67
6.0	REGIONAL TRANSIT FUNDING.....	67
6.1	REGIONAL FIXED ROUTE BUS & PARATRANSIT FUNDING .....	67
6.1.1	Revenues.....	67
6.1.2	Expenditures .....	68
6.2	REGIONAL HIGH CAPACITY TRANSIT CAPITAL FUNDING .....	70
6.2.1	Revenues.....	70
6.2.2	Expenditures .....	72
6.3	REGIONAL TRANSIT FINANCING.....	73
APPENDIX A	.....	74
APPENDIX B	.....	80
APPENDIX C	.....	86



## LIST OF TABLES

<b>Table ES-1:</b> Transit Services in the Region .....	3
<b>Table ES-2:</b> Annual Efficiency & Effectiveness Report Card .....	6
<b>Table ES-3:</b> Capital Facilities in the Region.....	7
<b>Table ES-4:</b> Planned Regional Operations Investments .....	9
<b>Table ES-5:</b> Regionally Funded Transit Facility Investments FY 2009 through FY 2014 .....	9
<b>Table ES-6:</b> Regional Bus Stop Funding FY 2009 through FY 2014 .....	10
<b>Table ES-7:</b> Planned Regional Expansion Vehicles .....	10
<b>Table 1-1:</b> Public Transit Milestones.....	15
<b>Table 1-2:</b> Population and Employment (2005-2020) .....	16
<b>Table 1-3:</b> Language Spoken at Home .....	18
<b>Table 2-1:</b> FY 2007 System Data .....	22
<b>Table 2-2:</b> Comparison of System-wide Data for Five-Year Period—2003 and 2007 .....	23
<b>Table 2-3:</b> Efficiency and Effectiveness Performance Measures Targets .....	24
<b>Table 2-4:</b> Comparison of Fixed Route <sup>1</sup> Data—2003, 2006 and 2007 .....	28
<b>Table 2-5:</b> Annual Boardings and Revenue Miles—FY 2008.....	28
<b>Table 2-6:</b> Comparison of Paratransit Data—2003, 2006 and 2007 .....	33
<b>Table 2-7:</b> Comparison of Vanpool Data—2003, 2006 and 2007 .....	34
<b>Table 3-1:</b> Existing Park-and-Ride Facilities .....	36
<b>Table 3-2:</b> Planned Publicly Owned Park-and-Ride Facilities .....	38
<b>Table 3-3:</b> Passenger Facilities and Transit Centers—FY 2007.....	41
<b>Table 3-4:</b> Planned Transit Centers and Transit Center Improvements .....	44
<b>Table 3-5:</b> Existing Publicly Owned Operations and Maintenance Facilities.....	46
<b>Table 3-6:</b> Planned Publicly Owned Operations and Maintenance Facilities .....	47
<b>Table 3-7:</b> Existing and Planned Freeway HOV Lanes .....	49
<b>Table 5-1:</b> Regionally Funded Transit Operations Investments FY 2009 and FY 2014.....	54
<b>Table 5-2:</b> Comparison of Funded Operating Improvements and Implementation (FY 2009).....	54
<b>Table 5-3:</b> Considerations for Regionally Funded Transit Operations Investments .....	55
FY 2010 through FY 2014 .....	55
<b>Table 5-4:</b> Example of the Density Score for Power Road Supergrid Route.....	60
<b>Table 5-5:</b> Ridership Estimates for New Regionally Funded Routes Through FY 2013/2014.....	61
<b>Table 5-6:</b> Regionally Funded Transit Facility Investments FY 2009 and FY 2014 .....	62
<b>Table 5-7:</b> Regional Bus Stop Funding FY 2009 through FY 2014.....	63
<b>Table 5-8:</b> Considerations for Regionally Funded Transit Facility Investments .....	64
FY 2009 through FY 2014 .....	64
<b>Table 5-9:</b> Planned Regional Expansion Vehicles.....	66
<b>Table 5-10:</b> Funded Regional Fixed Route Transit Vehicles FY 2010 through FY 2014 .....	66
<b>Table 5-11:</b> Comparison of Planned Regional Fixed Route Transit Expansion Vehicles and Vehicles Acquired (FY 2008 and FY 2009) .....	67
<b>Table 6-1:</b> Estimated Regional Fixed Route & Paratransit Revenues (in \$millions) .....	67
<b>Table 6-2:</b> Estimated Regional Fixed Route & Paratransit Expenditures FY 2009 - FY 2014.....	69
<b>Table 6-3:</b> Estimated Regional HCT Capital Revenues (in \$millions).....	71
<b>Table 6-4:</b> Estimated Regional HCT Capital Expenditures (in \$millions).....	72
<b>Table A-1:</b> FY 2007 Regional Transit System Data.....	75
<b>Table A-2:</b> Operations and Performance Data for FY 2003 through FY 2007 .....	76
<b>Table B-1:</b> Operations and Performance Data for FY 1995 through FY 2007 .....	81
<b>Table C-1:</b> Fixed Route Transit Service Historical Trends since FY 1985.....	87

## LIST OF FIGURES

<b>Figure ES-1:</b> Regional Transit Program Process .....	2
<b>Figure ES-2:</b> Local Routes Map—January 2007 .....	4
<b>Figure ES-3:</b> Express & RAPID Routes Map—January 2007 .....	5
<b>Figure 1-1:</b> Population Concentration Age 60 and Over .....	20
<b>Figure 1-2:</b> Population Age 5 and Over With Disability .....	20
<b>Figure 1-3:</b> Minority Population .....	21
<b>Figure 1-4:</b> Families in Poverty .....	21
<b>Figure 2-1:</b> Local Routes Map for January 2007 .....	25
<b>Figure 2-2:</b> Express & RAPID Routes Map for January 2007 .....	26
<b>Figure 2-3:</b> On Time Performance for City of Phoenix Fixed Route Service .....	29
<b>Figure 2-4:</b> High Capacity Transit Corridors .....	31
<b>Figure 2-5:</b> High Capacity Transit Corridors—Schedule .....	31
<b>Figure 3-1:</b> Existing and Planned Publicly Owned Park-and-Rides .....	37
<b>Figure 3-2:</b> Existing and Planned Transfer Facilities and Major Park-and-Rides .....	44
<b>Figure 3-3:</b> Existing Operations and Maintenance Facilities .....	47
<b>Figure 3-4:</b> HOV Facilities and Queue Jumpers .....	48
<b>Figure 6-1:</b> Estimated Regional Fixed Route & Paratransit Revenues FY 2009 - FY 2014 .....	68
<b>Figure 6-2:</b> Estimated Regional Fixed Route & Paratransit Expenditures (in \$millions) .....	70
<b>Figure 6-3:</b> Estimated Regional HCT Capital Revenues FY 2009 - FY 2014 .....	71
<b>Figure 6-4:</b> Estimated Regional HCT Capital Expenditures FY 2009 - FY 2014 .....	73

## 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] 2008/09 to 2013/14) and provides support for regional transit projects contained in the Maricopa Association of Governments Regional Transportation Plan (MAG RTP). 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<sup>1</sup> 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<sup>2</sup> 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

<sup>1</sup> Source: Maricopa Association of Governments, Socioeconomic Projections of Population, Housing, & Employment by Municipal Planning Areas and Regional Analysis Zones, May 2007.

<sup>2</sup> 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**

<b>Fixed Route</b>	
Number routes	65 local 17 express 4 RAPID 1 arterial bus rapid transit (BRT) <sup>1</sup> 9 shuttle 2 regional connectors
Total	97
Number vehicles	811
Hours of Operation:	
- Local/shuttles and circulators	Weekdays: Generally 5:00 AM-10:00 PM weekdays; some popular routes operate to midnight or 1:00 AM Weekends: Hours of service somewhat reduced
- Express and RAPID	Peak hours on weekdays only
- Regional connector	Limited number of daily stops
<b>Paratransit (Dial-a-Ride)</b>	
10 systems or services:	<ul style="list-style-type: none"> <li>- East Valley Dial-a-Ride - Peoria</li> <li>- El Mirage - Phoenix Dial-A-Ride</li> <li>- Glendale - Southwest Valley ADA</li> <li>- Maricopa County - Sun Cities (SCAT)</li> <li>- Paradise Valley ADA - Surprise</li> </ul>
	Operating hours, service eligibility requirements, transfer policies, fares vary by provider.
<b>Vanpool</b>	
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.
<b>Light Rail<sup>1</sup></b>	
Route:	20 miles within portions of Phoenix, Tempe, and west Mesa
Hours of operation:	Weekdays: 4:00 AM to midnight Weekends: 5:00 AM to 1:00 AM

<sup>1</sup>Light rail and arterial BRT are scheduled to begin revenue operations in late December 2008.

Figure ES-2: Local Routes Map—January 2007

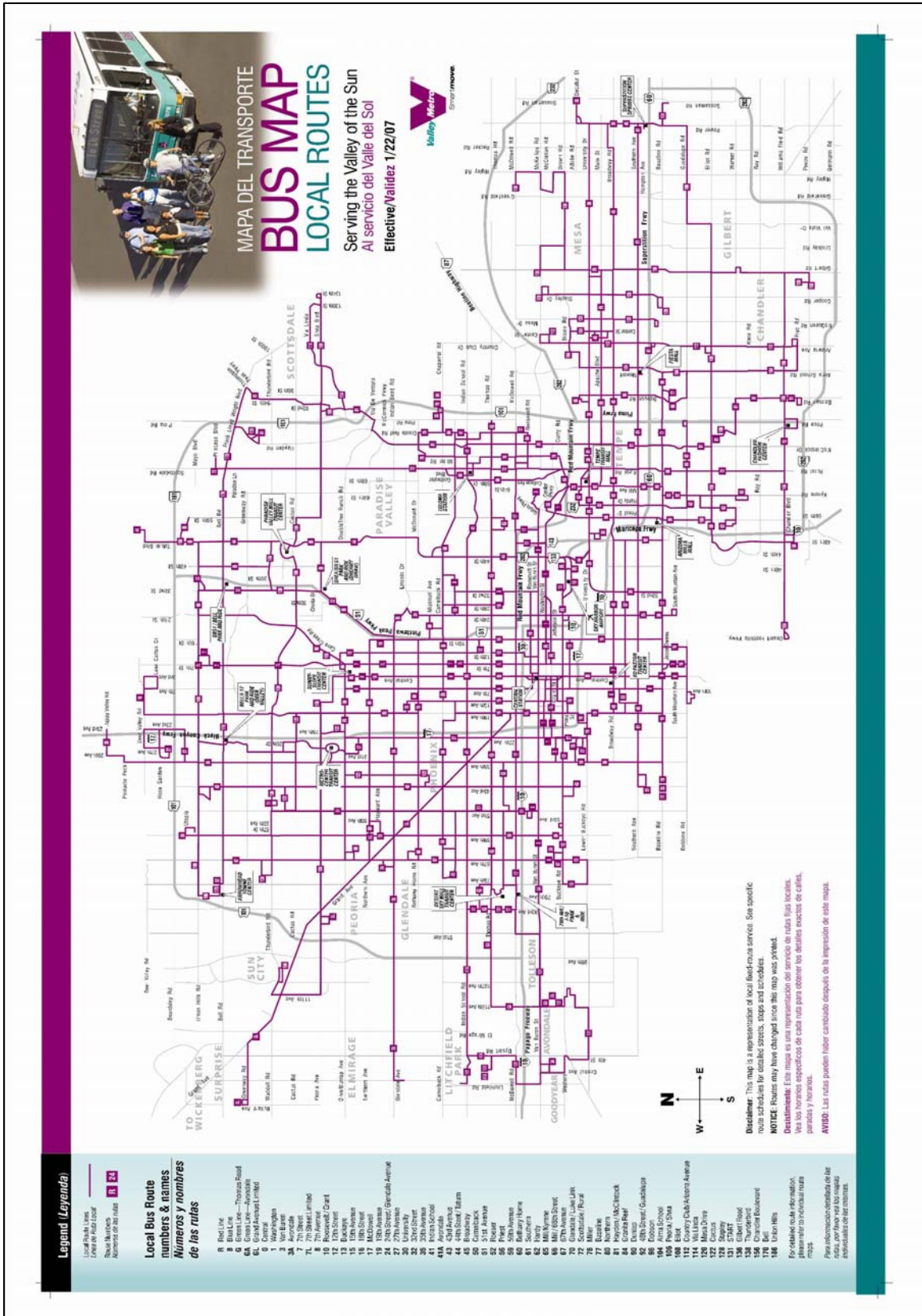
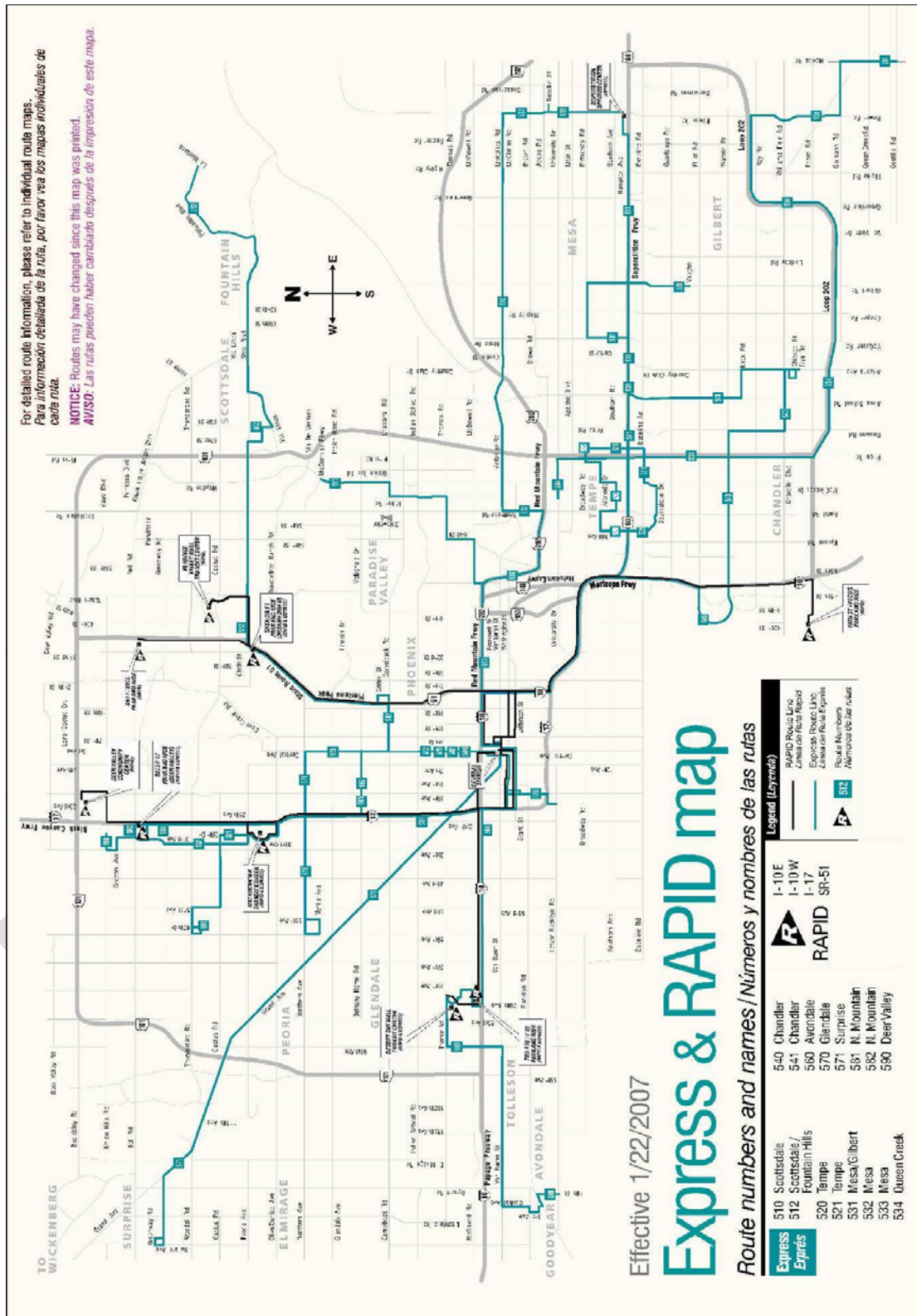


Figure ES-3: Express & RAPID Routes Map—January 2007



**Table ES-2: Annual Efficiency & Effectiveness Report Card**

FIXED ROUTE BUS, SYSTEMWIDE	TARGET	ACTUAL FY 2007	RAIL	TARGET	ACTUAL FY 2007
<b>Cost Efficiency/Effectiveness</b>			<b>Cost Efficiency/Effectiveness</b>		
Farebox Recovery Ratio <sup>1</sup>	25%	24.2%	Farebox Recovery Ratio <sup>1</sup>	25%	--
Operating Cost per Boarding	\$2.34	\$2.62	Operating Cost per Boarding	TBD	--
Subsidy (Net Opg Cost) per Boarding	\$1.76	\$1.99	Subsidy (Net Opg Cost) per Boarding	TBD	--
Cost per Revenue Mile	\$5.00	\$5.31	Cost per Revenue Mile	TBD	--
Average Fare	\$0.68	\$0.64	Average Fare	TBD	--
<b>Service Effectiveness</b>			<b>Service Effectiveness</b>		
Total Boardings (Number)	--	58,184,595	Total Boardings (Number)	7,827,000	--
Total Boardings (% increase compared to previous year)	3%	-1.14%	Boardings Avg. Weekday	26,090	--
Boardings per Revenue Mile	2.1	2.0	Boardings Avg. Sat.	N/A	--
On-time Performance	90%	91.5%	Boardings Avg. Sun./Holiday	N/A	--
<b>PARATRANSIT</b>			<b>Boardings per Vehicle Revenue Mile</b>		
<b>Cost Efficiency/Effectiveness</b>			<b>Boardings per Revenue Mile</b>		
Farebox Recovery Ratio <sup>1</sup>	5%	4.4%	Safety Incidents per 100,000 Vehicle Miles	N/A	--
Operating Cost per Boarding	\$28.87	\$31.97	Security Incidents per "x" Boardings	N/A	--
Subsidy (Net Opg Cost) per Boarding	\$27.37	\$30.57	On-time Performance	95%	--
Operating Cost per Revenue Hour	\$50.70	\$55.40	Miles between Failures	25,000	--
Average Fare	TBD	\$1.41	Customer Satisfaction <sup>3</sup>	89%	--
<b>Service Effectiveness</b>			<b>VANPOOL</b>		
Total Boardings (Number)	--	922,790	<b>Cost Efficiency/Effectiveness</b>		
Total Boardings (% increase compared to previous year)	3%	-1.71%	Farebox Recovery Ratio <sup>1</sup>	100%	115%
Boardings per Revenue Hour	1.76	1.73	Operating Cost per Boarding	\$1.71	\$1.63
On-time Performance	90%	95.4%	Subsidy (Net Opg Cost) per Boarding	\$0.00	-\$0.24
			Cost Per Revenue Mile	\$0.46	\$0.44
			Average Fare	\$1.85	\$1.87
			<b>Service Effectiveness</b>		
			Total Boardings	--	1,418,466
			Boardings per Revenue Mile	0.27	0.27
			Increase in Net Vanpools	24	19

<sup>1</sup>Farebox recovery ratio = % of operating costs covered by passenger revenues.

<sup>2</sup>Source: Valley Metro

<sup>3</sup>Based on annual telephone survey of % of respondents rating rider satisfaction as "excellent" or "good".

<sup>4</sup>Light rail starter line begins operations in December 2008 so no data is available for FY 2007.

TBD = To Be Determined    N/A = Not Available

## 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**

<b>Passenger &amp; Support Facilities</b>	
On-Street Passenger	7,480 bus stops (43% with shelters; 1,186 with bench only) 15 BRT stops in Mesa Main Street Corridor <sup>1</sup> 28 LRT stops in Phoenix, Tempe, Mesa <sup>1</sup>
Park-and-Ride	Existing: 20 publicly-owned 30 joint-use with agreement with private property owners 50 facilities with 7,082 spaces Planned <sup>2</sup> : 19 publicly-owned
Transit Centers	Existing: 15 existing Planned <sup>2</sup> : 13 new 3 to be expanded
<b>Maintenance &amp; Operations Facilities</b>	
	Existing: 5 fixed route/demand response vehicles 1 light rail <sup>1</sup> Planned <sup>2</sup> : 2 new 3 upgrades to existing 1 light rail
<b>Roadway Enhancements</b>	
High Occupancy Vehicle (HOV) Lanes	Existing: 152 lane miles Under construction: 42 lane miles (SR 51 and Loop 101) Planned <sup>2</sup> : 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 <sup>1</sup>
- Arterial BRT (planned) <sup>2</sup>	4
<b>Regional Transit Fleet</b>	
Fixed Route	811 vehicles
Light Rail <sup>1</sup>	50 vehicles

<sup>1</sup>Operations begin late 2008 concurrent with initiation of the LRT Starter Line and arterial BRT operations.

<sup>2</sup>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. Several key facts about the planned regional transit operations investments between FY 2009 and FY 2014 are identified below:

- 13 supergrid routes, 12 express/BRT routes, and one light rail extension are included as improvements.
- Of these, one supergrid route, six express/BRT routes, and the light rail extension are totally new services.
- 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.
- Eight bus routes (three supergrid and five express/BRT) were programmed to be regionally funded beginning in FY 2009. Six routes were implemented in July 2008. However, three express routes were implemented at a service level below that identified in the Transit Life Cycle Program Update (TLCP). Two of the express routes will be funded at full service levels in December 2008 when the LRT starter line opens. Full implementation of the third route (Papago Freeway Connector – operated as the “Goodyear Express”) 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 2014. 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
2009	3 supergrid 5 express/BRT
2010	2 supergrid 0 express/BRT
2011	1 supergrid 2 express/BRT
2012	2 supergrid 1 express/BRT
2013	3 supergrid 2 express/BRT
2014	2 supergrid 2 express/BRT 1 light rail extension
<b>Total 2009-2014</b>	<b>13 supergrid</b> <b>12 express/BRT</b> <b>1 light rail extension</b>

Source: Valley Metro Transit Life Cycle Program Update, 2008.

### Planned Regionally Funded Capital Improvements

A summary of the transit capital improvements planned between FY 2009 and 2014 is presented in Table ES-5. Table ES-6 identifies the regional funds programmed in the FY 2008 TLCP Update for regional bus stop construction and upgrades.

**Table ES-5: Regionally Funded Transit Facility Investments FY 2009 through FY 2014**

Facility	Pre-Design (FY)	Design (FY)	Land (FY)	Construction/ Open (FY)
Happy Valley Rd & I-17 Park-and-Ride	2009	2009	2009	2009
Grand/Surprise Park-and-Ride	2009	2009	2009	2009
Cactus Rd & Loop 101 Park-and-Ride	2009	2009	2009	2009
Price Freeway & Loop 202 Park-and-Ride (Chandler Tumbleweed PNR)	2009	2009	2009	2009
19th Ave & Camelback Rd Transit Center	2009	2009	2009	2009
South Tempe Transit Center	2009	2009	2009	2009
Downtown Chandler Transit Center	2009	2009	2009	2010
Mesa Downtown Transit Center	2009	2010	2010	2011
Country Club Dr & US 60 (Superstition Freeway) Park-and-Ride	2009	2009	2009	2010
South Chandler Transit Center	2009	2010	2010	2011
East Buckeye Park-and-Ride	2009	2010	2010	2011
Metrocenter Rehabilitation / Expansion	2009	2010	NA	2011
Arrowhead Park-and-Ride <sup>1</sup>	2011	2012	2012	2013
Glendale/Grand Park-and-Ride	2011	2012	2012	2013
Glendale / Grand Transit Center	2011	2012	2012	2013
Central Station Rehabilitation / Expansion	2010	2013	NA	2014
Phoenix Heavy Maintenance Facility	2011	2013	2013	2014
Phoenix South Fixed Route O&M Rehabilitation	2014	2014	NA	2015
Mesa Fixed Route O&M Rehabilitation	2014	2014	NA	2015

Note: Phoenix Paratransit O&M facility was originally programmed in the TLCP to be constructed and open in FY 2013. The facility was delayed to a year outside of the TLCP as identified in the FY 2008 TLCP Update. The facility is eligible to be reinstated if regional revenues become available.

<sup>1</sup>Facility was switched with the Peoria/Grand Park-and-Ride

Source: 2008 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 <sup>3</sup>
2009	\$5,468,835 <sup>4</sup>
2010	\$1,672,137
2011	\$1,722,301
2012	\$1,773,970
2013	\$1,827,189
2014	\$1,882,004
<b>Total</b>	<b>\$14,346,436</b>

Source: 2008 Valley Metro Transit Life Cycle Program Update

Key facts about the programmed transit facility investments include:

- Planned capital investments for the fiscal years 2009 through 2014 include seven transit centers, eight park-and-ride facilities, three operations and maintenance facilities, and new/upgraded regional bus stops. Improvements include expansion and/or rehabilitation of two transit centers and two operations and maintenance facilities.
- Several of the facilities programmed in the FY 2008 TLCP Update for implementation in FY 2008 have been delayed to FY 2009. Six transit facility improvements are programmed to open in FY 2009, including some of those delayed from FY 2008. All six of the facilities programmed for completion in FY 2009 will not be open for service until at least FY 2010.

### **Planned Regionally Funded Transit Vehicle Acquisitions**

A total of 298 transit vehicles are programmed for services planned to be implemented through FY 2014. The largest category, fixed route buses, account for 169 of the vehicles. The fixed route fleet acquired in FY 2008 and FY 2009 was 34 less than that identified in the TLCP. A benefit of acquiring fewer vehicles includes long-term savings through reducing future replacement vehicle requirements. 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 2010, it will be programmed for purchase during FY 2009.

**Table ES-7: Planned Regional Expansion Vehicles**

Fiscal Year For Acquisition	Fixed Route	Paratransit	Rural	Vanpool
2010	18	0	0	25
2011	25	0	0	25
2012	33	0	0	25
2013	42	0	4	25
2014	51	0	0	25
<b>Total</b>	<b>169</b>	<b>0</b>	<b>4</b>	<b>125</b>

Source: RPTA, 2008

<sup>3</sup> Funding subject to change based on annual budget.

<sup>4</sup> FY 2009 balance reflects bus stop funds unspent since start of TLCP. This was to allow for development of the Regional Bus Stop Study and associated fund disbursement methodology.



## **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.). 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 2013/14 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. Based on the FY 2008 TLCP Update, two bus program bond issuances valued at \$180.2 million and \$183.1 million were planned for FY 2008/09 and FY 2012/13 respectively to provide a positive annual cash flow 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 (S RTP) proposes transit service and capital improvements for implementation in Fiscal Years (FY) 2008/09 to 2013/14. 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 S RTP; RPTA/Valley Metro 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.

The S RTP 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**

The history of creation of RPTA and 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 is comprised of 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. Residents wishing to cross municipal boundaries must transfer to the other city's DAR service to complete the trip. On the other hand, 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) is nearing completion of construction of the first 20 miles of light rail transit (LRT) and will serve the cities of Phoenix, Tempe, and Mesa. LRT operations are scheduled to begin 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 Performance Management Analysis System (PMAS) Report. The Transit Life Cycle Program (TLCP) feeds into the SRTP, and the SRTP then feeds into the next 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 is composed of 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	✓	<p>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:</p> <ul style="list-style-type: none"> <li>• A "Supergrid" fixed route bus system providing consistent levels of service throughout the region;</li> <li>• Bus rapid transit (BRT) service on the region's freeway network and selected arterials;</li> <li>• More than 27 miles of light rail transit or other high capacity transit route extensions to the 30 miles being funded from other sources.</li> </ul>

**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%
<b>County Total</b>	<b>3,681,025</b>	<b>5,230,300</b>	<b>42.1%</b>	<b>1,747,532</b>	<b>2,788,101</b>	<b>59.5%</b>

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 live generally 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 75<sup>th</sup> 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 67<sup>th</sup> Avenue and the SR-51 freeway; 2) Near the Loop 202 (Red Mountain Freeway) from approximately the SR-51 freeway to 48<sup>th</sup> 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<sup>5</sup>, 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.

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<sup>5</sup> Valley Metro/Regional Public Transportation Authority 2007 Origin-Destination Survey Draft 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

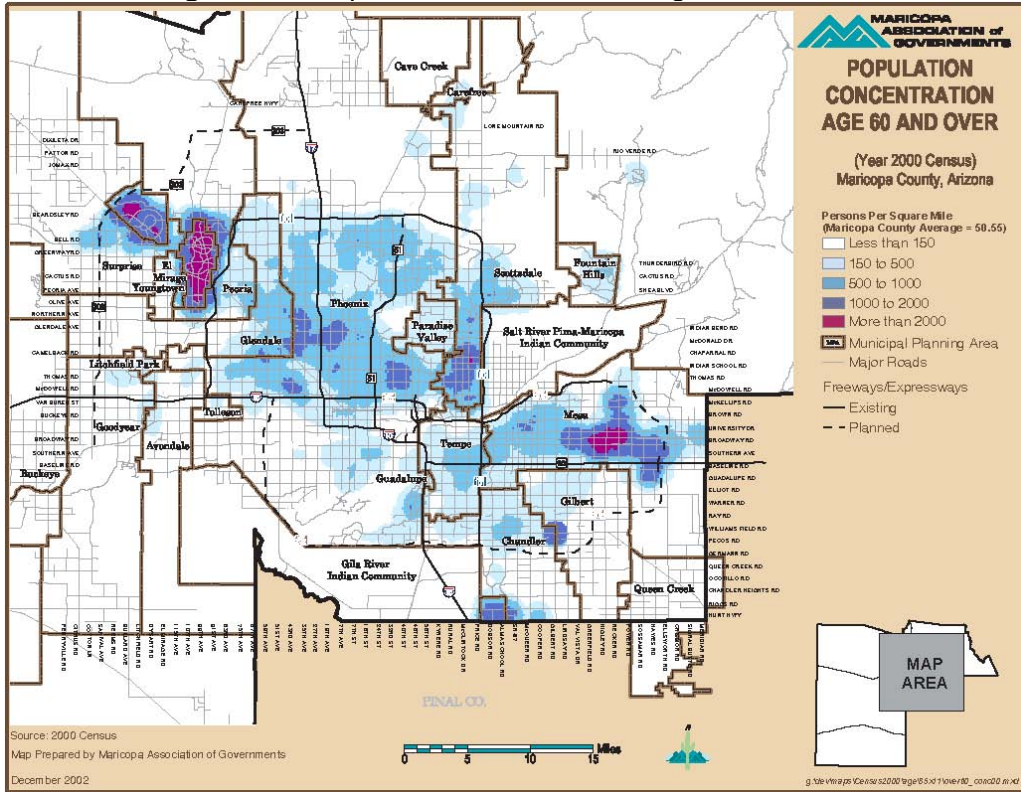


Figure 1-2: Population Age 5 and Over With Disability

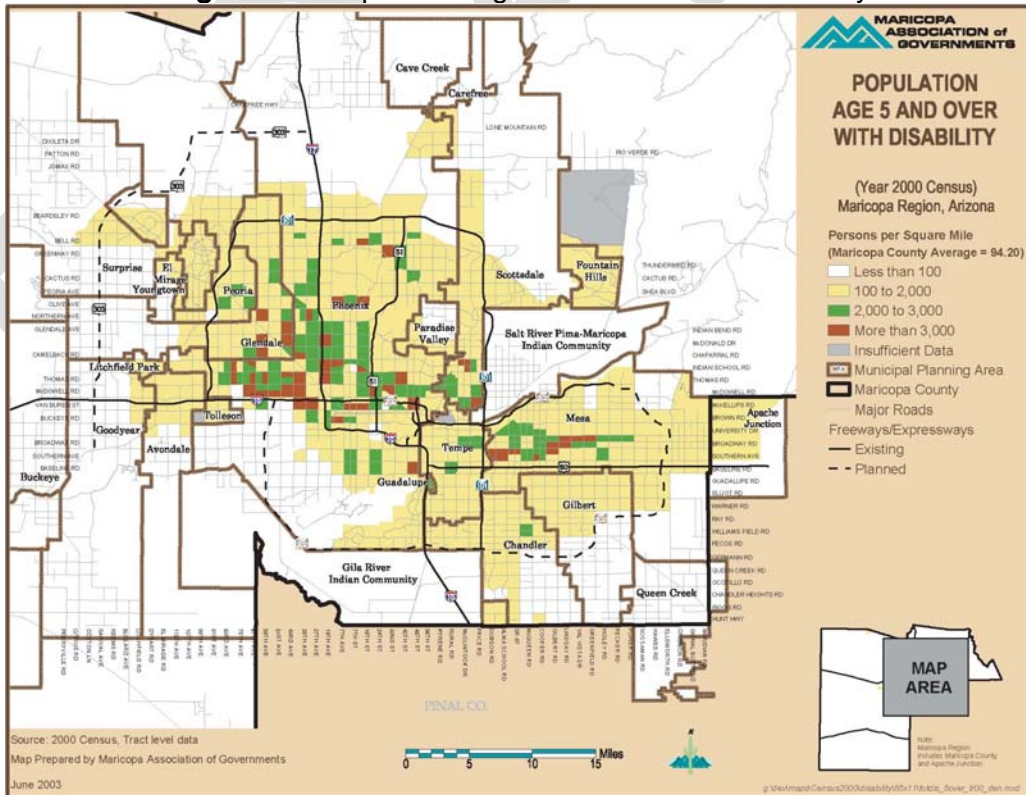


Figure 1-3: Minority Population

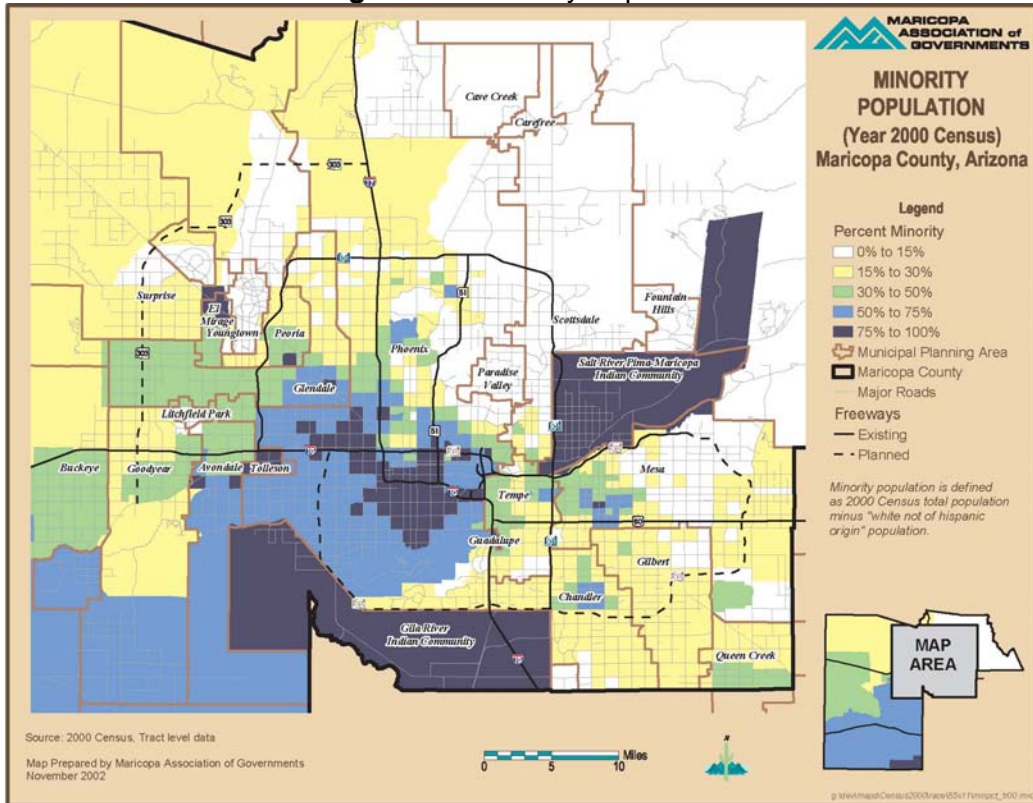
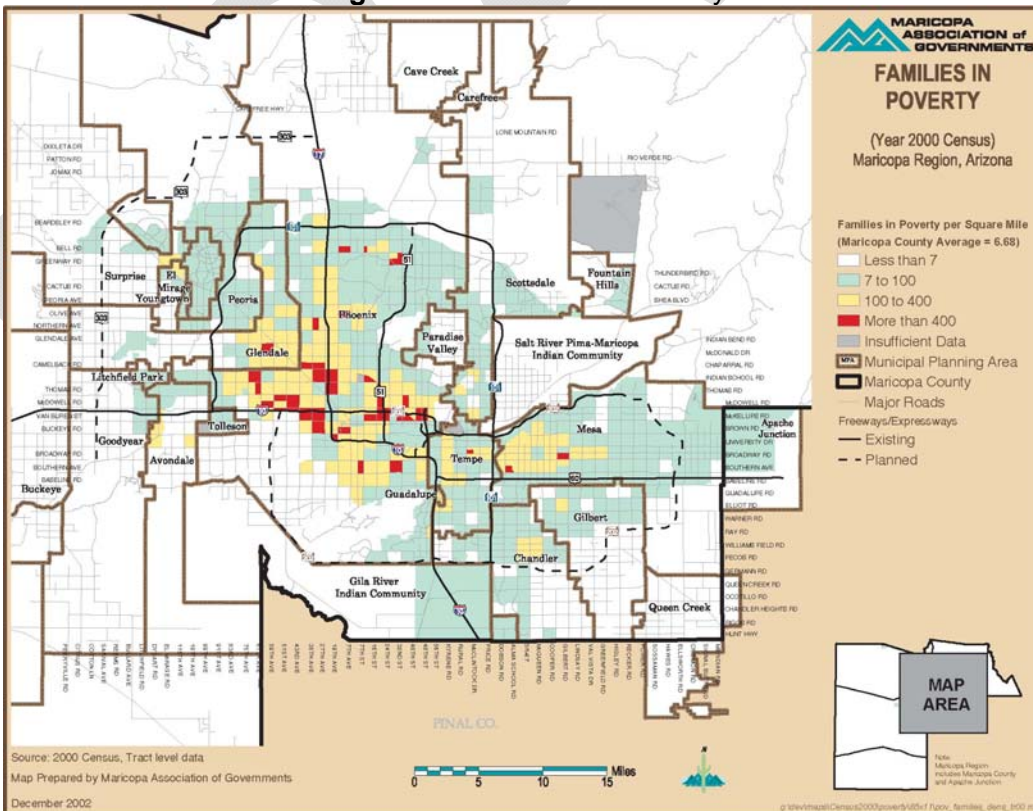


Figure 1-4: Families in Poverty



## 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 2007 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 2007 System Data**

Total Boardings	Total Wheelchair Boardings	Total Vehicle Miles	Total Revenue Miles	Total Vehicle Hours
60,525,851	n/a	46,697,586	34,201,137 <sup>1</sup>	n/a
Total Revenue Hours	Operating Cost	Capital Cost	Total Cost	
2,629,781	\$184,473,347	n/a	n/a	
Total Passenger Revenues	Percent On-Time Performance	Vehicle Accidents	Farebox Recovery Ratio	
\$40,953,630	93.47%	n/a	22.20%	
Boardings Per Revenue Hour	Boardings Per Revenue Mile	Operating Cost Per Boarding	Operating Cost Per Revenue Hour	Operating Cost Per Revenue Mile
23.02	1.77	\$3.05 <sup>1</sup>	\$70.15	\$5.40 <sup>1</sup>

<sup>1</sup>Does not include Dial-a-Ride revenue miles since this data was not available for FY 2007  
n/a = data not available.

A comparison of major ridership, financial, and other major statistics for the five-year period FY 2003-FY 2007 is shown in Table 2-2. Over the five-year period, boardings and passenger revenues increased about 15% and 38%, respectively. However, operating costs increased nearly 24% in the same period. This resulted in an approximate 14% decrease 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 – 2007 System Data for performance data by jurisdiction, by mode, by paratransit system and by individual fixed route. Appendix B – 1995 to 2007 System Data presents various performance data by mode over a 13 year period.

**Table 2-2: Comparison of System-wide Data for Five-Year Period—2003 and 2007**

General	FY 2003	FY 2007	5 Years (FY 2003-2007) % Change
Vehicle Revenue Miles <sup>1</sup>	29,996,885	34,201,137	14.02%
Vehicle Revenue Hours	2,465,752	2,629,781	6.65%
Revenue Miles Per Hour <sup>1</sup>	12.2	13.0	6.90%
Ridership	FY 2003	FY 2007	5 Years (FY 2003-2007) % Change
Total Boardings	52,481,596	60,525,851	15.33%
Boardings Per Revenue Mile	1.41	1.77	25.40%
Boardings Per Revenue Hour	21.28	23.02	8.13%
Financial	FY 2003	FY 2007	5 Years (FY 2003-2007) % Change
Farebox Recovery Ratio	36.50%	22.20%	-14.3%
Operating Costs	\$149,712,352	\$184,473,347	23.22%
Passenger Revenues	\$29,722,791	\$40,953,630	37.79%
Operating Cost Per Boarding	\$2.85	\$3.05	6.92%
Fare Revenue Per Boarding	\$1.63	\$1.87	14.77%
Subsidy Per Boarding	\$1.22	\$1.18	-3.28%
Operating Cost Per Revenue Hour	\$60.72	\$70.15	15.53%
Operating Cost Per Revenue Mile <sup>1</sup>	\$2.85	n/a	n/a

<sup>1</sup>Dial-a-Ride revenue miles not available for FY 2007. Therefore, totals for FY 2003 and FY 2007 do not include Dial-a-Ride data to provide an equal comparison.  
n/a = data not available.

## 2.1 SERVICE GOALS AND STANDARDS

The Regional Public Transportation Authority 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 2007, fixed route transit service was provided in a 653 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, seventeen (17) express and four (4) RAPID routes 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. Many of the most popular routes operate to midnight and even 1:00 am. 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.

**Table 2-3: Efficiency and Effectiveness Performance Measures Targets**

Fixed Route Bus, Systemwide	Target	Rail <sup>4</sup>	Target
<b>Cost Efficiency/Effectiveness</b>		<b>Cost Efficiency/Effectiveness</b>	
Farebox Recovery Ratio <sup>1</sup>	25%	Farebox Recovery Ratio <sup>1</sup>	25%
Operating Cost per Boarding	\$2.32	Operating Cost per Boarding	TBD
Subsidy (Net Opg Cost) per Boarding	\$1.75	Subsidy (Net Opg Cost) per Boarding	TBD
Cost per Revenue Mile	\$4.96	Cost per Revenue Mile	TBD
Average Fare	\$0.67	Average Fare	TBD
<b>Service Effectiveness</b>		<b>Service Effectiveness</b>	
Total Boardings (Number)	--	Total Boardings (Number)	7,827,000
Total Boardings <sup>2</sup>	3%	Boardings Avg. Weekday	26,090
Boardings Avg. Weekday, Sat., Sun. <sup>2</sup>	3%	Boardings Avg. Sat.	N/A
Boardings per Revenue Mile	2.1	Boardings Avg. Weekday Sun./Holiday	N/A
Safety Incidents per 100,000 Vehicle Miles	1.2	Boardings per Vehicle Revenue Mile	3.94
Security Incidents per 100,000 Boardings	0	Boardings per Revenue Mile	8.04
Complaints per 100,000 Boardings	28	Safety Incidents per 100,000 Vehicle Miles	N/A
On-time Performance	90%	Security Incidents per "x" Boardings	N/A
Miles between Mechanical Failures	23,400	On-time Performance	95%
Customer Satisfaction <sup>3</sup>	89%	Miles between Failures	25,000
<b>Fixed Route Bus, Route Level</b>		<b>Customer Satisfaction<sup>3</sup></b>	
<b>Target</b>		89%	
<b>Cost Efficiency/Effectiveness</b>		<b>Paratransit</b>	
<b>Target</b>		<b>Target</b>	
Farebox Recovery Ratio <sup>1</sup>	25%	<b>Cost Efficiency/Effectiveness</b>	
Operating Cost per Boarding	\$2.32	Farebox Recovery Ratio <sup>1</sup>	5%
Subsidy (Net Opg Cost) per Boarding	\$1.75	Operating Cost per Boarding	\$28.55
Cost per Revenue Mile	\$4.96	Subsidy (Net Opg Cost) per Boarding	\$27.16
<b>Service Effectiveness</b>		Operating Cost per Revenue Hour	\$50.30
Total Boardings (Number)	--	Average Fare	TBD
Total Boardings <sup>2</sup>	3%	<b>Service Effectiveness</b>	
Boardings Avg. Weekday, Sat., Sun. <sup>2</sup>	3%	Total Boardings (Number)	--
Boardings per Revenue Mile	2.1	Total Boardings <sup>2</sup>	3%
Boardings per Revenue Hour (Express Bus)	TBD	Boardings Avg. Weekday, Sat., Sun. <sup>2</sup>	3%
On-time Performance	90%	Boardings per Revenue Hour	1.76
Miles between Mechanical Failures	23,400	Percent No Shows	5%
<b>Vanpool</b>		On-time Performance	90%
<b>Target</b>		Miles between Mechanical Failures	TBD
<b>Cost Efficiency/Effectiveness</b>		Customer Satisfaction <sup>3</sup>	90%
Farebox Recovery Ratio <sup>1</sup>	100%	TBD = To Be Determined N/A = Not Available	
Operating Cost per Boarding	\$1.71		
Subsidy (Net Opg Cost) per Boarding	\$0.00		
Cost per Revenue Mile	\$0.46		
Average Fare	\$1.85		
Total Boardings (Number)	---		
Boardings per Revenue Mile	0.27		
Increase in Net Vanpools	24		

<sup>1</sup>Farebox recovery ratio = % of operating costs covered by passenger revenues.

<sup>2</sup>% increase in boardings compared to previous year.

<sup>3</sup>Based on annual telephone survey of % of respondents rating rider satisfaction as "excellent" or "good".

<sup>4</sup>Light rail starter line begins operations in December 2008.

Figure 2-1: Local Routes Map for January 2007

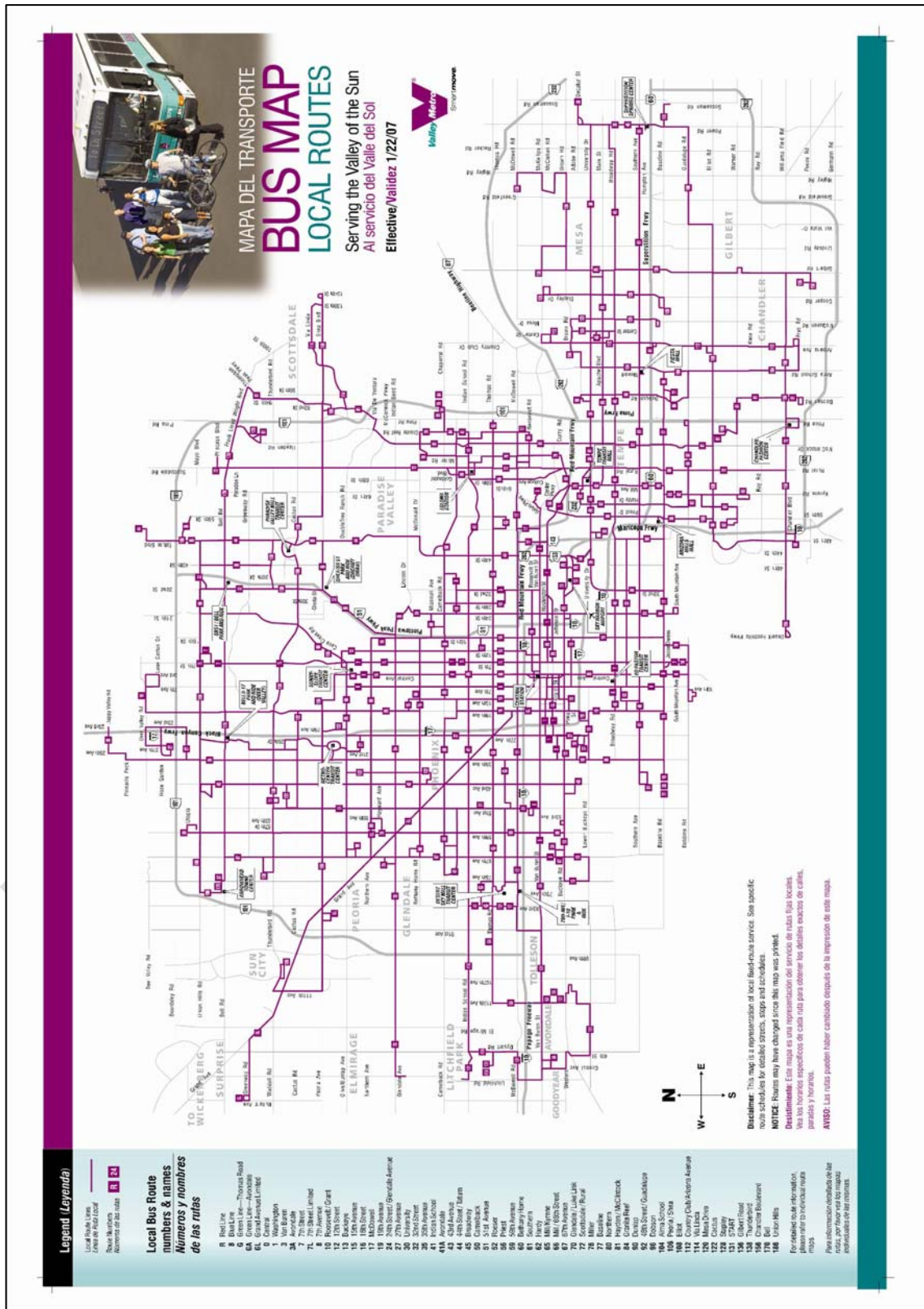
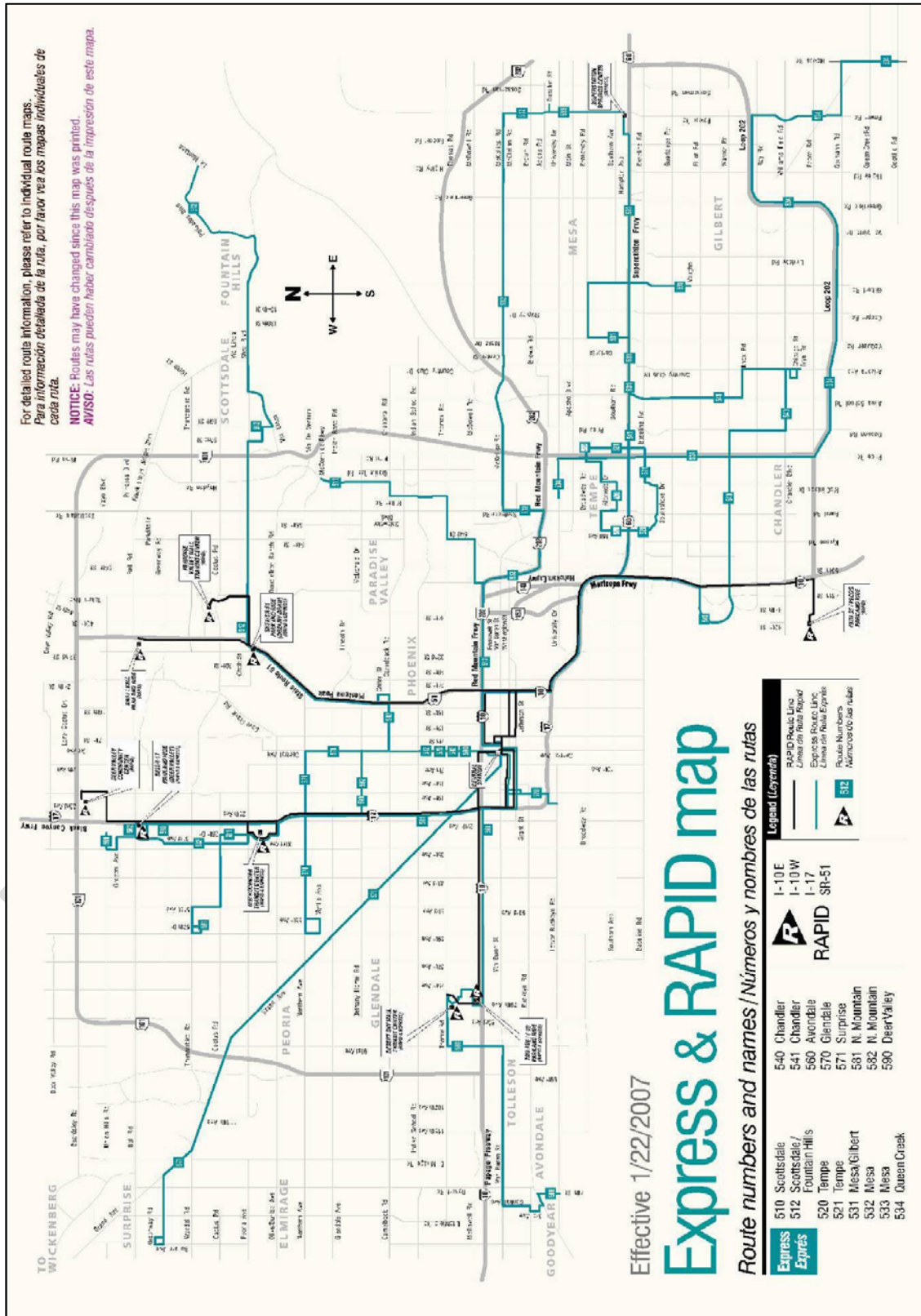


Figure 2-2: Express & RAPID Routes Map for January 2007





## 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 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 Regional Public Transportation Authority (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 2007, these local and express routes were provided by five private contractors. These five private transit operators are under contract to the City of Phoenix, the City of Tempe and the Regional Public Transportation Authority and provide service throughout the region. Many routes are funded by multiple government agencies, usually based on the miles of service provided in each jurisdiction.

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 the City of Tempe contracts with Veolia Tempe.

## 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 2003, 2006, and 2007. In FY 2007, 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 2006 and 2007, fixed route boardings decreased slightly (1.1%). However, boardings increased about 15% since FY 2003. Revenues increased about 16% and 38%, respectively, in the one- and five-year periods of comparison. Operating costs decreased nearly 15% between FY 2006 and FY 2007; however, these costs increased almost 23% over the previous five years. This all resulted in the farebox recovery ratio increasing slightly more than 6% in the one-year period and about 3.0% 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 2007. The increase in transit service and the resulting increases in ridership over the years are clearly apparent.

Not all data for FY 2008 is available at the time of preparation of this SRTP. However, Table 2-5 provides available statistics on boardings and revenue miles for FY 2008.

**Table 2-4: Comparison of Fixed Route<sup>1</sup> Data—2003, 2006 and 2007**

General	FY 2003	FY 2006	FY 2007	1 Year (FY 06-07) % Change	5 Years (FY 03-07) % Change
Vehicle Revenue Miles	26,357,307	27,504,359	28,766,992	4.59%	9.14%
Vehicle Revenue Hours	1,824,233	2,943,510	1,966,138	-33.20%	7.78%
Revenue Miles Per Hour	14.4484323	9.344068476	14.63121714	56.58%	1.27%
Ridership	FY 2003	FY 2006	FY 2007	1 Year (FY 06-07) % Change	5 Years (FY 03-07) % Change
Total Boardings	50,510,536	58,855,322	58,184,595	-1.14%	15.19%
Boardings Per Revenue Mile	1.9	2.1	2.0	-5.48%	5.54%
Boardings Per Revenue Hour	27.7	20.0	29.6	48.00%	6.88%
Financial	FY 2003	FY 2006	FY 2007	1 Year (FY 06-07) % Change	5 Years (FY 03-07) % Change
Farebox Recovery Ratio	21.66%	17.88%	24.24%	6.36%	2.58%
Operating Costs	\$124,341,810	\$178,436,399	\$152,662,789	-14.44%	22.78%
Operating Cost Per Boarding	\$2.46	\$3.03	\$2.62	-13.46%	6.58%
Fare Revenue	\$26,930,430	\$31,899,646	\$37,000,313	15.99%	37.39%
Fare Revenue Per Boarding	\$0.53	\$0.54	\$0.64	17.33%	19.27%
Subsidy Per Boarding	\$1.93	\$2.49	\$1.99	-20.16%	3.08%
Operating Cost Per Revenue Hour	\$68.16	\$60.62	\$77.65	28.09%	13.92%
Operating Cost Per Revenue Mile	\$4.72	\$6.49	\$5.31	-18.20%	12.49%

<sup>1</sup>For FY 2007, the data reported for shuttle/circulator and rural connector were included in the fixed route data. To provide a fair comparison, the totals shown for FY 2003 and FY 2006 also combined these two modes with fixed route service.

**Table 2-5: Annual Boardings and Revenue Miles—FY 2008**

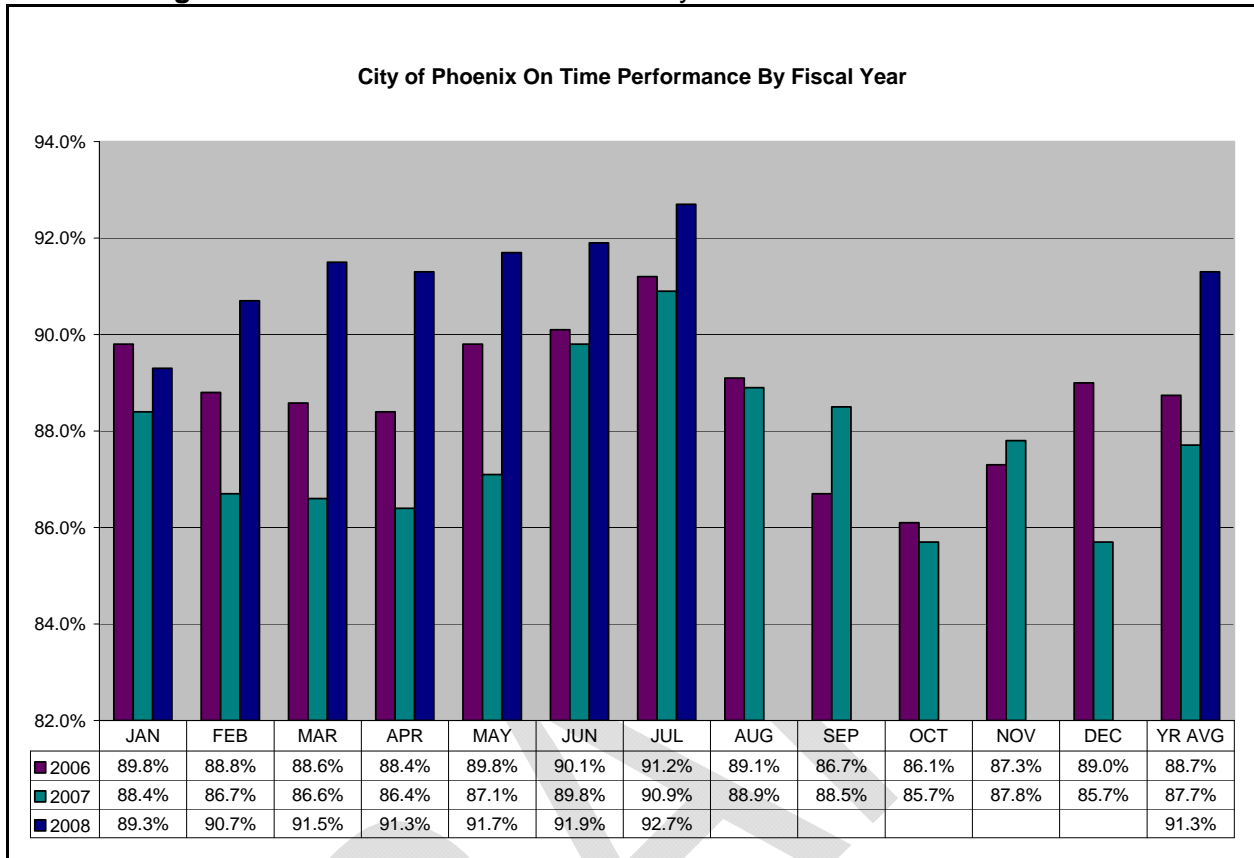
Ridership Statistic	Number
Boardings	59,843,059
Revenue Miles	33,410,203
Boardings Per Revenue Mile	1.8

Source: RPTA, *Annual Ridership Report for FY 2008*, 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 was not available.

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



### 2.2.6 Fixed Route Vehicle Inventory

In June 2007 the Regional Transit System had 741 vehicles available to provide fixed route service. The City of Glendale had 5 vehicles; the City of Phoenix operated 488 vehicles; the City of Tempe had 91 vehicles; and the Regional Public Transportation Authority had 157 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 is scheduled to begin 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.

### 2.3 HIGH CAPACITY TRANSIT

Light rail transit (LRT) will begin revenue operations in late December 2008. Valley Metro Rail (METRO) is the regional agency responsible for construction and operation of this high capacity mode of transit. The initial LRT segment will operate a total of 20 miles through the cities of Phoenix, Tempe, and Mesa. Headways (frequencies) of train service on opening day will be:

<u>Weekdays:</u>		<u>Weekends:</u>	
4:00 AM – 6:00 AM	20 minutes	5:00 AM – 7:00 AM	30 minutes
6:00 AM – 8:00 PM	10 minutes	7:00 AM – 8:00 PM	15 minutes
8:00 PM – midnight	20 minutes	8:00 PM – 1:00 AM	20 minutes

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

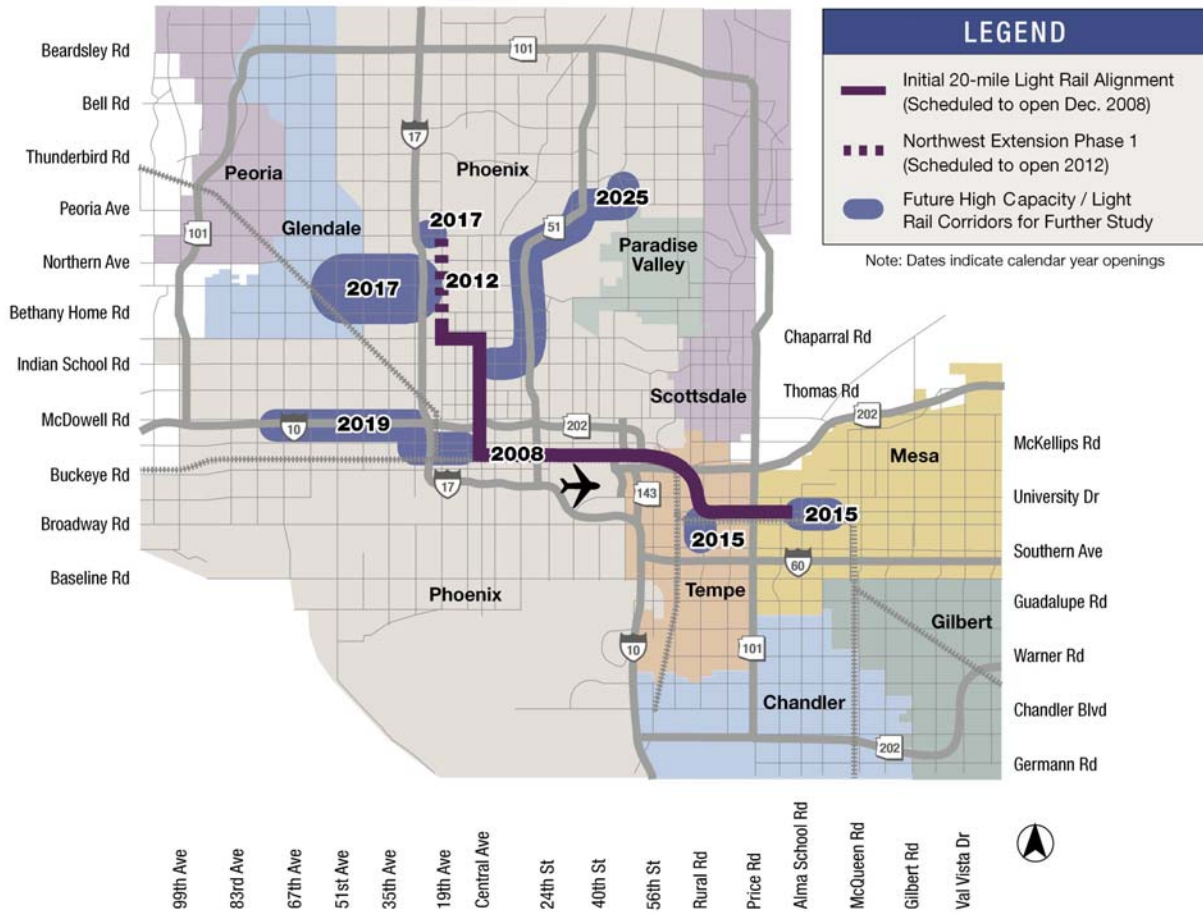
Figure 2-4 displays the initial LRT alignment as well as future high capacity transit corridors and scheduled opening dates. A detailed schedule for completion of the corridors included in the RTP is presented in Figure 2-5.

### 2.4 SHUTTLE AND CIRCULATOR

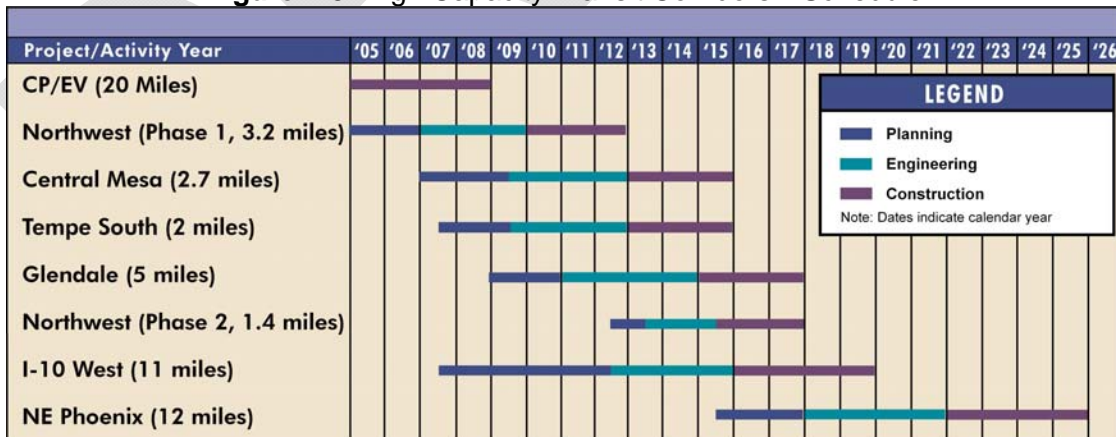
Several cities provide shuttle services (usually in their downtown areas) and / or neighborhood circulator service. The City of Phoenix operates DASH in the downtown and State Capitol area, and ALEX, a neighborhood circulator in the Ahwatukee/Desert Foothills area. The City of Tempe provides FLASH Forward and Back and FLASH to University in the downtown Tempe and Arizona State University area. Tempe also provides the Neighborhood FLASH connecting the Escalante and University Heights neighborhoods with the Riverside/Sunset and Lindon Park neighborhoods through the downtown Tempe/Arizona State University area. The City of Glendale operates GUS I, GUS II, and GUS III in the neighborhoods surrounding downtown Glendale. The City of Scottsdale operates the Scottsdale Neighborhood Connector and the Scottsdale Trolley in and around downtown Scottsdale. 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 shown in Appendix A – 2007 System Data.

**Figure 2-4: High Capacity Transit Corridors**



**Figure 2-5: High Capacity Transit Corridors—Schedule**



## 2.5 REGIONAL CONNECTORS

The Regional Public Transportation Authority 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. Please refer to Appendix A – 2007 System Data for performance information on the regional connectors.

## 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 2003, 2006, and 2007. 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 almost 2% between FY 2006 and FY 2007 and about 10% between FY 2003 and FY 2007. At the same time, operating costs increased about 10% and 26% over the same periods, respectively. Passenger revenues decreased slightly (less than 1%) over the previous year, and also decreased about 3.5% over the previous five-year period. The farebox recovery ratio remained fairly steady with a 0.5% decrease from the previous year, and an almost 1% decrease compared to FY 2003.

## 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-one 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 2003, 2006, and 2007 is displayed in Table 2-7. Between FY 2006 and 2007, boardings increased nearly 12%. Between FY 2003 and 2007 boardings jumped more than 50%. In addition, operating costs climbed nearly 7% in the same one year period and about 23% during the previous five years. However, comparatively

speaking, revenues rose at a much higher rate than operating costs with an almost 14% increase in one year and a nearly 73% increase during the previous five years. This resulted in a farebox recovery ratio that by FY 2006 was more than 107% and by FY 2007 had grown to 115%.

**Table 2-6: Comparison of Paratransit Data—2003, 2006 and 2007**

General	FY 2003	FY 2006	FY 2007	1 Year (FY 06-07) % Change	5 Years (FY 03-07) % Change
Vehicle Revenue Miles	8,365,039	7,865,367	n/a	n/a	n/a
Vehicle Revenue Hours	550,531	532,887	n/a	n/a	n/a
Revenue Miles Per Hour	13.05	14.76	n/a	n/a	n/a
Ridership	FY 2003	FY 2006	FY 2007	1 Year (FY 06-07) % Change	5 Years (FY 03-07) % Change
Total Boardings	1,029,378	938,879	922,790	-1.71%	-10.35%
Boardings Per Revenue Mile	0.14	0.12	n/a	n/a	n/a
Boardings Per Revenue Hour	1.87	1.76	n/a	n/a	n/a
Financial	FY 2003	FY 2006	FY 2007	1 Year (FY 06-07) % Change	5 Years (FY 03-07) % Change
Farebox Recovery Ratio	5.38%	4.88%	4.41%	-0.47%	-0.97%
Operating Costs	\$23,496,877	\$26,805,994	\$29,505,513	10.07%	25.57%
Operating Cost Per Boarding	\$22.83	\$28.55	\$31.97	12.00%	40.07%
Fare Revenue	\$1,259,045	\$1,307,546	\$1,302,579	-0.38%	3.46%
Fare Revenue Per Boarding	\$1.22	\$1.39	\$1.41	1.56%	15.71%
Subsidy Per Boarding	\$21.60	\$27.16	\$30.57	12.54%	41.51%
Operating Cost Per Revenue Hour	\$42.68	\$50.30	n/a	n/a	n/a
Operating Cost Per Revenue Mile	\$3.27	\$3.41	n/a	n/a	n/a

n/a = data not available.

**Table 2-7: Comparison of Vanpool Data—2003, 2006 and 2007**

General	FY 2003	FY 2006	FY 2007	1 Year (FY 06-07) % Change	5 Years (FY 03-07) % Change
Vehicle Revenue Miles	3,639,578	4,717,293	n/a	n/a	n/a
Vehicle Revenue Hours	90,989	117,932	131,612	11.6%	44.65%
Revenue Miles Per Hour	40.0	40.0	n/a	n/a	n/a
Ridership	FY 2003	FY 2006	FY 2007	1 Year (FY 06-07) % Change	5 Years (FY 03-07) % Change
Total Boardings	941,682	1,270,416	1,418,466	11.65%	50.63%
Boardings Per Revenue Mile	0.26	0.27	0.27	0.26%	4.35%
Boardings Per Revenue Hour	10.35	10.77	10.78	0.05%	4.14%
Financial	FY 2003	FY 2006	FY 2007	1 Year (FY 06-07) % Change	5 Years (FY 03-07) % Change
Farebox Recovery Ratio	81.84%	107.89%	115.00%	7.11%	33.16%
Operating Costs	\$1,873,665	\$2,158,282	\$2,305,045	6.80%	23.02%
Operating Cost Per Boarding	\$1.99	\$1.70	\$1.63	-4.05%	-18.08%
Fare Revenue	\$1,533,316	\$2,328,632	\$2,650,738	13.83%	72.88%
Fare Revenue Per Boarding	\$1.63	\$1.83	\$1.87	1.95%	14.77%
Subsidy Per Boarding	\$.36	-\$0.13	-\$0.24	84.62%	-166.67%
Operating Cost Per Revenue Hour	\$20.59	\$18.30	\$17.51	-4.30%	-14.95%
Operating Cost Per Revenue Mile	\$0.51	\$0.46	n/a/	n/a	n/a

n/a = not available.



## **3.0 EXISTING & PLANNED TRANSIT CAPITAL INFRASTRUCTURE**

The provision of transit service in an area that is nearly 652.5 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<sup>th</sup>, 2008 update of the Regional Bus Stop Database administered by the City of Phoenix reports that there are 7,480 bus stops throughout the region. 43 percent, or 3,244 of these stops include passenger shelters and 1,186 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 will begin operating 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 7,082 automobile spaces. Of these facilities, 20 are publicly owned and operated. The remaining 30 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 20 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. Figure 3-1 depicts the location of existing and planned park-and-ride facilities.

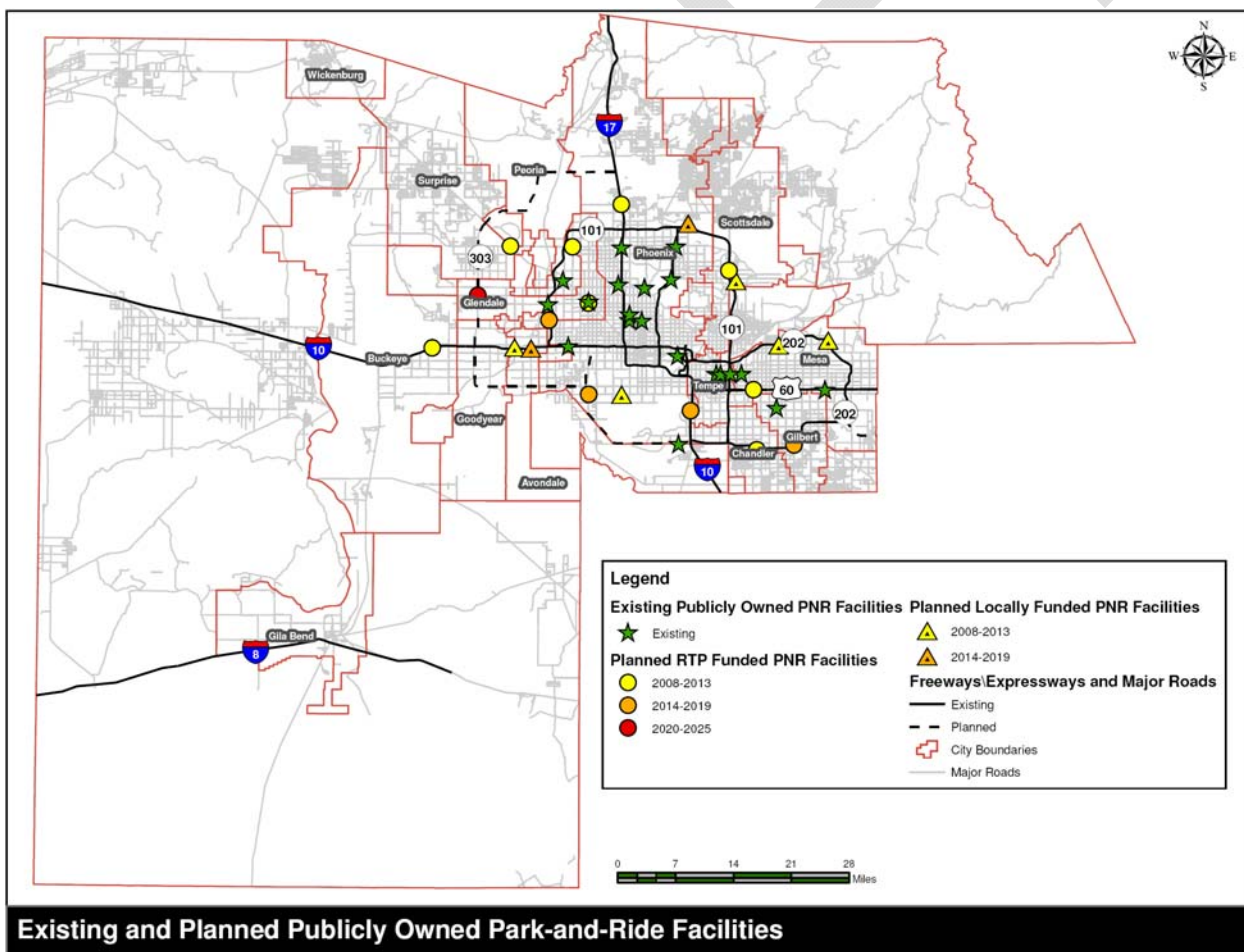
**Table 3-1: Existing Park-and-Ride Facilities**

Park-and-Ride Facility	Location	City	Capacity	Routes Served
<b>Publicly Owned Facilities</b>				
Gilbert PNR	Ash and Page	Gilbert	250	531
Glendale City Lot	59 <sup>th</sup> Ave & Myrtle Ave	Glendale	109	59, 70, 570, GUS, Grand Ave Limited
Glendale PNR	7111 N 99 <sup>th</sup> Ave	Glendale	388	70, 573
Superstition Springs PNR	Power Rd & US-60	Mesa	200	533
Main St & Sycamore Transit Center & PNR <sup>1</sup>	Main St & Sycamore St	Mesa	812	30, 40, 45, 96, 104, Main St Arterial BRT, Light Rail
Peoria PNR East	Jefferson St & 84 <sup>th</sup> Ave	Peoria	82	Grand Ave Limited
Spectrum Mall Transit Center & PNR <sup>1</sup>	Montebello Ave & 19 <sup>th</sup> Ave	Phoenix	795	15, 19, 60, 576, Light Rail
Central & Camelback Transit Center & PNR <sup>1</sup>	Central Ave & Camelback Rd	Phoenix	135	0, 39, 50, 512, 570, 582, 590, Light Rail
19 <sup>th</sup> Ave & Camelback PNR <sup>1</sup>	19 <sup>th</sup> Ave & Camelback Rd	Phoenix	411	19, 50, Light Rail
Washington & 38 <sup>th</sup> St PNR <sup>1</sup>	Washington St & 38 <sup>th</sup> St	Phoenix	189	1, 32, Light Rail
Bell/SR-51 PNR	SR-51 & Bell Rd	Phoenix	377	170, SR-51 RAPID
Shea & SR-51 PNR	Shea Blvd & SR-51	Phoenix	370	32, 512, SR-51 RAPID
Bell & I-17 PNR	Bell & I-17	Phoenix	350	27, 170, 582, 590, I-17 RAPID
40 <sup>th</sup> St & Pecos PNR	Pecos Rd & 40 <sup>th</sup> St	Phoenix	562	I-10 East RAPID, ALEX
79 <sup>th</sup> Ave & I-10 PNR	79 <sup>th</sup> Ave & I-10	Phoenix	607	17, 560, I-10 West RAPID
Metrocenter Transit Center & PNR	off I-17 between Peoria & Dunlap Ave	Phoenix	215	Red, 27, 35, 90, 106, 122, 581, 582, I-17 RAPID
Sunnyslope Transit Center & PNR	3 <sup>rd</sup> St & Dunlap Ave	Phoenix	45	0, 8, 12, 16, 80, 90, 106
Loop 101 & Apache Blvd <sup>1</sup>	Loop 101 & Apache Blvd	Tempe	695	40, 575, Orbit, Light Rail
McClintock Dr & Apache Blvd <sup>1</sup>	McClintock Dr & Apache Blvd	Tempe	300	40, 81, Orbit, Light Rail
Apache & Dorsey PNR <sup>1</sup>	Apache Blvd & Dorsey Ln	Tempe	190	40, Orbit, Light Rail
<b>Joint-Use Facilities</b>				
Donnie Hale Park	4 <sup>th</sup> 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, 156, 540, 541
Shopping Center	Thunderbird Rd & 51 <sup>st</sup> Ave	Glendale	N/A	51, 138, 581
Arrowhead Church of Joy	75 <sup>th</sup> Avenue & Rose Garden Ln	Glendale	N/A	573
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	32 <sup>nd</sup> & Cactus Rd	Phoenix	N/A	32, 106, 138
Deer Valley Community Center	19 <sup>th</sup> Ave & Utopia	Phoenix	N/A	19, I-17 RAPID
First Indian Baptist Church	Greenway Rd & 29 <sup>th</sup> Ave	Phoenix	N/A	27
Greenway Village Square	35 <sup>th</sup> Ave & Greenway Rd	Phoenix	N/A	35
Mountain View Lutheran Church	48 <sup>th</sup> St & Cheyenne St	Phoenix	N/A	56, 540, ALEX
Paradise Valley Community College	32 <sup>nd</sup> St & Union Hills Dr	Phoenix	N/A	32, 90, 186

Park-and-Ride Facility	Location	City	Capacity	Routes Served
Safeway Shopping Center	7 <sup>th</sup> St & Thunderbird Rd	Phoenix	N/A	7, 7L, 138
Paradise Valley Transit Center	Windrose & Tatum Blvd	Phoenix	N/A	Blue, 44, 106, 138, SR-51 RAPID
Chaparral Park	Hayden Rd & Jackrabbit Rd	Scottsdale	N/A	81, 510
Costco (Hayden Rd)	83 <sup>rd</sup> Pl & Butherus Dr	Scottsdale	N/A	81, 170
Dial Tech Center <sup>2</sup>	Scottsdale Rd & Butherus Dr	Scottsdale	N/A	72
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
Cobblestone Village	Warner Rd & McClintock Dr	Tempe	N/A	540
Costco	Priest Dr & Elliot Rd	Tempe	N/A	56, 108
Grace Community Church	Southern Ave & Dorsey Ln	Tempe	N/A	61, 520
Target Shopping Center	McClintock & Baseline Rd	Tempe	N/A	77, 81, 521
Tolleson City Offices	96 <sup>th</sup> Ave & Van Buren St	Tolleson	N/A	131, 560

<sup>1</sup> Facility opening in December of 2008 (FY 2009), concurrent with initiation of LRT starter line operations.  
<sup>2</sup> Facility closed in 2008.

**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)
Price/202 (FY 2010)	Yes	Price Freeway & Loop 202	Chandler	- East Loop 101 Connector (FY 2009) - San Tan Express (FY 2018)
Val Vista/202 (FY 2018)	Yes	Val Vista Dr & Loop 202	Gilbert	- Santan Express (FY 2018)
Glendale/Grand (FY 2013)	Yes	Glendale Ave & Grand Ave	Glendale	- Routes 59 & 70 - Grand Avenue Limited (FY 2013 Exp)
Loop 303 (FY 2023)	Yes	Northern Ave & Loop 303	Glendale	- Loop 303 Express (FY 2023)
Arrowhead (FY 2013) <sup>1</sup>	Yes	Bell Rd & 75 <sup>th</sup> 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)
Camelback/101 (FY 2015)	Yes	Camelback Rd & Loop 101	Phoenix	- Route 50 - Arrowhead Downtown Express - West Loop 101 Connector (FY 2009) - Peoria Express (FY 2014)
Laveen/59 <sup>th</sup> Ave <sup>2</sup> (TBD)	Yes	59 <sup>th</sup> Ave & Baseline Rd	Phoenix	- Route 77 - South Central Avenue Arterial BRT (FY 2016)
Elliot/I-10 (TBD)	Yes	Elliot Rd & I-10	Phoenix	- Route 56 - I-10 East RAPID - Ahwatukee Connector (FY 2017) - Santan Express (FY 2018)
Baseline Rd & 27 <sup>th</sup> Ave <sup>3</sup> (TBD)	No	Baseline Rd & 27 <sup>th</sup> Ave	Phoenix	- Route 77 - South Central Avenue Arterial BRT (FY 2016)
Desert Ridge <sup>4</sup> (TBD)	No	Tatum Blvd & Loop 101	Phoenix	- SR-51 RAPID - Anthem Express (FY 2018)

Park-and-Ride Facility/ Year of Implementation*	Prop 400 Funded	Location*	City	Routes Served
Cactus/101 (FY 2010)	Yes	Cactus Rd & Loop 101	Scottsdale	- East Loop 101 Connector (FY 2009) - San Tan Express (FY 2018)
Mustang Transit Center & PNR (FY 2015)	No	Shea Blvd & 90 <sup>th</sup> St	Scottsdale	- Routes 81, 106, 114, 512 - East Loop 101 Connector (FY 2009) - 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)

<sup>1</sup>Facility was switched with the Peoria/Grand Park-and-Ride

<sup>2</sup>Dependent upon loop 202 freeway development plan

<sup>3</sup>Funding for facility construction not identified

<sup>4</sup>Funding for facility construction and service not identified

\* 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 will begin operation 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. 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.

The RTP as well as transportation plans from the cities of Phoenix, Tempe, Scottsdale, and Glendale were reviewed to identify future transit centers within the region. A total of twelve future transit centers are identified as shown in Table 3-4. 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.

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**Table 3-3: Passenger Facilities and Transit Centers—FY 2007**

<b>Central Station</b>				
	<u>Route / Daily Round Trips</u>	<u>Mon-Fri</u>	<u>Sat</u>	<u>Sun</u>
300 N. Central Avenue Phoenix	Red	70	34	32
	Blue	50	32	28
	0	53	46	30
	3	68	33	29
	7	50	33	28
	8	37	33	29
	10	42	32	15
	12	26	17	15
	15	37	33	16
	Grand Avenue Limited	4	--	--
	560	2	--	--
	571	2	--	--
	I-10 W RAPID	14	--	--
	I-10 E RAPID	15	--	--
	SR-51 RAPID	15	--	--
I-17 RAPID	<u>25</u>	--	--	
Dial-a-Ride Service				
	Total	510	293	222
Ownership:	City of Phoenix			
Completed:	1997			
Project Size:	2.8 acres			
Facilities:	A 4,000 square foot building with a police office, two evaporatively 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.			
<b>Sunnyslope Transit Center</b>				
	<u>Route / Daily Round Trips</u>	<u>Mon-Fri</u>	<u>Sat</u>	<u>Sun</u>
8927 N. 3 <sup>rd</sup> Street Phoenix	0	52	46	30
	8	37	33	29
	12	26	17	15
	16	49	33	29
	80	33	32	15
	90	32	32	30
	106	<u>38</u>	<u>31</u>	<u>29</u>
	Dial-a-Ride Service			
	Total	267	224	177
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			
<b>Metrocenter Mall Transit Center</b>				
	<u>Route / Daily Round Trips</u>	<u>Mon-Fri</u>	<u>Sat</u>	<u>Sun</u>
9415 N. Metro Parkway Phoenix	Red	48	33	29
	27	37	32	29
	35	45	31	28
	90	32	32	30
	106	38	31	29
	122	16	16	14
	581	3	--	--
	582	4	--	--
	I-17 RAPID	<u>9</u>	--	--
	Dial-a-Ride Service			
	Total	232	175	159
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 2007 (cont'd)**

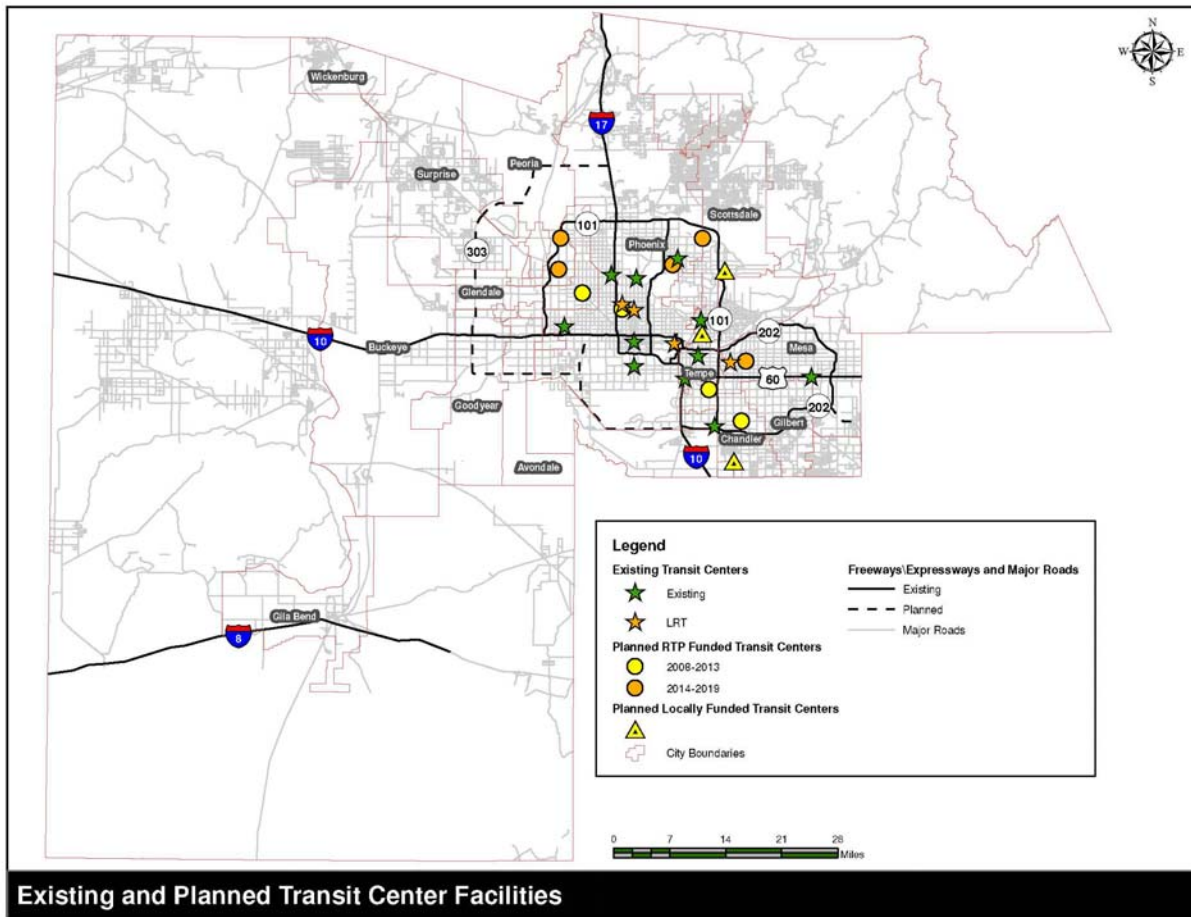
<b>Paradise Valley Mall Transit Center</b>				
	<u>Route / Daily Round Trips</u>	<u>Mon-Fri</u>	<u>Sat</u>	<u>Sun</u>
4623 E. Paradise Village Parkway N. Phoenix	Blue	49	33	28
	44	33	23	20
	106	38	31	29
	138	33	33	15
	SR-51 RAPID	2	--	--
	Dial-a-Ride Service			
	Total	155	120	92
Ownership: Leased land 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				
<b>Loloma Station</b>				
	<u>Route / Daily Round Trips</u>	<u>Mon-Fri</u>	<u>Sat</u>	<u>Sun</u>
7084 E. 2 <sup>nd</sup> Street Scottsdale	41	64	33	29
	66	40	39	35
	72	67	41	37
	76	36	36	14
	Downtown Trolley	60	60	60
	Neighborhood Trolley	43	43	43
	Dial-a-Ride Service			
	Total	310	252	218
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				
<b>Desert Sky Mall Transit Center</b>				
	<u>Route / Daily Round Trips</u>	<u>Mon-Fri</u>	<u>Sat</u>	<u>Sun</u>
7611 W. Thomas Road Phoenix	Green	69	32	29
	Green A	17	13	--
	17	64	33	29
	41	65	33	29
	41A	17	14	--
	131	11	--	--
	560	2	--	--
	I-10 W RAPID	13	--	--
	685	5	2	--
	Dial-a-Ride Service			
	Total	263	127	87
Ownership: Leased land Completed: 1989 Project Size: 900 square feet Facilities: One shelter, shade trees, information kiosk, and bicycle racks.				
<b>Arizona Mills Mall</b>				
	<u>Route / Daily Round Trips</u>	<u>Mon-Fri</u>	<u>Sat</u>	<u>Sun</u>
5000 Arizona Mills Circle Tempe	56	51	39	39
	77	54	40	35
	92	52	39	35
	108	38	19	18
	Dial-a-Ride Service			
	Total	195	137	127
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 2007 (cont'd)**

<b>Ed Pastor Transit Center</b>				
	<u>Route / Daily Round Trips</u>	<u>Mon-Fri</u>	<u>Sat</u>	<u>Sun</u>
10 W. Broadway Phoenix	Blue	50	32	28
	0	52	46	29
	7	46	33	28
	8	37	33	29
	45	48	33	33
	52	35	23	21
	Dial-a-Ride Service			
	Total	268	200	168
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				
<b>Chandler Fashion Center Transit Plaza</b>				
	<u>Route / Daily Round Trips</u>	<u>Mon-Fri</u>	<u>Sat</u>	<u>Sun</u>
3334 W. Frye Road Chandler	72	61	38	34
	156	36	32	31
	Dial-a-Ride Service			
	Total	97	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				
<b>Downtown Tempe/ASU College Avenue Bus Stops</b>				
	<u>Route / Daily Round Trips</u>	<u>Mon-Fri</u>	<u>Sat</u>	<u>Sun</u>
College Avenue/5 <sup>th</sup> Street Tempe	1	34	17	15
	44	33	22	20
	56	51	39	34
	62	52	40	35
	65	39	40	34
	66	40	39	35
	72	65	42	37
	76	35	35	14
	81	55	20	17
	92	50	39	35
	FLASH	102	--	--
	Dial-a-Ride Service			
		Total	556	333
Ownership: City of Tempe Completed: 1998 Project Size: 10,000 square feet Facilities: Four bus bays, two artist-designed shelters and an artist-designed seat wall, eight standard shelters, drinking fountains, information kiosks and bicycle racks.				
<b>Arrowhead Towne Center</b>				
	<u>Route / Daily Round Trips</u>	<u>Mon-Fri</u>	<u>Sat</u>	<u>Sun</u>
Glendale	67	31	27	14
	170	35	33	14
	186	33	33	15
	660	4	2	--
	Dial-a-Ride Service			
	Total	103	95	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.				

**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 2011)	Yes	Chandler Blvd & Arizona Ave	Chandler	- Routes 112, 156 - Arizona Avenue Arterial BRT (FY 2011) - Santan Express (FY 2018) - Chandler Blvd Arterial BRT (FY 2024)
South Chandler Transit Center (FY 2011)	No	Alma School Rd & Chandler Heights Rd	Chandler	- Routes TBD
Glendale/Grand (FY 2013)	Yes	Glendale Ave & Grand Ave	Glendale	- Routes 59, 79 - Grand Avenue Limited - Glendale Urban Shuttle (GUS) - Light Rail Extension
Bell/101 (FY 2019)	Yes	Bell Rd & 83 <sup>rd</sup> Ave	Glendale	- Routes 67, 170, 186 - Arrowhead Downtown Express - Surprise-Scottsdale Express - 83 <sup>rd</sup> /75 <sup>th</sup> Avenue Supergrid (FY 2023) - West Loop 101 Connector (FY 2009) - Loop 303 Express (FY 2023)
Main St/Sycamore <sup>1</sup>	No	Main St & Sycamore St	Mesa	- 30, 40, 45, 96, 104 - Main St Arterial BRT (FY 2009) - Light Rail
Mesa Downtown (FY 2010)	Yes	Main St & Center St	Mesa	- Routes 45, 104, 112, 120 - Main St Arterial BRT - Main St Supergrid (FY 2009)



Transit Center/ Year of Implementation	Prop 400 Funded	Location	City	Routes Served (Existing and Planned)
				- Light Rail Extension
Superstition Springs (FY 2009)	Yes	Southern Ave & Power Rd	Mesa	- Routes 30, 45, 61, 108, 533 - Main St Arterial BRT
Peoria (FY 2015)	Yes	Peoria Ave & Grand Ave	Peoria	- Route 106 - Grand Avenue Limited - 83 <sup>rd</sup> /75 <sup>th</sup> Avenue Supergrid (FY 2023)
19 <sup>th</sup> Ave/Camelback (FY 2009)	Yes	19 <sup>th</sup> Ave & Camelback Rd	Phoenix	- Routes 19, 50, 50 Limited - Light Rail
Central Ave/Camelback <sup>1</sup>	No	Central Ave & Camelback Rd	Phoenix	- Routes 0, 39, 50 - Express 512, 570, 582, 590 - Light Rail
Spectrum Mall <sup>1</sup>	No	Montebello Ave & 16 <sup>th</sup> St	Phoenix	- Routes 15, 19, 60 - Express 576 - Light Rail
Washington St/44 <sup>th</sup> St <sup>1</sup>	No	Washington St & 44 <sup>th</sup> St	Phoenix	- Routes 1, 13, 32, 44 - Airport Shuttle - Light Rail
44 <sup>th</sup> / Cactus (FY 2015)	Yes	44 <sup>th</sup> St & Cactus Rd	Phoenix	- Routes 44, 106, 138, Blue - SR-51 RAPID - Light Rail Extension
Scottsdale Airpark/101 (FY 2015)	Yes	Scottsdale Rd & Frank Lloyd Wright Blvd	Scottsdale	- Routes 72, 170 - Surprise-Scottsdale Express - East Loop 101 Connector (FY 2009) - Pima Express (FY 2013) - Anthem Express (FY 2018)
Skysong Transit Center (FY 2015)	No	Scottsdale Rd & McDowell Rd	Scottsdale	- Routes 17, 66, 72, 76 - Neighborhood Connector
Mustang Transit Center & PNR (FY 2015)	No	Shea Blvd & 90 <sup>th</sup> St	Scottsdale	- Routes 81, 106, 114, 512 - East Loop 101 Connector (FY 2009) - Pima Express (FY 2013)
South Tempe (FY 2009)	Yes	Guadalupe Rd & McClintock Rd	Tempe	- Routes 66, 81, 92 - East Loop 101 Connector (FY 2009)
<b>Planned Transit Center Improvements</b>				
Tempe Transportation Center Upgrades <sup>2</sup> (FY 2019)	Yes	College Ave & 5 <sup>th</sup> St	Tempe	- Routes 1, 30, 44, 56, 62, 65, 66, 72, 76, 81, 92 - Express 534 - ORBIT
Metrocenter Upgrades (FY 2011)	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 2014)	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.

<sup>1</sup>Transit centers opening late December 2008 concurrent with initiation of LRT starter line service.

<sup>2</sup>Tempe Transportation Center opening fall 2008.

Source: MAG regional Transportation Plan 2007 Update, Scottsdale Transportation Master Plan – Transportation Element, 2008

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). 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 been eliminated or 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 79 <sup>th</sup> 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 48 <sup>th</sup> & Washington Sts. Phoenix	METRO	100	Light Rail	Vehicle Maintenance, Cleaning, and Operator Dispatch

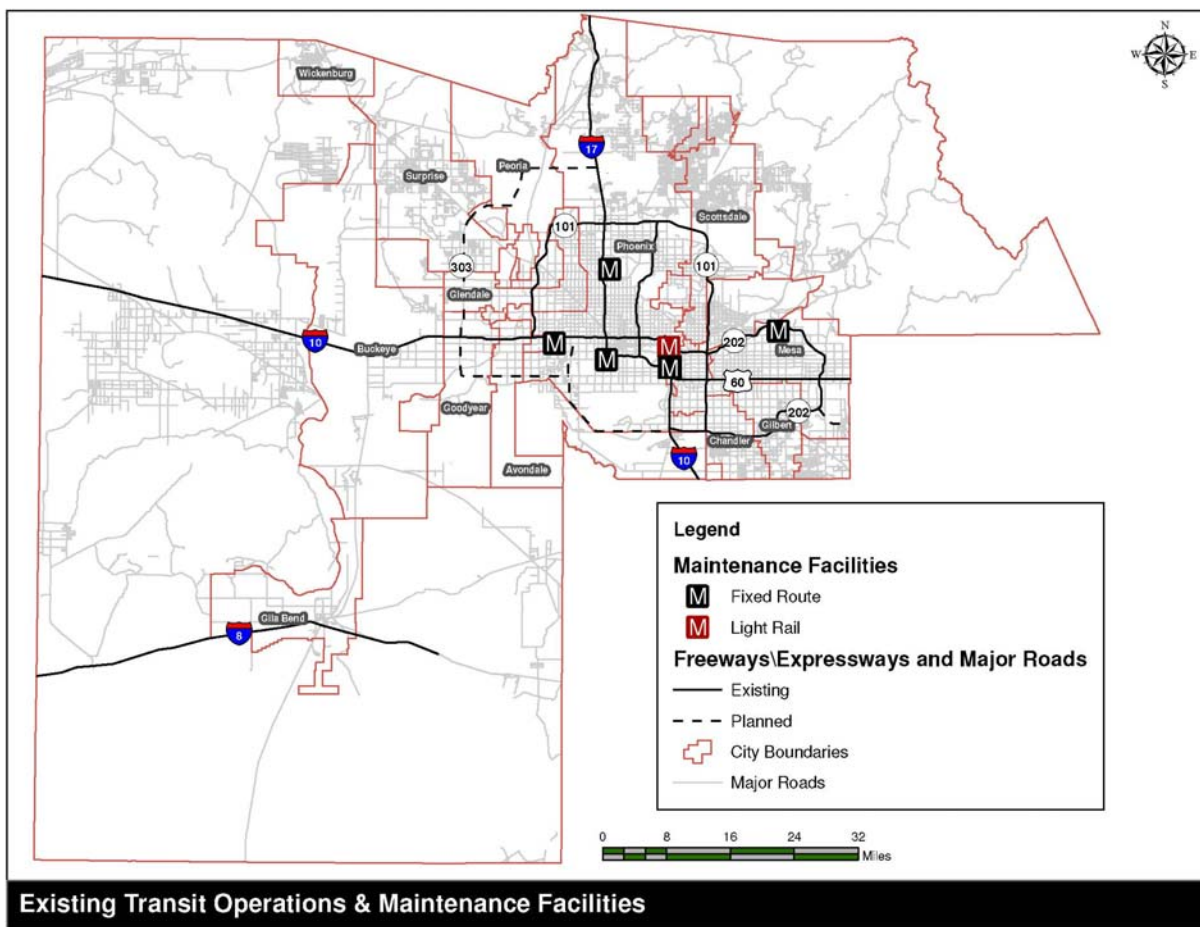
Sources: Valley Metro FY 2008 Transit life Cycle program Update, 2008  
 Regional Public Transportation Authority  
 City of Phoenix Public Transit Department  
 Veolia Transportation – Phoenix

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

Facility	Modes Served	Programmed Year Complete
New Heavy Maintenance – Fixed Route Bus	Fixed Route	2014
New Fixed Route Bus	Fixed Route	2026
Phoenix South Division Rehabilitation	Fixed Route	2015
RPTA Mesa Fixed Route Upgrades/Rehabilitation	Fixed Route	2015
RPTA Mesa Dial-a-Ride Upgrades/Rehabilitation	Demand Response	2018
Metro Light Rail Facility	Light Rail	TBD

Source: Valley Metro FY 2008 Transit life Cycle program Update, 2008

**Figure 3-3: Existing Operations and Maintenance Facilities**



### 3.3 ROADWAY ENHANCEMENTS

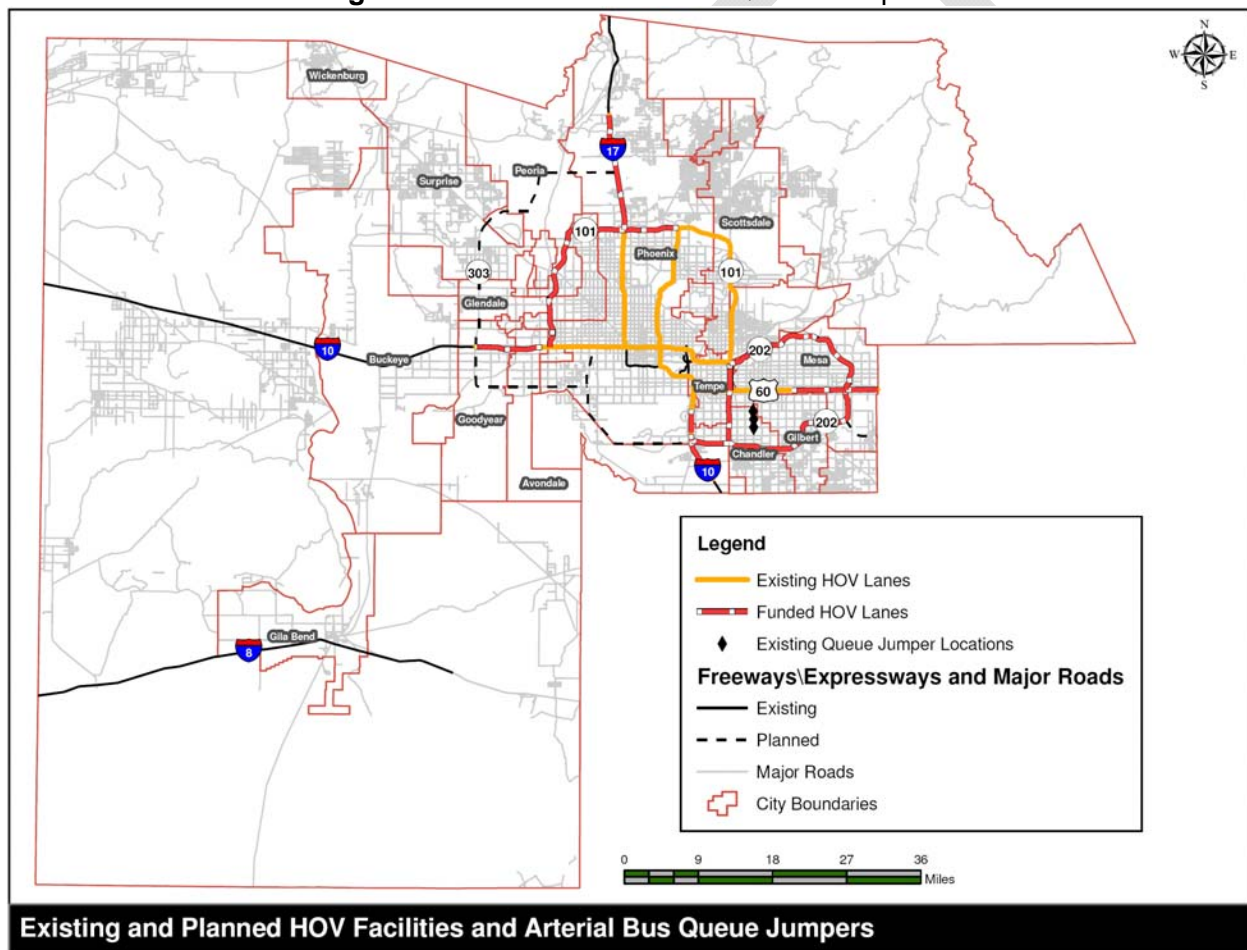
#### 3.3.1 Existing and Planned HOV Lanes and Ramps

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**



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.

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:

- 79<sup>th</sup> Avenue, providing an eastbound on-ramp and a westbound off-ramp connecting the I-10 HOV lanes with the 79<sup>th</sup> 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 <sup>1</sup>
	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 <sup>2</sup>
	I-10 "stack"	SR-101L	28	Existing
	SR-101L	SR-74	18	Programmed FY 2008
	SR-74	Anthem Way	10	Planned RTP Phase IV <sup>3</sup>
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
<b>Total Existing Lane Miles</b>			<b>152</b>	
<b>Total Planned Lane Miles</b>			<b>461</b>	

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.

<sup>1</sup>Phase II: Fiscal Years 2011 through 2015

<sup>2</sup>Phase III: Fiscal Years 2016 through 2020

<sup>3</sup>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 will begin 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 Ocotillo Road to a connection with the Main Street Arterial BRT route in Mesa. This route is scheduled to begin operation in July 2010. Additional arterial BRT routes are scheduled to enter service beginning in FY 2014. 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, 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 Rideshare Program. Services include:

- ShareTheRide.com (an online ride-match service)
- Vanpool program
- Trip reduction program—employer assistance
- Clean Air Campaign—promote alternatives to reduce congestion and air pollution
- Transit education program
- Transportation Coordinator Alliances—assistance
- Alternative work schedules/telecommute program—assistance

Each of these services is described below.

### 4.1 SHARETHERIDE.COM

This free online service ([www.ShareTheRide.com](http://www.ShareTheRide.com)) 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 is comprised of 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 used computer equipment to employers who want to implement or expand telecommuting programs or compressed work weeks. These programs benefit both employer and employee through:

- Employer Benefits
  - Help to achieve trip reduction goals
  - Increase worker productivity
  - Decrease absenteeism
  - Improve employee morale
  - Decrease overhead
  - Provide a great retention and recruitment tool
- Employee Benefits
  - Decrease stress
  - Eliminate or reduce commute time and expenses
  - Increase job satisfaction
  - Decrease work related expenses
  - Provide better work/life balance

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## **5.0 REGIONALLY FUNDED SHORT RANGE TRANSIT IMPROVEMENTS**

Regionally funded transit operations and capital improvements through Fiscal year 2026 are identified in the FY 2008 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 2008/2009 and 2013/14 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 TRANSIT OPERATING IMPROVEMENTS**

#### **5.1.1 Funded Regional Transit Operating Improvements FY 2009 through FY 2014**

Planned regionally funded transit operations improvements between FY 2008/2009 and FY 2013/2014 include new bus routes and the provision of regional funding for existing locally funded bus routes. Table 5-1 lists the 25 bus routes and one light rail extension that will be impacted by regional transit funding between FY 2008/2009 and FY 2013/2014.

### **5.2 Comparison of Funded Operating Improvements and Implementation (FY 2009)**

Eight bus routes (Table 5-2) were programmed in the FY 2008 TLCP Update to begin regional funding in FY 2009. Regional funding was initiated on six routes in July 2008. The other two routes will be implemented in December 2008 coinciding with the opening of LRT. Three of the routes that were implemented in July 2008 were implemented at service level below the level identified in the TLCP. All three routes with partial implementation are express routes. Full implementation of two routes (Red Mountain / Downtown Express and Northwest Valley / Downtown Express) will be fulfilled in December 2008 coinciding with the opening of LRT and will be achieved through providing additional trips using alternative trip patterns on each route that will provide direct connections with the LRT line. Full implementation of the third route, the Papago Freeway Connector, 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 2014**

Regionally funded transit operating improvements identified in the FY 2008 TLCP Update for FY 2009/2010 through FY 2013/2014 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 2013/2014.



**Table 5-1: Regionally Funded Transit Operations Investments FY 2009 and FY 2014**

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
<b>Supergrid</b>								
Main Street	2009	30	30	20.5 Tempe 16.5 Mesa	83 (T) 67 (M)	30	19.5 (T) 16.5 (M)	78 (T) 67 (M)
Dobson Road	2009	15	30	18	88	30	17	68
Southern Avenue	2009	15	30	20	104	30	30	72
Gilbert Road	2010	30	30	17	68	30	17	68
Power Road	2010	30	30	17	68	30	16	64
Baseline Road	2011	15	30	18	88	30	17	68
Arizona Avenue/Country Club Drive	2012	15	30	18	84	30	16	64
University Drive	2012	15	30	18	84	30	16	68
Camelback Road	2013	15	30	19	88	30	17	68
Elliot Road	2013	15	30	17	80	30	16	64
Broadway Avenue	2013	15	30	17	80	30	17	68
Alma School Road	2014	15	30	17	80	30	16	64
McDowell/McKellips Road	2014	15	30	18	88	30	17	68
<b>Express/BRT</b>								
East Loop 101 Connector	2009	Two-way	---	---	8	---	---	---
Main St Arterial BRT	2009	15	30	17.5	90	60	16	33
Papago Frwy Connector	2009	One-way	---	---	8	---	---	---
Red Mountain Express	2009	One-way	---	---	8	---	---	---
West Loop 101 Connector (renamed North Glendale Express)	2009	Two-way	---	---	12	---	---	---
Apache Junction Express	2011	One-way	---	---	8	---	---	---
Arizona Avenue Arterial BRT	2011	Two-way	---	---	40	---	---	---
Superstition Frwy Connector	2012	Two-way	---	---	6	---	---	---
Grand Avenue Limited	2013	Two-way	---	---	24	---	---	---
Pima Express	2013	One-way	---	---	8	---	---	---
Peoria Express	2014	One-way	---	---	12	---	---	---
Scottsdale/Rural Arterial BRT	2014	Two-way	---	---	48	---	---	---
<b>Light Rail</b>								
Northwest Extension (Phase I)	2012	10	20	20	180	20	20	120

Source: 2008 Valley Metro Transit Life Cycle Program Update

**Table 5-2: Comparison of Funded Operating Improvements and Implementation (FY 2009)**

Route	Route Number	Implementation Date	TLCP Funded Daily Weekday/Weekend Trips	Implemented Daily Weekday/Weekend Trips	Implementation
Main Street	40	December 2008	83 \ 78 Tempe 67 \ 67 Mesa	83 \ 78 Tempe 67 \ 67 Mesa	Full
Dobson Road	96	July 2008	88 \ 68	88 \ 70	Full
Southern Ave	61	July 2008	104 \ 72	101 \ 71 Sat \ 69 Sun	Full
East Loop 101 Connector (renamed Chandler / Scottsdale Airpark)	511	July 2008	8 \ 0	8 \ 0	Full
Main St Arterial BRT (renamed Main St Link)	440	December 2008	90 \ 33	90 \ 33	Full
Papago Frwy Connector (renamed Goodyear / Downtown)	562	July 2008	8 \ 0	6 \ 0	Partial
Red Mountain Express (renamed Red Mountain / Downtown)	535	July 2008	8 \ 0	6 \ 0	Partial
West Loop 101 Connector (renamed Northwest Valley / Downtown)	575	July 2008	12 \ 0	6 \ 0	Partial

Source: 2008 Valley Metro Transit Life Cycle Program Update and July 2008 Valley Metro Bus Book

**Table 5-3: Considerations for Regionally Funded Transit Operations Investments  
FY 2010 through FY 2014**

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	2010	No	Thomas Rd to Rittenhouse Rd	New Route	New Route	Future Connection to Red Mtn PNR  Consider rote 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.
77 - Baseline Rd	2011	Yes	59th Ave to Dobson Rd	Extend west to 59th Ave from 39th Ave. Phoenix portion is locally funded.	30 minute all day service currently provided in Phoenix and Mesa. 15 minute peak service in Tempe is locally funded.	Phoenix and Tempe is locally funded. Regional funding is provided in Mesa and Guadalupe (transferred to Tempe).
112 - Country Club Dr	2012	Yes	McKellips\Center St to Ocotillo\Alma School	Extend South to Ocotillo\Alma School Rd from Frye\Arizona Ave	Span of service increase from 13 hours to 18 hours. Peak frequency increase from 30 minute to 15 minute. Regional funding provides weekend service.	Connection to future South Chandler Transit Center. Consider coordinating service schedule\number of daily trips with LINK Arizona Ave\Country Club Dr route programmed for 2011. Consider providing service to the Chandler tumbleweed PNR.



Route	Year (FY)	Existing Route	Description	Route Pattern Variance	Service Variance	Considerations
30 - University Dr	2012	Yes	South Mtn Community College to Ellsworth Rd	Extend east to Ellsworth Rd and University Dr. Eliminate deviation to Superstition Springs Mall.	Planned service levels are less than currently provided today. PTF will fund 84 weekday and 68 weekend trips in Mesa and Tempe.	Consider extending all trips to the Red Mountain Multi Gen Center on Adobe Rd (see Route 184 considerations) and extend further east if suitable east end-of-line turn around is available. Remove downtown Mesa route diversion and replace with Sycamore rail station diversion.
50 - Camelback Rd	2013	Yes	Scottsdale Community College to Litchfield Rd	Extend west to Litchfield Rd from 67th Ave.	Planned service levels are less than currently provided in Phoenix today. PTF will fund 84 weekday and 68 weekend trips in Glendale, Litchfield Park and Scottsdale.	Will increase in peak headway be desired on entire length of route? Phoenix portion is locally funded.
108 - Elliot Rd	2013	Yes	AZ Mills Mall to Superstition Springs Mall	No	Weekday service levels in Chandler, Gilbert and Mesa are increased to a similar level of service currently operated within Tempe. Weekend service increased to 30 minutes in all served communities.	Should limited trips continue to serve Sunland Village East? Duplication of service on Power Rd (1.5 miles) to serve Superstition Springs Mall. Route could be extended east to serve new destinations.
45 - Broadway Rd	2013	Yes	35th Ave to Superstition Springs Mall	Extend west to 35th Ave. Phoenix portion is locally funded.	Planned service levels are less than currently provided today in the Tempe portion of the route. PTF will fund 88 weekday and 68 weekend trips in Mesa and Tempe.	Phoenix portion is locally funded. Route duplicates service on Power Rd. Could be extended east to serve new destinations (see Route 184). Include deviation to Sycamore & Main St light rail station.
104 - Alma School Rd	2014	Yes	McDowell Rd to Ocotillo	Extend route north to McDowell Rd and provide deviations to Mesa Riverview commercial center and Sycamore LRT station.	Peak frequency increase from 30 minute to 15 minute. Regional funding provides weekend service.	Connection to future South Chandler Transit Center. Consider terminating north end route at Mesa Riverview commercial center. See also Route 17 considerations.

Route	Year (FY)	Existing Route	Description	Route Pattern Variance	Service Variance	Considerations
17 – McDowell Rd	2014	Yes (2 routes 17A and 17)	Litchfield Rd to Power Rd	Extend west to Litchfield Rd from Desert Sky Mall. Desert Sky Mall deviation is eliminated. Extend east to Power Rd and Thomas Rd from McDowell Rd & Granite Reef Rd.	Peak frequency increase from 30 minutes to 15 minutes in Scottsdale and 60 minutes to 15 minutes in Avondale. Regional funding provides weekend service.	Consider modifying route to form two routes. One route could serve McDowell Rd between Litchfield Rd and Mesa Riverview commercial center via Tempe Marketplace. Other route could serve McKellips Rd between Power Rd & Thomas Rd and Mesa Riverview commercial center. See also Route 104 considerations. Consider 30 minute all day headways at start up of McKellips route. Regional funding for Route 532 is programmed to be eliminated with the implementation of PTF Route 17 improvements on McKellips Rd. Finally, consider reducing start-up frequency on Avondale segment to supplement or advance (implementation) other TLCP routes in Avondale.
I-17 RAPID	2010	Yes	Happy Valley Rd to Downtown Phoenix	Extend route north to Happy Valley PNR	None	Consider coordinating implementation with opening of PNR Happy Valley Rd\I-17.
Apache Junction Express	2011	No	Signal Butte Rd to Downtown Phoenix	New Route	8 one-way trips each weekday	Consider joint-use PNR operation near Signal Butte Rd. Superstition Springs PNR may have limited capacity due to existing local, express and LINK services. Consider increasing travel speeds by eliminating deviations to Southern Ave and Arizona Mills Mall. See footnote 1 below this table regarding considerations for alternate routing through downtown Phoenix.
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.





Route	Year (FY)	Existing Route	Description	Route Pattern Variance	Service Variance	Considerations
Superstition Freeway Connector	2012	No	Superstition Springs PNR to Arizona Mills Mall	New Route	6 one-way trips each weekday	Superstition Springs PNR may have limited capacity due to existing local, express and LINK services. Consider increasing travel speeds by eliminating deviation to Southern Ave. Consider alternative end of line from Arizona Mills Mall to Price/Apache LRT Station or Downtown Tempe\ASU.
Grand Ave Limited	2013	Yes	Bullard and Greenway to Downtown Phoenix	All trips will be extended to Surprise.	24 total daily weekday trips. Programmed to operate two-way service.	Connection to future Grand\Surprise PNR. Consider coordinating implementation and routing adjustments with opening of Glendale\Grand PNR and Transit Center. Due to duplication, consider combining with or eliminating Route 571. Regional funding for Route 570 is programmed to be eliminated with the implementation of PTF Grand Ave Limited improvements.
570 - Glendale Express	2013	Yes	59th Ave & Glenn Dr to Downtown Phoenix\State Capitol	NA	Eliminate regional funding	Regional funding is programmed to be eliminated with the implementation of PTF Grand Ave Limited improvements.
Pima Express	2013	No	Scottsdale Airpark to Downtown Phoenix\State Capitol	New Route	8 one-way trips each weekday	Cactus\101 PNR and Scottsdale Airpark TC may not be open at implementation. Interim stops and parking facilities may need to be considered. Consider increasing travel speeds by eliminating stop at Scottsdale Community College. Due to duplication with LRT, consider terminating route in Downtown Tempe\ASU.
532 - Mesa Express	2014	Yes	Power Rd to Downtown Phoenix\State Capitol	NA	Eliminate regional funding	Regional funding is programmed to be eliminated with the implementation of PTF Route 17 improvements on McKellips Rd.
Peoria	2014	No	Peoria and 101 (Agua Fria) to Downtown Phoenix\State Capitol	New Route (similar pattern to existing 573)	12 one-way trips each weekday	Consider coordinating schedules with Route 573 to maximize efficiency and service levels at the new Peoria\Grand PNR and existing Glendale PNR. See footnote 1 below this table regarding considerations for alternate routing through downtown Phoenix.

Route	Year (FY)	Existing Route	Description	Route Pattern Variance	Service Variance	Considerations
LINK Scottsdale \ Rural Rd (Dedicated BRT)	2014	No	Shea Blvd to Chandler Fashion Center	New Route (similar pattern to Scottsdale\Rural Supergrid Route)	48 total trips each weekday	Consider coordinating service schedule\number of daily trips with Scottsdale Rd\Rural Rd Supergrid route.
LRT Northwest Extension Phase I	2012	Yes	19 <sup>th</sup> Ave and Bethany Home to Main St and Sycamore	Extend LRT north on 19 <sup>th</sup> Ave to Dunlap Ave	None	Consider terminating some trips of the I-17 express \ RAPID routes at Dunlap & 19 <sup>th</sup> Ave LRT Station.

Source: HDR | S.R. Beard & Associates, 2008

<sup>1</sup>Express bus service levels are causing increased bus congestion in downtown Phoenix, all new express bus routes should consider an alternate routing through the downtown area including but not limited to utilizing the bus pull-out on northbound Central Ave far side of Van Buren St.

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.

### 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 2013/2014. 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	<b>-122</b>

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

Using the methodology described above, ridership projections for each new regionally funded route through FY 2013/2014 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. The Chandler Blvd Supergrid (Route 156) was implemented with a reduced initial headway and several routes identified in Section 5.1.3 of this report have been identified as potential candidates for a phased service level implementation.

Funding is currently programmed in the TLCP to provide 15 minute peak headway (from 30 minutes) service on the Chandler Blvd Supergrid Route in FY 2010. This service level increase will provide the full level of service designated in the TLCP. However, the implementation date for increasing peak headways on the Chandler Blvd Supergrid is based on budgetary programming, not route performance.

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 2013/2014**

Route	Year 1 Projected Annual Ridership	Year 3 Projected Annual Ridership	Year 5 Projected Annual Ridership
<b>Supergrid</b>			
Main Street	1,007,472	1,276,060	1,544,647
Dobson Road	537,793	679,739	821,685
Southern Ave	1,902,921	1,902,921	1,902,921
Gilbert Road	227,436	330,221	433,005
Power Road	155,410	233,115	310,820
Baseline Road	776,776	924,483	1,072,191
Arizona Avenue/Country Club	523,871	722,093	920,314
University Drive	991,944	1,071,685	1,151,426
Camelback Road	1,896,999	2,586,425	3,275,850
Elliot Road	456,913	456,913	456,913
Broadway Avenue	1,511,514	1,511,514	1,511,514
Alma School Road	476,679	682,464	888,250
McDowell/McKellips Road	2,765,801	3,572,401	4,379,001
<b>Express/BRT</b>			
East Loop 101 Connector	31,315	46,973	62,631
Main St Arterial BRT	145,132	217,698	290,264
Papago Frwy Connector	23,088	34,633	46,177
Red Mountain Express	26,316	39,474	52,632
West Loop 101 Connector ( <i>renamed North Glendale Express</i> )	48,972	73,458	97,943
Apache Junction Express	30,932	46,398	61,864
Arizona Avenue Arterial BRT	61,936	92,904	123,873
Superstition Frwy Connector	10,869	16,303	21,737
Grand Avenue Limited	99,164	132,695	166,226
Pima Express	29,248	43,872	58,496

Source: 2008 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 is 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 2009 through FY 2014

Planned regionally funded transit capital improvements between FY 2008/2009 and FY 2013/2014 include transit centers (7), park-and-ride facilities (8), operations and maintenance facilities (3), and bus stops. The capital facilities investments include expansion and rehabilitation of some existing facilities as well as new facilities. Table 5-6 summarizes the 18 regionally funded transit facilities programmed for funding between FY 2009/2010 and FY 2013/2014.

**Table 5-6: Regionally Funded Transit Facility Investments FY 2009 and FY 2014**

Facility	Pre-Design (FY)	Design (FY)	Land (FY)	Construction \ Open (FY)
Happy Valley Rd & I-17 Park-and-Ride	2009	2009	2009	2009
Grand/Surprise Park-and-Ride	2009	2009	2009	2009
Cactus Rd & Loop 101 Park-and-Ride	2009	2009	2009	2009
Price Freeway & Loop 202 Park-and-Ride (Chandler Tumbleweed PNR)	2009	2009	2009	2009
19th Ave & Camelback Rd Transit Center	2009	2009	2009	2009
South Tempe Transit Center	2009	2009	2009	2009
Downtown Chandler Transit Center	2009	2010	2010	2011
South Chandler Transit Center	2009	2010	2010	2011
Mesa Downtown Transit Center	2009	2010	2010	2011
Country Club Dr & US 60 (Superstition Freeway) Park-and-Ride	2009	2009	2009	2010
East Buckeye Park-and-Ride	2009	2010	2010	2011
Metrocenter Rehabilitation / Expansion	2009	2010	NA	2011
Peoria/Grand Park-and-Ride	2011	2012	2012	2013
Glendale/Grand Park-and-Ride	2011	2012	2012	2013
Glendale / Grand Transit Center	2011	2012	2012	2013
Central Station Rehabilitation / Expansion	2010	2013	NA	2014
Phoenix Heavy Maintenance Facility	2011	2013	2013	2014
Phoenix South Fixed Route O&M Rehabilitation	2014	2014	NA	2015
Mesa Fixed Route O&M Rehabilitation	2014	2014	NA	2015

Note: Phoenix Paratransit O&M facility was originally programmed in the TLCP to be constructed and open in FY 2013. The facility was delayed to a year outside of the TLCP as identified in the FY 2008 TLCP Update. The facility is eligible to be reinstated if regional revenues become available.

Source: 2008 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 2008/2009 and FY 2013/2014 based on the FY 2008 TLCP Update

**Table 5-7: Regional Bus Stop Funding FY 2009 through FY 2014**

TLCP Fiscal Year	TLCP Programmed Funding <sup>1</sup>
2009	\$5,468,835
2010	\$1,672,137
2011	\$1,722,301
2012	\$1,773,970
2013	\$1,827,189
2014	\$1,882,004
<b>Total</b>	<b>\$14,346,436</b>

<sup>1</sup>Funding subject to change based on annual budget  
 Source: 2008 Valley Metro Transit Life Cycle Program Update

**5.4.2 Comparison of Funded Transit Facility Investments and Implementation (FY 2009)**

Several of the facilities programmed in the FY 2008 TLCP Update for implementation in FY 2009 are projects that were delayed to FY 2009 as the facilities were not constructed in the original programmed year. Six regionally funded transit facility improvements are programmed for opening in FY 2009 (including facilities delayed from FY 2008). Based upon current project status, completion of all six facilities programmed for completion in FY 2009 will not be open for service until at least FY 2010. See Table 5-8 for the current project status of each regionally funded transit facility through FY 2014.

**5.4.3 Considerations for Regionally Funded Transit Facility Investments FY 2010 through FY 2014**

Regionally funded transit capital improvements support locally and regionally funded transit operations. The capital improvements identified in the FY 2008 TLCP Update for FY 2008/2009 through FY 2013/2014 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 2013/2014. 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 2009 through FY 2014**

To support fixed route service expansion through FY 2014, the TLCP identifies the acquisition of 298 vehicles between FY 2010 and 2014. 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 Gilbert Rd Supergrid route is programmed to receive two additional vehicles for service expansion in FY 2010. When fully implemented, the route will need a total of eight buses to provide service; six in-service vehicles plus two spare vehicles. The route is currently assigned six vehicles. Table 5-9 provides a summary of the regionally funded fleet expansion plans for fixed route, paratransit, rural connectors and vanpools, while the detailed (by route) fixed route fleet expansion requirements for new and expanded services programmed to be implemented between FY 2010 and 2014 are summarized in Table 5-10.

**Table 5-8: Considerations for Regionally Funded Transit Facility Investments  
FY 2009 through FY 2014**

Facility	Programmed Opening Year (FY) <sup>1</sup>	Current Status <sup>2</sup>	Project	General Location <sup>3</sup>	Existing Facility	Considerations
Happy Valley Rd & I-17 Park-and-Ride	2009	Preferred site selected and design is in progress		Happy Valley Rd & I-17	No	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	2009	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).
Cactus Rd & Loop 101 Park-and-Ride	2009	Site selection and pre-design process in progress		Cactus Rd & Loop 101 (Pima Frwy)	No	Consider inclusion of bus stop space for potential connecting routes: Route 511, Route 512, Route 572 and future locally funded services.
Price Freeway & Loop 202 Park-and-Ride (Chandler Tumbleweed PNR)	2009	Scheduled to open in December 2008		North of Germann Rd between Arizona Ave & McQueen Rd	No	Consider inclusion of bus stop space for potential connecting routes: Route 511, Arizona Ave Dedicated BRT (FY 2011), Arizona Ave/Country Club Dr Supergrid (FY 2012) and San Tan Express (FY 2018).
19th Ave & Camelback Rd Transit Center	2009	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 19 <sup>th</sup> 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.
South Tempe Transit Center	2009	Site selection and pre-design process in progress		5 <sup>th</sup> St and College Ave	No	None. Facility has already been designed and constructed.
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.
Mesa Downtown Transit Center	2011	Project will be formally initiated after completion of Mesa AA		Main St & Center St	No	Consider inclusion of bus stop space for potential connecting routes: Main St Supergrid (2009), Main St Dedicated BRT (2009), Mesa Downtown Circulator (2009) Route 45 (Broadway Rd Supergrid), Route 104 (Alma School Rd Supergrid), Route 112 (AZ Ave/Country Club Supergrid) and Route 120. Continuation of Supergrid routes 45 (FY 2013), 104 (FY 2014) and 112 (FY 2012) into the facility to be determined when Supergrid routing for each route is implemented.



Facility	Programmed Opening Year (FY) <sup>1</sup>	Current Status <sup>2</sup>	Project	General Location <sup>3</sup>	Existing Facility	Considerations
Country Club Dr & US 60 (Superstition Freeway) Park-and-Ride	2010	Site selection process in progress		Country Club Dr & US 60	No	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.
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).
Metrocenter Rehabilitation / Expansion	2011	Project has not been formally initiated		Metrocenter Mall (Metro Pkwy & Tree Lane)	Yes	Consider inclusion of bus stop space for potential connecting routes: Route 15 (replaces Red Line FY 2009), Route 27, Route 35, Route 90 (supergrid service begins FY 2021), Route 106, Route 122, Route 570 (scheduled to discontinue in FY 2013), Route 581, I-17 RAPID, Black Canyon Fwy Connector (2016), and North I-17 Express (2022).
Peoria/Grand Park-and-Ride	2013	Project has not been formally initiated		Peoria Ave & Loop 101 (Agua Fria)	No	Consider inclusion of bus stop space for potential connecting routes: Route 106 (Peoria/Shea Supergrid), 83rd Ave/75th Ave Supergrid (2023) and Peoria Express (2014). In addition, Route 573 could potentially serve the facility.
Glendale/Grand Park-and-Ride	2013	Finished site selection and initial design concept		59 <sup>th</sup> Ave & Glendale Ave	No	Consider combining with transit center (see next facility in table) and including bus stop space for potential connecting routes: Route 59 (59th Ave Supergrid), Route 70 (Glendale Ave Supergrid), Grand Ave Limited and GUS. Facility may also be served by future light rail extension.
Glendale / Grand Transit Center	2013	Finished site selection and initial design concept		59 <sup>th</sup> Ave & Glendale Ave	No	See Glendale/Grand Park-and-Ride considerations.
Central Station Rehabilitation / Expansion	2014	Project has not been formally initiated		Central Ave & Van Buren St	Yes	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.
Phoenix Heavy Maintenance Facility	2014	Land acquisition completed		Adjacent to Phoenix West O&M Facility-Van Buren St & 75 <sup>th</sup> Ave	No	Consider incorporating some additional capacity for non-heavy maintenance activities and vehicle storage to address O&M facility deficiencies projected before year 2026.
Phoenix South Fixed Route O&M Rehabilitation	2015	Project has not been formally initiated		21 <sup>st</sup> Ave & Lower Buckeye	Yes	Consider possible future service expansions, including additional capacity for maintenance activities and vehicle storage to address O&M facility deficiencies projected before year 2026.
Mesa Fixed Route O&M Rehabilitation	2015	Project has not been formally initiated		Greenfield Rd & Virginia St	Yes	Consider possible future service expansions, including additional capacity for maintenance activities and vehicle storage to address O&M facility deficiencies projected before year 2026.

Source: 2008 Valley Metro Transit Life Cycle Program Update PAR Documents



<sup>1</sup>Year of opening subject to change

<sup>2</sup>Current status as of November 2008

<sup>3</sup>Location is subject to change based on site availability and other variables

**Table 5-9: Planned Regional Expansion Vehicles**

Fiscal Year For Acquisition	Fixed Route	Paratransit	Rural	Vanpool
2010	18	0	0	25
2011	25	0	0	25
2012	33	0	0	25
2013	42	0	4	25
2014	51	0	0	25
<b>Total</b>	<b>169</b>	<b>0</b>	<b>4</b>	<b>125</b>

Source: RPTA, 2008

**Table 5-10: Planned Regional Fixed Route Transit Vehicles FY 2010 through FY 2014**

Route	FY Service Implemented	Planned Regional Expansion Vehicles (Fiscal Year Acquired)				
		FY09	FY10	FY11	FY12	FY13
Gilbert Road	2010	2				
Power Rd	2010	6				
Baseline Rd	2011		11			
Apache Junction Express	2011		5			
Arizona Ave Dedicated BRT	2011		9			
Arizona Avenue/Country Club Drive	2012			8		
University Drive	2012			9		
Superstition Freeway Connector	2012			4		
Chandler Blvd Peak Headway Expansion	2012			7		
Broadway Rd	2013				7	
Camelback Rd	2013				7	
Elliot Rd	2013				12	
Grand Ave Limited	2013				11	
Pima Express	2013				5	
Alma School Rd	2014					9
McDowell Rd/McKellips Rd	2014					17
Peoria Express	2014					6
Scottsdale/Rural Rd Dedicated BRT	2014					14
City of Phoenix General Local Buses Expansion	---	10		5		5
<b>Total</b>		<b>18</b>	<b>25</b>	<b>33</b>	<b>42</b>	<b>51</b>

Source: RPTA, 2008

#### 5.4.5 Comparison of Funded Regional Fixed Route Transit Vehicles and Implementation (FY 2009)

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 2008 and FY 2009 was less than the estimated quantity of vehicles identified in the TLCP. In total, 34 fewer buses were acquired, including 20 fewer articulated buses (60' bus). A benefit of acquiring fewer vehicles includes long-term savings through reducing future replacement vehicle requirements. Table 5-

11 provides a comparison of planned regional fixed route transit expansion vehicles and actual vehicles acquired for service expansion in FY 2008 and FY 2009.

**Table 5-11: Comparison of Planned Regional Fixed Route Transit Expansion Vehicles and Vehicles Acquired (FY 2008 and FY 2009)**

Route	Fixed Route Expansion Vehicles					
	TLCP Fleet Plan			Actual Vehicles Acquired		
	40' Bus	60' Bus	Total	40' Bus	60' Bus	Total
Main St Supergrid (40)	13	0	13	13	0	13
Dobson Rd Supergrid (96)	12	0	12	11	0	11
Southern Ave Supergrid (61)	17	0	17	4	0	4
Chandler Blvd Supergrid (156)	20	0	20	15	0	15
Glendale Ave Supergrid (70)	18	0	18	0	0	0
Papgo Frwy Connector (562)	0	5	5	5	0	5
Loop 101 East Connector (511)	0	5	5	5	0	5
Loop 101 West Connector (574)	0	8	8	8	0	8
Red Mountain Express (534)	0	5	5	5	0	5
Main St LINK BRT	0	7	7	0	10	10
<b>Total</b>	<b>80</b>	<b>30</b>	<b>110</b>	<b>66</b>	<b>10</b>	<b>76</b>

Source: RPTA, 2008

## 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.

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## 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.
- *Passenger Fares* – Revenues generated through assessed user fees.
- *Interest* – Includes interest earned on the annual operating reserve and year-end cash balance.

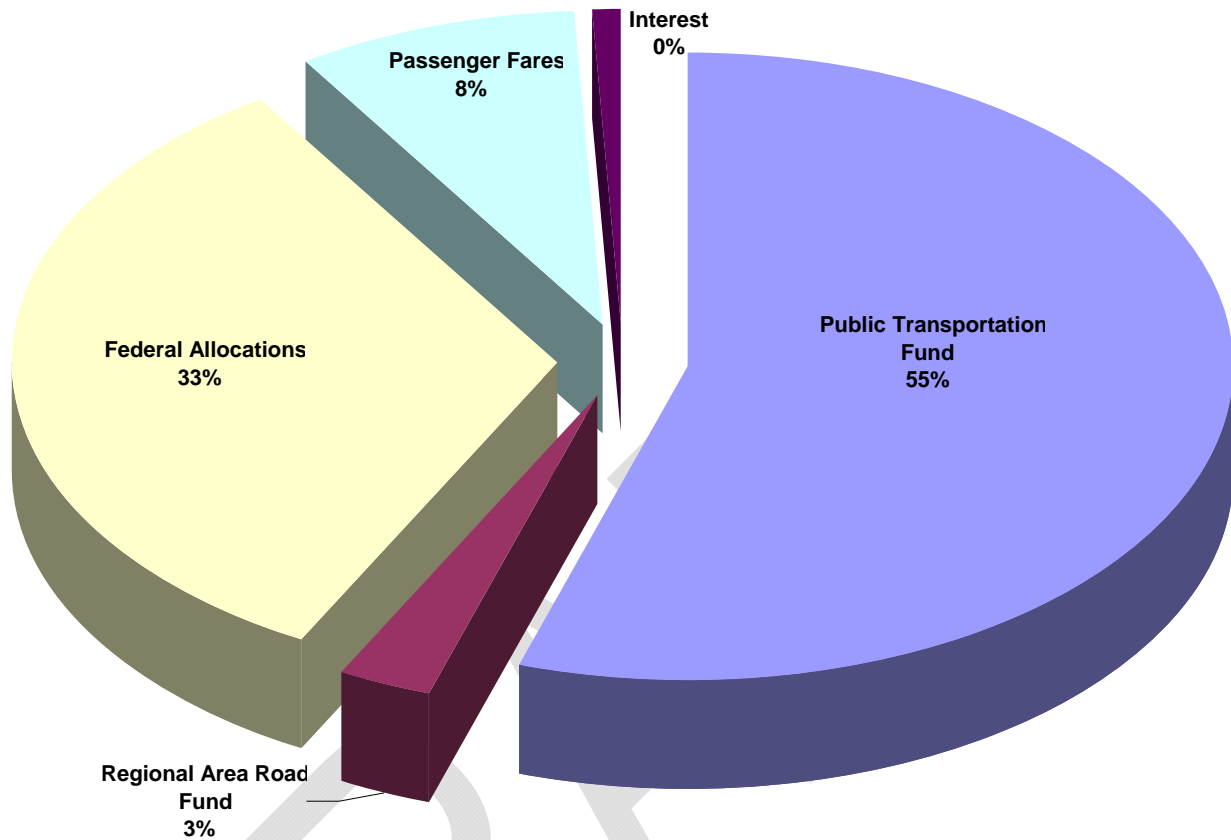
The TLCP is updated on an annual basis to determine reasonable estimates for future year revenues. Table 6-1 identifies the projected revenues summarized by the five general categories described above for FY 2008/09 through FY 2013/14. Figure 6-1 illustrates the total revenues by category for the same time period. The revenue estimates represent the most recent updated information for the region based on the FY 2008 TLCP Update.

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

<b>Revenue Category</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY2012</b>	<b>FY2013</b>	<b>FY 2014</b>	<b>Total</b>
Public Transportation Fund	\$81.2	\$86.2	\$91.8	\$98.1	\$104.7	\$111.8	\$573.7
Regional Area Road Fund	\$4.3	\$4.4	\$4.6	\$4.7	\$4.8	\$5.0	\$27.8
Federal Allocations	\$58.4	\$33.0	\$51.9	\$55.4	\$70.1	\$74.6	\$343.4
Passenger Fares	\$9.8	\$11.9	\$12.8	\$14.6	\$17.9	\$20.9	\$88.0
Interest	\$2.1	\$1.5	\$0.7	\$0.4	\$2.3	\$0.8	\$7.7
<b>Total</b>	<b>\$155.7</b>	<b>\$137.0</b>	<b>\$161.8</b>	<b>\$173.2</b>	<b>\$199.8</b>	<b>\$213.0</b>	<b>\$1,040.5</b>

Source: 2008 RPTA TLCP Update

**Figure 6-1: Estimated Regional Fixed Route & Paratransit Revenues FY 2009 - FY 2014**



Source: 2008 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.

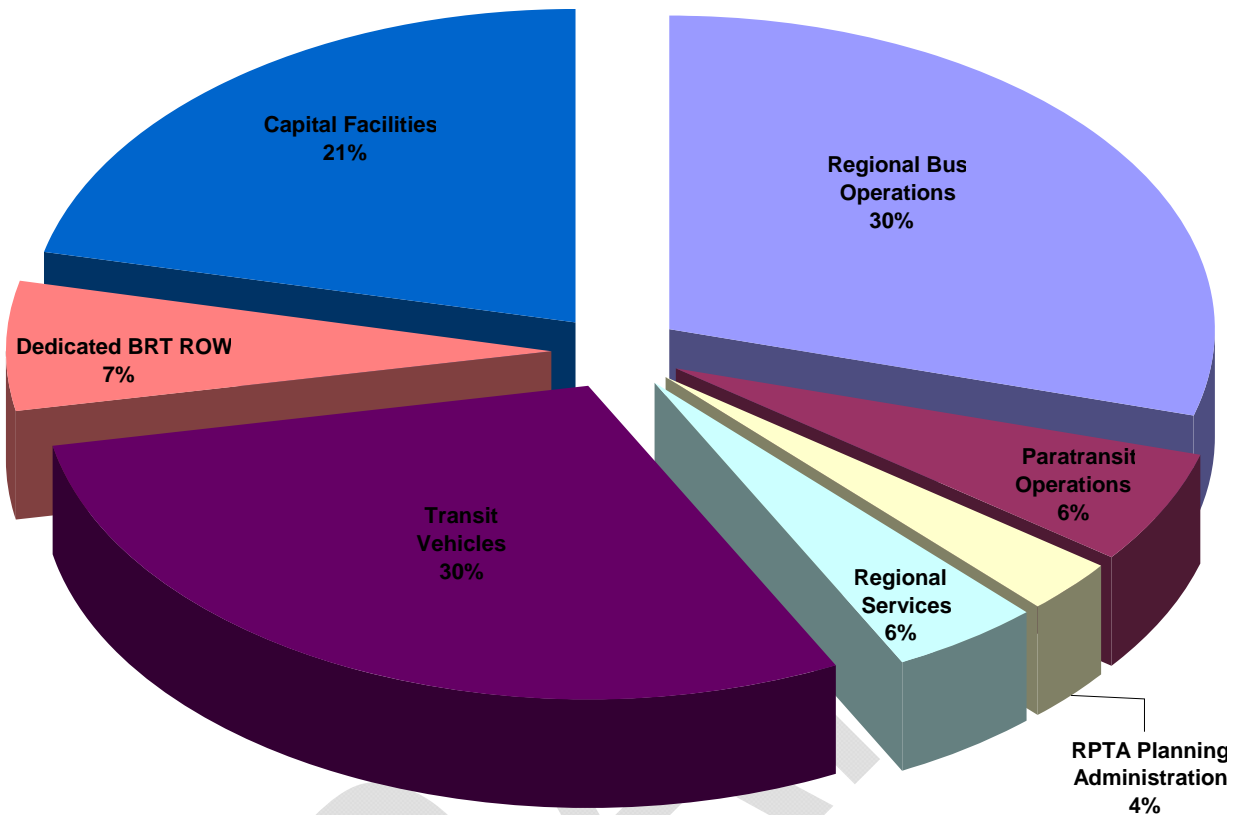
The TLCP is updated on an annual basis to determine reasonable estimates for future year expenditures. Table 6-2 identifies the projected expenditures summarized by the seven general categories described above for FY 2008/09 through FY 2013/14. Figure 6-2 illustrates the total expenditures by category for the same time period. The expenditure estimates represent the most recent updated information for the region based on the FY 2008 TLCP Update.

**Table 6-2: Estimated Regional Fixed Route & Paratransit Expenditures FY 2009 - FY 2014**  
(in \$millions)

<b>Revenue Category</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY2012</b>	<b>FY2013</b>	<b>FY 2014</b>	<b>Total</b>
Regional Bus Operations	\$40.2	\$48.1	\$51.7	\$59.9	\$74.3	\$86.8	<b>\$361.0</b>
Paratransit Operations	\$10.2	\$10.8	\$11.5	\$12.3	\$13.1	\$14.0	<b>\$72.0</b>
RPTA Planning & Administration	\$7.2	\$5.6	\$5.1	\$5.3	\$5.5	\$5.6	<b>\$34.3</b>
Regional Services	\$9.0	\$8.6	\$8.9	\$9.1	\$9.4	\$9.7	<b>\$54.7</b>
Transit Vehicles	\$45.4	\$54.5	\$84.1	\$70.9	\$75.1	\$32.4	<b>\$362.4</b>
Dedicated BRT ROW	\$14.0	\$11.1	\$0.0	\$18.7	\$29.1	\$10.2	<b>\$83.0</b>
Capital Facilities	\$101.5	\$11.1	\$9.9	\$58.1	\$41.6	\$41.5	<b>\$263.7</b>
<b>Total</b>	<b>\$227.6</b>	<b>\$149.9</b>	<b>\$171.2</b>	<b>\$234.3</b>	<b>\$248.1</b>	<b>\$200.2</b>	<b>\$1,231.1</b>

Source: 2008 RPTA TLCP Update

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



Source: 2008 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.

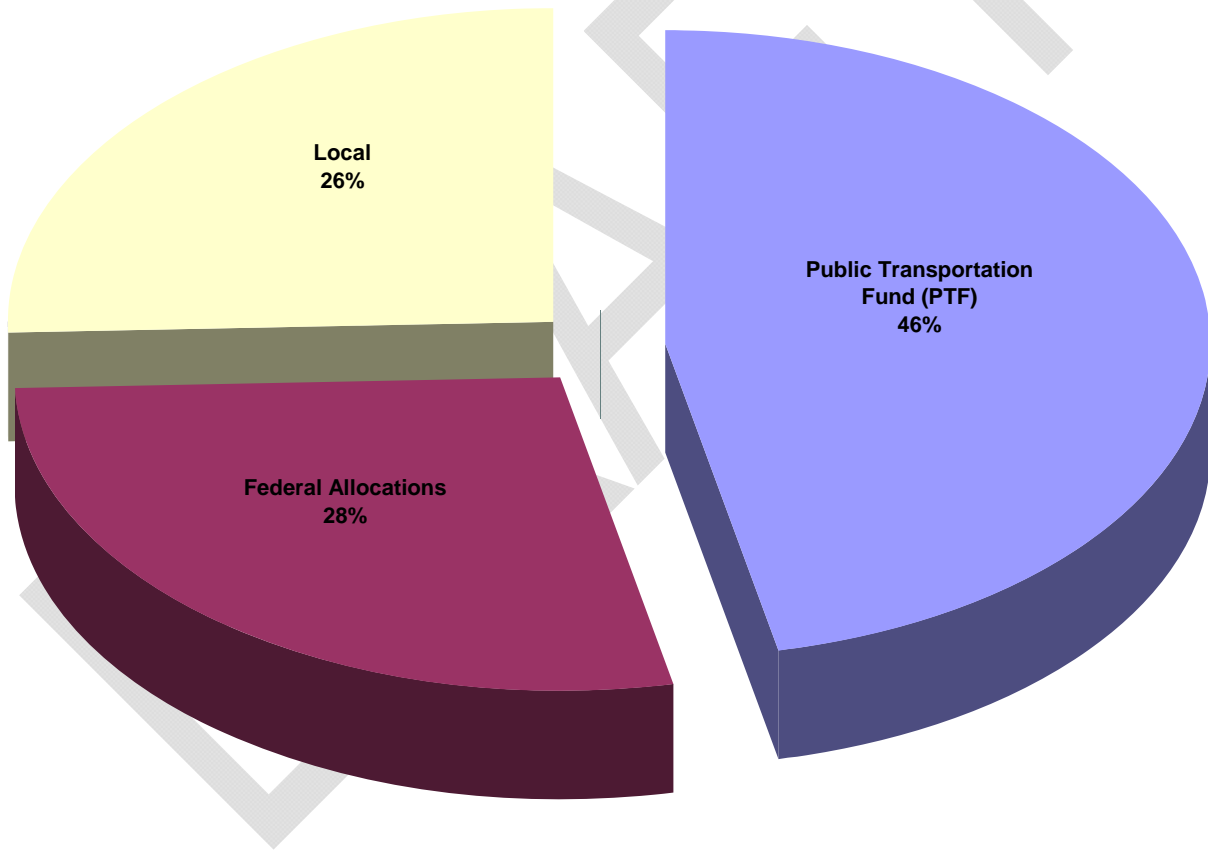
Table 6-3 identifies the projected revenues summarized by the four HCT capital revenue categories for FY 2008/09 through FY 2013/14. Figure 6-3 illustrates the total revenues by category for the same time period. The revenue estimates represent the most recent updated information for the region based on the FY 2008 TLCP Update.

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

Revenue Category	FY 2009	FY 2010	FY 2011	FY2012	FY2013	FY 2014	Total
Public Transportation Fund (PTF)	\$61.8	\$65.6	\$70.0	\$74.7	\$79.8	\$85.1	<b>\$437.1</b>
Federal Allocations	\$5.4	\$10.0	\$31.7	\$52.1	\$67.8	\$92.0	<b>\$258.9</b>
Local	\$64.1	\$56.8	\$38.0	\$42.0	\$12.5	\$25.3	<b>\$238.7</b>
Interest	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	<b>\$0.0</b>
<b>Total</b>	<b>\$131.3</b>	<b>\$132.5</b>	<b>\$139.7</b>	<b>\$168.8</b>	<b>\$160.1</b>	<b>\$202.3</b>	<b>\$934.7</b>

Source: 2008 RPTA TLCP Update

**Figure 6-3:** Estimated Regional HCT Capital Revenues FY 2009 - FY 2014



Source: 2008 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 2008/09 through FY 2013/14. 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 2008 TLCP Update.

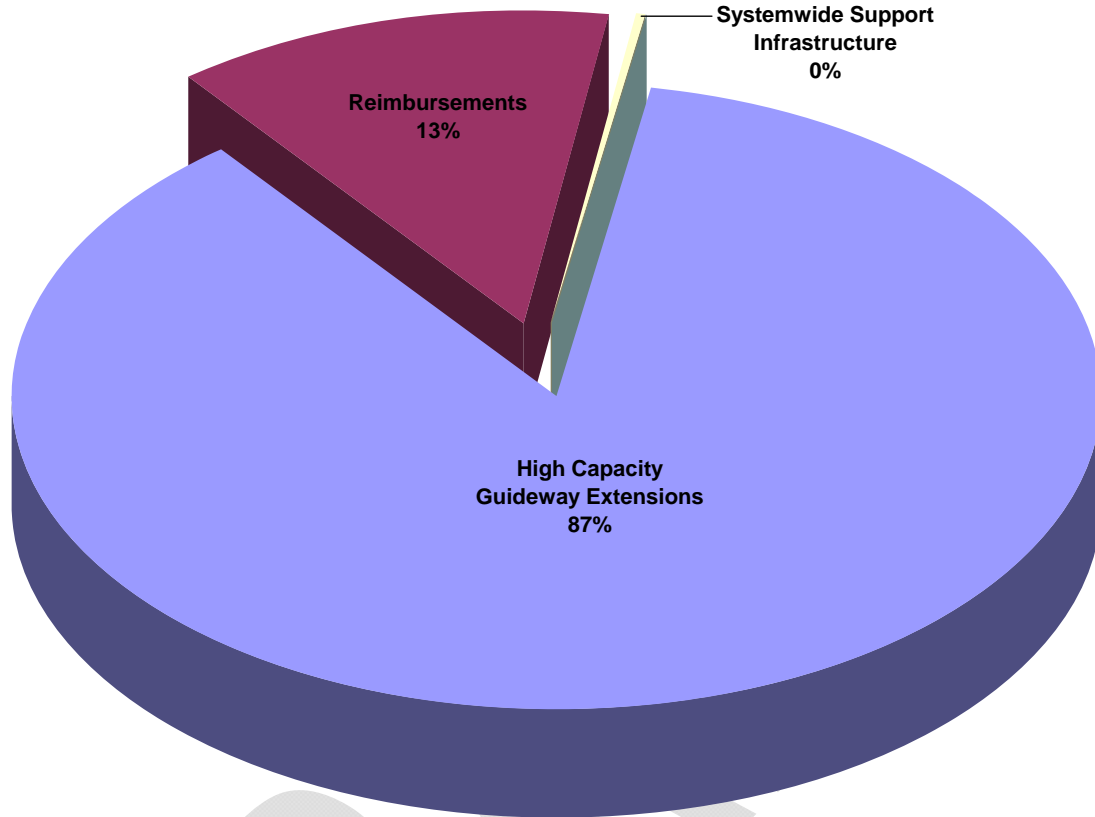
**Table 6-4:** Estimated Regional HCT Capital Expenditures (in \$millions)

<b>Expenditure Category</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY2012</b>	<b>FY2013</b>	<b>FY 2014</b>	<b>Total</b>
HCT Guideway Extensions	\$81.9	\$86.9	\$108.8	\$171.5	\$193.2	\$276.3	<b>\$918.5</b>
Reimbursements	\$55.9	\$47.1	\$34.8	\$0.0	\$0.0	\$0.0	<b>\$137.7</b>
Studies & Design Criteria	\$1.3	\$0.9	\$0.9	\$0.9	\$0.0	\$0.0	<b>\$4.1</b>
Systemwide Support Infrastructure*	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	<b>\$0.0</b>
<b>Total</b>	<b>\$139.1</b>	<b>\$134.9</b>	<b>\$144.4</b>	<b>\$172.4</b>	<b>\$193.2</b>	<b>\$276.3</b>	<b>\$1,060.3</b>

Source: 2008 RPTA TLCP Update

\* While no expenses are attributed to this category in FY 2008/09 through FY 2013/14, expenses are programmed in future years.

**Figure 6-4: Estimated Regional HCT Capital Expenditures FY 2009 - FY 2014**



Source: 2008 RPTA TLCP Update

### 6.3 REGIONAL TRANSIT FINANCING

Based on the estimated sources of revenues and programmed expenditures through FY 2013/14 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. Based on the FY 2008 TLCP Update, two bus program bond issuances valued at \$180.2 million and \$183.1 million were planned for FY 2008/09 and FY 2012/13 respectively to provide a positive annual cash flow 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.

**APPENDIX A**

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**Table A-1: FY 2007 Regional Transit System Data**

<b>FY 2007 System Data</b>					
	<b>Total Boardings</b>	<b>Total Wheelchair Boardings</b>	<b>Total Vehicle Miles</b>	<b>Total Revenue Miles</b>	<b>Total Vehicle Hours</b>
System					
Fixed Route	58,184,595	251,738	32,683,900	28,947,560	n/a
Dial-a-Ride	922,790	n/a	8,749,218	n/a	n/a
Vanpool	1,418,466	n/a	5,264,469	5,253,578	n/a
<b>Total System</b>	<b>60,525,851</b>		<b>46,697,586</b>	<b>34,201,137</b>	n/a
	<b>Total Revenue Hours</b>	<b>Operating Cost</b>	<b>Capital Cost</b>	<b>Total Cost</b>	
System					
Fixed Route	1,966,138	\$152,662,789	n/a	n/a	
Dial-a-Ride	532,031	\$29,505,513	n/a	n/a	
Vanpool	131,612	\$2,305,045	n/a	n/a	
<b>Total System</b>	<b>2,629,781</b>	<b>\$184,473,347</b>	n/a	n/a	
	<b>Total Passenger Revenues</b>	<b>Percent On-Time Performance</b>	<b>Vehicle Accidents</b>	<b>Farebox Recovery Ratio</b>	
System					
Fixed Route	\$37,000,313	91.55%	n/a	24.24%	
Dial-a-Ride	\$1,302,579	95.39%	n/a	4.41%	
Vanpool	\$2,650,738	-----	n/a	115%	
<b>Total System</b>	<b>\$40,953,630</b>	<b>93.47%</b>	n/a	<b>22.20%</b>	
	<b>Boardings Per Revenue Hour</b>	<b>Boardings per Revenue Mile</b>	<b>Operating Cost per Boarding</b>	<b>Operating Cost per Revenue Hour</b>	<b>Operating Cost per Revenue Mile</b>
System					
Fixed Route	29.59	2.01	\$2.62	\$77.65	\$5.28
Dial-a-Ride	1.73	n/a	\$31.97	\$55.46	n/a
Vanpool	10.78	0.27	\$1.63	\$17.51	\$0.44
<b>Total System</b>	<b>23.02</b>	<b>1.77</b>	<b>\$3.05</b>	<b>\$70.15</b>	<b>\$5.40</b>

**Table A-2: Operations and Performance Data for FY 2003 through FY 2007**

Revenue Miles								
System	FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007	
Fixed Route	25,199,371	25,885,061	25,736,871	26,133,953	28,766,992	10.08%	14.16%	
Shuttle/Circulator	1,157,936	1,196,425	1,177,451	1,237,806	-----	-----	-----	
Dial-a-Ride	7,185,339	8,052,626	7,623,118	7,865,367	n/a	n/a	n/a	
Rural Connector	-----	-----	-----	132,600	-----	-----	-----	
Vanpool	3,639,578	3,568,488	3,900,162	4,717,293	5,253,578	11.37%	44.35%	
<b>Total System</b>	<b>37,182,224</b>	<b>38,702,600</b>	<b>38,454,239</b>	<b>40,087,019</b>				

Notes:

1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Revenue Hours								
System	FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007	
Fixed Route	1,741,760	1,812,653	1,743,150	1,861,464	1,966,138	5.62%	12.88%	
Shuttle/Circulator	82,473	91,867	86,288	107,711	-----	-----	-----	
Dial-a-Ride	550,531	551,554	546,078	532,887	532,031	-0.16%	-3.36%	
Rural Connector	-----	-----	-----	4,335	-----	-----	-----	
Vanpool	90,989	89,212	97,504	117,932	131,612	11.60%	44.65%	
<b>Total System</b>	<b>2,465,752</b>	<b>2,545,286</b>	<b>2,473,560</b>	<b>2,624,329</b>	<b>2,629,781</b>	<b>0.21%</b>	<b>6.65%</b>	

Notes:

1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

On-Time Performance								
System	FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007	
Fixed Route	92.5%	91.0%	92.5%	90.7%	91.5%	0.94%	-1.03%	
Shuttle/Circulator	93.6%	94.1%	94.0%	96.0%	-----	-----	-----	
Dial-a-Ride	91.6%	92.8%	93.5%	94.9%	95.4%	0.48%	4.13%	
Rural Connector	-----	-----	-----	0.0%	-----	-----	-----	
Vanpool	-----	-----	-----	-----	-----	-----	-----	
<b>Total System</b>	<b>92.6%</b>	<b>92.6%</b>	<b>93.3%</b>	<b>93.9%</b>	<b>93.5%</b>	<b>-0.40%</b>	<b>0.90%</b>	

Notes:

1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Total Boardings								
System	FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007	
Fixed Route	48,190,883	51,815,468	54,012,208	55,832,297	58,184,595	4.21%	20.74%	
Shuttle/Circulator	2,319,653	2,564,667	2,969,448	3,023,025	-----	-----	-----	
Dial-a-Ride	1,029,378	1,034,742	1,063,600	938,879	922,790	-1.71%	-10.35%	
Rural Connector	-----	-----	-----	-----	-----	-----	-----	
Vanpool	941,682	975,156	1,025,136	1,270,416	1,418,466	11.65%	50.63%	
<b>Total System</b>	<b>52,481,596</b>	<b>56,390,033</b>	<b>59,070,596</b>	<b>61,067,461</b>	<b>60,525,851</b>	<b>-0.89%</b>	<b>15.33%</b>	

Notes:

1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Wheelchair Boardings								
System	FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007	
Fixed Route	189,448	195,277	214,024	222,878	251,738	12.95%	32.88%	
Shuttle/Circulator	3,002	3,111	4,376	1,793	-----	-----	-----	
Dial-a-Ride	166,650	172,896	185,275	186,603	n/a	n/a	n/a	
Rural Connector	-----	-----	-----	-----	-----	-----	-----	
Vanpool	NR	NR	NR	304	n/a	n/a	n/a	
<b>Total System</b>	<b>359,100</b>	<b>371,284</b>	<b>403,675</b>	<b>411,578</b>				

Notes:

1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Boardings per Revenue Mile								
System	FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007	
Fixed Route	1.91	2.00	2.10	2.14	2.01	-5.92%	5.10%	
Shuttle/Circulator	2.00	2.14	2.52	2.44	-----	-----	-----	
Dial-a-Ride	0.14	0.13	0.14	0.12	n/a	n/a	n/a	
Rural Connector	-----	-----	-----	0.02	-----	-----	-----	
Vanpool	0.26	0.27	0.26	0.27	0.27	0.26%	4.35%	
<b>Total System</b>	<b>1.41</b>	<b>1.46</b>	<b>1.54</b>	<b>1.54</b>	<b>1.77</b>	<b>15.22%</b>	<b>25.40%</b>	

Notes:  
1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Boardings per Revenue Hour								
System	FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007	
Fixed Route	27.67	28.59	30.99	29.99	29.59	-1.33%	6.96%	
Shuttle/Circulator	28.13	27.92	34.41	28.07	-----	-----	-----	
Dial-a-Ride	1.87	1.88	1.95	1.76	1.73	-1.56%	-7.24%	
Rural Connector	-----	-----	-----	-----	-----	-----	-----	
Vanpool	10.35	10.93	10.51	10.77	10.78	0.05%	4.14%	
<b>Total System</b>	<b>21.28</b>	<b>22.15</b>	<b>23.88</b>	<b>23.27</b>	<b>23.02</b>	<b>-1.09%</b>	<b>8.13%</b>	

Notes:  
1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Accidents per 100,000 Vehicle Miles								
System	FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007	
Fixed Route	0.84	0.01	0.01	1.22	n/a	n/a	n/a	
Shuttle/Circulator	1.10	1.91	0.36	1.10	-----	-----	-----	
Dial-a-Ride	0.86	0.83	0.59	0.87	n/a	n/a	n/a	
Rural Connector	-----	-----	-----	-----	-----	-----	-----	
Vanpool	0.77	0.70	0.72	0.02	n/a	n/a	n/a	
<b>Total System</b>	<b>0.85</b>	<b>0.29</b>	<b>0.20</b>	<b>1.04</b>				

Notes:  
1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Operating Expenses								
System	FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007	
Fixed Route	\$120,710,747	\$126,955,128	\$121,945,969	\$129,643,141	\$152,662,789	17.76%	26.47%	
Shuttle/Circulator	\$3,631,063	\$3,787,135	\$4,914,905	\$4,879,358	-----	-----	-----	
Dial-a-Ride	\$23,496,877	\$24,333,403	\$27,961,152	\$26,805,994	\$29,505,513	10.07%	25.57%	
Rural Connector	-----	-----	-----	-----	-----	-----	-----	
Vanpool	\$1,873,665	\$1,940,161	\$1,702,112	\$2,158,282	\$2,305,045	6.80%	23.02%	
<b>Total System</b>	<b>\$149,712,352</b>	<b>\$157,015,827</b>	<b>\$156,590,693</b>	<b>\$163,790,117</b>	<b>\$184,473,347</b>	<b>12.63%</b>	<b>23.22%</b>	

Notes:  
1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Total Passenger Revenue								
System	FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007	
Fixed Route	\$26,919,917	\$29,984,245	\$32,825,197	\$31,883,320	\$37,000,313	16.05%	37.45%	
Shuttle/Circulator	\$10,513	\$12,021	\$15,992	\$16,326	-----	-----	-----	
Dial-a-Ride	\$1,259,045	\$1,263,195	\$1,244,350	\$1,307,546	\$1,302,579	-0.38%	3.46%	
Rural Connector	-----	-----	-----	-----	-----	-----	-----	
Vanpool	\$1,533,316	\$1,606,046	\$1,791,450	\$2,328,632	\$2,650,738	13.83%	72.88%	
<b>Total System</b>	<b>\$29,722,791</b>	<b>\$32,865,507</b>	<b>\$35,877,630</b>	<b>\$35,544,535</b>	<b>\$40,953,630</b>	<b>15.22%</b>	<b>37.79%</b>	

Notes:  
1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Farebox Recovery Ratio								
System		FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007
Fixed Route		22.30%	23.62%	26.92%	24.59%	24.24%	-1.44%	8.69%
Shuttle/Circulator		0.33%	0.33%	0.33%	0.33%	-----	-----	-----
Dial-a-Ride		5.38%	5.19%	4.45%	4.88%	4.41%	-9.59%	-17.98%
Rural Connector		-----	-----	-----	-----	-----	-----	-----
Vanpool		81.84%	82.78%	105.25%	107.89%	115.00%	6.59%	40.53%
<b>Total System</b>		<b>36.50%</b>	<b>27.98%</b>	<b>27.58%</b>	<b>28.11%</b>	<b>22.20%</b>	<b>-21.04%</b>	<b>-39.19%</b>

Notes:  
1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Operating Cost per Boarding								
System		FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007
Fixed Route		\$2.50	\$2.45	\$2.26	\$2.32	\$2.62	12.83%	4.60%
Shuttle/Circulator		\$1.57	\$1.48	\$1.66	\$1.61	-----	-----	-----
Dial-a-Ride		\$22.83	\$23.52	\$26.29	\$28.55	\$31.97	11.97%	40.06%
Rural Connector		-----	-----	-----	-----	-----	-----	-----
Vanpool		\$1.99	\$1.99	\$1.66	\$1.70	\$1.63	-4.05%	-18.08%
<b>Total System</b>		<b>\$2.85</b>	<b>\$2.78</b>	<b>\$2.65</b>	<b>\$2.68</b>	<b>\$3.05</b>	<b>13.72%</b>	<b>6.92%</b>

Notes:  
1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Net Operating Cost per Boarding								
System		FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007
Fixed Route		\$1.95	\$1.87	\$1.65	\$1.75	\$1.99	13.53%	2.14%
Shuttle/Circulator		\$1.56	\$1.47	\$1.66	\$1.56	-----	-----	-----
Dial-a-Ride		\$21.60	\$22.30	\$25.12	\$27.16	\$30.56	12.53%	41.47%
Rural Connector		-----	-----	-----	-----	-----	-----	-----
Vanpool		\$0.36	\$0.34	-\$0.09	-\$0.13	-\$0.24	81.75%	-167.43%
<b>Total System</b>		<b>\$2.29</b>	<b>\$2.20</b>	<b>\$2.04</b>	<b>\$2.10</b>			

Notes:  
1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Operating Cost per Revenue Mile								
System		FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007
Fixed Route		\$4.79	\$4.90	\$4.74	\$4.96	5.31	6.98%	10.79%
Shuttle/Circulator		\$3.14	\$3.17	\$4.17	\$3.94	-----	-----	-----
Dial-a-Ride		\$3.27	\$3.02	\$3.67	\$3.41	n/a	n/a	n/a
Rural Connector		-----	-----	-----	-----	-----	-----	-----
Vanpool		\$0.51	\$0.54	\$0.44	\$0.46	n/a	n/a	n/a
<b>Total System</b>		<b>\$4.03</b>	<b>\$4.06</b>	<b>\$4.07</b>	<b>\$4.09</b>	<b>#DIV/0!</b>		

Notes:  
1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

Operating Cost per Revenue Hour								
System		FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006-2007	Percent Change From FYs 2003-2007
Fixed Route		\$69.30	\$70.04	\$69.96	\$69.65	\$77.65	11.49%	12.04%
Shuttle/Circulator		\$44.03	\$41.22	\$56.96	\$45.30	-----	-----	-----
Dial-a-Ride		\$42.68	\$44.12	\$51.20	\$50.30	\$55.46	10.25%	29.94%
Rural Connector		-----	-----	-----	-----	-----	-----	-----
Vanpool		\$20.59	\$21.75	\$17.46	\$18.30	\$17.51	-4.30%	-14.95%
<b>Total System</b>		<b>\$60.72</b>	<b>\$61.69</b>	<b>\$63.31</b>	<b>\$62.41</b>	<b>\$70.15</b>	<b>12.39%</b>	<b>15.53%</b>

Notes:  
1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

<b>Fare Revenue per Boarding</b>									
System		FY 2003 Total	FY 2004 Total	FY 2005 Total	FY 2006 Total	FY 2007 Total	Percent Change From FYs 2006- 2007	Percent Change From FYs 2003- 2007	
Fixed Route		\$0.56	\$0.58	\$0.61	\$0.57	\$0.64	11.36%	13.84%	
Shuttle/Circulator		\$0.00	\$0.00	\$0.01	\$0.01	-----	-----	-----	
Dial-a-Ride		\$1.22	\$1.22	\$1.17	\$1.39	\$1.41	1.36%	15.41%	
Rural Connector		-----	-----	-----	-----	-----	-----	-----	
Vanpool		\$1.63	\$1.65	\$1.75	\$1.83	\$1.87	1.95%	14.77%	
<b>Total System</b>		<b>\$0.57</b>	<b>\$0.58</b>	<b>\$0.61</b>	<b>\$0.58</b>	<b>\$0.68</b>	<b>16.25%</b>	<b>19.47%</b>	

Notes:  
1. Shuttle/Circulator and Rural Connector totals are included in 2007 Fixed Route data

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**APPENDIX B**

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

<b>Boardings</b>								
FY	Fixed Route	% Change From Previous Year	Shuttle/Circulator	% Change From Previous Year	Dial-A Ride	% Change From Previous Year	Total	% Change From Previous Year
1995	34,979,080		--		795,019		35,774,099	
1996	35,028,406	0.1%	--		795,019	0.0%	35,823,425	0.1%
1997	35,141,668	0.3%	--		959,400	20.7%	36,101,068	0.8%
1998	36,377,705	3.5%	--		938,659	-2.2%	37,316,364	3.4%
1999	37,366,572	2.7%	--		n/a	n/a	37,366,572	0.1%
2000	37,496,804	0.3%	--		968,120	n/a	38,464,924	2.9%
2001	39,313,693	4.8%	937,154		1,023,700	5.7%	41,274,547	7.3%
2002	43,523,952	10.7%	1,753,179	87.1%	1,023,885	0.0%	46,301,017	12.2%
2003	49,190,883	13.0%	2,319,653	32.3%	1,029,378	0.5%	52,539,914	13.5%
2004	51,815,468	5.3%	2,546,667	9.8%	1,034,742	0.5%	55,396,877	5.4%
2005	54,912,208	6.0%	2,969,448	16.6%	1,063,600	2.8%	58,945,256	6.4%
2006	55,832,297	1.7%	3,023,025	1.8%	938,879	-11.7%	59,794,201	1.4%
2007*	58,184,595	4.2%	---		922,790	-1.7%	59,107,385	-1.1%
<b>% Change 1998-2007</b>		<b>59.9%</b>		<b>n/a</b>		<b>-1.7%</b>		<b>58.4%</b>

Note:  
\*Shuttle/Circulator and Rural Connector Totals are included in 2007 Fixed Route data.

<b>Revenue Miles</b>								
FY	Fixed Route	% Change From Previous Year	Shuttle/Circulator	% Change From Previous Year	Dial-A Ride	% Change From Previous Year	Total	% Change From Previous Year
1995	13,664,992		---		5,213,388		18,878,380	
1996	14,331,831	4.9%	---		5,213,388	0.0%	19,545,219	3.5%
1997	14,740,186	2.8%	---		5,507,665	5.6%	20,247,851	3.6%
1998	16,198,218	9.9%	---		5,699,540	3.5%	21,897,758	8.1%
1999	16,226,425	0.2%	---		5,581,523	-2.1%	21,807,948	-0.4%
2000	18,039,016	11.2%	---		6,100,013	9.3%	24,139,029	10.7%
2001	20,633,013	14.4%	n/a		6,852,797	12.3%	27,485,810	13.9%
2002	23,046,161	11.7%	1,060,183	n/a	7,034,138	2.6%	31,140,482	13.3%
2003	25,199,371	9.3%	1,157,936	9.2%	7,185,339	2.1%	33,542,646	7.7%
2004	25,885,061	2.7%	1,196,425	3.3%	8,052,626	12.1%	35,134,112	4.7%
2005	25,736,871	-0.6%	1,177,451	-1.6%	7,623,118	-5.3%	34,537,440	-1.7%
2006	26,133,953	1.5%	1,237,806	5.1%	7,865,367	3.2%	35,237,126	2.0%
2007*	28,766,992	10.1%	---		n/a	n/a	28,766,992	-18.4%
<b>% Change 1998-2007</b>		<b>77.6%</b>		<b>n/a</b>		<b>n/a</b>		<b>31.4%</b>

Note:  
\*Shuttle/Circulator and Rural Connector Totals are included in 2007 Fixed Route data.

Boardings/Revenue Mile									
FY	Fixed Route	% Change From Previous Year		Shuttle/Circulator	% Change From Previous Year		Dial-A Ride	% Change From Previous Year	
								Total	% Change From Previous Year
1995	2.6						0.2	1.9	
1996	2.4	-4.5%					0.2	1.8	-3.3%
1997	2.4	-2.5%					0.2	1.8	-2.7%
1998	2.2	-5.8%					0.2	1.7	-4.4%
1999	2.3	2.5%					n/a	1.7	0.5%
2000	2.1	-9.7%					0.2	1.6	-7.0%
2001	1.9	-8.3%		1.5			0.1	1.5	-5.8%
2002	1.9	-0.9%		1.7	9.5%		0.1	1.5	-1.0%
2003	2.0	3.4%		2.0	21.1%		0.1	1.6	5.3%
2004	2.0	2.5%		2.1	6.3%		0.1	1.6	0.7%
2005	2.1	6.6%		2.5	18.5%		0.1	1.7	8.2%
2006	2.1	0.1%		2.4	-3.2%		0.1	1.7	-0.6%
2007*	2.0	-5.3%		---	---		n/a	2.1	21.1%
<b>% Change 1998-2007</b>		<b>-9.9%</b>		<b>n/a</b>		<b>n/a</b>		<b>20.6%</b>	

Note:  
\*Shuttle/Circulator and Rural Connector Totals are included in 2007 Fixed Route data.

Operating Costs									
FY	Fixed Route	% Change From Previous Year		Shuttle/Circulator	% Change From Previous Year		Dial-A Ride	% Change From Previous Year	
								Total	% Change From Previous Year
1995	n/a						n/a		
1996	n/a	n/a					n/a		
1997	n/a	n/a					n/a		
1998	\$61,579,208	n/a					\$11,811,483	\$73,390,691	
1999	\$65,686,899	6.7%					\$13,523,191	\$79,210,090	7.9%
2000	\$74,743,277	13.8%					\$15,606,135	\$90,349,412	14.1%
2001	\$93,806,320	25.5%		\$2,401,130			\$18,359,527	\$114,566,977	26.8%
2002	\$106,208,292	13.2%		\$3,611,664	50.4%		\$21,517,640	\$131,337,597	14.6%
2003	\$120,710,747	13.7%		\$3,631,063	0.5%		\$23,496,877	\$147,838,687	12.6%
2004	\$126,955,128	5.2%		\$3,787,135	4.3%		\$24,333,403	\$155,075,666	4.9%
2005	\$121,945,969	-3.9%		\$4,914,905	29.8%		\$27,961,152	\$154,822,026	-0.2%
2006	\$129,643,141	6.3%		\$4,879,358	-0.7%		\$26,805,994	\$161,328,493	4.2%
2007	\$152,662,789	17.8%		---	---		\$29,505,513	\$182,168,302	12.9%
<b>% Change 1998-2007</b>		<b>147.9%</b>		<b>n/a</b>		<b>149.8%</b>		<b>148.2%</b>	

Note:  
\*Shuttle/Circulator and Rural Connector Totals are included in 2007 Fixed Route data.

Operating Costs/Boarding								
FY	Fixed Route	% Change From Previous Year	Shuttle/Circulator	% Change From Previous Year	Dial-A Ride	% Change From Previous Year	Total	% Change From Previous Year
1995	\$1.46		---		n/a		n/a	
1996	\$1.51	3.4%	---	---	n/a	n/a	n/a	n/a
1997	\$1.67	10.6%	---	---	n/a	n/a	n/a	n/a
1998	\$1.69	1.2%	---	---	n/a	n/a	n/a	n/a
1999	\$1.76	4.1%	---	---	\$14.13	n/a	n/a	n/a
2000	\$1.99	13.1%	---	---	\$16.12	14.1%	n/a	n/a
2001	\$2.39	20.1%	\$2.56	---	\$17.93	11.2%	\$2.78	n/a
2002	\$2.44	2.1%	\$2.06	-19.5%	\$21.02	17.2%	\$2.84	2.2%
2003	\$2.45	0.6%	\$1.57	-24.0%	\$22.83	8.6%	\$2.81	-0.8%
2004	\$2.45	-0.2%	\$1.49	-5.0%	\$23.52	3.0%	\$2.80	-0.5%
2005	\$2.22	-9.4%	\$1.66	11.3%	\$26.29	11.8%	\$2.63	-6.2%
2006	\$2.32	4.6%	\$1.61	-2.5%	\$28.55	8.6%	\$2.70	2.7%
2007	\$2.62	13.0%	n/a	n/a	\$31.97	12.0%	\$3.08	14.2%
<b>% Change 1998-2007</b>		<b>55.3%</b>	<b>n/a</b>		<b>n/a</b>		<b>n/a</b>	

Note:  
\*Shuttle/Circulator and Rural Connector Totals are included in 2007 Fixed Route data.

Total Revenues								
FY	Fixed Route	% Change From Previous Year	Shuttle/Circulator	% Change From Previous Year	Dial-A Ride	% Change From Previous Year	Total	% Change From Previous Year
1995	n/a				n/a		n/a	
1996	n/a	n/a			n/a	n/a	n/a	n/a
1997	n/a	n/a			n/a	n/a	n/a	n/a
1998	\$19,188,643	n/a			\$1,024,347	n/a	\$20,212,990	n/a
1999	\$19,759,452	3.0%			\$1,107,043	8.1%	\$20,866,495	3.2%
2000	\$23,033,517	16.6%			\$1,386,709	25.3%	\$24,420,226	17.0%
2001	\$26,643,610	15.7%	\$6,477		\$1,224,283	-11.7%	\$27,874,370	14.1%
2002	\$24,429,588	-8.3%	\$12,231	88.8%	\$1,282,289	4.7%	\$25,724,109	-7.7%
2003	\$26,919,917	10.2%	\$10,513	-14.0%	\$1,259,045	-1.8%	\$28,189,475	9.6%
2004	\$29,984,245	11.4%	\$12,021	14.3%	\$1,263,195	0.3%	\$31,259,461	10.9%
2005	\$32,825,197	9.5%	\$15,992	33.0%	\$1,244,350	-1.5%	\$34,085,539	9.0%
2006	\$31,883,320	-2.9%	\$16,326	2.1%	\$1,307,546	5.1%	\$33,207,192	-2.6%
2007*	\$37,000,313	16.0%	n/a	n/a	\$1,302,579	-0.4%	\$38,302,892	15.3%
<b>% Change 1998-2007</b>		<b>92.8%</b>	<b>n/a</b>		<b>27.2%</b>		<b>89.5%</b>	

Note:  
\*Shuttle/Circulator and Rural Connector Totals are included in 2007 Fixed Route data.

Revenue Per Boarding								
FY	Fixed Route	% Change From Previous Year	Shuttle/Circulator	% Change From Previous Year	Dial-A Ride	% Change From Previous Year	Total	% Change From Previous Year
1995	\$1.51		n/a		n/a		n/a	
1996	\$0.55	-63.6%	n/a	n/a	n/a	n/a	n/a	n/a
1997	\$0.55	0.0%	n/a	n/a	n/a	n/a	n/a	n/a
1998	\$0.53	-4.1%	n/a	n/a	\$1.09	n/a	\$0.54	n/a
1999	\$0.53	0.2%	n/a	n/a	n/a	n/a	\$0.56	3.1%
2000	\$0.61	16.2%	n/a	n/a	\$1.43	n/a	\$0.63	13.7%
2001	\$0.68	10.3%	\$0.01	n/a	\$1.20	-16.5%	\$0.68	6.4%
2002	\$0.56	-17.2%	\$0.01	0.9%	\$1.25	4.7%	\$0.56	-17.7%
2003	\$0.55	-2.5%	\$0.00	-35.0%	\$1.22	-2.3%	\$0.54	-3.4%
2004	\$0.58	5.7%	\$0.00	4.2%	\$1.22	-0.2%	\$0.56	5.2%
2005	\$0.60	3.3%	\$0.01	14.1%	\$1.17	-4.2%	\$0.58	2.5%
2006	\$0.57	-4.5%	\$0.01	0.3%	\$1.39	19.0%	\$0.56	-4.0%
2007*	\$0.64	11.4%	n/a	n/a	\$1.41	1.4%	\$0.65	16.7%
<b>% Change 1998-2007</b>		<b>20.6%</b>	<b>n/a</b>		<b>29.3%</b>		<b>19.6%</b>	

Note:

\*Shuttle/Circulator and Rural Connector Totals are included in 2007 Fixed Route data.

Farebox Recovery Ratio (%)								
FY	Fixed Route	% Change From Previous Year	Shuttle/Circulator	% Change From Previous Year	Dial-A Ride	% Change From Previous Year	Total	% Change From Previous Year
1995	31.3%		n/a		n/a		n/a	
1996	36.4%	5.1%	n/a	n/a	n/a	n/a	n/a	n/a
1997	33.2%	-3.2%	n/a	n/a	n/a	n/a	n/a	n/a
1998	31.2%	-2.0%	n/a	n/a	8.7%	n/a	n/a	n/a
1999	30.2%	-1.0%	n/a	n/a	8.2%	-0.5%	n/a	n/a
2000	30.8%	0.6%	n/a	n/a	8.9%	0.7%	n/a	n/a
2001	28.4%	-2.4%	0.3%	n/a	6.7%	-2.2%	24.8%	n/a
2002	23.0%	-5.4%	0.3%	0.1%	6.0%	-0.7%	20.7%	-4.1%
2003	22.3%	-0.7%	5.4%	5.0%	5.4%	-0.6%	36.5%	15.8%
2004	23.6%	1.3%	5.2%	-0.2%	5.2%	-0.2%	28.0%	-8.5%
2005	26.9%	3.3%	4.5%	-0.7%	4.5%	-0.7%	27.6%	-0.4%
2006	24.6%	-2.3%	4.9%	0.4%	4.9%	0.4%	28.1%	0.5%
2007*	24.2%	-0.4%	---	---	4.4%	-0.5%	22.2%	-5.9%
<b>% Change 1998-2007</b>		<b>-7.0%</b>	<b>n/a</b>		<b>-4.3%</b>		<b>n/a</b>	

Note:

\*Shuttle/Circulator and Rural Connector Totals are included in 2007 Fixed Route data.

On-Time Performance (%)								
FY	Fixed Route	% Change From Previous Year	Shuttle/Circulator	% Change From Previous Year	Dial-A Ride	% Change From Previous Year	Total	% Change From Previous Year
1995	n/a				n/a			
1996	n/a	n/a			n/a	n/a		n/a
1997	n/a	n/a			n/a	n/a		n/a
1998	87.0%	n/a			69.2%	n/a	n/a	n/a
1999	93.0%	6.0%			86.2%	17.0%	n/a	n/a
2000	89.7%	-3.3%			87.8%	1.6%	n/a	n/a
2001	88.8%	-0.9%	92.2%		73.3%	-14.5%	n/a	n/a
2002	92.4%	3.6%	94.0%	1.8%	87.9%	14.6%	n/a	n/a
2003	92.5%	0.1%	93.6%	-0.4%	91.6%	3.7%	92.6%	n/a
2004	91.9%	-0.6%	94.1%	0.5%	92.8%	1.2%	92.6%	0.0%
2005	92.5%	0.6%	94.0%	-0.1%	93.5%	0.7%	93.3%	0.7%
2006	90.7%	-1.8%	96.0%	2.0%	94.9%	1.4%	93.9%	0.6%
2007*	91.5%	0.8%	---	---	95.4%	0.5%	93.5%	-0.4%
<b>% Change 1998-2007</b>		<b>4.5%</b>		<b>n/a</b>		<b>26.2%</b>		<b>n/a</b>
Note: *Shuttle/Circulator and Rural Connector Totals are included in 2007 Fixed Route data.								

**APPENDIX C**

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

<b>Fiscal Year</b>	<b>Annual Boardings</b>	<b>Revenue Miles of Service</b>	<b>Passengers Per Mile</b>
1985	16,501,219	7,592,893	2.17
1986	17,487,296	8,331,290	2.10
1987	19,327,298	9,275,347	2.08
1988	21,035,796	10,524,537	2.00
1989	25,000,896	10,824,442	2.31
1990	28,642,983	11,664,511	2.46
1991	31,063,899	11,503,650	2.70
1992	32,227,853	11,904,888	2.71
1993	32,194,122	12,029,150	2.68
1994	33,252,295	12,462,098	2.67
1995	34,227,244	13,365,761	2.56
1996	35,028,406	13,664,992	2.56
1997	35,141,668	14,331,831	2.45
1998	36,377,705	14,740,186	2.47
1999	37,366,572	16,198,218	2.32
2000	37,496,804	18,039,016	2.08
2001	40,194,501	21,221,858	1.89
2002	45,277,131	24,106,344	1.88
2003	50,510,536	26,357,307	1.91
2004	54,013,410	26,672,410	2.03
2005	56,361,933	27,427,972	2.05
2006	59,253,904	27,870,551	2.13
2007	58,184,595	28,766,992	2.02



