



# 2005 ANNUAL REPORT

## ON THE STATUS OF THE IMPLEMENTATION OF

# PROPOSITION 400



Freeway Life Cycle Program



Arterial Life Cycle Program



Transit Life Cycle Program

September 2005



**Maricopa Association of Governments**

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PROPOSITION 400**

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# **CHAPTER ONE**

## **INTRODUCTION**

Arizona Revised Statute (ARS) 28-6354 requires that the Maricopa Association of Governments (MAG) annually issue a report on the status of projects funded through Proposition 400. Proposition 400 was passed by Maricopa County voters on November 2, 2004 and authorizes a 20-year continuation of the half-cent sales tax for transportation projects in Maricopa County. To respond to the requirements of ARS 28-6354, MAG has prepared the *2005 Annual Report on the Status of the Implementation of Proposition 400* and will produce yearly updates consistent with the directives of the legislation. This annual reporting process will address project construction status, project financing, changes to the MAG Regional Transportation Plan, and criteria used to develop priorities. In addition, background information will be provided on the overall transportation planning, programming and financing process.

The half-cent sales tax extension approved through Proposition 400 will go into affect on January 1, 2006. This extension will replace the current half-cent sales tax for transportation that was approved by the voters of Maricopa County in 1985 through Proposition 300 and expires on December 31, 2005. Since funding from the tax extension will not be received until mid-FY 2006, the 2005 Annual Report is focused primarily on background information regarding planned region transportation improvements and ongoing activities to prepare for the new tax.

### **1.1 ANNUAL REPORT STRUCTURE**

The MAG Annual Report has been structured into ten chapters to provide a thorough review of the status of Proposition 400, as well as overall progress on the implementation of the MAG Regional Transportation Plan. Chapter One describes the approach to the reporting process and the topics addressed in the Annual Report. Chapter Two summarizes key findings and issues identified from the analysis. Chapter Three describes some of the major implementation activities ongoing in each transportation mode. Chapter Four describes Proposition 400 and its associated legislation. Chapter Five discusses the roles and responsibilities of the key agencies charged with implementing regional transportation programs and projects in the MAG Region. Chapter Six covers the major features of the MAG Regional Transportation Plan, which identifies uses and priorities for regional transportation revenues. Chapter Seven provides an in-depth review of the sources and uses of regional transportation revenues, including the one-half cent sales tax. Chapters Eight, Nine and Ten give the status of the life cycle programs for each of the transportation modes receiving half-cent funding. These life-cycle programs are the management tools used by the implementing agencies to ensure that transportation program costs and revenues are in balance, and that schedules are being met.

The MAG Annual Report will be updated each year on a fiscal year (FY) basis (fiscal year ending June 30<sup>th</sup>). The reporting period will cover FY 2006 through FY 2026, with a fixed end date of June 30, 2026. All projects for the major transportation modes, as defined in the MAG Regional Transportation Plan (RTP), will be monitored, whether they specifically receive half-cent funding or not. This ensures that an overview of progress on the entire RTP is provided, and that trends in each of the important transportation revenue sources are being tracked. Any amendments to the RTP will be reflected in the project monitoring process. A chronology of each original project in the RTP will be maintained to preserve a link between the MAG Annual Report and the Plan presented to the voters as part of Proposition 400. A database of RTP projects by mode will also be maintained to track costs, expenditures and accomplishments on a continuing basis.

## **1.2 FUTURE PERFORMANCE MONITORING**

Arizona Revised Statute 28-6313 establishes the requirement to conduct performance audits of proposed transportation projects and systems in the MAG Regional Transportation Plan. Specifically, beginning in 2010 and every fifth year thereafter, the Arizona Auditor General is required to contract with a nationally recognized independent auditor. In accordance with the statutes, the auditor is required to have expertise in evaluating multimodal transportation systems; and in regional transportation planning, to conduct a performance audit of the RTP and the identified projects scheduled for funding during the next five years.

The audit will examine the Regional Transportation Plan and the projects that are scheduled for funding within each transportation mode, using a specific set of performance measures. In addition, it will review past expenditures on the RTP and examine the performance of the transportation system in relieving congestion and improving mobility. The audit is also required to provide recommendations regarding whether further implementation of a project is warranted, warranted with modifications or not warranted.

In order to prepare for an effective audit, MAG is enhancing its staff and technical resources in the area of transportation system performance monitoring. MAG already has extensive traffic and transportation forecasting capabilities, but will be adding staff expertise and new traffic and travel demand modeling tools to address performance monitoring of existing and proposed transportation facilities and the regional transportation system. In this regard, MAG has been working closely with the Texas Transportation Institute on developing improved capabilities to report on freeway traffic conditions and trends, and expects to continue this effort in the future. In addition, a performance engineer position has been added to the MAG organization to bring the performance monitoring effort to a focus and maintain an increasing level of attention to this program area.

The MAG performance-monitoring program will address multimodal systems, aimed at establishing meaningful and consistent performance measures across all modes. Additional considerations will include “project level” versus “system level” performance, as well as developing meaningful measures in a rapidly growing area. Possible performance measurement categories for consideration include: travel time, speed, delay, congestion, customer satisfaction and safety. As the MAG performance-monitoring program develops over the upcoming months, it is anticipated that in addition to the MAG Annual Report, periodic performance reports will also be produced.

## CHAPTER TWO

### SUMMARY OF FINDINGS AND ISSUES

#### 2.1 KEY FINDINGS

- A strong coordination effort is being pursued by the agencies implementing Proposition 400.

The key agencies in the region have formed an ad hoc group, the “RTP Partners”, aimed at coordinating the effort to implement Proposition 400 and the projects in the MAG Regional Transportation Plan. The agencies include: the Maricopa Association of Governments (MAG); the Arizona Department of Transportation (ADOT); the Regional Public Transportation Authority (RPTA); and Valley Metro Rail (Valley Metro Rail).

As part of this undertaking, unified revenue forecasts have been established, as well as consistent approaches to the life cycle transportation programming process. Other key areas of common effort are development of a project information database and performance measurement system.

- The life cycle programming process has been initiated for all transportation modes.

As required by state law, life cycle programming provides a budgeting process to ensure that the estimated cost of improvements does not exceed the total amount of revenues available. Life cycle programming has been initiated by the responsible agencies, i.e., MAG, ADOT, RPTA, and Valley Metro Rail.

At this time, the life cycle programs are preliminary and are undergoing enhancement and refinement. It is expected that they will be fully in place by the time funding from Proposition 400 becomes available in the spring of 2006.

- Preliminary, twenty-year transportation project programs developed through the life cycle process are consistent with the MAG Regional Transportation Plan (RTP) and are in balance with projected revenues.

Preliminary transportation project programs covering freeways/highways, arterial streets and transit, have been developed, respectively, by ADOT, MAG and RPTA/Valley Metro Rail. These programs cover the life cycle period from FY 2006 through FY 2026, contain the projects included in the MAG RTP for each mode, and provide project implementation schedules consistent with the priorities identified in the RTP. The total project costs included in these programs are in balance with the revenues currently forecasted for each modal area, and annual expenditures are consistent with cash flows projected for available funding sources.

- Construction work on the remaining projects in the Proposition 300 – Regional Freeway Program will be completed by mid-2008 and costs for the program are generally in balance with projected future funds available.

The ongoing Proposition 300 - Regional Freeway Program is nearing its final stages. It is anticipated that construction on the final project in this program will be completed by mid-2008. This reflects a schedule change for the completion of the Red Mountain Freeway between Power Road and University Drive to mid-2008 rather than December 2007. The longer construction schedule is due to the need to stop construction activities at 10:00 PM, so that adjacent neighborhoods are not impacted during the late night hours.

Program costs for the completion of the Proposition 300 Program are generally in balance with the projected future funds available, with costs exceeding available funds by about one-half of one percent. It should also be noted that the timing requirements of construction and debt service payments can be met within available revenues based on the ADOT multi-year cash flow management program.

## **2.2 FUTURE ISSUES**

- The potential cost of future right-of-way acquisition will require careful monitoring and may warrant periodic program adjustments.

The recent real estate boom is resulting in unprecedented increases in land prices throughout the region. It will be vital to monitor this cost environment and the effect on project costs. Strategic program adjustments may be warranted to minimize the overall, long-term effect on the modal life cycle programs. Given the climate of rapidly increasing land costs, it will be vital to complete engineering studies quickly, so that right-of-way requirements can be defined in detail and property acquired. At the same time, the need for long-term right-of-way protection must be balanced against the immediate need to provide new roadway capacity to meet growth in travel demand.

- Materials prices are facing an environment of global competition and growing limits on supply, which may affect future construction costs and cost/revenue balance.

The rapid growth of emerging economies around the globe, particularly China and India, have created intense competition for resources. As a result, costs for cement, steel and other materials have been on the increase and have impacted construction costs. Petroleum, which is vital as a material and a fuel in the construction industry, is experiencing especially strong worldwide demand, while at the same time facing growing limits on supply. The recent storm damage to petroleum production facilities in the Gulf of Mexico area, as well as the continuing susceptibility of this area to future interruptions, may negatively affect petroleum supplies for the foreseeable future. Careful monitoring of construction

costs will be essential and periodic program adjustments may be warranted, as part of the life cycle programming process.

- The timing of the Federal New Starts Program for light rail transit may have a major effect on the schedule for implementation of route extensions.

Federal funding provides approximately half of the financial resources identified for construction of extensions to the light rail transit network included in the RTP. A large part of this funding is awarded by the US Department of Transportation through the discretionary “New Starts Program”. The timing and amounts of light rail transit new start monies coming to the MAG region will be subject to a highly competitive process at the federal level. The prospects for awards from this program will require careful monitoring, and adjustments to the life cycle program may be warranted to reflect changes in the outlook for these monies.

- A continuing challenge for the modal life cycle programs will be to minimize project “scope creep” and prepare project designs that are in scale with available funding.

As part of the development of the RTP, overall revenue and cost estimates were prepared for planning purposes. These estimates were based on past cost and revenue experience and are subject to uncertainties that can only be resolved once detailed engineering studies are completed and economic conditions are revealed over time. During the development of the RTP, it was noted that periodic adjustments and updating of the RTP would be needed to respond to changing conditions and new information.

One of the key challenges for the implementing agencies will be to respond to changing conditions and new information, while avoiding the expansion of project designs (scope creep) beyond available funding. The life cycle programming process is intended to provide the decision-making structure through which this discipline can be maintained.

## **CHAPTER THREE**

### **IMPLEMENTATION ACTIVITIES**

With the passage of Proposition 400 on November 2, 2004, a broad range of activities were initiated to begin the implementation of projects in the MAG Regional Transportation Plan (RTP). The projects in the RTP are being funded by the continuation of the half-cent sales tax for transportation authorized by Proposition 400, as well as state and federal sources. Although the initial revenues from the half-cent sales tax extension will not actually be received until March 2006, work is proceeding to put program management mechanisms in place, to develop highway engineering concepts and plans, and to proceed with transit service planning activities for projects throughout the region.

#### **3.1 REGIONAL TRANSPORTATION PLAN (RTP) PARTNERS**

Key agencies in the region have formed an ad hoc group, the “RTP Partners”, aimed at coordinating the effort to implement Proposition 400 and the projects in the MAG Regional Transportation Plan. The agencies include: the Maricopa Association of Governments; the Arizona Department of Transportation; the Regional Public Transportation Authority; and Valley Metro Rail. The RTP Partners have already held a number of meetings and anticipate a more frequent meeting schedule, as activity increases with the start of the half-cent sales tax extension in 2006.

In addition to ensuring overall coordination of planning and implementation activities, specific goals of the group are to: prepare uniform revenue forecasts; to establish consistent life cycle programming procedures; to maintain an integrated approach to the long-term development of transportation corridors and services; and to provide clear, concise information to the public and receive their input on issues connected with the implementation of Proposition 400.

Project Information Database – The RTP partners are discussing the best method to provide the public, the media, and elected officials with a way to access current information about the status of each of the projects funded from Proposition 400. Information on the description of the project, schedule, budget, and any current activity related to the project would be noted.

Performance Measures – The RTP partners are discussing the development of appropriate performance measures that can be used to provide information on the overall objectives of implementing Proposition 400, system performance measures that can provide regular updates on how the overall regional transportation system is performing, and project-specific measures that can be used to evaluate how individual projects are performing.

### **3.2 FREEWAY/HIGHWAY PROGRAM**

The Arizona Department of Transportation (ADOT) will be the implementing agency for freeway and highway projects in the RTP. These projects are on the State Highway System and are the major freeway and highway projects in the region. ADOT has been pursuing a number of activities to initiate the project development process.

Life Cycle Program - The legislation passed in connection with Proposition 400 requires that the agencies implementing transportation projects maintain a budget process to ensure that the estimated cost of programmed improvements does not exceed the total amount of revenues available for those improvements. ADOT has had this kind of program management system in place since 1992 as part of the previous freeway construction program. The Department has been refining and expanding the Freeway/Highway Life Cycle Program to cover all highway projects in the MAG region and include an integrated database for project management.

In addition, ADOT has prepared a draft preliminary life cycle project program that extends through the life of the sales tax extension. Program costs are in balance with projected revenues over the period, and the program has been structured to reflect a preliminary bonding strategy.

Management/Engineering Consultants - ADOT has contracted with three different engineering consultant firms to assist the Department in managing the implementation of projects in the ADOT Life Cycle Program. These firms will conduct design concept studies and environmental assessments, as well as prepare preliminary project construction plans. In addition, they will assist in the scheduling and monitoring of design and construction projects.

Litter & Landscape Maintenance and Noise Mitigation Program – Two blocks of funding were established in the RTP. The first is \$279 million for litter pick-up and landscape maintenance in the MAG region. The second block is \$75 million for noise mitigation, including the continued application of the quiet pavement program that uses rubberized asphalt to reduce noise generation. Both of these programs are new aspects for the application of regional funding compared to past programs.

A subcommittee of the Transportation Policy Committee was formed to specifically deal with these two programs. Information on the level of funding and service frequency for litter pick-up and landscape maintenance is being developed that will provide the baseline levels of ADOT funding. The TPC subcommittee is expected to make recommendations to the TPC concerning how the Proposition 400 funds should be used to supplement the ADOT baseline funding levels.

Preliminary Engineering - The preparation of design concept reports (DCR's) and environmental assessments (EA's) represents a key first step in the process of developing new corridors or improving existing facilities. A DCR and EA have been completed on I-17 (Loop 101 to Carefree Highway), and are nearing completion on

Loop 101 (Princess Drive to Loop 202), and on SR 51 (Loop 101 to Shea Boulevard). Studies are also underway on Loop 303, the South Mountain Freeway (Loop 202) corridor, and I-10. It is anticipated that additional studies on new corridors and facility improvements will begin in early 2006.

Construction Underway - Construction work on a project to add HOV and general purpose lanes on the Superstition Freeway (US 60) between Gilbert Rd. and Power Rd. will begin in FY 2006. Construction work on widening SR 85 to a four-lane, divided roadway between I-10 and Gila Bend is currently underway. Final design on the Wickenburg Bypass is underway and construction is anticipated to begin in Fall 2006.

Proposition 300 Freeways - The new Freeway/Highway Life Cycle Program will replace the ongoing Proposition 300 - Regional Freeway Program, which is in its final stages. It is anticipated that the last freeway segment in this program will be completed in 2008.

During FY 2005, freeway construction on the Red Mountain Freeway (Loop 202) between Higley Rd. and Power Rd. and at the south half of the system interchange with US 60 was completed and opened to traffic. Also, construction was completed and opened to traffic on the Santan Freeway (Loop 202) between Dobson Rd. and Arizona Ave., as well as between Baseline Rd. and Elliot Rd. The segments between Arizona Ave. and Elliot Rd. are now under construction and scheduled for completion in 2005 (Arizona Ave. to Gilbert Rd.) and 2006 (Gilbert Rd. to Elliot Rd.). In addition, seven grade separation projects on Grand Ave. are open to traffic, with the one at Glendale Ave/59<sup>th</sup> Ave. expected to be completed in 2006.

This leaves 7.7 miles on the Red Mountain Freeway to be completed and one mile on the Sky Harbor Expressway to be put out for bid and completed. The last section of the Sky Harbor Expressway is currently under study to determine if this section is still needed from a regional perspective, given the other improvements around Sky Harbor International Airport and the planned Collector-Distributor (C-D) system to augment existing capacity of I-10. A recommendation to change or delete the last Sky Harbor segment from the RTP would have to follow the major amendment process as outlined in A.R.S. 28-6353 (E).

### **3.3 ARTERIAL STREET PROGRAM**

The Arterial Street Life Cycle Program is maintained by the Maricopa Association of Governments (MAG) and includes the arterial street projects listed in the MAG Regional Transportation Plan. Although MAG is charged with the responsibility of administering the overall program, the actual construction of projects is accomplished by local government agencies. In addition, ADOT is the account holder and payee institution for reimbursements to the local governments. MAG has been taking a number of steps to develop the details of the Arterial Street Life Cycle Program, so that project construction can begin.

Arterial Program Policies and Procedures - Since the maintenance of a life cycle program represents a new area of responsibility for MAG, steps were taken early to develop policies and procedures for the administration of the program. MAG staff

conducted a series of meetings with member agencies to discuss program issues and approaches to monitoring project budgets and expenditures. A set of Arterial Life Cycle Program Policies and Procedures was recommended by the Transportation Policy Committee on June 22, 2005 and was approved by the MAG Regional Council on June 29, 2005.

Life Cycle Program - MAG has prepared a draft preliminary life cycle project program that extends through the life of the sales tax extension. This program responds to the requirement that total project costs do not exceed the total revenues available. The program is in balance with projected revenues over the period and has been structured to reflect a preliminary bonding strategy. Once the new federal funding levels resulting from SAFETEA-LU (the federal transportation reauthorization bill that was signed into law in August 2005) are determined, the final draft of the life cycle program will be further refined.

Project Assessments – A total of 74 project assessments for projects in the Arterial Life Cycle Program have been prepared by implementing local agencies. These assessments, which identify project design concepts and costs, are a key element in the development of agreements for funding of individual projects, as well as the further refinement and monitoring of the Arterial Life Cycle Program.

Project Agreements – Work is continuing on the development of a model project agreement that will provide the contractual arrangement between MAG and the local jurisdictions that are implementing arterial street projects funded by Proposition 400.

### **3.4 TRANSIT PROGRAM**

The Transit Life Cycle Program is maintained by the Regional Public Transportation Authority (RPTA) and implements transit projects in the MAG Regional Transportation Plan. The RPTA maintains responsibility for administering half-cent revenues deposited in the Public Transportation Fund for use on transit projects, including light rail transit (LRT) projects. Although RPTA maintains responsibility for the distribution of half-cent funds for light rail projects, the nonprofit corporation of Valley Metro Rail, Inc. was created to oversee the design, construction and operation of the light rail starter segment, as well as future corridor extensions to the system. Both of these agencies have been taking action to establish the tools to effectively administer the major new programs that Proposition 400 has made possible

Life Cycle Program – RPTA and Valley Metro Rail have developed a financial model for the Transit Life Cycle Program. This provides the capability to program service improvements and construction projects through the life of the sales tax extension. A preliminary program has been prepared that responds to the requirement that the cost of transit-related services and improvements does not exceed the total revenues available. Guiding principles for the Transit Life Cycle Program were adopted by the RPTA Board in June 2005.

Bus Service Improvements - RPTA staff has been working closely with local jurisdictions to define service characteristics and implementation procedures for bus

service improvements to be initiated over the next five years.

Light Rail Transit (LRT) Projects - A Design Criteria and Standards Study is being initiated to update and refine Valley Metro Rail design criteria, standards, and specifications. In addition an LRT System and Configuration Study to address future corridor issues is under development. The Metrocenter Corridor Study is currently in the draft environmental impact phase (DEIS). Preliminary engineering and the final environmental impact (FEIS) phase will likely occur in 2006-2007.

Work is currently underway on the construction of the Minimum Operating Segment (MOS), which will extend from Spectrum Mall to West Mesa. Construction is scheduled to be completed by December 2008 and service will be initiated on the entire system at that time. Half-cent sales tax money from Proposition 400 will not be utilized to pay for major route construction of the MOS, but is allocated toward certain elements of the support infrastructure.

## **CHAPTER FOUR**

### **PROPOSITION 400 AND ASSOCIATED LEGISLATION**

#### **4.1 PROPOSITION 400**

On November 2, 2004, Proposition 400 was passed by the voters of Maricopa County by a margin of 58 to 42 percent. This action authorized the continuation of a countywide, half-cent sales tax for regional transportation improvements (*Maricopa County Transportation Excise Tax*). The estimated revenues from the tax will total approximately \$14.3 billion (Year of Expenditure Dollars) for the twenty-year period covering calendar year 2006 through 2025, and represent the major funding source for the MAG Regional Transportation Plan (RTP). Proposition 400 continues the current half-cent sales tax for transportation, which was approved by the voters of Maricopa County in 1985 through the passage of Proposition 300. The current tax expires on December 31, 2005 and will be extended effective January 1, 2006.

As part of the Proposition 400 election, voters were provided with an information pamphlet describing the key features of the MAG Regional Transportation Plan. The RTP is a comprehensive, performance based, multi-modal and coordinated regional plan. It addresses specific project needs and the scheduling of improvements on freeways and highways, arterial streets and transit. The RTP was developed through a cooperative effort among government, business and public interest groups, and included an aggressive community outreach and public involvement program. It sets forth the region's transportation improvements through fiscal year 2026, and was adopted by the MAG Regional Council on November 25, 2003.

In advance of the Proposition 400 election, the Governor of Arizona signed House Bill 2292 on May 14, 2003, which guided the development of the MAG Regional Transportation Plan. This legislation was followed by House Bill 2456, which was signed by the Governor on February 5, 2004 and authorized an election to extend the half-cent sales tax. As specified in the bill language, Proposition 400 asked whether the voters in Maricopa County favored the continuation of the countywide sales tax through 2025, to provide funding for transportation projects as contained in the MAG Regional Transportation Plan. Key elements of House Bills 2292 and 2456 are described below.

#### **4.2 HOUSE BILL 2292**

Arizona House Bill 2292, which was passed during the Spring 2003 session of the Arizona Legislature, recognized MAG's establishment of a Transportation Policy Committee (TPC), which was tasked with the development of the Regional Transportation Plan (RTP). The TPC is a public/private partnership and consists of 23 members. Seventeen seats are from the membership of MAG and six are members who represent region-wide business interests. The MAG members include one representative each from the Citizens Transportation Oversight Committee, the ADOT State Transportation Board, the County Board of Supervisors and the Native American Indian Communities in the County, as well as 13 representatives from a geographic

cross-section of MAG cities and towns. The bill required the TPC to develop the RTP in cooperation with the Regional Public Transportation Authority (RPTA) and ADOT, and in consultation with the County Board of Supervisors, Native American Indian Communities, and cities and towns in the County.

The legislation identified the consultation process to be followed by the TPC in developing the RTP, and established a formal procedure for reviewing the Draft Plan. This included reviews at the alternatives stage and final draft stage of the planning process. As part of this process, the TPC was required to vote on, and provide written responses to, individual agency comments on the Draft Plan. After this extensive review and consultation process, the TPC was required to recommend a Plan to the MAG Regional Council for final approval.

Arizona House Bill 2292 also set forth the factors to be considered during the development of the RTP, such as the impact of growth on transportation systems and the use of a performance-based planning approach. It identified key features required in the final Plan, including a twenty-year planning horizon, allocation of funds between highways and transit, and priorities for expenditures. This legislation also established the process for authorizing the election to extend the existing half-cent county transportation excise tax. This existing tax was originally approved by Maricopa County voters under Proposition 300 in October 1985 and expires on December 31, 2005.

In addition, House Bill 2292 contained the requirement that MAG issue an annual report on the status of projects funded through the half-cent sales tax for transportation. This includes a public hearing within thirty days after the report is issued. Specific items to be addressed in the annual report cover the status of projects, changes to the RTP, changes to corridor and corridor segment priorities, project financing and project options, and criteria used to establish priorities.

### **4.3 HOUSE BILL 2456**

House Bill 2456 was passed by the Arizona Legislature and signed by the Governor of Arizona in February 2004. This legislation authorized the election to extend the half-cent sales tax for transportation, known as Proposition 400, which was placed on the November 2, 2004 ballot by the Maricopa County Board of Supervisors. In addition to calling the election, this legislation included a number of requirements regarding the nature of the tax extension and its administration. Several of the key provisions are reviewed below.

#### **4.3.1 Revenue Distribution**

House Bill 2456 addresses the allocation of revenues from the collection of sales tax monies from January 1, 2006, to December 31, 2025, among the eligible transportation modes. In accordance with the legislation, the net revenues collected are to be distributed as follows:

- 56.2 percent to the regional area road fund for freeways and other routes in the State Highway System, including capital expense and maintenance.

- 10.5 percent to the regional area road fund for major arterial street and intersection improvements, including capital expense and implementation studies.
- 33.3 percent to the public transportation fund for capital construction, maintenance and operation of public transportation classifications, and capital costs and utility relocation costs associated with a light rail public transit system.

#### **4.3.2 Revenue Firewalls**

The legislation creates three “firewalls”, which prohibit the transfer of half-cent funding allocations from one transportation mode to another. These firewall divisions correspond to the categories established for the distribution of revenues and include:

- Freeways and highways (including sub-accounts for capital and maintenance).
- Arterial streets.
- Public transportation (with sub-accounts for capital, maintenance and operations, and light rail).

Half-cent revenues cannot be moved among transportation modes (freeway/highway, arterial and transit).

#### **4.3.3 Five-Year Performance Audit**

As specified in House Bill 2456, beginning in 2010 and every fifth year thereafter, the Auditor General shall contract with a nationally recognized independent auditor with expertise in evaluating multimodal transportation systems and in regional transportation planning, to conduct a performance audit of the Regional Transportation Plan and all projects scheduled for funding during the next five years. The audit will make recommendations regarding whether further implementation of a project or transportation system is warranted, warranted with modification, or not warranted.

#### **4.3.4 Major Amendment Process**

House Bill 2456 recognized that the Regional Transportation Plan may be updated to introduce new transportation projects or to modify the existing plan. To ensure that the amendment process receives broad exposure and careful consideration, the concept of a major amendment was established. A major amendment of the Regional Transportation Plan means:

- The addition or deletion of a freeway, a route on the State Highway System, or a Fixed Guideway Transit System.
- The addition or deletion of a portion of a freeway; route on the State Highway System; or a Fixed Guideway Transit System that either exceeds one mile in length, or exceeds an estimated cost of forty million dollars as provided in the Regional Transportation Plan.
- The modification of a transportation project in a manner that eliminates a connection between freeways or fixed guideway facilities.

A major amendment is required if:

- An audit finding recommends that a project or system in the Regional Transportation Plan is not warranted, or requires a modification that is a major amendment.
- The MAG Transportation Policy Committee (TPC) recommends to the Regional Planning Agency a modification of the Regional Transportation Plan that is a major amendment.

The consideration and approval of a major amendment must adhere to a specific and rigorous consultation and review process set forth in the legislation. A major amendment requires that alternatives in the same modal category, which will relieve congestion and improve mobility in the same general corridor, are to be addressed. The TPC may recommend that funds be moved among projects within a mode, but half-cent revenues cannot be moved among transportation modes (freeway/highway, arterial and transit).

#### **4.3.5 Life Cycle Programs**

The legislation required that the agencies implementing the regional freeway, arterial, and transit programs are to adopt a budget process ensuring that the estimated cost of the program of improvements does not exceed the total amount of revenues available. These “life cycle programs” are the management tools used by the implementing agencies to ensure that transportation program costs and revenues are in balance, and that project schedules can be met. Responsibilities for maintaining these programs are as follows:

- Freeway/Highway Life Cycle Program: Arizona Department of Transportation.
- Arterial Life Cycle Program: Maricopa Association of Governments.
- Transit Life Cycle Program: Regional Public Transportation Authority.

The life cycle programs develop a schedule of projects through the life of the half-cent sales tax, monitor progress on project implementation, and balance annual and total program costs with estimated revenues. The MAG Annual Report draws heavily on life cycle program data and other life-cycle progress documentation in order to assemble the Annual Report.

#### **4.3.6 Regional Transportation Plan: Enhancements and Material Changes**

House Bill 2456 requires that any change in the Regional Transportation Plan and the projects funded that affect the MAG Transportation Improvement Program, including priorities, be approved by the MAG Regional Council. Requests for changes to projects funded in the Regional Transportation Plan that would materially increase costs are also required to be submitted to the MAG Regional Council for approval. If a local authority requests an enhancement to a project funded in the Regional Transportation Plan, the local authority is required to pay all costs associated with the enhancement.

## **CHAPTER FIVE**

### **REGIONAL ROLES AND RESPONSIBILITIES**

A number of different entities share responsibility for implementing the MAG Regional Transportation Plan, including individual projects and programs that comprise the freeway/highway, arterial and transit life cycle programs. Implementing agencies include both local governments and regional/state level agencies. Local governments design and construct projects covered in the regional arterial program and also manage and operate elements of the bus transit system. As specified in the MAG Regional Transportation Plan, regional/state agencies have a primary role in the implementation of freeway/highway projects, regional bus service, and light rail transit projects. These entities manage and monitor program implementation, and provide program oversight.

The key regional/state level entities include:

- Maricopa Association of Governments
- Transportation Policy Committee
- Arizona Department of Transportation
- State Transportation Board
- Regional Public Transportation Authority
- Valley Metro Rail
- Citizens Transportation Oversight Committee

The regional/state agencies and committees identified in this section have specific responsibilities related to coordination, management, planning, oversight and project construction. A brief description of each agency and committee, and their role in the freeway/highway, arterial street and transit programs is provided below.

#### **5.1 MARICOPA ASSOCIATION OF GOVERNMENTS**

The Maricopa Association of Governments (MAG), formed in 1967, is a regional planning agency and serves as the designated Metropolitan Planning Organization (MPO) for Maricopa County, including the Phoenix urbanized area. MAG members include the region's 25 incorporated cities and towns, Maricopa County, the Gila River Indian Community, the Fort McDowell Indian Community, the Salt River Pima-Maricopa Indian Community, the Citizens Transportation Oversight Committee, and the Arizona Department of Transportation.

MAG is responsible for the coordination of the following regional planning activities:

- Multi-modal Transportation Planning,
- Air Quality,
- Wastewater,
- Solid Waste,
- Human Services, and

- Socioeconomic Projections.

MAG strives to develop plans that are comprehensive and that are consistent and compatible with one another. For example, the Regional Transportation Plan must be in conformance with the air quality plans for the metropolitan area. MAG is responsible for the air quality conformity analysis that shows whether the transportation plan complies with the provisions of air quality plans and other air quality standards. MAG is also responsible for the development of the Arterial Street Life Cycle Program. Individual projects in this program are constructed by the cities, towns and Maricopa County.

The MAG Regional Council is the decision-making body of MAG. The Regional Council consists of elected officials from each member agency. The Chairman of Citizens Transportation Oversight Committee (COTC) and the Maricopa County representatives from the State Transportation Board also sit on the Regional Council, but only vote on transportation-related issues. Many policy and technical committees provide analysis and information to the MAG Regional Council.

The MAG Regional Council is the ultimate approving body for the MAG Regional Transportation Plan and MAG Transportation Improvement Program. Any change in the Regional Transportation Plan or the projects funded that affect the Transportation Improvement Program, including priorities, must be approved by the MAG Regional Council.

## **5.2 TRANSPORTATION POLICY COMMITTEE**

The MAG Transportation Policy Committee (TPC), which met for the first time in September 2002, was initially tasked with the responsibility of developing the Regional Transportation Plan (RTP) and recommending the plan for adoption by the MAG Regional Council. The TPC recommended a Plan in September 2003 and it was adopted unanimously by the MAG Regional Council on November 25, 2003. In addition to developing the RTP, the TPC has continuing responsibilities to advise the Regional Council on transportation issues, including, but not limited to recommendations regarding: the MAG Transportation Improvement Program; the Life Cycle Programs; and requested material changes and amendments to the RTP.

The TPC is comprised of 23 members and is a public/private partnership. Of the total membership, six are members representing business interests and 17 are from the membership of MAG. The MAG members include 13 representatives from a geographic cross-section of MAG cities and towns, as well as one representative each from the Citizens Transportation Oversight Committee, the ADOT State Transportation Board, the County Board of Supervisors and the Native American Indian Communities in the County. The business representatives are from businesses with region-wide interest, including one representing transit interests and a representative from the freight industry. Three of the business representatives are appointed by the Speaker of the Arizona House of Representatives and the other three are appointed by the President of the Arizona State Senate.

### **5.3 ARIZONA DEPARTMENT OF TRANSPORTATION**

The primary role of the Arizona Department of Transportation (ADOT) is to provide a transportation system that meets the needs of the citizens of Arizona. The transportation system includes the State Highway System, which is designed to provide safe and efficient highway travel around the state. The Governor of Arizona appoints the Director of ADOT. The MAG Regional Freeway/Highway Program is part of the State Highway System, and is the responsibility of ADOT. However, ADOT is not responsible for highways, streets, or roads that are not part of the State Highway System, which are owned and maintained by counties, or cities and towns in Arizona.

ADOT is responsible for the overall management of the Regional Freeway/Highway Program. This includes the design, engineering, right-of-way acquisition, and construction and maintenance activities. ADOT develops and maintains the Freeway/Highway Life Cycle Program, making projections of available revenues and developing financing strategies to fund projects.

ADOT also has a role for the arterial streets component of the MAG Regional Transportation Plan. Although MAG is responsible for the development of the Arterial Street Life Cycle Program, in accordance with ARS 28-6303.D.2, ADOT maintains the arterial street fund and issues bonds on behalf of the MAG Arterial Street Program.

### **5.4 STATE TRANSPORTATION BOARD**

The State Transportation Board has statutory authority over the State Highway System. The State Transportation Board also sets priorities for the State Highway System (except the MAG Regional Freeway/Highway Program), establishes a five-year construction program for individual airport and highway projects, awards construction contracts, issues bonds and sets policy. The Board consists of seven members appointed by the Governor representing six geographic regions of the state. Two members are appointed from Maricopa County. Each member serves a six-year term.

Each year, the Board approves the ADOT Five-Year Highway Construction Program for statewide projects and the Life Cycle Program for the MAG Freeway/Highway System. The Life Cycle Program incorporates the priorities set by the MAG Regional Council. ADOT and MAG cooperatively develop the program for the MAG region. The State Transportation Board cannot approve projects within the MAG region that are not consistent with the MAG Regional Transportation Plan and the MAG Transportation Improvement Program. This limitation provides for the participation of local governments in project selection and to ensure conformity with air quality standards.

The State Transportation Board adopts policies that affect the MAG Regional Freeway/Highway Program. The Board has the authority to issue bonds supported by both the Regional Area Road Fund and the Highway User Revenue Fund and issue other forms of debt. Issuance of these bonds allows for significant acceleration of the MAG Regional Freeway/Highway Program than what would be possible on a pay-as-you-go basis.

## **5.5 REGIONAL PUBLIC TRANSPORTATION AUTHORITY/VALLEY METRO**

The Regional Public Transportation Authority (RPTA)/Valley Metro is a political subdivision of the State of Arizona, and is overseen by a board of elected officials. Membership is open to all municipalities in Maricopa County and to the county government. Currently, the 18 participating communities are Avondale, Chandler, El Mirage, Fountain Hills, Gilbert, Glendale, Goodyear, Guadalupe, Litchfield Park, Mesa, Paradise Valley, Peoria, Phoenix, Scottsdale, Sun City, Surprise, Tempe, and Tolleson. In 1993, the RPTA Board adopted Valley Metro as the identity for the regional transit system. The RPTA Board cannot approve projects and programs within the MAG region that are not consistent with the MAG Regional Transportation Plan and the MAG Transportation Improvement Program.

The primary goal of RPTA/Valley Metro is to ensure that a viable public transportation system is provided for regional mobility, and to ease the traffic congestion and improve air quality. The RPTA is responsible for transit public information, the management and operation of regional bus and dial-a-ride services, the Regional Ridesharing program, a regional vanpool program and elements of the countywide Trip Reduction program and Clean Air Campaign. The RPTA is also responsible for maintaining the Transit Life Cycle Program.

In November of 2004, the passage of Proposition 400 increased the amount of funding for public transit from the current amount of approximately two percent of total half-cent sales tax revenues (\$5 million annually inflated), to a figure of over 33 percent, which will begin on January 1, 2006. Over the 20-year life of the half-cent sales tax as approved by Proposition 400, it is anticipated that over \$4.8 billion will be raised for public transit projects. These monies will be deposited in the Public Transportation Fund (PTF), which was created as part of the Proposition 400 legislation. The RPTA is charged with the responsibility of administering monies in the PTF for use on transit projects, including light rail transit projects, identified in the MAG Regional Transportation Plan. The RPTA Board must separately account for monies allocated to: 1) light rail transit, 2) capital costs for other transit, and 3) operation and maintenance costs for other transit.

Currently, the RPTA receives funding that was approved through the passage of Proposition 300 in 1985. Proposition 300 authorized a half-cent sales tax to fund freeway construction, and also provided \$5 million (inflated annually) as seed money for regional transit service expansion.

## **5.6 VALLEY METRO RAIL**

Valley Metro Rail is a non-profit, public corporation overseeing the design, construction, and operation of the light rail starter segment, as well as extensions to the project. The four cities currently participating in the light rail system – Phoenix, Tempe, Mesa and Glendale – are the members of Valley Metro Rail. The Valley Metro Rail Board of Directors is composed of the mayors of each of the participating cities.

The Valley Metro Rail Board of Directors establishes procedures for the administration

and oversight of the design, construction and operation of light rail, as well as receives and disburses funds and grants from federal, state, local and other funding sources. The Valley Metro Rail board has the authority to enter into contracts for light rail design and construction, hire or contract for staff for the Light Rail Project, and undertake extensions to the system. The Valley Metro Rail Board cannot approve projects and programs within the MAG region that are not consistent with the MAG Regional Transportation Plan and the MAG Transportation Improvement Program

## **5.7 CITIZENS TRANSPORTATION OVERSIGHT COMMITTEE**

ARS 28-6356 provides for the establishment of a Citizens Transportation Oversight Committee (CTOC) in a county that has a transportation sales tax such as Maricopa County. CTOC consists of seven persons - one member appointed from each of the five supervisory districts in Maricopa County. The Governor appoints an at-large member and the Chair of the committee. Members serve three-year terms. ADOT provides a special assistant to provide staff support to CTOC and to assist in coordination among CTOC, ADOT, MAG, RPTA and local jurisdictions.

The CTOC plays a number of important roles in the regional transportation process. It reviews and advises MAG, RPTA and the State Transportation Board on matters relating to the Regional Transportation Plan, the Transportation Improvement Program, the ADOT 5-year Construction Program and the life cycle management programs. This includes making recommendations on any proposed major amendment of the RTP, on criteria for establishing priorities, and on the five-year performance audit of the RTP. The CTOC is charged with annually contracting for a financial compliance audit of expenditures from the Regional Area Road Fund and the Public Transportation Fund, as well as setting parameters for periodic performance audits of the administration of those funds (life cycle programs).

The CTOC also holds public hearings and issues reports as appropriate, receives written complaints from citizens regarding adverse impacts of transportation projects funded in the RTP, receives complaints from citizens relating to regional planning agency responsibilities, and makes recommendations regarding transportation projects and public transportation systems funded in the Regional Transportation Plan.

## **CHAPTER SIX**

### **REGIONAL TRANSPORTATION PLAN**

#### **6.1 PLAN OVERVIEW**

On November 25, 2003, the MAG Regional Council adopted the MAG Regional Transportation Plan (RTP), culminating a three-year planning effort. The RTP is a comprehensive, performance based, multi-modal and coordinated regional plan, covering the period through Fiscal Year (FY) 2026. It provides a blueprint for future transportation investments in the region for the next several decades, and represents the most extensive transportation plan update by MAG since the mid-1980s.

The initial technical work to prepare the MAG RTP began in December of 2000, and the process to recommend a Plan for adoption proceeded under the direction of the Transportation Policy Committee (TPC). This committee was established by MAG in 2002 and recognized in Arizona House Bill 2292, which was passed in the Spring 2003 Session of the Arizona Legislature. The TPC was charged with working to find solutions to the region's transportation challenges and recommending a long-range transportation plan to the MAG Regional Council. The Committee is a public/private partnership, which includes both elected officials, and business and community representatives.

State legislation identifies the MAG Regional Transportation Plan as the key guide for regional transportation investments in Maricopa County. By state law, the revenues from the half-cent sales tax for transportation (or, commonly referred to as the *Maricopa County Transportation Excise Tax*) must be used in consistency with the Regional Transportation Plan adopted by MAG. As set forth in this legislation, the RTP identifies projects and revenue allocations by transportation mode for: 1) freeways and other routes on the State Highway System, 2) major arterial streets and intersection improvements, and 3) public transportation systems. The types of projects in the RTP, the funding sources for implementation, and the process by which the RTP was developed are described below. The status of specific modal programs and projects is discussed in greater detail under the Life Cycle Programs covered in Chapters 8 through 10.

##### **6.1.1 Plan Development Process**

The Regional Transportation Plan was developed through a comprehensive, performance-based process, consistent with state legislation. This process followed a specific methodology and evaluated the Plan relative to a range of performance measures. Through the application of computer modeling techniques, this process took into account the effects of population growth on travel patterns to identify future demand for transportation facilities. The steps in the process were: 1) Goals and Objectives, 2) Needs Assessment, 3) Evaluation Methodologies, 4) Scenario Evaluation, 5) Scenario Refinement, and 6) Phasing and Funding. These components are discussed below and displayed in Figure 6-1.

Goals and Objectives: A number of goals and objectives were developed as part of the RTP planning process. These goals and objectives provided the structure for developing options and evaluating scenarios. Performance measures were also identified and linked with specific goals and objectives, so that the evaluation process reflected key regional issues and concerns. The four primary goals developed for the RTP included the following: 1) System Preservation and Safety, 2) Access and Mobility, 3) Sustaining the Environment, and 4) Accountability and Planning.

Needs Assessment: A series of background studies were conducted for the RTP, including area transportation studies, corridor assessments, specific modal analyses, and a number of other regional planning studies. Transportation needs and deficiencies identified in these studies have been assessed as part of the RTP process. In addition, projects identified by MAG member agencies have been tabulated and considered in the assessment of transportation needs in the region.

Evaluation Methodologies: The methodology for assessing system performance and evaluating scenarios utilized a set of performance measures. During the “Alternatives Stage” of the RTP process, the performance measures were used to provide information on the advantages and disadvantages of different approaches for meeting future travel needs, and to assess the relative strengths and weaknesses of the modeling scenarios. This was done within the overall context of regional transportation goals and objectives. The results of this assessment provided input into the RTP “Final Draft Stage.”

Scenario Evaluation: The RTP process included the development of transportation system modeling scenarios, which were evaluated by using performance measures. Three scenarios were used each one placing an emphasis on a different transportation mode, including freeways, streets and transit. The scenarios were structured to reflect consistent levels of future funding and project eligibility. The primary goal was to provide a basis for analyzing the performance of potential plan components, rather than providing a detailed allocation of funding resources.

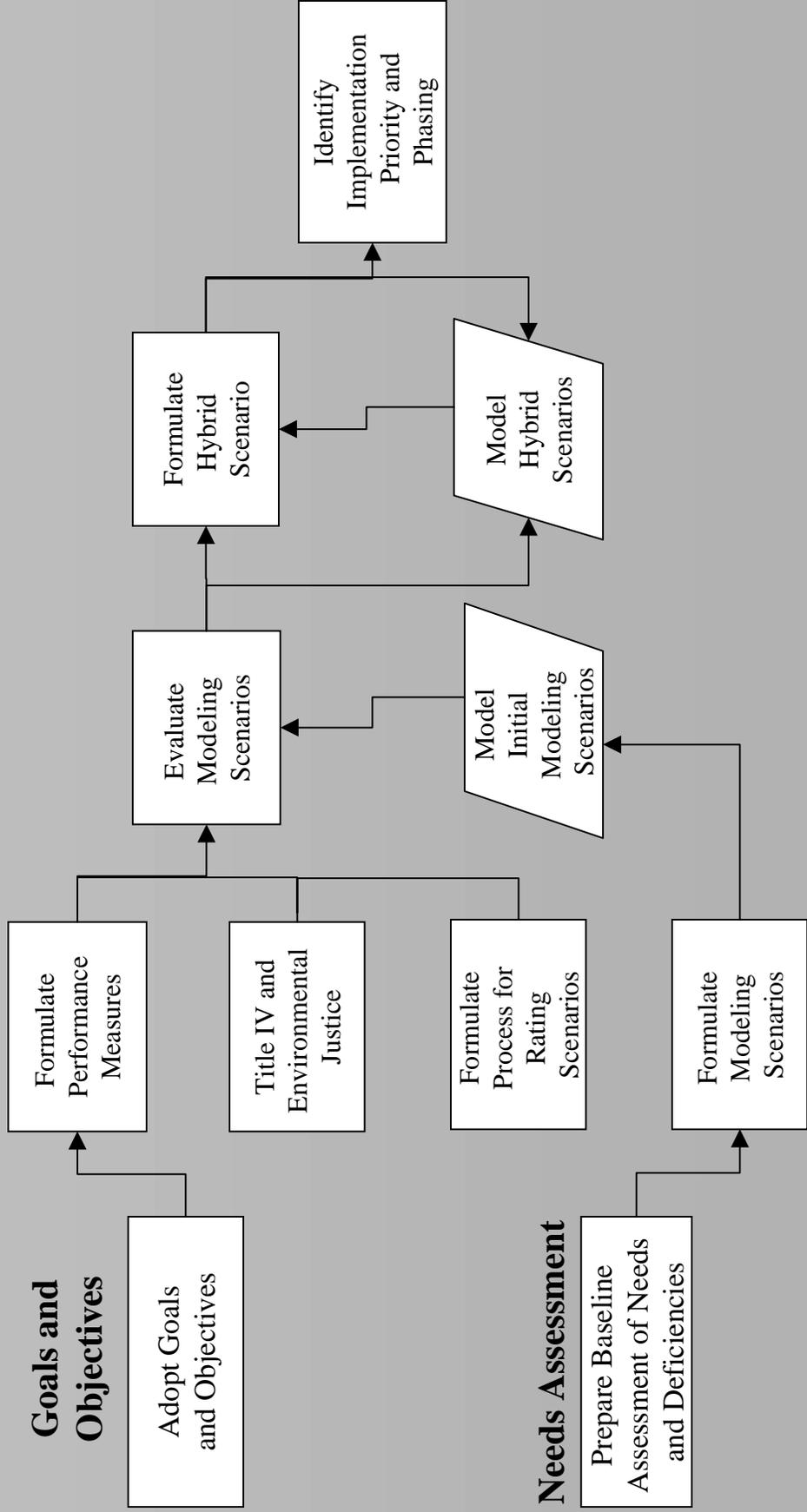
Scenario Refinement: The overall analysis of the scenarios provided insights into the tradeoffs associated with different transportation investment strategies, as well as the performance of system components. Using the results of the evaluations, a hybrid scenario was defined. After further modeling and evaluation, the hybrid resulted in the “Final Draft Stage” scenario, providing the basis for the RTP.

Phasing and Funding: The “Final Draft Stage” not only looked at how the Plan would be funded, but also identified the phasing of projects included in the Plan. Project phasing priorities were based on revenue streams and other factors such as traffic volumes, congestion, system continuity, and project readiness. For phasing purposes, the projects were grouped into four phases as follows: 1) Phase I: FY 2005 through FY2010; 2) Phase II: FY 2011 through FY 2015; 3) Phase III: FY 2016 through FY 2020; and 4) Phase IV: FY 2021 through FY 2026.

Figure 6 - 1

# Plan Development Process

**Evaluation Methodologies**      **Scenario Evaluation**      **Scenario Refinement**      **Phasing and Funding**



### **6.1.2 Public Involvement**

The transportation planning process has benefited greatly by incorporating broad-based public input, which was received as the result of an extensive public involvement process that included an aggressive public outreach effort. As part of this process, MAG held 150 public input opportunities, 173 stakeholder opportunities, and 117 agency meetings to identify public issues and concerns regarding future transportation needs.

The Public Involvement Process: Public involvement meetings and events were held to accommodate citizens throughout the MAG Region. Meeting and event times were varied in an attempt to accommodate as many citizens as possible, and complied with the provisions of the Americans with Disabilities Act. In addition, Spanish language materials, sign language interpretation, alternate materials, and FM/Infrared Listening Devices were available upon request. Additional input was also received through the MAG Web Site, and through [www.LetsKeepMoving.com](http://www.LetsKeepMoving.com), which is a special Web Site developed for the RTP process. Also, MAG conducted two scientific telephone polls to collect information about citizen priorities.

Title VI and Environmental Justice: MAG is committed to ensuring that communities of concern as defined and included in the Title VI Act of 1964, Executive Order 12898 addressing environmental justice, and other federal directives have been specifically considered during the transportation planning and programming process. These laws ensure that such populations benefit equally from the transportation system without shouldering a disproportionate share of its burdens. Each of the three major components of the RTP (freeways/highways, transit and arterial roads) were analyzed separately in the environmental justice analysis to assess the distribution of benefits of projects included within the RTP.

### **6.1.3 Freeway/Highway Element**

The RTP includes a component for freeways and highways on the State Highway System in the MAG Region. In total, about 57 percent of regional funding is allocated to projects in this category. The RTP calls for both new freeway corridors to serve growth in the region and improvements to the existing system to address current and future congestion. In addition, effective operation and maintenance of the system are addressed.

New Freeway/Highway Corridors: Funding for new freeway and highway corridors in the Plan totals approximately 39 percent of the funding dedicated to the freeway/highway mode. These new corridors will provide approximately 490 additional new lane miles to the network and include the I-10 Reliever, Loop 303 Freeway, South Mountain Freeway and Williams Gateway Freeway.

Freeway/Highway Widening and Other Improvements: Funding for widening and other improvements to the existing regional freeway/highway network represents 50 percent of the funding dedicated to the freeway/highway mode. These improvements include an

additional 530 lane-miles of general-purpose lanes and 300 lane-miles of HOV lanes, covering essentially the entire existing system, including future widening of the freeway loop elements now under construction. A number of bottleneck segments on the freeway system are also addressed in this category. Improvements to Grand Avenue, State Route 85 and other highways are also funded. In addition to new travel lanes, a series of new interchanges with arterial streets on existing freeways is included, as well as improvements at freeway-to-freeway interchanges to provide direct connections between HOV lanes.

Freeway/Highway Maintenance, Operations, Mitigation and Systemwide Programs: The RTP also provides funding for maintenance on the freeway system, directed at litter pickup, landscaping, and noise mitigation. Together with other systemwide programs, these components represent about 11 percent of the funding dedicated to the freeway/highway mode.

Freeway/Highway Phasing Priorities: In the freeway/highway mode, Phase I emphasizes improvements to the currently congested parts of the system. In Phase II, major objectives include the construction of Loop 303 (I-17 to I-10) and completion of the South Mountain Freeway. Phase III is marked by capacity improvements on I-17 and construction of the Williams Gateway Freeway. In Phase IV, a key objective is construction of the I-10 Reliever between the South Mountain Freeway and Loop 303, as well as an interim connection between Loop 303 and SR 85. New interchanges, HOV lanes and HOV ramp connections at freeway-to-freeway interchanges are generally constructed throughout the planning period.

Proposition 300 - Regional Freeway Program: The RTP includes projects that were already funded, but remain to be completed from the existing MAG Freeway Program. This Program funds controlled-access projects previously scheduled for completion by mid-2008. Funding for the Program includes proceeds from the half-cent transportation excise tax passed by Proposition 300 in 1985, which expires at the end of calendar year 2005. The Santan Freeway should be completed in 2006 and the final segments of the Red Mountain Freeway are scheduled for completion in 2008.

#### **6.1.4 Arterial Street Element**

The RTP includes a component for major arterial streets in the MAG Region. In total, approximately 9 percent of regional funding is allocated to projects in this element. While MAG is responsible for developing the RTP, local jurisdictions are primarily responsible for design, right-of-way acquisition, and construction and maintenance of arterial facilities as identified in the RTP.

New Arterial Facilities, Widening and Intersection Improvements: The RTP provides regional funding for widening existing streets, improving intersections, and constructing new arterial segments. As growth extends into new areas, widening and extension of the arterial street network will be needed in order to keep up with growing traffic volumes. Funding for these improvements totals approximately 89 percent of the funding dedicated to the arterial streets. Congestion on the arterial street network is often caused by inadequate intersection capacity. The RTP calls for a number of

intersection improvements, which enhance traffic flow and reduce congestion. Funding for this area is 8 percent of the total.

Intelligent Transportation System (ITS): The RTP allocates funding to assist in the implementation of projects identified in the regional ITS Plan. These projects smooth traffic flow and help the transportation system to operate more efficiently. The remaining 3 percent of the funding falls in this area.

Arterial Street Phasing Priorities: For the arterial street mode, in Phase I key objectives include construction on the western end of the Northern Avenue Parkway, widening of Scottsdale Road north of Loop 101, and a series of arterial and intersection projects in the East Valley. Phase II completes several major links, including the Rio Salado Parkway and the Lake Pleasant/Beardsley link between Loop 101 and Loop 303. In Phase III, key objectives include improvements on El Mirage Road, construction of the Sonoran Desert Parkway and completion of the Scottsdale Airport Tunnel. Phase IV completes the arterial street program, with major improvements to Pima Road in the northeast part of the region, completion of the last segment of the Northern Avenue Parkway, and final intersection and street projects in the East Valley.

### **6.1.5 Transit Element**

The RTP provides for a range of transit facilities and services throughout the region. In total, about 32 percent of regional funding is allocated to projects in this element. A regional bus network is funded, including operating costs, to ensure that reliable service is available on a continuing basis. In addition, light rail corridors are constructed to provide a high-capacity backbone for the transit network. Other transit services are included to provide a full range of options, such as paratransit and rural transit service.

Regional Bus: Regional transit services include both arterial grid and express type services that are designed to provide for regional connections. Routes are designed to connect activity centers, transportation nodes, or residential areas across jurisdictional boundaries. Regional bus service consists of three categories of service: Supergrid routes, which are arterial grid routes that provide a regional connection function; Arterial Bus Rapid Transit (BRT) Routes, which operate as overlays on corridors served by local fixed route service, but provide higher speed services by operating with limited stops; and Freeway BRT Routes, which use existing and future high occupancy vehicle (HOV) facilities to connect remote park-and-ride lots with major activity centers, including core downtown areas.

Light Rail Transit: The RTP includes a 57.7-mile Light Rail Transit (LRT) system, which incorporates the 20-mile minimum-operating segment (MOS) as designated in the Central Phoenix/East Valley Major Investment Study (MIS); a five-mile extension to Metrocenter; a five-mile extension to downtown Glendale; an 11-mile extension along I-10 west to 79th Avenue; a 12-mile extension to Paradise Valley Mall; a two-mile extension south of the MOS on Rural Road to Southern Avenue; and a 2.7-mile extension from the east terminus of the MOS to Mesa Drive. The technology on the latter segment has not been determined. The RTP also provides for the continued preparation of commuter rail implementation strategies for the region.

Other Transit Services: Other transit services provided in the RTP include rural/non-fixed route transit, commuter vanpools, and paratransit transportation.

Transit Phasing Priorities: For the transit mode, in Phase I the emphasis is on providing consistent levels of service across several key regional bus routes in the east, central and west parts of the region. Phase I will also see the completion of the MOS of the LRT system. In Phase II, the regional bus system will continue to grow and LRT extensions will be added from the MOS south on Rural Road in Tempe to Southern Avenue; east on Main Street in Mesa; as well as construction of an extension to the Metrocenter Mall Transit Center in Phoenix. Phase III continues building on the regional bus connections defined in the previous two phases and includes investment in the I-10 LRT extension. In Phase IV, the regional bus system reaches maturity, and with the construction of the SR 51 extension, the planned program of LRT extensions will be completed. Other transit services would expand in relationship to the Plan's fixed route bus and light rail transit systems.

#### **6.1.6 Other Transportation Modes and Programs**

The RTP also incorporates funding for other program areas, such as transportation planning, bicycle/pedestrian projects, and air quality projects for street sweepers and paving of dirt roads. Representing a small portion of the total funding, it is anticipated that the Annual Report will not track these programs in detail.

#### **6.1.7 Air Quality Conformity Analysis**

As required by the Clean Air Act, air quality conformity analyses have been conducted on the RTP and the associated Transportation Improvement Program (TIP) as a whole. Analyses were conducted on carbon monoxide, volatile organic compounds, and particulate matter (PM-10). These conformity analyses have demonstrated that the RTP and TIP are in conformance with regional air quality plans and will not contribute to air quality violations. The conformity analyses demonstrated that the criteria specified in the federal transportation conformity rule for a conformity determination are satisfied by the TIP and RTP. The U.S. Department of Transportation has issued findings of air quality conformity for the RTP in December 2003, July 2004, June 2005, and, most recently, in August 2005.

#### **6.1.8 Cost and Revenue Estimates**

As part of the planning process, overall revenue and cost estimates were prepared for the RTP and are considered to be reasonable for planning purposes. In addition, bonding strategies, which can have a major effect on the phasing of plan development, were assumed. To recognize the uncertainties associated with projecting costs and revenues over a 20-year period, contingency factors were applied.

However, it is important to note that cost and revenue uncertainties can only be resolved once detailed engineering studies are completed and economic conditions are revealed over time. Periodic adjustments and updating of the RTP will be needed to

respond to changing conditions and new information.

### **6.1.9 Plan Funding**

The half-cent sales tax for transportation is the major funding source for the MAG RTP. In addition, there are other funding sources from state and federal agencies. These revenue sources, and the half-cent tax, have been termed regional revenues in the RTP. In addition to regional revenues, local governments provide certain funding allocations that will support the implementation of the RTP. The discussion here is focused on regional revenues.

Table 6-1 displays the approximate percentage distribution of funding for the RTP by funding source, for the period FY 2006 through FY 2026. As shown in Table 6-1, it is anticipated that the half-cent sales will tax provide approximately 54 percent of the total funding; ADOT funds 26 percent; and federal transit and highway funding the remaining 20 percent. While the half-cent tax clearly provides the major block of resources for the RTP, the successful implementation of the Plan will also depend on state and federal sources. Since these other sources, particularly those from federal programs, are subject to legislative action, it will be important to carefully track the outlook for future program funding levels.

Table 6-2 provides an additional perspective on the funding of the RTP, and displays the approximate percentage distribution of funding by use. As displayed in Table 4-2, of the total regional revenues funding the Plan, approximately 57 percent is directed to freeway/highway projects; 9 percent to arterial streets; 32 percent to transit; and 2 percent to other programs.

It should be noted that the figures in Tables 6-1 and 6-2 are based on the RTP funding plan, as originally adopted. This funding plan was expressed in 2002 dollars, assumed a preliminary bonding strategy, and addressed regional revenues sources only. As specific financing plans are developed within each modal area, revenue source distributions may vary somewhat from the initial funding plan.

## **6.2 PRIORITY CRITERIA**

Arizona Revised Statute 28-6354 B. directs MAG to develop criteria to establish the priority of corridors, corridor segments, and other transportation projects. These criteria include public and private funding participation; the consideration of social and community impacts; the establishment of a complete transportation system for the region; the construction of projects to serve regional transportation needs; the construction of segments to provide connectivity on the regional system; and other relevant criteria for regional transportation. As part of the regional transportation planning process, MAG has applied these kinds of criteria, both for the development and the implementation of the Regional Transportation Plan (RTP).

**TABLE 6-1  
REGIONAL TRANSPORTATION PLAN FUNDING  
PERCENTAGE BY SOURCE: FY 2006-2026**

<b>Funding Sources</b>	<b>Highways/ Freeways</b>	<b>Arterial Streets</b>	<b>Transit</b>	<b>Other Programs</b>	<b>Total Regional Funding</b>
Proposition 400: Half Cent Sales Tax Extension	52.8	58.9	56.6	0.0	53.9
ADOT Funds (Includes HURF and Federal)	45.6	0.0	0.0	0.0	26.1
Federal Transit (5307 Funds)	0.0	0.0	18.9	0.0	6.0
Federal Transit (5309 Funds)	0.0	0.0	18.9	0.0	6.0
Federal Highway (MAG STP)	0.0	33.9	0.0	0.0	3.1
Federal Highway (MAG CMAQ)	1.6	7.2	5.6	100.0	4.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**TABLE 6-2  
REGIONAL TRANSPORTATION PLAN FUNDING  
PERCENTAGE BY USE: FY 2006-2026**

<b>Plan Uses</b>	<b>Prop. 400: Half Cent Tax</b>	<b>ADOT Funds</b>	<b>Federal Transit</b>	<b>MAG Federal Highway</b>	<b>Total Regional Funding</b>
Highways/Freeways	56.2	100.0	0.0	11.7	57.3
Arterial Streets	10.5	0.0	0.0	47.2	9.3
Transit	33.3	0.0	100.0	21.9	31.7
Other Programs	0.0	0.0	0.0	19.2	1.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

As discussed previously in Section 6.1.1, the RTP was developed through a performance-base process that evaluated alternatives relative to a range of performance measures. Also, specific criteria were considered as part of the process to schedule the implementation of transportation projects over the 20-year life of the RTP. In addition implementation principles, or criteria, have been identified as part of policies and procedures that were prepared to guide the life cycle programs. The discussion below describes how the criteria applied in the RTP planning process correspond to the categories included in ARS 28-6354 B.

It should be noted that the criteria as described below will be applied, as appropriate, on a continuing basis in the future decision-making process for the RTP. This includes amending the RTP, updating the five-year regional transportation improvement program, and revising the 20-year life cycle programs.

### **6.2.1 Extent of Local Public and Private Funding Participation**

A higher level of local public and private funding participation in the RTP benefits the region by leveraging regional revenues and helping ensure local government commitment to the success of the regional program. The extent of local public and private funding participation is addressed in a number of ways in the MAG transportation planning process.

Project Matching Requirements: In developing funding allocations among the various RTP components and project types, local matching requirements have been established. The local matching requirements in the RTP are:

- 30 percent major street projects, including ITS elements.
- 30 percent bicycle and pedestrian projects.
- For air quality and transit projects involving federal funds, minimum federal match requirements were assumed. Depending on the specific project funding mix, this match may be provided from regional revenue sources.

Private Funding Participation: As part of the policies and procedures developed for the Arterial Street Life Cycle Program, private funding participation is recognized as applicable local match for half-cent funds for street and intersections projects. This policy helps free local monies that may then be applied to additional transportation improvements.

Local Government Incentives: In the Arterial Street Life Cycle Program, incentives to make efficient use of regional funds have been established by ensuring that project savings by local governments may be applied to new projects in the jurisdiction that achieved those savings.

### **6.2.2 Social and Community Impacts**

Regional transportation improvements can have both beneficial and negative social and community impacts. It is important to conduct a thorough assessment of these impacts, to ensure that they are taken into account in the decision-making process. The MAG planning effort assesses social and community impacts at each key stage of the transportation planning and programming process. In addition, it should be noted that similar efforts are carried out by the agencies implementing specific transportation improvement projects.

Public Participation and Community Outreach: An aggressive citizen participation and outreach program is conducted to obtain public views on the potential community and social impacts of transportation improvements. In particular, input is sought regarding the possible impacts of specific transportation alternatives on the community's social

values and physical structure.

Social Impact Assessment: The social impact of transportation options is evaluated as part of the Title VI/Environmental Justice assessment. In this assessment, potential transportation impacts are evaluated for key communities of concern, including minority populations, low-income populations, aged populations, mobility disability populations, and female head of household populations. In addition, community goals are taken into account by basing future travel demand estimates, on local land use plans.

Corridor and Community Impact Assessment: Corridor-level analyses are conducted, which assess the possible social and community impacts of alternative facility alignments based on neighborhood factors such as noise, air quality and land use. Community impacts of transportation facilities are further analyzed by assessing air quality effects through the emissions analysis of plan alternatives, as well as conducting a federally required air quality conformity analysis of the RTP. In addition, the process for annually updating the Regional Transportation Improvement Program includes project air quality scores, which reflect the potential community impacts of the projects.

### **6.2.3 Establishment of a Complete Transportation System for the Region**

The RTP calls for major investments in all elements of the regional transportation system over the next several decades. It is critical that these expenditures result in a complete and integrated transportation network for the region. The MAG planning process responds directly to this need by conducting transportation planning at the system level, giving priority to segments that can lead to a complete transportation system as quickly as possible, and maintaining a life cycle programming process for all the major modes.

System Level Planning Approach: The regional planning effort is conducted at the system level, taking into account all transportation modes in all parts of the MAG geographic area. This systems level approach is applied in identifying and analyzing alternatives, as well as specifying the final Regional Transportation Plan. In this way, the complete transportation needs of the region, as a whole, are identified and addressed in the planning process.

Project Development Process and Project Readiness: The implementation of regional transportation projects requires a complex development process. This process involves extensive corridor assessments, environmental studies, and engineering concept analyses. This is followed by right-of-way acquisition and final design work, before actual construction may begin. For a variety of reasons, certain projects may progress through this process more rapidly than others. By moving forward, where possible, on those projects with the highest level of readiness for construction, important transportation improvements can be delivered as quickly as possible.

Progress on Multiple Projects: Major needs for transportation improvements exist throughout the MAG area. The scheduling of projects is aimed at proceeding with improvements to the transportation network throughout the planning period in all areas of the region. This will lead toward a complete and functioning regional transportation

system that benefits all parts of the MAG area.

Revenues, Expenditures and Life Cycle Programming: Cash flow patterns from revenue sources limit the amount of work that can be accomplished within a given period of time. Project expenditures need to be scheduled to accommodate these cash flows. Life cycle programs have been established that take these conditions into account and implement the projects in the RTP for the major transportation modes: freeways/highways, arterial streets, and transit. The life cycle programs provide a budget process that ensures that the estimated cost of the program of improvements does not exceed the total amount of revenues available. This ensures that a complete transportation system for the region will be developed within available revenues.

As part of the life cycle programming process, consideration is given to bonding a portion of cash flows to implement projects that provide critical connections earlier than might otherwise be possible. This has to be weighed against the reduction in total revenues available for constructing projects, which results from interest costs.

#### **6.2.4 Construction of Projects to Serve Regional Transportation Needs**

The resources to implement the RTP are drawn from regional revenue sources and should address regional transportation needs. Transportation projects that serve broad regional needs should have a higher priority than those that primarily only serve a local area. At the same time, the nature of regional transportation needs varies across the MAG area and the same type of transportation solution does not apply everywhere in the region. Enhancing the arterial network may represent the most pressing regional need in one part of the region, whereas adding new freeway corridors may be the key need in another; and expanding transit capacity may represent the best approach in yet another area. The process to develop the RTP recognized that this was the nature of regional transportation needs in the MAG area. As a result, the RTP is structured to respond to different types of needs in different parts of the MAG Region.

Although the modal emphasis of the transportation improvements identified in the RTP varies from area to area, the effects of these improvements can be assessed using common measures of system performance and regional mobility. The measures that were utilized for this purpose are described below. These criteria were applied in the development of the RTP to evaluate alternatives and establish implementation priorities. They can also be applied in the future to evaluate potential adjustments to the priority of corridors, corridor segments, and other transportation projects and services.

Facility/Service Performance Measures: Facility performance measures focus on the amount of travel on specific facilities, the usage of transportation services, the degree of congestion, and other indicators of the level of service as provided:

- Accident rate per million miles of passenger travel.
- Travel time between selected origins and destinations.
- Peak period delay by facility type and geographic location.
- Peak hour speed by facility type and geographic location.
- Number of major intersections at level of service "E" or worse.

- Miles of freeways with level of service “E” or worse during peak period.
- Average Daily Traffic on freeways/highways and arterials
- Total transit ridership by route and transit mode.
- Cost effectiveness: trips served per dollar invested.

Mobility Measures: Mobility measures focus on the availability of transportation facilities and services, as well as the range of service options as provided:

- Percentage of persons within 30 minutes travel time of employment by mode.
- Jobs and housing within one-quarter mile distance of transit service.
- Percentage of workforce that can reach their workplace by transit within one hour with no more than one transfer.
- Per Capita Vehicle Miles of Travel (VMT) by facility type and mode.
- Households within one-quarter mile of transit.
- Transit share of travel (by transit sub-mode).
- Households within five miles of park-and-ride lots or major transit centers

### **6.2.5 Construction of Segments that Provide Connectivity with other Elements of the Regional Transportation System**

The phasing of the development of the transportation network should be done in a logical sequence, so that maximum possible system continuity, connectivity and efficiency are maintained.

Appropriately located transportation facilities around the region enhance the general mobility throughout the region. To the extent possible, facility construction and transportation service should be sequenced to result in a continuous and coherent network and to avoid gaps and isolated segments, bottlenecks and dead-end routes. Segments that allow for the connection of existing portions of the transportation system should be given a higher priority than segments that do not provide connectivity.

### **6.2.6 Other relevant criteria developed by the regional planning agency**

As part of the RTP, a series of objectives for the regional transportation network were identified. Two key objectives were to achieve broad public support for the needed investments, and to develop a regionally balanced plan that provides geographic equity in the distribution of investments. Specific criteria related to these objectives are:

- Transportation decisions that result in effective and efficient use of public resources and strong public support.
- Geographic distribution of transportation investments.
- Inclusion of committed corridors.

## **6.3 PLAN AND PRIORITY CHANGES**

Since the adoption of the MAG Regional Transportation Plan by the Regional Council on November 25, 2003, there have been certain modifications to the RTP. These

modifications were accomplished following the procedures specified in Arizona House Bill 2292 (Spring 2003 Session) Section 9.B.3. This legislation requires that the MAG Transportation Policy Committee consult with the Regional Public Transportation Authority, the State Board of Transportation, the County Board of Supervisors, Native American Indian Communities, and cities and towns in the MAG Region, regarding any proposed modifications to the MAG Regional Transportation Plan (RTP), through December 31, 2005. In addition to this process, an air quality conformity analysis was conducted on the modifications, as required by federal law.

The RTP modifications primarily affect the phases in which projects are planned to be implemented. For phasing purposes, the projects in the RTP were grouped into four phases as follows: 1) Phase I: FY 2005 through FY 2010; 2) Phase II: FY 2011 through FY 2015; 3) Phase III: FY 2016 through FY 2020; and 4) Phase IV: FY 2021 through FY 2026. The specific project phase changes covered by the RTP modifications are listed by category in Table 4-3.

**TABLE 6-3  
REGIONAL TRANSPORTATION PLAN MODIFICATIONS**

<p align="center"><b>Light Rail Transit (LRT) (RTP Modifications Approved June 23, 2004)</b></p> <p>- LRT Minimum Operating Segment (MOS): 19th Ave./Montebello Ave. to Main St./Sycamore; Schedule revised for a single opening of the MOS, with the entire 20-mile line opening in December 2008.</p> <p>- LRT Metrocenter Link: 19th Ave./Montebello Ave. to Metrocenter; Deferred from Phase I to Phase II.</p>	<p align="center"><b>Arterial Street Capacity Improvements (continued)</b></p> <p>- Hawes Rd.: Elliot Rd. to Ray Rd. (Part of Broadway Rd. to Ray Rd. Segment); Advanced from Phase IV to Phase I; Acceleration funding provided by the City of Mesa.</p> <p>- Happy Valley Rd.: Lake Pleasant Pkwy. to Terramar Blvd. (Part of Loop 303 to 67<sup>th</sup> Ave. Segment); Advanced from Phase IV to Phase I; Acceleration funding provided by the City of Peoria.</p> <p>- McKellips Rd.: - Higley Rd. to Power Rd. (part of Gilbert Rd. to Power Rd. segment); Deferred from Phase 1 to Phase 2; Local funding provided by City of Mesa.</p> <p>- Pecos Rd.: Ellsworth Rd. to Meridian Rd.; Defer from Phase 1 to Phase 2; Local funding provided by City of Mesa.</p> <p>- Power Rd.: Baseline Rd. to Guadalupe Rd (part of Baseline Rd. to Williams Field Rd.); Advanced from Phase 2 to Phase 1; Acceleration funding provided by multi-jurisdictional project partners.</p> <p>- Power Rd.: Guadalupe Rd. to Loop 202/Santan Fwy. (Part of Baseline Rd. to Williams Field Rd. Segment); Advanced from Phase II to Phase I; Acceleration funding provided by the City of Mesa.</p> <p>- Queen Creek Rd.: Arizona Ave. to McQueen Rd. (Part of Arizona Ave. to Power Rd. Segment); Advanced from Phase II to Phase I; Acceleration funding provided by the City of Chandler.</p> <p>- Ray Rd.: Sossaman Rd. to Ellsworth Rd. (Part of Sossaman Rd. to Meridian Rd. Segment); Advanced from Phase IV to Phase I; Acceleration funding provided by the City of Mesa.</p> <p>- Shea Blvd.: Loop 101/Pima Fwy. to Via Linda (Part of Loop 101/Pima Fwy. to State Route 87 Segment); Advanced from Phase IV to Phase I; Acceleration funding provided by the City of Scottsdale.</p> <p>- Southern Ave.: Greenfield Rd. to Recker Rd. (part of Country Club Dr. to Recker Rd. segment); Deferred from Phase 1 to Phase 2; Local funding provided by City of Mesa.</p> <p>- Southern Ave.: Lindsay Rd. to Greenfield Rd. (part of Country Club Dr. to Recker Rd. segment); Deferred from Phase 1 to Phase 2; Local funding provided by City of Mesa.</p> <p>- Southern Ave.: Stapley Dr. to Lindsay Rd. (part of Country Club Dr. to Recker Rd. segment); Deferred from Phase 1 to Phase 2; Local funding provided by City of Mesa.</p> <p>- Val Vista Rd.: Warner Rd. to Pecos Rd.; Advanced from Phase II to Phase I; Acceleration funding provided by the Town of Gilbert.</p>
<p align="center"><b>New Interchanges - Freeway/Arterial (RTP Modifications Approved July 27, 2005)</b></p> <p>- Dixleta Dr./I-17: New Traffic Interchange; Advanced from Phase II to Phase I; Acceleration funding provided by the City of Phoenix.</p>	
<p align="center"><b>Arterial Street Intersection Improvements (RTP Modifications Approved July 27, 2005)</b></p> <p>- Arizona Ave. at Chandler Blvd.: Advanced from Phase II to Phase I; Acceleration funding provided by the City of Chandler.</p> <p>- Arizona Ave. at Elliot Rd.: Advanced from Phase IV to Phase I; Acceleration funding provided by the City of Chandler.</p> <p>- Country Club Dr. at University Dr.: Advanced from Phase III to Phase I. Acceleration funding provided by the City of Chandler.</p> <p>- Gilbert Rd. at University Dr.: Advanced from Phase IV to Phase I; Acceleration funding provided by the City of Mesa.</p> <p>- Ray Rd. at Gilbert Rd.: Advanced from Phase III to Phase I; Acceleration funding provided by the Town of Gilbert.</p> <p>- Ray Rd. at McClintock Dr.: Advanced from Phase II to Phase I; Acceleration funding provided by the City of Chandler.</p>	
<p align="center"><b>Arterial Street Capacity Improvements (RTP Modifications Approved July 27, 2005)</b></p> <p>- Gilbert Rd.: Loop 202/Santan Fwy. to Queen Creek Rd. (Part of Loop 202/Santan Fwy. to Hunt Hwy. Segment); Advanced from Phase IV to Phase I; Acceleration funding provided by the City of Chandler.</p>	

## **CHAPTER SEVEN**

### **HALF-CENT SALES TAX FOR TRANSPORTATION AND OTHER REGIONAL REVENUES**

The half-cent sales tax for transportation approved through Proposition 400 is the major funding source for the MAG Regional Transportation Plan (RTP), providing over half the revenues for the Plan. In addition to the half-cent sales tax, there are a number of other RTP funding sources, which are primarily from state and federal agencies. These revenue sources and the half-cent tax have been termed regional revenues in the RTP. The specific regional revenue sources are:

- Half-cent Sales Tax
- Arizona Department of Transportation (ADOT) Funds
- MAG Area Federal Highway Funds
- MAG Area Federal Transit Funds

These funding categories and their estimated future revenues are addressed below. Financial issues such as bonding strategies and an allowance for inflation are also discussed, along with an overall summary of the sources and uses of regional revenues.

In addition to regional revenues, local governments provide funding that supports implementation of the RTP. These resources provide matching monies for capital projects in the Arterial Street Program and Light Rail Transit Program; subsidize certain transit operating costs; and, in the form of transit farebox monies, contribute significant funding for transit operations.

It should also be noted that revenue projections are expressed in “Year of Expenditure” (YOE) dollars, which reflect the actual number of dollars collected/expended in a given year. Therefore, there is no correction or discounting for inflation. The effect of inflation is accounted for separately through an allowance for inflation that will be applied when comparing project costs and revenues.

#### **7.1 HALF-CENT SALES TAX (*Maricopa County Transportation Excise Tax*)**

On November 2, 2004, the voters of Maricopa County passed Proposition 400, which authorized the continuation of the existing half-cent sales tax for transportation in the region (also known as the *Maricopa County Transportation Excise Tax*). This action provides a 20-year extension of the half-cent sales tax through calendar year 2025 to implement projects and programs identified in the MAG RTP. The current half-cent sales tax for transportation was approved by the voters of Maricopa County in 1985 through Proposition 300, and expires on December 31, 2005. The half-cent sales tax extension approved through Proposition 400 will go into affect on January 1, 2006.

The revenues collected from the half-cent sales tax extension will be deposited into the

Regional Area Road Fund (RARF), and allocated between freeway/highway and arterial street projects; and into the Public Transportation Fund (PTF) for public transit programs and projects. These monies must be applied to projects and programs consistent with the MAG RTP. Projects and programs in the MAG RTP that are not categorized into the freeways/highways, transit, or arterial street modes have not been allocated sales tax funding.

As specified in ARS 42-6105.E, 56.2 percent of all sales tax collections will be distributed to freeways and highways (RARF); 10.5 percent will be distributed to arterial street improvements (RARF); and 33.3 percent of all collections will be distributed to transit (PTF). The use of PTF monies must be separately accounted for based on allocations to: (1) light rail transit, (2) capital costs for other transit, and (3) operation and maintenance costs for other transit.

Tables 7-1 and 7-2 display the projected half-cent sales tax revenues from the extension approved by Proposition 400. Forecasts are listed by fiscal year (FY) for the period FY 2006 through FY 2026, with fiscal years beginning on July 1<sup>st</sup> and ending on June 30<sup>th</sup>. The amounts in FY 2006 include only the receipts from the Proposition 400 half-cent sales tax extension, which begins on January 1, 2006. Receipts from the Proposition 300 tax, which will be received through December 31, 2005, have been committed to ongoing freeway projects and are not included in the FY 2006 figures. In addition, it may be noted that the first revenues from the tax extension are not actually received until March 2006, which is also reflected in the estimates for FY 2006. All other fiscal years through FY 2025 represent a full year of the tax extension. Fiscal year 2026 includes tax extension revenues through December 31, 2025, at which time the tax is scheduled to end.

Table 7-1 depicts projected half-cent sales tax collections by category. These categories include retail sales, contracting, utilities, restaurant and bar taxes, rental of personal property, and other miscellaneous taxable sources. Of the total \$14.3 billion forecasted for the period FY 2006 through FY 2026, it is anticipated that over two-thirds of the sales tax revenues will be generated by retail sales and contracting activities. These activities are subject to business conditions in the region that respond to national and international economic trends. ADOT maintains a detailed annual revenue forecasting process in which economic reviews are conducted and forecasting assumptions are updated.

Table 7-2 displays the distribution of projected revenues to the RARF and the PTF, including the sub-allocation of the RARF to freeway/highway and arterial street uses. As displayed in these tables, total half-cent revenues through FY 2026 are projected to be approximately \$14.3 billion. Of this total, \$8.0 billion will be allocated to freeway/highway projects; \$1.5 billion to arterial street improvements; and \$4.8 billion to transit projects and programs.

**TABLE 7-1**  
**MARICOPA COUNTY TRANSPORTATION EXCISE TAX**  
**REVENUE FORECASTS BY SOURCE: FY 2006-2026**  
 (Year of Expenditure Dollars in Millions)

Fiscal Year	Retail Sales	Contracting	Utilities	Restaurant/ Bar	Rental of Real Property	Rental of Personal Property	Other	Total	Annual % Change
2006	70.8	20.2	9.3	11.9	12.4	5.3	7.3	137.2	7.2
2007	186.4	49.2	23.0	30.6	30.5	13.1	19.6	352.4	3.8
2008	199.3	53.6	23.8	32.8	33.4	14.1	20.3	377.3	7.1
2009	213.8	58.0	24.8	35.2	36.5	15.3	21.0	404.6	7.1
2010	228.7	63.0	25.8	37.6	39.9	16.6	21.7	433.3	7.3
2011	245.2	68.5	26.9	40.6	43.4	18.0	22.4	465.0	7.0
2012	262.7	73.9	28.0	43.4	47.3	19.2	23.2	497.7	7.0
2013	281.3	79.9	29.0	46.5	51.3	20.9	23.9	532.8	7.1
2014	301.1	85.8	30.2	49.6	56.6	22.7	24.7	570.7	7.1
2015	323.3	92.7	31.5	53.0	61.6	24.7	25.5	612.3	7.3
2016	346.5	100.1	32.7	56.6	66.8	26.6	26.3	655.6	7.1
2017	371.4	107.6	34.0	60.7	73.1	28.7	27.3	702.8	7.2
2018	397.9	114.3	35.5	65.0	80.4	31.2	28.3	752.6	7.1
2019	427.7	123.2	37.0	69.9	87.2	33.6	29.3	807.9	7.4
2020	458.0	131.4	38.5	74.5	95.4	37.0	30.4	865.2	7.1
2021	491.6	142.2	40.2	80.2	104.1	40.1	31.4	929.8	7.5
2022	527.8	152.4	41.9	85.9	114.2	43.6	32.6	998.4	7.4
2023	564.8	163.5	43.8	92.4	124.4	47.3	33.9	1,070.1	7.2
2024	606.5	173.9	45.6	98.7	135.0	51.0	35.1	1,145.8	7.1
2025	652.6	186.4	47.8	106.3	146.8	56.1	36.5	1,232.5	7.6
2026	407.1	115.7	29.1	66.4	94.2	35.8	22.1	770.5	N/A
<b>Totals</b>	<b>7,564.5</b>	<b>2,155.5</b>	<b>678.4</b>	<b>1,237.8</b>	<b>1,534.5</b>	<b>600.9</b>	<b>542.8</b>	<b>14,314.5</b>	

Reflects the Proposition 400 half-cent sales tax which begins on January 1, 2006; totals for FY 2006 reflect the lag in actual receipt of revenues by the fund; totals for FY 2026 reflect a 6-month tax collection, since the tax expires on December 31, 2025. Percent change for 2006 and 2007 based on combined Proposition 300 and Proposition 400 revenues for 2006.

## 7.2 ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT) FUNDS

ADOT funding is expected to generate \$6.9 billion for the construction of freeway and highway projects identified in the RTP on the State Highway System. ADOT funding sources include the Arizona State Highway User Revenue Fund (HURF) monies allocated to ADOT to support the State Highway System, ADOT Federal Aid Highway Funds, and other miscellaneous sources.

### 7.2.1 ADOT Funding Overview

ADOT relies on funding from two primary sources: the Highway User Revenue Fund (HURF) and federal transportation funds. The HURF is comprised of funds from the gasoline and use fuel taxes, a portion of the vehicle license tax, registration fees and other miscellaneous sources. Of the total funding, approximately 40 percent comes from

**TABLE 7-2**  
**MARICOPA COUNTY TRANSPORTATION EXCISE TAX**  
**REVENUE FORECAST DISTRIBUTION: FY 2006-2026**  
 (Year of Expenditure Dollars in Millions)

Fiscal Year	Regional Area Road Fund (RARF)		Public Transportation Fund (PTF) (33.3%)	Total
	Freeways (56.2%)	Arterial Streets (10.5%)		
2006	77.1	14.4	45.7	137.2
2007	198.1	37.0	117.3	352.4
2008	212.1	39.6	125.6	377.3
2009	227.4	42.5	134.7	404.6
2010	243.5	45.5	144.3	433.3
2011	261.3	48.8	154.9	465.0
2012	279.7	52.3	165.7	497.7
2013	299.4	56.0	177.4	532.8
2014	320.7	59.9	190.1	570.7
2015	344.1	64.3	203.9	612.3
2016	368.5	68.8	218.3	655.6
2017	395.0	73.8	234.0	702.8
2018	423.0	79.0	250.6	752.6
2019	454.1	84.8	269.0	807.9
2020	486.2	90.9	288.1	865.2
2021	522.6	97.6	309.6	929.8
2022	561.1	104.8	332.5	998.4
2023	601.4	112.4	356.3	1,070.1
2024	643.9	120.3	381.6	1,145.8
2025	692.7	129.4	410.4	1,232.5
2026	433.0	80.9	256.6	770.5
<b>Totals</b>	<b>8,044.9</b>	<b>1,503.1</b>	<b>4,766.5</b>	<b>14,314.5</b>

Reflects the Proposition 400 half-cent sales tax which begins on January 1, 2006; totals for FY 2006 reflect the lag in actual receipt of revenues by the fund; totals for FY 2026 reflect a 6-month tax collection, since the tax expires on December 31, 2025.

the gasoline tax and another 15 percent comes from the sale of diesel fuel. The portion of the Vehicle License Tax (VLT) that flows into the HURF accounts for about 25 percent of the total HURF funds. According to the Arizona constitution, HURF funds can only be used on highways and streets, therefore, HURF funds cannot be used for transit purposes.

ADOT, Arizona counties and cities and towns, and the Department of Public Safety (DPS) receive an allocation from HURF. Of the funds remaining after the allocation for DPS, ADOT receives 50.5 percent, 19 percent is allocated to counties, and 27.5 percent is allocated to Arizona cities and towns. The remaining 3 percent is allocated to cities with populations over 300,000.

For the purposes of revenue forecasting, total HURF funds were projected based on projected population and economic growth, assuming that there would no change in tax rates. Total HURF funds were then distributed to ADOT and the other entities based on the current statutory formula and policy.

From the ADOT HURF allocation, state statute provides that 12.6 percent of the HURF funds flowing to ADOT are earmarked for the MAG Region, and the region comprising the Pima Association of Governments (PAG), which includes metropolitan Tucson, Arizona. In addition, the State Transportation Board has established a policy that another 2.6 percent of ADOT HURF funds would be allocated to the two regions. These funds are divided into 75 percent for the MAG Region and 25 percent for the PAG Region. These funds are referred to as “15 Percent Funds”.

After the deduction of the 15 Percent Funds, ADOT must pay for operations and maintenance and debt service on outstanding bonds. This includes funds for the Motor Vehicle Division, administration, highway maintenance and additional funding for DPS. The remaining HURF funds are then combined with federal highway funds to provide the basis for the ADOT Highway Construction Program. This block of funds is often referred to as “ADOT Discretionary Funds”.

## **7.2.2 ADOT Funding in the MAG Area**

Table 7-3 summarizes ADOT funds applicable to projects in the MAG Regional Transportation Plan. It is projected that a total of \$6.9 billion will be available for the construction of freeways and highways in the MAG Region between FY 2006 and FY 2026. These funds have been reduced appropriately to reflect ADOT expenses for operations, maintenance and debt service on outstanding bonds. This includes bond obligations acquired in connection with the Proposition 300 - Regional Freeway Program.

15 Percent Funding: The MAG area receives annual funding from the Arizona Department of Transportation (ADOT) in the form of ADOT 15 Percent Funds, which are allocated from the Highway User Revenue Fund (HURF). These funds are spent for improvements on limited access facilities on the State Highway System.

MAG Share of ADOT Discretionary Funds: A 37 percent share of ADOT Discretionary Funds is targeted to the MAG Region. Arizona Revised Statute 28-304 C. 1 states that the percentage of ADOT discretionary monies allocated to the MAG region in the Regional Transportation Plan shall not increase or decrease unless the State Transportation Board, in cooperation with the regional planning agency, agrees to change the percentage of the discretionary monies.

Adjustments to the ADOT revenue stream: Three adjustments have been made to refine the ADOT revenue stream. First, an allocation for the ADOT “subprograms” has been made that totals \$1.0 billion over the planning period. This covers ADOT

**TABLE 7-3**  
**ADOT FUNDING IN MAG AREA: FY 2006-2026**  
 (Year of Expenditure Dollars in Millions)

Fiscal Year	15% Funds	ADOT Discretionary	Less Other Program Allowances			Net Total Funding
			Subprograms	Miscellaneous Projects and Contingency	Proposition 300/MAG Freeway Program	
2006	70.8	197.5	36.8	0.0	111.6	119.9
2007	78.7	352.9	37.9	0.0	223.6	170.2
2008	82.5	229.6	39.0	0.0	132.4	140.6
2009	86.4	224.6	40.2	12.4	107.6	150.8
2010	90.0	236.8	41.4	14.6	62.8	208.0
2011	94.1	255.6	42.6	18.7	62.8	225.6
2012	98.1	272.5	43.9	24.9	34.7	267.1
2013	102.7	283.3	45.2	26.3	34.5	279.9
2014	107.1	294.6	46.6	27.7	34.5	292.9
2015	111.8	306.8	48.0	29.7	40.0	300.9
2016	116.8	319.0	49.4	31.3	40.0	315.1
2017	121.7	331.7	50.9	33.0	40.0	329.5
2018	126.8	345.0	52.4	34.8	40.0	344.5
2019	132.6	358.7	54.0	36.7	40.0	360.6
2020	138.5	373.6	55.6	39.2	34.4	382.8
2021	144.5	389.2	57.3	42.0	25.6	408.8
2022	151.2	404.6	59.0	44.1	25.6	427.1
2023	158.6	421.1	60.8	46.7	12.7	459.5
2024	165.9	437.2	62.6	48.5	4.2	487.8
2025	173.6	454.8	64.5	51.2	4.2	508.5
2026	181.4	688.6	66.4	54.3	4.2	745.1
<b>Totals</b>	<b>2,533.7</b>	<b>7,177.9</b>	<b>1,054.8</b>	<b>616.3</b>	<b>1,115.5</b>	<b>6,925.0</b>

programs such as pavement preservation, freeway service patrol, and minor improvement projects in the MAG area. Second, to provide ADOT funds for unanticipated projects in the MAG area, \$616 million of ADOT funds have been reserved. The third adjustment is to deduct the amount that has been allocated for the completion of the Proposition 300 - Regional Freeway Program by mid-2008 – about \$1.1 billion.

### 7.3 MAG AREA FEDERAL TRANSPORTATION FUNDS

In addition to the half-cent sales tax revenues and ADOT funding, a number of federal transportation funding sources are available for use in implementing projects in the MAG Regional Transportation Plan. These sources are discussed below and summarized in Table 7-4. It is projected that a total of \$5.2 billion will be available from this source for the construction of projects in the MAG Region between FY 2006 and FY 2026.

**TABLE 7-4**  
**MAG FEDERAL TRANSPORTATION FUNDS: FY 2006-2026**  
 (Year of Expenditure Dollars in Millions)

Fiscal Year	Transit 5307 Funds	Transit 5309 Funds	MAG STP Funds	MAG CMAQ Funds	Total
2006	12.1	5.0	5.3		22.5
2007	14.0	11.0	6.3		31.3
2008	25.2	19.2	7.8	46.1	98.3
2009	27.1	20.1	9.2	48.0	104.4
2010	11.5	7.1	10.8	49.9	79.3
2011	43.2	66.3	12.3	51.9	173.8
2012	46.1	95.2	14.0	54.0	209.3
2013	60.1	98.3	15.7	56.2	230.3
2014	64.1	101.6	17.4	58.4	241.5
2015	68.3	104.9	19.2	60.8	253.2
2016	72.7	108.4	42.5	63.2	286.8
2017	77.5	111.9	57.1	65.8	312.3
2018	82.5	115.6	59.1	68.4	325.7
2019	87.9	94.1	61.2	71.2	314.4
2020	93.6	13.7	63.4	74.1	244.8
2021	99.7	34.2	65.6	77.0	276.5
2022	106.1	131.5	67.9	80.2	385.7
2023	127.6	135.9	70.3	83.4	417.1
2024	135.8	176.5	72.8	86.7	471.8
2025	144.5	66.7	75.3	90.2	376.7
2026	153.3	69.1	78.0	93.9	394.2
<b>Totals</b>	<b>1,552.9</b>	<b>1,586.6</b>	<b>831.1</b>	<b>1,279.3</b>	<b>5,249.8</b>

### 7.3.1 Federal Transit (5307) Funds

These federal transit formula grants are available to large urban areas to fund bus purchases and other transit capital projects. Purchases made under this program must include a 20 percent local match. This funding source is expected to generate \$1.5 billion for transit development from FY 2006 through FY 2026.

### 7.3.2 Federal Transit (5309) Funds Federal

Transit 5309 funds are available through discretionary grants from the Federal Transit Administration (FTA), and applications are on a competitive basis. They include grants for bus transit development and “new starts” of Light Rail Transit (LRT) and other high capacity systems. Bus transit development requires a 20 percent local match, while new starts are expected to require a 50 percent local match. These funds are granted at the discretion of the FTA, following a very thorough evaluation process. Over the planning horizon, it is estimated that \$1.6 billion in 5309 funds for bus and rail transit projects will be made available to the MAG Region from the FTA. The total does not include the \$587 million in 5309 funds for the 20-mile light rail starter segment, which has already been committed to the region.

### **7.3.3 Federal Highway (MAG STP) Funds**

MAG Surface Transportation Funds (STP) are the most flexible federal transportation funds and may be used for highways, transit or streets. Approximately \$831 million will be available from STP funds for projects during the period from FY 2006 through FY 2026. In addition to this amount, \$34.1 million per year has been allocated through FY 2015 to retire debt related to the completion of the Proposition 300 program.

### **7.3.4 Federal Highway (MAG CMAQ) Funds**

MAG Congestion Mitigation and Air Quality (CMAQ) funds are available for projects that improve air quality in areas that do not meet clean air standards (“non-attainment” areas). Projects may include a wide variety of highway, transit and alternate mode projects that contribute to improved air quality. While they are allocated to the state, Arizona’s funds have been dedicated entirely to the MAG Region, due to the high congestion levels and major air quality issues in the region. They are projected to generate \$1.3 billion from FY 2006 through FY 2026.

## **7.4 REVENUE SOURCES AND USES SUMMARY**

Revenue sources for the MAG RTP between FY 2006 and FY 2026 are shown in Table 7-5 and include: the Proposition 400 half-cent sales tax extension (\$14.3 billion); ADOT funds (\$6.9 billion); Federal Transit (5307) funds (\$1.5 billion); Federal Transit (5309) funds (\$1.6 billion); Federal Highway Surface Transportation Program (STP) funds (\$831 million); Federal Highway Congestion Mitigation and Air Quality (CMAQ) funds (\$1.3 billion); bond proceeds (\$4.3 billion); bus farebox revenues (\$526 million); and other income (\$432 million). The total of all these revenue sources is \$31.8 billion. After deducting debt service (\$1.4 billion interest and \$4.3 billion return of principal) and other expenses (\$214 million) for a total of \$5.9 billion, the net funding available is \$25.8 billion. From this amount, an allowance for inflation (\$8.0 billion) is deducted. This yields \$17.8 billion, which represents the amount of funding available for transportation projects and programs expressed in 2005 dollars.

### **7.4.1 Transportation Uses**

As Table 7-5 depicts, regional revenues are allocated among three major transportation modal categories: freeway/highway, arterial street and transit. The transit mode is further divided into bus transit and light rail transit. After deducting debt service and other expenses, the freeway/highway mode receives a total of \$13.9 billion, with the vast majority of funding coming from the Proposition 400 half-cent sales tax extension and ADOT funds. The arterial street mode is allocated \$2.3 billion, derived from the Proposition 400 half-cent sales tax extension and MAG federal funds. Bus transit receives \$5.0 billion, consisting mostly of Proposition 400 half-cent sales tax and Federal Transit (5307) funds. Light rail transit is allocated \$4.2 billion, with funding coming from the Proposition 400 half-cent sales tax, Federal Transit (5309) funds and MAG CMAQ funds. In addition, other modal programs receive \$404 million from MAG CMAQ funds, resulting in a total funding of \$25.8 billion after debt service and other

expenses.

In Table 7-5, an allowance for inflation is also deducted for each modal program. This results in the amount of funding available for transportation projects and services expressed in 2005 dollars for each of the programs. These amounts are: freeway/highway - \$10.0 billion; arterial streets - \$1.6 billion; bus transit - \$3.0 billion; light rail transit - \$2.9 billion; and other modal programs - \$278 million. As noted previously, these total \$17.8 billion (\$2005).

**TABLE 7-5**  
**SOURCES AND USES OF REGIONAL REVENUES: FY 2006-2026**  
 (Year of Expenditure Dollars in Millions; Unless Noted Otherwise)

Sources	Uses					Total
	Highways/ Freeways	Arterial Streets	Bus Transit	Light Rail Transit	Other Modes	
Proposition 400: Half Cent Sales Tax Extension (RARF)	8,044.9	1,503.1	2,707.4	2,059.1		14,314.5
ADOT Funds (Includes HURF and Federal)	6,925.0					6,925.0
Federal Transit (5307 Funds)			1,552.9			1,552.9
Federal Transit (5309 Funds)			270.0	1,316.6		1,586.6
Federal Highway (MAG STP)		831.0				831.0
Federal Highway (MAG CMAQ)	244.4	171.4		459.3	404.3	1,279.4
Bond Proceeds	3,525.0	504.3	305.0			4,334.3
Bus Farebox Revenues			526.3			526.3
Other Income	101.8		12.0	318.0		431.8
Subtotal	18,841.1	3,009.8	5,373.6	4,153.0	404.3	31,781.8
Less Debt service and Other Expenses	(4,908.3)	(672.5)	(376.4)			(5,957.2)
Subtotal	13,932.8	2,337.3	4,997.2	4,153.0	404.3	25,824.6
Less Inflation Allowance	(3,960.2)	(706.1)	(1,945.5)	(1,254.2)	(126.8)	(7,992.8)
<b>Total (2005 \$'s)</b>	<b>9,972.6</b>	<b>1,631.2</b>	<b>3,051.7</b>	<b>2,898.8</b>	<b>277.5</b>	<b>17,831.8</b>

#### 7.4.2 Bonding, Debt Issues and Debt Service

Bonding provides an important program management tool to accelerate the construction of certain projects and take advantage of financial market conditions. Bonding can be supported by the Highway User Revenue Fund (HURF), Regional Area Road Fund (RARF), Public Transportation Fund (PTF) and federal funds. HURF and RARF bonds are issued by the State Transportation Board, and are used to accelerate the construction of freeway, highway and arterial street projects. The Regional Public Transportation Authority (RPTA)/Valley Metro also has the option of issuing bonds for transit capital projects, backed by the Public Transportation Fund (PTF).

Bonding assumptions were included in the initial financial planning effort for the highway and street elements of the RTP. The RTP set aside \$500 million (2002 \$'s) of sales tax funds for interest expense. However, it is important to note that actual future bonding levels will depend on a variety of factors, including the financial markets and program cash flow requirements. As reflected in Table 7-5, it was assumed that bond proceeds during the planning period (from FY 2006 to FY 2026) would total approximately \$4.3 billion. Bond proceeds were distributed to freeway construction, street construction, and transit capital. The bonding assumptions by mode include: \$3.5 billion to the freeway/highway mode; \$504 million for arterial streets, and \$305 million for transit bus capital. The debt service, including interest (\$1.4 billion) and return of principal (\$4.3 billion), for this financing was projected to total \$5.7 billion and is included under the debt service and expenses item shown by mode.

In addition to conventional bonding, other debt financing will be available for the construction of projects. No specific assumptions were made regarding the application of these options toward financing the RTP. Available debt financing includes the Highway Expansion and Extension Loan Program (HELP); Grant Anticipation Notes (GANS); Board Funding Obligations (BFO); funding through the Transportation Infrastructure Finance and Innovation Act (TIFIA); and local government loan sources. HELP was enacted in 1998 and is the State of Arizona's Infrastructure Bank, which provides loans and financial assistance for eligible highway projects in Arizona. Loans through the State Infrastructure Bank provide options to accelerate projects, and may be utilized throughout the 20-year MAG RTP through FY 2026. In addition, GANS also provide a significant opportunity to accelerate projects. Also, the State Transportation Board has the authority to issue Board Funding Obligations (BFOs) for the State Highway Fund for construction purposes.

### **7.4.3 Inflation Allowance**

As noted previously, regional revenue forecasts have been presented in terms of "Year of Expenditure" (YOE) dollars. YOE dollars reflect the actual number of dollars collected/expended in a given year, with no correction or discounting for inflation. In order to account for the effects of inflation, an allowance for inflation totaling \$8.0 billion for the period FY 2006 through FY 2026 has been included in Table 7-5. An allowance is applied to the revenues available to each transportation mode. The allowance for inflation was obtained by applying discount factors corresponding to an annual three percent inflation rate to the forecasted future revenues after the deduction of expenses. This same approach is utilized in Chapters Eight, Nine and Ten to compare life cycle program costs and revenues.

## **CHAPTER EIGHT**

### **FREEWAY/HIGHWAY LIFE-CYCLE PROGRAM**

The Freeway/Highway Life Cycle Program is maintained by the Arizona Department of Transportation (ADOT) and implements freeway/highway projects listed in the MAG Regional Transportation Plan (RTP). The Life Cycle Program covers FY 2006 through FY 2026 and meets the requirements of state legislation calling for a budget process to ensure that the estimated cost of programmed freeway/highway improvements does not exceed the total amount of revenues available for those improvements.

The Freeway/Highway Life Cycle Program started on July 1, 2005, which is the beginning of fiscal year 2006. It will receive major funding from the Proposition 400 half-cent sales tax extension, as well as a significant amount of funding from state and federal revenue sources. The half-cent sales tax extension starts on January 1, 2006, and revenues from the tax will be available beginning in March of 2006.

The new Freeway/Highway Life Cycle Program will replace the ongoing MAG Regional Freeway Program, which is in its final stages. It is anticipated that the last freeway segment in this program will be completed by mid-2008. Investments related to this program have relied heavily on Proposition 300 half-cent revenues. Proposition 300 was originally authorized in 1985 by Maricopa County voters and the tax will end on December 31, 2005. Proposition 400 extends the half-cent tax initiated by Proposition 300 through December 31, 2025. Debt service requirements and other financial obligations for the ongoing MAG Regional Freeway Program continue through FY 2026. These obligations have been taken fully into account in the planning process for the new Freeway/Highway Life Cycle Program, so that there are no conflicting demands on available revenues between FY 2006 and FY 2026.

When the MAG RTP was initially compiled and adopted in 2003, all projects contained within the Freeway/Highway Life Cycle Program were identified by their phase of anticipated funding. Each period covered by the MAG RTP was divided into four phases, with all Fiscal years ending on June 30<sup>th</sup> of the year indicated. The four phases are as follows:

- Phase I - FY 2005 through FY 2010
- Phase II - FY 2011 through FY 2015
- Phase III - FY 2016 through FY 2020
- Phase IV - FY2021 through FY 2026

In Figures 8-1 and 8-2, projects in the Freeway/Highway Life Cycle Program are mapped to indicate the phase in which they are programmed for final construction. Work may occur on a given segment in earlier phases leading up to final construction of the project. Project status information is also provided in greater detail in Tables A-1 through A-7 in the Appendix.

Figure 8 - 1

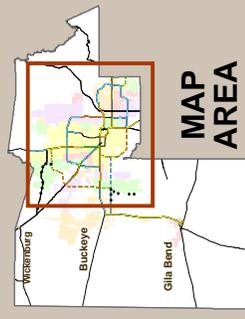
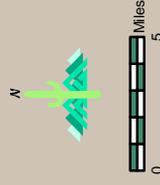


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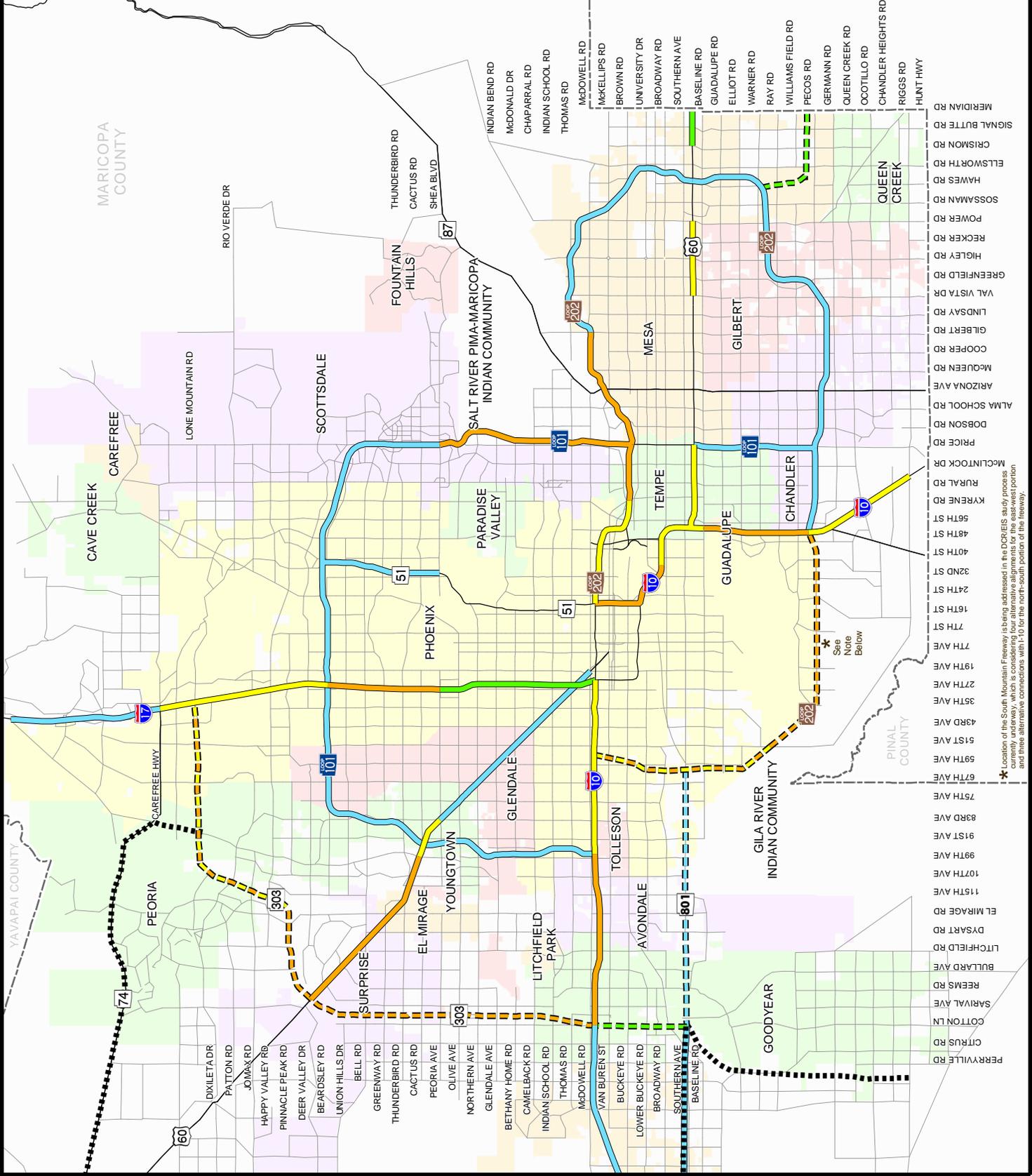
Freeway/Highway: New Corridors and Widening

- Phase 1 (FY 2005 - FY 2010)
- Phase 2 (FY 2011 - FY 2015)
- Phase 3 (FY 2016 - FY 2020)
- Phase 4 (FY 2021 - FY 2026)
- New Corridors
- Right of Way Preservation Phase 1 - 4
- County Boundary
- Freeways/Highways
- Other Roads

Alignments for new freeway, highway, arterial, and light rail/high capacity transit facilities will be determined following the completion of appropriate design and environmental studies.



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\* Location of the South Mountain Freeway (being addressed in the DCRIS study process) shown in the map, which is a separate project and three alternative connections with I-10 for the north-south portion of the freeway.

Figure 8 - 2

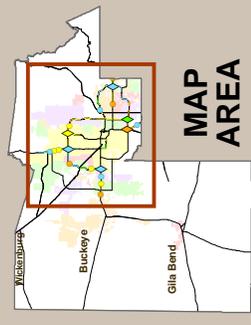
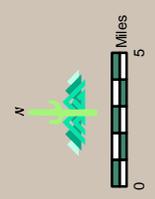


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New Interchanges,  
HOV Lanes, and HOV  
Ramp Connections

- New Traffic Interchange
- ◆ New System HOV Ramp Connections
- HOV Lane Phasing
  - Phase 1 (FY 2005 - FY 2010)
  - Phase 2 (FY 2011 - FY 2015)
  - Phase 3 (FY 2016 - FY 2020)
  - Phase 4 (FY 2021 - FY 2026)
- County Boundary
- Freeways/Highways
- Other Roads

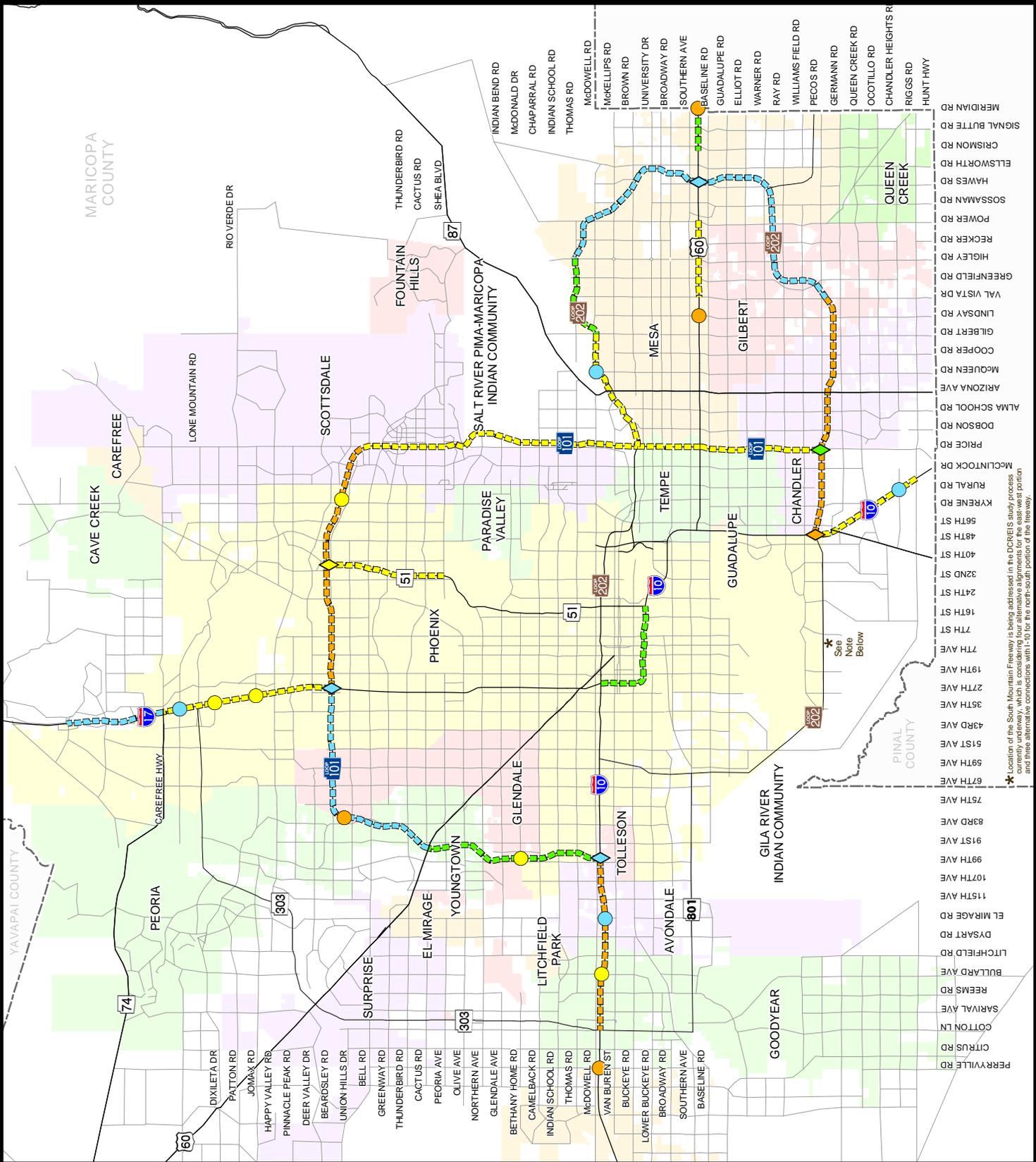
Alignments for new freeway, highway, arterial, and light rail/high capacity transit facilities will be determined following the completion of appropriate design and environmental studies.



MAP AREA

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\* Location of the South Mountain Freeway is being addressed in the DCP/IS Study process. The location of the freeway is shown for the project period and three alternative connections with I-10 for the north-south position of the freeway.



## 8.1 STATUS OF FREEWAY/HIGHWAY PROJECTS

The Freeway/Highway Life Cycle Program includes both new facilities and improvements to the existing system. Operation and maintenance of the system are also addressed. Projects include new freeway corridors, additional lanes on existing facilities, new interchanges at arterial cross streets, high occupancy vehicle (HOV) ramps at system interchanges, and maintenance and operations programs. All projects in the Freeway/Highway Life Cycle Program are consistent with the MAG Regional Transportation Plan (RTP).

The following sections provide an overview of the status of the projects in the Life Cycle Program. In these discussions, the emphasis is placed on reviewing ongoing activities, as well as additional work anticipated during the next five years (FY 2006 through 2010).

### 8.1.1 New Corridors

Figure 8-1 and Table A-1 provide background data on the new corridors that will be added to the regional freeway/highway system. The total costs through FY 2026 for the new corridors in the MAG RTP are estimated at \$3.7 billion (2005 \$'s). The new corridors include the I-10 Reliever, Loop 202 (South Mountain Freeway), Loop 303 (Estrella Freeway), the Williams Gateway Freeway, and the Wickenburg Bypass. In addition, right-of-way protection (only) for Loop 303 (south of I-10 Reliever) and State Route 74 (SR 74) are covered. The status of individual corridors is reviewed below:

#### I-10 Reliever (SR 801):

- The I-10 Reliever (SR 801) is planned as an east-west facility south of I-10 connecting the South Mountain Freeway (Loop 202) and SR 85. In the RTP, the route is funded for construction as a six-lane freeway between Loop 202 and Loop 303; and as a two-lane roadway, with right-of-way preservation for a freeway facility, between Loop 303 and SR 85. Construction of the facility is targeted for the period 2021 through 2026.
- Preliminary engineering and environmental analysis will begin in FY 2006.
- \$3 million (2005 \$'s) per year, from FY 2008 through FY 2010 has been programmed for early right-of-way protection. The amounts programmed for right-of-way will increase in later years prior to construction.

#### Loop 202 (South Mountain Freeway):

- The South Mountain Freeway is planned to loop south of the central area of the region, connecting the western terminus of the Santan Freeway with I-10 in the vicinity of 59<sup>th</sup> Avenue. The RTP calls for construction of an interim facility between I-10 and 51<sup>st</sup> Avenue by the end of FY 2010, and construction of a full six-lane freeway between I-10 (west) and I-10 (east) during FY 2011 through FY 2015.

- A Design Concept Report (DCR) and an Environmental Impact Statement (EIS) are currently proceeding on the South Mountain Freeway corridor. A US Department of Transportation “Record-of-Decision” on the recommended alternative for the corridor is expected by the end of calendar year 2007.
- A total of \$300 million (2005 \$’s) has been programmed from FY 2006 through FY 2010 to cover design, right-of-way, and construction for the segment located between I-10 and 51<sup>st</sup> Avenue. In addition, from FY 2006 through FY 2010, \$70 million has been programmed for design and right-of-way on the segment located east of 51<sup>st</sup> Avenue extending to I-10 on the eastside of the region.

Loop 303 (Estrella Freeway):

- Loop 303 is planned to extend west from I-17 at Lone Mountain Road, swinging southwest to Grand Avenue, running south in the vicinity of Cotton Lane to I-10, and then terminating at MC 85 (Buckeye Road). The RTP calls for construction on an interim facility between Happy Valley Road and I-17 by FY 2010, and for the construction of a full six-lane freeway between I-10 and I-17 during the period of FY 2011 through FY 2015. The segment between I-10 and MC 85 is targeted for construction during FY 2016 through FY 2020.
- An interim facility has been constructed between Grand Avenue and Happy Valley Road by Maricopa County, and full freeway right-of-way has also been acquired along this segment.
- DCRs and Environment Assessments (EAs) are proceeding on the Loop 303 corridor. This includes the segment between I-10 and Grand Avenue (US 60), and the segment between Happy Valley Road and I-17. Initial design work on these segments will begin in FY 2006.
- Preliminary engineering and environmental analysis for the segment between I-10 and Buckeye Road will begin in Phase II (after FY 2010).
- A total of \$250 million (2005 \$’s) has been programmed from FY 2006 through FY 2010 for design, right-of-way, and construction between Happy Valley Road and I-17. A total of \$50 million (2005 \$’s) has also been programmed during this period for design and right-of-way for the segment between I-10 and Grand Avenue. Corridor-wide, right-of-way protection in the amount of \$2 million (2005 \$’s) per year has also been identified for FY 2006 and FY 2007.

Williams Gateway Freeway:

- The Williams Gateway Freeway is planned as a six-lane facility extending from Loop 202 south to the Williams Gateway Airport, and east to the Pinal County line. In the RTP, final construction of the facility is targeted to occur during the period from FY 2016 to FY 2020.

The MAG Alignment and Environmental Overview Study is proceeding on the Williams Gateway Freeway to determine a MAG preferred location for this facility within Maricopa County. ADOT is conducting a Corridor Definition Study that will determine the characteristics of the facility in Pinal County. Preliminary engineering and environmental analysis will begin in FY 2006.

- Approximately \$2 million (2005 \$'s) per year from FY 2007 through FY 2010 has been programmed for early right-of-way protection. The amounts programmed for right-of-way increase in later years prior to construction.

#### Other Right-of-Way Protection on SR 74 and Loop 303 (Buckeye Road to Riggs Road):

- Approximately \$1 million (2005 \$'s) per year has been programmed during the period from FY 2006 through FY 2010 for right-of-way protection on SR 74. This level is maintained and enhanced in future years, in an effort to meet potentially growing right-of-way protection requirements in this area.
- Funding for right-of-way is also identified for Loop 303 (MC 85 to Riggs Road) in later years. The precise alignment for Loop 303 south of MC 85 has not yet been defined.

### **8.1.2 Widen Existing Facilities: General Purpose Lanes and HOV Lanes**

Figures 8-1 and 8-2, as well as Tables A-2 and A-3, provide background data on the new general purpose and the new high occupancy vehicle (HOV) lanes that will be added to the regional freeway/highway system. The total costs through FY 2026 for these improvements are estimated at \$4.4 billion (2005 \$'s). This includes additional lanes on I-10, I-17, Loop 101 (the Agua Fria, Pima and Price Freeways), Loop 202 (the Red Mountain and Santan freeways), State Route 51 (Piestewa Freeway), State Route 85, and on US 60 (Grand Avenue and Superstition Freeway). The status of individual corridors is reviewed below:

#### I-10:

- The RTP calls for the addition of general purpose lanes along essentially the entire length of I-10, between State Route 85 on the west and Riggs Road on the east (No additional lanes are planned between I-17 and SR 51). HOV lanes are also added along several segments to provide continuous HOV service on I-10, between Loop 303 on the west and Riggs Road on the east. Improvements are generally scheduled to start in the central area of the region, from FY 2006 through FY 2010, and extending to other areas of the region through FY 2023.
- A Design Concept Report (DCR) and Environmental Impact Statement (EIS) are proceeding on a collector/distributor system that would ease congestion between State Route 51 and Baseline Road. A total of \$414 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for design, right-of-way and construction work on this project.

- Preliminary engineering and environmental analysis for general purpose lanes and HOV lanes on the segment between Loop 101 (Agua Fria) and SR 85 is underway.
- Preliminary engineering and environmental analysis for general purpose lanes on the segment between I-17 and Loop 101 (Agua Fria) will begin in FY 2006. A total of \$72 million (2005 \$'s) has been programmed during FY 2006 through FY 2010 for design and construction on this segment.
- A total of \$44 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for the design and construction of both general purpose and HOV lanes between Loop 202 (Santan Freeway) and Riggs Road. Preliminary engineering and environmental analysis are currently proceeding.
- Funding in the amount of approximately \$5 million (2005 \$'s) has been programmed from FY 2006 through 2010 for design work on both general purpose and HOV lanes between Dysart Road and Loop 303.

#### I-17:

- The RTP includes construction of additional general purpose lanes on I-17 between McDowell Road on the south and New River Road on the north. HOV lanes are also being added to fill gaps, and to extend the HOV system along I-17 from I-10 at Sky Harbor, to Anthem Way. Improvements are programmed throughout the planning period ending in FY 2026.
- A DCR and EA have been completed for the segment between Loop 101 and the Carefree Highway. A total of \$180 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for design, right-of-way and construction of both general purpose and HOV lanes on this segment. Initial design work will begin on this segment in FY 2006.

#### Loop 101:

- The RTP calls for constructing additional general purpose lanes and HOV lanes along most of the length of Loop 101 (the Agua Fria, Pima, and Price Freeways) by the end of FY 2026. No additional general purpose lanes are planned between the Red Mountain Freeway and Baseline Road. The early focus of the improvements is on additional HOV lanes, with general purpose lanes scheduled after FY 2010.
- A DCR and EA covering the addition of HOV lanes between Princess Drive and Loop 202 (Red Mountain Fwy.) is nearing completion. A total of \$81 million has been programmed from FY 2006 through FY 2010 for design and construction.
- Preliminary engineering and environmental analysis for the addition of HOV lanes between Loop 202 (Red Mountain) and Loop 202 (Santan Freeway) is nearing completion. A total of \$53 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for design and construction.

- Preliminary engineering and environmental analysis for the addition of general purpose and HOV lanes on the remainder of the Pima and Price Freeways, and on the Agua Fria Freeway will begin in Phase II (after FY 2010).

#### Loop 202:

- The RTP identifies the construction of additional general purpose and HOV lanes along essentially the entire length of Loop 202 (Red Mountain and Santan Freeways) by the end of FY 2026. The segment from SR 51 to Loop 101 already has HOV lanes. Also, this does not include the portion of Loop 202 covered by the South Mountain Freeway, which will be constructed as a new corridor. Generally, the construction of HOV lanes has been scheduled before the addition of general purpose lanes, with the major portion of new general purpose lanes scheduled after FY 2021.
- The segment of Loop 202 from State Route 51 to Loop 101 is the first stretch of Loop 202 scheduled for additional general purpose lanes. A total of \$73 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for design and construction on this segment. Another \$27 million (2005 \$'s) is included in Phase II. Preliminary engineering and environmental analysis for this segment are underway.
- Preliminary engineering and environmental analysis for the addition of general purpose and HOV lanes on the remainder of the Red Mountain and Santan Freeways will begin in FY 2006.

#### State Route 51 (Piestewa Freeway):

- The RTP includes construction of additional general purpose and HOV lanes on SR 51 between Shea Boulevard and Loop 101. The HOV improvements are called for first, with funding for the general purpose lanes scheduled after FY 2021.
- A DCR and EA covering the addition of HOV lanes between Loop 101 and Shea Boulevard are nearing completion. A total of \$51 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for design and construction. This includes HOV ramps to the east at the system interchange between SR 51 and Loop 101.
- Preliminary engineering and environmental analysis for the addition of general purpose lanes on SR 51 will begin in Phase III (after FY 2015).

#### State Route 85:

- The RTP calls for widening SR 85 to a four-lane, divided roadway between I-10 and I-8.
- Construction work on widening SR 85 to a four-lane, divided roadway between I-10 and Gila Bend is currently underway. A total of \$113 million (2005 \$'s) has been programmed during FY 2006 through FY 2010 to complete the widening to Gila

Bend.

US 60 (Superstition Freeway):

- The RTP includes widening projects along several segments of the Superstition Freeway, providing a combination of additional general purpose and HOV lanes. These projects will increase general purpose lane capacity along certain segments and provide continuous HOV lane service between I-10 and Loop 202 by FY 2010, and to Meridian Road by FY 2020.
- Final design work on the addition of both general purpose and HOV lanes from Gilbert Road to Power Road is underway, and a total of \$85 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for construction on this segment.
- Preliminary engineering and environmental analysis for the addition of general purpose lanes between I-10 and Loop 101 will begin in FY 2007. A total of \$8 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for design and construction on this segment. Construction of the westbound element of this project may be coordinated with the I-10 C-D roads project.
- Preliminary engineering and environmental analysis for the addition of general purpose lanes and HOV lanes between Crismon Road and Meridan Road will begin in Phase II (after FY 2010).

US 60 (Grand Avenue):

- The RTP identifies a series of improvement projects along various segments of Grand Avenue between Loop 303 and McDowell Road, including the addition of general purpose lanes, grade separations and other improvements. The implementation of these projects will span the planning period through FY 2026.
- Preliminary engineering and environmental analysis for the addition of general purpose lanes between Loop 303 and Loop 101 will begin in FY 2006. A total of \$30 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for design and construction on this segment.
- Preliminary engineering and environmental analysis for corridor improvement projects between Loop 101 and McDowell Road will begin in FY 2008. A total of \$32 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for design and construction on this segment.
- Preliminary engineering and environmental analysis for the remainder of the projects projected for Grand Avenue between Loop 303 and McDowell Road will begin in Phase II (after FY 2010).

US 93 (Wickenburg Bypass):

- An interim bypass of the downtown Wickenburg area is being implemented to

provide congestion relief until the final US 93 bypass can be funded and constructed.

- Final design on the interim bypass is underway and construction is anticipated to begin during the fall of 2006.

### **8.1.3 New Interchanges and New HOV Ramps on Existing Facilities**

In addition to new corridors and additional travel lanes, the RTP call for a series of new interchanges on existing freeways at arterial street crossings, as well as improvements at freeway-to-freeway interchanges to provide direct connections between HOV lanes. Figure 8-2, as well as Tables A-4 and A-5, provide background data on these improvements to the regional freeway/highway system. The total cost through FY 2026 for these projects is estimated at \$409 million (2005 \$'s). The status of individual projects is reviewed below:

#### New Interchanges at Arterial Streets:

- The RTP identifies a total of thirteen new interchanges to be constructed on existing freeways at arterial street crossings. These projects fall along most of the major segments of the regional freeway system, including I-10, I-17, Loop 101, Loop 202, and US 60 (Superstition Freeway). The implementation of these new interchanges is phased over the entire planning period through FY 2026.
- Preliminary engineering and environmental analysis for new interchanges programmed for construction during the next five years have been completed.
- A total of \$80 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for design and construction of new interchanges including the following locations:
  - Bullard Avenue/I-10
  - Jomax Road/I-17
  - Dixileta Drive/I-17 (City of Phoenix Advancement)
  - Bethany Home Road/101L
  - 64<sup>th</sup> Street/101L

#### New HOV Ramps at Existing Freeway-to-Freeway Interchanges:

- The RTP identifies a total of six locations at freeway-to-freeway interchanges on existing freeways where HOV ramps will be constructed to provide a direct connection through the interchange. These projects fall at major connections among components of the regional freeway system, including I-10, I-17, Loop 101, Loop 202, US 60 (Superstition Freeway) and SR 51. The implementation of these new interchanges is phased over the entire planning period through FY 2026.
- Preliminary engineering and environmental analysis for new HOV ramps at existing freeway-to-freeway interchanges has been initiated.

- Construction of new HOV ramps at the SR 51/101L freeway-to-freeway interchange has been programmed from FY 2006 through FY 2010 as part of the addition of HOV lanes on SR 51 between Loop 101 and Shea Boulevard. A DCR and an EA covering this project is nearing completion.

#### **8.1.4 Maintenance, Operations and Mitigation Programs**

The RTP also provides funding for maintenance, operations and mitigation programs on the freeway system. Table A-6 provides background data on these programs, which are directed at litter pickup, landscaping, freeway system management (FMS) functions and noise mitigation. The total costs through FY 2026 for these projects are estimated at \$179 million (2005 \$'s) for FMS, \$279 million for maintenance, and \$75 million for noise mitigation. The status of individual programs is reviewed below:

##### Freeway Management System:

- The RTP identifies a block of funding, covering the planning period through FY 2026, for a freeway management system (FMS) in the MAG area. This includes projects to enhance FMS on existing facilities, as well as to expand the system to new corridors. FMS covers items such as ramp metering, changeable message signs, and other measures to facilitate traffic flow.
- A total of \$42 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for the design and implementation of FMS projects on I-10, SR 51, US 60, Loop 101 and Loop 202. Future phases of the FMS will be facilitated by the FMS Working Group that was recently formed by the MAG ITS Committee. The FMS Working Group has been charged with making recommendations for new features and enhancements to the current template, used by ADOT for building the FMS.

##### Maintenance:

- The RTP includes a block of funding, covering the planning period through FY 2026, for maintenance of the regional freeway system in the MAG area. This funding will be dedicated only to litter pick-up, landscaping maintenance and landscaping restoration.
- A total of \$45 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for system-wide litter pick-up and landscape maintenance.

##### Noise Mitigation:

- The RTP identifies a block of funding, covering the planning period through FY 2026, for noise mitigation projects on the freeway system in the MAG area. This funding will be used for mitigation projects such as rubberized asphalt overlays and noise walls.
- A system-wide total of \$33 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for rubberized asphalt and other noise mitigation projects.

### **8.1.5 System-wide Preliminary Engineering, Advance Right-of-Way Acquisition, Property Management/Plans and Titles, and Risk Management**

- The overall highway development process involves a number of steps that are necessary to prepare projects for eventual construction. Key elements that fall in this area include: (1) Preliminary Engineering - preparation of preliminary plans defining facility design concepts, right-of-way requirements and environmental factors; (2) Advance Right-of-Way Acquisition - acquisition of right-of-way to respond to development pressures in a corridor; (3) Property Management/Plans and Titles - procedures to acquire property and manage it until needed for construction; and (4) Risk Management - programs to minimize risk of litigation.
- A total of \$155 million (2005 \$'s) has been programmed from FY 2006 through FY 2010 for system-wide preliminary engineering, advance right-of-way acquisition, property management/plans and titles, and risk management.

## **8.2 FREEWAY/HIGHWAY PROGRAM COSTS, FUNDING AND FISCAL STATUS**

### **8.2.1 Program Costs**

Table 8-1 provides a summary of past expenditures, estimated future costs and total costs by major program category for the Freeway/Highway Life Cycle Program. Since the Life Cycle Program covers the period FY 2006 through FY 2026, there are no expenditures recorded as of the end of FY 2005. However, data on estimated future costs and total costs is provided for each program category. *(Currently, total costs are identical to the estimated future costs, since there are no expenditures through the end of FY 2005. Future Annual Reports will provide cumulative historical data beginning with FY 2006.)* Detailed data on costs at the project level is included in Tables A-1 through A-6 in the appendix.

As indicated in Table 8-1, the total estimated future costs (and total costs) for the Freeway/Highway Life Cycle Program is \$9.6 billion (2005 \$'s). Approximately 39 percent of this total is devoted to new corridors; 50 percent to additional general purpose lanes, HOV lanes, and other improvements on existing facilities; and 11 percent to the remaining project categories. The latter group includes improvements such as litter pick-up, rubberized asphalt overlays, and ramp metering.

### **8.2.2 Funding and Fiscal Status**

Table 8-2 summarizes the funding sources and uses that apply to the Freeway/Highway Life Cycle Program between FY 2006 and FY 2026.

**TABLE 8-1**  
**FREEWAY/HIGHWAY LIFE CYCLE PROGRAM**  
**SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026**  
**(2005 and Year of Expenditure Dollars in Millions)**

Category	Expenditures through FY 2005 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Cost: FY 2006-2026 (2005 and YOY Dollars)
	Design	Right-of-Way	Construction	Total		
New Corridors	0.0	0.0	0.0	0.0	3,714.0	3,714.0
Widen Existing Facilities: Add General Purpose Lanes	0.0	0.0	0.0	0.0	3,536.0	3,536.0
Widen Existing Facilities; Add HOV Lanes	0.0	0.0	0.0	0.0	866.6	866.6
New Interchanges on Existing Facilities: Freeway/Arterial	0.0	0.0	0.0	0.0	197.2	197.2
New HOV Ramps on Existing Facilities: Freeway/Freeway	0.0	0.0	0.0	0.0	212.4	212.4
Maintenance, Operations, Mitigation and Systemwide Programs	0.0	0.0	0.0	0.0	1,028.6	1,028.6
Other Projects	0.0	0.0	0.0	0.0	37.5	37.5
<b>Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>9,592.3</b>	<b>9,592.3</b>

Sources for the Life Cycle Program between FY 2006 through FY 2026 include the Proposition 400 half-cent sales tax extension (\$8.0 billion); ADOT funds (\$6.9 billion); Federal Highway Congestion Mitigation and Air Quality (CMAQ) funds (\$244 million); bond proceeds (\$3.5 billion); and other income (\$102 million). Expenses totaling \$4.9 billion are deducted from these sources, including an RTP implementation allowance required in legislation that is provided to MAG and RPTA (\$214 million) and estimated future debt service and repayment of other financing (\$1.2 billion interest and \$3.5 billion return of principal). In addition, an allowance for inflation of \$4.0 billion is deducted. This yields a net total of nearly \$10.0 billion (2005 \$'s) for use on freeway and highway projects through FY 2026.

Table 8-2 also lists the estimated future uses identified in the Life Cycle Program for the period from FY 2006 through FY 2026. As shown, Life Cycle Program costs are in balance with the projected future funds available, with available funds exceeding costs by approximately four percent. As the engineering process proceeds, project costs will be subject to revision, and adjustments in the Life Cycle Program may be required to ensure that project costs do not exceed expected revenues.

**TABLE 8-2**  
**FREEWAY/HIGHWAY LIFE CYCLE PROGRAM**  
**SOURCES AND USES OF FUNDS: FY 2006-2026**  
(2005 and Year of Expenditure Dollars in Millions)

Sources of Funds	
Source	Projected Available Funding FY 2006-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	8,044.9
ADOT Funds	6,925.0
Federal Highway / MAG CMAQ	244.4
Bond Proceeds	3,525.0
Other Income	101.8
Less Debt Service and Other Expenses	(4,908.3)
Less Inflation Allowance	(3,960.2)
<b>Total (2005 \$'s)</b>	<b>9,972.6</b>
Uses of Funds	
Category	Estimated Future Costs: FY 2006-2026 (2005 Dollars)
New Corridors	3,714.0
Widen Existing Facilities: Add General Purpose Lanes	3,536.0
Widen Existing Facilities: Add HOV Lanes	866.6
New Interchanges on Existing Facilities: Freeway/Arterial	197.2
New HOV Ramps on Existing Facilities: Freeway/Freeway	212.4
Maintenance, Operations, Mitigation and Systemwide Programs	1,028.6
Other Projects	37.5
<b>Total</b>	<b>9,592.3</b>

### 8.3 PROPOSITION 300 - REGIONAL FREEWAY PROGRAM

Proposition 300 was passed by the voters of Maricopa County on October 8, 1985, establishing a half-cent sales tax for transportation, effective from January 1, 1986 to December 31, 2005. The revenues from this tax, along with state and federal funding, have been used by ADOT to build new freeways in the MAG area. This program is scheduled for completion by mid-2008.

### 8.3.1 Status of Projects

Table 8-3 and Figure 8-3 display the status of the freeway segments covered in the Proposition 300 - Regional Freeway Program. The Program also originally included money for the Paradise Freeway, and an additional set-aside for the Estrella Freeway (Loop 303). However, the Paradise Freeway was deleted from the Regional Freeway System, and the right-of-way that was originally held for the project was sold. Also, work on the Estrella Freeway was left unfunded as part of the Program.

**TABLE 8-3  
PROPOSITION 300 - REGIONAL FREEWAY PROGRAM  
STATUS OF SYSTEM CONSTRUCTION**

Proposition 300 Regional Freeway System Construction (Centerline Miles)					
Corridor	Opened	Under Construction	Planned		Total
			Life Cycle Program	Unfunded	
Agua Fria	22.0	0.0	0.0	0.0	22.0
Grand Avenue <sup>1</sup>	3.3	1.2	0.0	0.0	4.5
Hohokam	3.1	0.0	0.0	0.0	3.1
Pima	28.2	0.0	0.0	0.0	28.2
Price	9.9	0.0	0.0	0.0	9.9
Red Mountain	23.5	0.5	6.9	0.0	30.9
Santan	10.2	14.6	0.0	0.0	24.8
Sky Harbor	2.4	0.0	0.9	0.0	3.3
South Mountain Connection	1.0	0.0	0.0	21.1	22.1
State Route 51	10.2	0.0	0.0	0.0	10.2
<b>Total</b>	<b>113.8</b>	<b>16.3</b>	<b>7.8</b>	<b>21.1</b>	<b>159.0</b>

<sup>1</sup> Represents 8 grade separated intersections included in the Program.

The Program now covers a total of 159.0 centerline miles of facilities. Excluding the unfunded portion of the South Mountain Freeway, the mileage totals 137.9 miles. This includes the Agua Fria, Pima and Price Freeways (Loop 101); the Santan and Red Mountain Freeways (Loop 202); the Piestewa Freeway (State Route 51); the Hohokam Expressway (State Route 143); the Sky Harbor Expressway (State Route 153); the construction of the South Mountain connection at I-10, and improvements to Grand Avenue (US 60). Although the South Mountain connection for Loop 202 at the Santan Freeway was constructed as part of the Proposition 300 - Regional Freeway Life Cycle Program, the remaining 21.1-mile segment of the South Mountain Freeway corridor was left unfunded due to a fiscal shortfall in the program. Engineering and environmental studies on the South Mountain Freeway and Loop 303 are currently underway and funding for completion of these facilities is included in the Proposition 400 Freeway/Highway Life Cycle Program.

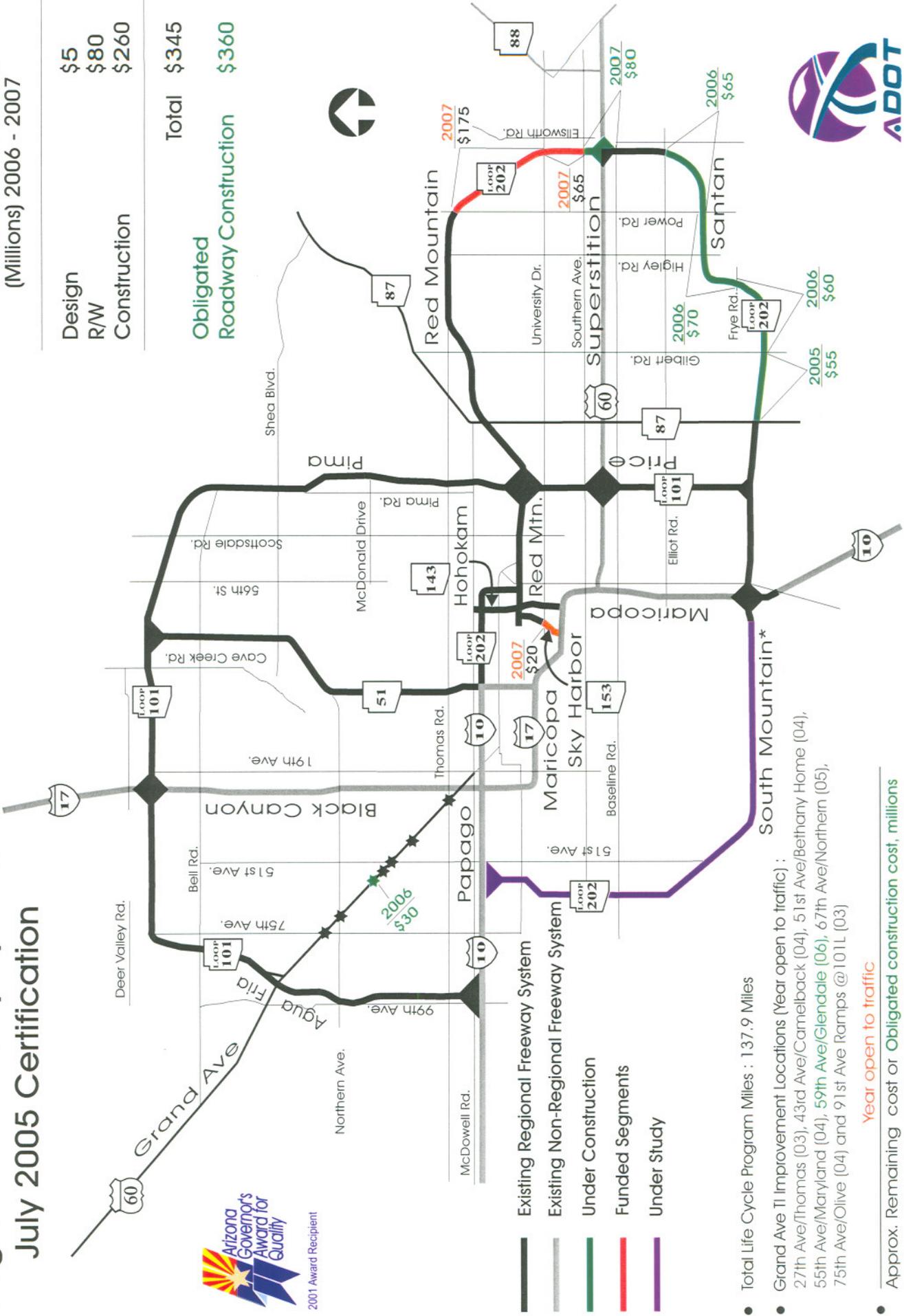
# Regional Freeway System July 2005 Certification

Figure 8-3

Remaining Life Cycle Cost  
(Millions) 2006 - 2007

Design	\$5
R/W	\$80
Construction	\$260
<b>Total</b>	<b>\$345</b>

Obligated  
Roadway Construction \$360



- Total Life Cycle Program Miles : 137.9 Miles
- Grand Ave TI Improvement Locations (Year open to traffic) :  
27th Ave/Thomas (03), 43rd Ave/Camelback (04), 51st Ave/Bethany Home (04),  
55th Ave/Maryland (04), 59th Ave/Glendale (06), 67th Ave/Northern (05),  
75th Ave/Olive (04) and 91st Ave Ramps @101L (03)
- **Year open to traffic**
- Approx. Remaining cost or Obligated construction cost, millions
- \* Corridor under Environmental Impact Statement / Design Concept Report

Note : This map does not include Proposition 400 projects.

During FY 2005, freeway construction on the Red Mountain Freeway (Loop 202) between Higley Rd. and Power Rd. and at the south half of the system interchange with US 60 was completed and opened to traffic. Also, construction was completed and opened to traffic on the Santan Freeway (Loop 202) between Dobson Rd. and Arizona Ave., as well as between Baseline Rd. and Elliot Rd. The segments between Arizona Ave. and Elliot Road are now under construction and scheduled for completion in 2005 (Arizona Ave. to Gilbert Rd.) and 2006 (Gilbert Rd. to Elliot Rd.). In addition, all eight grade separation projects on Grand Ave. are open to traffic, except at Glendale Ave/59<sup>th</sup> Ave., which is anticipated to be open in 2006.

This leaves 7.7 miles on the Red Mountain Freeway to be completed and one mile on the Sky Harbor Expressway to be put out for bid and completed. The last section of the Sky Harbor Expressway is currently under study to determine if this section is still needed from a regional perspective, given the other improvements around Sky Harbor International Airport and the planned I-10 Collector-Distributor (C-D) system to augment existing capacity of I-10. A recommendation to change or delete the last Sky Harbor segment would be required to meet the requirements of a Major Amendment to the RTP as outlined in A.R.S. 28-6353 (E).

Although sales tax collections for Proposition 300 will officially end on December 31, 2005, work utilizing state and federal funding sources will continue through mid-2008 to complete the last segments of the Program.

### **8.3.2 Program Costs**

Expenditures, Obligations and Estimated Future Costs: Table 8-4 displays the total obligations (expenditures and bid advertisements) by design/utility, right-of-way and construction through November 30, 2004. These include obligations to the system that were decided prior to 1986. As displayed, the total obligations through November of 2004 represent a total amount of \$5.4 billion dollars. Approximately 56 percent of all obligations were allocated toward construction, 34 percent were allocated toward the purchase of right-of-way, and the remaining 10 percent were allocated toward design. Projects in the table are either in progress, have been completed, or are yet to be constructed.

Table 8-4 also provides the estimated future costs to complete work included in the Program for each segment through mid-2008. It is estimated that a total of \$343 million (2005 \$'s) is needed to complete the remaining construction projects in the Program, with the majority of the funding for the Red Mountain Freeway (\$256 million), the Santan Freeway (\$49 million), and the Sky Harbor Expressway (\$20 million).

Material Changes: Arizona Revised Statute 28-6353 requires that MAG approve any change in priorities, new projects or other requests that materially increase the cost of a project. A cost increase for construction of the Red Mountain Freeway between Power Road and University Drive of \$17.6 million was approved by MAG in June 2005.

**TABLE 8-4**  
**PROPOSITION 300 - REGIONAL FREEWAY PROGRAM**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS**  
(2005 and Year of Expenditure Dollars in Millions)

Corridor	Expenditures and Obligations through November 30, 2004 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2006- 2008 (2005 Dollars)
	Design/Utility	Right-of-Way	Construction	Totals	
Agua Fria	64.1	260.0	356.7	680.8	3.8
Estrella	4.6	1.6	6.7	12.9	0.0
Grand Avenue	24.0	71.5	145.9	241.4	2.8
Hohokam	22.2	61.1	105.7	189.0	0.0
Paradise	4.1	33.1	0.0	37.2	0.0
Pima	117.6	500.0	686.3	1,303.9	10.1
Price	53.6	59.0	208.1	320.7	0.1
Red Mountain	82.3	346.2	525.7	954.2	256.0
Santan	45.3	275.5	657.7	978.5	48.6
Sky Harbor	9.3	11.1	34.0	54.4	20.1
South Mountain Connection	11.1	32.0	43.3	86.4	0.0
State Route 51	27.0	146.8	205.7	379.5	0.0
Systemwide	85.2	21.0	5.9	112.1	1.2
<b>Total</b>	<b>550.4</b>	<b>1,818.9</b>	<b>2,981.7</b>	<b>5,351.0</b>	<b>342.7</b>

The revised construction cost estimate for this segment now totals \$144.1 million. The cost changes were the result of factors such as additional traffic control during construction, runoff handling enhancements, new CAP canal access requirements, additional noise mitigation, and material quantity and cost increases. The cash balances for the Regional Freeway Program are adequate to accommodate the required changes.

Another material change to the Proposition 300 Program involves a schedule change for the construction of the Red Mountain Freeway between Power Road and University Drive. In September 2005, the MAG Regional Council approved a revised schedule that will result in the completion of this section in mid-2008 rather than December 2007. The longer construction schedule is due to the need to stop construction activities at 10:00 PM, so that adjacent neighborhoods are not impacted during the late night hours. It is not anticipated that the schedule change will result in any cost increases. It should be noted that Figure 8-3 does not reflect this recent change.

### 8.3.3 Funding and Fiscal Status

As indicated previously, it is anticipated that construction work on the Proposition 300 - Regional Freeway Program will be completed by mid-2008. However, debt service and other financial obligations will continue through FY 2026. Table 8-5 summarizes the funding sources and uses that apply to the remaining Program from FY 2005 forward. Sources for the Program include the Proposition 300 half-cent sales tax (RARF) (\$212

million); ADOT funds (\$1.0 billion); Federal Highway Surface Transportation Program funds (\$375 million); and bond proceeds (\$146 million). Expenses totaling \$1.4 billion are deducted from these sources, which consists primarily of debt service and repayment of other financing. In addition an allowance for inflation (\$9 million) is deducted. This yields a net total of \$639 million (2005 \$'s) for use on freeway construction projects.

Table 8-5 also lists estimated future costs to complete the remaining construction work in the Program through mid- 2008, amounting to \$643 million (2005 \$'s). This amount also includes outstanding past project obligations. As shown, Program costs are in balance with the projected future funds available, with costs exceeding available funds by about one-half of one percent. It should also be noted that the timing requirements of construction and debt service payments can be met within available revenues based on the ADOT multi-year cash flow management program.

**TABLE 8-5**  
**PROPOSITION 300 - REGIONAL FREEWAY PROGRAM**  
**SOURCES AND USES OF FUNDS**  
(2005 and Year of Expenditure Dollars in Millions)

Sources of Funds	
Sources	Projected Available Funding (YOE Dollars)
Cash Balance - Beginning of FY 2006	258.9
Proposition 300: One-Half Cent Sales Tax	212.3
ADOT Funds	1,021.0
Federal Highway/MAG STP	375.1
Bond Proceeds	145.5
Other Income	27.6
Less Debt Service and Other Expenses	(1,392.6)
Less Inflation Allowance	(8.7)
<b>Total (2005 \$'s)</b>	<b>639.1</b>
Uses of Funds	
Corridor	Estimated Future Costs (2005 Dollars)
Agua Fria Freeway	3.8
Grand Avenue	2.8
Pima Freeway	10.1
Red Mountain Freeway	256.0
Santan Freeway	48.6
Sky Harbor Expressway	20.1
Systemwide	1.2
Past Project Obligations Outstanding	300.0
<b>Total</b>	<b>642.6</b>

## **8.4 FREEWAY/HIGHWAY PROGRAM OUTLOOK**

The new Freeway/Highway Life Cycle Program, which covers FY 2006 through FY 2026, started on July 1, 2005, which is the beginning of fiscal year 2006. The goal of this program is to implement the freeway and highway projects in the MAG Regional Transportation Plan by the end of FY 2026. The initial FY 06-26 Life Cycle Program costs are in balance with the projected future funds available. A continuing requirement of the life cycle process will be to maintain this balance, through effective financing and cash flow management, value engineering of projects, and Plan and Program adjustments as may be necessary.

Early tasks in the process of implementing the new Freeway/Highway Life Cycle Program will be to: (1) refine project concepts and cost estimates, (2) define right-of-way needs in new corridors for early right-of-way protection, and (3) identify financing strategies. ADOT is preparing a long-range project development schedule covering the full twenty years of the Life Cycle Program, and will be proceeding with preliminary engineering and environmental studies to establish project design concepts and right-of-way needs.

An immediate task will be to evaluate the recent cost increases related to materials and to better understand the impact of the highway program on construction industry capacity, especially during the first five years. A continuing challenge during the life of the program will be to minimize project "scope creep" and prepare project designs that are in scale with available funding.

In addition to the new Life Cycle Program, the ongoing Proposition 300 - Regional Freeway Program is nearing its final stages. It is anticipated that construction work on the remaining projects in this program can be completed mid-2008. Costs for the program are in balance with projected future funds available. Funding requirements for final construction by mid-2008, as well as debt service and other financial obligations will that continue through FY 2026, have been fully taken into account in the planning process for the new Freeway/Highway Life Cycle Program, so that there are no conflicting demands on available revenues between FY 2006-2026.

## **CHAPTER NINE**

### **ARTERIAL STREET LIFE-CYCLE PROGRAM**

The Arterial Street Life Cycle Program is maintained by the Maricopa Association of Governments (MAG) and implements arterial street projects in the MAG Regional Transportation Plan (RTP) that are funded from regional revenue sources. The Program meets the requirements of state legislation calling on MAG to conduct a budget process to ensure that the estimated cost of programmed arterial street improvements does not exceed the total amount of revenues available for these improvements. The Program started on July 1, 2005, which is the beginning of fiscal year 2006.

The Arterial Street Life Cycle Program covers FY 2006 through FY 2026 and provides MAG with a management tool to administer regional funding for arterial street improvements. The Program will receive major funding from both the Proposition 400 half-cent sales tax extension and federal highway programs. The half-cent sales tax extension starts on January 1, 2006 and revenues from the tax will be available beginning in March 2006. Although MAG is charged with the responsibility of administering the overall program, the actual construction of projects is accomplished by local government agencies that provide funding to match regional level revenues.

When the MAG RTP was initially compiled and adopted in 2003, all projects contained within the Arterial Street Life Cycle Program were identified by their phase of anticipated completion. Each period covered by the MAG RTP was divided into four phases, with all Fiscal years ending on June 30<sup>th</sup> of the year indicated. The four phases are as follows:

- Phase I - FY 2005 through FY 2010
- Phase II - FY 2011 through FY 2015
- Phase III - FY 2016 through FY 2020
- Phase IV - FY2021 through FY 2026

In Figure 9-1, projects in the Arterial Street Life Cycle Program are mapped to indicate the phase in which they are programmed for final construction. Work may occur on a given segment in earlier phases leading up to final construction of the project. Project status information is also provided in greater detail in Table B-1 through Table B-3 in the Appendix.

#### **9.1 STATUS OF ARTERIAL STREET PROJECTS**

The Arterial Street Life Cycle Program provides regional funding for widening existing streets, improving intersections, and constructing new arterial segments. The implementation of projects in the regional Intelligent Transportation System (ITS) Plan is also included. The following sections provide an overview of the status of the projects covered by the program.

Figure 9 - 1

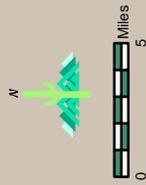


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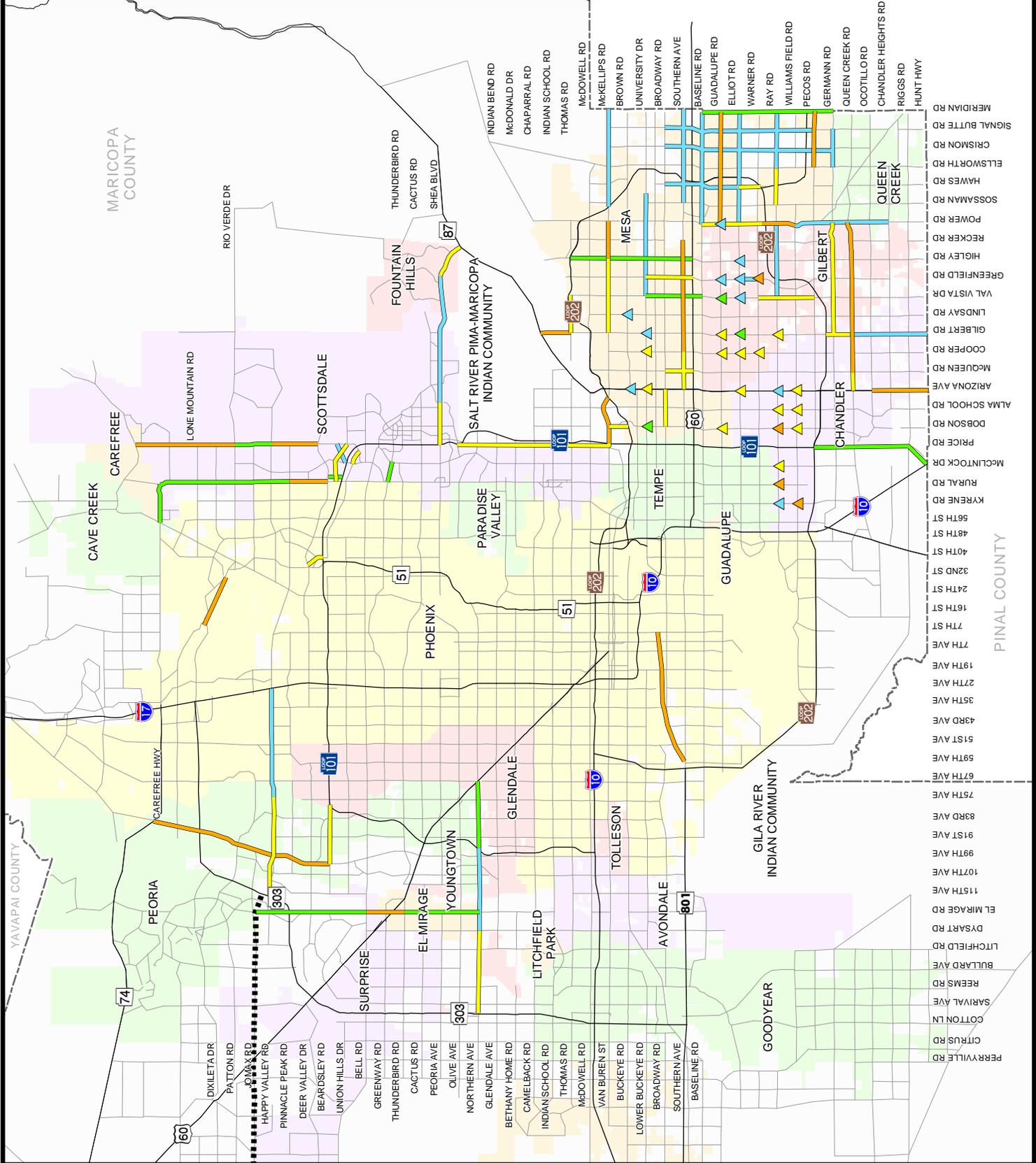
New/Improved Arterials

- ▲ Improved Intersections
- Phase 1 (FY 2005 - FY 2010)
- Phase 2 (FY 2011 - FY 2015)
- Phase 3 (FY 2016 - FY 2020)
- Phase 4 (FY 2021 - FY 2026)
- Right of Way Preservation
- County Boundary
- Freeways/Highways
- Other Roads

Alignments for new freeway, highway, arterial, and light rail/high capacity transit facilities will be determined following the completion of appropriate design and environmental studies.



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It should be noted that the funding for construction of arterial improvements is spread throughout the period covered by the Life Cycle Program. However, to respond to local priorities and development issues, in certain cases local governments are planning to construct projects sooner in the program period than originally scheduled in the RTP. In these cases, the implementing agency will be reimbursed according to the original arterial street program schedule identified in the Regional Transportation Plan adopted in November 2003, even though the construction takes place earlier. For those cases in which a project is deferred, no reimbursement occurs until work is completed.

The following sections provide an overview of the status of the projects in the Arterial Street Life Cycle Program. In these discussions, the emphasis is placed on reviewing ongoing activities, as well as additional work anticipated during the next five years (FY 2006 through 2010).

### **9.1.1 Arterial Capacity Improvements**

Figure 9-1 and Table B-1 provide background data on the capacity improvement projects included in the Arterial Street Life Cycle Program. A total of 63 projects that have been allocated \$1.4 billion (2005 \$'s) in cost reimbursements are covered in this category. The projects vary in nature, including widening of existing arterial streets, such as the series of improvements called for in the East Valley; major upgrading of facilities, such as the development of a parkway along Northern Avenue in the West Valley; and construction of new facilities on new alignments, such as the Rio Salado Parkway in southwest Phoenix.

During the period FY 2006 through FY 2010, work will be proceeding on capacity improvement projects on a number of arterial streets. Various stages of work will be conducted on these projects and all segments will not necessarily be completed during this period. It is projected that reimbursements from regional funds for these projects will total approximately \$220 million (2005 \$'s), including \$23 million for design, \$85 million for right-of-way, and \$112 million for construction. Arterial street segments that will undergo work include:

- Beardsley Rd. – Loop 101 to 83<sup>rd</sup> Ave.
- Broadway Rd. – Dobson Rd. to Country Club Dr.
- Dobson Rd. – Salt River Bridge
- Germann Rd. – Gilbert Rd. to Power Rd.
- Greenfield Rd. – University Rd. to Baseline Rd.
- Lake Pleasant Pkwy. – Union Hills Dr. to Dynamite Rd.
- Loop 101 Frontage Roads (E/B) – Hayden Rd. to Pima Rd.
- Loop 101 Frontage Roads (W/B) – Pima Rd. to Scottsdale Rd.
- McKellips Rd. – Gilbert Rd. to Higley Rd.
- Mesa Dr. – Broadway Rd. to US 60
- Northern Ave. – Grand Ave. to Loop 303
- Pima Rd. – McKellips Rd. to Via Linda
- Power Rd. – Guadalupe Rd. to Santan Fwy.
- Shea Blvd. – Palisades Blvd. to Saguaro Blvd.

- Southern Ave. – Country Club Dr. to Stapley Dr.
- Thomas Rd. – Gilbert Rd. to Val Vista Dr.

In addition to these segments, local governments are proceeding with advance work on capacity improvements during FY 2006 through FY 2010 on a number of projects that were programmed later in the RTP but represent earlier local priorities. In these cases, the implementing agencies will be reimbursed later, according to the original arterial street program schedule identified in the Regional Transportation Plan adopted in November 2003. The projects that have been advanced into Phase I are those shown in Table 6-3.

### **9.1.2 Intersection Improvements**

Figure 9-1 and Table B-2 provide background data on the intersection improvement projects included in the Arterial Street Life Cycle Program. A total of 32 projects that have been allocated \$123 million (2005 \$'s) in cost reimbursements are covered in this category. These projects are aimed at increasing the level of service at the intersections being improved, compared to what it would have been without the improvement.

During the period FY 2006 through FY 2010, work will be proceeding on intersection improvement projects on a number of arterial streets. Consistent with the priorities in the RTP, these intersections are concentrated in the East Valley area. It is projected that reimbursements from regional funds for these projects will total approximately \$31 million (2005 \$'s), including \$2 million for design, \$8 million for right-of-way, and \$21 million for construction. The intersection that will undergo work include:

- Arizona Ave./Ray Rd.
- Chandler Blvd./Alma School Rd.
- Chandler Blvd./Dobson Rd.
- Dobson Rd./Guadalupe Rd.
- Elliot Rd./Cooper Rd.
- Greenfield Rd./University Dr.
- Guadalupe Rd./Cooper Rd.
- Guadalupe Rd./Gilbert Rd.
- Ray Rd./Alma School Rd.
- Warner Rd./Cooper Rd.

In addition to these locations, local governments are proceeding with advance work on intersection improvements during FY 2006 through FY 2010 at certain locations that were programmed later in the RTP but are being advanced by the local jurisdictions. In these cases, the implementing agencies will be reimbursed later, according to the original arterial street program schedule identified in the Regional Transportation Plan adopted in November 2003. The projects that have been advanced into Phase I are those shown in Table 6-3.

### **9.1.3 Intelligent Transportation Systems (ITS)**

The RTP allocates funding to assist in the implementation of projects identified in the regional ITS Plan. These projects smooth traffic flow and help the transportation system to operate more efficiently. It is estimated that a total of \$16 million (2005 \$'s) in reimbursements from regional funds for will be made for ITS projects during FY 2006 through FY 2010.

The focus of the arterial ITS program is to assist MAG member agencies to develop their arterial traffic management systems to better address needs. The process for identifying and recommending arterial ITS projects for funding will continue to be overseen by the MAG ITS Committee. In the past the ITS committee has utilized an objective project rating system, that is linked to the region's ITS Strategic Plan and Regional ITS Architecture, to provide guidance in prioritizing projects. A project is planned for FY 2006 to update the region's 2001 ITS Strategic Plan and ITS Architecture that would include a 20-year arterial ITS plan.

## **9.2 ARTERIAL STREET PROGRAM COSTS, FUNDING AND FISCAL STATUS**

### **9.2.1 Program Costs**

The Arterial Street Program is based on the principle of project budget caps. Under this approach, the regional funding allocated to a specific project is fixed (on an inflation adjusted basis) in the Regional Transportation Plan. This amount must be matched by the implementing agency with, at a minimum, a 30 percent contribution to the project costs. Any projects costs above this amount are the responsibility of the implementing agency. Under this funding scheme, program administration will focus on tracking actual project expenditures and determining the corresponding regional share. Therefore, data monitoring will primarily be directed at regional funding disbursements and total project expenditures.

Table 9-1 provides a summary of past and estimated future regional funding disbursements, and total project expenditures, by major program category for the Arterial Street Life Cycle Program. Since the Life Cycle Program covers the period FY 2006 through FY 2026, there are no past expenditures or disbursements recorded as of the end of FY 2005. However, future disbursements and expenditures currently estimated for each program category are provided. *(At this time, total disbursements are identical to the estimated future disbursements, since there are no past disbursements through the end of FY 2005. Future Annual Reports will provide cumulative historical data beginning with FY 2006.)* Detailed data showing regional funding disbursements and estimated total expenditure at the project level is included in Tables B-1 through B-3.

As indicated in Table 9-1, the total estimated future disbursements (and total disbursements) for the Arterial Street Life Cycle Program is \$1.6 billion (2005 \$'s). Approximately 89 percent of this total is devoted capacity improvements, eight percent to additional intersection improvements, and three percent to ITS.

**TABLE 9-1**  
**ARTERIAL STREET LIFE CYCLE PROGRAM**  
**SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026**  
**(2005 and Year of Expenditure Dollars in Millions)**

Category	Regional Funding Disbursements			Total Expenditures		
	Disburse. through FY 2005 (YOE Dollars)	Estimated Future Disburse.: FY 2006-2026 (2005 Dollars)	Total Disburse.: FY 2006-2026 (2005 and YOE Dollars)	Expenditures through FY 2005 (YOE Dollars)	Estimated Future Expenditures: FY 2006-2026 (2005 Dollars)	Total Expenditures: FY 2006-2026 (2005 and YOE Dollars)
Capacity Improvements		1,406.8	1,406.8		2,062.0	2,062.0
Intersection Improvements		122.6	122.6		209.1	209.1
Intelligent Transportation Systems		54.1	54.1		57.1	57.1
<b>Total</b>		<b>1,583.5</b>	<b>1,583.5</b>		<b>2,271.1</b>	<b>2,271.1</b>

### 9.2.2 Funding and Fiscal Status

Table 9-2 summarizes the funding sources and uses that apply to the Arterial Street Life Cycle Program for FY 2006 through FY 2026. Sources for the Life Cycle Program include the Proposition 400 half-cent sales tax extension (\$1.5 billion); Federal Highway Congestion Mitigation and Air Quality (CMAQ) funds (\$171 million); Federal Highway Surface Transportation Program (STP) funds (\$831 million); and bond proceeds (\$504 million). Note that the bonding program is still being adjusted with the objective of lowering the overall level of bonding for the Arterial Street Program. Expenses totaling \$673 million are deducted from these sources, representing estimated future debt service and repayment of other financing (\$169 million interest and \$504 million return of principal). In addition an allowance for inflation of \$706 million has been deducted. This yields a net total of \$1.6 billion (2005 \$'s) for use on arterial street projects through FY 2026.

Table 9-2 also lists the estimated future regional funding disbursements identified in the Life Cycle Program for the period FY 2006 through FY 2026. As shown, Life Cycle Program disbursements are in balance with the projected future funds available, with funding in excess of disbursements by about three percent. Since Arterial Street Program projects have fixed regional reimbursement budgets, it is anticipated that this balance can be maintained on a continuing basis.

**TABLE 9-2**  
**ARTERIAL STREET LIFE CYCLE PROGRAM**  
**SOURCES AND USES OF FUNDS: FY 2006-2026**  
**(2005 and Year of Expenditure Dollars in Millions)**

Sources of Funds	
Source	Projected Available Funding FY 2006-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	1,503.0
Federal Highway / MAG CMAQ	171.4
Federal Highway / MAG STP	831.1
Bond Proceeds	504.3
Other Income	-
Less Debt Service	(672.5)
Less Inflation Allowance	(706.1)
<b>Total (2005 \$'s)</b>	<b>1,631.2</b>
Uses of Funds	
Category	Estimated Future Regional Disbursements: FY 2006-2026 (2005 Dollars)
Capacity Improvements	1,406.8
Intersection Improvements	122.6
Intelligent Transportation Systems	54.1
<b>Total</b>	<b>1,583.5</b>

### 9.3 ARTERIAL STREET PROGRAM OUTLOOK

The Arterial Street Program is based on the principle of project budget caps, with a fixed amount of regional funding allocated to individual projects (on an inflation adjusted basis). The total estimated future regional revenue disbursements for these projects are in balance with projected revenues, and it is anticipated that this balance can be maintained in the future.

On June 29, 2005, MAG adopted a set of Arterial Life Cycle Program Policies and Procedures to help guide the administration of the Arterial Street Program. These Policies and Procedures address a range of issues, including:

- Lead Implementing Agencies
- Project Budgets
- Eligible Costs for Reimbursement
- Invoicing for Reimbursement of Project Costs
- Eligible Prior Right-of-Way Acquisition and/or Work for Reimbursement
- Reallocation of Surplus Project Funds

- Project Agreements

Under the guidance of the Policies and Procedures adopted by MAG, major initial tasks in implementing the new Arterial Street Life Cycle Program will be to: (1) define project reimbursement procedures and documentation requirements, (2) develop project agreements with lead implementing agencies, and (3) refine project and program monitoring software. The adoption of the Arterial Street Life Cycle Program by MAG is anticipated before the end of 2005.

## CHAPTER TEN

### TRANSIT LIFE-CYCLE PROGRAM

The Transit Life Cycle Program is maintained by the Regional Public Transportation Authority (RPTA) and implements transit projects in the MAG Regional Transportation Plan (RTP). The Program meets the requirements of state legislation calling on the RPTA to conduct a budget process that ensures the estimated cost of the Regional Public Transportation System does not exceed the total amount of revenues expected to be available. This includes expenses such as bus purchases and operating costs, maintenance facilities, park-and-ride lot construction, light rail construction and other transit projects. The Program started on July 1, 2005, which is the beginning of fiscal year 2006.

The Transit Life Cycle Program will receive major funding from the Proposition 400 half-cent sales tax extension, as well as federal transit funds and local sources. The half-cent sales tax extension starts on January 1, 2006 and revenues from the tax will be available beginning in March 2006. The RPTA maintains responsibility for administering half-cent revenues deposited in the Public Transportation Fund (ARS 48-5103) for use on transit projects, including light rail transit (LRT) projects as identified in the MAG RTP. The RPTA Board must separately account for monies allocated to light rail transit, capital costs, and operation and maintenance costs for other transit.

Although the RPTA maintains responsibility for the distribution of half-cent funds for light rail projects, Valley Metro Rail, Inc., a public nonprofit corporation, was created to form an alliance among the cities of Phoenix, Tempe, Mesa and Glendale to implement the LRT system. Valley Metro Rail Inc. is responsible for overseeing the design, construction and operation of the light rail starter segment, as well as future corridor extensions to the system. It should be noted that the RTPA also often uses the term “*Valley Metro*” for their agency, having adopted the name in 1993 as the identity for the regional transit system.

When the MAG RTP was initially compiled and adopted in 2003, all projects contained within the Transit Life Cycle Program were identified by their phase of anticipated completion. The planning period covered by the MAG RTP was divided into four phases, with all Fiscal years ending on June 30<sup>th</sup> of the year indicated. The four phases are as follows:

- Phase I - FY 2005 through FY 2010
- Phase II - FY 2011 through FY 2015
- Phase III - FY 2016 through FY 2020
- Phase IV - FY2021 through FY 2026

In Figures 10-1 through 10-3, projects in the Transit Life Cycle Program are mapped to indicate the phase in which they are programmed. For transit route services, this corresponds to the phase in which service would be initiated. For the construction of

Figure 10 - 1



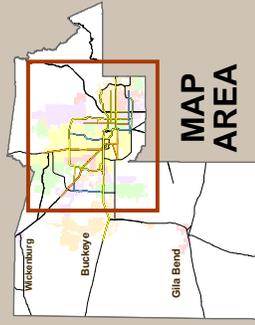
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Bus Rapid Transit  
(BRT)

- Phase 1 (FY 2005 - FY2010)
- Phase 2 (FY 2011 - FY2015)
- Phase 3 (FY 2016 - FY2020)
- Phase 4 (FY 2021 - FY2026)

- Planned or Existing Park-and-Rides
- Planned or Existing Transit Centers
- County Boundary
- Freeways/Highways
- Other Roads

Phasing colors indicate the first phase in which service improvements occur. Additional improvements may occur in later phases.



MAP AREA

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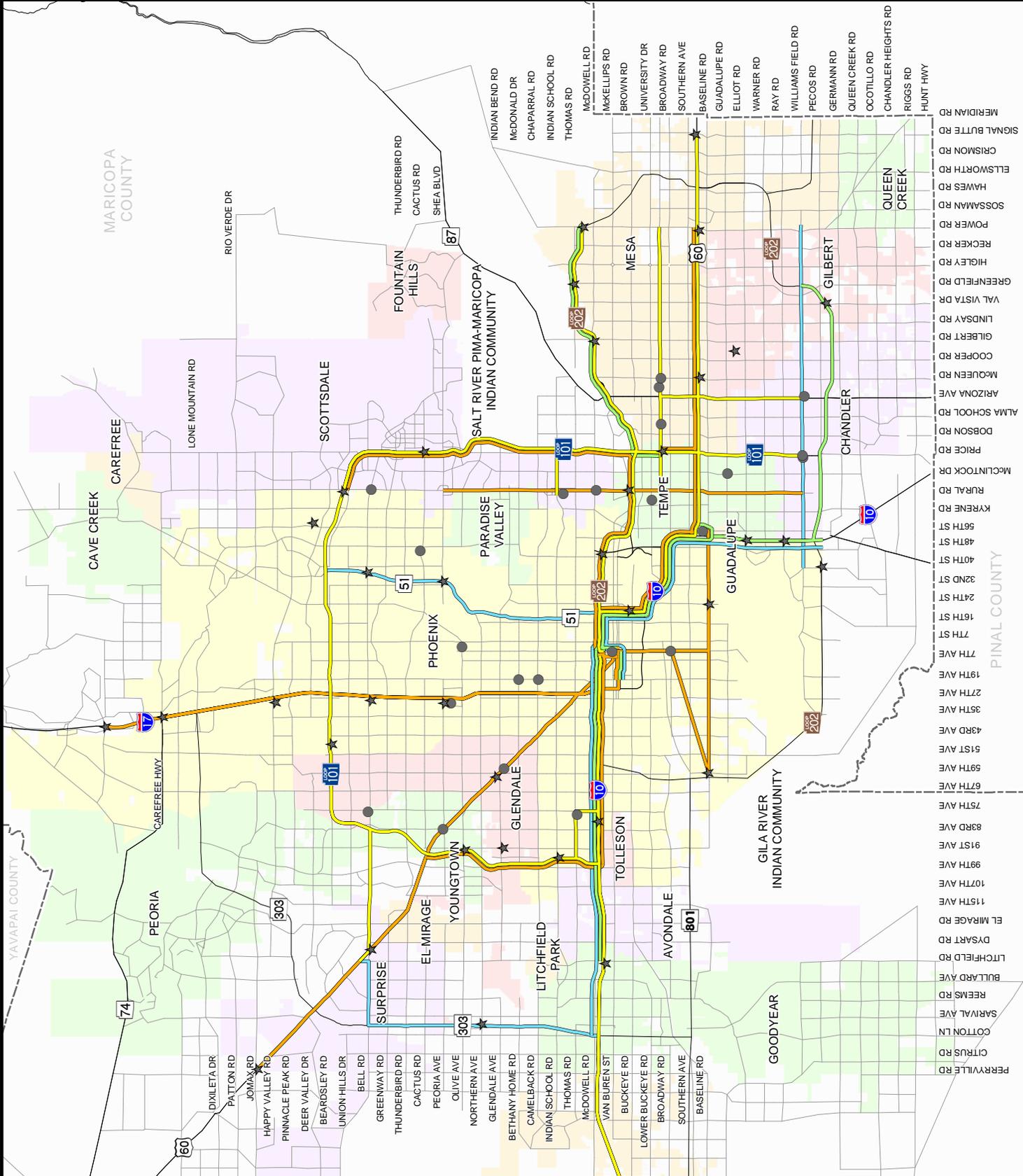


Figure 10 - 2

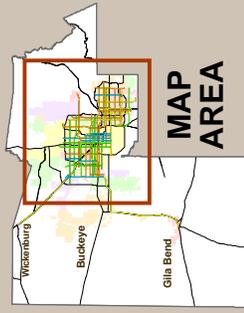
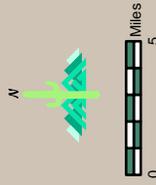


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Super Grid  
Bus System

- Phase 1 (FY 2005 - FY 2010)
- Phase 2 (FY 2011 - FY 2015)
- Phase 3 (FY 2016 - FY 2020)
- Phase 4 (FY 2021 - FY 2026)
- County Boundary
- Freeways/Highways
- Other Roads

Phasing colors indicate the first phase in which service improvements occur. Additional improvements may occur in later phases.



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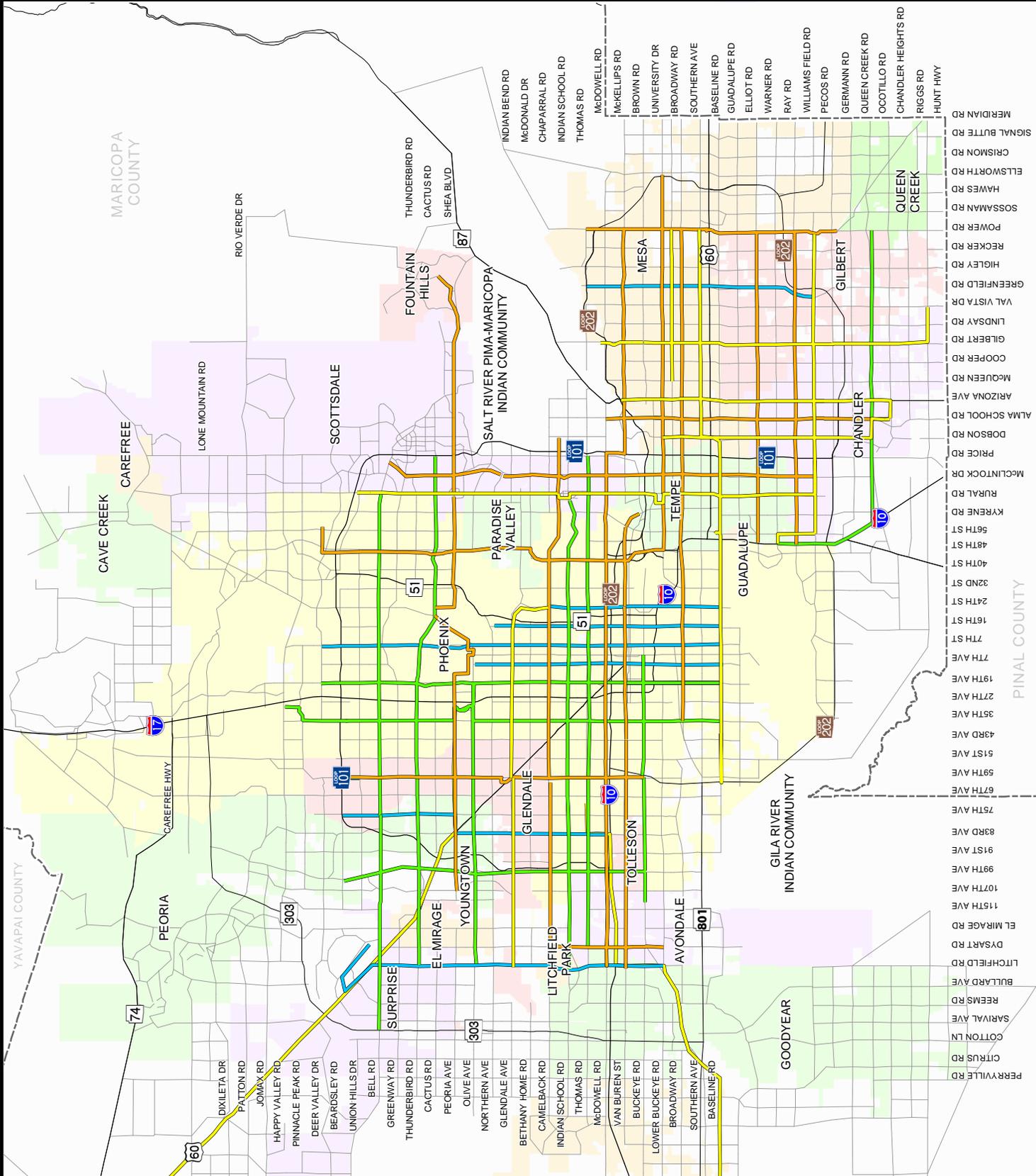


Figure 10 - 3

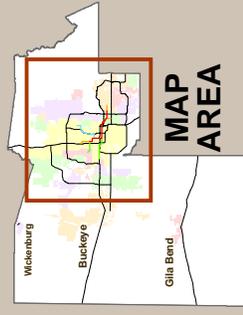
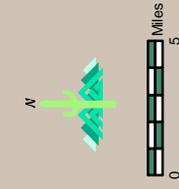


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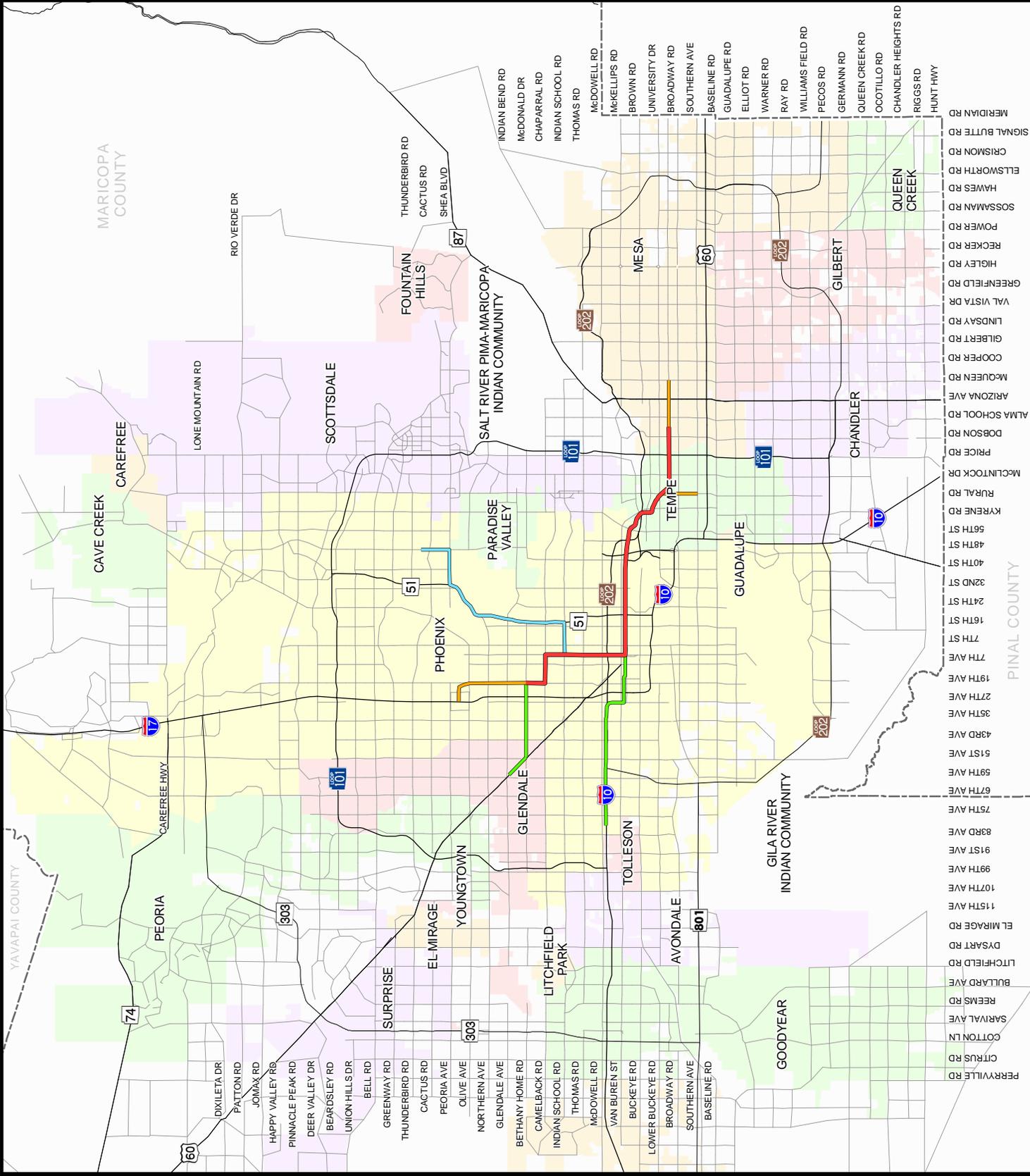
Light Rail Transit (LRT)/ High Capacity Transit

- Phase 1 (FY 2005 - FY 2010)
- Phase 2 (FY 2011 - FY 2015)
- Phase 3 (FY 2016 - FY 2020)
- Phase 4 (FY 2021 - FY 2026)
- Phoenix Minimum Operating Segment
- County Boundary
- Freeways/Highways
- Other Roads

Alignments for new freeway, highway, arterial, and light rail/high capacity transit facilities will be determined following the completion of appropriate design and environmental studies.



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transit facilities, this represents the phase in which final construction is programmed. Project status information is also provided in greater detail in Table C-1 through Table C-9 in the Appendix.

## **10.1 STATUS OF BUS PROJECTS**

The Transit Life Cycle Program includes funding for operations, vehicle fleet and new capital facility improvements to the regional bus network. This includes Bus Rapid Transit (BRT)/Express, the Regional Grid, and other bus service. The following sections provide an overview of the status of the bus operations and capital projects in the Transit Life Cycle Program. In these discussions, the emphasis is placed on reviewing ongoing activities, as well as service additions anticipated during the next five years (FY 2006 through FY 2010).

### **10.1.1 Bus Operations: Bus Rapid Transit (BRT)/Express**

Regional BRT/Express transit services are comprised of Arterial BRT and Freeway Express routes. Arterial BRT routes are intended to operate as overlays on corridors served by local fixed route service, but provide higher speed services by operating with limited stops and with other enhancements, such as bus only lanes, queue-jumpers or signal priority systems. The proposed Arterial BRT routes as identified in the RTP are intended to operate during peak and off-peak periods. In addition to Arterial BRT routes, the RTP also includes Freeway routes, which use existing and proposed high occupancy vehicle (HOV) facilities to connect park-and-ride lots with major activity centers, including core downtown areas. Freeway routes provide suburb-to-suburb connections using the regional freeway system and intermediate stops.

Collectively, the Regional BRT/Express transit services as identified within the RTP account for a total of \$152 million (2005 \$'s) in regional funding for operating costs for the period FY 2006 through FY 2026. This total represents approximately three percent of the total regional funding budget allocated for transit. Figure 10-1 and Table C-1 provide information on the locations and costs affiliated with BRT/Express Transit Services. There are a total of 31 BRT/Express routes identified for funding during the RTP planning period from FY 2006 through 2026. During the next five years, FY 2006 through FY 2010, 11 routes are planned for implementation. These routes would operate in the peak direction at 30-minute intervals, during the three-hour morning and afternoon commute periods. The route descriptions below are generalized for brevity and do not specifically identify all stops and routing details.

North Loop 101 Connector (Surprise to Scottsdale Airpark) – The east terminus of this route is located at the Scottsdale Airpark. From this area, bus service is generally routed along Loop 101 to Arrowhead Towne Center Transit Center, then west on Bell Road to the Surprise Park-and Ride facility, which is the west terminus of the route.

North Glendale Express – The north terminus of this route is the Arrowhead Transit Center. From this area, bus service is generally routed on Bell Road to Loop 101, along Loop 101 to Grand Avenue, along Grand through Peoria, Glendale and Phoenix, then on 19<sup>th</sup> Avenue, then to the Capitol Complex, and to Central Station in Downtown

Phoenix, which is the south terminus of the route.

Papago Freeway Connector (To West Buckeye Park and Ride) – The west terminus of this route is the future Buckeye Park-and-Ride facility at Miller and Lower Buckeye roads. From this area, bus service is generally routed along I-10 to 83<sup>rd</sup> Avenue, then on 83<sup>rd</sup> Avenue to Thomas Road, to the Desert Sky Transit Center. From this area, the bus service extends to the High Occupancy Vehicle (HOV) ramp at 79<sup>th</sup> Avenue/I-10, then on I-10 to 19<sup>th</sup> Avenue; then to the Capitol Complex, and to the Phoenix Downtown Central Station, which is the east terminus of the route.

West Loop 101 Connector (To North Glendale Park and Ride) – The north terminus of this route is the Arrowhead Transit Center. From this area, bus service is generally routed on Bell Road to Loop 101, along Loop 101 to Bethany Home Road and the Arizona Cardinals Stadium complex, to Thomas Road, then to the Desert Sky Transit Center. The route extends to the Park-and-Ride facility at 79<sup>th</sup> Avenue/I-10, which is the south terminus of the route.

East Loop 101 Connector – The north terminus of this route is located at the Scottsdale Airpark. From this area, bus service is generally routed along Loop 101 to Chaparral Road and Scottsdale Community College. From that point, the bus service continues on Loop 101 to University Drive, then to the College Avenue Transit Center. The route then extends back to and along Loop 101 to the Chandler Fashion Mall Transit Center, which is the south terminus of the route.

Red Mountain Express – The east terminus of this route is located at the Park-and-Ride facility on Power Road and Loop 101 (Red Mountain Freeway). From this area, bus service is generally routed along Loop 202 to Scottsdale Road, then to ASU and Rural Road. From that area, the bus service returns to Loop 202, extending to the Phoenix Downtown Central Station, which is the west terminus of the route.

Main Street Arterial BRT – The east terminus of this route is located at Main Street and Power Road. From this area, bus service is generally routed along Main Street, to a connection with LRT at the Sycamore end-of-line station.

Desert Sky Express – The west terminus of this route is the Desert Sky Transit Center. From this area, bus service generally extends along 79<sup>th</sup> Avenue to I-10, continues on I-10 to the 19<sup>th</sup> Avenue, to the Capitol Complex, and to the Downtown Phoenix Central Station, which is the east terminus of the route.

Apache Junction Express – The east terminus of this route is the future Park-and-Ride lot at Signal Butte Road and US 60. From this area, bus service extends generally along US 60 (Superstition Freeway) to I-10, then along I-10 to the Downtown Phoenix Central Station, which is the west terminus of the route.

Arizona Avenue Arterial BRT – The south terminus of this route is located at the intersection of Ocotillo and Alma School roads. From this area, bus service generally extends along Arizona Avenue to Main Street, and then on Main Street to the Mesa Municipal complex, which is the north terminus.

Buckeye Express (To West Buckeye Park and Ride) – The west terminus of this route is located at Verado Way and I-10. From this area, bus service generally extends along I-10 to 19<sup>th</sup> Avenue, then along 19<sup>th</sup> Avenue to the Capitol Complex, and to the Downtown Phoenix Central Station, which is the east terminus of the route.

### **10.1.2 Bus Operations: Regional Grid**

Regional Grid bus routes, which are also commonly referred to as “Supergrid Routes,” include bus routes that are situated along major roads on the regional arterial grid network. The supergrid network addresses a major weakness of the current fixed route bus network. The operational efficiency of the current bus network is hampered by varying service levels across routes and jurisdictions, which is a direct result of the variability of local funding from jurisdiction to jurisdiction. The supergrid addresses this problem by regionally funding key routes at a consistent level of service across all served jurisdictions. Regional funding of bus operations along the arterial grid network ensures a degree of consistency in service levels across jurisdictions, which may not otherwise be possible due to current funding limitations at the local level.

A total of \$1.0 billion (2005 \$’s) in regional funding has been allocated for bus operations on the regional grid for the period FY 2006 through FY 2026. This represents approximately 17 percent of the total regional funding budget allocated for transit. Figure 10-2 and Table C-2 provide information on the locations and costs affiliated with bus operations on the regional grid. There are a total of 32 Regional Grid routes identified for funding during the RTP planning period from FY 2006 through 2026. During the next five years, FY 2006 through FY 2010, seven routes are planned for implementation. A description of each route planned for implementation is provided below. In most cases these, routes would operate in the peak direction at 15-minute intervals during the three-hour morning and afternoon commute periods, and at 30-minute intervals during the rest of the service day. In addition, 30-minute service on Saturday and Sunday would be provided. The route descriptions below are generalized for brevity and do not specifically identify all stops and routing details.

Scottsdale/Rural – The north terminus of this route is located at the Princess Resort on Princess Boulevard east of Scottsdale Road. From this area, bus service extends generally along Scottsdale Road and Rural Road, to the Chandler Fashion Mall Transit Center, which is the south terminus of this route.

Glendale Avenue – The west terminus of this route is located at Luke Air Force Base at Litchfield Road. From this area, bus service generally continues along Glendale Avenue to State Route 51, which serves as the east terminus.

Main Street – The west terminus of this route is the College Avenue Transit Center, which is located adjacent to the ASU campus. From this area, bus service is generally routed along University Drive and Main Street/Apache Boulevard to Power Road, which is the east terminus of the route.

Baseline/Southern/Dobson Extension – The west terminus of this route is at the 59<sup>th</sup> Avenue Park-and-Ride lot. From this area, bus service is generally routed along Baseline Road to Dobson Road. Two service options are currently being considered. Option A would have alternating buses traveling south on Dobson Road to the Chandler Regional Hospital at Frye Road (east terminus A), or north on Dobson Road to Southern Avenue. Service then continues on Southern Avenue to the Superstition Springs Transit Center (east terminus B). Option B would split this route into two routes, with Dobson Road being one route and Baseline/Southern being the other.

Arizona Avenue/Country Club – The south terminus for this route is the Snedigar Recreation Complex at Ocotillo and Alma School Road. From this area, bus service is generally routed on Arizona Avenue/Country Club Drive to McKellips Road, then on McKellips Road to Center Street, which serves as the north terminus for the route.

Gilbert Road – The south terminus for this route is Riggs Road. From this point, bus service is generally routed along Gilbert Road to McDowell Road, which is the north terminus of the route.

Chandler Boulevard – The west terminus of this route is the 40<sup>th</sup> Street Park-and-Ride facility located south of Chandler Boulevard. From this area, bus service is generally routed along Chandler Boulevard/Williams Field Road to the Williams Gateway Airport/ASU East Campus, which serves as the east terminus of the route.

### **10.1.3 Bus Operations: Other**

In addition to the BRT/Express and Regional Grid services, a total of \$307 million (2005 \$'s) in regional funding for operating costs for the period FY 2006 through FY 2026 has been allocated to other bus services. These services include rural/flexible routes, commuter vanpools and paratransit services. Table C-3 provides information on the locations and costs affiliated with these services. The services are described briefly below:

Rural/flexible Routes - This service type addresses the need to provide connections between the urban and rural communities of the county. Rural routes provide connections between remote communities and urban transit nodes and address a range of trip needs including work, shopping, education, and access to various community services. A total of \$11 million (2005 \$'s) in regional funding has been identified to support these services during the FY 2006 through FY 2026 planning period.

Funding has been identified for two rural transit routes to be initiated during the period FY 2006 through 2010. One route will operate between Gila Bend and West Phoenix, while the second route will operate between Wickenburg and Glendale.

Commuter Vanpools – The Commuter Vanpool Program operates as a personalized express service for commuters, and is managed by Valley Metro/RPTA through its complementary rideshare program. Commuter vanpools allow groups of employees throughout the region to self-organize and lease a vehicle from Valley Metro/RPTA to operate a carpool service. Vanpools can be very effective at serving suburban

employment centers such as office parks and office campuses. Vanpooling is one of the Transportation Demand Management strategies many employers have implemented as a Trip Reduction Program measure. Through sponsorship and funding of a vanpool program, Valley Metro/RPTA aspires to maintain rider fares at a level that is attractive to the commuter and available to all employers and commuter groups in Maricopa County.

Valley Metro/RPTA is planning to increase the vanpool fleet to over 770 vehicles. This expanded fleet will provide a flexible transit solution for those trips not well served by more conventional fixed route service. A total of \$70 million (2005 \$'s) in regional funding has been identified to support these services during the FY 2006 through FY 2026 planning period. During the next five years (FY 2006 through FY 2010), it is anticipated that \$14 million (2005 \$'s) will be expended to acquire 527 vanpool vehicles.

ADA Paratransit Services – ADA paratransit services address the needs of disabled riders who cannot utilize fixed route bus service due to physical or cognitive disability. Paratransit service is demand-response and provides curbside pick-ups and drop-offs. This service is required by the Americans with Disabilities Act (ADA) for all ADA-certified patrons for all areas within three-quarter miles of a fixed route. A total of \$226 million (2005 \$'s) in regional funding has been identified to support these services during the FY 2006 through FY 2026 planning period. During the next five years (FY 2006 through FY 2010), it is anticipated that \$41 million (2005 \$'s) will be expended to provide required ADA paratransit services.

#### **10.1.4 Bus Capital: Facilities**

Associated with the expansion of transit service will be the need for additional maintenance and passenger facilities. While the Transit Life Cycle Program identifies general areas and phasing for associated capital facilities, the identification of specific locations that would host these facilities will occur as the result of ongoing capital planning efforts. These efforts will include the identification and evaluation of potential sites for transit passenger and maintenance facilities. This process will guide the selection of sites, and will be done in cooperation with the host communities, which will include public outreach efforts to identify and address the concerns of affected neighborhoods, institutions, and commercial users.

A total of \$462 million (2005 \$'s) has been allocated during the planning period covering FY 2006 through 2026 to fund numerous capital projects affiliated with regional bus operations. There is also an additional \$23 million (2005 \$'s) contingency. Table C-4 provides information on the locations and costs affiliated with these services. This infrastructure calls for the completion of 13 park-and-ride lots; 6 transit centers (4 bus-bay); 4 transit centers (6 bus-bay); 3 transit centers (for major activity centers); 5 bus maintenance facilities; two dial-a-ride/rural bus maintenance facilities; a vanpool maintenance facility; the purchase of BRT Right-of-way and associated improvements and maintenance; 1,200 bus stop pullouts/improvements at various locations, and the implementation of ITS/VMS in 2,154 vehicles.

As of 2005, pre-design, design, and planning is underway on a number of park-and-ride facilities. Other maintenance and passenger facilities are to be implemented over the

next several years. It is anticipated that a total of \$111 million (2005 \$'s) in regional funding will be expended during the next five years (FY 2006 through FY 2010) on bus capital facilities. The park and ride projects under development during this period will include the Peoria/Grand Park and Ride, the Glendale Park and Ride, and the Scottsdale/Loop 101 Park and Ride. Other capital projects that will be under development during this period include three transit centers, two operations and maintenance facilities, and improvements to approximately 270 bus stops.

### **10.1.5 Bus Capital: Fleet**

Over the duration of the 20-year planning horizon associated with Proposition 400, the Transit Life Cycle Program calls for the allocation of \$984 million (2005 \$'s) for the purchase of 2,138 buses for fixed route networks; 36 buses for rural routes; 1,000 Dial-a-Ride (DAR) vans for paratransit purposes; and 1,404 vanpool vans. There is also an additional \$49 million (2005 \$'s) contingency. It is anticipated that a total of \$165 million (2005 \$'s) in regional funding will be expended during the period FY 2006 through FY 2010 on vehicle purchases. These purchases will include 403 fixed route buses, 45 express/BRT buses, 8 rural transit buses, 213 paratransit vehicles, and 527 commuter vans. These reflect both replacement and expansion vehicles.

## **10.2 STATUS OF LIGHT RAIL TRANSIT PROJECTS**

The Transit Life Cycle Program includes an extensive Light Rail Transit (LRT) component for the MAG Region. This covers support infrastructure for the LRT system, as well as future extensions of light rail corridors that are planned throughout the region. The construction of the 20-mile Minimum Operating Segment that was developed through the Central Phoenix/East Valley Major Investment Study (MIS) is not a part of the Transit Life Cycle Program, except for some funding for support infrastructure. Figure 10-3, as well as Tables C-6 and C-7, provide information on the planned phasing of light rail throughout the metropolitan area. A total of \$2.8 billion (2005 \$'s) is allocated to LRT projects in the Transit Life Cycle Program, which is approximately 49 percent of the total regional funding dedicated to transit. Of this amount, approximately \$2.4 billion (2005 \$'s) will be utilized toward construction of route extensions, whereas the remaining \$391 million (2005 \$'s) is allocated for support infrastructure affiliated with the LRT system. None of the regional funding for LRT is allocated to operating costs.

### **10.2.1 Minimum Operating Segment**

Although the construction of the Minimum Operating Segment (MOS) is not a part of the Transit Life Cycle Program, background information on this project is provided here to provide an overview of the entire LRT system planned for the region. The conceptualization of a light rail starter segment began with the completion of the Central Phoenix/East Valley Major Investment Study (MIS) in 1998. The purpose of the Central Phoenix/East Valley MIS was to identify transportation improvements designed to reduce existing and future traffic congestion, improve mobility options, and provide transportation alternatives in the corridor linking central Phoenix with the cities of Tempe and Mesa. The approved alignment for the Light Rail Transit (LRT) MOS starter

segment extends from Bethany Home Road and 19<sup>th</sup> Avenue (formerly Chris-Town Mall, and recently renamed the Spectrum Mall) into downtown Phoenix; from downtown Phoenix to downtown Tempe and Arizona State University; and continuing to the intersection of Main Street and Sycamore in Mesa. The MOS will be completed by December 2008 and service will be initiated through a single opening of the entire system at that time.

The MOS will operate primarily at-grade on city streets. The LRT system will have two tracks, with light rail vehicles running in trains from one to three cars. The trains will run in both directions approximately 18 to 21 hours per day, seven days per week. The trains will initially operate every 10 minutes during peak hours and approximately every twenty minutes during off-peak hours.

Important elements of the light rail plan include provisions for park-and-ride lots at the end of rail lines and signal priority strategies to improve speed. A total of 27 station locations have been identified on the MOS alignment, with 21 scheduled for completion by opening day and six scheduled for development by 2010. Stations are generally located about a mile apart, but closer (1/2 mile apart) in urban centers. Shuttle buses and an improved fixed route network also play an important role in the light rail system. Half-cent sales tax money from Proposition 400 will not be utilized to pay for route construction of the MOS, but is rather allocated toward certain elements of the support infrastructure.

### **10.2.2 Light Rail Transit: Support Infrastructure**

A total of \$391 (2005 \$'s) is allocated in the Transit Life Cycle Program toward the completion of support infrastructure affiliated with the LRT system. Of this amount, \$164 million (2005 \$'s) is allocated toward infrastructure along the LRT MOS (to be expended by 2010); \$30 million (2005 \$'s) is allocated toward infrastructure needs on the Metrocenter Link, from 19<sup>th</sup> Avenue/Bethany Home to Metrocenter Mall (to be expended by 2010); \$30.0 million (2005 \$'s) is allocated toward infrastructure needs on the Glendale Link from 19<sup>th</sup> Avenue/Bethany Home to Downtown Glendale (to be expended by 2020); and \$167 million (2005 \$'s) is allocated to other LRT improvements throughout the system (to be expended by 2026).

### **10.2.3 Light Rail Transit: Route Extensions**

The Transit Life Cycle Program includes regional funding for the completion of six additional LRT segments on the system. These include a five-mile extension to Metrocenter; a five-mile extension to downtown Glendale; an 11-mile extension along I-10 west to 79<sup>th</sup> Avenue; a 12-mile extension to Paradise Valley Mall; a two-mile extension south of the MOS on Rural Road to Southern Avenue; and a 2.7-mile extension from the east terminus of the MOS to Mesa Drive. In total, the extensions account for a total of 37.7 miles of the 57.7-mile system. The total estimated cost for development of the route extensions is \$2.4 billion (2005 \$'s).

It should be noted that local sources will provide a significant share of the funding for the extension to downtown Glendale and the extension to Metrocenter. For these

segments, regional funding in the form of Federal 5309 funds will provide approximately half of the funding, with local sources providing the remaining half. Other than the funding for support infrastructure identified previously, it is not anticipated that half-cent funds will be applied to these segments. The status of development work on the route extensions is discussed below.

### Design Criteria and Standards Study

This study will develop, update and refine Valley Metro Rail design criteria, standards, specifications, and CADD standards to reflect lessons learned from the Central Phoenix/East Valley LRT Project and to fully incorporate (or reference) all applicable local standards and requirements. The updated standards will be provided to all future LRT design consultants, to assure all standards are met, and to minimize future design efforts and costs.

### LRT System and Configuration Study

The study will address three related areas: the I-10 West Corridor, the future configuration of the completed 57-mile light rail system, and address broad corridor issues in some specific corridors where resolution needs to address either multiple options, engineering challenges or technology issues.

### Metrocenter Extension

The Metrocenter Corridor Study is currently in the draft environmental impact phase (DEIS). Preliminary engineering and the final environmental impact (FEIS) phase will likely occur in 2006-2007, with Final Design of the project following in 2007-2008, and right-of-way acquisition occurring in 2008-2010. Construction of the extension is currently projected to begin in 2010.

## **10.3 TRANSIT PROGRAM COSTS, FUNDING AND FISCAL STATUS**

### **10.3.1 Program Costs**

Table 10-1 provides a summary of past expenditures, estimated future costs and total costs by major program category for the Transit Life Cycle Program. Since the Life Cycle Program covers the period FY 2006 through FY 2026, there are no expenditures recorded as of the end of FY 2005. However, data on estimated future costs and total costs is provided for each program category. (*Currently, total costs are identical to the estimated future costs, since there are no expenditures through the end of FY 2005. Future Annual Reports will provide cumulative historical data beginning with FY 2006.*) Detailed data on costs at the project level is included in Tables C-1 through C-7 in the appendix.

As indicated in Table 10-1, the total estimated future costs (and total costs) for the Transit Life Cycle Program is \$5.8 billion (2005 \$'s). Approximately 25 percent of this total is devoted bus operations, 26 percent to bus capital projects, and 49 percent to light rail projects. Funding for light rail projects is limited to capital expenditures and no

regional revenues are allocated to LRT operating costs.

It is important to note that, as a part of the expenditures for light rail, A.R.S. 48-5107 requires that all costs for relocation of utility facilities incurred after July 1, 2003 as a direct result of the construction and operation of a light rail project be reimbursed to the utility by the light rail project.

**TABLE 10-1**  
**TRANSIT LIFE CYCLE PROGRAM**  
**SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026**  
**(2005 and Year of Expenditure Dollars in Millions)**

Category	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)
	Operations	Capital Investments	Total		
Bus Operations: BRT/Express	0.0	0.0	0.0	152.1	152.1
Bus Operations: Regional Grid	0.0	0.0	0.0	1,001.3	1001.3
Bus Operations: Other	0.0	0.0	0.0	306.6	306.6
Bus Capital Projects: Facilities	0.0	0.0	0.0	461.7	461.7
Bus Capital Projects: Fleet	0.0	0.0	0.0	984.2	984.2
Bus Capital Projects: Contingency	0.0	0.0	0.0	72.3	72.3
Light Rail Transit: Support Infrastructure	0.0	0.0	0.0	390.5	390.5
Light Rail Transit Capital: Route Extensions	0.0	0.0	0.0	2,434.5	2,434.5
<b>Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>5,803.2</b>	<b>5,803.2</b>

### 10.3.2 Funding and Fiscal Status

Table 10-2 summarizes the funding sources and uses that apply to the Transit Life Cycle Program from FY 2006 through FY 2026. Sources of funds that will be utilized for the life cycle program include the Proposition 400 half-cent sales tax extension (\$4.8 billion); Federal 5307 Transit Funds (\$1.5 billion); Federal 5309 Transit Funds (\$1.6 billion); Federal Highway Congestion Mitigation and Air Quality (CMAQ) funds (\$459 million); bond proceeds (\$305 million); other income (\$330 million) from local funding sources; and bus farebox revenues (\$526 million). Table 10-2 also includes expenses of \$376 million for estimated future debt service and repayment of other financing (\$71 million interest and \$305 million return of principal). Allowance for future inflation in the amount of \$3.2 billion is also deducted from the funding. This yields a net total of \$5.9 billion (2005 \$'s) for use on public transit projects through FY 2026.

Table 10-2 also includes a list of estimated future funding uses (in 2005 \$'s) that have been identified in the Transit Life Cycle Program from FY 2006 through FY 2026. The transit categories include bus operations for Bus Rapid Transit (BRT)/Express (\$152 million); Regional Grid (\$1.0 billion); other bus services (\$307 million); bus capital expenditures for facilities (\$462 million); fleet purchases (\$984 million); a set aside for

capital contingency (\$72 million); LRT support infrastructure (\$391 million); and LRT route extensions (\$2.4 billion). As shown, Life Cycle Program costs are in balance with the projected future funds available, with available funds exceeding costs by about two percent. As the engineering and service planning process proceeds, project costs will be subject to revision, and adjustments in the Life Cycle Program may be required to ensure that project costs do not exceed expected revenues.

**TABLE 10-2  
TRANSIT LIFE CYCLE PROGRAM  
SOURCES AND USES OF FUNDS : FY 2006 - FY 2026  
(2005 and Year of Expenditure Dollars in Millions)**

Sources of Funds	
Category	Projected Available Funding FY 2006-2026 (YOE Dollars)
Proposition 400: One-Half Cent Sales Tax Extension	4,766.6
Federal Transit / 5307 Funds	1,552.9
Federal Transit / 5309 Funds	1,586.6
Federal Highway/MAG CMAQ	459.3
Bonding	305.0
Other Income	330.0
Bus Farebox Revenues	526.3
Less Debt Service	(376.4)
Less Inflation Allowance	(3,199.7)
<b>Total (2005 \$'s)</b>	<b>5,950.5</b>
Uses of Funds	
Category	Estimated Future Costs: FY 2006-2026 (2005 Dollars)
Bus Operations: BRT/Express	152.1
Bus Operations: Regional Grid	1,001.3
Bus Operations: Other	306.6
Bus Capital Projects: Facilities	461.7
Bus Capital Projects: Fleet	984.2
Bus Capital Projects: Contingency	72.3
Light Rail Transit: Support Infrastructure	390.5
Light Rail Transit Capital: Route Extensions	2,434.5
<b>Total</b>	<b>5,803.2</b>

#### 10.4 TRANSIT PROGRAM OUTLOOK

The Transit Life Cycle Program, which covers FY 2006 through FY 2026, started on July 1, 2005. The primary goal of the life cycle program is to ensure the development and implementation of all transit projects, as identified in the MAG RTP, by the end of FY 2006. The initial FY 2006 to 2026 Transit Life Cycle Program costs are in balance with the projected future funds available. A continuing requirement of the life cycle

process will be to maintain this balance, through effective financing and cash flow management, value engineering of projects, and Plan and Program adjustments as may be necessary.

Another consideration is that a large part of the funding for the LRT system is awarded by the US Department of Transportation through the discretionary “New Starts Program”. The timing and amounts of light rail transit new start monies coming to the MAG region will be subject to a highly competitive process at the federal level. The prospects for awards from this program will require careful monitoring.

**APPENDIX**  
**DETAILED PROJECT LISTING**

**TABLE A-1**  
**FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - NEW CORRIDORS**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006- 2026 (2005 Dollars)	Total Cost: FY 2006-2026 (2005 and YOE Dollars)	Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Design	Right-of-Way	Construction					
<b>I-10 Reliever</b>								
SR 85 to Loop 303	0.0	0.0	0.0	81.0	81.0	2025	11.0	
Loop 303 to Loop 202	0.0	0.0	0.0	723.0	723.0	2025	13.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>804.0</b>	<b>804.0</b>		<b>24.0</b>	
<b>Loop 202 (South Mountain Freeway)</b>								
I-10 (West) to 51st Avenue	0.0	0.0	0.0	490.0	490.0	2011	10.0	
51st Avenue to Loop 202/I-10	0.0	0.0	0.0	577.0	577.0	2015	12.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1,067.0</b>	<b>1,067.0</b>		<b>22.0</b>	
<b>Loop 303 (Estrella Freeway)</b>								
I-17 to US 60 (Grand Avenue)	0.0	0.0	0.0	546.9	546.9	2015	18.0	
US 60 (Grande Avenue to I-10)	0.0	0.0	0.0	646.6	646.6	2013	15.0	
I-10 to I-10R/MC 85	0.0	0.0	0.0	220.5	220.5	2019	5.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1,414.0</b>	<b>1,414.0</b>		<b>38.0</b>	
<b>Williams Gateway Freeway</b>								
Loop 202 to Ellsworth Road	0.0	0.0	0.0	156.2	156.2	2016	2.0	
Ellsworth Road to Meridian Road	0.0	0.0	0.0	174.8	174.8	2020	3.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>331.0</b>	<b>331.0</b>		<b>5.0</b>	
<b>Right-of-Way</b>								
Right-of-Way Protection for Loop 303 (Extension south of MC 85) to Riggs Road	0.0	0.0	0.0	50.0	50.0	2025	---	
Right-of-Way Protection for SR 74 (US 60 to Loop 303)	0.0	0.0	0.0	48.0	48.0	2025	---	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>98.0</b>	<b>98.0</b>			
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>3,714.0</b>	<b>3,714.0</b>			

**TABLE A-2**  
**FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - WIDEN EXISTING FACILITIES: GENERAL PURPOSE LANES**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026**  
(2005 and Year of Expenditure Dollars in Millions)

Facility	Expenditures through FY 2005 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Design	Right-of-Way	Construction	Total					
<b>I-10</b>									
SR 85 to Loop 303	0.0	0.0	0.0	0.0	106.0	106.0	2023	12.0	
Loop 303 to Dysart Road	0.0	0.0	0.0	0.0	62.2	62.2	2011	5.0	
Dysart Road to Loop 101	0.0	0.0	0.0	0.0	33.0	33.0	2014	6.0	
Loop 101 to I-17	0.0	0.0	0.0	0.0	71.7	71.7	2009	7.0	
SR 51 to 40th Street	0.0	0.0	0.0	0.0	140.0	140.0	2011	3.0	
40th Street to Baseline Road	0.0	0.0	0.0	0.0	394.3	394.3	2010	6.0	
Baseline Road to Loop 202/Santan	0.0	0.0	0.0	0.0	50.6	50.6	2014	6.0	
Loop 202/Santan Freeway to Riggs Rd.	0.0	0.0	0.0	0.0	22.2	22.2	2009	6.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>880.0</b>	<b>880.0</b>			
<b>I-17</b>									
New River Road to Anthem Way	0.0	0.0	0.0	0.0	26.0	26.0	2024	3.0	
Anthem Way to Carefree Highway	0.0	0.0	0.0	0.0	44.0	44.0	2023	5.0	
Carefree Highway to Loop 101	0.0	0.0	0.0	0.0	119.9	119.9	2007	9.0	
Loop 101 to Arizona Canal	0.0	0.0	0.0	0.0	50.6	50.6	2013	6.0	
Arizona Canal to McDowell Road	0.0	0.0	0.0	0.0	960.0	960.0	2020	7.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1,200.6</b>	<b>1,200.6</b>			
<b>Loop 101 (Aqua Fria Freeway)</b>									
US 60/Grand Avenue to I-17	0.0	0.0	0.0	0.0	102.0	102.0	2024	12.0	
I-10 to US 60/Grand Avenue	0.0	0.0	0.0	0.0	85.0	85.0	2022	10.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>187.0</b>	<b>187.0</b>			
<b>Loop 101 (Pima Freeway)</b>									
I-17 to SR 51	0.0	0.0	0.0	0.0	59.0	59.0	2024	7.0	
SR 51 to Princess Drive (SHEA)	0.0	0.0	0.0	0.0	85.0	85.0	2022	10.0	

**TABLE A-2**  
**FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - WIDEN EXISTING FACILITIES: GENERAL PURPOSE LANES**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Design	Right-of-Way	Construction					
Princess Drive to Shea Boulevard	0.0	0.0	0.0	--	--	--		
Shea Boulevard to Loop 202	0.0	0.0	0.0	90.7	90.7	2014	11.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>234.7</b>	<b>234.7</b>			
<b>Loop 101 (Price Freeway)</b>								
Baseline Road to Loop 202/Santan	0.0	0.0	0.0	51.0	51.0	2023	6.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>51.0</b>	<b>51.0</b>			
<b>Loop 202 (Red Mountain Freeway)</b>								
I-10/SR 51 to Rural Road	0.0	0.0	0.0	63.3	63.3	2009	7.0	
Rural Road to Loop 101	0.0	0.0	0.0	36.9	36.9	2012	2.0	
Loop 101 to Gilbert Road	0.0	0.0	0.0	48.5	48.5	2014	6.0	
Gilbert Road to Higley Road	0.0	0.0	0.0	42.0	42.0	2024	5.0	
Higley Road to US 60/Superstition	0.0	0.0	0.0	85.0	85.0	2025	10.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>275.8</b>	<b>275.8</b>			
<b>Loop 202 (Santan Freeway)</b>								
I-10 to Dobson Road	0.0	0.0	0.0	43.0	43.0	2023	5.0	
Dobson Road to Val Vista Road	0.0	0.0	0.0	59.0	59.0	2024	7.0	
Val Vista Road to US 60	0.0	0.0	0.0	93.0	93.0	2025	11.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>195.0</b>	<b>195.0</b>			
<b>SR 51 (Piestewa Freeway)</b>								
Loop 101/Pima to Shea Boulevard	0.0	0.0	0.0	51.0	51.0	2023	6.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>51.0</b>	<b>51.0</b>			
<b>SR 85</b>								
I-10 to Hazen Road	0.0	0.0	0.0	38.2	38.2	2010	5.0	
Hazen Road to I-8	0.0	0.0	0.0	74.6	74.6	2010	32.5	

**TABLE A-2**  
**FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - WIDEN EXISTING FACILITIES: GENERAL PURPOSE LANES**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Design	Right-of-Way	Construction					
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>112.8</b>	<b>112.8</b>		<b>37.5</b>	
<b>US 60 (Grand Avenue)</b>								
Loop 303 to Loop 101	0.0	0.0	0.0	139.8	139.8	2015	10.0	
Loop 101 to Van Buren Street	0.0	0.0	0.0	97.0	97.0	2014	11.0	
99th Ave. to 83rd Ave.	0.0	0.0	0.0	5.0	5.0	2007	2.0	
71st Ave. to Grand Canal Bridge	0.0	0.0	0.0	3.2	3.2	2006	6.5	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>245.1</b>	<b>245.1</b>			
<b>US 60 (Superstition Freeway)</b>								
I-10 to Loop 101	0.0	0.0	0.0	8.4	8.4	2010	5.0	
Gilbert Road to Power Road	0.0	0.0	0.0	50.0	50.0	2007	6.0	
Crismon Road to Meridian Road	0.0	0.0	0.0	18.0	18.0	2017	2.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>76.4</b>	<b>76.4</b>			
<b>Wickenburg Bypass</b>								
Wickenburg Bypass	0.0	0.0	0.0	26.6	26.6	2006	1.7	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>26.6</b>	<b>26.6</b>		<b>1.7</b>	
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>3,536.0</b>	<b>3,536.0</b>			

**TABLE A-3  
 FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - WIDEN EXISTING FACILITIES: HIGH OCCUPANCY VEHICLE LANES  
 EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026  
 (2005 and Year of Expenditure Dollars in Millions)**

Facility	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Design	Right-of-Way	Construction					
<b>I-10</b>								
Loop 303 to Dysart Road	0.0	0.0	0.0	26.4	26.4	2011	5.0	
Dysart Road to Loop 101	0.0	0.0	0.0	20.8	20.8	2014	6.0	
Loop 202/Santan to Riggs Road	0.0	0.0	0.0	22.2	22.2	2009	6.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>69.3</b>	<b>69.3</b>		<b>17.0</b>	
<b>I-17</b>								
Anthem Way to Carefree Highway	0.0	0.0	0.0	28.0	28.0	2023	5.0	
Carefree Highway to Loop 101	0.0	0.0	0.0	50.4	50.4	2007	9.0	
I-10 (West) to I-10 (East)	0.0	0.0	0.0	77.0	77.0	2017	7.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>155.4</b>	<b>155.4</b>		<b>21.0</b>	
<b>Loop 101 (Aqua Fria Freeway)</b>								
US 60/Grand Avenue to I-17	0.0	0.0	0.0	64.0	64.0	2022	12.0	
I-10 to US 60/Grand Avenue	0.0	0.0	0.0	53.0	53.0	2017	10.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>117.0</b>	<b>117.0</b>		<b>22.0</b>	
<b>Loop 101 (Pima Freeway)</b>								
I-17 to SR 51 (Tatum)	0.0	0.0	0.0	35.5	35.5	2013	7.0	
SR 51 (Tatum) to Princess Drive	0.0	0.0	0.0	28.0	28.0	2011	6.0	
Princess Drive to Shea Boulevard (Loop 202)	0.0	0.0	0.0	81.0	81.0	2007	4.0	
Shea Boulevard to Loop 202	0.0	0.0	0.0	--	--	--	11.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>144.5</b>	<b>144.5</b>		<b>28.0</b>	

**TABLE A-3  
 FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - WIDEN EXISTING FACILITIES: HIGH OCCUPANCY VEHICLE LANES  
 EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026  
 (2005 and Year of Expenditure Dollars in Millions)**

Facility	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Design	Right-of-Way	Construction					
<b>Loop 101 (Price Freeway)</b>								
Loop 202/Red Mountain to Baseline	0.0	0.0	0.0	22.0	22.0	2008	4.0	
Baseline to Loop 202/Santan	0.0	0.0	0.0	30.5	30.5	2010	6.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>52.5</b>	<b>52.5</b>		<b>10.0</b>	
<b>Loop 202 (Red Mountain Freeway)</b>								
Loop 101 to Gilbert Road	0.0	0.0	0.0	31.5	31.5	2009	6.0	
Gilbert Road to Higley Road	0.0	0.0	0.0	27.0	27.0	2019	5.0	
Higley Road to US 60/Superstition	0.0	0.0	0.0	52.0	52.0	2022	10.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>110.5</b>	<b>110.5</b>		<b>21.0</b>	
<b>Loop 202 (Santan Freeway)</b>								
I-10 to Dobson Road	0.0	0.0	0.0	26.2	26.2	2013	5.0	
Dobson Road to Val Vista Road	0.0	0.0	0.0	57.0	57.0	2015	7.0	
Val Vista Road to US 60 (Superstition)	0.0	0.0	0.0	55.0	55.0	2022	11.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>138.2</b>	<b>138.2</b>		<b>23.0</b>	
<b>SR 51</b>								
Loop 101/Pima to Shea Boulevard	0.0	0.0	0.0	31.1	31.1	2007	6.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>31.1</b>	<b>31.1</b>		<b>6.0</b>	
<b>US 60 (Superstition Freeway)</b>								
Gilbert Road to Power Road	0.0	0.0	0.0	35.0	35.0	2007	4.0	
Crismon Road to Meridian Road	0.0	0.0	0.0	13.0	13.0	2017	2.0	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>48.0</b>	<b>48.0</b>		<b>6.0</b>	
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>866.6</b>	<b>866.6</b>			

**TABLE A-4  
 FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - NEW ARTERIAL INTERCHANGES ON EXISTING FACILITIES  
 EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026  
 (2005 and Year of Expenditure Dollars in Millions)**

Facility	Expenditures through FY 2005 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Year Programmed for Final Construction	Other Project Information
	Design	Right-of-Way	Construction	Total				
<b>I-10</b>								
Bullard Road	0.0	0.0	0.0	0.0	11.0	11.0	2006	
Chandler Heights	0.0	0.0	0.0	0.0	13.8	13.8	2022	
El Mirage	0.0	0.0	0.0	0.0	17.3	17.3	2023	
Perryville Road	0.0	0.0	0.0	0.0	8.7	8.7	2013	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>50.8</b>	<b>50.8</b>		
<b>I-17</b>								
Dixie Drive (Half Interchange)	0.0	0.0	0.0	0.0	8.2	8.2	2006	
Dove Valley Road	0.0	0.0	0.0	0.0	18.4	18.4	2022	
Jomax Road	0.0	0.0	0.0	0.0	22.8	22.8	2006	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>49.4</b>	<b>49.4</b>		
<b>Loop 101 (Aqua Fria Freeway)</b>								
Beardsley Road	0.0	0.0	0.0	0.0	27.6	27.6	2012	
Bethany Home Road	0.0	0.0	0.0	0.0	15.7	15.7	2006	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>43.3</b>	<b>43.3</b>		
<b>Loop 101 (Pima Freeway)</b>								
64th Street	0.0	0.0	0.0	0.0	22.0	22.0	2006	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>22.0</b>	<b>22.0</b>		
<b>Loop 202 (Red Mountain Freeway)</b>								
Mesa Drive (Ramps Only)	0.0	0.0	0.0	0.0	4.6	4.6	2025	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>4.6</b>	<b>4.6</b>		

**TABLE A-4  
 FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - NEW ARTERIAL INTERCHANGES ON EXISTING FACILITIES  
 EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026  
 (2005 and Year of Expenditure Dollars in Millions)**

Facility	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Year Programmed for Final Construction	Other Project Information
	Design	Right-of-Way	Construction				
<b>US 60 (Superstition Freeway)</b>							
Lindsay Road (Half Interchange)	0.0	0.0	0.0	4.6	4.6	2012	
Meridian Road (Half Interchange)	0.0	0.0	0.0	4.6	4.6	2013	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>9.2</b>	<b>9.2</b>		
<b>Other Arterial Interchange Improvements</b>							
Deer Valley Road at I-17	0.0	0.0	0.0	1.9	1.9	2006	
Higley Road at US 60	0.0	0.0	0.0	1.3	1.3	2006	
Ray Road at I-10	0.0	0.0	0.0	4.9	4.9	2006	
SR 74 at Carefree Highway	0.0	0.0	0.0	9.2	9.2	2007	
43rd Avenue at I-10	0.0	0.0	0.0	0.3	0.3	2007	
51st Avenue at I-10	0.0	0.0	0.0	0.3	0.3	2007	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>17.9</b>	<b>17.9</b>		
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>197.2</b>	<b>197.2</b>		

**TABLE A-5  
 FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - NEW HOV RAMPS AT FREEWAY-TO-FREEWAY INTERCHANGES  
 EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026  
 (2005 and Year of Expenditure Dollars in Millions)**

Facility	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Year Programmed for Final Construction	Other Project Information
	Design	Right-of-Way	Construction				
<b>Loop 101</b>							
I-10	0.0	0.0	0.0	60.0	60.0	2025	
I-17	0.0	0.0	0.0	72.0	72.0	2024	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>132.0</b>	<b>132.0</b>		
<b>Loop 202</b>							
Red Mountain and US 60 (Superstition)	0.0	0.0	0.0	20.4	20.4	2025	
Santan and I-10	0.0	0.0	0.0	19.8	19.8	2013	
Santan and Loop 101 / Price	0.0	0.0	0.0	20.4	20.4	2017	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>60.6</b>	<b>60.6</b>		
<b>SR 51</b>							
Loop 101 / Pima	0.0	0.0	0.0	19.8	19.8	2007	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>19.8</b>	<b>19.8</b>		
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>212.4</b>	<b>212.4</b>		

**TABLE A-6**  
**FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - OPERATIONS, MAINTENANCE AND SYSTEMWIDE PROGRAMS**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facilities	Expenditures through FY 2005 (Year of Expenditure Dollars)		Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Years Programmed for Implementation	Other Project Information
	Operating	Capital				
<b>Freeway Management System</b>						
Freeway Management System	0.0	0.0	179.3	179.3	2006-2026	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>179.3</b>	<b>179.3</b>		
<b>Maintenance</b>						
Maintenance (Landscaping, including restoration and litter pick-up)	0.0	0.0	278.3	278.3	2006-2026	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>278.3</b>	<b>278.3</b>		
<b>Noise Mitigation</b>						
Noise Mitigation	0.0	0.0	75.0	75.0	2006-2026	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>75.0</b>	<b>75.0</b>		
<b>Systemwide</b>						
Advanced Right-of-Way Administration	0.0	0.0	57.0	57.0	2006-2026	
Preliminary Engineering and Right-of-Way Management	0.0	0.0	439.0	439.0	2006-2026	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>496.0</b>	<b>496.0</b>		
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>1,028.6</b>	<b>1,028.6</b>		

**TABLE A-7  
 FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - OTHER PROJECTS  
 EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026  
 (2005 and Year of Expenditure Dollars in Millions)**

Facilities	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Years Programmed for Implementation	Other Project Information
	Operating	Capital	Total				
<b>I-17</b>							
Greenway Rd./Thunderbird Rd. (Drainage Improvements)	0.0	0.0	0.0	4.0	4.0	2006	
Peoria Ave./Cactus Rd. (Drainage Improvements)	0.0	0.0	0.0	5.0	5.0	2007	
Bethany Home Rd. - Northern Ave., Alhambra District (Construction)	0.0	0.0	0.0	2.3	2.3	2010	
16th Street - Buckeye Rd.	0.0	0.0	0.0	3.0	3.0	2006	
Buckeye Rd./Northbound On-Ramp (Construction)	0.0	0.0	0.0	1.5	1.5	2007	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>15.8</b>	<b>15.8</b>		
<b>SR 87</b>							
Forest Boundary - New Four Peaks (Construction)	0.0	0.0	0.0	10.5	10.5	2007	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>10.5</b>	<b>10.5</b>		
<b>SR 88</b>							
Apache Trail (District Force Account)	0.0	0.0	0.0	0.2	0.2	2006	
Fish Creek Hill	0.0	0.0	0.0	1.5	1.5	2006	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.7</b>	<b>1.7</b>		
<b>Loop 101 (Agua Fria)</b>							
I-10 - MC 85 (99th Avenue)	0.0	0.0	0.0	4.0	4.0	2008	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>4.0</b>	<b>4.0</b>		
<b>Loop 101 (Price)</b>							
Balboa Dr., Multi-Use Path (Local)	0.0	0.0	0.0	2.0	2.0	2009	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2.0</b>	<b>2.0</b>		
<b>Loop 202 (Santan)</b>							
Lindsey Rd. to Gilbert Rd.	0.0	0.0	0.0	0.5	0.5	2008	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.5</b>	<b>0.5</b>		

**TABLE A-7  
 FREEWAY/HIGHWAY LIFE CYCLE PROGRAM - OTHER PROJECTS  
 EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026  
 (2005 and Year of Expenditure Dollars in Millions)**

Facilities	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006-2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Years Programmed for Implementation	Other Project Information
	Operating	Capital	Total				
<b>Systemwide</b>							
Ramp Meters (Various Locations)	0.0	0.0	0.0	3.0	3.0	2007	
<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>3.0</b>	<b>3.0</b>		
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>37.5</b>	<b>37.5</b>		

**TABLE B-1**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - CAPACITY IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Disburse. through FY 2005 (YOE Dollars)	Estimated Future Disburse. FY 2006-2026 (2005 Dollars)	Total Disburse. FY 2006-2026 (2005 and YOE Dollars)	Expend. through FY 2005 (YOE Dollars)	Estimated Future Expend. FY 2006-2026 (2005 Dollars)	Total Expend. FY 2006-2026 and YOE Dollars			
Arizona Ave.: Ocotillo Rd. to Hunt Hwy.		5.5			8.7		2011	3.0	
Avenida Rio Salado: 7th St to SR 202L (South Mountain Fwy)		39.7			56.7		2013	7.0	
Baseline Rd.: Power Rd. to Meridian Rd.		15.9			23.2		2019	6.0	Project has been advanced from Phase 4 to Phase 3 and reimbursement will be in Phase 4.
Baseline Rd.: Power Rd to Ellsworth Rd		8.1			11.6		2016	3.0	
Baseline Rd: Ellsworth Rd to Meridian Rd		7.8			11.6		2019	3.0	
Beardsley Rd.: Loop 101 to Lake Pleasant Pkwy.		20.6			29.5		2007	3.0	Project has been advanced from Phase 2 to Phase 1 and reimbursement will be in Phase 2.
Black Mt. Pkwy.: SR 51 to Black Mountain Pkwy.		20.0			28.6		2011	1.0	
Broadway Rd.: Dobson Rd. to Country Club Dr.		6.6			11.0		2009	2.0	
Carefree Hwy.: Cave Creek Rd. to Scottsdale Rd.		8.3			11.9		2016	2.0	
Crismon Rd.: Broadway Rd. to Germann Rd.		32.6			46.7		2020	9.0	Project has been advanced from Phase 4 to Phase 3 and reimbursement will be in Phase 4.
Crismon Rd: Broadway to Guadalupe		11.1			15.9		2016	3.0	
Crimson Rd: Guadalupe to Ray		10.8			15.4		2018	3.0	
Crimson Rd: Ray to Germann		10.7			15.4		2020	3.0	
Dobson Rd.: Salt River Bridge		16.5			37.3		2009	1.0	

**TABLE B-1**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - CAPACITY IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Disburse. through FY 2005 (YOE Dollars)	Estimated Future Disburse. FY 2006-2026 (2005 Dollars)	Total Disburse. FY 2006-2026 (2005 and YOE Dollars)	Expend. through FY 2005 (YOE Dollars)	Estimated Future Expend. FY 2006-2026 (2005 Dollars)	Total Expend. FY 2006-2026 and YOE Dollars			
El Mirage Rd.: Bell Rd. to Jomax Rd.		17.4			28.4		2018	6.0	
El Mirage Rd.: Paradise Ln. over Grand Ave. to Thunderbird Rd.		19.0			27.2		2014	2.0	
El Mirage Rd.: Thunderbird Rd. to Northern Ave.		14.9			21.3		2018	4.0	
Elliot Rd.: Power Rd. to Meridian Rd.		16.1			23.2		2025	6.0	
Elliot Rd.: Power Rd. to Ellsworth Rd.		8.0			11.6		2023	3.0	
Elliot Rd.: Ellsworth Rd. to Meridian Rd.		8.1			11.6		2025	3.0	
Germann Rd.: Ellsworth Rd. to Signal Butte Rd.		11.1			16.1		2021	2.0	
Germann Rd.: Gilbert Rd. to Power Rd.		19.7			45.5		2010	6.0	
Gilbert Rd.: Loop 202 (Santan) to Hunt Hwy.		18.6			33.5		2014	5.3	Project has been advanced from Phase 4 to Phase 1 & 2 and reimbursement will be in Phase 4.
Gilbert Rd.: Chandler Heights Rd to Hunt Hwy		5.3			7.6		2014	2.0	
Gilbert Rd.: Loop 202 (Santan Fwy) to Queen Creek Rd		6.1			8.7		2010	1.3	
Gilbert Rd.: Queen Creek Rd to Chandler Heights Rd		7.2			17.2		2011	2.0	
Gilbert Rd.: Salt River Bridge		12.4			21.6		2013	1.0	
Greenfield Rd.: Elliot Rd. to Warner Rd.		3.7			5.3		2023	1.0	

**TABLE B-1**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - CAPACITY IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Disburse through FY 2005 (YOE Dollars)	Estimated Future Disburse FY 2006-2026 (2005 Dollars)	Total Disburse FY 2006-2026 (2005 and YOE Dollars)	Expend through FY 2005 (YOE Dollars)	Estimated Future Expend FY 2006-2026 (2005 Dollars)	Total Expend FY 2006-2026 and YOE Dollars			
<b>Greenfield Rd: University Dr. to Baseline Rd.</b>		9.6			19.4		2010	3.0	
Greenfield Rd: Baseline Rd to Southern		5.0			7.1		2008	1.0	
Greenfield Rd: Southern to University Rd		4.6			12.2		2010	2.0	
<b>Guadalupe Rd.: Power Rd. to Meridian Rd.</b>		20.5			30.0		2015	6.0	
Guadalupe Rd: Power Rd to Hawes Rd		7.0			10.0		2011	2.0	
Guadalupe Rd: Hawes Rd to Crimson		7.0			10.0		2013	2.0	
Guadalupe Rd: Crimson to Meridian		6.6			10.0		2015	2.0	
<b>Happy Valley Rd.: Loop 303 to 67th Ave.</b>		18.4			26.3		2022	5.0	Part of project has been advanced from Phase 4 to Phase 1 & 2 and reimbursement will be in Phase 4.
Happy Valley Rd: Lake Pleasant Pkwy to Terramar Blvd		8.6			12.4		2006	2.1	
Happy Valley Rd: Loop 303 to Lake Pleasant Pkwy		7.6			10.8		2014	2.1	
Happy Valley Rd: Terramar Blvd to 67th Ave		2.2			3.1		2022	0.8	
<b>Happy Valley Rd.: 67th Ave. to I-17</b>		14.7			21.0		2024	4.0	
<b>Hawes Rd.: Broadway Rd. to Ray Rd.</b>		18.5			28.9		2022	6.0	Part of project has been advanced from Phase 4 to Phase 1 and reimbursement will be in Phase 4.
Hawes Rd: Broadway to Baseline		6.4			9.1		2022	2.0	
Hawes Rd: Baseline to Elliot		6.2			8.8		2024	2.0	
Hawes Rd: Elliot to Santan		3.8			5.5		2025	1.0	

**TABLE B-1**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - CAPACITY IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Disburse through FY 2005 (YOE Dollars)	Estimated Future Disburse FY 2006-2026 (2005 Dollars)	Total Disburse FY 2006-2026 (2005 and YOE Dollars)	Expend through FY 2005 (YOE Dollars)	Estimated Future Expend FY 2006-2026 (2005 Dollars)	Total Expend FY 2006-2026 and YOE Dollars			
Hawes Rd: Santan Fwy Ray Rd		2.1			5.5		2010	1.0	
<b>Higley Rd.: US 60 to 202L (Red Mountain)</b>		14.9			21.4		2020	6.0	
Higley Rd Parkway: Loop 202 to Brown Rd		7.5			10.7		2019	3.0	
Higley Rd Parkway: Brown Rd to US60		7.5			10.7		2020	3.5	
<b>Jomax Rd.: Loop 303 to Sun Valley Pkwy.</b>		18.4			23.9		2018	17.0	
<b>Lake Pleasant Pkwy.: Beardsley Rd. to 303L</b>		49.7			71.0		2012	9.0	Part of project has been advanced from phase 2 to phase 1 and reimbursement will be in phase 2.
Lake Pleasant Pkwy: Dynamite Blvd to SR-74: 0 to 6 lanes		21.7			31.0		2012	4.0	
Lake Pleasant Pkwy: Union Hills Dr to Dynamite Rd. 4 lane portion		21.6			30.8		2006	5.0	
Lake Pleasant Pkwy: Union Hills Dr to Dynamite Rd:4 To 6 lanes		6.5			9.3		2012		
<b>Loop 101 Frontage Roads: North (West Bound) Pima/Princess Dr to Scottsdale Rd</b>		9.3			13.3		2008	2.0	The RTP funds available are \$20.6 million. There is a cost savings of \$11.3 million.
Loop 101 Frontage Rd: hayden Rd to Scottsdale Rd		4.2			6.0		2006	1.0	
Loop 101 Frontage Rd: Pima Rd/ Princess Dr to Hayden Rd		5.2			7.4		2008	1.0	
<b>Loop 101 South Frontage Roads: Hayden to Pima</b>		9.7			13.9		2010	1.0	The RTP funds available are \$12.3 million. There is a cost savings of \$2.6 million.

**TABLE B-1**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - CAPACITY IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Disburse through FY 2005 (YOE Dollars)	Estimated Future Disburse FY 2006-2026 (2005 Dollars)	Total Disburse FY 2006-2026 (2005 and YOE Dollars)	Expend through FY 2005 (YOE Dollars)	Estimated Future Expend FY 2006-2026 (2005 Dollars)	Total Expend FY 2006-2026 and YOE Dollars			
<b>McKellips Rd.: East of Sossaman Rd. to Meridian Rd.</b>		17.7			25.3		2025	5.0	
McKellips Rd: E of Sossaman to Crismon		10.7			15.3		2023	3.0	
McKellips Rd: Crismon to Meridian		7.0			10.1		2025	2.0	
<b>McKellips Rd.: Gilbert Rd. to Power Rd.</b>		18.7			27.0		2013	6.0	Part of project has been deferred to Phase 2 from Phase 1 and reimbursement will follow into Phase 2.
McKellips Rd: Gilbert Rd to Val Vista Dr		4.4			6.6		2008	2.0	The RTP funds available are \$19.4 million. There is a cost savings of \$0.6 million.
McKellips Rd: Val Vista Dr to Higley Rd		7.9			11.2		2010	2.0	
McKellips Rd: Higley Rd to Power Rd		6.4			9.2		2013	2.0	
<b>McKellips Rd.: Salt River Bridge</b>		12.4			20.3		2014	1.0	
<b>McKellips Rd.: Loop 101 to Mesa city limit</b>		7.6			10.9		2015	2.0	The RTP funds available are \$35.0 million. There is a cost savings of \$27.4 million.
<b>Meridian Rd.: Baseline Rd. to Germann Rd.</b>		26.1			37.5		2019	7.0	
Meridian Rd: Baseline Rd to Ray Rd		15.0			21.4		2017	4.0	
Meridian Rd: Ray Rd to Germann Rd		11.1			16.1		2019	3.0	
<b>Mesa Dr.: Broadway Rd. to US 60</b>		8.1			11.6		2010	2.0	The RTP funds available are \$8.2 million. There is a cost savings of \$0.2 million.
<b>Miller Rd.: Princess Dr. to Center St. (101L underpass)</b>		12.4			17.8		2020	0.5	
<b>Northern Ave.: Grand Ave. to Loop 101</b>		75.7			108.1		2016/2017		
<b>Northern Ave.: Loop 101 to Loop 303</b>		77.1			110.1		2021/2022		

**TABLE B-1**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - CAPACITY IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Disburse. through FY 2005 (YOE Dollars)	Estimated Future Disburse. FY 2006-2026 (2005 Dollars)	Total Disburse. FY 2006-2026 (2005 and YOE Dollars)	Expend. through FY 2005 (YOE Dollars)	Estimated Future Expend. FY 2006-2026 (2005 Dollars)	Total Expend. FY 2006-2026 (2005 and YOE Dollars)			
Northern Ave.: Dysart Rd. to Loop 303		54.1					2009		
Pecos Rd.: Ellsworth Rd. to Meridian Rd.		11.2					2014	3.0	Project has been deferred from Phase 1 to Phase 2 and reimbursement will follow to Phase 2. There is a cost savings of \$5,000.
Pima Rd.: Deer Valley Rd. to Happy Valley Rd. and Dynamite Rd. to Cave Creek Rd.		73.9					2015	7.0	
Pima Rd.: Deer Valley Rd to Happy Valley Rd		29.6					2012	2.0	
Pima Rd.: Dynamite Blvd to Cave Creek Rd (Stagecoach Rd)		44.4					2015	5.0	
Pima Rd.: Happy Valley Rd. to Dynamite Rd.		21.1					2018	2.0	
Pima Rd.: McKellips to Via Linda		27.2					2010	8.0	
Power Rd.: Baseline Rd. to Galveston		16.1					2013	5.0	Part of project has been advanced from Phase 2 to Phase 1 and reimbursement will be in Phase 2.
Power Rd: Baseline Rd to East Maricopa Floodway (EMF)		8.3					2006	1.0	
Power Rd: Ease Maricopa Floodway (EMF) to Galveston		7.8					2008	2.5	
Power Rd.: Galveston. to Chandler Heights		18.4					2024	5.0	
Power: Galveston to Pecos		9.2							
Power: Pecos to Chandler Heights		9.2							

**TABLE B-1**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - CAPACITY IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Disburse through FY 2005 (YOE Dollars)	Estimated Future Disburse FY 2006-2026 (2005 Dollars)	Total Disburse FY 2006-2026 (2005 and YOE Dollars)	Expend through FY 2005 (YOE Dollars)	Estimated Future Expend FY 2006-2026 (2005 Dollars)	Total Expend FY 2006-2026 and YOE Dollars			
Price Rd. (Ext.): Loop 202 (Santan) to I-10		49.7			71.0		2020	6.0	
Queen Creek Rd.: Arizona Ave. to Power Rd.		33.6			79.3		2013	9.0	Part of project has been advanced from Phase 2 to Phase 1 and reimbursement will be in Phase 2.
Queen Creek Rd: Arizona Ave to McQueen Rd		3.9			8.9		2006	1.0	
Queen Creek Rd: McQueen Rd to Lindsay Rd		10.8			15.4		2011	3.0	
Queen Creek Rd: Lindsay Rd to Power Rd		18.9			55.0		2013	5.0	
Ray Rd.: Val Vista Dr. to Power Rd.		14.1			20.1		2025	4.0	The RTP funds available are \$14.8 million. There is a cost savings of \$0.8 million.
Ray Rd.: Sossaman Rd to Meridian Rd		22.4			32.5		2025	5.0	Part of project has been advanced from Phase 4 to Phase 1 and reimbursement will be in Phase 4.
Ray Rd: Sossaman Rd to Ellsworth Rd		9.3			13.3		2010	2.3	
Ray Rd: Ellsworth Rd to Meridian Rd		13.1			19.3		2025	2.8	
Scottsdale Airport: Runway Tunnel		62.4			89.1		2016	1.0	
Scottsdale Rd.: Thompson Peak Pkwy. to Happy Valley Rd.		11.9			17.0		2015	3.0	
Scottsdale Rd.: Happy Valley Rd. to Carefree Hwy.		25.3			36.1		2019	6.0	
Shea Blvd: Loop 101 (PI) to SR 87		20.6			29.5		2024	12.0	Part of project has been advanced from Phase 4 to Phase 1 and reimbursement will be in Phase 4.
Shea Blvd: Loop 101 (Pima Fwy) to Via Linda		3.9			5.6		2009	2.3	
Shea Blvd: Via Linda to SR-87		16.7			23.9		2024	9.8	

**TABLE B-1**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - CAPACITY IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Disburse through FY 2005 (YOE Dollars)	Estimated Future Disburse FY 2006-2026 (2005 Dollars)	Total Disburse FY 2006-2026 (2005 and YOE Dollars)	Expend through FY 2005 (YOE Dollars)	Estimated Future Expend FY 2006-2026 (2005 Dollars)	Total Expend FY 2006-2026 and YOE Dollars			
Shea Blvd: Palisades Blvd to Saguaro Blvd		5.4			7.7		2010	3.0	
Signal Butte Rd: Broadway Rd to Pecos Rd		29.4			42.8		2024	8.0	
Signal Butte Rd: Broadway Rd to Elliot Rd		14.7			21.4		2022	4.0	
Signal Butte Rd: Elliot Rd to Pecos Rd		14.7			21.4		2024	4.0	
Sonoran Parkway: Central to 32nd St		29.0			41.4		2013	4.0	
Southern Ave: Country Club Dr to Recker Rd		27.4			40.8		2015	8.0	Part of project has been deferred from Phase 1 to Phase 2 and reimbursement will follow to Phase 2.
Southern Ave: Country Club Dr to Stapley Dr		7.9			11.3		2009	2.0	
Southern Ave: Stapley Dr to Lindsay Rd		6.9			9.8		2011	2.0	
Southern Ave: Lindsay Rd to Greenfield Rd		6.9			9.8		2013	2.0	
Southern Ave: Greenfield Rd to Recker Rd - Design		5.7			9.8		2015	2.0	
Southern Ave: Sossaman Rd to Meridian Rd		16.1			23.2		2024	5.0	
Southern Ave: Sossaman Rd to Crismon		9.7			13.9		2022	3.0	
Southern Ave: Crismon to Meridian		6.4			9.3		2024	2.0	
Thomas Rd: Gilbert Rd to Val Vista Dr		4.9			7.0		2009	2.0	The RTP funds available are \$5.0 million. There is a cost savings of \$49,000.
Union Hills: Hayden to Pima		12.1			17.3		2021	1.0	
University Dr: Val Vista Dr to Hawes Rd		19.4			27.8		2023	6.0	

**TABLE B-1**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - CAPACITY IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Disburse through FY 2005 (YOE Dollars)	Estimated Future Disburse FY 2006-2026 (2005 Dollars)	Total Disburse FY 2006-2026 (2005 and YOE Dollars)	Expend through FY 2005 (YOE Dollars)	Estimated Future Expend FY 2006-2026 (2005 Dollars)	Total Expend FY 2006-2026 and YOE Dollars			
University Dr: Val Vista Dr to Higley		9.7			13.9		2021	3.0	
University Dr: Higley to Hawes		9.6			13.9		2023	4.0	
<b>Val Vista Dr: University Dr to Baseline Rd</b>		<b>9.7</b>			<b>13.9</b>		<b>2014</b>	<b>3.0</b>	<b>Project has been advanced from Phase 3 to Phase 2 and reimbursement will be in Phase 3.</b>
Val Vista Dr: Baseline Rd to Southern		4.9			7.0		2012	1.0	The RTP funds available are \$9.8 million. There is a cost savings of \$0.1 million.
Val Vista Dr: Southern to University		4.9			7.0		2014	2.0	
<b>Val Vista Rd: Warner Rd to Pecos Rd</b>		<b>9.8</b>			<b>20.4</b>		<b>2006</b>	<b>3.0</b>	<b>Project has been advanced from Phase 2 to Phase 1 and reimbursement will be in Phase 2.</b>
<b>TOTAL</b>		<b>1,363.8*</b>			<b>2,062.0</b>				

\*Total disbursements do not include the cost savings, which is \$43.0 million. When including the cost savings, the total regional funding disbursements are \$1,406.8 million.

**TABLE B-2**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - INTERSECTION IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
**(2005 and Year of Expenditure Dollars in Millions)**

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Other Project Information
	Disburse through FY 2005 (YOE Dollars)	Estimated Future Disburse: FY 2006-2026 (2005 Dollars)	Total Disburse: FY 2006-2026 (2005 and YOE Dollars)	Expenditures through FY 2005 (YOE Dollars)	Estimated Future Expenditures FY 2006-2026 (2005 Dollars)	Total Expenditures: FY 2006-2026 (2005 and YOE Dollars)		
Arizona Ave.: Elliot Rd.		3.4			5.2		2005	Project has been advanced from Phase 4 to Phase 1 and reimbursement will be in Phase 4.
Arizona Ave.: Ray Rd.		3.4			5.4		2005/2006	
Arizona Ave.: Chandler Blvd.		3.4			5.7		2006	Project has been advanced from Phase 2 to Phase 1 and reimbursement will be in Phase 2.
Chandler Blvd.: Alma School Rd.		3.4			11.6		2009	
Chandler Blvd.: Dobson Rd.		3.4			11.6		2007	
Chandler Blvd.: Kyrene Rd.		2.6			3.7		2013	The RTP funds available are \$3.4 million. There is a cost savings of \$0.8 million.
Country Club Dr.: University Dr.		2.2			3.2		2009	Project has been advanced from Phase 3 to Phase 1 and reimbursement will be in Phase 3. The RTP funds available are \$2.5 million. There is a cost savings of \$0.2 million.
Country Club Dr.: Brown Rd.		2.5			3.6		2012	Project has been advanced from Phase 4 to Phase 2 and reimbursement will be in Phase 2.
Dobson Rd.: Guadalupe Rd.		2.0			2.8		2009	The RTP funds available are \$2.5 million. There is a cost savings of \$0.5 million.
Dobson Rd.: University Dr.		2.5			3.6		2011	Project has been advanced from Phase 3 to Phase 1 & 2 and reimbursement will be in Phase 3.
Elliot Rd.: Greenfield Rd.		3.4			5.9		2023	
Elliot Rd.: Higley Rd.		2.6			3.8		2023	The RTP funds available are \$3.4 million. There is a cost savings of \$0.7 million.
Elliot Rd.: Cooper Rd.		3.4			6.4		2010	
Elliot Rd.: Gilbert Rd.		3.4			8.9		2018	
Elliot Rd.: Val Vista Dr.		3.4			6.2		2023	

**TABLE B-2**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - INTERSECTION IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
**(2005 and Year of Expenditure Dollars in Millions)**

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Other Project Information
	Disburse through FY 2005 (YOE Dollars)	Estimated Future Disburse: FY 2006-2026 (2005 Dollars)	Total Disburse: FY 2006-2026 (2005 and YOE Dollars)	Expenditures through FY 2005 (YOE Dollars)	Estimated Future Expenditures: FY 2006-2026 (2005 Dollars)	Total Expenditures: FY 2006-2026 (2005 and YOE Dollars)		
Gilbert Rd.: University Dr.		2.5			5.2		2007	Project has been advanced from Phase 4 to Phase 1 and reimbursement will be in Phase 4.
Guadalupe Rd.: Greenfield Rd.		3.4			4.6		2023	
Guadalupe Rd.: Power Rd.		3.4			13.3		2023	
Guadalupe Rd.: Cooper Rd.		3.4			6.0		2010	
Guadalupe Rd.: Gilbert Rd.		3.4			4.5		2009	
Guadalupe Rd.: Val Vista Dr.		3.1			4.4		2018	The RTP funds available are \$3.4 million. There is a cost savings of \$0.3 million.
Higley Rd.: US 60 to Loop 202 (Red Mt.) Construct 3 grade separations		24.8			35.4		2017	
Kyrene Rd.: Ray Rd.		2.6			3.7		2014	Project has been advanced from Phase 4 to Phase 2 and reimbursement will be in Phase 4. The RTP funds available are \$3.4 million. There is a cost savings of \$0.8 million.
Lindsay Rd.: Brown Rd.		2.5			3.6		2012	Project has been advanced from Phase 4 to Phase 2 and reimbursement will be in Phase 4.
Ray Rd.: Alma School Rd.		3.4			6.9		2008	
Ray Rd.: Dobson Rd.		3.4			5.5		2011	
Ray Rd.: Gilbert Rd.		3.1			4.5		2018	The RTP funds available are \$3.4 million. There is a cost savings of \$0.2 million.
Ray Rd.: McClintock Dr.		3.2			4.5		2010	Project has been advanced from Phase 2 to Phase 1 and reimbursement will be in Phase 2. The RTP funds available are \$3.4 million. There is a cost savings of \$0.1 million.

**TABLE B-2**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - INTERSECTION IMPROVEMENTS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
**(2005 and Year of Expenditure Dollars in Millions)**

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Other Project Information
	Disburse through FY 2005 (YOE Dollars)	Estimated Future Disburse: FY 2006-2026 (2005 Dollars)	Total Disburse: FY 2006-2026 (2005 and YOE Dollars)	Expenditures through FY 2005 (YOE Dollars)	Estimated Future Expenditures FY 2006-2026 (2005 Dollars)	Total Expenditures: FY 2006-2026 (2005 and YOE Dollars)		
Ray Rd.: Rural Rd.		2.7			3.8		2012	The RTP funds available are \$3.4 million. There is a cost savings of \$0.7 million.
Stapley Dr.: University Dr.		2.5			3.6		2011	Project has been advanced from Phase 4 to Phase 1 & 2 and reimbursement will be in Phase 4.
Warner Rd.: Cooper Rd.		3.4			5.6		2008	
Warner Rd.: Greenfield Rd.		3.4			6.5		2013	
<b>TOTAL</b>		<b>118.3*</b>			<b>209.1</b>			

\*Total disbursements do not include the cost savings, which is \$4.3 million. When including the cost savings, total regional funding disbursements are \$122.6 million.

**TABLE B-3**  
**ARTERIAL STREET LIFE CYCLE PROGRAM - INTELLIGENT TRANSPORTATION SYSTEMS**  
**REGIONAL FUNDING DISBURSEMENTS AND TOTAL EXPENDITURES: FY2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Regional Funding Disbursements			Total Expenditures			Year Programmed for Final Construction	Other Project Information
	Disburse through FY 2005 (YOE Dollars)	Estimated Future Disburse: FY 2006-2026 (2005 Dollars)	Total Disburse: FY 2006-2026 (2005 and YOE Dollars)	Expenditures through FY 2005 (YOE Dollars)	Estimated Future Expenditures: FY 2006-2026 (2005 Dollars)	Total Expenditures: FY 2006-2026 (2005 and YOE Dollars)		
Systemwide ITS		54.1			57.1		2007-2016	
<b>TOTAL</b>		<b>54.1</b>			<b>57.1</b>			

**TABLE C-1**  
**TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: BUS RAPID TRANSIT/EXPRESS**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Route	Expenditures through FY 2005: (YOE Dollars)	Estimated Future Costs: FY2006 - 2026 (2005 Dollars)	Total Estimated Cost (In 2005 and YOE Dollars)	Service Start Date	Other Project Information
Ahwatukee Connector	0.00	1.2	1.2	2016	
Ahwatukee Express	0.00	1.2	1.2	2023	
Anthem Express	0.00	0.3	0.3	2017	
Apache Junction Express	0.00	4.5	4.5	2010	
Arizona Avenue Arterial BRT	0.00	9.1	9.1	2010	
Avondale Express	0.00	2.4	2.4	2019	
Black Canyon Freeway Corridor	0.00	3.1	3.1	2015	
Buckeye Express (to West Buckeye P&R)	0.00	3.4	3.4	2010	
Chandler Boulevard Arterial BRT	0.00	2.8	2.8	2023	
Desert Sky Express	0.00	4.1	4.1	2009	
Deer Valley Express	0.00	5.8	5.8	2018	
East Loop 101 Connector	0.00	5.9	5.9	2008	
Grand Avenue Limited	0.00	7.3	7.3	2012	
Loop 303 Express	0.00	1.2	1.2	2022	
Main Street Arterial BRT	0.00	9.3	9.3	2008	
North Glendale Express	0.00	8.1	8.1	2007	
North I-17 Express	0.00	1.6	1.6	2021	
North Loop 101 Connector Surprise to Scottsdale P&R	0.00	7.0	7.0	2007	
Papago Fwy Connector (to West Buckeye P&R)	0.00	5.2	5.2	2008	
Peoria Express (to Peoria P&R)	0.00	3.8	3.8	2013	
Pima Express (To Airport P&R)	0.00	3.8	3.8	2012	
Red Mountain Express	0.00	4.2	4.2	2008	
Red Mountain Fwy Connector	0.00	2.3	2.3	2018	
Santan Express	0.00	7.9	7.9	2017	
Scottsdale/Rural Arterial BRT	0.00	10.8	10.8	2013	

**TABLE C-1**  
**TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: BUS RAPID TRANSIT/EXPRESS**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Route	Expenditures through FY 2005: (YOE Dollars)	Estimated Future Costs: FY2006 - 2026 (2005 Dollars)	Total Estimated Cost (In 2005 and YOE Dollars)	Service Start Date	Other Project Information
South Central Avenue	0.00	4.6	4.6	2014	
South Central Avenue Arterial BRT	0.00	4.8	4.8	2015	
SR 51 Express	0.00	1.6	1.6	2022	
Supersition Fwy Connector	0.00	1.5	1.5	2011	
Supersition Springs Express	0.00	4.7	4.7	2018	
West Loop 101 Connector (to North Glendale P&R)	0.00	3.8	3.8	2008	
Regional Passenger Support Services	0.00	14.7	14.7	2006	
<b>TOTAL</b>	<b>0.0</b>	<b>152.1</b>	<b>152.1</b>		

**TABLE C-2**  
**TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: REGIONAL GRID**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026**  
**(2005 and Year of Expenditure Dollars in Millions)**

Route	Expenditures through FY 2005: (YOE Dollars)	Estimated Future Costs: FY2006 - 2026 (2005 Dollars)	Total Estimated Cost (In 2005 and YOE Dollars)	Service Start Date	Other Project Information
59th Avenue	0.00	18.7	18.7	2014	
83rd Avenue/75th Avenue	0.00	5.5	5.5	2022	
99th Avenue	0.00	10.6	10.6	2020	
Alma School Rd.	0.00	30.5	30.5	2013	
Arizona Avenue/Country Club	0.00	41.2	41.2	2009	
Baseline/Southern/Dobson (ext)	0.00	88.2	88.2	2010	
Bell Road (via 303)	0.00	18.3	18.3	2018	
Broadway	0.00	38.9	38.9	2012	
Buckeye Road (Litchfield Road to Central Ave.)	0.00	2.5	2.5	2019	
Camelback Road	0.00	23.6	23.6	2012	
Chandler Blvd.	0.00	49.5	49.5	2007	
Dunlap/Olive Avenue	0.00	11.3	11.3	2020	
Dysart Road	0.00	7.6	7.6	2014	
Elliot Road	0.00	34.3	34.3	2012	
Gilbert Road	0.00	40.7	40.7	2009	
Glendale Avenue	0.00	35.8	35.8	2008	
Greenfield Road	0.00	4.0	4.0	2023	
Hayden/McClintock	0.00	39.6	39.6	2014	
Indian School Road	0.00	7.8	7.8	2019	
Litchfield Road	0.00	8.2	8.2	2023	
Main Street	0.00	33.8	33.8	2008	
McDowell/McKellips	0.00	43.2	43.2	2014	
Peoria Ave./Shea	0.00	47.7	47.7	2014	
Power Road	0.00	17.9	17.9	2014	

**TABLE C-2**  
**TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: REGIONAL GRID**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026**  
**(2005 and Year of Expenditure Dollars in Millions)**

Route	Expenditures through FY 2005: (YOE Dollars)	Estimated Future Costs: FY2006 - 2026 (2005 Dollars)	Total Estimated Cost (In 2005 and YOE Dollars)	Service Start Date	Other Project Information
Queen Creek Road (Pecos P&R to Power Road)	0.00	19.0	19.0	2018	
Ray Road	0.00	28.0	28.0	2015	
Scottsdale/Rural	0.00	115.8	115.8	2006	
Tatum / 44th Street	0.00	6.4	6.4	2015	
Thomas Road	0.00	11.3	11.3	2019	
University Drive (to Ellsworth Road)	0.00	39.2	39.2	2011	
Van Buren	0.00	13.9	13.9	2015	
Waddell/Thunderbird	0.00	11.5	11.5	2019	
Regional Passenger Support Services	0.00	97.0	97.0		
<b>TOTAL</b>	<b>0.00</b>	<b>1,001.3</b>	<b>1,001.3</b>		

**TABLE C-3**  
**TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: OTHERS**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Category	Expenditures through FY 2005: (YOE Dollars)	Estimated Future Costs: FY2006 - 2026 (2005 Dollars)	Total Estimated Cost (In 2005 and YOE Dollars)	Service Start Date	Other Project Information
ADA Paratransit	0.0	225.6	225.6	2006	
Rural/Non-Fixed Route	0.0	11.2	11.2	2006	
Other services	0.0	69.8	69.8	2006	
<b>TOTAL</b>	<b>0.0</b>	<b>306.6</b>	<b>306.6</b>		

**TABLE C-4**  
**TRANSIT LIFE CYCLE PROGRAM - BUS CAPITAL: FACILITIES**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026**  
**(2005 and Year of Expenditure Dollars in Millions)**

Category	Expenditures through FY 2005 (YOE Dollars)	Estimated Future Costs: FY 2006 - 2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Total Number of Units to be Constructed/ Installed through FY 2026	Number of Units Constructed/ Installed through FY 2005	Other Project Information
Arterial BRT Right-of-Way and Improvements	0.0	17.8	17.8	50	0	
Bus Stop Pullouts/Improvements	0.0	27.8	27.8	1200	0	
Dedicated BRT Right-of-Way and Improvements	0.0	82.2	82.2	10	0	
Dial-a-Ride and Rural Bus Maintenance Facilities	0.0	17.9	17.9	2	0	
Intelligent Transportation Systems (ITS) / Vehicle Management Systems (VMS)	0.0	37.8	37.8	1684	0	
Park & Ride Lots	0.0	53.0	53.0	13	0	
Standard Bus Maintenance Facilities*	0.0	181.9	181.9	5	0	
Transit Centers (4 Bay)	0.0	10.4	10.4	6	0	
Transit Centers (6 Bay)	0.0	10.0	10.0	4	0	
Transit Centers (Major Activity Centers)	0.0	17.8	17.8	3	0	
Vanpool Vehicle Maintenance Facilities	0.0	5.0	5.0	1	0	
<b>TOTAL</b>	<b>0.0</b>	<b>461.7</b>	<b>461.7</b>	<b>2978</b>	<b>0</b>	

\* Includes four new operations/maintenance facilities and one rehab facility.

**TABLE C-5**  
**TRANSIT LIFE CYCLE PROGRAM - BUS CAPITAL: FLEET**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006 to FY 2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Category	Expenditures through FY 2005 (YOE Dollars)	Estimated Future Costs: FY 2006 - 2026 (2005 Dollars)	Total Estimated Cost (2005 and YOE Dollars)	Total Number of Units to be Acquired through FY 2026	Number of Units Acquired through FY 2005	Other Project Information
ADA Paratransit	0.0	67.0	67.0	1019	0	
Fixed Route	0.0	866.2	866.2	2029	0	
Rural Route	0.0	2.3	2.3	36	0	
Van Pool	0.0	48.7	48.7	1577	0	
<b>TOTAL</b>	<b>0.0</b>	<b>984.2</b>	<b>984.2</b>	<b>4661</b>	<b>0</b>	

**TABLE C-6**  
**TRANSIT LIFE CYCLE PROGRAM - LIGHT RAIL TRANSIT: SUPPORT INFRASTRUCTURE**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026**  
 (2005 and Year of Expenditure Dollars in Millions)

Facility	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006- 2026 (2005 Dollars)	Total Cost: FY 2006-2026 (2005 and YOE Dollars)	Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Design	Right-of-Way	Construction					
Glendale Link: 19th Ave./Bethany Home to Downtown Glendale				30.0	30.0	2016-17	5	Regional costs
Metrocenter Link: 19th Ave./Bethany Home to Metrocenter				30.0	30.0	2011-2012	5	Regional costs
Minimum Operating System: 19th Ave./Bethany Home to Main St./Sycamore				164.0	164.0	2007-10	20	Regional costs
Systemwide - Infrastructure Improvements				166.5	166.5	2024-26	57.5	System support infrastructure
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>390.5</b>	<b>390.5</b>			

**TABLE C-7**  
**TRANSIT LIFE CYCLE PROGRAM - LIGHT RAIL TRANSIT: ROUTE EXTENSIONS**  
**EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026**  
**(2005 and Year of Expenditure Dollars in Millions)**

Facility	Expenditures through FY 2005 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2006- 2026 (2005 Dollars)	Total Cost: FY 2006-2026 (2005 and YOE Dollars)	Year Programmed for Final Construction	Project Length (Centerline Miles)	Other Project Information
	Design	Right-of-Way	Construction					
Glendale Link: 19th Ave./Bethany Home to Downtown Glendale				0.0	324.6	2015-17	5.0	
I-10 West Link: Washington Ave./Central Ave. to 79th Ave.				0.0	714.2	2017-20	11.0	
Metrocenter Link: 19th Ave./Bethany Home to Metrocenter				0.0	324.6	2010-13	5.0	
Northeast Phoenix Link: Indian School Rd./Central Ave. to Paradise Valley Mall				0.0	779.1	2023-25	12.0	
Tempe South Link: Main St./ Rural Rd. to Southern Ave.				0.0	129.3	2014-15	2.0	
West Mesa Link: Main St./Sycamore to Main St./Mesa Dr. *				0.0	162.7	2014-15	2.7	
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2434.5</b>		<b>37.7</b>	

\* Technology to be determined.

**TABLE C-8  
TRANSIT LIFE CYCLE PROGRAM - BUS RAPID TRANSIT/EXPRESS  
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 to FY 2026**

Route	Service Start Date	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings through FY 2005 (Thousands)	Farebox Revenues through FY 2005 (YOE Dollars)	Annual Average Boardings FY 2003 through FY 2005 (Thousands)	Annual Average Farebox Revenues FY 2003 through FY 2005 (YOE Dollars)	Other Project Information
Ahwatukee Connector	2016	14.5	30,160					
Ahwatukee Express	2023	20.9	108,680					
Anthem Express	2017	3.1	8,060					
Apache Junction Express	2010	35.3	73,424					
Arizona Avenue Arterial BRT	2010	14.3	148,720					
Avondale Express	2019	21.6	89,856					
Black Canyon Freeway Corridor	2015	18.0	74,880					
Buckeye Express (to West Buckeye P&R)	2010	36.0	56,160					
Chandler Boulevard Arterial BRT	2023	19.4	242,112					
Desert Sky Express	2018	21.5	134,160					
Deer Valley Express	2009	17.3	89,960					
East Loop 101 Connector	2008	41.1	85,488					
Grand Avenue Limited	2012	21.9	136,656					
Loop 303 Express	2022	38.8	80,704					
Main Street Arterial BRT	2008	10.8	134,784					
North Glendale Express	2007	26.7	111,072					
North I-17 Express	2021	33.1	86,060					
North Loop 101 Connector Surprise to Scottsdale P&R)	2007	30.9	96,408					
Papago Fwy Connector (to West Buckeye P&R)	2008	36.3	75,504					
Peoria Express (to Peoria P&R)	2013	24.8	77,376					
Pima Express (To Airpark P&R)	2012	33.8	70,304					
Red Mountain Express	2008	29.1	60,528					
Red Mountain Fwy Connector	2018	18.0	74,880					

**TABLE C-8  
TRANSIT LIFE CYCLE PROGRAM - BUS RAPID TRANSIT/EXPRESS  
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 to FY 2026**

Route	Service Start Date	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings through FY 2005 (Thousands)	Farebox Revenues through FY 2005 (YOE Dollars)	Annual Average Boardings FY 2003 through FY 2005 (Thousands)	Annual Average Farebox Revenues FY 2003 through FY 2005 (YOE Dollars)	Other Project Information
Ahwatukee Connector	2016	14.5	30,160					
Santan Express	2017	44.3	230,360					
Scottsdale/Rural Arterial BRT	2013	17.5	218,400					
South Central Avenue	2014	8.0	99,840					
South Central Avenue Arterial BRT	2015	11.0	114,400					
SR 51 Express	2022	20.5	106,600					
Superstition Fwy Connector	2011	17.3	26,988					
Superstition Springs Express	2018	29.6	153,920					
West Loop 101 Connector (to North Glendale P&R)	2008	17.8	55,536					
Regional Passenger Support Services	2006							
<b>TOTAL</b>		<b>733.2</b>	<b>3,151,980</b>	<b>0.0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**TABLE C-9  
TRANSIT LIFE CYCLE PROGRAM - REGIONAL GRID  
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 to FY 2026**

Route	Service Start Date	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings through FY 2005 (Thousands)	Farebox Revenues through FY 2005 (YOE Dollars)	Annual Average Boardings FY 2003 through FY 2005 (Thousands)	Annual Average Farebox Revenues FY 2003 through FY 2005 (YOE Dollars)	Other Project Information
59th Avenue	2014	15.8	250,155					
83rd Avenue/75th Avenue	2022	13.4	250,171					
99th Avenue	2020	16.2	323,054					
Alma School Rd.	2013	16.3	427,451					
Arizona Avenue/Country Club	2009	16.6	466,062					
Baseline/Southern/Dobson (ext)	2010	47.3	1,032,979					
Bell Road (Via 303)	2018	28.4	416,055					
Broadway	2012	27.7	505,955					
Buckeye Road (Litchfield Road to Central Ave.)	2019	13.2	63,970					
Camelback Road	2012	28.0	306,901					
Chandler Blvd.	2007	25.4	516,592					
Dunlap/Olive Avenue	2020	14.3	341,920					
Dysart Road	2014	6.0	132,864					
Elliot Road	2012	16.5	446,424					
Gilbert Road	2009	20.0	454,960					
Glendale Avenue	2007	18.7	349,145					
Greenfield Road	2023	12.0	277,968					
Hayden/McClintock	2014	22.9	600,530					
Indian School Road	2019	26.8	202,274					
Litchfield Road	2023	21.1	497,538					
Main Street	2008	12.5	363,700					
McDowell/McKellips	2014	40.3	655,204					
Peoria Ave./Shea	2014	36.0	723,446					
Power Road	2014	13.8	317,069					

**TABLE C-9  
TRANSIT LIFE CYCLE PROGRAM - REGIONAL GRID  
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 to FY 2026**

Route	Service Start Date	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings through FY 2005 (Thousands)	Farebox Revenues through FY 2005 (YOE Dollars)	Annual Average Boardings FY 2003 through FY 2005 (Thousands)	Annual Average Farebox Revenues FY 2003 through FY 2005 (YOE Dollars)	Other Project Information
59th Avenue	2014	15.8	250,155					
Queen Creek Road (Pecos P&R to Power Road)	2018	20.2	431,495					
Ray Road	2015	17.2	395,933					
Scottsdale/Rural	2006	27.7	1,170,657					
Tatum / 44th Street	2015	24.6	106,213					
Thomas Road	2019	28.6	293,435					
University Drive (to Ellsworth Road)	2011	22.7	475,828					
Van Buren	2015	23.9	230,463					
Waddell/Thunderbird	2019	28.0	299,485					
Regional Passenger Support Services	2006							
<b>TOTAL</b>		<b>702.1</b>	<b>13,325,894</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	