DRAFT 2016 ANNUAL REPORT ON THE STATUS OF THE IMPLEMENTATION OF PROP 400

October 2016

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MARICOPA ASSOCIATION of GOVERNMENTS

REGIONAL TRANSPORTATION PLAN

Maricopa Association of Governments

2016 ANNUAL REPORT ON THE STATUS OF THE IMPLEMENTATION OF PROPOSITION 400

October 2016

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SUMMARY OF FINDINGS AND ISSUES

The *2016 Annual Report on the Status of the Implementation of Proposition 400* has been prepared by the Maricopa Association of Governments (MAG) in response to Arizona Revised Statue (ARS) 28-6354. ARS 28-6354 requires that MAG annually issue a report on the status of projects funded through Proposition 400, addressing project construction status, project financing, changes to the MAG Regional Transportation Plan, and criteria used to develop priorities. In addition, background information is provided on the overall transportation planning, programming and financing process. The key findings and issues from the 2016 Annual Report are summarized below.

MAG REGIONAL TRANSPORTATION PLAN

The MAG Regional Transportation Plan (RTP) provides the blueprint for the implementation of Proposition 400. By Arizona State law, the revenues from the half-cent sales tax for transportation must be used on projects and programs identified in the RTP adopted by MAG. The RTP identifies specific projects and revenue allocations by transportation mode, including freeways and other routes on the State Highway System, major arterial streets, and public transportation systems.

- Changes to the Plan from Amendments to the MAG Transportation Improvement Program.

  The Transportation Improvement Program (TIP), by definition, is an element of the Regional Transportation Plan (RTP), describing in detail the projects and funding covering the early years of the RTP. As a result, any amendments to the TIP represent corresponding changes to the RTP. During FY 2016, the MAG Regional Council approved amendments to the TIP at eight of its meetings. On June 22, 2016, the MAG Regional Council also approved the new Fiscal Year 2017 – 2021 TIP. Details of these actions may be accessed on the MAG website.

- Revised opening dates of Light Rail Transit Projects

  On April 27, 2016, the MAG Regional Council approved an amendment to the 2035 MAG Regional Transportation Plan to reflect changes in the opening dates of several light rail transit (LRT) projects and the addition of one light rail station. The air quality conformity analysis for this amendment was approved by the MAG Regional Council on June 22, 2016. Impacted projects included Northwest LRT/Phase II (opening advanced to 2023), South Central LRT Corridor (opening advanced to 2023), Capitol/I-10 West to 17th Ave/Jefferson (continue opening in 2023), Capitol/I-10 West Phase II to 79th Ave/Interstation 10 (deferred to 2030), 50th Street/Washington Street Station

(new station opening in 2019), and the Tempe Streetcar (Opening deferred to 2019).

- Development of the Next Regional Transportation Plan Update

  According to federal planning regulations, the next update of the 2035 Regional Transportation Plan (RTP) must be approved through the MAG committee process no later than January 2018. The current target for MAG approval of the next update is June 2017, and it is anticipated that the planning horizon year of the RTP will be extended to 2040. One of the major goals of the update will be to incorporate new federal metropolitan planning regulations from recent federal transportation legislation into the planning process. A key requirement in the new planning regulations is the identification of transportation system performance measures and performance targets.

HALF-CENT SALES TAX AND OTHER TRANSPORTATION REVENUES

The half-cent sales tax for transportation approved through Proposition 400 is a key funding source for the MAG Regional Transportation Plan (RTP), representing nearly half the regional 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.

- Fiscal Year 2016 receipts from the Proposition 400 half-cent sales tax were 3.8 percent higher than receipts in FY 2015.

  The receipts from the Proposition 400 half-cent sales tax in FY 2016 totaled approximately $397 million, corresponding to a 3.8 percent increase over the total of $382 million in FY 2015. This represents the sixth consecutive year of higher revenues since FY 2010. Additionally, for the first time, collections for FY 2016 were 1.5 percent higher than those in FY 2007.

- Forecasts of Proposition 400 half-cent revenues are 5.3 percent higher for the period FY 2017 through FY 2026, compared to the 2015 Annual Report estimate.

  Future half-cent revenues for the period FY 2017 through FY 2026 are currently forecasted to total $5.1 billion. This amount is $259 million, or 5.3 percent, higher than the forecast for the same period presented in the 2015 Annual Report. This increase reflects a slightly higher annual growth rate in revenues forecasted for this period (5.2 versus 4.3 percent). The Proposition 400 half-cent revenue forecasts will be updated again in the fall of 2016.

- Forecasts of total ADOT Funds dedicated to the MAG area for FY 2017 through FY 2026 are 10.9 percent higher than the 2015 Annual Report estimate.

  The forecast for ADOT Funds for FY 2017 through FY 2026 totals $2.6 billion, which is 10.9 percent higher than the 2015 Annual Report forecast of $2.4 billion for the same period. This increase reflects funding allocation adjustments in the ADOT five-year construction program.

- Forecasts of total MAG Federal Transportation Funds for FY 2017 through FY 2026 are 8.5 percent higher than the 2015 Annual Report estimate.

  Total MAG Federal funding for the period FY 2017 through FY 2026 is forecasted to total $2.3 billion. This is about a 8.5 percent increase from the amount forecasted for the same period in the 2015 Annual Report. These forecasts are only for those MAG Federal fund sources that are utilized in the Life Cycle Programs. Additional Federal funds are received in the MAG region and applied to other transportation program areas, which are not covered by this report.

- Federal transportation funding under the new Surface Transportation Act.

  On December 4, 2015, President Obama signed legislation known as the 'Fixing America's Surface Transportation Act', or 'FAST Act'. The MAG area federal transportation funding forecasts included in 2016 Annual Report correspond to the programs as structured in the FAST Act. Under the FAST act, the MAG region saw an overall increase in federal funding.

FREEWAY/HIGHWAY LIFE CYCLE PROGRAM

The Freeway/Highway Life Cycle Program (FLCP) extends through FY 2026 and is maintained by the Arizona Department of Transportation (ADOT) to implement freeway/highway projects listed in the MAG Regional Transportation Plan (RTP). The program utilizes funding from the Proposition 400 half-cent sales tax extension, as well as funding from state and Federal revenue sources.

- A number of major freeway/highway construction projects were completed, underway, or advertised for bids during FY 2016.

  Projects completed during FY 2016:

  - Loop 303 (US 60 to Happy Valley Road): Construct new freeway.
  - Loop 202 (Loop 101 to Broadway Road): Add GP and HOV lanes.
  - US 60 Meridian Road Half-diamond TI: Construct new interchange.
  - Loop 303/I-10: Construct new system interchange (Phase I).

Projects advertised for bids or under construction during FY 2016:

- Loop 101 (Shea Blvd. to Loop 202): Construct GP lanes.
- Loop 303/US 60: Construct new interchange.
- Loop 303 El Mirage Road TI: Construct new interchange.
- Loop 303/I-10: Construct new system interchange (Phase II).
- US 60 (Grand Ave) Bell Road TI: Construct new interchange.
- US 60 (Grand Ave) Thompson Ranch Rd TI: Construct intersection improvements.

- Major progress was made toward construction of the South Mountain Freeway.

  The final EIS for the South Mountain Freeway Corridor was released to the public on September 26, 2014. A Record of Decision (ROD) by the Federal Highway Administration was published to the public through the Federal Register on March 13, 2015, selecting a build alternative. The project litigation has concluded and the ROD was upheld on August 19, 2016.

  On July 31, 2014, it was announced that the South Mountain Freeway would be delivered as a single P3 Design-Build-Maintain project. A Request for Qualifications was released on October 15, 2014 and five developers responded. Following an evaluation process, a shortlist of three developers was announced on March 19, 2015. A draft Request for Proposals (RFP) was released for industry review on April 9, 2015 and the Final RFP was released June 12, 2015.

  Proposals from the three shortlisted developers were received on November 2, 2015. Following an evaluation period, ADOT announced the apparent best value proposer on December 28, 2015. The selected team was Connect 202 Partners, which consists of Fluor Enterprises Inc., Granite Construction Co., and Ames Construction Inc., with Parsons Brinckerhoff Inc. as the lead designer. Following a negotiation period, the design-build-maintain contract was signed on February 26, 2016. Final design is underway and construction activities began in the summer of 2016 with a completion target of late 2019. This completion date is three-years ahead of previous schedules for the Loop 202/South Mountain Freeway facility.

- Cash flow analysis indicates that there is a positive balance of approximately $787million for the Regional Freeway/Highway Life Cycle Program through FY 2026.

  In FY 2016, updated cash flow modeling estimated a positive balance of $787 million by the end of FY 2026. The improvement in ending cash balance reflected increased revenues, savings from the Loop 202 South Mountain Freeway project and the continuing cooperative efforts by MAG an ADOT to

identify cost savings through value engineering, risk management, and enhanced coordination of project development activities. Discussions will be held through the MAG committee process throughout the fall of 2016 to possibly advance projects that had been previously deferred in the program as part of the 2009 and 2012 rebalancing efforts.

ARTERIAL STREET LIFE CYCLE PROGRAM

The Arterial Street Life Cycle Program (ALCP) extends through FY 2026 and is maintained by the Maricopa Association of Governments (MAG) to implement arterial street projects in the MAG Regional Transportation Plan (RTP). The Program receives significant funding both from the Proposition 400 half-cent sales tax and Federal highway programs, as well as a local match component. Although MAG is charged with the responsibility of administering the overall program, the actual construction of projects is accomplished by local government agencies. MAG distributes the regional share of the funding on a reimbursement basis.

- <u>During FY 2016, a total of $73.3 million in ALCP project expenses were reimbursed to the implementing agencies.</u>

  During FY 2016, a total of $73.3 million in ALCP project expenses were reimbursed to implementing agencies. This included reimbursements to nine individual agencies, as well as funding for projects in the MAG ITS program. Since the beginning of the program, $661.8 million has been disbursed and 62 projects have been completed.

- <u>Continuing progress on projects in the Arterial Street Life Cycle Program has been maintained.</u>

  During FY 2016, project overview reports were prepared by the lead agencies for three projects in the ALCP. Since the inception of the program, 95 project overviews have been submitted to MAG. A total of three project agreements were executed in FY 2016. In all, 94 project agreements have been executed to date. Lead agencies deferred approximately $31.9 million in Federal and regional reimbursements from FY 2016 to later years due to project implementation and local funding issues.

TRANSIT LIFE CYCLE PROGRAM

The Transit Life Cycle Program (TLCP) is maintained by the Regional Public Transportation Authority (RPTA)/Valley Metro and implements transit projects identified in the MAG Regional Transportation Plan. The RPTA maintains responsibility for administering half-cent sales tax 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 planned for the system.

- Service improvements were implemented on one route in FY 2016 and additional routes will be funded during the next five years.

  Service improvements implemented during FY 2016:

  - Scottsdale/Rural (T66); frequency improvements

  Routes Planned for Implementation during FY 2017 through FY 2021:

  - Arizona Avenue/Country Club (T44); Scheduled Improvement: FY 2017.
  - Hayden/McClintock (T57); Scheduled Improvement: FY 2017.
  - Main Street (T60); Scheduled Improvement: FY 2017.
  - Alma School Road (T43); Scheduled Improvement: FY 2018.
  - Broadway Road (T47); Scheduled Improvement: FY 2018.
  - Gilbert Road (T54); Scheduled Improvement: FY 2019.
  - Baseline Road (T45); Funding Start: FY 2020.
  - University Drive (T69); Funding Start: FY 2020.
  - Chandler Boulevard (T50); Scheduled Improvements; FY 2021

- Estimated future costs for the Transit Life Cycle Program are in balance with project future funds for the period of FY 2017 through FY 2026.

  Estimated future costs for the period of FY 2016 through FY 2026 are in balance with project future funds available with a remainder of approximately $181.6 million (2016 $'s). Valley Metro continually works with its members to find the optimal mix of local, regional and federal funds for the projects in the TLCP. The life cycle process requires a balance to be maintained through effective financing and cash flow management, value engineering of projects, and Plan and Program adjustments as necessary.

- Federal discretionary funding for transit continues to be an important issue.

  A significant portion of the funding for the LRT/HCT system is awarded by the US Department of Transportation through the discretionary "New Starts Program". The MAG area is subject to a highly competitive process with other regions for this Federal funding, resulting in uncertain timing and amounts of New Starts monies over the long term. Therefore, prospective New Starts awards require careful monitoring. Beyond the "New Starts Program" for the LRT/HCT system, other revenues from the Federal Transit Administration are a key source of funding for the bus capital program. Moreover, the latest

Federal transportation legislation, FAST-Act signed by the President on December 4, 2015, retained significant changes to the federal transit funding programs from MAP-21. Some of those changes included the elimination of several discretionary programs in favor of formula based programs. This allows a more predictable stream of federal revenues for planning purposes

PERFORMANCE MONITORING PROGRAM

The MAG Transportation System Performance Monitoring and Assessment Program has been established to provide a framework for reporting performance at the system and project levels, and serve as a repository of historical, simulated and observed data for the transportation system in the MAG Region.

- Freeway vehicle miles of travel (VMT) in the region have increased recently.

  Freeway Vehicle-Miles of Travel (VMT) per day in the Phoenix-Mesa urbanized area reflects the overall vehicle travel trends for the region. In 2015, there was a significant increase of 1.3 percent in VMT in the region. This compares with an increase of 4.8 percent in 2014.

- Annual boardings on light rail transit increased and fixed route bus declined during FY 2016.

  Light rail transit boardings increased by 9.0 percent, and boardings on bus service (local bus, express, RAPID, circulators, and a rural route) decreased by 8.3 percent, during FY 2016 compared to FY 2015.

CHAPTER ONE

INTRODUCTION

The *2016 Annual Report on the Status of the Implementation of Proposition 400* covers progress on transportation projects being implemented under Proposition 400, through the fiscal year ending June 30, 2016. The report also addresses the future outlook for the Proposition 400 program through June 30, 2026. Proposition 400 was passed by the voters of Maricopa County on November 2, 2004, authorizing a 20-year extension of a half-cent sales tax for transportation projects in Maricopa County. The extension was initiated on January 1, 2006 and will be effective through December 31, 2025. The half-cent tax was originally approved by the voters in 1985 through Proposition 300.

1.1 REQUIREMENT FOR THE ANNUAL REPORT

Arizona Revised Statue (ARS) 28-6354 requires that the Maricopa Association of Governments (MAG) annually issue a report on the status of projects funded through Proposition 400. MAG produced the first *Annual Report on the Status of the Implementation of Proposition 400* in 2005 and will produce an updated report yearly during the life of the tax. The annual reporting process addresses project construction status, project financing, changes to the MAG Regional Transportation Plan (RTP), and criteria used to develop priorities. In addition, information is provided on the overall transportation planning, programming and financing process.

1.2 ANNUAL REPORT CONTENT

The Annual Report addresses project status and tabulates expenditures through the fiscal year (FY) ending June 30th. In addition, the overall program outlook through FY 2026 for each transportation mode is reviewed, with an emphasis on the balance between projected costs and forecasted revenues. All projects for the major transportation modes (freeways/highways, arterial streets, public transit), as defined in the RTP, are monitored, whether they specifically receive half-cent funding or not. This ensures that progress on the entire RTP is monitored and trends for all revenue sources are tracked. Any amendments to the RTP are also identified as part of the annual reporting process. A database of RTP projects by mode is maintained to track costs, expenditures and accomplishments on a continuing basis.

1.3 CLARIFICATIONS REGARDING DATA, TERMINOLOGY AND OTHER METHODOLOGICAL FACTORS

- Accounting Objectives - It should be noted that the Annual Report is intended to identify overall progress and future trends in the Proposition 400 program,

as opposed to providing detailed financial documentation. Estimates of past expenditures and revenue receipts, as well as future costs and revenue collections, are included for use as an aid in assessing past program progress and future program outlook. These figures should not be interpreted as an official, year-by-year financial accounting record of program activities.

- Data Consistency - In preparing the Annual Report, every effort is made to use data sources that are consistent with other documents that publish similar data, such as regional transportation plans, transportation improvement programs, and life cycle programs. However, these reports are issued at different times and serve different purposes, which means that each report may not contain exactly the same set of data presented in the other reports. Therefore, minor differences in the data provided in the reports may continue to be present. Delaying the issue of the Annual Report to achieve total uniformity with other reports would lessen the ability to provide a timely report to decision-makers and the public. Specific data sources used in the Annual Report are identified in Appendix E.

- Nominal vs. Real Dollars - Revenue projections are expressed in "Year of Expenditure" (YOE) dollars, which reflect the actual number of dollars collected/expended in a given year (nominal dollars). Therefore, there is no correction or discounting for inflation. The effect of inflation on revenues is accounted for separately through an allowance for inflation that is applied when comparing project costs and revenues, which is included in the modal chapters. In these chapters, costs reflect currently available, real dollars estimates as of the current year, but may not have been specifically factored, in every case, to a current dollar base year.

- Fourth Quarter Estimates - In some instances, expenditure data may include estimates for the fourth quarter of the most recent fiscal year included in the Annual Report. These estimates are updated later to reflect actual expenditures when that data is available and are provided in subsequent Annual Reports. This, in certain cases, may result in total expenditures reported for a given facility/service in one year being less than that reported in the previous year. Postponing the issue of the Annual Report to await final fourth quarter data would require significant delays, greatly lessen the relevancy of the Annual Report in the decision-making process.

- Expenditure Data Adjustments - Close coordination is maintained with the agencies that supply expenditure data for the Annual Report, in an effort to ensure that cost items are treated consistently from year-to-year. However, due to the timing of billing receipts, collection of other financial information, and posting of necessary accounting adjustments, there may be anomalies in the expenditures reported by the agencies for a given project from one year to the next. This variation (for example, total costs reported for a given facility/service in one year being less than that reported in the previous year)

is minor and generally reflects the increasing accuracy of the figures being provided by the agencies. Expenditure tabulations in the Annual Report correspond to the data received from the reporting agencies.

- Project Schedules - In describing project status, both “open to traffic” and “program group for construction” are used. The term “open to traffic” is used if the specific date when a facility has been opened, or will be open with some certainty, is known. The term “program group for construction” is utilized to indicate the period in which funding has been identified for construction of the facility. The latter term is employed due to the difficulty in specifying an “open to traffic” date for future projects that may not even be designed at this time, much less have specific bid and construction schedules established. An “open to traffic” date for a future project may be identifiable if it is under construction or has scheduled bid dates.

- Freeway/Highway Project Segment Definitions - Beginning with the 2013 Annual Report, the freeway/highway facility segments listed in the appendix tables are revised somewhat compared to previous annual reports. The new segment definitions/limits correspond more closely to those utilized by ADOT’s cost reporting system, and are being used to facilitate more accurate compilation of expenditure data and facility cost estimates.

- Transit Expenditure Reporting - Since light rail operating expenses were excluded at the inception of the Proposition 400 program, for light rail projects only capital expenditures and costs are reported. These expenditures and costs are reported to reflect total capital costs and include all funding sources to offset those costs. For bus services, the Proposition 400 program covers both capital and operating expenses. Accordingly, both capital and operating expenditures and costs are reported. These expenditures and costs reflect total costs and include all funding sources to offset those costs, including local funds and farebox revenues.

- Freeway/Highway Future Sources and Uses of Funds Adjustments - An adjustment is made in the comparison of future sources and uses of funds for the Freeway/Highway Life Cycle Program that the reconciles the net of sources and uses with the projected ending balance estimated by the ADOT Cash Flow Analysis (CFA) for the Freeway/Highway Life Cycle Program. It takes into account the difference between the projected cash flow requirements of the CFA through FY 2026 and the project costs contained in the ADOT Regional Transportation Plan Freeway Program (RTPFP) Expenditures Report. It represents the cash flow requirements of projects in the Freeway Life Cycle Program that extend beyond the end of FY 2026.

- Bus Ridership Reporting - Beginning with the 2013 Annual Report, ridership data relates to all Public Transit Fund (PTF) supported routes or portions of routes. This includes existing routes receiving PTF funding that predate Prop

400 and may not have been reported on previously. This approach is being used to ensure that the broadest disclosure possible is being provided. As a result of this approach, total ridership on some routes may stay the same from year to year, because PTF funds no longer pay for the service. Conversely, certain other routes may indicate a jump from no-ridership to significant levels of ridership. This occurs in cases where a route is now being reported on but had not been reported on previously.

CHAPTER TWO

PROPOSITION 400 LEGISLATION

Proposition 400 was enabled by House Bill 2292 and House Bill 2456, which were signed by the Governor of Arizona on May 14, 2003 and on February 5, 2004, respectively. These two pieces of legislation were enacted to guide the process leading up to the Proposition 400 election on November 2, 2004 and establish the features of the half-cent tax sales extension. Key elements of House Bills 2292 and 2456 are described below.

2.1 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). The TPC, which was tasked with the development of the Regional Transportation Plan (RTP), 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. The original tax was approved by Maricopa County voters under Proposition 300 in October 1985 and expired 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.

2.2 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.

2.2.1 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.

2.2.2 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).

2.2.3 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. In 2010, the Auditor General contracted with an independent auditor to conduct a performance audit of the Regional Transportation Plan. The results of the audit were released in December 2011 (see Chapter Nine). The next five-year audit (2015 Audit) is currently underway.

2.2.4 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).

2.2.5 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.

2.2.6 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 THREE

REGIONAL ROLES AND RESPONSIBILITIES

The responsibility for implementing and monitoring projects and programs funded through Proposition 400 is shared by several regional and State entities. These organizations 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.

A brief description of each agency and committee, and their role in implementing freeway/highway, arterial street and transit programs is provided below. It should be noted that local governments also design and construct projects covered in the regional arterial street program, and manage and operate elements of the bus transit system. These agencies are not discussed here.

3.1 MARICOPA ASSOCIATION OF GOVERNMENTS

The Maricopa Association of Governments (MAG) was formed in 1967, as the designated Metropolitan Planning Organization (MPO) for transportation planning in the Phoenix metropolitan area. On May 9, 2013, the Governor of Arizona approved an expanded metropolitan planning area (MPA) boundary for MAG, and the MAG MPA boundary now extends significantly into Pinal County. The new MPA boundary is in accordance with Federal regulations, which require that metropolitan planning areas encompass at least the existing urbanized area and the contiguous area expected to become urbanized within a 20-year forecast. MAG members include the region's 27 incorporated cities and towns, Maricopa County, Pinal 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.

It is important to note that Proposition 400 applies only to the Maricopa County portion of MAG, and all expenditures related to Proposition 400 are on projects within the Maricopa County area.

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

- Multi-modal Transportation Planning.
- Air Quality.
- Wastewater.
- Solid Waste.
- Human Services.
- 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 (CTOC) 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.

3.2 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.

3.3 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.

3.4 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.

3.5 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. In 1993, the RPTA Board adopted Valley Metro as the identity for the regional transit system. The (RPTA)/Valley Metro Board of Directors helps guide the agency by providing transportation leadership to best serve the region and their communities. Members are represented by an elected official who is appointed by their Mayor, Councilmembers or Board of Supervisors. Currently the Board includes Avondale, Buckeye, Chandler, El Mirage, Gilbert, Glendale, Goodyear, Maricopa County, Mesa, Peoria, Phoenix, Scottsdale, Surprise, Tempe, Tolleson, and Wickenburg. The RPTA Board cannot approve projects and programs within the MAG area that are not consistent with the MAG RTP and the MAG TIP.

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 former 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. These monies are 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.

3.6 VALLEY METRO RAIL

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

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.

In March 2012, a decision was made to employ a single Chief Executive Officer (CEO) for both RPTA/Valley Metro (Bus) and Valley Metro Rail. Subsequently, the staffs of the two agencies were integrated into a single organization under the direction of the CEO. The combined staff organization addresses all administrative, planning and operational functions for both agencies, including: (1) communications and marketing, (2) planning and development, (3) design and construction, (4) operations and maintenance, (5) finance, (6) administrative and organizational development, (7) legal, and (8) intergovernmental relations. The legal structure and Boards of the two agencies will not be affected.

3.7 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 FOUR

REGIONAL TRANSPORTATION PLAN

The MAG Regional Transportation Plan (RTP) provides the blueprint for the implementation of Proposition 400. By Arizona State law, the revenues from the half-cent sales tax for transportation must be used on projects and programs identified in the RTP adopted by MAG. The RTP identifies specific projects and revenue allocations by transportation mode, addressing freeways and other routes on the State Highway System, major arterial streets and intersection improvements, and public transportation systems. An overview of the RTP is provided below, including plan elements, priority criteria, and changes to the RTP during FY 2016.

On May 9, 2013, the Governor of Arizona approved an expanded metropolitan planning area (MPA) boundary for MAG, and the MAG MPA boundary now extends significantly into Pinal County. *It is important to note that Proposition 400 applies only to the Maricopa County portion of MAG, and all expenditures related to Proposition 400 are on projects within the Maricopa County area.*

4.1 PLAN OVERVIEW

The MAG Regional Transportation Plan (RTP) is a comprehensive, performance based, multi-modal and coordinated regional plan, covering all major modes of transportation, including freeways/highways, streets, public mass transit, airports, bicycles and pedestrian facilities, goods movement and special needs transportation. In addition, key transportation related activities are addressed, such as transportation demand management, system management, safety and air quality conformity analysis.

On January 29, 2014, the MAG Regional Council approved the 2035 MAG Regional Transportation Plan (RTP). This was the first update of the RTP since July 2010 and extends the horizon year of the plan from FY 2031 to FY 2035. The 2035 RTP largely continues the policies, priorities, and projects contained in previous plans. In addition, the 2035 RTP encompasses the expanded MAG metropolitan planning area (MPA), which was designated by the Governor on May 9, 2013. The MAG MPA boundary now extends significantly into Pinal County and includes the entire Gila River Indian Community, the Town of Florence, the City of Maricopa, all of the City of Apache Junction, and certain unincorporated areas of Pinal County. The new areas in the MAG MPA do not participate in the Life Cycle Programs.

4.1.1 Plan Development Process

The Regional Transportation Plan is developed and updated through a comprehensive, performance-based process, consistent with State legislation. This process takes into account household trip-making characteristics and regional travel patterns, as well as the effects of population growth, to identify future demand for transportation facilities. The transportation planning process establishes goals and objectives, estimates future travel demand, identifies and evaluates facility options, and defines a planned, multi-modal transportation network. As part of the process, funding for the implementation of the plan is identified and a facility phasing program is prepared.

The transportation planning process also includes broad-based public input, which is received as the result of an extensive public involvement process that includes an extensive public outreach effort. Public involvement meetings and events are held to receive input from citizens throughout the MAG Region. Additional comments are also received through the MAG Web Site. In addition, 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 are specifically considered during the transportation planning and programming process.

As required by the Clean Air Act, air quality conformity analyses are conducted on the RTP and the associated Transportation Improvement Program (TIP). Analyses are conducted on carbon monoxide, volatile organic compounds, nitrogen oxides, 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.

4.1.2 Freeway/Highway Element

The RTP includes new freeway corridors, as well as improvements to existing freeways and highways. Operation and maintenance of the freeway/highway system are also addressed. All projects in the freeway/highway element are on the State Highway System.

<u>New Freeway/Highway Corridors:</u> New corridors in the RTP include: Loop 202 (South Mountain Freeway), Loop 303 (Estrella Freeway, State Route 30 (I-10 Reliever Freeway), and State Route 24 (Gateway Freeway).

<u>Freeway/Highway Widening and Other Improvements:</u> Freeway/highway widening improvements cover essentially the entire existing freeway system. Widening of non-freeway highways, such as US 60/Grand Avenue, State Route 85 and other State Highways, are also funded. In addition, new interchanges with arterial streets on existing freeways are included, as well as improvements

at freeway-to-freeway interchanges to provide direct connections between HOV lanes.

Freeway/Highway Maintenance, Operations, Mitigation and System-wide Programs: The RTP provides funding for maintenance of the freeway system, directed at litter pickup, landscaping, and noise mitigation. System-wide programs, such as freeway operations management, are also identified.

Freeway/Highway Priorities: Freeway/highway priorities are established by the RTP and are implemented through the schedule of projects in the ADOT Freeway/Highway Life Cycle Program (see Chapter Six).

4.1.3 Arterial Street Element

The RTP includes a component for major arterial streets in the MAG Region. While MAG is responsible for developing the RTP, local jurisdictions are primarily responsible for design, right-of-way acquisition, construction and maintenance of arterial facilities as identified in the RTP.

New Arterial Facilities, Widening and Intersection Improvements: The RTP identifies regional funding for widening existing streets, improving intersections, and constructing new arterial segments. This is in addition to extensive local government funding for arterial street improvements. As growth extends into new areas, widening and extension of the arterial street network is needed in order to keep up with growing traffic volumes. Congestion on the arterial street network is often caused by inadequate intersection capacity. The RTP also includes a number of intersection improvements, which enhance traffic flow and reduce congestion.

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.

Arterial Street Priorities: Arterial street priorities are established by the RTP and are implemented through the schedule of projects in the MAG Arterial Life Cycle Program (see Chapter Seven).

4.1.4 Transit Element

The RTP includes a range of regionally funded transit facilities and services that address needs throughout the region. A regional bus network is included to ensure that reliable service is available on a continuing basis. In addition, light rail/high capacity transit corridors are identified 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 bus services include both arterial grid and express type services that are designed to provide regional connections. Regional bus service consists of three categories of service: Supergrid routes, which provide local fixed route service on the arterial street grid system; limited-stop LINK routes, which operate as express overlays on streets served by local fixed route service; and Freeway BRT Routes, which use freeways to connect remote park-and-ride lots with major activity centers. Funding for both capital and operating needs is identified in the RTP.

Light Rail/High Capacity Transit: The RTP includes a 65.0-mile Light Rail Transit (LRT)/High Capacity Transit (HCT) system, which incorporates the 19.7-mile, LRT minimum-operating segment (MOS); a 4.6-mile northwest extension; a 5.0-mile extension to downtown Glendale; an 11.0-mile extension along I-10 west to 79th Avenue; a 12.0-mile extension to Paradise Valley Mall; a 2.7-mile extension south of the MOS in Tempe; and a 5.0-mile extension from the east terminus of the MOS to Gilbert Road. Light rail transit has been selected as the technology on the northwest extension, the Capitol/I-10 west extension, and the extension to Gilbert Road. A modern streetcar has been designated for the extension in Tempe. The technology for the remaining segments has not yet been determined. In addition, a 5.0-mile light rail transit corridor from downtown Phoenix south along Central Ave. to Baseline Road was added to the RTP in June 2015.

It is important to note that LRT/HCT capital needs, only, are eligible for the regional half-cent sales tax for transportation, and LRT/HCT operating costs must draw on other funding sources.

Other Transit Services: Other transit services provided in the RTP include rural/non-fixed route transit, commuter vanpools, and paratransit transportation. The RTP also provides for the continued investigation of commuter rail implementation strategies for the region.

Transit Priorities: Transit priorities are established by the RTP and are implemented through the schedule of bus and light rail projects in the RPTA Transit Life Cycle Program (see Chapter Eight).

4.1.5 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 support the implementation of the RTP. The regional revenue sources are discussed in detail in Chapter Five.

4.2 PRIORITY CRITERIA

Arizona Revised Statute 28-6354 B. directs MAG to develop criteria that establish the priority of corridors, corridor segments, and other transportation projects. These criteria should consider: (1) the extent of local public and private funding participation; (2) the social and community impact; (3) the establishment of a complete transportation system for the region as rapidly as practicable; (4) the construction of projects to serve regional transportation needs; (5) the construction of segments to provide connectivity with other elements of the regional transportation system; and (6) other relevant criteria developed by the regional planning agency. The discussion below describes how these kinds of criteria have been applied in the MAG regional transportation planning process, both for the development and the implementation of the Regional Transportation Plan (RTP).
agency.

4.2.1 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:

- Generally, 30 percent for major street projects, bicycle and pedestrian projects. Under certain limited conditions, this requirement may be less depending on the type of Federal funds that may be utilized on a given project.

- For air quality and transit projects involving Federal funds, minimum Federal match requirements are 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.

In the Freeway/Highway Life Cycle Program, MAG recognizes that local jurisdictions may want to accelerate highway projects by providing the local jurisdiction's financial resources to the program. Acceleration of specific highway projects benefits not only the affected local jurisdiction, but also the entire region. To facilitate local financing that allows the acceleration of freeway/highway construction in the region, MAG has adopted a Highway Acceleration Policy. This policy includes a provision that 50 percent of the interest expense incurred by the local jurisdiction will be paid by regional program revenues.

4.2.2 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: A far reaching 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, and mobility disability 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 updating the Regional Transportation Improvement Program includes project air quality scores, which reflect the potential community impacts of the projects.

Consultation on Resource and Environmental Factors: As part of the planning process for the update of the Regional Transportation Plan (RTP), MAG reaches out to Federal, State, Tribal, regional, and local agencies to consult on environmental and resource issues and concerns. This effort includes consultation regarding conservation plans and maps, inventories of natural or historic resources, and potential environmental mitigation activities. Specific topics of interest include: land use management, wildlife, natural resources, environmental protection, conservation, historic preservation, and potential environmental mitigation activities. The primary goal of this consultation effort is to make transportation planning decisions and prepare planning products that are sensitive to environmental mitigation and resource conservation considerations.

4.2.3 Establishment of a Complete Transportation System for the Region

The RTP includes 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.

4.2.4 Construction of Projects to Serve Regional Transportation Needs

The resources to implement the RTP are drawn from regional revenue sources and address regional transportation needs. 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. These kind of criteria were applied when the RTP was originally developed in 2003 to evaluate alternatives and establish implementation priorities. They have also been applied in various forms to evaluate potential adjustments to the priority of corridors, corridor segments, and other transportation projects and services.

MAG continues to place emphasis on performance-based planning, and focuses on enhancing the ongoing transportation system performance monitoring and assessment program. The MAG performance measurement framework was developed with the participation of MAG's member agencies and will continue to be used as a key information source, as the implementation of the RTP moves forward. A major goal of the program is to coordinate study methodologies,

prioritize investments, and assess the implementation of strategies, in order to help ensure that projects serve regional transportation needs. A broad range of data supports analysis for multimodal planning and programming activities, and also provides the public with timely and relevant information on the performance of the multi-modal transportation system.

4.2.5 Construction of Segments that Provide Connectivity with other Elements of the Regional Transportation System

The phasing of the development of the transportation network has been 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 has been sequenced to result in a continuous and coherent network and to avoid gaps and isolated segments, bottlenecks and dead-end routes. The value of system segments that allow for the efficient connection of existing portions of the transportation system has been considered through the programming process.

4.2.6 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 regional plan that provides geographic balance 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.

4.3 REGIONAL TRANSPORTATION PLAN CHANGES AND OUTLOOK

The RTP is a long range plan for transportation improvements in the region, covering a period of over two decades. During a program of this length, new information will be obtained and changing conditions will be faced as the implementation effort proceeds. As a result, the RTP and the MAG Transportation Improvement Program (TIP) are revised periodically to reflect factors such as changes in travel patterns and transportation needs, updated project costs and schedules, and new projections of future revenues.

4.3.1 Plan Changes from Amendments to the MAG Transportation Improvement Program

The Transportation Improvement Program (TIP), by definition, is an element of the Regional Transportation Plan (RTP), describing in detail the projects and funding covering the early years of the RTP. As a result, any amendments to the TIP represent corresponding changes to the RTP. During FY 2016, amendments to the MAG TIP were made by the MAG Regional Council at the meetings listed below. On June 22, 2016, the MAG Regional Council also approved the new Fiscal Year 2017 – 2021 TIP. Details of these actions may be accessed on the MAG website at:

http://www.azmag.gov/Committees/Committee.asp?CMSID=1009 (see Meetings, Agendas and Minutes).

- August 26, 2015
- October 28, 2015
- January 27, 2016
- February 24, 2016
- March 23, 2016
- April 27, 2016
- May 25, 2016
- June 22, 2016

4.3.2 Amendment of the MAG 2035 Regional Transportation Plan for Revised Opening Dates of Light Rail Transit Projects.

On April 27, 2016, the MAG Regional Council approved an amendment to the MAG 2035 RTP to reflect changes in the opening dates of several light rail transit (LRT) projects and the addition of one light rail station. The air quality conformity analysis for this amendment was approved by the MAG Regional Council on June 22, 2016. The changes included:

- Northwest LRT/Phase II - Opening in 2023 from 2026.
- South Central LRT Corridor - Opening in 2023 from 2034.
- Capitol/I-10 West LRT - Project segmented into two phases: Phase I, Central/Jefferson to 17th Ave./Jefferson will continue to open in 2023; Phase II, 17th Ave. /Jefferson to 79th Ave. /Interstate 10 will open in 2030.
- 50th Street/Washington St. Station - Added LRT station to open in 2019.
- Tempe Streetcar - Opening in 2019 from 2018.

The schedule changes were due to the T-2050 program, which was approved by Phoenix voters with the passage of Proposition 104 in August 2015. The T-2050 program is a 35-year tax extension that would provide additional funding for light

rail expansion, additional bus routes and street improvements. The Tempe Streetcar project was deferred by one year as per the Valley Metro Transit Life Cycle Program (TLCP). This action will more closely align with the Federal Transit Administration (FTA) funding allocations and project delivery schedule.

4.3.3 Development of the Next Regional Transportation Plan Update

According to Federal planning regulations, the next update of the 2035 RTP must be approved through the MAG committee process no later than January 2018. The current target for MAG approval of the next update is June 2017, and it is anticipated that the planning horizon year of the RTP will be extended to 2040. One of major goals of the update will be to incorporate new Federal metropolitan transportation planning regulations from recent Federal transportation legislation into the planning process. A key requirement in the new planning regulations is the identification of transportation system performance measures and performance targets.

It is anticipated that the next iteration of the RTP will be a transitional update maintaining the existing Life Cycle Program structure, but incorporating federally required planning concepts, as appropriate. MAG staff efforts are focusing on the development of specific performance measures and targets for the transportation system in the MAG metropolitan planning area. A collaborative Performance Measures and Targets Advisory Group (PMTAG) has been created to gather input from MAG member agencies with respect to the requirements in the Metropolitan Planning and Asset Management Rules from the U. S. Department of Transportation.

CHAPTER FIVE

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.

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/High Capacity Transit Program; subsidize certain transit operating costs; and, in the form of transit farebox monies, contribute significant funding for transit operations.

A block of funding from state sources, the Statewide Transportation Acceleration Needs (STAN) Account, was available for a time but the remaining funds were discontinued in January 2009 by the legislature in order to balance the FY 2009 State Budget. Resources from another, non-recurring source were made available in early 2009 in the form of infrastructure funding from the American Recovery and Reinvestment Act (ARRA).

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 is applied when comparing project costs and revenues, which is included in the modal chapters. In these chapters, costs reflect currently available, real dollars estimates as of 2016, but may not have been specifically factored, in every case, to a 2016 base year. In addition, both actual and forecasted revenues have been updated from previous reports.

5.1 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 and went into affect on January 1, 2006.

The revenues collected from the half-cent sales tax extension are 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. Table 5-1 displays the actual and projected Proposition 400 half-cent sales tax revenues for the period FY 2006-2026. As specified in ARS 42-6105.E, 56.2 percent of all sales tax collections are 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.

As displayed in Table 5-1, actual receipts from the Proposition 400 half-cent sales tax have totaled $3.6 billion through FY 2016. Beginning in FY 2008, annual receipts steadily declined, with the year-over-year decreases for the three years from the end of FY 2007 through the end of FY 2010 equaling, respectively, 3.1, 13.7 and 8.9 percent. Beginning in FY 2011, receipts began to recover, with year-over-year increases for individual years between FY 2011 and FY 2016 ranging from of 3.4 to 7.0 percent. Most recently, collections for FY 2016 were 3.8 percent higher than those in FY 2015. Additionally, the collections for FY 2016 were only 1.5 percent higher than those in FY 2007. In addition, the current estimate of total 20-year revenues from the half-cent sales tax is approximately 41 percent lower than the estimate of $15.0 billion prepared before the effects of the 2007-2009 recession.

Future half-cent revenues for the period FY 2017 through FY 2026 are forecasted to total $5.1 billion. This amount is approximately 5.3 percent higher than the forecast for the same period in the 2015 Annual Report, due to a higher annual growth rate in revenues (5.2 versus 4.3 percent). Of the $5.1 billion total included in the current forecast, $2.9 billion will be allocated to freeway/highway projects; $538 million to arterial street improvements; and $1.7 billion to transit projects and programs. The actual receipts for FY 2016 ($397 million) were slightly lower than amount forecasted for that year in FY 2015 ($402 million). The Proposition 400 half-cent revenue forecasts will be updated again in the fall of 2016

TABLE 5-1
MARICOPA COUNTY TRANSPORTATION EXCISE TAX: 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%)		
Historical (2)				
2006 (1)	86.3	16.1	51.1	153.6
2007	219.7	41.1	130.2	391.0
2008	213.2	39.8	126.3	379.4
2009	184.0	34.4	109.0	327.4
2010	167.7	31.3	99.4	298.4
2011	173.3	32.4	102.7	308.4
2012	182.1	34.0	107.9	324.0
2013	192.0	35.9	113.8	341.7
2014	205.5	38.4	121.8	365.7
2015	214.8	40.1	127.3	382.2
2016 (3)	223.0	41.7	132.1	396.8
Subtotal	**2,061.8**	**385.2**	**1,221.6**	**3,668.6**
Forecasted				
2017	239.7	44.8	142.1	426.6
2018	253.8	47.4	150.4	451.6
2019	268.0	50.1	158.8	476.8
2020	281.8	52.7	167.0	501.5
2021	296.0	55.3	175.4	526.7
2022	310.0	57.9	183.7	551.6
2023	323.7	60.5	191.8	576.0
2024	338.5	63.2	200.6	602.3
2025	353.5	66.0	209.5	629.0
2026 (4)	215.1	40.2	127.4	382.7
Subtotal	**2,880.1**	**538.1**	**1,706.6**	**5,124.8**
Total				
Totals	**4,941.9**	**923.3**	**2,928.2**	**8,793.4**

(1) Represents Proposition 400 tax revenues, which began on January 1, 2006.

(2) Fiscal Year totals reflect the lag in actual receipt of revenues by the fund.

(3) Estimated subject to change.

(4) Reflects end of Proposition 400 half-cent sales tax on December 31, 2025.

At the end of the 2015 session of the Arizona Legislature, House Bill (HB) 2617 was passed, providing for the diversion of Proposition 400 sales tax funds for transportation to the Arizona Department of Revenue (DOR). Provisions in HB 2617 would direct over $2.5 million per year to offset DOR expenses associated

with collecting the tax, decreasing funds available for transportation improvements.

5.2 ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT) FUNDS

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.

5.2.1 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. 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 three percent is allocated to cities with populations over 300,000. For the purposes of revenue forecasting, total HURF funds are projected based on forecasted population and economic growth, assuming that there would no change in tax rates. Total forecasted HURF funds are 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, maintenance and debt service on outstanding bonds. This includes funds for the Motor Vehicle Division, department administration, highway maintenance and additional funding for DPS.

ADOT also receives federal transportation funds which are allocated to Arizona through various federal programs and allocation formulas. The remaining HURF funds are combined with the 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”.

5.2.2 ADOT Funding in the MAG Area

Table 5-2 summarizes ADOT funds applicable to projects in the MAG Regional Transportation Plan. As displayed in Table 5-2, actual receipts from ADOT Funds through FY 2016 totaled $2.8 billion, and forecasted revenues for the period FY 2017 through FY 2026 total $2.6 billion. This forecast is 10.9 percent higher than the 2015 Annual Report forecast for the same period. This increase reflects funding allocation adjustments in the ADOT FY 2017-2021 Five-Year Highway Construction Program. Revenue growth rates have also slightly increased over previous forecasts.

TABLE 5-2
ADOT FUNDING IN MAG AREA: FY 2006-2026
(Year of Expenditure Dollars in Millions)

Fiscal Year	15% Funds	ADOT Discretionary	Total Funding
Historical			
2006-07	149.7	262.5	412.2
2008	76.9	248.0	324.9
2009	60.5	156.3	216.8
2010	59.1	122.4	181.5
2011	59.5	230.9	290.4
2012	45.7	223.7	269.4
2013	60.7	244.7	305.4
2014	63.5	173.2	236.7
2015	69.0	199.4	268.4
2016	72.6	289.3	361.9
Subtotal	**717.2**	**2,150.5**	**2,867.7**
Forecasted			
2017	78.8	147.4	226.2
2018	74.6	185.9	260.4
2019	76.3	176.6	252.9
2020	79.2	178.8	258.0
2021	82.3	201.8	284.2
2022	85.4	174.7	260.1
2023	88.6	176.3	264.9
2024	92.0	180.1	272.1
2025	95.4	183.9	279.3
2026	98.8	187.7	286.6
Subtotal	**851.4**	**1,793.3**	**2,644.7**
Total			
Totals	**1,568.6**	**3,943.7**	**5,512.4**

The MAG area receives annual funding through the Arizona Department of Transportation (ADOT) in the form of 15 Percent Funds, which are allocated from the State Highway Fund to the MAG area. These funds are spent exclusively for improvements on limited access facilities on the State Highway System in the MAG area through the ADOT Five-Year Construction Program.

In addition, 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.

5.3 MAG AREA FEDERAL TRANSPORTATION FUNDS

In addition to the half-cent sales tax revenues and ADOT funding, federal transportation funding directed to the MAG region is available for use in implementing projects in the MAG Regional Transportation Plan. On December 4, 2015, President Obama signed legislation known as the 'Fixing America's Surface Transportation Act', or 'FAST Act′. The MAG area federal transportation funding forecasts included in 2016 Annual Report correspond to the programs as structured in the FAST Act. .

MAG area federal transportation funding sources are summarized in Table 5-3, which displays actual and forecasted revenues. *It is important to note that the federal funds estimates are only for those sources that are utilized in the Life Cycle Programs. Additional federal funds are received in the MAG region and applied to other transportation program areas, which are not covered by this report.* Total federal funding for the period FY 2017 through FY 2026 is forecasted to total $2.3 billion. This forecast is approximately 8.5 percent higher than the amount forecasted for the same period in the 2015 Annual Report.

5.3.1 Federal Transit Funds

The Federal Transit Administration (FTA) is an agency within the U.S. Department of Transportation that provides financial and technical assistance to local public transit systems, including buses and light rail transit. The federal government, through the FTA, provides financial assistance to develop new transit systems and improve, maintain, and operate existing systems. The FTA funding includes both formula and discretionary programs.

TABLE 5-3
MAG FEDERAL TRANSPORTATION FUNDS: FY 2006-2026
(Year of Expenditure Dollars in Millions)

Fiscal Year	Transit			MAG STP			MAG CMAQ				Grand Total
	FTA Formula	FTA Discr.	Total	Fwy/Hwy	Arterial	Total	Fwy/Hwy	Arterial	Transit	Total	
Historical											
2006	10.2	0.0	10.2	38.1	0.0	38.1	0.0	0.0	2.8	2.8	51.1
2007	15.7	7.8	23.6	42.3	0.0	42.3	0.0	0.0	0.4	0.4	66.2
2008	71.2	18.6	89.8	38.0	0.2	38.2	5.9	11.7	0.0	17.7	145.6
2009	26.8	8.9	35.7	34.4	17.5	51.9	0.0	16.3	2.4	18.7	106.4
2010	14.3	1.6	15.8	39.3	19.6	58.9	29.1	9.3	0.6	39.0	113.7
2011	26.9	1.2	28.1	33.9	39.4	73.2	4.3	3.5	5.6	13.3	114.7
2012	29.3	1.0	30.3	34.1	24.5	58.6	10.6	16.2	9.2	35.9	124.8
2013	21.8	18.2	40.0	34.1	24.1	58.2	8.2	24.4	10.0	42.6	140.8
2014	82.1	20.7	102.8	34.1	21.8	55.9	8.8	22.1	6.8	37.6	196.3
2015	15.0	29.6	44.6	33.7	8.4	42.1	8.6	6.0	11.8	26.4	113.2
2016	48.2	6.5	54.7	12.6	41.9	54.4	8.9	14.3	20.5	43.7	152.8
Subtotal	**361.6**	**114.1**	**475.7**	**374.5**	**197.3**	**571.8**	**84.4**	**123.7**	**70.1**	**278.1**	**1,325.6**
Forecasted											
2017	77.3	0.0	77.3	0.0	22.1	22.1	9.0	32.0	81.2	122.1	221.6
2018	76.2	19.9	96.1	0.0	38.9	38.9	9.1	11.2	24.9	45.3	180.2
2019	52.1	75.9	128.0	0.0	48.0	48.0	9.4	3.3	16.9	29.6	205.6
2020	82.7	70.1	152.9	0.0	43.3	43.3	9.6	2.2	19.2	30.9	227.1
2021	56.9	97.6	154.5	0.0	50.2	50.2	9.7	1.3	24.3	35.4	240.1
2022	30.3	139.6	169.8	0.0	39.5	39.5	9.9	1.4	31.8	43.1	252.4
2023	33.9	185.9	219.7	0.0	53.1	53.1	10.1	0.7	38.9	49.7	322.6
2024	59.0	61.8	120.7	0.0	46.7	46.7	10.3	6.1	38.9	55.2	222.7
2025	69.4	112.4	181.8	0.0	50.2	50.2	10.5	7.4	19.8	37.6	269.6
2026	23.0	67.2	90.2	0.0	56.2	56.2	10.7	7.5	15.0	33.2	179.6
Subtotal	**560.7**	**830.4**	**1,391.0**	**0.0**	**448.2**	**448.2**	**98.3**	**73.1**	**310.7**	**482.1**	**2,321.4**
Total											
Totals	**922.3**	**944.5**	**1,866.7**	**374.5**	**645.6**	**182.7**	**182.7**	**196.8**	**380.8**	**760.2**	**3,647.0**

Notes:
- Values in Table 5-3 represent use of federal funds in life cycle programs, only.
- Values in Table 5-3 represent obligation authority available during the fiscal year, except for FTA funds and CMAQ transit funds, which are the amounts actually expended.
- Forecasted STP and CMAQ revenues are based on a 94.6% Obligation Authority.

Formula Programs: Funding is apportioned to areas on the basis of legislative formulas. The formulas include factors such bus revenue vehicle miles, bus passenger miles, fixed guideway revenue vehicle miles, and fixed guideway route miles, as well as population and population density. The federal share is not to exceed 80 percent of the net project cost. The federal share may be 90 percent for the cost of vehicle-related equipment attributable to compliance with

the Americans With Disabilities Act and the Clean Air Act. The federal share also may be 90 percent for projects or portions of projects related to bicycles. The federal share may not exceed 50 percent of the net project cost of operating assistance.

A number of FTA funding programs that cover a range of uses fall into this category. Individual programs have specific restrictions regarding eligible expenditures. These programs include: (1) 5307/5340 Funds - capital and planning needs, as well as operating expenses in certain circumstances; (2) 5310 Funds - special needs of transit-dependent populations; (3) 5337 Funds - replacement and rehabilitation or capital projects required to maintain public transportation systems in a state of good repair; (4) 5339 Funds - capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities; and (5) STP-AZ Funds - STP Flexible Funds that ADOT makes available for transit purposes in urban and rural Arizona. It should be noted that STP-AZ funds are not included under Formula Programs in Table 5-3 but are listed separately in Table 8-3.

Discretionary Programs: 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 “New Starts” and expanded rail and bus rapid transit systems that reflect local priorities to improve transportation options in key corridors. The statutory match for New Starts funding is 80 percent federal and 20 percent local. However, for projects under a Full Funding Grant Agreement, FTA continues to encourage project sponsors to request a Federal New Starts funding share that is as low as possible.

Table 5-3 indicates that it is anticipated that a total of $561 million will be expended from the Formula Programs category and $830 million will be expended from the Discretionary Programs category during FY 2017 - FY 2026. The Formula Programs estimate increased by 10 while the Discretionary Programs remained largely unchanged for the same period in the 2015 Annual report.

5.3.2 Federal Highway Funds

The Federal Highway Administration (FHWA) is an agency within the U.S. Department of Transportation that supports state and local governments in the design, construction, and maintenance of the nation’s highway system and various federally and tribal owned lands. Through financial and technical assistance to state and local governments, the Federal Highway Administration is responsible for ensuring that America’s roads and highways continue to be among the safest and most technologically sound in the world. Funding mostly comes from the federal gasoline tax. FHWA oversees projects using these funds to ensure that federal requirements for project eligibility, contract administration and construction standards are adhered to. The FHWA funding programs

applicable to the MAG area are described below. Table 5-3 indicates the FHWA program funding levels forecasted for the period FY 2017 - FY 2026.

Surface Transportation Funds (STP): STP funds are the most flexible federal transportation funds and may be used for highways, transit or streets. During the period from FY 2017 through FY 2026, it is estimated that $448 million will be available from STP funds. This funding will be directed to the Arterial Life Cycle Program. This funding level is 2.9% lower than the 2015 Annual Report estimate for the same period. The decrease is attributable to the shift in appointment from STP to CMAQ in the Arterial Life Cycle Program to fund the Gilbert Road light rail extension.

Congestion Mitigation and Air Quality (CMAQ): 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 primarily to the MAG Region, due to the high congestion levels and major air quality issues in the area. MAG CMAQ funds are projected to generate $482 million from FY 2017 through FY 2026 for the Life Cycle Programs. This represents a 50 percent increase from the 2015 Annual Report estimate for the same period. A portion of the increase is attributable to the shift in apportionment from STP to CMAQ in the Arterial Life Cycle Program to fund the Gilbert Road light rail. A portion of this increase also stems from assumed inflationary increases by Valley Metro. Finally, the increase is also attributable to the reallocation of previously unused transit funding to the Gilbert Road light-rail extension. It is important to note that the CMAQ funds reported for the transit program represent anticipated expenditures. All other CMAQ funding represents forecasted amounts.

5.4 STATEWIDE TRANSPORTATION ACCELERATION NEEDS (STAN) ACCOUNT

During the spring 2006 legislative session, the Arizona Legislature provided $307 million to accelerate highway projects statewide, of which $184 million was allocated to the MAG region. On December 13, 2006, the MAG Regional Council approved a set of projects to be funded with these monies. In January 2009, any remaining STAN monies were used by the Legislature to help balance the FY 2009 State Budget. As a result, only $121 million in STAN funding was applied to projects in the MAG area. Subsequently, in the spring of 2009, certain projects that would have been funded by STAN monies on I-10 and I-17 were re-accelerated, as a result of funding from the American Recovery and Reinvestment Act. In addition, in FY 2014 through legislative action some STAN funding was restored to the MAG program, resulting in a program total of $141 million, including interest earnings.

5.5 AMERICAN RECOVERY AND REINVESTMENT ACT

The American Recovery and Reinvestment Act (ARRA) was signed by President Obama on February 17, 2009 and contains a national highway infrastructure component that provides approximately $350 million to the Arizona Department of Transportation (ADOT) for highway infrastructure improvements throughout Arizona. The ADOT Board determined that approximately $129 million of this amount would be spent on projects on the State Highway System in the MAG area. On February 25, 2009, the MAG Regional Council approved the projects to utilize these funds. The latest cash flow summary from ADOT (8/17/15) indicates that $112 million has been spent.

The ARRA also sub-allocated $105 million in funding to local jurisdictions in the MAG area for road and street improvements. On March 25, 2009, the MAG Regional Council approved allocation of these funds to MAG jurisdictions on the basis of a minimum allocation of $500,000, plus an allocation proportional to population. A total of $12 million from this allocation was utilized to provide funding for projects in the Arterial Life Cycle Program (ALCP), freeing up monies that can be applied later in the ALCP for other projects

In addition, the ARRA directed approximately $66 million in funding to the MAG area for transit projects. On March 25, 2009, the MAG Regional Council approved allocation of these funds to transit projects such as park-and-ride lots, maintenance facilities, transit centers, and bus stop improvements. Approximately $40 million of this funding was directed to the Transit Life Cycle Program.

5.6 REGIONAL REVENUES SUMMARY

Actual and forecasted regional revenue sources for the Life Cycle Programs between FY 2006 and FY 2026 are summarized in Table 5-4. Actual receipts from all regional revenue sources through FY 2016 total $8.1 billion. Future regional revenues are projected to total $10.0 billion for the period FY 2017 through FY 2026. Total revenues for the period FY 2006 through FY 2026 amount to $18.2 billion, which is slightly more (4.1 percent) than the estimate presented in the 2015 Annual Report.

In addition to the funding sources listed in Table 5-4, bonding and other debt financing assumptions, as well as allowances for inflation, are applied in each modal life cycle program. These amounts are listed in the respective modal chapters (see Chapters Six, Seven and Eight).

TABLE 5-4
REGIONAL REVENUES SUMMARY
(Year of Expenditure Dollars in Millions)

Sources	FY 2006 - 2016 Historical	FY 2017 - 2026 Forecast	Total
Proposition 400: Half Cent Sales Tax Extension	3,668.6	5,124.8	8,793.4
ADOT Funds	2,867.7	2,644.7	5,512.4
American Recovery and Reinvestment Act (Freeways) *	112.3	0.0	112.3
American Recovery and Reinvestment Act (Arterials) **	11.9	0.0	11.9
American Recovery and Reinvestment Act (Transit) ***	39.6	0.0	39.6
Statewide Transportation Acceleration Needs (STAN)	141.1	0.0	141.1
Federal Highway	850.0	930.3	1,780.3
Federal Transit Funds	475.7	1,391.0	1,866.7
Total	**8,166.8**	**10,090.8**	**18,257.7**

* Represents amount applied to FLCP projects only.

** Represents amount applied to ALCP projects only.

*** Represents amount applied to TLCP projects only.

CHAPTER SIX

FREEWAY/HIGHWAY LIFE CYCLE PROGRAM

The Freeway/Highway Life Cycle Program (FLCP) extends through FY 2026 and is maintained by the Arizona Department of Transportation (ADOT) to implement freeway/highway projects identified in the MAG Regional Transportation Plan (RTP). The program utilizes funding from the Proposition 400 half-cent sales tax extension, as well as funding from State and Federal revenue sources.

During FY 2016, cash flow modeling based on updated revenue forecasts and project cost estimates was conducted. This analysis indicated that program totals show positive ending balances for all years through FY 2026 and that there is a positive balance of approximately $787 million for the Regional Freeway and Highway Program through FY 2026. MAG and ADOT will continue to work together continuously to monitor and update estimated costs, revenues, and project schedules, as well as identify cost savings through value engineering, risk management, and enhanced project development coordination.

6.1 STATUS OF FREEWAY/HIGHWAY PROJECTS

The Freeway/Highway Life Cycle Program includes 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 existing and future system are addressed. Figure 6-1, as well as appendix Table A-1, provides information on the locations and costs associated with Freeway/Highway Life Cycle projects. The projects depicted in Figure 6-1 are cross-referenced with the data in the tables by the code associated with each project segment.

It should be noted that, beginning with the 2013 Annual Report, the freeway/highway facility segments listed in the appendix tables are revised somewhat compared to previous annual reports. The new segment definitions/limits correspond more closely to those utilized by ADOT's cost reporting system, and are being used to facilitate more accurate compilation of expenditure data and facility cost estimates.

In the discussion of project status below, the following abbreviations are used:

- DCR: Design Concept Report
- EIS: Environmental Impact Statement
- EA: Environmental Assessment
- CE: Categorical Exclusion
- T.I.: Traffic Interchange

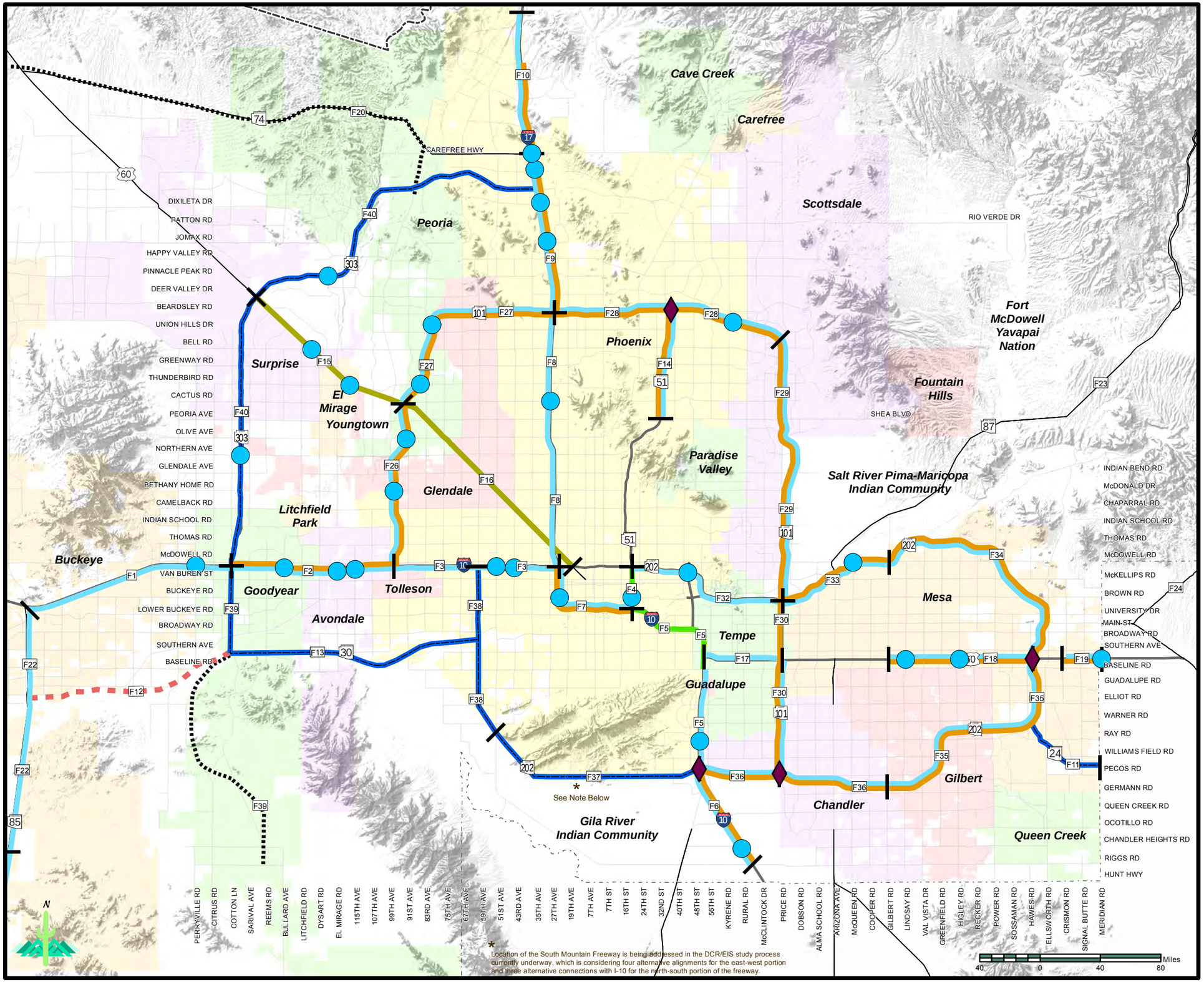

Figure 6-1

MARICOPA ASSOCIATION of GOVERNMENTS

MAG 2016 Annual Report on Proposition 400

Freeways/Highways

- New/Improved Traffic Interchange
- New High Occupancy Vehicle Ramp Connection
- New Freeway/Highway Construction
- New General Purpose Lanes
- New High Occupancy Vehicle Lanes
- Grand Avenue Corridor Improvements
- Corridor Capacity Improvements
- Interim Corridor Development
- Right of Way Preservation
- Existing Freeway
- Project Segment Separators
- Highways
- Other Roads
- County Boundary

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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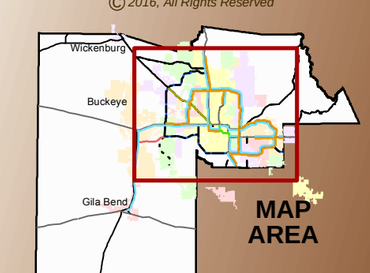

While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.

6.1.1 New Corridors

SR-153 (Sky Harbor Expressway):

- On July 25, 2007, the MAG Regional Council deleted SR-153/Sky Harbor Expressway from the RTP, and shifted the funding to improvements on SR-143/Hohokam Expressway. This action was taken in accordance with the requirements of Arizona Revised Statute (A.R.S.) 28-6353 and met applicable Federal air quality conformity requirements. In October 2007, the State Transportation Board approved deleting SR-153 from the Arizona State Highway System and transferring the facility to the City of Phoenix as 44th Street.

Loop 202 (South Mountain Freeway):

- Overview - The South Mountain Freeway is planned as a freeway loop facility south of the central area of the region, connecting the western terminus of the Santan Freeway in the East Valley with I-10 at 59th Avenue in the West Valley for 22-miles. It is planned for three general purpose lanes and one HOV lane in each direction. Loop 202/South Mountain Freeway is located entirely within the City of Phoenix.

- DCR/EIS - A DCR/EIS has been completed for the South Mountain Freeway corridor. The Draft EIS was completed in April 2013. The public hearing for the project was held on May 21, 2013 at the Phoenix Convention Center, followed by several community meetings in Ahwatukee, Chandler, and Laveen, and on the Gila River Indian Community. The final EIS was released to the public on September 26, 2014. The Record of Decision (ROD) by the Federal Highway Administration was published to the public through the Federal Register on March 13, 2015. The ROD selected a build alternative, which will run east and west along Pecos Road and then turn north between 55th and 63rd Avenues, connecting with Interstate 10 on each end. There was a contestability period which ended on August 10, 2015. The ROD was in litigation in the U.S. District Court for the District of Arizona. The project litigation has concluded and the ROD was upheld on August 19, 2016.

- I-10/Maricopa to 51st Ave. - ADOT and MAG worked closely with the Gila River Indian Community (GRIC) regarding the possibility of locating a portion of the corridor on the GRIC. The concept was presented to the Community in the fall of 2010 and a community-wide referendum was held on February 7, 2012. Based on the result of the referendum, there is no longer consideration of placing the freeway within the GRIC boundary. The alignment selected by FHWA in the ROD for this segment of Loop 202 is located along Pecos Rd between Interstate 10 and 17th Avenue. West of this point, the selected alignment is located along the GRIC boundary with the City of Phoenix to 51st Avenue.

- 51st Avenue to I-10/Papago - The portion of the roadway alignment that initially selected in 2007 to be along 55th Avenue, between Lower Buckeye Rd and Interstate 10, was shifted to align along on 59th Avenue in 2010. Within the vicinity of Dobbins Road, ADOT, MAG, and FHWA have made localized alignment shifts to avoid several historic properties in the area. The selected alignment in the ROD in 2015 continues to follow the 59th Avenue alignment.

- Public Private Partnership (P3) - On February 22, 2013, ADOT received an unsolicited proposal to design-build-finance the entire 22-miles of the South Mountain Freeway. Following Arizona's P3 statutes, a comprehensive review of the unsolicited proposal was completed by ADOT, with assistance from MAG and FHWA. On July 31, 2014, it was announced that the South Mountain Freeway would be delivered as a single P3 Design-Build-Maintain project. A Request for Qualifications was released on October 15, 2014 and five developers responded. Following an evaluation process, a shortlist of three developers was announced on March 19, 2015. A draft Request for Proposals (RFP) was released for industry review on April 9, 2015 and the Final RFP was released June 12, 2015.

  Proposals from the three shortlisted developers were received on November 2, 2015. Following an evaluation period, ADOT announced the apparent best value proposer on December 28, 2015. The selected team was Connect 202 Partners, which consists of Fluor Enterprises Inc., Granite Construction Co., and Ames Construction Inc., with Parsons Brinckerhoff Inc. as the lead designer. Following a negotiation period, the design-build-maintain contract was signed on February 26, 2016. Final design is underway and construction activities will begin summer of 2016 with a completion target of late 2019. This completion date is three-years ahead of previous schedules for the Loop 202/South Mountain Freeway facility.

Loop 303 (Estrella Freeway):

- Overview - Loop 303 is planned as a six-lane freeway facility extending west from I-17 at Lone Mountain Road, swinging southwest to Grand Ave., running south in the vicinity of Cotton Lane to I-10, and then to SR-30. Right-of-way preservation south to Riggs Road is also part of the plan. Loop 303 is located in the Cities of Phoenix, Peoria, Surprise, Glendale, and Goodyear, and unincorporated Maricopa County.

- I-17 to Happy Valley Road - Construction has been completed on a first-phase four-lane divided roadway and opened to traffic in May 2011. Upgrading this facility to a six-lane freeway, including construction of the full system interchange at I-17, has been shifted beyond FY 2026 and remains in the MAG Regional Transportation Plan.

- Happy Valley Road to US-60/Grand Avenue – A first-phase four-lane divided roadway was completed between US-60 and Happy Valley Road by Maricopa County in 2004, and full freeway right-of-way was also acquired along most of this segment. A DCR/CE was completed in April 2010, covering construction of a full freeway facility in the corridor. Preliminary design was completed in 2012.

  At the end of FY 2013, the project was advanced to take full advantage of available Federal highway funding. A design-build project to complete the six-lane freeway was advanced in the MAG and ADOT programs, and funding for construction was identified for FY 2013. A design-builder was selected and the contract was awarded. The construction project was completed in July 2015. A separate project to construct a grade-separated interchange at El Mirage Road was completed in July 2016.

- US-60/Grand Ave Interchange - Preliminary design of a first-phase interchange at Loop 303 and US-60/Grand Avenue was completed in spring 2011. Final design was completed, using the construction manager at risk (CMAR) method of project delivery. The CMAR was selected in early 2013, and the project was completed in June 2016.

- US-60/Grand Avenue to I-10 – A first-phase two-lane roadway was constructed in the 1990's by ADOT. A DCR and EA on the segment for construction of a freeway facility were completed in 2009, and a "Finding of No Significant Impact" issued. Construction of this Loop 303 segment began in 2011 and finished in 2015.

  Construction of crossroad improvements in anticipation of future traffic interchanges at Bell Road, Waddell Road, and Cactus Road was completed in March 2011. Construction of the Peoria Avenue to Mountain View Boulevard and Thomas Road to Camelback Road segments were completed in November 2013; the Glendale Avenue to Peoria Avenue segment in February 2014, including the Northern Parkway system interchange; and the Camelback Road to Glendale Avenue segment in January 2015. First phase construction of the I-10 System TI, representing the northern half of the interchange, was also completed in January 2015.

  A project to complete the southern half of the I-10 system interchange was added to the program for delivery in FY 2016. Design for this project was programmed in FY 2013. Construction started in February 2016 with completion scheduled for the fall of 2017.

  Landscaping projects are being completed after the roadway construction projects throughout the entire segment. Landscaping has been completed on

all segments except the I-10 Phase 1 TI and the US-60 TI, with estimated completion in 2017 and 2018, respectively.

- I-10 to SR-30 - A DCR/EA is scheduled for completion in summer of 2017, covering construction of a full freeway facility in the corridor. Construction of this segment was previously shifted beyond FY 2026; but has returned to the Proposition 400 program with funding for design in 2019 and some construction programmed as early as FY 2023.

- SR-30 to Riggs Rd. - A location DCR and environmental overview for a freeway concept has been started; but work is currently on-hold. Right-of-way protection for this segment was shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

SR-30 (I-10 Reliever):

- Overview - The I-10 Reliever (SR-30) is planned as a parallel east-west facility south of I-10 in the vicinity of Southern Avenue, extending from Loop 202/South Mountain Freeway (Loop 202) to SR-85. The route is identified as a six-lane freeway between Loop 202 and Loop 303; and as an arterial roadway, with right-of-way preservation for a future freeway facility, between Loop 303 and SR-85. SR-30 is located in the Cities of Buckeye, Goodyear, Avondale, and Phoenix, and unincorporated Maricopa County. Construction of SR-30 has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

- DCR/EA - A DCR and EA are underway on the segment between Loop 202 and Loop 303, and are targeted for completion in 2018. A location study for the segment between Loop 303 and SR-85 has been placed on hold pending determination of the SR-30/Loop 303 system traffic interchange location.

SR-24 (Gateway Freeway):

- Overview - The Gateway Freeway (formerly Williams Gateway) is planned as a six-lane freeway extending from Loop 202/Santan Freeway to the Phoenix-Mesa Gateway Airport, and east to the Pinal County line at Meridian Road. ADOT is conducting additional study for extending SR-24 into Pinal County to US-60 and SR-79 in the Gold Canyon area. In Maricopa County, SR-24 is located in Mesa.

- DCR/EA - A DCR and EA between Loop 202 and Ironwood Road (logical terminus one-mile east of Meridian Road) have been completed and a Finding of “No Significant Impact” has been received.

- Loop 202 (Santan) to Ellsworth Road – Construction of an first-phase four-lane divided roadway was completed in June 2014 representing the first mile

of SR-24. Final freeway construction on this segment has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

- Ellsworth Road to Meridian Road - The City of Mesa has requested advancement of an first-phase roadway concept for the next three-miles of SR-24. A DCR and environmental document is underway to define a first-phase facility from Ellsworth Road to Ironwood Road. Construction of a first-phase facility is not yet programmed in the RTP. Final construction of this segment has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

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

- SR-74 - Funding for right-of-way protection on SR 74 has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

- Loop 303 (MC-85 to Riggs Road) - Funding for right-of-way protection has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

6.1.2 Widen Existing Facilities: General Purpose Lanes and HOV Lanes

Interstate 10 (Papago and Maricopa Freeways):

- Overview - Additional general purpose lanes have been identified for construction along essentially the entire length of I-10, between State Route 85 in Buckeye and Riggs Road on the Gila River Indian Community (no additional lanes are planned between I-17 and SR-51). HOV lanes will also be added along several segments to provide continuous HOV service along I-10, between Loop 303 in Goodyear and Riggs Road on the Gila River Indian Community.

- SR-85 to Verrado Way – A DCR and CE were completed in April 2006 to add one general purpose lane in each direction. Funding for the design and construction of the improvements has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

  Safety issues with the interchanges at Watson Road and Miller Road and I-10 have also been identified. Due to the safety issues, construction of improvements to both interchanges could be advanced before FY 2026 should funding become available.

- Verrado Way to Sarival Avenue - Construction of one general purpose lane in each direction between Verrado Way in Buckeye and Sarival Avenue in

Goodyear, for a distance of five-miles, was completed in summer 2011. This segment now has three general purpose lanes in each direction.

- Sarival Avenue to Loop 101 (Agua Fria) - Construction work to add one HOV lane and one general purpose lane in each direction in the median of I-10 was completed in June 2010. The addition of one general purpose lane in each direction along the outside of the facility between Sarival Avenue and Dysart Road was completed in summer 2011. This segment now has four-general purpose lanes and one HOV lane in each direction, for a distance of eight-miles, between Sarival Avenue in Goodyear and Loop 101 in Avondale, Phoenix, and Tolleson.

- Loop 101 (Agua Fria) to I-17 - A DCR/EA is on-hold pending completion of the I-10 and I-17 Corridor Master Plan (the Spine Study). Improvements from 43rd Avenue and 75th Avenue will be constructed as part of the South Mountain Freeway P3 project to facilitate the proposed system interchange with Loop 202. Funding for these improvements is programmed in FY 2019. Improvements in this section will also consider the possibility of a future light rail extension along I-10 in this segment.

- SR-51 (Piestewa) to 32nd Street – In previous proposals, a local-express lane project was envisioned for this segment of Interstate 10, and ADOT was in the process of developing a DCR and EIS for this proposal. In 2012, at the request of MAG and its member agencies, this proposal was cancelled as the concepts were starting to exceed the funding capabilities of the project as envisioned in the Regional Transportation Plan. In 2014, MAG, in partnership with ADOT and FHWA, began an Interstate 10/Interstate 17 Corridor Master Plan to identify the long-term vision for a 35-mile freeway segment between the Loop 101 North Stack and Loop 202 Pecos Stack traffic interchanges. This freeway segment represents the transportation Spine of Metro Phoenix as approximately 40 percent of all daily freeway traffic finds its way on this corridor. Corridor master plan recommendations are expected in June 2017.

  As the Corridor Master Plan represents the long-term vision for this segment of Interstate 10, a Near Term Improvement Strategy for developing “spot improvements” has been established for addressing current traffic bottlenecks. A feasibility study and environmental document to restripe I-10 from I-17 to US-60 (Superstition) is underway for adding an extra lane in the outbound direction of the freeway from Downtown Phoenix. Construction funding for this improvement has not been programmed.

- 32nd Street to Loop 202 (Santan-South Mountain) – As noted above in the previous segment, efforts for the long-term vision of the corridor are now underway in establishing a Corridor Master Plan for Interstate 10. Results from this Corridor Master Plan are expected in summer 2017.

The Near Term Improvement Strategy for this segment of Interstate 10 consists of collector-distributor roads eastbound between SR-143 to US-60 and braided ramps westbound from US-60 to SR-143 to eliminate the present severe traffic weave that limit capacity between the two system interchanges. The project also identifies adding a general purpose lane in each direction from US-60 to Loop 202 (Santan-South Mountain). ADOT completed a DCR for this strategy in 2015. Construction funding for this improvement is programmed after 2020, but could be accelerated to an earlier date if funding is available.

- Loop 202 (Santan-South Mountain) to Riggs Road - A project to construct one general purpose lane and one HOV lane in each direction between Loop 202 (Santan-South Mountain Freeways) and Riggs Road is programmed for FY 2021. Upon completion, this segment will have a total of three general purpose lanes and one HOV lane in each direction.

Interstate 17 (Black Canyon Freeway):

- Overview - Construction of additional general purpose lanes has been identified for I-17 between I-10 (Maricopa or "Split" interchange) 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 the entire stretch of I-17 from I-10 to Anthem Way. Interstate 17 is located within the City of Phoenix and unincorporated Maricopa County.

- New River Road to Anthem Way - Construction of one general purpose lane in each direction on this segment has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP. Upon completion, this segment will have a total of three general purpose lanes in each direction. In 2006, ADOT completed a DCR to construct additional lanes from Loop 101 to Black Canyon City, as well as an EA for additional lanes between Loop 101 and New River Road. The New River Road to Anthem Way project and the following two projects were initiated as a result of that study.

- Anthem Way to SR-74/Carefree Highway - The addition of one general purpose lane in each direction, using ARRA funding, was completed in May 2010 for a total of three general purpose lanes in each direction. A project to convert the pavement to PCCP and add one HOV lane in each direction has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

- SR-74/Carefree Highway to Loop 101 (Agua Fria) - Construction work was completed in May 2010 to add one general purpose lane and one HOV lane in each direction. With completion of this project, this segment has three general purpose lanes and one HOV lane in each direction. The interval

between Pinnacle Peak Rd. and Loop 101 includes additional lanes for exiting/merging traffic to/from Loop 101.

Design memoranda, schematic 30% plans, and categorical exclusions CEs) for reconstruction of the Happy Valley Road TI and Pinnacle Peak Road TI have been prepared. Review and approval of the CEs by FHWA is subject to project programming. The Happy Valley TI also requires FHWA approval of a change-of-access report, which is also subject to CE approval. Implementation of the Pinnacle Peak Road TI also includes the addition of a general purpose lane in each direction. Design funding was identified in the Transportation Improvement Program in FY 2016 for the Happy Valley Road TI and the general purpose lane. However, the construction phase of the projects has not yet been programmed.

- Loop 101 to I-10/Maricopa Freeway – In previous proposals, additional lanes were considered for this segment of Interstate 17, and ADOT was in the process of developing a DCR and EIS for this proposal. In 2012, at the request of MAG and its member agencies, this proposal was cancelled to consider different concepts for the corridor. In 2014, MAG, in partnership with ADOT and FHWA, began an Interstate 10/Interstate 17 Corridor Master Plan to identify the long-term vision for a 35-mile freeway segment between the Loop 101 North Stack and Loop 202 Pecos Stack traffic interchanges. This freeway segment represents the transportation Spine of Metro Phoenix as approximately 40 percent of all daily freeway traffic finds its way on this corridor. Results from the Corridor Master Plan are expected in summer 2017.

  A Near-Term Improvement Strategy has been developed to address known bottlenecks along Interstates 10 and 17 in the Spine corridor. A new Project Assessment/CE was commissioned in late 2014 to study adding auxiliary lanes in both directions from 16th Street to 19th Avenue. The study was completed in November 2015. Design funding was programmed in FY 2016. Implementation is subject to integration into the Corridor Master Plan.

  In addition, the Near-Term Improvement Strategy for Interstate 17 identifies an Active Traffic Management (ATM) System between the Interstate 10 Stack and Loop 101 North Stack traffic interchanges. This system will consist of variable speed limits, lane controls, adaptive ramp metering, and wrong-way driver detection to improve and protect the traffic flow along the freeway during peak operations. Modeling results suggest that this ATM system will provide additional capacity along Interstate 17 by reducing the potential for congestion shockwaves and improving first-responder capabilities in attending to incidents. A Concept of Operations plan for the I-17 ATM will be completed by the end of 2016.

SR-51 (Piestewa Freeway):

- Overview - Construction of additional general purpose lanes and HOV lanes has been identified for the stretch of SR-51 between Shea Boulevard and Loop 101.

- Loop 101 to Shea Blvd. - The project to construct the HOV lanes, including ramps at the system interchange between SR-51 and Loop 101, has been completed and was opened to traffic in January 2009, resulting in a cross section of three general purpose lanes and one HOV lane in each direction. The project to construct one additional general purpose lane in each direction has been shifted beyond FY 2026 but remains within the FY 2035 planning horizon of the RTP.

US-60 (Grand Ave):

- Overview - A series of improvement projects have been identified for construction along various segments of US-60/Grand Avenue between Loop 303 and McDowell Rd., including the addition of general purpose lanes, grade separations and other improvements. With completion of the projects between Loop 303 and 83rd Avenue, described below, Grand Avenue is now six-lanes from Van Buren Street in Phoenix to Loop 303 in Surprise. This portion of US-60 is located in the Cities of Surprise, El Mirage, Youngtown, Peoria, Glendale and Phoenix, and the Sun Cities areas of unincorporated Maricopa County.

- Loop 303 to 99th Avenue - A project to widen US-60 to six lanes between Loop 303 and 99th Avenue was completed in June 2011. A feasibility study on potential grade separation projects on Grand Avenue between Loop 303 and Loop 101 was completed in January 2009 and funding for construction is programmed, beginning this fiscal year.

- US-60/Grand Avenue at Bell Road and Thunderbird/Thompson Ranch Road Intersections - DCRs and EAs for intersection improvements at Bell Road in Surprise and at Thunderbird Road in El Mirage, on US-60/Grand Avenue, were completed in January 2015 and August 2014, respectively. The final design for the Thunderbird Road project was completed in March 2016, and the construction was awarded in May 2016 with an anticipated completion in summer 2017. Bell Road intersection improvement project is currently under construction with an anticipated completion in the spring of 2017. It was bid as a design-build project and awarded in January 2016.

- 99th Avenue to 83rd Avenue - A project to widen US-60/Grand Avenue to six lanes between 99th Avenue and 83rd Avenue was completed in June 2011.

- Loop 101 to McDowell Road - A DCR/CE for roadway improvement projects between Loop 101 and McDowell Rd. was finalized in October 2008, and design work was completed in 2012. The project was split for construction, and the Peoria segment, from Loop 101 to 71st Avenue, was completed in August 2013. The Glendale/Phoenix segment, from 71st Avenue to Van Buren Street, was completed in August 2014. Funding for additional roadway improvements along this segment had been programmed in FY 2014, but was deleted from the program. Potential grade separation projects identified for this segment have been shifted beyond FY 2026 but remain within the FY 2035 planning horizon of the RTP.

- Loop 303 to Willetta Avenue – In addition to the Proposition 400 efforts, a long-range vision for US-60/Grand Avenue was finished in 2015 by MAG and its planning partners for this segment under ADOT jurisdiction. The Corridor Optimization, Access Management Plan, and System Study (COMPASS) was developed and identifies the long-term plan for US-60. Study results identify an access management plan to reduce private property access currently at 427 locations down to 215 locations over-time; the opportunity to eliminate ten at-grade crossings of the adjacent BNSF Railway to improve intersection operations; and an additional twelve grade-separated traffic interchanges throughout the corridor to accommodate 2040 travel demand. Presently, the COMPASS recommendations are considered long-term investment concepts for US-60.

US-60 (Superstition Freeway):

- Overview - Widening projects have been identified for construction 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 Meridian Road. The Superstition Freeway is located in the Cities of Tempe and Mesa.

- I-10 to Loop 101 - Construction of one additional general purpose lane in each direction was completed in May 2010, resulting in a cross-section of four general purpose lanes and one HOV lane in each direction along this segment.

- Gilbert Rd. to Power Rd. - Construction work on the addition of both general purpose and HOV lanes from Gilbert Road to Power Road was completed and was opened in June 2007. As a result, the entire segment of the Superstition Freeway between Loop 101 and Loop 202 has five general purpose lanes and one HOV lane in each direction.

- Crismon Road to Meridian Road - A project to add one additional HOV lane and one additional GP has been programmed in FY 2020. Study work began

in FY 2014 and will take approximately two years to complete. Design is programmed in FY 2018, with construction in FY 2020.

SR-74:

- Passing Lanes - Projects for the construction of passing lanes along mile-post segment 20-22, and mile-post segment 13-15, were completed in fall 2010 and summer 2011, respectively.

SR-85:

- Overview - Plans call for the widening of SR-85 to a four-lane, divided roadway between I-10 and I-8. With the completion of the projects noted below, a four-lane divided roadway has been completed from 2½ miles north of Gila Bend to I-10.

- I-10 to Southern Avenue - Construction to provide four lanes between I-10 and Southern Ave. was completed in fall 2010.

- Southern Avenue to MC-85 - Construction of frontage roads between Southern Ave. and MC-85 was completed in May 2008.

- Mile-post 130 to Mile-post 137 - Construction of a four-lane divided roadway between Mile-post 130 and Mile-post 137 was completed in January 2010.

- SR-85/B-8/Maricopa Rd. Intersection - The project includes construction of a new, elevated intersection at State Route 85 (Pima St.) and Business Route 8 (B-8), a wider bridge over the Union Pacific Railroad, and realigning both State Route 85 (Pima St.) and Maricopa Road. Construction began in February 2011 and was completed in late 2012.

SR-87:

- Overview - Since identification of the original concepts for corridors in the RTP, projects were added on SR-87 to refine roadway cross-section and provide for turning movements at a high volume recreational location.

- Forest Boundary to New Four Peaks - A project for improvements between Forest Boundary and New Four Peaks Road, including an interchange at Bush Highway, was completed in late 2008.

- New Four Peaks Road to Dos S Ranch Road – Reconstruction of the southbound lanes, construction of a climbing lane and shoulder widening between New Four Peaks Road and Dos S Ranch Road were completed in May 2011. This project included the erosion control and shoulder

improvements between MP 211.8 and MP 213.0 and that were completed in summer 2011.

US-93 (Wickenburg Bypass):

- A bypass of downtown Wickenburg was completed September 2009. This four-lane facility is the realignment of US-93 and includes roundabout traffic intersections at Tegner Street and US-60.

Loop 101 (Agua Fria, Pima, and Price Freeways):

- Overview - Additional general purpose lanes and HOV lanes have been identified for construction along most of the length of Loop 101. Only additional HOV lanes are planned between the Red Mountain Freeway and Baseline Rd.

- Van Buren Street to I-10 (99th Avenue) - A project to provide improvements along 99th Avenue between I-10 and Van Buren Street at the southern terminus of Loop 101/Agua Fria was completed in spring 2011.

- I-10 (Papago Freeway) to Tatum Boulevard - A project to construct one HOV lane in each direction from I-10 (Papago) to Tatum Boulevard was advanced into FY 2010. This project combined three HOV segments originally identified for construction between FY 2013 to FY 2015 into a single design/build project. The construction of this 39-mile segment, which includes a general-purpose lane in each direction at the I-17 TI, started early in 2011 and was completed in fall 2011. This completes the installation of HOV lanes on Loop 101 from the Papago Freeway in west Phoenix to the Santan Freeway in Chandler. Installation of freeway management system equipment on the Pima Freeway between I-17 and SR-51 was completed in January 2010.

- I-17 to Pima Road-Princess Drive - A DCR/CE for GP lanes in this segment was started in FY 2013 and was completed in June 2016 Design work is currently planned for FY 2020. Construction between SR-51 and Pima Road-Princess Drive, and between I-17 and SR-51, are planned in FY 2021 and FY 2024, respectively.

- Tatum Boulevard to Pima Road-Princess Drive - Construction of HOV lanes from Tatum Boulevard to Princess Drive on the Pima Freeway was completed in August 2009.

- Pima Road-Princess Drive to Loop 202 (Red Mountain Freeway) - The construction of HOV lanes on the Pima Freeway between Pima Road-Princess Drive and Via De Ventura was completed in June 2009. HOV lanes between Via De Ventura and Loop 202/Red Mountain were completed in November 2008. In addition, a DCR/CE for general purpose lanes on the

Pima Freeway between Princess Dr. and Loop 202 was completed in summer 2010. Preliminary design of the GP lanes between Shea Boulevard and Red Mountain Freeway was completed in spring 2012. Final design was completed in 2014, and the project was advertised and awarded in spring 2014. Construction began in August 2014 and is expected to be completed late in 2016.

- Loop 202 (Red Mountain Freeway) to Loop 202 (Santan Freeway) - On the Price Freeway, HOV lanes were completed between Loop 202/Red Mountain and Loop 202/Santan in October 2009.

- Baseline Road to Loop 202 (Santan Freeway) - A DCR and EA to add a fourth general purpose lane in each direction was started for this project in 2014. Completion of the study is expected in late 2016. Final design of this segment is planned in 2021, with construction scheduled in 2023.

Loop 202 (Red Mountain and Santan Freeways):

- Overview - Construction of additional general purpose and HOV lanes has been identified for construction along essentially the entire length of Loop 202. The segment of the Red Mountain Freeway from SR 51 to Loop 101 had HOV lanes prior to Proposition 400.

- SR-51 to Loop 101 -. Construction of a project to widen the Red Mountain Freeway between State Route 51 and Loop 101 was completed through a design/build contract in July 2010. This project added one general purpose lane eastbound between SR-51 and Loop 101, and one general purpose lane westbound between Loop 101 and Scottsdale Rd.

- Loop 101 to Gilbert Rd (on Red Mt. Freeway) - Construction was completed on one HOV lane in each direction on the Red Mountain Freeway between Loop 101/Pima-Price Freeways and Gilbert Road in July 2010. A DCR/CE to construct one additional general purpose lane in each direction in this segment was completed in October 2012 and 30% design was completed in July 2013. A design-build project to construct the additional lane was advanced in the MAG and ADOT programs to FY 2013 to take full advantage of available Federal highway funding. The project will also include the construction of HOV lanes between Gilbert Road and Broadway Road. Construction began in October 2014 and was completed in February 2016.

- Gilbert Road (on Santan Freeway) to I-10 (Maricopa Freeway) - A project to construct one HOV lane in each direction from Gilbert Rd. to I-10 on the Santan Freeway was advanced into FY 2010. This project combined two HOV segments originally identified for construction between FY 2013 to FY 2015 into a single design/build project. The project was completed in fall

2011, and included construction of direct HOV ramp connections at the freeway-to-freeway interchanges with Loop 101 and I-10.

- Gilbert Road (on Red Mountain Freeway) to Gilbert Road (on Santan Freeway) - A DCR/CE to construct HOV lanes on the remainder of Loop 202 between Gilbert Rd. (at Red Mt. Fwy.) and Gilbert Rd. (at Santan Fwy.) was completed in August 2010. A Categorical Exclusion was approved by FHWA on the project in April 2010. As discussed above, construction of the HOV lanes between Gilbert Rd. and Broadway Rd. (on the Red Mountain Freeway) is included in the design-build project that began construction in October 2014.

6.1.3 New Interchanges and New HOV Ramps on Existing Facilities

New Interchanges at Arterial Streets:

- Overview - The RTP identifies a total of thirteen new traffic interchanges (T.I.s) to be constructed on existing freeways at arterial street crossings. These projects are located 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).

- Bullard Road - A new traffic interchange along I-10 in the City of Goodyear was completed in FY 2008.

- Bethany Home Road - A new traffic interchange along Loop 101 (Agua Fria Freeway) in the City of Glendale was completed in FY 2008.

- Jomax Road / Dixileta Drive - New traffic interchanges on I-17 in the City of Phoenix were opened to traffic in September 2008.

- SR-74/Carefree Highway - The reconstruction of the traffic interchange at I-17 was completed and opened to traffic in October 2008. This project is located in the City of Phoenix and unincorporated Maricopa County.

- 64th Street - The construction of a new traffic interchange at Loop 101(Pima Freeway) was completed in October 2008. The City of Phoenix has recently connected 64th Street to Mayo Boulevard.

- Dove Valley Road/Sonoran Boulevard - A new traffic interchange at I-17 was completed in January 2010, and was opened to traffic in fall 2013 to coincide with the completion of Dove Valley Road by the City of Phoenix.

- Beardsley Road/Union Hills Road - The widening of the Union Hills Road traffic interchange bridge at Loop 101 was accelerated from FY 2012 to FY 2009, allowing the project to be constructed concurrently with a project for a

Beardsley Road connector with Loop 101. Construction was completed in May 2011. This project is located in the Cities of Peoria and Glendale.

- Perryville Road - A DCR/CE for a new traffic interchange at I-10 was completed in 2012. Funding for construction was programmed in FY 2013. Contractor selection for this design-build project was completed in fall of 2013, and construction was completed in February 2015. This project is located in the Cities of Buckeye and Goodyear.

- Fairway Drive (previously identified as El Mirage Rd) - Funding for construction of a new traffic interchange at I-10 is programmed in FY 2023. A DCR/CE for the project was completed in September 2014. Design and Right of Way funds are programmed in FY 2015, with construction in FY 2023. The final design consultant was selected in May 2015 and final design is now underway. This project is located in the City of Avondale.

- Chandler Heights Rd. - Funding for construction of a new traffic interchange along I-10 on the Gila River Indian Community is programmed in FY 2022.

- Mesa Drive - Funding for construction of ramps to/from the west on Loop 202 (Red Mountain Freeway) in the City of Mesa was moved beyond FY 2026 and is included in FY 2030 in the RTP Potential grade separation projects identified for this segment have been shifted beyond FY 2026 but remain within the FY 2035 planning horizon of the RTP.

- Lindsay Road - Funding for construction of ramps to/from the west on US-60 in the City of Mesa was moved beyond FY 2026 but remain within the FY 2035 planning horizon of the RTP. .

- Meridian Road - Preliminary engineering studies were completed in FY 2013. Design of a project to construct a half-diamond interchange with access to/from the west along US-60/Superstition Freeway in Mesa and Apache Junction was completed in spring 2014. Construction began in October 2014 and was completed in December 2015.

- El Mirage Road - A project to design a grade-separated interchange at El Mirage Road and Loop 303 in unincorporated Maricopa County, near Surprise and Peoria, has been funded for FY 2014. Final design was completed in spring 2014. Construction began in February 2015, with completion in June 2016.

New Direct HOV (DHOV) Ramps at Existing Freeway-to-Freeway Interchanges:

- Overview - The RTP identifies a total of six locations at freeway-to-freeway interchanges on existing freeways where HOV ramps (DHOV ramps) will be constructed to provide a direct connection through the interchange. These

projects are located 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.

- I-10/Loop 101 (Agua Fria Freeway) - DHOV ramps at this location, for HOV traffic between I-10 on the east and Loop 101 on the north, were moved beyond the horizon year of the RTP and included in the Plan as illustrative projects.

- I-17/Loop 101 (Pima Freeway) - DHOV ramps at this location, for HOV traffic between I-17 on the south and Loop 101 on the west, were moved beyond the horizon year of the RTP and included in the Plan as illustrative projects.

- SR-51/Loop 101 (Pima Freeway) - Construction of DHOV ramps (northbound to eastbound and westbound to southbound) at this location was programmed in FY 2007 as part of the addition of HOV lanes on SR-51 and completed in January 2009.

- US-60/Loop 202 (Red Mountain Freeway) - Construction of DHOV ramps at this location, for HOV traffic between Loop 202 on the south and US-60 on the west, was moved beyond FY 2026 and is included in FY 2029 in the RTP.

- Loop 101 (Price Freeway)/Loop 202 (Santan Freeway) - Construction of DHOV ramps at this location was combined with the HOV project on Loop 202 between Gilbert Road and I-10, which was completed in fall 2011. This ramp facilitates movement between Loop 101 on the north and Loop 202 on the east in Chandler.

- I-10/Loop 202 (Santan Freeway) - Construction of DHOV ramps at this location was combined with the HOV project on Loop 202 between Gilbert Rd. and I-10, which was completed in fall 2011. This ramp allows for HOV movement between I-10 on the north and Loop 202 on the east in Chandler.

Other Interchange Improvements:

- SR-143 - A total of $37 million was programmed in FY 2009 and FY 2010 for the design and construction of improvements to the interchange between SR 143 and the Loop 202 access road to Sky Harbor Airport. Construction began in December 2010 and was completed in summer 2012.

- I-10 (West side airport access) - Construction of a project for improved access to the west entrance to Phoenix Sky Harbor International Airport from I-10 has been programmed for FY 2025.

- Maryland Avenue DHOV – A direct HOV traffic interchange was constructed at Maryland Avenue and Loop 101 near the University of Phoenix Stadium

and Westgate Entertainment District in Glendale. Planning and design for the traffic interchange began in 2009 with the widening of the freeway median completed in 2011, during the design-build construction of HOV lanes along Loop 101 between I-10 and SR-51. Design-build construction of the DHOV interchange began in late 2013 and was completed in 2014 in advance of Super Bowl XLXI in February 2015. Funding for this interchange was provided through the Statewide Transportation Assistance (STAN) fund initiated by the Arizona State Legislature in 2007.

- Other Interchanges - The Freeway Life Cycle Program also funds improvements at certain other existing traffic interchanges. Work has been completed at:

  - Higley Road/US-60 (FY 2006)
  - Cactus Road /I-17 (FY 2007)
  - 43rd Avenue/I-10 (FY 2008)
  - Ray Road/I-10 (FY 2008)
  - Thunderbird Road/Loop 101 (FY 2010)
  - Chaparral Road/Loop 101 (FY2011
  - Avondale Boulevard/I-10 (FY2011)
  - Olive Avenue/Loop 101 (FY 2012)

6.1.4 Maintenance, Operations and Mitigation Programs

Freeway Management System:

- A block of funding for the freeway management system (FMS) has been identified for 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.

- Enhancement and operation of the freeway management system has proceeded since the start of the Proposition 400 program. It is estimated that future costs will total approximately $111 million for FY 2017-2026, including development of new projects, system-wide projects, preservation and maintenance of existing equipment, and the freeway service patrol.

Maintenance:

- A block of regional funding for the freeway system in the MAG area has been dedicated to litter pick-up, landscaping maintenance and landscaping restoration. The remainder of maintenance functions is funded through ADOT state-level sources.

- The Proposition 400 program has allowed ADOT to provide a level of landscaping, litter pick up and sweeping maintenance on the freeway system that would not have been possible without this funding. Approximately $139 million has been identified for FY 2017-2026 for activities related to this program.

Noise Mitigation:

- A block of funding has been identified for noise mitigation projects on the freeway system in the MAG area. This funding has been used for mitigation projects such as rubberized asphalt overlays and noise walls.

- Approximately $63 million has been expended through FY 2016 for rubberized asphalt on freeway facilities and noise wall projects. The list of noise wall projects was approved by the Regional Council in 2008 and construction was completed in mid-2012.

6.1.5 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 of the development process 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.

- It is estimated that future costs for these types of system-wide projects and programs will total approximately $118 million for FY 2017-2026. This estimate reflects the assignment of previous system-wide costs to individual corridors as they are identified.

6.1.6 Proposition 300 - Regional Freeway Program

- The Proposition 300/Regional Freeway Program was drawn to a close with the opening of the freeway segment between University Drive and Power Road on Loop 202/Red Mountain Freeway on July 21, 2008.

- Although sales tax collections for Proposition 300 ended on December 31, 2005, work utilizing State and Federal funding sources continued through FY 2008 to complete the last segment of the program. In addition, certain debt service requirements and other financial obligations for the program continue through FY 2026. These obligations have been taken fully into account in the planning process for the current Freeway/Highway Life Cycle Program, so that there are no conflicting demands on revenues.

6.2 FREEWAY/HIGHWAY PROGRAM CHANGES

Arizona Revised Statue 28-6353 requires that MAG approve any change in the RTP, and projects funded in the RTP that affect the agency's transportation improvement program, including priorities. In addition, requests for changes to transportation projects funded in the RTP that would materially increase costs must be submitted to MAG for approval.

6.2.1 Program Amendments and Cost Changes

Generally, material cost increases that affect projects programmed in the current fiscal year are approved individually prior to the projects going to bid**.** According to the MAG Material Cost Change Policy, a material cost change is defined as: "An increase in the cost of a project that is more than five (5) percent of the adopted budget, but not less than $500,000, or any increase greater than $2.5 million."

A detailed accounting of cost changes or other project changes during FY 2016 may be obtained by reviewing actions to amend the FY 2014-FY 2018 and FY 2017-FY2021 MAG Transportation Improvement Programs. The overall Freeway/Highway Life Cycle Program cost for the period FY 2006 - FY 2026 as reported in the 2016 Annual Report is $8.4 billion, which is 3.3 percent less than the total of $8.7 billion indicated in the 2015 report.

6.2.2 Freeway/Highway Program Rebalancing

Arizona Revised Statues (ARS) 28-6352 (A) requires a budget process that ensures the estimated cost of the freeways and other controlled access highways in the Regional Transportation Plan (RTP) does not exceed the total amount of revenues estimated to be available. Due to the "Great Recession" (December 2007 to June 2009) and a changing Federal government outlook for transportation funding, revenue collections and forecasts have declined, requiring action to rebalance the Freeway/Highway Life Cycle Program.

In October 2009, the MAG Regional Council approved a tentative scenario to balance the Freeway/Highway Life Cycle Program. As part of this effort, project scopes were reevaluated and cost estimates reviewed, resulting in project cost reductions amounting to $2.4 billion. Also, projects totaling approximately $4.4 billion were shifted beyond FY 2026, which is the end of the life cycle program period. This scenario was subsequently incorporated into the Regional Transportation Plan - 2010 Update and the FY 2011-2015 MAG Transportation Improvement Program, which were approved by the MAG Regional Council on July 28, 2010.

On May 23, 2012, the MAG Regional Council approved a rebalancing scenario for the Regional Freeway/Highway Life Cycle Program. The rebalancing scenario addressed an overall life cycle program deficit of approximately $390 million and eliminated any annual year end negative cash balances. A rebalancing scenario was approved that: (1) repositioned the SR-202L/South Mountain Freeway and Interstate 10/Maricopa Freeway projects to improve the Program's cash flow, (2) transferred funding from the SR-303L segment between US-60 and Interstate 17 to the SR-303L segment between Interstate 10 and MC-85, and (3) removed $300 million from the Program's budget for the Interstate 17/Black Canyon Freeway corridor.

In FY 2013, a comparison forecasted revenues and estimated future costs for FY 2014 through FY 2026 of the Freeway/Highway Life Cycle Program indicated a negative ending balance in FY 2026 of $444 million, which was largely due to significantly lower forecasts for Federal funding for transportation. This ending balance represented approximately 8.0 percent of the estimated remaining program costs for the period FY 2014 - FY 2026.

In FY 2014, cash flow modeling revealed an overall Freeway/Highway Life Cycle Program deficit of $162 million by the end of FY 2026, representing 3.1 percent of estimated program costs during FY 2015 through FY 2026. In FY 2015, further cash flow modeling estimated a positive balance of $30 million by the end of FY 2026.

In FY 2016, updated cash flow modeling estimated a positive balance of $787 million by the end of FY 2026. The improvement in ending cash balance reflected savings from the Loop 202 South Mountain Freeway project and the continuing cooperative efforts by MAG an ADOT to identify cost savings through value engineering, risk management, and enhanced coordination of project development activities. Discussions will be held through the MAG committee process throughout the fall of 2016 to possibly advance projects that had been previously deferred in the program as part of the 2009 and 2012 rebalancing efforts.

6.3 FREEWAY/HIGHWAY PROGRAM EXPENDITURES, ESTIMATED FUTURE COSTS, AND FISCAL STATUS

6.3.1 Program Expenditures and Estimated Future Costs

Table 6-1 provides a summary of past expenditures, estimated future costs and total costs by major program category for the Freeway/Highway Life Cycle Program. Detailed data on costs at the project level is included in Table A-1 in the Appendix. In the Life Cycle Program, future costs reflect currently available, real dollars estimates as of 2016, but may not have been specifically factored, in every case, to a 2016 dollar base year.

As indicated in Table 6-1, expenditures through FY 2016 equal $4.5 billion (YOE $'s) and estimated future costs covering the period FY 2017-2026 amount to $3.9 billion (2016 $'s). The total FY 2006-2026 cost for the program is currently estimated to be $8.4 billion (YOE and 2016$'s). As indicated in Appendix A, the estimated cost for the Life Cycle Program through FY 2035 totals $12.4 billion (YOE and 2016 $'s).

6.3.2 Future Fiscal Status

Table 6-2 summarizes the future funding sources and uses for the Freeway/Highway Life Cycle Program between FY 2017 and FY 2026. Sources for the Life Cycle Program between FY 2017 through FY 2026 include the Proposition 400 half-cent sales tax extension ($2.9 billion); ADOT funds, ($2.6 billion); MAG Federal highway funds ($98 million); bond and loan proceeds ($570

TABLE 6-1
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM
SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2016 and Year of Expenditure Dollars in Millions)

Category	Expenditures through FY 2016 (Year of Expenditure Dollars)				Estimated Future Costs: FY 2017 -2026 (2015 Dollars)	Total Cost: FY 2006-2026 (2016 and YOE Dollars)
	Design	Right-of-Way	Construction	Total		
New Corridors	202.3	631.3	987.9	1,821.5	1,606.0	3,427.5
Widen Existing Facilities	159.5	312.7	1,488.9	1,961.1	1,731.8	3,692.9
New/Improved Interchanges	37.6	30.0	295.3	362.9	193.5	556.4
Maintenance	0.0	0.0	118.2	118.2	138.9	257.1
Freeway Management	15.8	0.0	71.0	86.8	110.9	197.7
Noise Mitigation	3.3	0.2	60.0	63.6	0.8	64.5
Minor/Other Projects	10.1	2.9	55.8	68.8	28.2	96.9
Pre-Engr., Adv. R/W, Admin.	25.4	8.1	0.1	33.6	118.3	151.9
Total	**454.0**	**985.2**	**3,077.3**	**4,516.5**	**3,928.3**	**8,444.9**

million); and other income ($179 million). Expenses totaling $1.9 billion are deducted from these sources, which includes transfers for RTP implementation identified in legislation, estimated future debt service, and repayment of other financing. In addition, an allowance for inflation of $431 million is deducted. Including a beginning balance of $663 million, there is a net total of $4.6 billion (2016 $'s) for use on freeway and highway projects through FY 2026.

Table 6-2 also lists the estimated future uses identified in the Life Cycle Program for the period covering FY 2017 through FY 2026, which result in a cash flow

requirement of $3.8 billion (2016 $'s). A comparison of these projects costs with the expected revenues indicates a positive balance of approximately $787 million (2016 $'s) through FY 2026.

6.4 FREEWAY/HIGHWAY PROGRAM OUTLOOK

During FY 2016, cash flow modeling based on revised revenue forecasts and updated project cost estimates was conducted. This analysis indicated that there is positive ending cash balance for all years through FY 2026, and that there is a positive balance of approximately $787 million for the total program through FY 2026. This is an improvement compared to the ending balance of $30 million reported in the FY 2015 Annual report and is due largely to increased revenues and reduction of project costs, particularly on Loop 202 South Mountain Freeway.

MAG and ADOT will continue their cooperative effort to monitor and update estimated costs, revenue forecasts, and project schedules, as well as identify cost savings through value engineering, risk management, and enhanced project development coordination. Discussions to determine which projects that had been previously been deferred beyond 2026 should be advanced will take place during FY 2017.

TABLE 6-2
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2017-2026
(2016 and Year of Expenditure Dollars in Millions)

SOURCES OF FUNDS	
Source	**Projected Future Funding: FY 2017-2026 (YOE Dollars)**
Proposition 400: One-Half Cent Sales Tax Extension	2,880.1
ADOT Funds	2,644.7
MAG CMAQ and STP (Federal Highway)	98.3
Other Income	179.1
Bond and Loan Proceeds	570.0
Plus Beginning Balance	663.3
Less Debt Service and Other Expenses	(1,943.7)
Less Inflation Allowance	(431.1)
Total (2015 $'s)	**4,660.6**
USES OF FUNDS	
Category	**Estimated Future Costs: FY 2017-2026 (2016 Dollars)**
New Corridors	1,606.0
Widen Existing Facilities	1,731.8
New/Improved Interchanges	193.5
Maintenance (Litter & Landscaping)	138.9
Freeway Management	110.9
Noise Mitigation	0.8
Minor/Other Projects	28.2
Pre-Engr., Adv. R/W, Admin.	118.3
Cash Flow Adjustment*	(54.9)
Total (2015 $'s)	**3,873.5**

*This amount reconciles the net of sources and uses in Table 6-2 $787 million with the projected ending balance estimated by the ADOT Cash Flow Analysis (CFA) for the Freeway Life Cycle Program. It takes into account the difference between the projected cash flow requirements of the CFA through FY 2026 and the project costs contained in the ADOT Regional Transportation Plan Freeway Program (RTPFP) Expenditures Report. It also takes into account the differences in revenue estimation between the ADOT CFA and regional funding forecasts. It represents the cash flow requirements of projects in the Freeway Life Cycle Program that extend beyond the end of FY 2026.

CHAPTER SEVEN

ARTERIAL LIFE CYCLE PROGRAM

The Arterial Life Cycle Program (ALCP) extends through FY 2026 and is maintained by the Maricopa Association of Governments (MAG) to implement arterial street projects identified in the MAG Regional Transportation Plan (RTP). The Program meets the requirements of State legislation calling on MAG to conduct a budget process to ensure the estimated costs of the programmed arterial street improvements do not exceed the total amount of revenues available for these improvements.

The Arterial Life Cycle Program (ALCP) provides MAG with a management tool to administer regional funding for arterial street improvements. The Program receives funding from both the Proposition 400 half-cent sales tax extension and federal highway programs. 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.

7.1 PROGRAM COMPONETS

The ALCP provides regional funding to widen existing streets, improve intersections, and construct new arterial segments. The program also provides resources for MAG planning studies and implementation of arterial Intelligent Transportation System (ITS) projects. It should be noted that the funding for the construction of arterial improvements is spread throughout the 20-year period covered by the Life Cycle Program.

In certain cases, local governments plan to construct projects sooner than originally scheduled in the Regional Transportation Plan in response to local priorities and development issues. When this occurs, the local jurisdiction implementing the project will be reimbursed according to the original arterial street program schedule identified in the RTP adopted in November 2003, even though construction occurs earlier. In cases when a project is deferred, the reimbursement does not occur until work is completed. Funding swaps among an individual jurisdiction's projects and the allocation of "close-out" funds may alter the reimbursement sequence for certain projects. In some cases, advanced projects will not be reimbursed unless sales tax or other program revenues in the future are higher than currently projected.

Figure 7-1, depicts the location of ALCP projects in the. The projects shown in Figure 7-1 are cross-referenced with the data in the Appendix B by the code associated with each project.

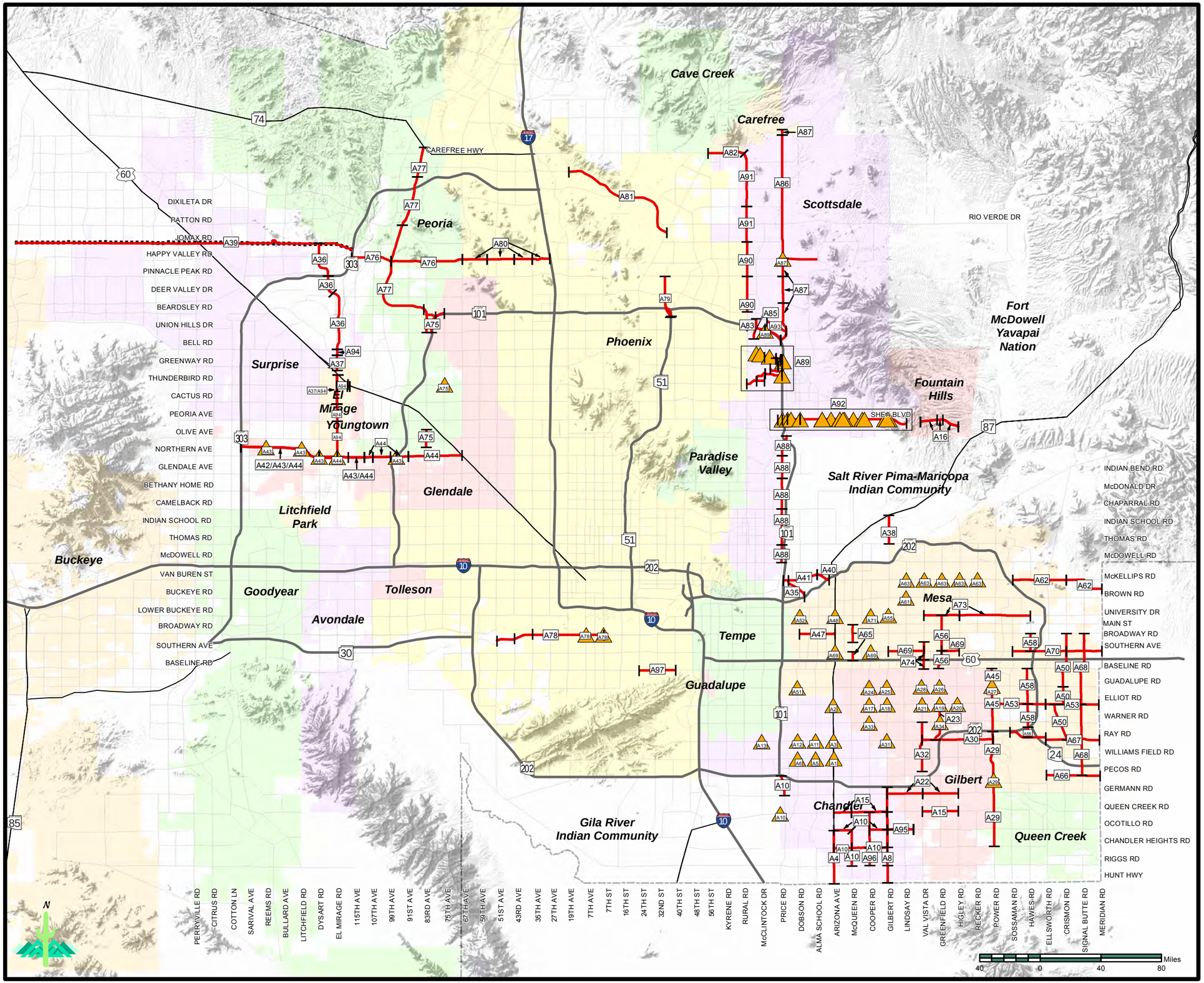

Figure 7-1

MARICOPA ASSOCIATION of GOVERNMENTS

MAG 2016 Annual Report on Proposition 400

New/Improved Arterials

- New/Improved Arterials
- Improved Intersections
- Right of Way Preservation
- Freeways
- Highways
- Other Roads
- County Boundary

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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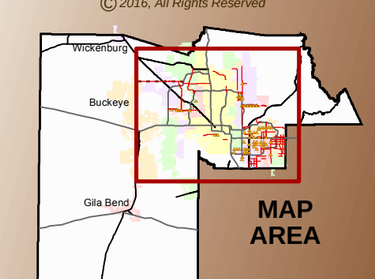

While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.

7.1.1 Arterial Capacity/Intersection Improvements

A total of 94 arterial capacity/intersection improvement projects were originally identified in the RTP and included in the Arterial Life Cycle Program. As the engineering process has proceeded, specific types of improvements have been defined and project concepts prepared. After the detailing of the various project elements, the original 94 projects have been segmented into a total of 207 individually defined projects.

Through FY 2016, 62 ALCP projects have been completed. These projects included arterial street widenings, capacity improvement projects, and intersection improvements at the following locations.

- 75th Ave. at Thunderbird Rd.: Intersection Improvement
- 83rd Ave.: Butler Rd. to Mountain View Rd.
- Airpark Design Concept Report (design only)
- Arizona Ave. at Chandler Blvd.: Intersection Improvements
- Arizona Ave. at Elliot Rd.: Intersection Improvements
- Arizona Ave. at Ray Rd.: Intersection Improvement
- Beardsley Rd.: Loop 101 to 83rd Ave/Lake Pleasant Parkway
- Black Mountain Blvd.: SR51 and 101L/Pima Fwy. To Pinnacle Peak Rd.
- Chandler Blvd. at Dobson Rd.: Intersection Improvements
- Dobson Rd. at Guadalupe Rd.: Intersection Improvements
- El Mirage Rd.: Deer Valley Drive to Loop 303
- El Mirage Rd.: Bell Rd to Deer Valley Dr.
- El Mirage Rd.: Bell Rd. to Picerne Dr.
- El Mirage Rd.: Northern to Cactus (design only)
- Frank Lloyd Wright at 76th/78th/82nd Street: Intersection Improvements
- Germann Rd.: Vail Vista Dr. to Higley Rd.
- Gilbert Rd. at University Dr.: Intersection Improvements
- Gilbert Rd.: Chandler Heights Rd. to Hunt Hwy.
- Gilbert Rd.: Ocotillo Rd to Chandler Heights
- Gilbert Rd.: Queen Creek Rd. to Hunt Hwy. (design & right-of-way only)
- Gilbert Rd.: Queen Creek Rd. to Ocotillo Rd
- Gilbert Rd.: SR202L/Germann Road to Queen Creek Rd.
- Greenfield Rd.: Baseline Rd. to Southern Ave.
- Guadalupe Rd. at Gilbert Rd.: Intersection Improvements
- Happy Valley Rd.: Lake Pleasant Pkwy to 67th Ave.
- Happy Valley: I-17 to 35th Ave.
- Hawes Rd.: Santan Freeway to Ray Rd.
- Lake Pleasant Pkwy.: Union Hills to Dynamite Rd.
- Lake Pleasant Pkwy.: West Wing Pkwy to Loop 303
- Loop 101 at Beardsley Rd/Union Hills Dr.
- Loop 101 Frontage Rd.: Hayden Rd to Scottsdale Rd.

- McQueen Rd.: Ocotillo Rd. to Chandler Heights Rd.
- McQueen Rd.: Ocotillo Rd. to Riggs Rd. (design & right-of-way only)
- Mesa Dr.: US-60 to Southern Ave.
- Northern Parkway: Reems and Litchfield Overpasses
- Northern Parkway: Sarival to Dysart
- Northsight Blvd.: Hayden Rd. to Frank Lloyd Wright Blvd.
- Old Price Rd. at Queen Creek Rd.
- Pima Rd.: SR101L to Thompson Peak Pkwy.
- Pima Rd.: Thompson Peak Parkway to Pinnacle Peak Rd.
- Pima Rd.: Via De Ventura to Krail St.
- Power Rd at Pecos: Intersection Improvements
- Power Rd.: Baseline Rd. to East Maricopa Floodway
- Power Rd: Santan Fwy to Pecos Rd.
- Price Rd.: Santan Freeway to Germann Rd.
- Queen Creek Rd.: Arizona Ave. to McQueen Rd.
- Queen Creek Rd.: Val Vista Dr. to Higley Rd.
- Ray Rd. at Alma School Rd.: Intersection Improvements
- Ray Rd.: Sossaman Rd. to Ellsworth Rd.
- Scottsdale Rd.: Thompson Peak Pkwy. to Pinnacle Peak Rd. (Phase I)
- Shea Blvd. at 90th/92nd/96th: Intersection Improvements
- Shea Blvd. at 120/124th St.: Intersection Improvements
- Shea Blvd. at Mayo/134th St.: Intersection Improvements
- Shea Blvd. at Via Linda (Phase1): Intersection Improvements
- Shea Blvd.: Loop 101 to 96th Street ITS Improvements
- Shea Blvd.: Palisades Blvd. to Fountain Hills Blvd.
- Shea Blvd.: Technology Dr. to Cereus Wash
- Signal Butte Rd: Elliot Rd to Ray Rd
- Sonoran Blvd.: 15th Ave. to Cave Creek Rd
- Southern Avenue Area Design Concept Report (design only).
- Warner Rd. at Cooper Rd.: Intersection Improvements
- Val Vista Dr.: Warner Rd to Pecos Rd.

7.1.2 Intelligent Transportation Systems (ITS)

The RTP allocates funding to assist in the implementation of projects identified in the Regional ITS Plan. The ITS projects improve traffic flow and help the transportation system operate more efficiently. The focus of the arterial ITS program is to assist MAG member agencies with the development of their arterial traffic management systems to better address jurisdictional needs. The process to identify and recommend arterial ITS projects for funding is overseen by the MAG ITS Committee. The ITS Committee has used an objective project rating system, which is linked to the region's ITS Strategic Plan and Regional ITS Architecture, to provide guidance in prioritizing projects.

A total of $52 million in reimbursements has been provided to ITS projects through FY 2016. It is estimated that an additional $14 million (2016 $'s) in reimbursements will be provided for ITS projects between FY 2017 and FY 2019.

7.2 ARTERIAL PROGRAM REIMBURSEMENTS AND FISCAL STATUS

7.2.1 Program Reimbursements

The Arterial Life Cycle Program (ALCP) is based on the principle of project budget caps. Under this approach, regional funding allocated to a specific project is fixed (on an inflation adjusted basis), as originally identified in the MAG 2003 Regional Transportation Plan. The budgeted amount must be matched by the implementing, or lead, agency with a 30 percent minimum contribution to the total project costs. Any project costs above the amount budgeted are the responsibility of the lead agency. Under this funding scheme, program administration focuses on tracking actual project expenditures and determining the corresponding regional share. As a result, data monitoring is primarily directed at regional funding reimbursements and total project expenditures.

During FY 2016, a total of more than $73 million in ALCP project expenses were reimbursed or obligated to implementing agencies. This included reimbursements to nine individual agencies, as well as funding for projects in the MAG ITS program. Since the beginning of the program in FY 2006, a total of $662 million in reimbursements or obligations has been provided ($610 arterial street and $52 ITS projects). An additional $13 million has been provided for MAG Implementation Studies for a grand total of $675 million.

The ALCP Policies and Procedures detail the three required documents for each ALCP project - the Project Overview, the Project Agreement, and Project Reimbursement Request. The Project Overview describes the general design features of the project, the implementation schedule, estimated costs, and the relationships among participating agencies. The Project Agreement is developed jointly between the lead agency and MAG and determines the responsibilities of each party. Project Reimbursement Requests may be submitted by jurisdictions once a Project Agreement has been executed. The Project Reimbursement Request requires an invoice and request for payment signed by the lead agency and MAG. The signed request for payment form is submitted to the Arizona Department of Transportation, who, in turn, reimburses the lead agency.

Table 7-1 provides a summary of project reimbursements and obligations that have occurred through FY 2016. Table 7-1 also indicates the anticipated level of future reimbursements for the period FY 2017 - FY 2026. As indicated, a total of

TABLE 7-1
ARTERIAL STREET LIFE CYCLE PROGRAM
SUMMARY OF PAST AND ESTIMATED FUTURE REIMBURSEMENTS: FY 2006-2026
(2016 and Year of Expenditure Dollars in Millions)

Category	Reimbursements from Regional Funding		
	Reimbursements through FY 2016 (YOE Dollars)	Estimated Future Reimbursements: FY 2017-2026 (2016 Dollars)	Total Reimbursements: FY 2006-2026 (2016 and YOE Dollars)
Capacity / Intersection Improvements	609.8	940.7	1,550.5
Intelligent Transportation Systems	52.0	14.0	66.0
MAG Implementation Studies	13.4	17.1	30.5
Total	**593.8**	**1,052.0**	**1,645.8**

over $1.05 billon is anticipated to be reimbursed during this period for all ALCP categories. Appendix Tables B-1 and B-2 provide detailed information on reimbursements and obligations associated with individual ALCP projects. The appendix tables also compile total project expenditures, which include local funding on the projects. This local funding, to date, has represented approximately 39 percent of total project costs.

7.2.2 Future Fiscal Status

Table 7-2 summarizes the future funding sources and uses applicable to the Arterial Life Cycle Program for FY 2017 through FY 2026. Sources for the Life Cycle Program include the Proposition 400 half-cent sales tax extension ($538 million); Federal Highway Congestion Mitigation and Air Quality (CMAQ) funds ($73 million); and Federal Highway Surface Transportation Program (STP) funds ($448 million). In addition, an allowance for inflation of $93 million has been deducted. Including a beginning balance of approximately $25 million, this yields a net total of $991 million (2016 $'s) for use on arterial street projects (including ITS and Implementation Studies) through FY 2026.

Table 7-2 also lists the estimated future regional funding reimbursements totaling $972 million, identified in the Life Cycle Program for the period FY 2017 through FY 2026. As shown, projected Arterial Life Cycle Program revenues are somewhat above estimated future reimbursements, with a $19 million difference.

TABLE 7-2
ARTERIAL STREET LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2017-2026
(2016 and Year of Expenditure Dollars in Millions)

SOURCES OF FUNDS	
Source	**Projected Future Regional Funding FY 2017-2026 (YOE Dollars)**
Proposition 400: One-Half Cent Sales Tax Extension	538.1
Federal Highway / MAG CMAQ	73.1
Federal Highway / MAG STP	448.2
Other Income	-
Bond and Loan Proceeds	0.0
Plus Beginning Balance	24.6
Less Debt Service	0.0
Less Inflation Allowance	(93.0)
Total (2016$'s)	**990.9**
USES OF FUNDS	
Category	**Estimated Future Regional Disbursements: FY 2017-2026 (2016 Dollars)**
Capacity / Intersection Improvements	940.7
Intelligent Transportation Systems	14.0
MAG Implementation Studies	17.1
Total (2016$'s)	**971.9**

7.3 ARTERIAL STREET PROGRAM OUTLOOK

The Arterial Life Cycle Program (ALCP) 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). Since the beginning of the program, $610 million has been disbursed and 62 arterial street projects have been completed. Additional blocks of funding have been provided for ITS projects and implementation studies, amounting to $52 million and $13 million, respectively.

During FY 2016, project overview reports were prepared by the lead agencies for three projects in the ALCP. Since the inception of the program, 94 project

overviews have been submitted to MAG. These reports describe the general design features of the project, estimated costs, implementation schedules, and relationships among participating agencies. The project overview reports provide the basis for preparation of project agreements, which must be executed before agencies may receive any reimbursements from the program. A total of three project agreements were executed in FY 2016. Nine jurisdictions received reimbursements or obligations for project work during FY 2016 totaling almost $73 million, including the MAG ITS program. In all, 94 project agreements have been executed to date. Lead agencies deferred approximately $32 million in federal and regional reimbursements from FY 2016 to later years due to project implementation and local funding issues.

On June 22, 2016, the MAG Regional Council approved the FY 2017 ALCP. The Regional Area Road Fund (RARF) forecast, released by the Arizona Department of Transportation in the fall of 2015, indicated a slight increase in half-cent revenues. The projection of Federal funds into the program also increased under the new federal authorization bill, the FAST Act. Given the amount of reimbursements that were deferred beyond the funding horizon, the temporary elimination of program bonding and project inflation remained in place.

CHAPTER EIGHT

TRANSIT LIFE CYCLE PROGRAM

The Regional Public Transportation Authority (RPTA) maintains the Transit Life Cycle Program (TLCP) and implements transit projects identified in the MAG Regional Transportation Plan. In accordance with state legislation, the RPTA conducts the budget process to ensure the estimated cost of the Regional Public Transportation System does not exceed the total amount of expected revenues available. Transit expenses include fleet purchases, operating costs, passenger and maintenance facilities, light rail construction, and other transit projects.

Funding for the TLCP comes from the Proposition 400 half-cent sales tax extension, federal transit funds, fare revenues, and local sources. The sales tax extension started on January 2, 2006 with revenues available beginning March 2006.

The RPTA is responsible for administering the half-cent sales tax revenues deposited into the Public Transportation Fund (PTF) for use on transit projects (ARS 48-5103). The RPTA maintains responsibility for the distribution of the PTF for use on transit 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 modes.

Valley Metro Rail, Inc., (VMR) is a public nonprofit corporation created to implement the light rail system through a partnership among the cities of Phoenix, Tempe, Mesa, Glendale, and Chandler. VMR is responsible for overseeing the design, construction, and operation of the current light rail line as well as future extensions. RPTA frequently uses the name "*Valley Metro*" for the agency after adopting the term in 1993 as a marketing identity for the regional transit system. VMR uses the term "*METRO*" to refer to the light rail system similarly. In 2012, the RPTA and VMR Boards of Directors decided to integrate the staffs of the two agencies under a single Chief Executive Officer and the single Valley Metro brand.

8.1 STATUS OF BUS PROJECTS

Transit Standards and Performance Measures

Proposition 400 and the recent federal transportation bill, Fixing America's Surface Transportation (FAST-Act), emphasize a performance based transit system. As a result, Valley Metro began a multi-phase process to update and expand its standards. The effort resulted in the Board adopted Transit Standards and Performance Measures (TSPM). TSPM addresses the following items:

- Service delivery
- Service types
- Service standards
- Passenger stop spacing
- Performance measures
- Planning tools
- Performance thresholds
- New service implementation standards
- Application principles
- Service design standards
- Fleet prioritization

The TSPM effort is applied to future service changes through the agency's Short Range Transit Program (SRTP) planning process. The SRTP is a five-year planning document that identifies regionally and locally funded transit service change concepts. The SRTP builds on previous and ongoing Valley Metro efforts and is developed in accordance with adopted TLCP policies. The SRTP is updated annually based route performance review as well as input from member agencies and Valley Metro staff through sub-regional meetings and the regional Service Planning Working Group (SPWG). Modifications to existing or planned Proposition 400 services or Proposition 400 service additions are reviewed through a set of guiding principles; the outcome of the analysis serves as an input to the TLCP annual planning and programming process. The SRTP also serves as an input to Valley Metro Fleet Management Plan, bi-annual service change process and the Transportation Improvement Program (TIP).

The TLCP includes funding for freeway Bus Rapid Transit (BRT)/Express, Arterial BRT (known as LINK), supergrid and other bus service. This includes operations, vehicle fleet and new capital facility improvements to the regional bus network. An overview of the status of the bus operations and capital projects in the TLCP are included in the following sections. In these discussions, the emphasis is placed on reviewing ongoing activities and service additions anticipated during the next five years (FY 2017 through FY 2021).

8.1.1 Bus Operations: Bus Rapid Transit (BRT)/Express

Regional Bus Rapid Transit (BRT)/Express transit services are comprised of Arterial BRT and Freeway BRT/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, queue-jumpers, signal priority systems or other enhancements. The Arterial BRT routes operate during peak and off-peak periods. Freeway BRT/Express routes are also included in the RTP. These routes vary by using existing and proposed high occupancy vehicle (HOV) facilities to connect park-and-ride lots with major activity centers such as downtown core areas. Freeway routes provide suburb to central city connections using the regional freeway system and limited stops. Location and cost information of BRT/Express Transit Services are provided in Figure 8-1 and Table C-1. The routes depicted in Figure 8-1 are cross-referenced with the data in Table C-1 by the code associated with each route.

Collectively, the Regional BRT/Express transit services account for a total of $89.2 million (2016 and YOE $'s) in regional funding for operating costs for the period FY 2006 through FY 2026 (see Table 8-2). This total represents approximately 1.9 percent of the total regional funding budget allocated for transit. This total is somewhat lower than reported last year due largely to a key service contract that was renegotiated with a significant reduction to the cost for many of the express routes in the West Valley. There are 20 BRT/Express routes identified for funding in the TLCP during the planning period from FY 2006 through 2026. Though included in the Regional Transportation Plan, an additional 15 routes have been shifted beyond FY 2026. Included in the TLCP as an illustrative project is the Chandler Blvd. Arterial BRT. A total of 13 routes have received funding since the start of the program.

These improvements were in lieu of the proposed Scottsdale/Rural Road LINK project that was the only route planned for implementation during the next five years, FY 2016 through FY 2020. The LINK service will be deferred for implementation in the future.

In addition, the LINK services that had been implemented on Main Street and on Country Club Dr/Arizona Ave are being combined into the local routes that operate on those streets. Performance of the LINK routes have not met expectations and do not meet adopted standards. The services in the corridors will no longer operate as LINK service, but frequency on the local routes 40 and 112 will be increased so that overall service levels are better than currently operated.

<u>Routes Implemented During FY 2016</u>

- None

<u>Routes Planned for Implementation During FY 2017 through FY 2021</u>

- None

8.1.2 Bus Operations: Supergrid

Commonly referred to as "Supergrid Routes," the Regional Grid routes are bus routes operated along major roads in the regional arterial grid network. The supergrid network allows a higher level of operational efficiency than the local bus network by regionally funding the key routes at a consistent level of service across all served jurisdictions as defined in the Valley Metro Transit Standards and Performance Measures level of service standards. Other elements of the fixed route bus network are local routes; these routes are hindered by varying service levels across routes and jurisdictions, which is a direct result of the variability of local funding from jurisdiction to jurisdiction. Due to current funding limitations at the local level, consistent service operation across jurisdictions may

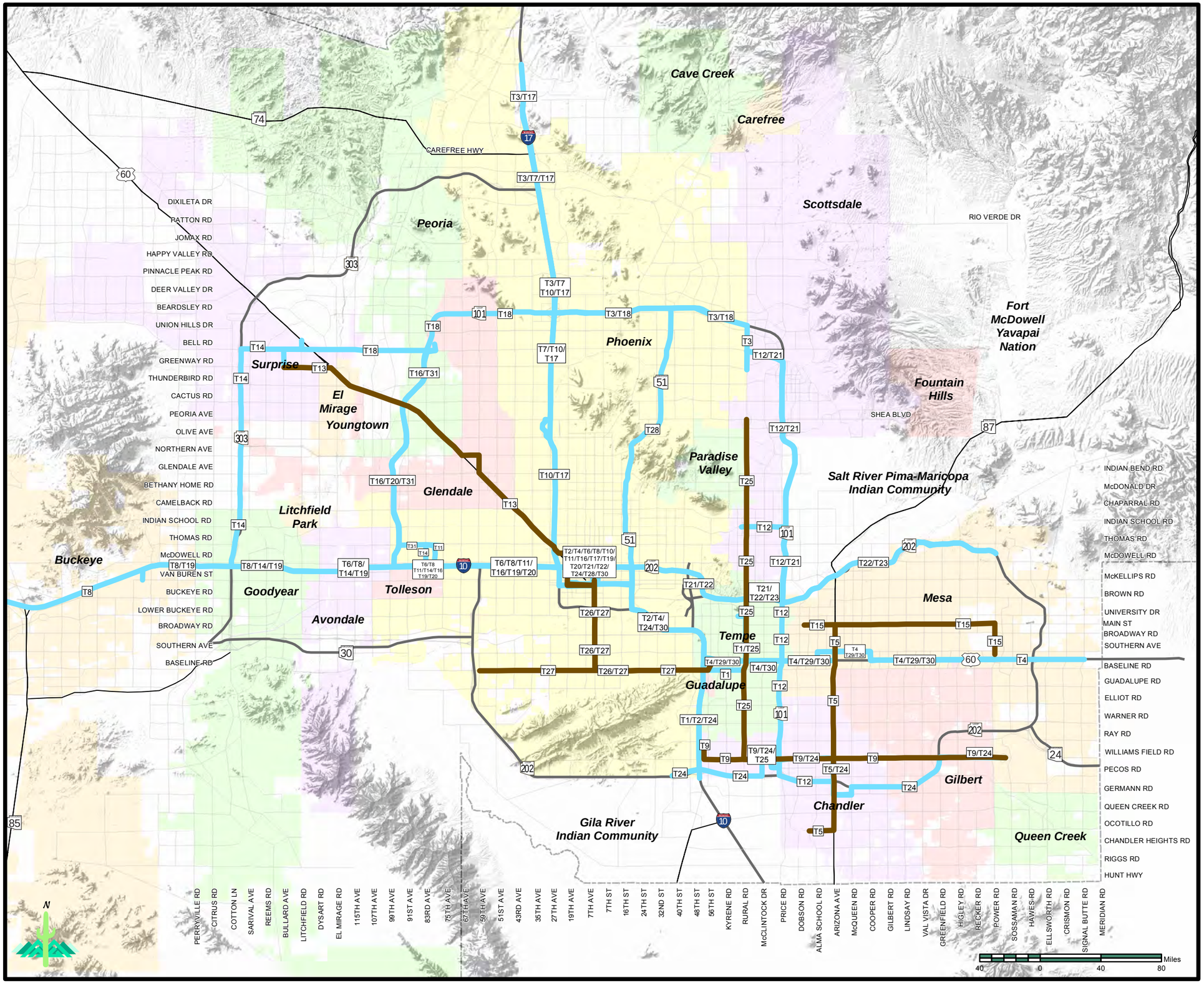

Figure 8-1

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Bus Rapid Transit (BRT)/ Express Bus

- Arterial BRT Routes
- Freeway BRT Routes
- Freeways
- Highways
- Other Roads
- County Boundary

Routes are conceptual and subject to change. Contact Valley Metro to obtain current status. Ongoing operational planning includes an extensive public outreach component.

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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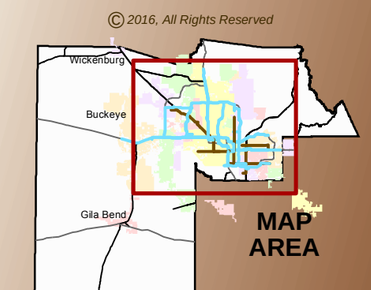

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not be possible. Regionally funding bus operations ensures a degree of consistency along the supergrid network.

Figure 8-2 and Table C-2 provide information on the locations and costs associated with the regional bus grid. The routes depicted in Figure 8-2 are cross-referenced with the data in Table C-2 by the code associated with each route.

Regional Grid bus operations account for $736.1 million (2016 and YOE $'s) in regional funding for the period FY 2006 through FY 2026 (see Table 8-2). This represents approximately 13.0 percent of the total regional funding budget allocated for transit. There are 23 Regional Grid routes identified for funding in the TLCP during the planning period from FY 2006 through 2026. Many of the routes scheduled for funding will not be implemented with the full service levels originally programmed, due to the decline in revenues. Lower service levels have been programmed in order to implement more of the routes through FY 2026. An additional 9 routes have been shifted beyond FY 2026 but are in the Regional Transportation Plan. Included in the TLCP as an illustrative project is the Litchfield Rd. regional grid route. In total, 22 routes have received funding since the start of the program.

In general, supergrid routes were originally planned to operate in the peak direction at 15-minute intervals during the two-hour morning and afternoon commute periods, and at 30-minute intervals during the rest of the service day. In addition, weekend service was to be provided at 30-minute intervals. Due to the reduction in revenues, these routes are currently planned for lesser service levels. Funding is only adequate for existing service levels in some cases. Seven routes are planned for improvements in FY 2017 through 2021, while two routes will have increased funding from the TLCP for existing service. These are existing routes that will receive TLCP funding and may also receive improved service levels and/or route extensions.

Service improvements along Scottsdale/Rural road were implemented in FY 2016; i.e. 10 minute weekday frequency from Camelback Road to the Tempe Transportation Center from about 6AM to 6PM.

<u>Routes Implemented During FY 2016</u>

- Scottsdale/Rural (T66); frequency improvements

<u>Routes Planned for Implementation During FY 2017 through FY 2021</u>

- Arizona Avenue/Country Club (T44); Scheduled Improvement: FY 2017.
- Hayden/McClintock (T57); Scheduled Improvement: FY 2017.
- Main Street (T60); Scheduled Improvement: FY 2017.

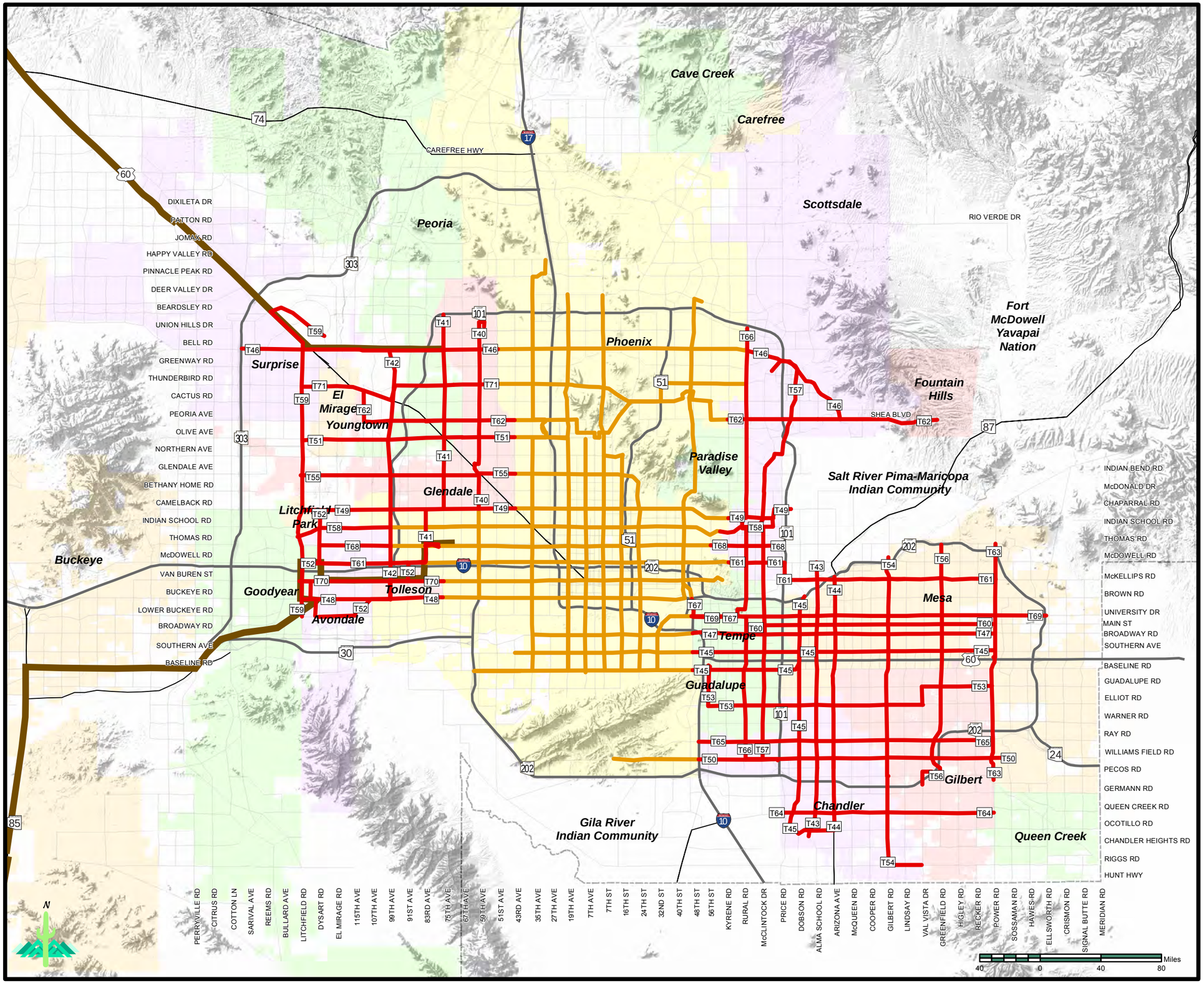

Figure 8-2

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Super Grid Bus System

- Regional Grid Routes
- Grid Routes Funded by City of Phoenix
- New Rural Routes
- Freeways
- Highways
- Other Roads
- County Boundary

Routes are conceptual and subject to change. Contact Valley Metro to obtain current status. Ongoing operational planning includes an extensive public outreach component.

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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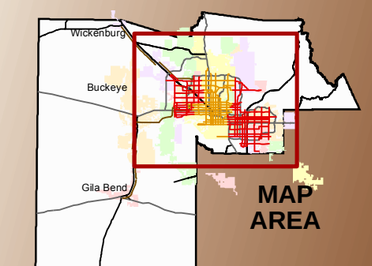

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- Alma School Road (T43); Scheduled Improvement: FY 2018.
- Broadway Road (T47); Scheduled Improvement: FY 2018.
- Gilbert Road (T54); Scheduled Improvement: FY 2019.
- Baseline Road (T45); Funding Start: FY 2020.
- University Drive (T69); Funding Start: FY 2020.
- Chandler Boulevard (T50); Scheduled Improvements; FY 2021

8.1.3 Bus Operations: Other

Other bus services operating costs account for a total of $783 million (2016 and YOE $'s) in regional funding for the period FY 2006 through FY 2026 (see Table 8-2). Other bus operations costs include paratransit services, rural/flexible routes, commuter vanpools, safety and security, operating contingencies and RPTA planning and administration costs. Table C-3 provides information on the costs associated with these services. The services are described briefly below:

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 provides curbside pick-ups and drop-offs by demand-response services. As required by the Americans with Disabilities Act (ADA) this service is provided for all ADA-certified patrons for all areas within three-quarter miles of fixed bus route service. On July 1, 2016 Valley Metro began operated a seamless, transfer-free regional ADA service. Previously, customers would need to transfer among systems (e.g. between East Valley Dial-a-Ride and Phoenix Dial-a-Ride) in order to complete multi-jurisdictional trips. The new Regional ADA service is a significant improvement in the delivery of services to ADA certified passengers.

These services account for a total of $455 million (2016 and YOE $'s) in regional funding during FY 2006 through FY 2026 (see Table C-3). During the next five years (FY 2017 through FY 2021), it is anticipated that $147 million (2016 $'s) will be expended providing paratransit services.

Rural/flexible Routes - This service type addresses the need to provide connections to urban areas from rural communities of the county. Rural routes provide connections between remote communities and urban transit nodes to address a range of trip needs such as work, shopping, education, and access to various community services. These services account for a total of $7.7 million (2016 and YOE $'s) in regional funding during FY 2006 through FY 2026 (see Table C-3).

Funding has been identified for two rural transit routes. A route operating between Gila Bend and West Phoenix was initiated in FY 2006. The second route was initiated in FY 2007 with service between Wickenburg and Glendale. Valley Metro looked at ways to enhance ridership on the Wickenburg route due

to low productivity. However, as the productivity continued to be very low, the route was eliminated in FY 2012.

Commuter Vanpools – The Commuter Vanpool Program is a customized express service for commuters managed by Valley Metro through its complementary rideshare program. Commuter vanpools allow groups of commuters throughout the region to self-organize and utilize a vehicle from Valley Metro to operate a carpool service. Vanpools can be 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 aspires to maintain rider fares at a level that is attractive to the commuter. This service is available to all employers and commuter groups in Maricopa County. Operating costs are fully recovered through fare revenues and are not publicly subsidized.

Safety and Security – Funds are set aside to improve the safety and security of passengers and transit assets such as rolling stock and facilities. Specific expenditures will be programmed each year based on need. Items may include closed circuit television at facilities, cameras on buses, and other needed infrastructure improvements in support of safety and security. These services account for a total of $13 million (2016 and YOE $'s) in regional funding during FY 2006 through FY 2026 (see Table C-3).

RPTA Planning, Administration and Passenger Support Services – Valley Metro/RPTA receives an allocation from the Regional Area Road Fund (RARF) for planning and administration. This pays for the overhead, administration costs, and any regional or general planning costs that are not attributable to specific RTP projects. These services account for a total of $81 million (2016 and YOE $'s) in regional funding during FY 2006 through FY 2026 (see Table C-3). In addition, passenger support services account for a total of $149 million (2016 and YOE $'s) in regional funding during FY 2006 through FY 2026 (see Table C-3).

Existing Local and Express Service: Supplementary funding is allocated to previously existing local and express services, which complement the planned BRT and regional grid networks. This accounts for a total of $77 million (2016 and YOE $'s) in regional funding during FY 2006 through FY 2026 (see Table C-3).

8.1.4 Bus Capital: Facilities

Design and construction is underway on a number of facilities including park-and-ride and transit center facilities. Other passenger facilities are to be implemented over the next several years. It is anticipated that a total of $13.6 million (2016 $'s)

in regional funding will be expended during the next five years (FY 2017 through FY 2021) on bus capital facilities.

With the expansion of transit service, there is additional need for passenger facilities and associated maintenance. Ongoing capital planning efforts will identify specific locations and the timing of construction for these facilities. Efforts including the identification and evaluation of potential transit passenger and maintenance facilities sites are included in the capital planning process. In cooperation with the host communities, this process will guide the selection of sites including public outreach efforts to identify and address the concerns of affected neighborhoods, institutions, and commercial users.

Capital projects affiliated with regional bus operations account for a total of $251 million (2016 and YOE $'s) during FY 2006 through 2026 (see Table C-4). Due to the decline in revenues, many of the facilities originally programmed are currently unfunded through FY 2026. Capital projects currently completed or funded through FY 2026 are the completion of 11 park-and-ride lots; 2 transit centers (4 bus-bay); 1 transit center (6 bus-bay); 1 transit center (for major activity centers); 2 new bus maintenance facilities; the purchase of BRT Right-of-way and associated improvements in 2 corridors; and 424 bus stop pullouts/improvements at various locations.

8.1.5 Bus Capital: Fleet

Over the planning horizon associated with Proposition 400, fleet purchases account for a total of $893 million (2016 and YOE $'s) during FY 2006 to FY 2026 (see Table C-5). Planned fleet purchases through FY 2026 include 1,503 buses for fixed route networks; 23 buses for rural routes; 603 Dial-a-Ride (DAR) vans for paratransit purposes; and 1,541 vanpool vans. It is anticipated that a total of $342 million (2016 $'s) in regional funding will be expended during the period FY 2017 through FY 2021 on vehicle purchases. These purchases will include 536 fixed route buses, 7 rural transit buses, 164 paratransit vehicles, and 442 commuter vans. Both replacement and expansion vehicles are included in these numbers.

8.2 STATUS OF HIGH CAPACITY/ LIGHT RAIL TRANSIT PROJECTS

An extensive High Capacity / Light Rail Transit (HCT/LRT) component is included in the TLCP for the MAG Region. This includes completed and planned future extensions of HCT/LRT corridors throughout the region as well as support infrastructure for the system. A portion of this amount supported the initial 20-mile Central Phoenix / East Valley (CP/EV) light rail.

Figure 8-3, Tables C-6, and C-7, provide information on the locations and costs of HCT/LRT support infrastructure and route extensions throughout the

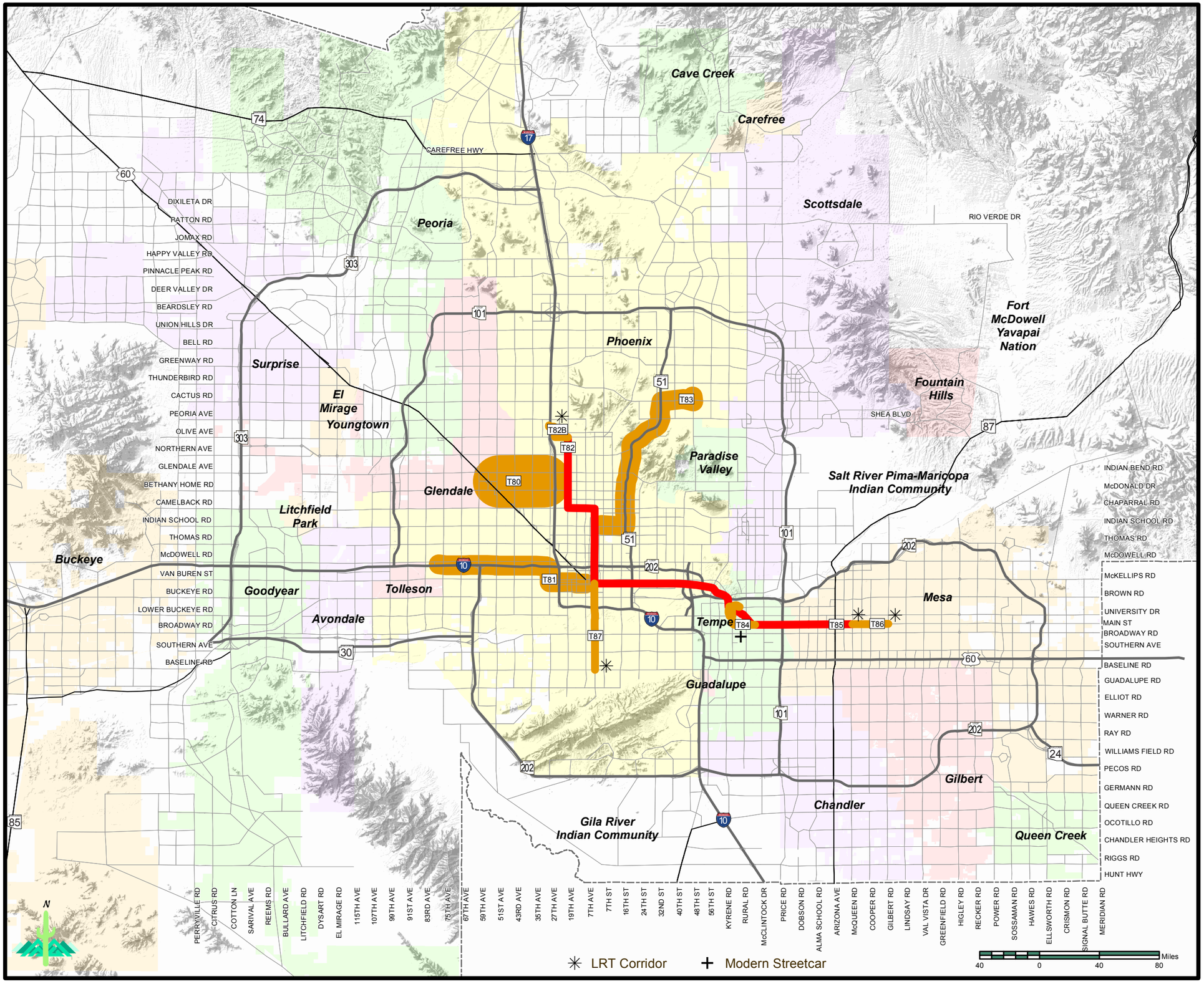

Figure 8-3

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Light Rail Transit (LRT)/ High Capacity Transit

- Existing Light Rail Corridor
- Future High Capacity Transit Corridor
- Freeways
- Highways
- Other Roads
- County Boundary

The Transit Life Cycle Program does not include funding for the Eligible High Capacity Corridors

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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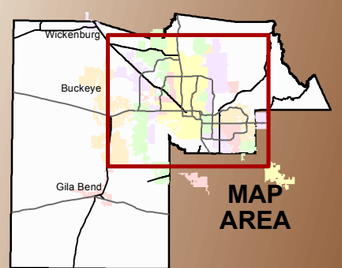

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metropolitan area. The TLCP accounts for a total of $2.93 billion (2016 and YOE $'s) for HCT/LRT projects (see Table 8-2). This amount represents approximately 51.7 percent of the total regional funding dedicated to transit. Approximately $2.33 billion (2016 and YOE $'s) of this amount applies toward construction of route extensions. The remaining $602 million (2016 and YOE $'s) applies to support infrastructure affiliated with the HCT/LRT system. Operating costs are not covered by any of the regional funding for HCT/LRT system and are not reported in this document. (See Section 8.4.2)

8.2.1 Central Phoenix/East Valley (CP/EV) LRT

The alignment for the CP/EV LRT covers a total of 19.7 miles, extending from Montebello Road and 19th Avenue 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 CP/EV LRT segment was completed and began operations in December 2008.

The CP/EV LRT system includes 28 stations, 9 park-and-ride lots, and 50 light rail vehicles. Additionally the CP/EV LRT utilizes traffic signal priority strategies to improve the system's speed. Light rail stations are generally located about 3/4-mile apart, but closer (1/3-mile) in urban centers. The park-and-ride facilities have over 3,600 spaces.

The CP/EV LRT operates primarily at-grade on city streets, with two tracks and light rail vehicles running in trains from one to three cars. The trains run in both directions approximately 18 hours per day on weekdays, and 22 hours per day on weekends. The trains operate every 12 minutes during peak hours, 15 minutes on weekends and 20 minutes during off-peak hours.

The CP/EV system is complemented by shuttle buses and a fixed route bus service network. Half-cent sales tax money from Proposition 400 is allocated toward certain elements of the support infrastructure of the system. Regional funding for the HCT/LRT system is not utilized to pay for operating costs or route construction.

8.2.2 High Capacity / Light Rail Transit: Support Infrastructure

The TLCP for the period FY 2006 through FY 2026, support infrastructure affiliated with the HCT/LRT system accounts for a total of $602 million (2016 and YOE $'s, see Table C-6). Of this amount, $272.4 million applies toward infrastructure along the CP/EV, including bridges, regional park-and-rides, operations and maintenance facility, rail vehicles and legislatively mandated non-prior rights utilities; $143.5 million applies toward corridor preliminary planning, project development and system integration planning (to be expended by 2026); and $163 million applies to other HCT/LRT improvements throughout the system (to be expended by 2026).

The other improvements covered by the $163 million above include the purchase of system expansion vehicles not specifically programmed as part of a corridor extension; expansion of the current Operations and Maintenance Center (OMC) by FY 2020; and improvements or rehabilitation of existing vehicles and system infrastructure.

Non-prior rights utility relocations are legislatively mandated to be funded with Prop 400 revenues. These had been reported separately in the support infrastructure category in past Annual Reports. These costs are part of each extension project and are reported as such, so to eliminate confusion these costs are now reported with the corridors project costs.

8.2.3 High Capacity / Light Rail Transit: Corridors

The completions of eight additional LRT/HCT segments on the system are included in the TLCP using regional and local funding. These include: (1) a 4.6-mile Northwest Extension, which in FY 2007 was split into two phases; (2) a 3.0-mile Tempe Streetcar; (3) a 3.1-mile light rail extension from the east terminus of the CP/EV to Mesa Drive; (4) a 1.9-mile extension from Mesa Dr. to Gilbert Rd., which was amended into the Regional Transportation Plan in 2013; (5) a 5.0-mile corridor to downtown Glendale; (6) an 11.0-mile corridor along I-10 into west Phoenix; (7) a 12.0-mile corridor to northeast Phoenix; and (8) a 5.0 mile corridor south along Central Avenue to Baseline Road. The development of the route extensions account for a total of $2.33 billion (2016 and YOE $'s) during FY 2006 through FY 2026 (see Table C-7).

Local sources will provide approximately half of the funding for the Northwest Extension (phase II) and Glendale corridor. For some of these segments, Federal 5309 funds will provide the remaining half as a regional funding source. It is not anticipated that half-cent funds will be applied to these segments apart from funding for support infrastructure (including vehicles, bridges and regional park-and-ride lots) and preliminary planning efforts. The status of development work on the route extensions is described below.

<u>Central Mesa Extension:</u>

The Central Mesa LRT Extension extends along Main Street from the end of line station for the CP/EV at Sycamore eastward to Mesa Drive. Land acquisition has been completed along the corridor. Construction activities were initiated in May 2012 and after the approval of the Project Construction Grant Agreement (PCGA) in October 2012. Construction is substantially complete and revenue service was initiated on August 22, 2015.

<u>Northwest Extension:</u>

The Northwest Extension was split into two phases in FY 2007. For Phase 1 (to

Dunlap Rd.), design and right-of-way acquisition were completed in 2008-2009 and 2008-2010 respectively. Construction for the Phase 1 extension is substantially complete and opened for revenue operations in March 2016.

The Northwest Phase II Light Rail Extension was initially approved in 2007 and would terminate along Mountain View Road east of Interstate 17 (I-17). In 2013, the City of Phoenix requested that Valley Metro evaluate design options that would extend the alignment over I-17 and terminate at the Metrocenter Mall. Valley Metro completed the evaluation and recommended that the alignment to be extended across I-17 and terminate on an elevated station Platform. The City of Phoenix City Council approved the refined alignment on November 18, 2014. The Northwest Phase II Light Rail Extension is scheduled to be complete in 2026. In January 2016, Phoenix City Council approved to advance the project completion to 2023.

Tempe Streetcar:

Initially approved in FY 2011, the Tempe Streetcar project was revised in 2013 at the request of the Federal Transit Administration (FTA) to better fit new federal funding criteria. Valley Metro and the City of Tempe made several modifications to the streetcar route. The modified project includes an alignment along Rio Salado Parkway and connects with the one-mile downtown Tempe loop on Ash and Mill Avenues then travels south to Apache Boulevard, where the route would continue on Apache Boulevard east to the Dorsey LRT station. The modified alignment was adopted by Tempe City Council in June 2014. Between June 2014 and May 2015, Valley Metro and City of Tempe staff continued to refine the project's definition, including stop locations and street configurations. In May/June of 2015, MAG approved the revised project to be part of the RTP and TIP. The Environmental Assessment is expected to be complete by Fall 2015. Construction is estimated to begin in early 2017, and to be completed in 2019.

Gilbert Road Extension:

The extension to Gilbert Rd., which was amended into the RTP in 2013, will be funded with local and Federal sources provided by the City of Mesa. None of the costs for this extension, including vehicles and utility relocations, will be borne by the half-cent regional funds. The Federal funds are Congestion Mitigation/Air Quality (CMAQ) and Surface Transportation Program (STP) funds from Federal Highway Administration which are being flexed to transit. The project is currently in the design phase and a construction manager-at-risk contract was awarded in fall 2015 to work with the designer to develop a guaranteed maximum price (GMP) for construction. The GMP is anticipated in fall 2016 after which construction will begin, with revenue operations beginning in late 2018.

Capitol/I-10 West:

The Capitol/I-10 West LPA recommendation for alignment and technology were

formally adopted by Phoenix City Council in May 2012 and by MAG regional council in July 2012. The 11-mile light rail alignment would extend from downtown Phoenix through the State Capitol area to approximately 79th Avenue and the I-10 West freeway. The Environmental Assessment began in spring 2013 and is scheduled to be completed in the summer 2015. In 2016, the City if Phoenix Council voted to phase the project, with the initial phase terminating near the Capitol and scheduled to be complete in 2023. The second phase is proposed to be complete by 2030.

West Phoenix/Central Glendale:

The West Phoenix/Central Glendale project will travel westbound from the existing CP/EV line through Phoenix to the city of Glendale. In 2013, Valley Metro, city of Phoenix, and the city of Glendale initiated a transit corridor study to identify determine a route location and a type of transit that would best serve the transportation needs in the corridor. The corridor study is expected to be complete in the mid-2015. It is anticipated that the environmental phase of the project would begin in spring 2017. Construction is anticipated to be completed in 2026.

Northeast Phoenix:

The Northeast Phoenix LRT corridor is planned to connect to the current 20-mile CP/EV LRT and extend near Paradise Valley Mall. While remaining in the RTP, the project has been shifted beyond the TLCP horizon year of FY 2026 to accommodate the decrease in actual and forecasted revenues. Construction is anticipated to be complete in 2034.

South Central:

The South Central Phoenix LRT corridor is planned to connect to the current 20-mile CP/EV LRT and extend south along Central Avenue to baseline Road. This project was amended into the RTP in 2015. The project had an anticipated completion in 2034. The City of Phoenix Council voted to advance the construction of this project for completion in 2023. This project is programmed to be funded by federal, City of Phoenix and regional half-cent funds. The regional half-cent funds were made available by delaying Phase II of the Capitol/I-10 West project beyond 2026.

8.3 TRANSIT PROGRAM CHANGES

The $5.68 billion for FY 2006-2026 estimated total transit costs represent a 1.1 percent increase over the figure of $5.61 billion provided in the 2015 Annual Report. In FY 2016, cost adjustments in the bus program were minimal and estimates for the TLCP components are summarized in Table 8-1. The most significant changes were in the Light Rail categories, as a result of reclassifying

the non-prior rights utility relocations; and improvements to the regional grid service and regional ADA. The FY 2016 changes amounted to a net total increase of approximately $62 million. The TLCP is dynamic program updated based on changing economic conditions, development patterns, local priorities and availability of funding. Included projects are continually reevaluated to reflect the fluidity of the program.

As noted in the transit appendix tables, the "funding start date" for a number of bus routes was shifted beyond FY 2026, due to TLCP adjustments made in FY 2009, FY 2010 and FY 2012. Additionally, in FY 2011 four BRT/Express routes were eliminated and the City of Phoenix assumed funding for four other BRT/Express routes already in service. .

TABLE 8-1
TRANSIT LIFE CYCLE PROGRAM COST CHANGES
(2015, 2016 and Year of Expenditure Dollars in Millions)

Category	2015 Annual Report Total Costs: FY 2006 - 2026 (2014 and YOE Dollars)	2016 Annual Report Total Costs: FY 2006 - 2026 (2015 and YOE Dollars)	Change in Total Costs: 2015 vs. 2016
Bus Operations: BRT/Express	103.6	77.8	(25.8)
Bus Operations: Regional Grid	693.4	736.1	42.7
Bus Operations: Other	771.7	783.7	12.0
Bus Capital Projects: Facilities	255.8	251.5	(4.3)
Bus Capital Projects: Fleet	861.0	893.0	32.1
Light Rail Transit: Support Infrastructure	733.7	601.8	(131.9)
Light Rail Transit Capital: Route Extensions	2,194.0	2,331.3	137.4
Total	**5,613.2**	**5,675.3**	**62.1**

8.4 TRANSIT PROGRAM EXPENDITURES, ESTIMATED FUTURE COSTS AND FISCAL STATUS

8.4.1 Transit Life Cycle Program Update

Valley Metro RPTA and METRO Boards of Directors unanimously approved the 2016 TLCP update on June 16, 2016. The bus and rail program financial models are balanced both annually and through the sunset of the half-cent tax. The bus financial model provides guidance for the continuing effort to maintain financial balance within the bus component of the TLCP.

In FY 2016, TLCP balance for the light rail/high capacity program was achieved while making many changes in corridor priorities and funding as a result of Phoenix' Prop 104, which increased and extended the dedicated transit tax.

8.4.2 Program Expenditures and Estimated Future Costs

Table 8-2 provides a summary of past expenditures, estimated future costs and total costs by major program category for the TLCP. In the appendix, Tables C-1 through C-7 provide detailed data on costs at the project level.

As part of light rail expenditures, 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 are reimbursed to the utility by the light rail project as required by A.R.S. 48-5107. Additionally, as light rail operating expenses were excluded at inception from the Proposition 400 program, for light rail projects only capital expenditures and costs are reported. These expenditures and costs reflect total capital costs and include all funding sources to offset those costs.

For bus services, the Proposition 400 program covers both capital and operating expenses. Accordingly, both capital and operating expenditures and costs are reported. These expenditures and costs reflect total costs and include all funding sources to offset those costs, including local funds and farebox revenues.

For the period FY 2006 through FY 2026 the total estimated cost for the TLCP is $5.63 billion (2016 and YOE $'s) as indicated in Table 8-2. Expenditures through FY 2016 total $2.17 billion (YOE $'s), while estimated future costs total $3.5 billion (2016 $'s).

TABLE 8-2
TRANSIT LIFE CYCLE PROGRAM

SUMMARY OF EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026
(2016 and Year of Expenditure Dollars in Millions)

Category	Expenditures: through FY 2016 (Year of Expenditure Dollars)			Estimated Future Costs: FY 2017-2026 (2016 Dollars)	Total Costs: FY 2006 - 2026 (2016 and YOE Dollars)
	Operations	Capital Investments	Total		
Bus Operations: BRT/Express	58.6	--	58.6	19.2	77.8
Bus Operations: Regional Grid	266.7	--	266.7	469.4	736.1
Bus Operations: Other	336.3	--	336.3	447.3	783.7
Bus Capital Projects: Facilities	--	214.4	214.4	37.1	251.5
Bus Capital Projects: Fleet	--	365.3	365.3	527.7	893.0
Light Rail Transit: Support Infrastructure	--	406.1	406.1	195.7	601.8
Light Rail Transit Capital: Route Extensions	--	522.6	522.6	1,808.7	2,331.3
Total	**661.7**	**1,508.5**	**2,170.1**	**3,502.2**	**5,675.3**

8.4.3 Future Fiscal Status

Future funding sources and uses that apply to the TLCP are summarized in Table 8-3 for the period FY 2016 through FY 2026. Available funding sources include the Proposition 400 half-cent sales tax extension ($1.7 billion); Regional Area Road Fund transfer ($58 million); Federal Transit/Formula Program funds ($560 million); Federal Transit/Discretionary Program funds ($830 million); Federal Highway/CMAQ funds ($310 million); Federal Highway/STP funds ($40 million); other income from local sources ($608 million); and bond and loan proceeds ($140 million). Additional revenue from future bus farebox receipts are estimated as a total of $148 million. To cover estimated future debt service a total of $372 million is deducted from these sources. Additionally deducted is an allowance for inflation in the amount of $475 million. With a beginning balance of $128 million, a net total of $3.68 billion (2016 $'s) is available for use on transit projects and programs through FY 2026. It should be noted that the Federal Highway funding amounts incorporate funds "flexed" from the Arterial Life Cycle Program.

Estimated future uses totaling $3.5 billion (2016 $'s) are also listed in Table 8-3 for the period covering FY 2016 through FY 2026, as identified in the TLCP. Expressed in 2016 $'s these costs are estimated at $935 million for bus operations, $565 million for bus capital projects, and $2.0 billion for light rail transit capital projects. Projected revenues are sufficient to meet future projects costs with a small surplus of approximately $182 million (2016 $'s) remaining in the TLCP. Achieving a balanced program can be attributed to significant efforts over the past several years by Valley Metro in conjunction with their members and MAG.

8.5 TRANSIT PROGRAM OUTLOOK

The TLCP began on July 1, 2005 with a primary goal of the development and implementation of transit projects identified in the MAG RTP covering FY 2006 through FY 2026. Estimated future costs for the period of FY 2016 through FY 2026 are in balance with project future funds available with a remainder of approximately $182 million (2016 $'s). Over the past several years, the TLCP balance was achieved by delaying the implementation of numerous projects and reducing the scope of many other projects, particularly bus routing and frequencies adjustments. Additionally, operating efficiencies were achieved by consolidating contracts. The life cycle process continually requires a balance to be maintained through effective financing and cash flow management, value engineering of projects, and Plan and Program adjustments as necessary. Changes in this year's TLCP resulted in a higher fund balance. Valley Metro will continue to work with its members and MAG to program additional improvements.

TABLE 8-3
TRANSIT LIFE CYCLE PROGRAM
FUTURE SOURCES AND USES OF FUNDS: FY 2017-2026
(2016 and Year of Expenditure Dollars in Millions)

SOURCES OF FUNDS	
Category	**Projected Future Funding: FY 2017-2026 (YOE Dollars)**
Proposition 400: One-Half Cent Sales Tax Extension	1,706.6
Regional Area Road Fund	57.7
Federal Transit / Formula Program Funds	560.7
Federal Transit / Discretionary Program Funds	830.3
Federal Highway/ MAG CMAQ	310.8
STP-AZ	39.7
Other Income	608.6
Bond and Loan Proceeds	140.5
Bus Farebox Revenues	148.5
Plus Beginning Balance	128.1
Less Debt Service	(372.1)
Less Inflation Allowance	(475.4)
Total (2016 $'s)	**3,683.8**
USES OF FUNDS	
Category	**Estimated Future Costs: FY 2017-2026 (2016 Dollars)**
Bus Operations: BRT/Express	19.2
Bus Operations: Regional Grid	469.4
Bus Operations: Other	447.3
Bus Capital Projects: Facilities	37.1
Bus Capital Projects: Fleet	527.7
Light Rail Transit: Support Infrastructure	195.7
Light Rail Transit Capital: Route Extensions	1,808.7
Total (2016 $'s)	**3,502.2**

Through the discretionary Section 5309 “New Starts” Program, a significant portion of the funding for the LRT/HCT system is awarded by the US Department of Transportation. At the Federal level, the MAG region is subject to a highly competitive process resulting in indeterminate timing and amounts of New Starts monies. Therefore, the prospective New Starts awards require careful monitoring. In addition to the “New Starts Program” for the LRT/HCT system, revenues from the Federal Transit Administration are a key source of funding for the bus capital program. At the Federal level, continued pressure to reduce

spending could result in decreased Federal revenues for the TLCP. In the future, this could put additional projects in jeopardy as a result.

Moreover, the latest Federal transportation legislation, FAST-Act signed by the President on December 4, 2015, retained significant changes to the federal transit funding programs from MAP-21. Some of those changes included the elimination of several discretionary programs in favor of formula based programs. This allows a more predictable stream of federal revenues for planning purposes.

CHAPTER NINE

TRANSPORTATION SYSTEM PERFORMANCE

The Fixing America's Surface Transportation Act, or FAST Act was signed into law on December 4, 2015. This federal transportation legislation replaces the Moving Ahead for Progress in the 21st Century Act (MAP-21), which had been continued through 36 short term extensions and continuing resolutions. The FAST Act provides substantially the same transportation planning guidance contained in, MAP-21; it increases funding by 11 percent over five years but largely maintains current program structures and funding shares between highway and transit. Since it is a long-term legislation, it allows state and local governments to plan and finance projects with greater certainty through 2020.

The FAST Act also makes changes and reforms to many federal transportation programs, such as streamlining the approval process for new transportation projects by providing new safety tools and establishing new programs to advance critical freight projects. Guidance includes the following requirements: (1) coordination between states and metropolitan areas and between the public and private sectors, (2) linkages and connections between different forms of transportation, (3) recognition of environmental mitigation considerations, and (4) broad participation to ensure that decisions will be responsive to local needs. In addition, FAST continues to place increased emphasis on: (1) following a performance-based approach to transportation decision-making, (2) establishing performance targets, and (3) integrating state departments of transportation and public transit operators' targets into the metropolitan planning process.

Final rules and regulations initially introduced by MAP-21 are still under development by the U.S. Department of Transportation. Three rules are available in final form and have been published: The Highway Safety Improvement Program (HSIP), the Safety Performance Management Measures and the Statewide and Metropolitan Planning Rule. The Pavement and Bridge Condition Performance Measures, the Asset Management, the System Performance/Freight Movement and Congestion Mitigation and Air Quality (CMAQ) Program Performance Measures Rules are in proposed format. The Federal Transit Administration has also published the final Public Transportation Safety Program Guidance, effective Sept 12, 2016, and the Transit Asset Management (TAM) Rule, effective October 1, 2016. Still in proposed format is the FTA Public Transportation Agency Safety Plan Rule, initially posted in February 2016. MAG will continue to follow general transportation planning concepts as included in FAST, and has initiated work in coordination with state and transit partners to follow performance based planning and programming criteria and principles in developing targets required by the final rules.

Performance measurement and management is not a new activity at MAG; over the last six years, a performance measurement and management program has

been developed in cooperation with regional partner agencies and member jurisdictions. The program has been integral to the development of MAG's Unified Planning Work Program (UPWP). Based on a robust data collection and processing component, the program includes a series of analytic procedures, various reporting methodologies and web-based products, allowing policymakers, technical users and the general public easy access to performance data and visualization. The material presented in this chapter documents performance of the regional transportation system, utilizing the on-going MAG data monitoring and assessment program, as well as peak period forecasted performance of the system for 2025 based on simulations from the MAG travel demand model.

At the state level, Proposition 400 legislation set forth the factors to be considered during the development of the MAG Regional Transportation Plan (RTP) such as the impact of growth on transportation systems and the use of a performance-based planning approach. Consistent with state legislation, the development of the MAG Regional Transportation Plan (RTP) included a performance-based planning and programming process. This process established goals, objectives and performance measures for developing various options and evaluating potential scenarios to be included in the Plan. A number of the goals and objectives adopted relate to the performance of the system as a whole as well as the individual components of the multimodal system across various facilities such as freeway, arterial and transit corridors.

In conjunction with the adoption of the MAG RTP in November 2003 and the passage of Proposition 400 in November 2004, the Arizona Legislature issued A.R.S. 28-6313 which requires the Auditor General to contract with a nationally recognized independent auditor to conduct a performance audit of the regional transportation system beginning in 2010 and every five years thereafter. The 2010 Performance Audit of the MAG RTP was successfully completed and released to the public on December 21, 2011. The audit examined the RTP multimodal plan and evaluated it using specific performance measures included in MAG's Performance Measurement Program. The 2015 Performance Audit of the RTP is underway and a final report is scheduled to be published in November of 2016.

Pursuant to national goals and performance management requirements set forth in the current federal transportation legislation (MAP-21), MAG continues to place emphasis on performance-based planning, and focuses on enhancing the ongoing Transportation System Performance Monitoring and Assessment Program.

9.1 PERFORMANCE MONITORING AND ASSESSMENT CONCEPTS

The transportation system performance monitoring and assessment process includes: (1) data collection and tracking of the performance of the transportation system on a continuous basis, and (2) forecasting how the system is likely to perform in the future. The tracking element emphasizes collection of observed data and development of analysis and comparative statistics that reveal trends in system performance over time. The forecasting element focuses on the use of travel demand computer models to project travel conditions and draw conclusions regarding future performance of the transportation system.

9.1.1 Monitoring Current Conditions

The optimum combination of accuracy and detail for performance measurement is based on real time, observed data sources. These data provide the information to assess the principal operating characteristics of the current transportation system and to establish a historical record that tracks performance trends over time. The specific parameters observed vary by transportation mode and must take into consideration the practicality and expense of collecting data on a continuing basis. The latter factor is particularly important if a historical record is to be established that allows effective analysis of performance trends. A large amount of data is collected annually in the MAG region related to the movement of people, goods, and services.

- Data Items - For roadway systems, typical data collected to assess current performance includes: vehicle counts at a sample of locations; vehicle densities along various roadway segments; speeds and point-to-point travel times; delays; number and types of accidents and, as a result of special studies, intersection queue lengths. For transit systems, common data items cover: boardings and fare box revenues by route; on-board passenger loadings at various points in the system; operating costs; and service standards.

- Data Sources - Data from the Arizona Department of Transportation's (ADOT) Freeway Management System (FMS), which now includes 158 centerline miles of the regional freeway system, is collected continuously in five minute increments from loop and acoustic sensors that detect and record the movement of vehicles across a large portion of the MAG region. Currently the FMS instrumented portion covers approximately 56 percent of the entire MAG freeway system. As the FMS system continues to grow, it will allow the use of these data for future reliability, vehicle hours of delay and other performance calculations over the entire urban highway system.

For the past five years, MAG has also acquired traffic speed data for freeways and arterials in the region from third party commercial sources; this

acquisition has enhanced the baseline traffic data archive serving planning, programming and performance measurement activities. A major national private data provider is under contract with MAG to supply GPS-probe based speed data for all regional freeways and all major arterials, thus supplementing the existing arterial database and ADOT FMS freeway database. This acquisition is proposed to be renewed on a yearly basis allowing the current data archive to be more geographically complete and enable MAG to perform analysis on system and corridor performance from comprehensive data sources. In 2013, the Federal Highway Administration (FHWA) made available, free of charge to States and Metropolitan Planning Organizations (MPOs), the National Performance Management Research Data Set (NPMRDS), a national data set of average travel times for use in performance measurement. MAG is receiving the 2015 iteration of this data set in the fall of 2016 and will continue with the analysis for performance measurement and travel demand model calibration.

In addition, traffic count data is collected on arterial roadways through both permanent and temporary counting stations deployed by a variety of MAG member agencies as well as by a MAG sponsored vehicle counts program at selected regional locations. Moreover, periodic studies are conducted to collect information on topics such as the average number of people in cars, bottlenecks, the proportion of trucks on the roadways, and levels of congestion on the freeways and arterials.

Recent Monitoring Results - Per Capita Freeway Vehicle-Miles of Travel (VMT) is defined as the average number of freeway miles a vehicle in the Phoenix-Mesa urbanized area travels per day per person. This measure reflects overall vehicle travel trends for the region. Table 9-1 lists the total number of freeway vehicle miles traveled each year during 2012 to 2015. Between 2012 and 2015, Freeway VMT figures are trending upward, showing an increase of 7.3 percent.

The level of VMT per capita in 2015 is 2.8 percent higher than in 2012.

TABLE 9-1
PER CAPITA FREEWAY VMT for the PHOENIX/MESA URBANIZED AREA

	2012	2013	2014	2015
Total Freeway VMT*	29,073,331	29,400,899	30,802,738	31,209,013
Population of Phoenix-Mesa Urbanized Area**	3,392,348	3,414,591	3,490,349	3,542,153
Per Capita Freeway VMT	8.57	8.61	8.83	8.81

Source:

*ADOT Highway Performance Monitoring System (HPMS) 2015 Draft

** ACS and Census 2010 (2014 Draft Estimate)

9.1.2 Forecasting Future Performance

A secondary aspect of performance monitoring and assessment is the analysis of future conditions on the transportation system. An understanding of potential future performance status provides valuable input into the decision-making process for prioritizing expansions, rebalancing activities or other improvements to the system.

- Travel Demand Forecasting - Forecasts of travel on the roadway and transit system are developed through the use of computer simulations of the future transportation network. These simulations are based on assumptions regarding potential future improvements to the transportation system, projections of future population levels, and other critical factors such as land use densities and patterns. The use of computer simulations allows the testing of various network options to determine how future system performance is affected by alternative investment strategies. The models have the capability to produce simulated data for all the same factors that are collected as part of the monitoring process, as well as additional data that would be impractical or too costly to collect.

  An important observation regarding the current MAG four-step Travel Demand Model is that it is inherently a static model. Statistics on performance results have been tabulated for the Maricopa County portion of the MAG modeling area, while performance maps have been prepared covering the fully expanded MAG metropolitan planning area (including Pinal County areas). Modeling was based on the MAG 2013 Socio-economic Projections, which reflect changes in regional demographics and market. Conditions such as fuel costs and other road user costs are not factored into the simulation runs.

- Build vs. No-Build Scenarios - Transportation network simulation models are also used to assess the impact of improvements (Build Scenarios) compared to conditions without improvements (No-Build Scenarios). This capability is especially important when an area experiences significant changes in growth patterns. Under high growth conditions, the performance of the transportation system may decline even though improvements are made, due to additional travel demand brought on by an improvement in regional economic activity as well as increases in housing units and population, The reverse occurs when a decrease in demand results in a reduction in congestion levels. However, in the case of an increased demand scenario such as the one depicted in the “2025 No-Build” column of Table 9-2, conditions easily reach critical levels, if improvements are not implemented. Network simulation models provide the capability to analyze conditions with and without improvements,

allowing an assessment of project performance relative to a “No-Build” option.

9.2 ROADWAY SYSTEM PERFORMANCE

A broad range of monitoring data on the performance of the roadway system in the MAG area has been collected over the years. These data collection efforts have supported a variety of performance factors and have enabled historical comparisons to be made.

9.2.1 Transportation Monitoring Data

Currently, traffic data is available for the MAG Region from various studies and surveys completed within the last five years. Besides the yearly ADOT FMS and private sector speed data mentioned previously, data sources include:

- 2007 Travel Time and Speed Study
- 2007 Regional On-Board Transit Survey
- 2007 Internal Truck Travel Survey
- 2008 Regional Household Survey
- 2011 MAG Complete Streets Study
- 2011 MAG Design Assistance Program Guidebook
- 2011 MAG Non-Recurring Congestion Study
- 2011/12 Traffic Data Collection Management Study
- 2012 Transit Standards and Performance Measures Study
- 2012-2013 Southwest Corridor Major Investment Study (data base)
- 2012-2013 Mode Choice Model Update (data base)
- 2012-2013 Central Phoenix Framework Study (data base)
- 2012-2013 Sustainable Transportation-Land Use Study (data base)
- 2013 Bottleneck Data collection and Model Validation Study
- 2013 Airport Travel Model Update and Data Collection
- 2013 Special Events Travel Forecasting Model and Collection of Special Events Data
- 2015 MAG Truck Travel Model Update
- 2015 Arizona State University Travel Survey and Model Update
- 2015 Valley Metro Transit Performance Report
- 2015 Valley Metro Ridership Report
- 2015 Arizona State University Travel Survey and Model Update

- <u>Volume Data</u> - The ADOT Freeway Management System (FMS) provides count data on the mainline general purpose lanes and HOV lanes 24/7/365, and on ramps on the majority of the urbanized freeway system. Traffic counts are collected through 273 in-pavement loop detectors and 83 passive acoustic detectors (PADs). This data feeds directly to the

Arizona AZ511 system, providing real-time traveler information. Data is also aggregated in periods from five minutes to 24 hours for weekdays and weekends. (http://www.az511.gov/traffic/)

For the arterial system, MAG collects traffic data at over 770 stations using machine counts. Data is collected on weekdays every three to four years, over a 48-hour time period, and aggregated by 15-minute, hour, peak period, and 24-hour periods. Counts are conducted by direction at mid-block locations throughout the region. Data from the MAG count program undergoes a variety of data quality control checks; count data collected from other jurisdictions/member agencies is usually subject to the same kind of quality control checks. Since 2010 MAG has developed a web-based Traffic Data Management System which is a repository of all available traffic counts, turning movement counts and travel time databases. (http://mag.ms2soft.com/)

- Travel Time Data - Travel time is among the measures that are most meaningful to travelers and system managers alike, since it relates to their experience of everyday travel. The Travel Time Index (TTI) is a measure of average conditions that tells one how much longer, on average, travel times are during congested conditions compared to during light traffic. For example, a value of 1.30 TTI means that a 20 minute trip at free flow speeds takes 30 percent longer, or 26 total minutes in the peak hours.

  Figure 9-1 depicts the location of the regional freeway segments for which TTI's have been calculated. Appendix Table D-1 provides a detailed listing of the calculated commuting TTI's for the a.m. and p.m. commuting peak periods on the instrumented freeway corridors, based on 2013 and 2014 ADOT FMS data.

  The 2014 TTI peak period values have generally maintained their levels, with the exception of a PM period westbound I-10 segment between I-17 and SR-101, which experienced an increase of 3.9 percent and a southbound segment of SR-51 between Glendale Ave. and I-10 which increased by 3.15 percent in travel time. The highest percent changes in travel time indices between 2013 and 2014 are seen during the AM peak periods, certain corridors have experienced significant service level declines, such as eastbound I-10 between I-17and SR-51, southbound I-17 between Peoria Ave. to I-10 and westbound US-60 between SR-101 and I-10,
  experiencing travel time increases of 7.5 and 8.7 and 7.5 percent respectively.

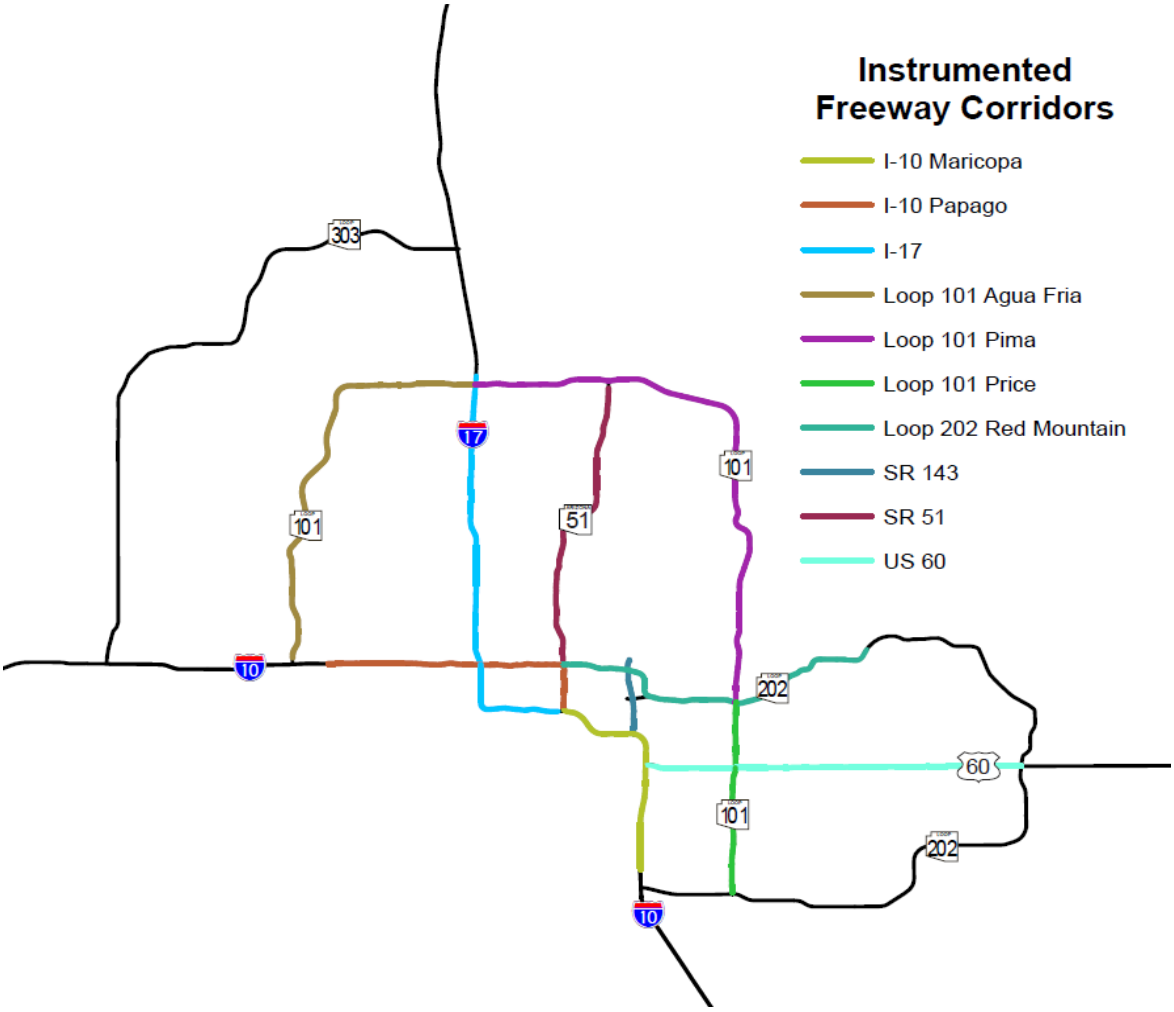
  With respect to the SR-101 and SR-202 Corridors, the highest percent change in travel time is seen on the northbound segment of SR-101 between SR-202 and Pima Rd., and on the westbound segment of SR-

101 between SR-51 and I-17, with increases of 6.6 and 7.7 percent in travel time index respectively.

As a whole, the percent increases in travel times comparing 2013 and 2014 are been moderate across the freeway system, the most significant differences are seen in the direction of central locations with higher concentrations of job destinations near the urban core. This pattern is generally an indicator of a recovering regional economy.

- Speed Data - Currently, the three principal, most comprehensive sources of speed data for the MAG region are: the private sector data bases, (which have been acquired by MAG starting in 2010), ADOT's Freeway

FIGURE 9-1
SELECTED FREEWAY CORRIDORS



Management System (FMS) permanent count detector database, and the National Performance Measurement Research Data Base (NPMRDS), made available to States and MPOs by the FHWA. The source for private sector and national traffic data is mainly probe GPS-equipped vehicles and other mobile consumer devices. The significant benefit to these products is their consistency in reporting, as well as the full coverage of the MAG freeway and major arterial network. Speed data for the instrumented portions of the freeway system is also available through the ADOT Transportation Planning Division traffic detector stations.

Appendix Tables D-2 and D-3 depict changes in average speed for freeway corridors monitored by ADOT'S FMS System between 2014 and 2015. Comparing these two years, it can be observed that general purpose lanes have generally maintained their morning peak period average speeds in 2015, with the exception of eastbound I-10 in between 83rd Ave. and SR-51 and northbound I-10 between Chandler Blvd. and US-60, where speeds have decreased between 15 and 17 percent as compared with 2014. Westbound US60, has also experienced speed decreases of up to 8 mph. between SR-101 and the I-10 interchange.

During the afternoon peak period, for 2015, the freeway system in general maintained balanced speed conditions as compared to 2014; a few segments located within the urban core corridors experienced a significant decline. General purpose lanes and HOV lanes on westbound I-10 between SR-51 and I-17 experienced significantly decreased speeds up to 10 mph. Similarly, eastbound I-10 between SR-51 and US-60, speeds experienced decreases of 6 and 8 mph. on general purpose lanes and HOV lanes respectively.

A number of projects initiated construction phase during 2014 outside of the urban core area, such as additional travel lanes and an interim interchange on SR-303. Additionally, on SR-101 between SR-202 and Shea Blvd., additional travel lanes are being built in both directions; a new traffic interchange is being constructed on US -60 and Meridian Rd., New general purpose and HOV lanes are being added to SR-202 between SR-101 and Broadway Rd. Despite, the significant non-recurring congestion effects from road work, none of these segments have experienced measurable loss of throughput or speeds.

With regards to arterial corridors, the highest increases in travel time are experienced in morning and afternoon peak periods especially in popular commute directions, accessing and exiting major freeway corridors and approaching and leaving regional employment centers. For example, in the morning peak period, travel time on the westbound Glendale Avenue corridor increased by 8 percent between 59th Ave. and the I-17; on the northbound Arizona Ave. corridor, travel time between Riggs Rd. and SR-

202 increased by 6 percent. The Chandler Blvd. corridor in Ahwatukee, experienced increases of approximately 6 percent as well. In the afternoon peak period, when commuter travel is exiting the freeway corridors, southbound Gilbert Rd. between SR-202 and Queen Creek Road and southbound Scottsdale Rd. from SR-101 to Bell Road experienced the highest ravel time increases at 8 and 7 percent respectively.

9.2.2 Roadway Performance Forecasts

In order to analyze future congestion, it is necessary to make use of simulations of the regional transportation network. The MAG travel demand model, which is a state-of-the-art computer travel demand model, was utilized for this purpose.

- Forecast Modeling Scenarios **-** For the analysis presented in this chapter, three network scenarios were modeled to assess potential future conditions on the transportation system in the region.

    - 2015 Base Year Scenario: For this scenario the highway, arterial and transit networks reflect the base year 2015. This network reflects "up-to date" conditions after implementing a number of projects identified in the RTP, as well as 2015 travel demand. The socio-economic data that generated the travel demand for this scenario is based on the 2013 Socioeconomic Projections.

    - 2025 RTP Plan Scenario: The network used for this model run includes all the projects in the RTP Plan in place by 2025 and utilizes MAG's 2013 Socioeconomic Projections for the year 2025.

    - 2025 No-Build Scenario: The purpose of this scenario is to quantify the performance of the system without including the RTP major investments and assess the impact on levels of service. This scenario uses the same socioeconomic data for 2025 as that used for the RTP scenario, but does not include the system improvements identified in the 2025 RTP Plan Scenario.

- Performance Measure Forecasts - To illustrate the relationship between the various indicators of forecasted future roadway system performance, data has been grouped into three categories: Supply Measures, Demand Measures and Level of Service Measures, as shown in Table 9-2.

TABLE 9-2
ROADWAY PERFORMANCE MEASURES FROM MAG MODEL

	Scenario		
Measures	**2015**	**2025**	**2025 No Build**
Population	4,357,255	5,307,941	5,307,941
Supply Measures			
Lane-Miles:			
Freeways (GP Lane)	2,342	2,598	2,342
Freeways (HOV Lane)	392	492	392
Arterials	10,915	14,603	10,915
Daily Capacity Miles:			
Freeways (GP Lane)	73,032,442	80,239,107	72,131,079
Freeways (HOV Lane)	12,201,729	15,017,826	11,844,391
Arterials	137,014,066	182,797,755	133,898,245
Demand Measures			
Daily Vehicle-Miles Traveled (VMT):			
Freeways (GP Lane)	33,748,480	41,957,175	40,480,847
Freeways (HOV Lane)	4,608,598	5,850,296	5,387,788
Arterials	42,520,771	52,787,945	52,781,523
Level of Service Measures			
Congested Lane-Miles:			
Freeways	599	831	910
Arterials	282	523	777
% Congested Lane-Miles:			
Freeways	21.9	26.9	33.3
Arterials	2.6	3.6	7.1
Congested VMT:			
Freeways	4,242,971	5,704,593	6,402,738
Arterials	778,061	1,423,348	2,207,248
% Congested VMT:			
Freeways	39.4	43.2	51.2
Arterials	6.1	9.0	14.1
Vehicle Hours of Delay:			
Hours of Delay	214,070	293,617	364,257
Hrs of. Delay per 1000 VMT	9.1	10.1	13.0

Note: Level of Service measures are based on PM peak traffic conditions.
Source: MAG Travel Demand Model Update (20160408.10.11.15.TC6Cpmfpr,otuS[romg16);
Maricopa County portion of the modeling area.
2013 Socioeconomic Projections

For Supply Measures and Demand Measures, daily values have been calculated and are listed in Table 9-2. For Level of Service Measures, p.m. peak period values have been selected as representative indicators of the overall performance of the transportation system and are also shown in Table 9-2. Values are presented in a comparative fashion among three modeling scenarios:

the 2015 Current Base Year, the 2025 RTP and the 2025 No-Build. All data is for the Maricopa County portion of the MAG transportation modeling area. Table 9-2 provides a comparison of key system level parameters and performance measures for the three scenarios that were modeled. It is important to note that according to the 2013 socioeconomic projections, population increases by 21.8 percent between 2015 and 2025.

- Supply Measures**:** Two measures of the supply of roadway capacity in the region are included in Table 9-2: lane miles and capacity miles. Taking into account both general purpose (GP) lanes and high occupancy vehicle (HOV) lanes, there is an increase of 9.87 percent in daily freeway capacity miles between the 2015 Base Year and the 2025 RTP. Arterial daily capacity miles for the 2025 RTP also increase significantly, by 33.4 percent, as compared to the Base 2015 Year network. For the No-Build Scenario, there is a slight decrease in capacity compared to the 2015 Base Year.

- Demand Measures: The demand measure identified in Table 9-2 is daily vehicle miles of travel (VMT) for arterials and freeways on an average weekday. These facility types were selected, since they carry the vast majority of travel in the roadway network. However, there is some additional VMT carried by local and collector streets, which is not reflected in the figures in Table 9-2. Comparing the 2015 Base Year and the 2025 RTP, a 24.3 percent daily VMT increase is observed on freeways and 31.4 percent on arterials. For the No-Build scenario, the VMT increases are 21.7 percent and 32.6 percent, respectively, with the lower increase in freeway daily VMT reflecting the lack of facility improvements.

- Level of Service (LOS) Measures: The MAG Four Step Travel Demand Model results reported in this section includes a LOS metric based on the ratio between Volumes over Capacity on a given facility. A number of LOS measures are included in Table 9-2 for the three modeled scenarios, including p.m. peak congestion on freeways and arterials, congested VMT, and vehicle hours of delay. As noted previously, congested segments are those with Levels of Service E-F, and delay represents amount of extra travel time due to congestion.

    - Congested Lane Miles: A review of Table 9-2 indicates that the number of lane miles of congested freeways increases by 54 percent between the 2015 Base Year and the 2025 RTP, while the number of lane miles of congested arterials increases by 75.7 percent. At the same time, when comparing the 2015 Base Year to the

2025 No-Build scenario, these values are 74.6 percent and 284 percent, respectively.

- Percent Congested Lane Miles: For freeways, the percentage of congested lane miles in the 2025 RTP scenario shows a measurable increase compared to the 2015 Base Year, increasing from 21.9 percent to 26.9 percent. However, for the 2025 No-Build scenario, the percentage of congested lane miles on freeways increases to 33.3 percent. A similar pattern occurs for the percentage of lane miles on arterials that are congested. This percentage increases from 2.6 percent for the 2015 Base Year to 3.6 percent for the 2025 RTP scenario, while the percentage reaches 7.1 percent for the No-Build scenario.

- Congested VMT: A review of Table 9-2 indicates that the amount of congested VMT on freeways increases by 34.4 percent between the 2015 Base Year and the 2025 RTP, while amount of congested VMT on arterials increases by 82.9 percent. When comparing the 2015 Base Year to the 2025 No-Build scenario, these values are 50.9 percent and 183.6 percent, respectively.

- Percent Daily Congested VMT: For freeways, the percentage of congested VMT in the 2025 RTP scenario shows a small increase compared to the 2015 Base Year, increasing from 39.4 percent to 43.2 percent. However, for the 2025 No-Build scenario, the percentage of congested VMT on freeways increases to 51.2 percent. A similar pattern occurs for the percentage of

  VMT on arterials that is congested. This percentage increases from 6.1 percent for the 2015 Base Year to 9 percent for the 2025 RTP scenario, while the percentage reaches 14.1 percent for the No-Build scenario.

- Vehicle Hours of Delay: The total vehicle hours of delay increases 37 percent between the 2015 Base Year and the 2025 RTP, but increases by 70.1 percent under the No-Build scenario. The vehicle hours of delay per 1,000 VMT increases by 10.9 percent between the 2015 Base Year and the 2025 RTP; however, it increases by 42.8 percent, under the No-Build scenario.

- Build vs. No-Build: The enhanced freeway network and additional arterial mileage provided in the 2025 RTP, but not included in the No-Build scenario, result in significant congestion relief on the both the freeway and arterial systems. These system improvements help significantly to mitigate the effects of a growing population, estimated to increase by 21.8 percent between 2015 and 2025. It is important to note that a significant portion of the arterial improvements included in the 2025 RTP network are funded outside of the Arterial Life Cycle Program.

- Level of Service Maps: Appendix Figures D-1 through D-3 show the geographic distribution of P.M. peak period congestion patterns for the three modeled scenarios, depicting facility Levels of Service for the Maricopa County portion of the MAG freeway system. Figures D-1 through D-3 show levels of service on the freeway system for the 2015 Base Year, 2025 RTP, and the 2025 No-Build scenarios, respectively. A complete Freeway and Arterial Performance Dashboard Report can be accessed interactively from the MAG performance website (www.performance.azmag.gov).

9.3 TRANSIT SYSTEM PERFORMANCE

There are two key components to the transit performance monitoring effort: the Transit Performance Report (TPR) and the Ridership Report. The TPR is prepared and updated annually by Valley Metro/Regional Public Transportation Authority (RPTA). This report is developed using input from, and is reviewed by, member agencies and the RPTA Board. The TPR serves as an important information source for the MAG regional transportation planning process. This Report also updates the Valley Metro Short Range Transit Plan.

Valley Metro also publishes an annual Ridership Report, which covers transit passenger ridership for all the operating agencies in the region. The report includes annual weekday, Saturday and Sunday ridership figures by select transit modes (bus, circulator, rural and light rail). Principal performance measures include total boardings and boardings per mile across the system as well as total number of riders and revenue miles by route and by city.

The full Transit Performance Report and The Valley Metro Ridership report can be accessed from the Valley Metro Website (www.valleymetro.org).

9.3.1 Service Standards and Performance Measures

In 2006 RPTA hired a consultant to conduct a Service Efficiency and Effectiveness Study (SEES). One task of this study was to develop a series of performance measures. This SEES also developed initial performance targets

that allow comparison between performance expectations and actual performance. These performance measures are being incorporated into the TPR, as well as reported on the Transit Ridership Report and Dashboard.

The SEES framework established a baseline of performance expectation for Fixed Route bus (system-wide); Fixed Route bus at the route level; Paratransit; and Light Rail Transit (LRT). One of the key goals of the performance targets is to ensure consistent service levels throughout the region.

A Technical Advisory Group (TAG) made up of Valley Metro member agencies and MAG, was formed in November 2012, being tasked with the development of Regional Transit Service, Facility Standards and Performance Measures. Phase I of this effort was completed with Valley Metro/RPTA Board adoption in November of 2013, and included service standards and service delivery goals and objectives. The Advisory Group also developed transit standards, performance measures and a fully documented process for transit service changes. Phase II which was built upon the effort initiated as part of Phase I, was completed in December 2014. Phase II focused on the development of transit service performance measures, service thresholds, application principles, and implementation standards for new service. Phase II recommendations were approved by the Valley Metro Board of Directors in December 2014. Phase III was initiated in December 2014 to establish standards and performance measures for regionally funded transit vehicles such as buses and light rail vehicles and transit facilities such as bus stops and park and ride facilities. Phase III is now complete and approved by the Valley Metro Board of directors June 16, 2016.

9.3.2 Performance Targets and Operating Results

The original performance measures developed during the Service Efficiency and Effectiveness Study are listed in Tables 9-3 through 9-5. These tables also include actual operating results, from the 2013, 2014 and 2015 Transit Performance Reports (TPR). The annual (TPR) provides information to the Boards of Directors and member cities concerning ridership, operating costs, fare revenue and performance indicators for region-wide transit services. The modes covered by the TPR include fixed route bus, paratransit, and light rail transit. Fixed route bus service includes local routes, super grid (major arterial routes), express/bus, circulators, rural connector routes and shuttles.

Since the adoption of service provision goals and standards, in December 2014, Valley Metro has undertaken the development of transit service performance measures and thresholds to evaluate transit operations and assess the attainment of the adopted service provision goals. Transit service performance measures are intended to assess the effectiveness of transit operations in achieving the adopted system goals.

TABLE 9-3
LIGHT RAIL TRANSIT (LRT) PERFORMANCE MEASURES

Measure	2013	2014	2015
Cost Efficiency/Effectiveness			
Farebox Recovery Ratio	45.00%	40.00%	41.00%
Operating Cost per Boarding	$2.01	$2.18	$2.19
Subsidy (Net Operating Cost per Boarding)	$1.11	$1.31	$1.29
Operating Cost per Revenue Hour	$11.81	$12.60	$12.60
Service Effectiveness			
Annual Total Boardings	14,286,093	14,331,488	14,276,884
Boardings per Revenue Mile	5.88	5.77	5.75
ADA On-time Performance	94.70%	93.50%	92.10%

Source: FY 2015 Valley Metro Transit Performance Report

TABLE 9-4
FIXED ROUTE BUS PERFORMANCE MEASURES

Measure		2013	2014	2015
Cost Efficiency/Effectiveness				
Farebox Recovery Ratio		21.60%	21.90%	20.50%
Operating Cost per Boarding		$3.85	$3.83	$4.07
Subsidy (Net Operating Cost per Boarding)		$3.02	$3.00	$3.24
Operating Cost per Revenue Mile		$8.09	$7.65	$7.90
Average Fare		$0.83	$0.84	$0.83
Service Effectiveness				
Annual Increase in Total Boardings		2.84%	-2.23%	-2.29%
Annual Increase in Average Boardings	Weekday	4.34%	-4.16%	-2.46%
	Sat.	5.12%	-3.59%	3.78%
	Sun.	6.50%	-2.17%	1.37%
Average Boardings per Revenue Mile		2.1	2.0	1.9

Source: FY 2015 Valley Metro Transit Performance Report

Transit performance is also reported on in Appendix Tables C-8 and C-9. Beginning with the 2013 Annual Report, ridership data relates to all Public Transit Fund (PTF) supported routes or portions of routes. This includes existing routes receiving PTF funding that predate Prop 400 and may not have been reported on previously. This approach is being used to ensure that the broadest disclosure routes may stay the same from year to year, because PTF funds no longer pay for the service. On the other hand, certain other routes may indicate a jump from no ridership to significant levels of ridership. This occurs in cases where a route is now being reported on but had not been reported on previously.

TABLE 9-5
PARATRANSIT PERFORMANCE MEASURES

Measure	2013	2014	2015
Cost Efficiency/Effectiveness			
Farebox Recovery Ratio	5.70%	7.00%	7.70%
Operating Cost per Boarding	$36.90	$37.29	$33.78
Subsidy (Net Operating Cost per Boarding)	$34.81	$34.69	$31.17
Operating Cost per Revenue Hour	$97.17	$88.99	$84.70
Service Effectiveness			
ADA On-time Performance	95.81%	96.83%	95.50%

Source: FY 2015 Valley Metro Transit Performance Report

9.4 PERFORMANCE AUDIT OF THE REGIONAL TRANSPORTATION PLAN

In conjunction with the adoption of the MAG RTP in November 2003 and the passage of Proposition 400 in November 2004, the Arizona Legislature issued A.R.S. 28-6313, which requires the Auditor General to contract with a nationally recognized independent auditor to conduct a performance audit of the regional transportation system beginning in 2010 and every five years thereafter. The 2010 Performance Audit of the MAG RTP was successfully completed and released to the public on December 21, 2011. The audit examined the RTP multimodal plan and evaluated it using specific performance measures included in MAG's Performance Measurement Program.

By August of 2014 all recommendations derived from the audit were completed by MAG, with the exception of two that would require legislative and policy changes. Performance measurement for freeway, arterial and transit facilities was abundantly documented, quantified and communicated via dashboard visualization, web archives and project descriptions located on web-based project cards.

The second iteration of the state-mandated Performance Audit of the MAG Regional Transportation Plan was initiated in March 2016. MAG is currently in the process of assisting the Auditor General consultants at all stages of the auditing process by providing necessary background documentation to assess the performance of the RTP, as well as demonstrating compliance with prior audit recommendations.

9.5 PERFORMANCE MONITORING AND ASSESSMENT PROGRAM OUTLOOK

The MAG Transportation System Performance Monitoring and Assessment Program has been established to provide a framework for reporting performance

at the system and corridor levels, and serves as a repository of historical, simulated and observed data for the transportation system in the MAG Region. In

light of MAP-21/FAST legislation and federal rulemaking documents, this program has reached an important level of development and is poised to serve as the performance measurement and management component supporting planning and programming activities at MAG. A major goal of the program is to communicate measures related to mobility and accessibility in the MAG Region, and to continuously provide the public with timely and relevant information on the performance of the multi-modal transportation system.

MAP-21 and FAST establishes performance-based programs and sets forth requirement for performance goals, outcomes and targets. MAG staff efforts are focusing on the development of specific performance measures and targets for the transportation system in the MAG metropolitan planning area. A collaborative Performance Measures and Targets Working Group (PMTAG) was created to gather input from MAG member agencies with respect to the requirements included in the Metropolitan Planning, System Performance and Freight, Safety and Asset Management Proposed Rules from the Federal Highway and Transit Administration. The PMTAG continues to meet and is currently awaiting coordination sessions with ADOT to discuss targets.

The monitoring program consolidates the data collection efforts related to system performance and develops an archive of historic and current performance data sets that can be used for future evaluation, analysis and decision making. Web-based, performance monitoring products published by MAG include MAGnitude (a performance dashboard) and the RTP Project Cards. These products serve as a primary source for roadway system and corridor performance information in the region, providing a broad range of data to support analysis for multimodal planning and programming activities at MAG.

Extensive reporting has been also developed by Valley Metro, starting with the SEES report, which established an initial set of performance measures to monitor and evaluate bus and rail systems in the region. Valley Metro also publishes a web-based Performance Dashboard documenting ridership, productivity and financial statistics for the regional transit system. These measures are complemented by the results of the Service Standards and Performance Measures effort.

The MAG Performance Measurement Framework was developed with the participation of MAG's member agencies and will continue to be used as a vital information source, as the implementation of the RTP moves forward. Additionally, recognizing the close relationship between congestion and performance, and in an effort to align key performance measurement indicators with the congestion management process, MAG continues to use the evaluative tools developed with the Congestion Management Process in 2010 to coordinate

results, prioritize investments, and assess the implementation of strategies. Based on the multitude of observed and archived data sources, as well as input from the Transit Performance Report, MAG will continue to publish semi-annual performance reports in various formats including hard-copy, web-based, map and interactive dashboards.

Appendix A

Freeway/Highway Life Cycle Program

ABREV.	PROGRAM GROUPS
1	GROUP 1 (FY 2017 – FY 2021)
2	GROUP 2 (FY 2022 - FY2026)
3	GROUP 3 (FY 2027 - FY 2035)
U	UNDERWAY*

	PROJECT CATEGORIES
NEW	New Freeway or Highway
GPL	Addition of General Purpose Lanes
HOV	Addition of HOV Lanes
GPL HOV	Addition of General Purpose Lane Widening & HOV Lane Widening
NEW TI	New TI or Reconstruct TI
IMP TI	Existing TI Improvement
HOV TI	HOV Ramps
LS	Landscaping
IMP	Improvements to Existing Roadway
MINOR	Minor Improvements to Existing Roadway
WIDENING	Minor lane widening improvement, shoulder widening, turn lanes
FMS	Freeway Management
FSP	Freeway Service Patrol
NOISE	Noise Mitigation Project (Quiet Pavement)
RW	Right of Way Administration
RW PROT	Right of Way Protection
MAINT	Maintenance
P R LOTS	Park and Ride Lots
DESIGN	Design Administration
ADMIN	Administrative Tasks or Functions

*Includes projects programmed in FY 2016

TABLE A-1
FREEWAY/HIGHWAY LIFE CYCLE PROGRAM
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2016 and Year of Expenditure Dollars in Millions)

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY16) YOE $'s	R/W (FY06-FY16) YOE $'s	CONST. (FY06-FY16) YOE $'s	TOTAL (FY06-FY16) YOE $'s	COSTS (FY17-FY26) '16 $'s	TOTAL COSTS (FY06-FY26) YOE & '16 $'s	COSTS (FY27-FY35) '16 $'s	TOTAL COSTS (FY06-FY35) YOE & '16 $'s	Program Group for Construct.	Date Open to Traffic
	I-10													
F1	**SR-85 to SR-303**													
	395th Avenue TI (Belmont Road)	96.2	0.5	NEW TI					20.0	20.0		20.0	1	
	Desert Creek TI	105.3	0.5	NEW TI					20.4	20.4		20.4	1	
	SR 85 - 303L (RW & DCR)	112.0	11.0	GPL	1.5	0.5	0.0	2.0	0.0	2.0		2.0		
	County Line - 303L (MC Oversight)	112.0	42.0	GPL	0.3		0.0	0.3	0.1	0.4		0.4		
	SR85 - Verrado Way (GPL)	112.0	8.2	GPL	0.0		0.0	0.0	0.0	0.0	42.8	42.8	3	
	Verrado Way - Sarival Rd (GPL)	120.2	6.1	GPL	2.6		28.2	30.8		30.8		30.8		8/16/2011
	Perryville Road TI (Design Build)	122.7	0.0	NEW TI	1.7	4.0	23.8	29.5	1.6	31.1		31.1		10/19/2014
	Subtotal				**6.0**	**4.5**	**52.0**	**62.5**	**42.2**	**104.7**	**42.8**	**147.5**		
F2	**SR-303 to SR-101**													
	303L - 101L Agua Fria Median (RW & DCR)	124.0	9.0	GPL HOV	2.7	0.2	0.0	3.0		3.0		3.0		
	303L - I-17 Blk Canyon (MC Oversight)	124.0	18.0	GPL HOV	0.3		0.0	0.3	0.0	0.3		0.3		
	303L - I-17 Blk Canyon (RW & DCR)	124.0	18.0	GPL HOV	2.9	1.9	0.0	4.8	0.0	4.8		4.8		
	Cotton Lane - Litchfield RdDysart Road (FMS)	124.7	5.0	FMS	0.1		0.0	0.1	4.7	4.7		4.7		
	Sarival Ave - Dysart Rd (GPL Outside)	126.0	4.0	GPL	2.9		35.8	38.7	0.2	39.0		39.0		1/15/2011
	Sarival Rd - 101L Agua Fria (GPL HOV Med)	126.0	8.0	GPL HOV	4.3		88.6	93.0		93.0		93.0		7/30/2010
	Sarival Avenue - 107th Avenue (Landscape)	126.0	4.0	LS	0.7		4.3	5.0	0.0	5.1		5.1		
	Bullard Road TI (New TI)	127.7	0.0	NEW TI	1.2	5.6	9.7	16.6		16.6		16.6		4/11/2008
	Dysart Road - 101L Agua Fria (Landscape)	130.0	4.0	LS	0.5		4.1	4.6	0.3	4.9		4.9		
	Litchfield Rd Dysart Road - 83rd Ave (FMS)	130.0	6.0	FMS	0.5		3.8	4.3	1.8	6.0		6.0		
	Fairway Drive TI (El Mirage Rd)	130.7	0.0	NEW TI	0.7	0.0	0.1	0.7	21.0	21.8		21.8	2	
	Avondale Blvd @ I-10 (TI Impr)	131.7	0.0	IMP TI	0.1	0.0	2.8	2.8	0.0	2.8		2.8		FY 2011
	Subtotal				**16.9**	**7.7**	**149.3**	**173.9**	**28.0**	**202.0**	**0.0**	**202.0**		
F3	**SR-101 to I-17**													
	101L AGUA Fria - I-17 Black Canyon (DCR & RW)	133.0	9.0	GPL	3.0	0.6	0.2	3.8	0.1	3.9		3.9		
	43rd Avenue / 51st Avenue TIs	139.7	0.0	IMP TI	0.4		2.6	3.1		3.1		3.1		8/8/2007
	51st Avenue TI	140.7	0.0	IMP TI	0.0	0.0	0.0	0.1	0.0	0.1		0.1		See Above
	Subtotal				**3.4**	**0.7**	**2.9**	**6.9**	**0.1**	**7.0**	**0.0**	**7.0**		
F4	**I-17 (Stack) to I-17 (Split)**													
	I-17 Black Cyn - SR 51 Piestewa (MC Oversite)	142.0	5.0	GPL	0.3	0.0	0.0	0.3	0.0	0.3		0.3		
	SR51 - 202L Santan (DCR & RW)	147.0	11.0	GPL HOV	12.8	15.3	0.3	28.5	-0.1	28.3		28.3		

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY16) YOE $'s	R/W (FY06-FY16) YOE $'s	CONST. (FY06-FY16) YOE $'s	TOTAL (FY06-FY16) YOE $'s	COSTS (FY17-FY26) '16 $'s	TOTAL COSTS (FY06-FY26) YOE & '16 $'s	COSTS (FY27-FY35) '16 $'s	TOTAL COSTS (FY06-FY35) YOE & '16 $'s	Program Group for Construct.	Date Open to Traffic
	Sky Harbor West Airport Access	148.0	1.0	NEW TI				0.0	50.6	50.6	0.0	50.6	2	
	Subtotal				**13.1**	**15.3**	**0.3**	**28.7**	**50.5**	**79.2**	**0.0**	**79.2**		
F5	**24th St. to SR-202**													
	Salt River - Baselilne Rd (RW)	150.7	3.5	GPL HOV	0.0	144.8	9.4	154.2	2.9	157.1		157.1		
	32nd St - 202L Santan, Ph 1	151.5	3.5	GPL HOV					144.0	144.0		144.0	1	
	32nd St - 202L Santan, Ph 2	151.5	3.5	GPL HOV					114.0	114.0		114.0	1	
	32nd St - 202L Santan, Ph 3	151.5	4.0	GPL HOV					191.2	191.2		191.2	2	
	Southern Ave - SR143 Hohokam (GPL)	153.0	2.0	GPL	0.3		3.3	3.6	0.0	3.7		3.7		10/3/2008
	SR143 Hohokam - SR202 Santan (NTIS)	153.4	7.6	GPL	1.9	2.5	0.5	4.8	7.0	11.8		11.8	2	
	Broadway Rd - Baseline Rd EB	153.5	2.5	GPL					12.1	12.1		12.1	1	
	Broadway Rd - Baseline Rd WB	153.5	2.5	GPL					4.8	4.8		4.8	1	
	Alameda Dr and Guadalupe Rd (Pedestrian Bridges)	153.5	0.5	PED BR					9.1	9.1		9.1		
	Baseline Rd - Ray Rd EB	156.0	3.5	GPL					2.2	2.2		2.2	1	
	Baseline Rd - Ray Rd WB	156.0	3.5	GPL					1.4	1.4		1.4	1	
	Baseline Rd - Riggs Rd (MC Oversight)	156.0	11.5	GPL	0.0		0.0	0.0		0.0		0.0		
	Ray Rd TI (TI Impr)	160.0	0.5	IMP TI	0.8		9.6	10.4		10.4		10.4		7/13/2007
	Subtotal				**3.0**	**147.2**	**22.8**	**173.0**	**488.6**	**661.7**	**0.0**	**661.7**		
F6	**SR-202 to Riggs Rd.**													
	202L Santan - Riggs Rd (GPL)	162.0	6.0	GPL	2.0			2.0	73.7	75.7		75.7	1	
	Chandler Heights Rd TI	166.2	0.0	NEW TI					22.9	22.9		22.9	2	
	Subtotal				**2.0**	**0.0**	**0.0**	**2.0**	**96.6**	**98.6**	**0.0**	**98.6**		
	TOTAL I-10				**44.5**	**175.5**	**227.2**	**447.1**	**706.0**	**1153.1**	**42.8**	**1195.9**		
	I-17													
F7	**I-10/Maricopa - I-10/Papago**													
	16th St - 19th Ave (AUX Lanes) NTIS-Design	194.0	17.0	AUX					5.6	5.6		5.6		
	I-10 Maricopa - 101L Agua Fria (RW & DCR)	194.0	19.0	GPL HOV	7.6	0.2	0.4	8.1	7.5	15.6		15.6		
	I-10 Maricopa - I-10 Papago (MC Oversight)	194.0	6.0	HOV	0.0		0.0	0.0	0.0	0.0		0.0		
	I-10 Maricopa - I-10 Papago	194.0	6.0	HOV				0.0	400.0	400.0		400.0	2	
	Subtotal				**7.6**	**0.2**	**0.4**	**8.1**	**413.1**	**421.2**	**0.0**	**421.2**		
F8	**I-10/Papago to SR-101**													
	McDowell Rd - Arizona Canal (MC Oversight)	200.1	7.0	GPL	0.6		0.0	0.6	0.0	0.6		0.6		
	McDowell Rd - Arizona Canal	200.1	7.0	GPL					385.0	385.0		385.0	2	
	SR101L - I-10 (Active Traffic Mgmt), NTIS	200.5	14.5	ATM					2.2	2.2		2.2		
	Arizona Canal - 101L Agua Fria (DCR)	208.0	6.8	GPL	2.0		0.0	2.0	0.1	2.1		2.1		
	Arizona Canal - 101L Agua Fria (FMS)	208.0	6.8	FMS	0.5		4.7	5.2		5.2		5.2		
	I-10 Papago - 101L Agua Fria	208.0	6.8	GPL					6.0	6.0	86.4	92.4	2	
	Peoria Ave - Greenway Rd (Drainage)	208.9	3.0	MINOR	1.0		0.0	1.0	16.5	17.5		17.5		
	Cactus Rd TI	209.0	0.0	IMP TI	0.8	0.3	6.8	7.8		7.8		7.8		12/3/2006

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY16) YOE $'s	R/W (FY06-FY16) YOE $'s	CONST. (FY06-FY16) YOE $'s	TOTAL (FY06-FY16) YOE $'s	COSTS (FY17-FY26) '16 $'s	TOTAL COSTS (FY06-FY26) YOE & '16 $'s	COSTS (FY27-FY35) '16 $'s	TOTAL COSTS (FY06-FY35) YOE & '16 $'s	Program Group for Construct.	Date Open to Traffic
	Subtotal				**4.8**	**0.3**	**11.6**	**16.7**	**409.8**	**426.5**	**86.4**	**512.9**		
F9	**SR-101 to SR-74**													
	101L Agua Fria - Anthem Way (FMS)	215.0	14.0	FMS	0.8		6.0	6.8	1.6	8.4		8.4		
	101L Agua Fria – Black Canyon TI (RW)	215.0	17.0	GPL HOV		77.7	0.1	77.8	0.6	78.4		78.4		
	101L Agua Fria – SR74 (DCR)	215.0	9.0	GPL HOV	3.8		0.0	3.8		3.8		3.8		
	101L Agua Fria – Jomax Rd (GPL HOV)	215.0	4.0	GPL HOV	4.9		76.7	81.6	0.0	81.6		81.6		11/8/2009
	101L Agua Fria – SR74 (Landscape)	215.0	9.0	LS	0.8		6.6	7.4		7.4		7.4		
	Jomax Rd – SR74 Carefree Hwy (GPL HOV)	219.0	5.0	GPL HOV	4.6		93.0	97.6	0.2	97.8		97.8		7/30/2010
	Jomax Rd TI / Dixletta Rd TI	219.0	0.0	NEW TI	4.1	2.7	40.8	47.6	0.0	47.6		47.6		10/1/2008
	Dove Valley Rd TI	222.5	0.0	NEW TI	2.2		20.4	22.7	0.0	22.7		22.7		4/21/2010
	Dove Valley Rd TI (Furnish Signals)	222.5	0.0	NEW TI			0.1	0.1	0.0	0.1		0.1		
	Pinnacle Peak Rd TI	217.5	216.5	IMP TI	0.6		0.0	0.6	0.0	0.7		0.7		
	Happy Valley Rd TI	218.5	217.5	IMP TI	0.7		0.1	0.8	0.0	0.8		0.8		
	Subtotal				**22.5**	**80.4**	**243.9**	**346.9**	**2.5**	**349.4**	**0.0**	**349.4**		
F10	**SR-74 to New River Rd.**													
	SR74 Carefree Hwy TI	223.5	0.0	NEW TI	1.6		22.7	24.3		24.3		24.3		10/10/2008
	SR74 Carefree - New River (RW)	224.0	10.0	GPL	0.0	0.3	0.0	0.3		0.3		0.3		
	SR74 Carefree - New River (RW)	224.0	10.0	GPL	0.0	0.4	0.0	0.4		0.4		0.4		
	SR74 Carefree - Anthem Way (GPL)	224.0	5.0	GPL	3.5		13.7	17.2		17.2		17.2		5/15/2010
	SR74 Carefree - Anthem Way (HOV)	224.0	5.0	HOV						0.0	89.5	89.5	3	
	Anthem Way - New River (GPL)	229.0	3.0	GPL							57.4	57.4	3	
	Subtotal				**5.1**	**0.7**	**36.4**	**42.2**	**0.0**	**42.2**	**146.9**	**189.1**		
	TOTAL I-17				**40.0**	**81.6**	**292.3**	**413.9**	**825.4**	**1239.3**	**233.3**	**1472.6**		
	SR-24													
F11	**202L Santan -Meridian Rd.**													
	202L Santan - Ellsworth Rd, Ph 1 (New)	0.0	1.0	NEW	14.8	27.2	79.7	121.7	19.9	141.6		141.6		5/4/2014
	202L Santan - Ellsworth Rd, Ph 2 (New)	0.0	1.0	NEW							46.9	46.9	3	
	Ellsworth Rd - Meridian Rd (New) Study	1.0	6.0	NEW	0.4		0.0	0.5	0.4	0.8	212.6	213.4	3	
	Subtotal				**15.3**	**27.2**	**79.7**	**122.2**	**20.2**	**142.4**	**259.5**	**401.9**		
	TOTAL SR-24				**15.3**	**27.2**	**79.7**	**122.2**	**20.2**	**142.4**	**259.5**	**401.9**		
	SR-30													
F12	**SR-85 to SR-303**													
	SR85 - 303L Bob Stump (DCR)	100.0	12.0	NEW	3.3		0.2	3.5	1.9	5.4	192.7	198.1	3	
	Subtotal				**3.3**	**0.0**	**0.2**	**3.5**	**1.9**	**5.4**	**192.7**	**198.1**		
F13	**SR-303 to SR-202**													
	303L Bob Stump - 202L South Mountain (DCR & RW)	112.0	16.5	NEW	14.8	15.1	0.4	30.3	19.2	49.4	55.9	105.3		
	303L Bob Stump - Estrella Pkwy	112.0	4.2	NEW							279.4	279.4	3	

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
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	Estrella Pkwy - Dysart Rd	116.2	3.3	NEW							243.4	243.4	3	
	Dysart Rd - Avondale Blvd	119.5	2.0	NEW							116.6	116.6	3	
	Avondale Blvd - 97th Ave	121.5	2.5	NEW							148.9	148.9	3	
	97th Ave - 67th Ave	124.0	3.8	NEW							223.2	223.2	3	
	67th Ave - 202L South Mountain	127.8	0.7	NEW							278.5	278.5	3	
	Subtotal				**14.8**	**15.1**	**0.4**	**30.3**	**19.2**	**49.4**	**1345.9**	**1395.3**		
	TOTAL SR-30				**18.2**	**15.1**	**0.5**	**33.8**	**21.1**	**54.8**	**1538.6**	**1593.4**		
	SR-51													
F14	**Shea Blvd to SR-101**													
	202L Red Mtn - 101L Pima (MC Oversite)	1.0	15.7	HOV	0.0	0.0	0.0	0.0		0.0		0.0		
	Glendale Ave - 101L Pima (FMS)	5.7	13.0	FMS	0.3	0.0	2.4	2.7	0.0	2.7		2.7		
	Shea Blvd – 101L Pima (HOV/ HOV Ramp)	9.5	7.3	HOV	4.0		48.7	52.7		52.7		52.7		2/13/2009
	Shea Blvd - 101lL Pima (GPL)	9.5	5.2	GPL							60.2	60.2		
	Subtotal				**4.3**	**0.0**	**51.1**	**55.4**	**0.0**	**55.4**	**60.2**	**115.6**		
	TOTAL SR-51				**4.3**	**0.0**	**51.1**	**55.4**	**0.0**	**55.4**	**60.2**	**115.6**		
	US-60 (GRAND AVE.)													
F15	**SR-303 to SR-101**													
	303L Bob Stump - 99th Ave (Ph 1)	138.0	10.0	GPL	7.2	1.2	24.8	33.2	0.1	33.3		33.3		6/14/2011
	303L Bob Stump - 101L Agua Fria (Ph 2) (MIS)	138.0	9.0	IMP	0.1		0.0	0.1		0.1		0.1		
	Bell Road TI (DESIGN BUILD)	142.5	0.0	IMP TI	3.2	7.0	21.3	31.5	40.4	71.9		71.9	U	
	Greenway Rd - Thompson Ranch Frontage Road	144.3	1.1	MINOR	0.2		0.0	0.3	0.5	0.7		0.7	U	
	Thompson Ranch Rd TI (Thunderbird)	145.5	0.0	IMP TI	2.2	5.2	0.7	8.1	8.5	16.6		16.6	U	
	99th Ave – 83rd Ave, Incl New River Bridge	148.0	3.0	GPL	1.3	1.2	9.5	12.0		12.0		12.0		4/30/2011
	83rd Ave & Peoria Ave (Intersection Impr)	148.5	1.8	MINOR	0.1		2.0	2.2		2.2		2.2		10/4/2006
	Subtotal				**14.4**	**14.6**	**58.4**	**87.4**	**49.5**	**136.8**	**0.0**	**136.8**		
F16	**SR-101 to Van Buren**													
	101L Agua Fria - 71st Ave	149.0	3.5	IMP			6.4	6.4		6.4		6.4		8/7/2013
	101L Agua Fria - Van Buren (DCR)	149.0	14.0	IMP	1.2		0.0	1.2	0.1	1.3		1.3		
	101L Agua Fria - McDowell Rd (RW & MIS)	149.0	13.0	IMP	1.0	8.3	0.5	9.9	1.4	11.3		11.3		
	101L Agua Fria - Van Buren Ph 2	149.0	14.0	IMP	0.0		0.0	0.0	0.1	0.1		0.1	Dropped in FY 2014	
	101L Agua Fria - Van Buren Ph 3	149.0	14.0	IMP						0.0	86.2	86.2	3	
	71st Ave - McDowell Rd (101L - McDowell Rd)	152.5	6.0	IMP	5.3	2.6	24.0	31.8	1.8	33.6		33.6		7/14/2014
	71st Ave - Grand Canal Bridge (Impr)	152.5	5.0	MINOR	0.1		3.6	3.7	0.0	3.7		3.7		5/16/2007
	Subtotal				**7.5**	**10.9**	**34.5**	**52.9**	**3.4**	**56.4**	**86.2**	**142.6**		
	TOTAL US-60 (GRAND)				**21.9**	**25.5**	**92.9**	**140.3**	**52.9**	**193.2**	**86.2**	**279.4**		
	US-60 (SUPERSTITION FWY.)													

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F17	**I-10 to SR-101**													
	I-10 Maricopa – 101L Price (GPL)	172.0	4.5	GPL	2.7		27.3	30.0	0.0	30.0		30.0		3/29/2010
	I-10 Maricopa - Meridian Rd (MC Oversite)	172.0	22.0	GPL	0.0	0.0	0.0	0.0		0.0		0.0		
	Subtotal				**2.7**	**0.0**	**27.3**	**30.0**	**0.0**	**30.0**	**0.0**	**30.0**		
F18	**SR-101 to SR-202**													
	Gilbert Rd - Power Rd (GPL HOV)	182.5	6.0	GPL HOV	4.7		88.1	92.7		92.7		92.7		3/15/2007
	Lindsay Rd TI (Half TI)	182.9	0.5	NEW TI							8.2	8.2	3	
	Val Vista Dr – Power Rd (Landscaping)	183.0	6.0	LS			5.0	5.0		5.0		5.0		
	Higley Rd TI	186.4	1.0	IMP TI	0.4	0.2	5.0	5.6		5.6		5.6		7/24/2007
	Subtotal				**5.1**	**0.2**	**98.1**	**103.3**	**0.0**	**103.3**	**8.2**	**111.5**		
F19	**SR-202 to Meridian Rd.**													
	Crismon Rd - Idaho Rd (FMS)	192.4	2.0	FMS					4.0	4.0		4.0		
	Crismon Rd - Meridian Rd (GPL HOV)	192.4	2.0	GPL HOV	1.4		0.1	1.5	29.0	30.5		30.5	1	
	Meridian TI (West Half)	194.0	1.0	NEW TI	1.8	1.2	10.2	13.2	1.4	14.6		14.6		10/17/2015
	Subtotal				**3.2**	**1.2**	**10.3**	**14.7**	**34.4**	**49.1**	**0.0**	**49.1**		
	TOTAL US-60 (SUPERSTITION)				**11.0**	**1.3**	**135.7**	**148.0**	**34.4**	**182.5**	**8.2**	**190.7**		
	SR-74													
F20	**US-60 to SR-303**													
	US60 Grand - 303L Bob Stump (RW Protection)	0.0	26.0	RW PROT	0.4		0.0	0.4	0.0	0.4		0.4		
	US60 Grand - 303L Bob Stump (RW Protection)	0.0	26.0	RW PROT							1.9	1.9		
	US60 Grand - I-17 Black Canyon (RW PROT SURVEY)	0.0	31.0	RW PROT	0.0	0.2	0.0	0.2	0.0	0.2		0.2		
	US60 Grand - MP 13 (RW PROT)	0.0	13.0	RW PROT		0.2	0.0	0.2	0.0	0.3		0.3		
	US60 Grand - I-17 Black Canyon (RW)	0.0	31.0	RW PROT						0.0	40.1	40.1		
	US60 Grand – 303L Bob Stump (Pass Ln MP 13-15)	13.0	2.0	MINOR	0.5	0.1	3.5	4.1		4.1		4.1		4/1/2011
	US60 Grand – 303L Bob Stump (Pass Ln MP 20-22)	20.0	2.0	MINOR	0.5	1.1	2.9	4.5	1.1	5.6		5.6		10/20/2010
	Subtotal				**1.4**	**1.6**	**6.4**	**9.4**	**1.1**	**10.6**	**42.0**	**52.5**		
	TOTAL SR-74				**1.4**	**1.6**	**6.4**	**9.4**	**1.1**	**10.6**	**42.0**	**52.5**		
	SR-85													
F21	**I-8 to MC-85**													
	SR85 Corridor (MC Oversight)	120.0	35.0	GPL	0.2		0.0	0.3	0.0	0.3		0.3		
	I-8 - I-10 (RW) FY2006-2013)	120.0	35.0	GPL	0.1	32.7	2.1	35.0		35.0		35.0		
	SR85 at Gila Bend, Phase 1 (New)	120.5	2.5	GPL	3.3	3.4	18.2	24.9		24.9		24.9		1/8/2013
	MP 130.7 – MP 137.0 (New)	130.7	6.3	GPL	0.3		24.9	25.2	0.2	25.4		25.4		1/29/2010
	MP 139.01 – MP 141.71 (New)	139.0	2.7	GPL	0.3		22.9	23.2		23.2		23.2		11/26/2008
	Subtotal				**4.3**	**36.1**	**68.1**	**108.5**	**0.2**	**108.7**	**0.0**	**108.7**		
F22	**MC-85 to I-10**													
	Hazen Rd - Broadway Rd (Design)	149.5	3.5	GPL	2.3	0.0	0.1	2.4	0.1	2.5	9.5	12.0		

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
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	MC85 - Southern Ave (New)	150.0	3.0	GPL	0.5		9.2	9.6		9.6		9.6		5/29/2008
	Southern Ave – I-10 Papago (New)	152.0	3.0	GPL	1.6		11.1	12.6		12.6		12.6		7/27/2011
	Broadway Rd - Lower Buckeye (Connecting Rd)	153.0	3.0	GPL			4.7	4.7		4.7		4.7		FY 2009
	Warner Street Bridge	153.4	0.2	GPL					5.7	5.7		5.7		
	Subtotal				**4.3**	**0.0**	**25.0**	**29.3**	**5.8**	**35.2**	**9.5**	**44.7**		
	TOTAL SR-85				**8.6**	**36.1**	**93.1**	**137.8**	**6.1**	**143.9**	**9.5**	**153.4**		
	SR-87													
F23	**Forest Boundry to Mile Post 213.0**													
	Forest Boundary – New Four Peaks (Widening)	194.0	8.0	MINOR / TI	3.0	0.6	22.6	26.3		26.3		26.3		9/30/2008
	New Four Pks Rd - Dos S Ranch (Widening)	202.0	5.4	MINOR	2.7	0.2	13.7	16.5	0.0	16.5		16.5		5/9/2011
	MP 211.8 - MP 213 (Drainage)	211.8	1.2	MINOR	0.3	0.1	1.0	1.4		1.4		1.4		5/9/2011
	Subtotal				**6.1**	**0.9**	**37.3**	**44.2**	**0.0**	**44.2**	**0.0**	**44.2**		
	TOTAL SR-87				**6.1**	**0.9**	**37.3**	**44.2**	**0.0**	**44.2**	**0.0**	**44.2**		
	SR-88													
F24	**Fish Creek Hill**													
	Fish Creek Hill (Ret Walls)	223.0	2.0	MINOR	0.6		0.0	0.6		0.6		0.6		FY 2012
	Subtotal				**0.6**	**0.0**	**0.0**	**0.6**	**0.0**	**0.6**	**0.0**	**0.6**		
	TOTAL SR-88				**0.6**	**0.0**	**0.0**	**0.6**	**0.0**	**0.6**	**0.0**	**0.6**		
	US-93													
F25	**Wickenburg By-Pass**													
	Wickenburg By-Pass	196.0	1.7	GPL	2.8	15.5	35.8	54.0	0.0	54.0		54.0		2/26/2010
	Subtotal				**2.8**	**15.5**	**35.8**	**54.0**	**0.0**	**54.0**	**0.0**	**54.0**		
	TOTAL US-93				**2.8**	**15.5**	**35.8**	**54.0**	**0.0**	**54.0**	**0.0**	**54.0**		
	SR-101													
F26	**I-10 to US-60**													
	I-10 Papago - Tatum Blvd (HOV) DESIGN BUILD	1.7	31.0	HOV	2.2	0.3	106.9	109.3	0.7	109.9		109.9		10/29/2011
	I-10 Papago - VanBuren (99th Ave) (Widening)	1.7	1.7	MINOR	0.9	0.8	4.0	5.7	0.2	5.9		5.9		12/19/2010
	I-10 Papago - I-17 Black Canyon, Ph 1 (FMS)	1.7	21.7	FMS	0.9		9.8	10.7	0.0	10.7		10.7		
	I-10 Papago - I-17 Black Canyon, Ph 2 (FMS)	1.7	21.7	FMS	0.8	0.0	7.8	8.6	1.4	10.0		10.0		
	I-10 Papago - Grand Ave (GPL)	1.7	9.0	GPL				0.0			116.4	116.4	3	
	Bethany Home Rd TI, North Half	6.0	0.5	NEW TI	1.2		8.4	9.6	0.0	9.6		9.6		9/14/2007
	Maryland Ave HOV Ramps DESIGN BUILD	6.5	0.8	HOV TI	0.7	0.0	13.7	14.5	2.1	16.6		16.6		3/29/2014
	Northern Ave - 31st Ave (Med LS)	8.0	14.0	MINOR	0.2		0.7	0.9	0.0	0.9		0.9		
	Olive Ave TI (Impr)	9.0	1.0	IMP TI	0.4		3.4	3.9	0.0	3.9		3.9		7/2/2011
	Subtotal				**7.3**	**1.1**	**154.7**	**163.1**	**4.4**	**167.5**	**116.4**	**283.9**		

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY16) YOE $'s	R/W (FY06-FY16) YOE $'s	CONST. (FY06-FY16) YOE $'s	TOTAL (FY06-FY16) YOE $'s	COSTS (FY17-FY26) '16 $'s	TOTAL COSTS (FY06-FY26) YOE & '16 $'s	COSTS (FY27-FY35) '16 $'s	TOTAL COSTS (FY06-FY35) YOE & '16 $'s	Program Group for Construct.	Date Open to Traffic
F27	**US-60 to I-17**													
	Thunderbird Rd TI (Impr)	12.0	1.0	IMP TI	0.4		3.6	4.0		4.0		4.0		7/28/2009
	Beardsley Rd / Union Hills Dr (TI Impr)	15.8	1.0	NEW TI	0.8	0.3	19.0	20.1		20.1		20.1		5/6/2011
	Grand Ave - I-17 Black Canyon (GPL)	11.2	12.4	GPL							150.4	150.4	3	
	Subtotal				**1.2**	**0.3**	**22.6**	**24.0**	**0.0**	**24.0**	**150.4**	**174.4**		
F28	**I-17 to Princess Dr.**													
	I-17 Black Cyn - Princess Dr (GPL) (DCR & RW)	23.0	12.6	GPL	3.6	0.0	0.3	3.8	0.1	4.0		4.0		
	I-17 Black Cyn - 202L Red Mtn (MC Oversight)	23.0	28.0	HOV	0.0		0.0	0.0		0.0		0.0		
	I-17 Black Canyon - SR51 Piestewa (FMS)	23.0	6.6	FMS	1.4		5.2	6.6		6.6		6.6		
	I-17 Black Cyn - SR51 Piewstewa (GPL)	23.0	6.6	GPL					73.5	73.5		73.5	2	
	SR51 Piestewa - Princess Dr (GPL)	30.0	6.0	GPL					66.2	66.2		66.2	1	
	SR51 Piestewa - Princess Dr (FMS)	30.0	6.0	FMS	0.0		3.1	3.1		3.1		3.1		
	Tatum Blvd - Princess Dr (HOV)	31.0	5.0	HOV	1.4		16.3	17.7		17.7		17.7		7/19/2009
	64th St TI	33.0	1.0	NEW TI	2.9	2.3	24.3	29.5		29.5		29.5		10/24/2008
	Hayden Rd - Princess Drive (Drainage)	35.5	1.0	MINOR	0.0		0.0	0.0	0.0	0.0		0.0		
	Subtotal				**9.2**	**2.3**	**49.2**	**60.8**	**139.8**	**200.6**	**0.0**	**200.6**		
F29	**Princess Dr. to SR-202**													
	Princess Dr – 202L Red Mountain (HOV)	36.0	15.4	HOV	4.4		57.4	61.9		61.9		61.9		11/8/2008
	Princess Dr - Shea Blvd (GPL)	36.0	5.0	GPL				0.0	56.4	56.4		56.4	1	
	Princess Drive TI (Study)	36.0	1.0	TI	0.4		0.0	0.4	1.0	1.4		1.4		
	Shea Blvd - 202L Red Mtn (GPL) Constr	41.0	15.4	GPL	5.6		81.3	86.9	12.7	99.6		99.6	U	
	Shea Blvd – Chaparral Rd (GPL) Design	41.0	5.5	GPL	4.8	0.0	0.4	5.2	0.0	5.2		5.2		
	Chaparral Rd - 202L Red Mtn (GPL) Design	46.0	5.0	GPL	4.5	0.0	0.4	4.9	0.0	5.0		5.0		
	Chaparral Rd TI Improvements	46.0	0.2	TI IMP	0.2		0.9	1.2		1.2		1.2		FY 2011
	Pima Rd Extension, JPA	49.5	1.5	GPL				0.0	3.9	3.9		3.9	1	
	Subtotal				**20.0**	**0.0**	**140.6**	**160.5**	**74.1**	**234.6**	**0.0**	**234.6**		
F30	**SR-202/Red Mt. to SR-202/Santan**													
	Baseline Rd – 202L Santan (GPL)(DCR)	51.0	7.0	HOV	1.7		0.2	1.8	0.3	2.2		2.2		
	202L Red Mountain – Baseline (HOV) Design	51.0	4.2	HOV	1.3		0.0	1.3		1.3		1.3		
	202L Red Mountain – 202L Santan (HOV)	51.0	7.0	HOV	2.0		35.8	37.8		37.8		37.8		2/10/2010
	Baseline Rd - 202L Santan (FMS) Ramp Meters	55.6	4.8	FMS	0.1		0.4	0.5		0.5		0.5		
	Baseline Rd - 202L Santan (GPL)	55.6	6.4	GPL				0.0	53.4	53.4		53.4	2	
	Guadalupe Rd - Chandler Blvd (FMS)	56.6	4.6	FMS	0.2		3.1	3.3		3.3		3.3		
	Galveston Street (Drainage Imprv.)	59.0	1.0	MINOR	0.0		1.4	1.5	0.8	2.2		2.2		
	Subtotal				**5.3**	**0.0**	**40.9**	**46.2**	**54.5**	**100.7**	**0.0**	**100.7**		
	TOTAL SR-101				**43.0**	**3.7**	**407.9**	**454.6**	**272.8**	**727.4**	**266.8**	**994.2**		
	SR-143													
F31	**SR-143 at SR-202**													

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
MAP ID	SEGMENT / PROJECT	BEGIN MILE POST	LEN. (MI.)	PROJ. TYPE	DESIGN (FY06-FY16) YOE $'s	R/W (FY06-FY16) YOE $'s	CONST. (FY06-FY16) YOE $'s	TOTAL (FY06-FY16) YOE $'s	COSTS (FY17-FY26) '16 $'s	TOTAL COSTS (FY06-FY26) YOE & '16 $'s	COSTS (FY27-FY35) '16 $'s	TOTAL COSTS (FY06-FY35) YOE & '16 $'s	Program Group for Construct.	Date Open to Traffic
	SR143 / SR202L TI	0.8	1.5	NEW TI	5.2	0.4	22.0	27.5		27.5		27.5		7/9/2012
	Subtotal				**5.2**	**0.4**	**22.0**	**27.5**	**0.0**	**27.5**	**0.0**	**27.5**		
	TOTAL SR-143				**5.2**	**0.4**	**22.0**	**27.5**	**0.0**	**27.5**	**0.0**	**27.5**		
	SR-202													
F32	**I-10 to SR-101/Pima**													
	I 10 / SR51 TI - US60 (MC Oversight)	0.0	10.0	GPL	0.0		0.0	0.0		0.0		0.0		
	I 10 / SR51 TI - 101L Pima (GPL) (DESIGN BUILD)	0.0	10.0	GPL	10.5		205.8	216.3	0.0	216.3		216.3		8/11/2010
	Mill Ave & Washington St (GPL)	4.5	2.5	GPL	1.2		5.7	6.8		6.8		6.8		4/11/2009
	Subtotal				**11.6**	**0.0**	**211.5**	**223.1**	**0.0**	**223.1**	**0.0**	**223.1**		
F33	**SR-101/Pima to Gilbert Rd.**													
	101L Pima – Gilbert Rd (HOV)	10.0	6.5	HOV	3.3		24.3	27.6		27.6		27.6		8/27/2010
	101L Pima – Gilbert Rd (FMS)	10.0	6.5	FMS	0.3		3.4	3.7	0.0	3.7		3.7		
	101L Pima – Broadway Rd (GPL HOV) DESIGN BUILD	10.0	6.5	GPL	4.7	3.1	133.1	140.9	10.8	151.8		151.8		12/18/2015
	Mesa Drive TI (Ramps Only)	14.0	0.5	NEW TI							13.5	13.5	3	
	Subtotal				**8.3**	**3.1**	**160.8**	**172.2**	**10.8**	**183.1**	**13.5**	**196.6**		
F34	**Gilbert Rd. to US-60**													
	Gilbert Rd - Higley Rd (GPL)	16.5	4.5	GPL							51.9	51.9	3	
	Higley Rd - US60 Superstition (GPL)	21.0	9.0	GPL							108.3	108.3	3	
	Power Rd - University Dr (Habitat Mitigation Monitoring)	23.0	5.0	MINOR			0.2	0.2	0.0	0.2		0.2		
	Broadway Rd - US60 Superstition (HOV)	28.8	2.2	HOV					5.7	5.7		5.7	2	
	US60 Superstition System TI HOV Ramps	29.5	1.0	HOV							42.1	42.1	3	
	Broadway Rd - Ray Rd (FMS)	30.0	10.7	FMS	0.0		0.0	0.1	6.8	6.8		6.8		
	Subtotal				**0.0**	**0.0**	**0.2**	**0.2**	**12.4**	**12.7**	**202.3**	**215.0**		
F35	**US-60 to Val Vista Dr. - Gilbert Rd.**													
	US60 Superstition - Gilbert Rd (HOV)	31.0	11.0	HOV					50.2	50.2		50.2	2	
	US60 Superstition - Val Vista Dr (GPL)	31.0	12.0	GPL							104.0	104.0	3	
	Subtotal				**0.0**	**0.0**	**0.0**	**0.0**	**50.2**	**50.2**	**104.0**	**154.2**		
F36	**Val Vista Dr. - Gilbert Rd. to I-10/Maricopa**													
	Ray Rd - Dobson Rd (FMS)	39.7	9.6	FMS	0.6		0.4	1.0	6.5	7.5		7.5		
	Val Vista Dr - Dobson Rd (GPL)	42.3	7.0	GPL				0.0			83.5	83.5	3	
	Lindsay Rd TI (Study)	43.0	1.0	TI	0.0			0.0	0.0	0.0		0.0		
	Gilbert Rd - I-10 Maricopa (HOV & 2 HOV Ramps)	44.5	13.0	HOV	2.1		99.2	101.3	0.4	101.7		101.7		10/9/2011
	Dobson Rd - I-10 Maricopa (FMS)	49.3	6.0	FMS	0.4		5.4	5.8	0.7	6.6		6.6		
	Dobson Rd - I-10 Maricopa (GPL)	49.3	5.7	GPL							50.3	50.3	3	
	Subtotal				**3.0**	**0.0**	**105.1**	**108.1**	**7.6**	**115.8**	**133.8**	**249.6**		
F37	**I-10/Maricopa to 51st Ave.**													
F38	I-10 Maricopa - I-10 Papago (RW)	56.0	21.5	NEW		72.7		72.7	1.9	74.6		74.6		

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	I-10 Maricopa - I-10 Papago (DCR)	56.0	21.5	NEW	27.3			27.3	0.8	28.1		28.1		
	I-10 Maricopa - I-10 Papago (Design, Build, Maintain)	56.3	21.0	NEW	18.4	269.6	28.6	316.6	1315.1	1631.8		1631.8	U	
	Chandler Blvd; 19th Ave - 27th Ave	63.0	1.0	NEW					12.0	12.0		12.0	U	
	Subtotal				**45.7**	**342.3**	**28.6**	**416.6**	**1329.9**	**1746.5**	**0.0**	**1746.5**		
	TOTAL SR-202				**68.7**	**345.5**	**506.1**	**920.3**	**1411.0**	**2331.3**	**453.6**	**2784.9**		
	SR-303										0.0			
F39	**Riggs Rd. to I-10**													
	Riggs Rd - SR30 / MC85 (Study)	86.0	14.0	NEW	1.6	0.0	0.1	1.7	0.6	2.3	46.6	48.9		
	MC85 - I-17 Black Canyon (RW)	100.0	3.0	NEW		7.1		7.1		7.1		7.1		
	MC85 - Van Buren St, Ph1 (I-10) (DCR & RW)	100.0	3.0	NEW	5.6	0.0	0.3	5.9	82.6	88.5		88.5		
	MC85 - Van Buren St, Ph 2 (I-10)	100.0	3.0	NEW					21.7	21.7	85.8	107.5	3	
	Subtotal				**7.2**	**7.1**	**0.4**	**14.7**	**104.9**	**119.6**	**132.4**	**252.0**		
F40	**I-10 to US-60**													
	I-10 / 303L System TI, Ph 2	103.0	1.0	NEW	9.2	3.4	18.8	31.4	71.2	102.6		102.6	U	
	I-10 / 303L System TI, Ph 2 (Landscape)	103.0	1.0	LS				0.0	5.5	5.5		5.5		
	I-10 Papago - US60 Grand (DCR)	103.9	15.5	NEW	1.3		0.1	1.4	0.0	1.4		1.4		
	I-10 Papago - US60 Grand (DCR)	103.9	15.5	NEW	1.6		0.0	1.6	0.0	1.6		1.6		
	I-10 / 303L System TI, Ph 1, I-10 Realignment	103.9	1.7	NEW	19.5	89.5	180.3	289.4	6.4	295.8		295.8		9/3/2014
	I-10 / 303L TI, Ph 1 (Landscape)	103.9	1.7	LS	0.5		4.7	5.2	3.0	8.2		8.2		
	I-10 / 303L TI Ph2 (Noise Analysis)	103.9	1.0	NEW	0.0			0.0	0.0	0.1		0.1		
	I-10 Papago - Northern Ave (FMS)	103.9	6.1	FMS	0.0		0.0		4.7	4.7		4.7		
	SR303L / FCDMC Study (JPA)	104.0	NA	NEW	0.4		0.0	0.4	0.0	0.4		0.4		
	Thomas Rd - Peoria Ave (30% Design & RW)	105.6	7.0	NEW	2.4	64.9	4.2	71.5	0.2	71.7		71.7		
	Thomas Rd - Camelback Rd (Seg C) (New)	105.6	2.0	NEW	4.6		37.2	41.8	1.4	43.2		43.2		11/22/2013
	Thomas Rd - Camelback Rd (Landscape)	105.6	2.0	LS	0.3	0.0	2.8	3.1	0.1	3.2		3.2		
	Camelback Rd - Glendale Ave (Seg) (New)	107.6	2.0	NEW	4.4		52.6	57.1	5.8	62.8		62.8		5/21/2014
	Camelback Rd - Glendale Ave (Landscape)	107.6	2.0	LS	0.3		2.6	2.8	0.3	3.1		3.1		
	Glendale Ave - Peoria Ave (Seg) (New)	109.6	3.0	NEW	7.9		86.7	94.6	4.2	98.7		98.7		9/16/2013
	Glendale Ave - Peoria Ave (Landscape)	109.6	3.0	LS	0.4		5.2	5.6	0.4	6.0		6.0		
	Northern Ave - Clearview Blvd (FMS)	110.0	7.4	FMS					4.8	4.8		4.8		
	Northern Ave Parkway	111.0	1.0	NEW TI						0.0	85.6	85.6	3	
	Olive Ave TI	111.0	0.8	NEW TI	0.1		0.0	0.1	0.0	0.2		0.2		
	Peoria Ave -Bell Rd (30% Design & RW)	112.6	3.4	NEW	1.7	28.3	1.3	31.2	0.2	31.4		31.4		
	Peoria Ave - Mtn View Rd (Seg D & F) (New)	112.6	5.9	NEW	4.3		146.2	150.5	2.3	152.8		152.8		11/13/2013
	Peoria Ave - Waddell Rd (Landscape)	112.6	2.0	LS	0.3	0.0	2.8	3.1	0.1	3.2		3.2		
	Cactus Rd, Waddell Rd & Bell Rd (New)	113.6	0.2	NEW	3.9		33.5	37.4	0.6	38.1		38.1		3/8/2011
	Waddell Rd	114.0	0.2	NEW	0.1		0.0	0.1	0.0	0.1		0.1		

PROJECTS					EXPENDITURES				ESTIMATED FUTUE COSTS				COMMENTS	
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	Waddell Rd - Mtn View Rd (F) (New)	114.6	3.0	NEW	7.2		4.3	11.5		11.5		11.5		11/13/2013
	Waddell Rd - Mtn View Blvd (Landscape)	114.6	3.9	LS	0.5	0.0	3.1	3.6	0.1	3.7		3.7		
	Bell Rd	116.0	0.2	NES	0.2		0.0	0.2	0.0	0.2		0.2		
	Bell Rd - US60 Grand (30% Design & RW)	116.6	3.0	NEW	1.4	11.3	0.3	13.0	0.3	13.3		13.3		
	US60 Grand / 303L TI (Interim)	118.1	1.1	NEW	6.6	0.0	52.1	58.7	5.2	64.0		64.0	U	
	US60 / 303L TI (Interim) (Landscaping)	118.1	1.1	LS	0.4		0.0	0.4	3.1	3.5		3.5		
	US60 Grand / 303L TI (Final)	118.1	1.1	NEW					8.2	8.2	116.4	124.6	3	
	Subtotal				**79.5**	**197.4**	**638.9**	**915.8**	**128.2**	**1044.0**	**202.0**	**1246.0**		
F41	**US-60 to I-17**													
	US60 Grand - I-17 Black Cyn (MC Oversite)	119.2	20.0	NEW	0.0	0.0	0.0	0.0	0.1	0.1		0.1		
	US60 Grand - Happy Valley Rd (DESIGN BUILD)	119.6	7.0	NEW	4.2	0.6	36.5	41.3	3.4	44.7		44.7		5/30/2015
	US60 Grand Ave - I-17 Black Canyon (Final)	119.6	20.0	NEW				0.0		0.0	227.4	227.4	3	
	El Mirage Rd TI	123.2	1.0	NEW TI	2.8	0.8	23.1	26.7	3.3	29.9		29.9	U	
	Happy Valley Rd - I-17 Blk Cyn (RW & 30% Design)	125.2	13.0	NEW	6.7	41.6	0.0	48.4	0.0	48.4		48.4		
	Happy Valley Rd – Lake Pleasant Rd (Interim)	125.2	5.3	NEW	14.4		114.2	128.6	1.3	129.9		129.9		5/13/2011
	Lake Pleasant Rd – I-17 Black Canyon (Interim)	130.5	7.2	NEW	10.5		82.1	92.6	6.3	98.9		98.9		5/13/2011
	Lake Pleasant Rd – I-17 Black Canyon (Landscape)	130.5	7.2	LS	0.0		0.3	0.3	0.0	0.4		0.4		
	Lake Pleasant - I-17 Black Canyon (FMS)	130.5	9.2	FMS					4.5	4.5		4.5		
	Subtotal				**38.6**	**43.0**	**256.3**	**337.9**	**18.9**	**356.8**	**227.4**	**584.2**		
	TOTAL SR-303				**125.3**	**247.5**	**895.5**	**1268.3**	**252.1**	**1520.4**	**561.8**	**2082.1**		
	SYSTEMWIDE PROGRAMS													
	Maintenance (Landscape, Litter & Sweep)						118.2	118.2	138.9	257.1	148.5	405.6		
	Freeway Management (FMS, Frwy. Service Patrol)				9.0	0.0	15.4	24.4	67.1	91.5	25.9	117.4		
	Noise Mitigation (Quiet Pavement, Noise Walls)				3.3	0.2	60.0	63.6	0.8	64.5	150.0	214.5		
	Engineering (Prelim. Engr., R/W Mgmt, Risk Mgmt.)				25.0	7.7	0.1	32.8	118.3	151.1	81.8	232.9		
	Subtotal				**37.3**	**7.9**	**193.8**	**239.0**	**325.1**	**564.1**	**406.2**	**970.3**		
	TOTAL SYSTEMWIDE PROGRAMS				**37.3**	**7.9**	**193.8**	**239.0**	**325.1**	**564.1**	**406.2**	**970.3**		
	GRAND TOTALS				**454.0**	**985.2**	**3077.3**	**4516.5**	**3928.3**	**8444.8**	**3968.6**	**12413.5**		

Appendix B

Arterial Street Life Cycle Program

TABLE B-1
ARTERIAL STREET LIFE CYCLE PROGRAM
REGIONAL FUNDING REIMBURSEMENTS AND TOTAL EXPENDITURES: FY 2006-2026, FY 2027-2035
(2016 and Year of Expenditure Dollars in Millions)

TABLE B-1

YOE	Year of Expenditure	CONST	Construction
FY	Fiscal Year	Expend	Expenditures
$	Dollars	Reimb	Reimbursement(s)

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY16 (YOE$)	Estimated Future Reimb (2016$)		Total Reimb. (2016$, YOE$)	Expend through FY16 (YOE$)	Estimated Future Expend (2016$)		Total Expend. (2016$, YOE$)			
			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
CHANDLER												
A1	**Arizona Ave/Chandler Blvd**	3.582	0.000	0.000	3.582	7.209	0.000	0.000	7.209	2006	0.25	Project Completed
A2	**Arizona Ave/Elliot Rd**	3.211	0.000	0.000	3.211	4.587	0.000	0.000	4.587	2007	0.25	Project Completed
A3	**Arizona Ave/Ray Rd**	3.464	0.000	0.000	3.464	4.949	0.000	0.000	4.949	2007	0.25	Project Completed
A4	**Arizona Ave: Ocotillo Rd to Hunt Highway**	0.000	4.433	3.018	7.451	0.000	3.113	13.208	16.320	2027	3.00	
A5	**Chandler Blvd/Alma School Rd**	0.709	2.638	0.942	4.289	0.000	10.810	0.000	10.810	2017	0.25	HSIP Recipient
A6	**Chandler Blvd/Dobson Rd**	2.500	0.000	0.000	2.500	10.316	0.000	0.000	10.316	2012	0.25	Project Completed
A7	**Chandler Blvd/Kyrene Rd**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project deleted in exchange for ACICOP1003
A8	**Gilbert Rd: SR-202L to Hunt Hwy**	25.741	0.000	1.770	27.511	48.696	0.000	0.000	48.696	2015	5.50	
	Gilbert Rd: SR-202L/Germann to Queen Creek Rd	6.752	0.000	0.000	6.752	10.316	0.000	0.000	10.316	2010	1.25	Project Completed
	Gilbert Rd: Queen Creek Rd to Hunt Hwy	3.244	0.000	0.000	3.244	4.849	0.000	0.000	4.849	----	----	Project Completed. Design and ROW project only.
	Gilbert Rd: Queen Creek Rd to Ocotillo Rd	7.537	0.000	0.000	7.537	16.198	0.000	0.000	16.198	2015	1.00	Project Completed
	Gilbert Rd: Ocotillo Rd to Chandler Heights	6.160	0.000	0.000	6.160	8.908	0.000	0.000	8.908	2015	1.00	FY15 RARF Closeout Project. Project Completed
	Gilbert Rd: Chandler Heights Rd to Riggs Rd	1.024	0.000	0.885	1.909	4.212	0.000	0.000	4.212	2015	1.00	Project combined with ACIGIL1003F
	Gilbert Rd: Riggs Rd to to Hunt Hwy	1.024	0.000	0.885	1.909	4.212	0.000	0.000	4.212	2015	1.00	Project combined with ACIGIL1003E
A9	**Kyrene Rd/Ray Rd**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project deleted in exchange for ACICOP1003
A10	**Price Rd Substitute Projects**	16.844	25.047	1.408	43.299	27.276	38.031	0.000	65.307	2021	----	
	Chandler Heights Rd: Arizona Avenue to McQueen Road	1.037	6.288	0.000	7.325	1.100	10.156	0.000	11.256	2018	1.00	
	Chandler Heights Road: McQueen Road to Gilbert Road	0.000	6.535	0.000	6.535	0.000	17.875	0.000	17.875	2021	2.00	
	McQueen Road: Ocotillo Road to Riggs Road	1.618	0.379	0.000	1.997	2.311	0.920	0.000	3.231	----	----	Design and ROW project only. Construction split into ACIPRC1003I and ACIPRC1003J

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY16 (YOE$)	Estimated Future Reimb (2016$)		Total Reimb. (2016$, YOE$)	Expend through FY16 (YOE$)	Estimated Future Expend (2016$)		Total Expend. (2016$, YOE$)			
			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
	Ocotillo Road: Arizona Avenue to McQueen Road	1.168	4.126	1.408	6.703	7.878	0.000	0.000	7.878	2016	1.00	HSIP Recipient
	Ocotillo Road: Cooper Road to Gilbert Road	0.000	6.499	0.000	6.499	0.000	7.965	0.000	7.965	2018	2.50	
	Price Rd at Germann Rd: Intersection Improvements	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project deleted in exchange forACIOCT1003
	Old Price Rd at Queen Creek Rd: Intersection Improvements	3.023	1.219	0.000	4.242	4.445	1.115	0.000	5.560	2017	0.80	Project limits changed from Price Rd at Germann Rd to Old Price Rd at Germann Rd
	Price Rd: Santan to Germann	3.053	0.000	0.000	3.053	4.361	0.000	0.000	4.361	2008	1.25	Project Completed
	McQueen Rd: Ocotillo Rd to Chandler Heights	3.896	0.000	0.000	3.896	4.131	0.000	0.000	4.131	2017	1.00	ACI-PRC1003C construction phase split into ACIPRC1003I and ACIPRC1003J
	McQueen Rd: Chandler Heights to Riggs Rd	3.049	0.000	0.000	3.049	3.049	0.000	0.000	3.049	2017	1.00	ACI-PRC1003C construction phase split into ACIPRC1003I and ACIPRC1003J
A11	**Ray Rd/Alma School Rd**	2.217	0.000	0.000	2.217	14.217	0.000	0.000	14.217	2012	0.25	Project Completed. HSIP Recipient
A12	**Ray Rd/Dobson Rd**	0.034	6.683	0.000	6.718	0.049	9.548	0.000	9.596	2026	0.30	
	Ray Rd at Dobson Rd: Intersection Improvements Phase I	0.034	0.232	0.000	0.266	0.049	0.331	0.000	0.380	2017	0.30	Project split into two phases.
	Ray Rd at Dobson Rd: Intersection Improvements Phase II	0.000	6.452	0.000	6.452	0.000	9.216	0.000	9.216	2026	0.30	Project split into two phases.
A13	**Ray Rd/McClintock Dr**	0.000	3.775	0.000	3.775	0.000	2.083	6.428	8.511	2027	0.30	
A14	**Ray Rd/Rural Rd**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project deleted in exchange for ACICOP1003
A95	**Ocotillo Rd: Gilbert Rd to 148th Street**	0.000	3.178	0.000	3.178	0.000	2.816	13.752	16.568	2027	1.50	Substitute project in exchange for ACIPRC1003F
A96	**Cooper Rd: South of Queen Creek to Riggs Rd**	1.037	8.384	3.776	13.197	1.100	15.054	0.000	16.154	2019	2.00	Substitute project in exchange for AIICHN3003, AIIKYR1003, and AIIRAY5003
	Cooper Rd: South of Queen Creek Rd to Chandler Heights	0.000	4.790	0.000	4.790	0.000	5.546	0.000	5.546	2018	2.00	New Project
	Cooper Rd: Chandler Heights to Riggs Rd	0.000	3.594	3.776	7.369	0.000	9.508	0.000	9.508	2019	2.00	New Project
	Cooper Rd: South of Queen Creek Rd to Riggs Rd	1.037	0.000	0.000	1.037	1.100	0.000	0.000	1.100	-----	-----	New Project. Design only.
CHANDLER/GILBERT												
A15	**Queen Creek Rd: Arizona Ave to Higley Rd**	19.580	4.433	5.112	29.125	26.862	12.440	0.000	39.301	2021	4.00	
	CHANDLER Queen Creek Rd: Arizona Ave to McQueen Rd	5.672	0.000	0.000	5.672	8.103	0.000	0.000	8.103	2009	1.00	Project Completed
	CHANDLER Queen Creek Rd: McQueen Rd to Gilbert Rd	3.015	4.433	5.112	12.560	3.197	12.440	0.000	15.637	2018	2.00	
	GILBERT Queen Creek Rd: Val Vista Dr. to Higley	10.893	0.000	0.000	10.893	15.562	0.000	0.000	15.562	2011	1.00	Project Completed. Savings reallocated to AIIGUD3003 and ACIGER2003B

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		Reimb. through FY16 (YOE$)	Estimated Future Reimb (2016$)		Total Reimb. (2016$, YOE$)	Expend through FY16 (YOE$)	Estimated Future Expend (2016$)		Total Expend. (2016$, YOE$)			
			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
EL MIRAGE/MARICOPA COUNTY												
A94	**El Mirage Rd: Northern Ave to Bell Rd (Phase I)**	8.920	19.993	0.000	28.913	15.388	31.075	0.000	46.463	2015	4.25	
	El Mirage Road Design Concept Report	1.448	0.000	0.000	1.448	1.448	0.000	0.000	1.448	-----	-----	Project completed.
	El Mirage Rd: Bell Rd to Picerne Dr (MC)	0.000	4.253	0.000	4.253	6.075	0.000	0.000	6.075	2014	0.50	Project completed.
	El Mirage Rd: Northern Ave to Cactus (MC)	0.669	0.000	0.000	0.669	0.956	0.000	0.000	0.956	-----	-----	Project completed. Design only. Savings reallocated to ACIELM2003D.
	El Mirage Rd: Cactus to Grand & Thunderbird Rd: 127th Ave to Grand (ELM)	1.112	0.000	0.000	1.112	1.588	0.000	0.000	1.588	-----	-----	Design only
	El Mirage Rd: Northern Ave to Peoria Ave (MC)	0.799	9.528	0.000	10.327	1.141	12.042	0.000	13.183	2018	2.00	
	Thunderbird Rd: 127th Avenue to Grand Avenue (ELM)	3.185	1.965	0.000	5.150	1.550	11.389	0.000	12.939	2017	0.50	
	El Mirage Rd: Peoria Ave to Cactus Rd (ELM)	1.708	4.247	0.000	5.956	2.630	7.643	0.000	10.274	2017	1.00	
A37	**El Mirage Rd: Northern Ave to Bell Rd (Phase II)**	0.026	13.527	0.000	13.553	0.038	9.361	0.000	9.399	2031	3.60	
	El Mirage Rd: Cactus to Grand Avenue (ELM)	0.026	13.527	0.000	13.553	0.038	9.361	0.000	9.399	2017	1.60	
	El Mirage Rd: Grand Avenue to Picerne Drive (MC)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2031	2.00	
FOUNTAIN HILLS												
A16	**Shea Blvd: Palisades Blvd to Cereus Wash**	3.331	2.174	0.692	6.196	4.761	4.658	0.000	9.419	2021	3.00	
	Shea Blvd: Palisades Blvd to Fountain Hills Blvd	0.248	0.000	0.000	0.248	0.358	0.000	0.000	0.358	----	----	Project is for design only. Project Completed.
	Shea Blvd: Technology Dr to Cereus Wash	3.082	0.043	0.000	3.125	4.403	0.013	0.000	4.417	2017	0.80	
	Shea Blvd: Fountain Hills Blvd to Technology Dr	0.000	2.131	0.692	2.823	0.000	4.645	0.000	4.645	2021	2.20	
GILBERT												
A17	**Elliot Rd/Cooper Rd**	0.000	4.140	0.000	4.140	0.000	15.510	0.000	15.510	2019	0.50	
A18	**Elliot Rd/Gilbert Rd**	0.000	3.775	3.600	7.375	0.000	13.924	0.000	13.924	2019	0.50	
A19	**Elliot Rd/Greenfield Rd**	0.000	3.774	0.000	3.774	0.000	12.582	0.000	12.582	2022	0.50	
A20	**Elliot Rd/Higley Rd**	0.000	3.775	1.137	4.912	0.000	11.497	0.000	11.497	2023	0.50	
A21	**Elliot Rd/Val Vista Dr**	0.000	3.775	0.669	4.444	0.000	15.081	0.000	15.081	2021	0.50	
A22	**Germann Rd: Gilbert Rd to Power Rd**	4.618	15.746	1.458	21.822	7.931	20.921	0.000	28.853	2020	4.00	
	Germann Rd: Gilbert Rd to Val Vista Dr	0.000	14.946	1.458	16.404	1.335	19.778	0.000	21.113	2019	2.00	

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			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
	Germann Rd: Val Vista Dr to Higley Rd	4.618	0.800	0.000	5.418	6.597	1.143	0.000	7.740	2016	2.00	Received project savings from ACIQNC1003C
A23	**Greenfield Rd: Elliot Rd to Ray Rd**	0.000	3.775	0.000	3.775	0.000	0.000	5.224	5.224	2027	2.00	
A24	**Guadalupe Rd/Cooper Rd**	2.590	2.598	0.000	5.188	3.699	6.490	0.000	10.189	2017	0.50	Received project savings from ACIQNC1003C.
A25	**Guadalupe Rd/Gilbert Rd**	6.512	0.000	0.000	6.512	9.302	0.000	0.000	9.302	2015	0.50	Project Completed
A26	**Guadalupe Rd/Greenfield Rd**	0.000	2.992	1.919	4.912	0.000	10.646	0.000	10.646	2023	0.50	
A27	**Guadalupe Rd/Power Rd**	0.000	2.379	3.901	6.280	0.000	7.554	0.000	7.554	2026	0.50	
A28	**Guadalupe Rd/Val Vista Dr**	0.000	3.775	0.000	3.775	0.000	12.797	0.000	12.797	2023	0.50	
A30	**Ray Rd: Val Vista Dr to Power Rd**	0.000	16.683	0.000	16.683	0.000	17.691	0.000	17.691	2025	0.50	Project segments combined
A31	**Ray Rd/Gilbert Rd**	0.000	0.000	3.775	3.775	0.000	7.744	0.000	7.744	2026	0.50	
A32	**Val Vista Dr: Warner Rd to Pecos**	10.398	0.000	0.000	10.398	16.308	0.000	0.000	16.308	2006	2.90	FY08 RARF Closeout Project. Project Completed.
A33	**Warner Rd/Cooper Rd**	3.701	0.000	0.000	3.701	6.268	0.000	0.000	6.268	2010	0.50	Project Completed
A34	**Warner Rd/Greenfield Rd**	0.000	3.775	0.000	3.775	0.000	10.972	0.000	10.972	2022	0.50	
GILBERT/MESA/MARICOPA COUNTY												
A29	**Power Rd: Santan Fwy to Chandler Heights**	20.591	0.000	0.000	20.591	36.765	27.993	0.000	64.758	2024	6.00	
	Power Rd/Pecos (GIL)	5.143	0.000	0.000	5.143	7.347	0.000	0.000	7.347	2008	0.50	Project Completed
	Power Rd: Santan Fwy to Pecos Rd (MES)	15.448	0.000	0.000	15.448	29.418	0.000	0.000	29.418	2014	1.50	Project Completed. Lead Agency changed from Gilbert to Mesa in July 2012.
	Power Rd: Pecos to Chandler Heights (GIL)	0.000	0.000	0.000	0.000	0.000	27.993	0.000	27.993	2025	4.00	
A45	**Power Rd: Baseline Rd to Santan Fwy**	7.760	8.193	0.000	15.953	22.040	12.571	0.000	34.611	2018	4.50	
	Power Rd: East Maricopa Floodway to Santan Fwy/Loop 202 (MES)	0.000	8.193	0.000	8.193	0.000	12.571	0.000	12.571	2022	3.50	
	Power Rd: Baseline Rd to East Maricopa Floodway (MC)	7.760	0.000	0.000	7.760	22.040	0.000	0.000	22.040	2009	1.00	Project Completed
MARICOPA COUNTY												
A35	**Dobson Rd: Bridge over Salt River**	0.000	18.632	0.000	18.632	0.000	43.110	0.000	43.110	2022	1.60	
A36	**El Mirage Rd: Bell Rd to Jomax Rd**	14.355	0.853	0.000	15.208	12.601	12.298	5.590	30.489	2027	5.80	
	El Mirage Rd: Bell Rd to Deer Valley Dr	8.821	0.853	0.000	9.673	12.601	0.000	0.000	12.601	2010	3.00	FY15 RARF Closeout Project. Project Completed
	El Mirage Rd: L303 to Jomax	0.000	0.000	0.000	0.000	0.000	12.298	5.590	17.889	2027	1.60	
	El Mirage Rd: Deer Valley Dr to L303	5.535	0.000	0.000	5.535	0.000	0.000	0.000	0.000	2009	1.20	FY10 RARF Closeout Project. Project Completed.
A38	**Gilbert Rd: Bridge over Salt River**	1.400	12.605	0.000	14.005	2.000	39.235	0.000	41.235	2019	2.00	

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			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
A39	**Jomax Rd: SR-303L to Sun Valley Parkway**	0.000	6.830	17.761	24.591	0.000	9.757	25.373	35.130	-----	-----	ROW project only
A40	**McKellips Rd: Bridge over Salt River**	0.000	0.000	14.005	14.005	0.000	2.832	24.586	27.418	2027	0.80	
A41	**McKellips Rd: SR-101L to SRP-MIC/Alma School Rd**	0.581	22.305	14.567	37.453	0.421	13.724	0.000	14.145	2021	1.60	
A42	**Northern Pkwy: Sarival to Grand (Phase I)**	60.713	0.000	0.000	60.713	89.174	0.000	0.000	89.174	2013	12.50	Total corridor length is 12.5 miles
	Northern Parkway: Sarival to Dysart	58.112	0.000	0.000	58.112	85.458	0.000	0.000	85.458	2013	12.50	Project Completed
	Northern Parkway: ROW Protection	2.601	0.000	0.000	2.601	3.716	0.000	0.000	3.716	2013	12.50	Project Completed
A43	**Northern Pkwy: Sarival to Grand (Phase II)**	23.032	64.416	0.000	87.447	30.355	72.144	0.000	102.500	2023	12.50	
	Northern Parkway: Sarival to Dysart	2.400	0.000	0.000	2.400	4.077	0.000	0.000	4.077	2014	4.10	Landscape and construction project.
	Northern Pkwy: Dysart to 111th	13.418	30.095	0.000	43.513	14.266	37.381	0.000	51.647	2018	2.50	Project received funding from ACINOR1003G. Project scope includes Agua Fria Bridge and Sarival Overpass
	Northern Parkway: Reems and Litchfield Overpasses	7.214	0.000	0.000	7.214	12.013	0.000	0.000	12.013	2016	0.20	Project Completed. Combined two segments
	Northern Pkwy: Northern Ave at L101	0.000	10.188	0.000	10.188	0.000	10.804	0.000	10.804	2020	0.50	
	Northern Pkwy: Dysart Overpass	0.000	10.712	0.000	10.712	0.000	11.359	0.000	11.359	2019	0.10	
	Northern Parkway: 111th Ave to Grand	0.000	13.421	0.000	13.421	0.000	12.600	0.000	12.600	2021	5.50	ROW project only. Received savings from ACINOR1003G.
	Northern Parkway: Interim Construction	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project Deleted. Funding shifted to ACINOR1003B and ACINOR1003E
A44	**Northern Pkwy: Sarival to Grand (Phase III)**	0.000	88.564	0.000	88.564	0.000	115.229	0.000	115.229	2027	12.50	
	Northern Pkwy: El Mirage Alternative Access	0.000	2.915	0.000	2.915	0.000	3.091	0.000	3.091	2021	1.00	
	Northern Pkwy: El Mirage Overpass	0.000	21.515	0.000	21.515	0.000	22.816	0.000	22.816	2021	0.10	
	Northern Pkwy: Agua Fria to 111th	0.000	2.817	0.000	2.817	0.000	3.874	0.000	3.874	2023	1.00	
	Northern Pkwy: 111th to 107th	0.000	15.423	0.000	15.423	0.000	22.304	0.000	22.304	2024	0.50	
	Northern Pkwy: 107th to 99th	0.000	20.572	0.000	20.572	0.000	29.241	0.000	29.241	2025	1.00	
	Northern Pkwy: Loop 101 to 91st	0.000	3.575	0.000	3.575	0.000	4.957	0.000	4.957	2025	0.50	
	Northern Pkwy: 91st to Grand Intersection Improvements	0.000	5.907	0.000	5.907	0.000	8.229	0.000	8.229	2025	3.00	
	Northern Pkwy: ROW Protection	0.000	0.000	0.000	0.000	0.000	2.125	0.000	2.125	2026	12.50	
	Northern Pkwy: Ultimate Construction	0.000	15.840	0.000	15.840	0.000	18.591	0.000	18.591	2026	12.00	

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			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
MESA												
A46	**Baseline Rd: Power Rd to Meridian Rd**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2017	6.00	
	Baseline Rd: Power Rd to Ellsworth Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Baseline Rd: Ellsworth Rd to Meridian Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A47	**Broadway Rd: Dobson Rd to Country Club**	0.081	3.751	4.741	8.574	0.116	24.014	0.000	24.130	2022	2.00	
A48	**Country Club/University Dr**	0.000	8.325	0.000	8.325	0.000	25.578	0.000	25.578	2023	1.00	
A49	**Country Club/Brown Rd**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A50	**Crismon Rd: Broadway Rd to Germann Rd**	0.000	12.406	9.919	22.324	0.000	25.921	11.138	37.059	2026	9.00	
	Crismon Rd: Broadway Rd to Guadalupe Rd	0.000	0.000	9.919	9.919	0.000	7.827	11.138	18.965	2027	3.00	
	Crismon Rd: Guadalupe Rd to Ray Rd	0.000	12.406	0.000	12.406	0.000	18.094	0.000	18.094	2025	3.00	
	Crismon Rd: Ray Rd to Germann Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A51	**Dobson Rd/Guadalupe Rd**	2.124	0.000	0.000	2.124	3.100	0.000	0.000	3.100	2010	0.50	Project Completed
A52	**Dobson Rd/University Dr**	0.000	0.000	4.921	4.921	0.000	0.763	7.460	8.224	2027	0.50	
A53	**Elliot Rd: Power Rd to Meridian Rd**	0.000	22.326	8.646	30.973	0.000	32.180	0.000	32.180	2026	6.00	
	Elliot Rd: Power Rd to Ellsworth Rd	0.000	11.163	0.000	11.163	0.000	15.947	0.000	15.947	2019	3.00	Received project savings from ACIRAY2003B and ACIRAY2003C.
	Elliot Rd: Ellsworth Rd to Meridian Rd	0.000	10.963	8.646	19.610	0.000	15.947	0.000	15.947	2019	3.00	Received project savings from ACIRAY2003B and ACIRAY2003C.
	Elliot Rd: Power Rd to Meridian Rd	0.000	0.200	0.000	0.200	0.000	0.286	0.000	0.286	-----	-----	Pre-design/scoping only.
A54	**Germann Rd: Ellsworth Rd to Signal Butte Rd**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A55	**Gilbert Rd/University Dr**	2.741	0.000	0.000	2.741	11.765	0.000	0.000	11.765	2010	0.50	Project Completed
A56	**Greenfield Rd: University Rd to Baseline Rd**	5.777	0.000	6.585	12.361	9.692	5.116	0.000	14.808	2024	3.00	
	Greenfield Rd: Baseline Rd to Southern Ave	5.777	0.000	0.000	5.777	9.692	0.000	0.000	9.692	2010	1.00	Project Completed
	Greenfield Rd: Southern Ave to University Rd	0.000	0.000	6.585	6.585	0.000	5.116	0.000	5.116	2024	2.00	

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			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
A57	**Guadalupe Rd: Power Rd to Meridian Rd**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2019	6.00	
	Guadalupe Rd: Power Rd to Hawes Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Guadalupe Rd: Hawes Rd to Crimson Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Guadalupe Rd: Crimson Rd to Meridian Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A58	**Hawes Rd: Broadway Rd to Ray Rd**	0.416	11.523	0.000	11.939	0.595	18.558	8.275	27.428	2027	6.00	
	Hawes Rd: Broadway Rd to US60	0.000	0.000	0.000	0.000	0.000	10.697	0.000	10.697	2025	2.00	
	Hawes Rd: Baseline Rd to Elliot Rd	0.000	7.108	0.000	7.108	0.000	5.979	4.389	10.368	2027	2.00	
	Hawes Rd: Elliot Rd to Santan Freeway	0.000	4.415	0.000	4.415	0.000	1.883	3.886	5.769	2027	1.25	
	Hawes Rd: Santan Freeway to Ray Rd	0.416	0.000	0.000	0.416	0.595	0.000	0.000	0.595	2011	0.75	Project Completed
A59	**Higley Rd Parkway: S 60 to SR-202L**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2020	6.50	
	Higley Rd Parkway: SR-202L to Brown Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Higley Rd Parkway: Brown Rd to US-60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A60	**Higley Rd Parkway: US 60 to SR 202L (RM) Grade Separations**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A61	**Lindsay Rd/Brown Rd**	0.000	3.919	0.000	3.919	0.000	7.361	0.000	7.361	2023	0.50	
A62	**McKellips Rd: East of Sossaman to Meridian**	0.000	12.283	0.000	12.283	0.000	33.911	0.000	33.911	2026	5.00	
	McKellips Rd: East of Sossaman to Crismon Rd	0.000	12.283	0.000	12.283	0.000	22.366	0.000	22.366	2024	3.00	
	McKellips Rd: Crismon Rd to Meridian Rd	0.000	0.000	0.000	0.000	0.000	11.545	0.000	11.545	2026	2.00	
A63	**McKellips Rd: Gilbert Rd to Power Rd**	0.122	18.471	0.000	18.592	0.174	23.927	0.000	24.101	2026	2.00	
	McKellips Rd/Lindsay Rd	0.043	6.137	0.000	6.180	0.061	10.668	0.000	10.729	2023	0.50	
	McKellips Rd/Greenfield Rd	0.040	2.630	0.000	2.670	0.057	3.893	0.000	3.950	2025	0.50	
	McKellips Rd/Higley Rd	0.040	6.310	0.000	6.350	0.057	4.355	0.000	4.412	2024	0.50	

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	McKellips Rd/Power Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	McKellips Rd/Recker Rd	0.000	3.393	0.000	3.393	0.000	5.010	0.000	5.010	2026	0.50	
	McKellips Rd/Val Vista Dr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A64	**Meridian Rd: Baseline Rd to Germann Rd**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2020	7.00	
	Meridian Rd: Baseline Rd to Ray Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
	Meridian Rd: Ray Rd to Germann Rd	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A65	**Mesa Dr: Southern Ave to US60 and Mesa Dr to Broadway Rd**	16.162	11.637	0.000	27.799	23.088	14.739	0.000	37.827	2016	2.00	
	Mesa Dr: US 60 to Southern Ave	15.919	0.108	0.000	16.026	22.741	0.154	0.000	22.895	2016	1.00	Project Completed. Received project savings from ACIRAY2003B.
	Mesa Dr: 8th Ave to Main Street	0.243	11.529	0.000	11.772	0.347	14.585	0.000	14.932	2017	1.00	Project limits changed from Mesa Dr at Broadway Rd Received project savings from ACIRAY2003B.
A66	**Pecos Rd: Ellsworth Rd to Meridian Rd**	0.000	15.381	0.000	15.381	0.000	26.045	0.000	26.045	2023	3.00	
A67	**Ray Rd: Sossaman Rd to Meridian Rd**	3.023	0.601	0.000	3.624	14.380	0.000	0.000	14.380	2026	5.00	
	Ray Rd: Sossaman Rd to Ellsworth Rd	3.023	0.000	0.000	3.023	4.319	0.000	0.000	4.319	2011	2.00	Project Completed
	Ray Rd: Ellsworth Rd to Signal Butte Rd	0.000	0.000	0.000	0.000	8.061	0.000	0.000	8.061	2015	2.00	Project Completed. Project segmented from Ray Rd: Ellsworth Rd to Meridian Rd. Project savings reallocated.
	Ray Rd: Signal Butte Rd to Meridian Rd	0.000	0.601	0.000	0.601	2.000	0.000	0.000	2.000	2014	1.00	Project Completed. Project segmented from Ray Rd: Ellsworth Rd to Meridian Rd. Project savings reallocated.
A68	**Signal Butte Rd: Broadway to Pecos Rd**	0.000	33.034	0.000	33.034	13.480	33.385	0.000	46.865	2026	8.00	
	Signal Butte Rd: Broadway Rd to Elliot Rd	0.000	11.693	0.000	11.693	0.000	18.151	0.000	18.151	2025	4.00	
	Signal Butte Rd: Elliot Rd to Ray Rd	0.000	8.677	0.000	8.677	13.480	0.000	0.000	13.480	2015	2.00	Project Completed. Project segmented from Signal Butte Rd: Elliot Rd to Pecos Rd. Project savings reallocated.
	Signal Butte Rd: Ray Rd to Pecos Rd	0.000	12.664	0.000	12.664	0.000	15.234	0.000	15.234	2025	2.00	Project segmented from Signal Butte Rd: Elliot Rd to Pecos Rd.
A69	**Southern Ave: Country Club Dr to Recker Rd**	1.041	28.947	0.000	29.987	1.528	42.523	0.000	44.052	2019	2.00	
	Southern/Country Club Dr	0.342	6.469	0.000	6.811	0.488	13.088	0.000	13.576	2019	0.50	
	Southern Ave/Stapley Dr	0.594	11.528	0.000	12.122	0.849	16.180	0.000	17.029	2019	0.50	HSIP Recipient

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			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
	Southern Ave: Gilbert Rd to Val Vista Dr	0.000	4.715	0.000	4.715	0.000	6.736	0.000	6.736	2019	2.50	Project limits were expanded. Received project savings from ACIRAY2003C.
	Southern Ave: Greenfield Rd to Higley Rd	0.000	6.234	0.000	6.234	0.000	6.519	0.000	6.519	2018	1.50	Project limits were expanded.
	Southern Avenue Area DCR	0.105	0.000	0.000	0.105	0.191	0.000	0.000	0.191	-----	-----	Pre-design/scoping only.
A70	**Southern Ave: Sossaman Rd to Meridian Rd**	0.000	0.000	13.310	13.310	0.000	27.151	0.000	27.151	2025	5.00	
	Southern Ave: Sossaman Rd to Crismon Rd	0.000	0.000	8.014	8.014	0.000	16.363	0.000	16.363	2026	3.00	
	Southern Ave: Crismon Rd to Meridian Rd	0.000	0.000	5.296	5.296	0.000	10.788	0.000	10.788	2025	2.00	
A71	**Stapley Dr/University Dr**	0.000	7.785	0.000	7.785	0.000	19.361	0.000	19.361	2023	0.50	
A72	**Thomas Rd: Gilbert Rd to Val Vista Dr**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project was deleted in FY 2013. Funding was transferred to the Gilbert Road LRT extension.
A73	**University Dr: Val Vista Dr to Hawes Rd**	0.000	22.708	0.000	22.708	1.586	33.467	0.000	35.054	2024	6.00	
	University Dr: Val Vista Dr to Higley Rd	0.000	11.204	0.000	11.204	0.000	16.340	0.000	16.340	2025	2.00	
	University Dr: Higley Rd to Sossaman Rd	0.000	9.018	0.000	9.018	0.000	16.127	0.000	16.127	2024	3.00	Project limits were expanded from University Dr: Higley Rd to Hawes Rd and segmented into two phases
	University Dr: Sossaman Rd to 88th St	0.000	2.486	0.000	2.486	1.586	1.000	0.000	2.586	2017	1.50	Project limits were expanded from University Dr: Higley Rd to Hawes Rd and segmented into two phases
A74	**Val Vista Dr: University Dr to Baseline Rd**	0.000	8.320	0.000	8.320	0.134	9.345	0.000	9.479	2026	3.50	
	Val Vista Dr: Baseline Rd to US-60	0.000	0.840	0.000	0.840	0.134	0.994	0.000	1.128	2018	1.00	Project limits were expanded from Val Vista Dr: Baseline Rd to Southern Ave and segmented into two phases.
	Val Vista Dr: US-60 to Pueblo	0.000	7.480	0.000	7.480	0.000	8.351	0.000	8.351	2020	1.50	Project limits were expanded from Val Vista Dr: Baseline Rd to Southern Ave and segmented into two phases.
	Val Vista Dr: Southern Ave to University Dr	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-----	-----	Project Deleted in exchange for ACIBSL2003
	Baseline Rd: 24th Sreet to Consolidated Canal	0.000	3.418	4.722	8.140	0.000	9.605	0.000	9.605	2019	1.00	Substitute project in exchange for ACIVAL1003B. Received project savings from ACISGB1003B and ACIRAY2003B.
	Mesa Main Street: Mesa Dr to Gilbert Rd Light Rail Extension	71.816	81.550	0.000	153.366	76.157	86.479	0.000	162.636	2020	2.00	
PEORIA												
A75	**Beardsley Connection: SR-101L to Beardsley Rd at 83rd Ave/Lake Pleasant Pkwy**	22.095	0.000	0.000	22.095	34.621	0.000	0.000	34.621	2014	3.95	
	Beardsley Connection: Loop 101 to 83rd Ave/Lake Pleasant Pkwy	6.125	0.000	0.000	6.125	8.473	0.000	0.000	8.473	2010	0.75	Project Completed.

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			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
	Loop 101 (Agua Fria Fwy) at Beardsley Rd/Union Hills Dr	10.851	0.000	0.000	10.851	13.484	0.000	0.000	13.484	2010	2.00	Project Completed
	83rd Avenue: Butler Rd to Mountain View	3.226	0.000	0.000	3.226	6.734	0.000	0.000	6.734	2014	1.00	FY15 ALCP RARF Closeout Project. Project Completed. Savings transferred to ACILKP1003A
	75th Ave at Thunderbird Rd: Intersection Improvement	1.893	0.000	0.000	1.893	5.931	0.000	0.000	5.931	2014	0.20	Project Completed
A76	**Happy Valley Rd: L303 to 67th Avenue**	20.634	1.895	11.114	33.644	50.277	34.800	7.500	92.577	2024	5.750	
	Happy Valley Rd: Agua Fria to Loop 303	0.000	0.000	0.000	0.000	0.000	1.500	7.500	9.000	2028	0.75	Project segmented
	Happy Valley Rd: Lake Pleasant Pkwy to 67th Ave	20.634	0.000	0.000	20.634	50.277	0.000	0.000	50.277	2010	5.00	Project Completed
	Happy Valley Rd: Lake Pleasant Pkwy to Agua Fria	0.000	1.895	11.114	13.010	0.000	33.300	0.000	33.300	2019	1.50	Project segmented
A77	**Lake Pleasant Pkwy: Union Hills to SR74**	42.672	0.000	0.000	42.672	60.960	0.000	47.500	108.460	2029	14.30	
	Lake Pleasant Pkwy: West Wing Parkway to Loop 303	15.545	0.000	0.000	15.545	22.207	0.000	0.000	22.207	2016	2.50	Project Completed. Project received savings from ACIBRD1003B.
	Lake Pleasant Pkwy: Union Hills to Dynamite Rd	27.127	0.000	0.000	27.127	38.753	0.000	0.000	38.753	2008	10.00	Project Completed
	Lake Pleasant Pkwy: Loop 303 to SR-74/Carefree Hwy	0.000	0.000	0.000	0.000	0.000	0.000	47.500	47.500	2029	1.80	
PHOENIX												
A78	**Avenida Rio Salado: 51st Ave. to 7th St.**	44.693	0.000	0.000	44.693	97.599	17.289	0.000	114.888	2018	6.00	Project has been segmented into two phases.
	Avenida Rio Salado Phase I: 51st Ave to 43rd Ave and 35th Ave to 7th Street	44.693	0.000	0.000	44.693	82.719	0.000	0.000	82.719	2017	5.00	
	Avenida Rio Salado Phase II: 51st Ave to 35th Ave,7th Ave, and 7th Street	0.000	0.000	0.000	0.000	14.880	17.289	0.000	32.169	2019	2.00	
A79	**Black Mountain Blvd: SR-51and Loop 101/ Pima Fwy to Pinnacle Peak Rd.**	22.530	0.000	0.000	22.530	36.146	0.000	0.000	36.146	2016	2.00	
A80	**Happy Valley Rd: 67th Ave to I-17**	5.343	0.000	13.291	18.634	7.162	15.947	15.375	38.483	2030	4.50	
	Happy Valley: I-17 to 35th Ave	5.343	0.000	0.078	5.421	7.162	0.000	0.000	7.162	2005	1.00	FY15 RARF Closeout Project. Project Completed
	Happy Valley: 35th Ave to 43rd Ave	0.000	0.000	5.232	5.232	0.000	11.700	0.000	11.700	2024	1.00	
	Happy Valley: 43rd Ave to 55th Ave	0.000	0.000	4.671	4.671	0.000	1.592	7.905	9.497	2027	1.50	
	Happy Valley: 55th Ave to 67th Ave	0.000	0.000	3.310	3.310	0.000	2.655	7.470	10.124	2030	1.50	
A81	**Sonoran Blvd: 15th Avenue to Cave Creek**	32.572	0.000	0.000	32.572	58.650	0.000	0.000	58.650	2013	8.00	Project completed.

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			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
SCOTTSDALE/CAREFREE												
A87	**Pima Rd: SR101L to Happy Valley Rd and Dynamite Rd to Cave Creek**	31.487	65.763	0.625	97.249	45.465	97.404	0.000	142.870	2022	12.45	
	Pima Rd: Thompson Peak Parkway to Pinnacle Peak (SCT)	17.847	0.000	0.000	17.847	25.540	0.000	0.000	25.540	2012	1.50	Project completed. Savings reallocated to ACISCT1003A
	Happy Valley Rd: Pima Rd to Alma School Rd	0.000	6.947	0.000	6.947	0.000	11.350	0.000	11.350	2020	2.20	Project limits expanded from Pima Rd at Happy Valley to Happy Valley Rd: Pima Rd to Alma School Rd. Savings received from ACISCT1003A and ACISAT1003A.
	Pima Rd: Pinnacle Peak to Happy Valley Rd (SCT)	0.000	15.991	0.000	15.991	0.000	22.844	0.000	22.844	2022	1.00	
	Pima Rd: Dynamite Blvd to Stagecoach Rd (SCT)	0.000	37.892	0.000	37.892	0.000	55.270	0.000	55.270	2024	5.00	
	Pima Rd: Stagecoach Rd to Cave Creek (CFR)	0.000	4.933	0.625	5.558	0.000	7.940	0.000	7.940	2024	0.25	
	Pima Rd: SR101L to Thompson Peak Pkwy (SCT)	13.639	0.000	0.000	13.639	19.926	0.000	0.000	19.926	2008	2.50	Project Completed
SCOTTSDALE												
A82	**Carefree Hwy: Cave Creek Rd to Scottsdale Rd**	0.000	8.012	0.000	8.012	0.000	14.344	0.000	14.344	2024	2.00	
A83	**SR-101L North Frontage Roads: Pima/Princess Dr to Scottsdale Rd**	3.745	0.000	29.014	32.759	5.350	0.000	41.449	46.799	2028	2.00	
	SR-101L Frontage Rd: Hayden Rd to Scottsdale Rd	3.745	0.000	0.000	3.745	5.350	0.000	0.000	5.350	2009	1.00	Project Completed
	SR-101L Frontage Rd: Pima Rd/Princess Dr to Hayden Rd	0.000	0.000	29.014	29.014	0.000	0.000	41.449	41.449	2028	1.00	
A84	**SR-101L South Frontage Rd: Hayden Rd to Pima**	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	----	----	This project was deleted in FY2009.
A85	**Miller Rd/SR-101L Underpass**	0.000	14.005	0.000	14.005	0.000	21.007	0.000	21.007	2023	1.30	
A86	**Pima Rd: Happy Valley Rd to Dynamite Blvd**	0.000	23.747	0.000	23.747	0.000	33.925	0.000	33.925	2024	2.00	
A88	**Pima Rd: McKellips Rd to Via Linda**	7.534	23.185	0.000	30.719	10.847	42.224	0.000	53.070	2022	7.40	
	Pima Rd: Via Linda to Via De Ventura	0.071	1.267	0.000	1.339	0.102	2.253	0.000	2.354	2018	1.30	
	Pima Rd: Via De Ventura to Krail	7.463	0.000	0.000	7.463	10.745	0.000	0.000	10.745	2012	1.30	Project Completed
	Pima Rd: Thomas Rd to McDowell Rd	0.000	9.463	0.000	9.463	0.000	8.761	0.000	8.761	2023	1.00	
	Pima Rd: Krail to Chaparral	0.000	6.326	0.000	6.326	0.000	20.170	0.000	20.170	2019	1.80	
	Pima Rd: Chaparral Rd to Thomas Rd	0.000	6.128	0.000	6.128	0.000	11.041	0.000	11.041	2023	2.00	
A89	**Scottsdale Airport: Runway Tunnel**	11.232	54.434	0.000	65.667	16.046	92.506	0.000	108.553	2026	7.10	
	Frank Lloyd Wright -Loop 101 Traffic Interchange	0.000	5.983	0.000	5.983	0.000	8.547	0.000	8.547	2023	0.40	

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY16 (YOE$)	Estimated Future Reimb (2016$)		Total Reimb. (2016$, YOE$)	Expend through FY16 (YOE$)	Estimated Future Expend (2016$)		Total Expend. (2016$, YOE$)			
			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
	Raintree -Loop 101 Traffic Interchange	0.000	3.167	0.000	3.167	0.000	4.524	0.000	4.524	2023	0.40	
	Northsight Blvd: Hayden to Frank Lloyd Wright	9.374	0.000	0.000	9.374	13.392	0.000	0.000	13.392	2015	0.35	Project Completed. Received project savings from ACISHA2003H. Project savings reallocated to ACIPMA1003B.
	Frank Lloyd Wright Frontage Rd: Northsight to Greenway-Hayden Loop	0.000	7.746	0.000	7.746	0.000	11.065	0.000	11.065	2024	0.75	
	Redfield Rd: Raintree Dr to Hayden Rd	0.000	1.500	0.000	1.500	0.000	2.215	0.000	2.215	2018	1.00	Renamed in FY15.
	Raintree Drive: Scottsdale Rd to Hayden Rd	0.626	15.348	0.000	15.974	0.894	21.971	0.000	22.865	2018	1.20	Renamed in FY15.
	Raintree Drive: Hayden to Loop 101	0.000	6.304	0.000	6.304	0.000	20.709	0.000	20.709	2020	1.00	
	Frank Lloyd Wright at 76th/78th/82nd Street: Intersection Improvements	0.398	0.000	0.000	0.398	0.568	0.000	0.000	0.568	2014	0.50	Project Completed. Savings transferred to ACISAT1003C.
	Southbound Loop 101 Frontage Road Connections	0.094	2.958	0.000	3.052	0.134	6.823	0.000	6.957	2018	0.75	Project Scope changed in FY2012
	Hayden Rd - Loop 101 Interchange Improvements	0.000	11.428	0.000	11.428	0.000	16.652	0.000	16.652	2026	0.75	
	Airpark DCR	0.741	0.000	0.000	0.741	1.058	0.000	0.000	1.058	-----	-----	Project Completed. Received project savings from ACISHA2003E
A90	**Scottsdale Rd: Thompson Peak Pkwy to Jomax Rd**	9.120	7.928	0.000	17.049	13.029	54.937	0.000	67.966	2022	4.00	
	Scottsdale Rd: Thompson Peak Pkwy to Pinnacle Peak Pkwy Phase I	9.120	0.000	0.000	9.120	13.029	0.000	0.000	13.029	2015	2.00	Project segmented into two phases. Phase one completed. Received project savings from ACIPMA1003A ACISHA2003E. Transferred project savigns to ACIPMA1003B.
	Scottsdale Rd: Thompson Peak Pkwy to Pinnacle Peak Pkwy Phase II	0.000	6.128	0.000	6.128	0.000	18.000	0.000	18.000	2023	2.00	Project segmented into two phases.
	Scottsdale Rd: Pinnacle Peak Pkwy to Jomax Rd	0.000	1.800	0.000	1.800	0.000	36.937	0.000	36.937	2023	2.00	
A91	**Scottsdale Rd: Jomax Rd to Carefree Hwy**	0.000	28.497	0.000	28.497	0.000	51.329	0.000	51.329	2024	5.50	
	Scottsdale Rd: Jomax Rd to Dixileta Dr	0.000	9.499	0.000	9.499	0.000	18.081	0.000	18.081	2024	2.00	
	Scottsdale Rd: Dixileta Dr to Ashler Hills Dr	0.000	9.499	0.000	9.499	0.000	16.624	0.000	16.624	2024	1.50	
	Scottsdale Rd: Ashler Hills Dr to Carefree Highway	0.000	9.499	0.000	9.499	0.000	16.624	0.000	16.624	2023	2.00	
A92	**Shea Blvd: SR-101L to SR-87**	5.366	17.197	0.000	22.563	7.610	25.210	0.000	32.820	2019	12.80	
	Shea Blvd at 90th/92nd/96th	4.056	0.000	0.000	4.056	5.794	0.000	0.000	5.794	2007	0.75	Project Completed
	Shea Auxiliary Lane from 90th St to Loop 101	0.000	6.390	0.000	6.390	0.000	9.129	0.000	9.129	2023	1.00	
	Shea Blvd at Via Linda (Phase1)	0.621	0.000	0.000	0.621	0.888	0.000	0.000	0.888	2007	0.20	Project Completed

MAP CODE	FACILITY/LOCATION	REGIONAL FUNDING				TOTAL EXPENDITURES				FINAL FY for CONST	LENGTH* (Miles)	OTHER PROJECT INFORMATION
		Reimb. through FY16 (YOE$)	Estimated Future Reimb (2016$)		Total Reimb. (2016$, YOE$)	Expend through FY16 (YOE$)	Estimated Future Expend (2016$)		Total Expend. (2016$, YOE$)			
			FY17-FY26	FY27-FY35			FY17-FY26	FY27-FY35				
	Shea Blvd at Via Linda (Phase 2)	0.000	2.086	0.000	2.086	0.000	2.980	0.000	2.980	2025	0.25	
	Shea Blvd at 120/124th St	0.183	0.000	0.000	0.183	0.206	0.000	0.000	0.206	2012	0.40	Project Completed
	Shea Blvd at Mayo/134th St	0.162	0.000	0.000	0.162	0.231	0.000	0.000	0.231	2007	0.20	Project Completed
	Shea Blvd: SR-101L to 96th St, ITS Improvements	0.344	0.000	0.000	0.344	0.491	0.000	0.000	0.491	2010	1.00	Project Completed. Project savings transferred to ACISAT1003C.
	Shea Blvd: 96th St to 144th St, ITS Improvements	0.000	2.360	0.000	2.360	0.000	3.372	0.000	3.372	2025	6.25	
	Shea Blvd at Loop 101	0.000	3.688	0.000	3.688	0.000	5.269	0.000	5.269	2025	1.00	
	Shea Blvd at 110th St	0.000	0.266	0.000	0.266	0.000	0.379	0.000	0.379	2025	0.25	
	Shea Blvd at 114th St	0.000	0.266	0.000	0.266	0.000	0.379	0.000	0.379	2025	0.25	
	Shea Blvd at Frank Lloyd Wright Blvd	0.000	0.664	0.000	0.664	0.000	1.489	0.000	1.489	2025	0.25	
	Shea Blvd at 115th St	0.000	0.111	0.000	0.111	0.000	0.159	0.000	0.159	2025	0.25	
	Shea Blvd at 125th St	0.000	0.880	0.000	0.880	0.000	1.257	0.000	1.257	2025	0.25	
	Shea Blvd at 135th St	0.000	0.111	0.000	0.111	0.000	0.159	0.000	0.159	2025	0.25	
	Shea Blvd at 136th St	0.000	0.376	0.000	0.376	0.000	0.637	0.000	0.637	2025	0.25	
A93	**Legacy Dr: Hayden Rd to 88th Street**	0.000	2.073	10.021	12.094	0.000	21.910	0.000	21.910	2025	1.00	
TOTALS		**609.8**	**940.7**	**196.4**	**1746.9**	**1001.9**	**1673.6**	**232.9**	**2908.3**	----	----	

TABLE B-2
ARTERIAL STREET LIFE CYCLE PROGRAM - INTELLIGENT TRANSPORTATION SYSTEMS
REGIONAL FUNDING REIMBURSEMENTS: FY 2006-2026
(2016 and Year of Expenditure Dollars in Millions)

Year of Expenditure	CONST	Construction
Fiscal Year	Expend	Expenditures
Dollars	Reimb	Reimbursement(s)

FACILITY/LOCATION	REGIONAL FUNDING				FINAL FY for CONST	LENGTH (Miles)	OTHER PROJECT INFORMATION
	Reimb. through FY16 (YOE$)	Estimated Future Reimb (2016$)		Total Reimb. (2016$, YOE$)			
		FY17-FY26	FY27-FY35				
REGION-WIDE							
Intelligent Transportation System Projects	51.972	13.984	0.000	65.956	2019	N/A	

Appendix C

Transit Life Cycle Program

TABLE C-1
TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: BUS RAPID TRANSIT/EXPRESS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2016 and Year of Expenditure Dollars in Millions)

Map Code	Route	Expenditures: through FY 2016: (YOE Dollars)	Est. Future Costs: FY 2017 - 2026 (2016 Dollars)	Total Est. Costs: FY 2006-2026 (2016 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2016 Dollars)	Total Est. Costs: FY 2006-2035 (2016 and YOE Dollars)	Funding Start (Fiscal Year)	Other Project Information
T1	Ahwatukee Connector	0.00	0.00	0.00	1.27	1.27	2031	
T2	Ahwatukee Express	5.07	0.00	5.07	0.00	5.07	2006	I-10 East RAPID (Phoenix assumed funding in FY 2011)
T3	Anthem Express	0.00	0.00	0.00	3.06	3.06	2031	
T4	Apache Junction Express	0.00	0.00	0.00	4.47	4.47	2027	
T5	Arizona Avenue LINK	6.83	1.28	8.10	0.00	8.10	2011	
T6	Avondale Express	0.00	0.00	0.00	0.00	0.00	2020	Route implemented early as a part of existing Route 563. Costs accounted for in route T19.
T7	Black Canyon Freeway Corridor	0.00	0.00	0.00	2.07	2.07	2031	
T8	Buckeye Express	0.00	0.00	0.00	3.94	3.94	2030	
T9	Chandler Boulevard LINK	0.00	0.00	0.00	8.14	8.14	2032	Designated as illustrative project in FY 2010.
T10	Deer Valley Express	5.51	0.00	5.51	0.00	5.51	2006	I-17 RAPID (Phoenix assumed funding in FY 2011)
T11	Desert Sky Express	1.98	0.00	1.98	0.00	1.98	2006	I-10 West RAPID (Phoenix assumed funding in FY 2011)
T12	East Loop 101 Connector	2.06	0.00	2.06	0.00	2.06	2009	Route 511 - Chandler/Scottsdale Airpark Express (route eliminated in FY2015)
T13	Grand Avenue Limited	2.02	1.28	3.30	1.24	4.54	2006	
T14	Loop 303 Express	0.00	0.00	0.00	3.66	3.66	2031	
T15	Main Street LINK	13.20	0.00	13.20	0.00	13.20	2009	
T16	North Glendale Express	5.87	4.28	10.15	4.25	14.40	2008	Route 573 - Northwest Valley
T17	North I-17 Express	0.00	0.00	0.00	3.30	3.30	2031	
T18	North Loop 101 Connector	2.94	0.00	2.94	0.00	2.94	2008	Route 572 - Surprise/Scottsdale Express (route eliminated in FY 2011)
T19	Papago Fwy Connector	2.62	5.21	7.83	5.17	13.00	2009	Routes 562 - Goodyear Express and Route 563 - Buckeye Express
T20	Peoria Express	0.00	0.00	0.00	3.45	3.45	2031	
T21	Pima Express	0.00	0.00	0.00	3.28	3.28	2030	
T22	Red Mountain Express	3.04	4.48	7.52	4.43	11.95	2009	Routes 535 & 536 - Northeast Mesa Express (route 536 eliminated in FY 2011)
T23	Red Mountain Fwy Connector	0.00	0.00	0.00	2.82	2.82	2032	
T24	Santan Express	0.00	0.00	0.00	8.02	8.02	2032	
T25	Scottsdale/Rural LINK	0.00	0.00	0.00	0.00	0.00	2035	Limited implementation (Rural/Apache LRT station to Scottsdale/Thunderbird park and ride)

Map Code	Route	Expenditures: through FY 2016: (YOE Dollars)	Est. Future Costs: FY 2017 - 2026 (2016 Dollars)	Total Est. Costs: FY 2006-2026 (2016 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2016 Dollars)	Total Est. Costs: FY 2006-2035 (2016 and YOE Dollars)	Funding Start (Fiscal Year)	Other Project Information
T26	South Central Avenue	0.00	0.00	0.00	0.00	0.00	2013	Advanced 2 years, funded by the City of Phoenix
T27	South Central Avenue LINK	0.00	0.00	0.00	5.41	5.41	2031	
T28	SR 51 Express	4.12	0.00	4.12	0.00	4.12	2006	SR-51 RAPID (Phoenix assumed funding in FY 2011)
T29	Superstition Fwy Connector	0.00	0.00	0.00	1.33	1.33	2028	
T30	Superstition Springs Express	0.00	0.00	0.00	4.28	4.28	2032	
T31	West Loop 101 Connector	3.35	2.67	6.02	2.58	8.60	2009	Routes 575 & 576 - Northwest Valley Express (route 576 eliminated in FY 2011)
	TOTAL	**58.62**	**19.19**	**77.81**	**76.17**	**153.98**		

TABLE C-2
TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: REGIONAL GRID
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2016 and Year of Expenditure Dollars in Millions)

Map Code	Route	Expenditures: through FY 2016: (YOE Dollars)	Est. Future Costs: FY 2017 - 2026 (2016 Dollars)	Total Est. Costs: FY 2006-2026 (2016 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2016 Dollars)	Total Est. Costs: FY 2006-2035 (2016 and YOE Dollars)	Funding Start (Fiscal Year)	Sched. Imprv. (Fiscal Year)	Other Project Information
T40	59th Avenue	9.37	11.04	20.41	10.95	31.36	2006		Route 59 - 59th Avenue
T41	83rd Avenue/75th Avenue	0.00	2.01	2.01	12.11	14.12	2030		
T42	99th Avenue	0.00	0.00	0.00	10.51	10.51	2032		
T43	Alma School Rd.	3.77	11.84	15.61	12.69	28.30	2006	2018	Route 104 - Alma School Road
T44	Arizona Avenue/Country Club	10.03	25.11	35.14	29.58	64.72	2006	2012	Route 112 - Country Club Drive/Arizona Avenue
T45	Baseline Rd	4.64	9.43	14.07	9.94	24.02	2013		Route 77 - Baseline Road
	Dobson Rd	16.25	18.23	34.48	18.31	52.79	2009		Route 96 - Dobson Road
	Southern Ave	25.58	36.50	62.08	36.68	98.75	2006	2009	Route 61 - Southern Avenue
T46	Bell Road	0.00	5.27	5.27	8.80	14.07	2022		Route 170 - Bell Road
T47	Broadway	3.26	16.23	19.49	23.44	42.93	2011		Route 45 - Broadway Road
T48	Buckeye Road	0.00	0.00	0.00	1.22	1.22	2035		
T49	Camelback Road	1.43	1.84	3.27	1.90	5.17	2006	2019	Route 50 - Camelback Road
T50	Chandler Blvd.	27.38	31.03	58.41	32.97	91.38	2008		Route 156 - Chandler Boulevard
T51	Dunlap/Olive Avenue	0.00	0.00	0.00	6.55	6.55	2031		
T52	Dysart Road	0.00	0.00	0.00	2.76	2.76	2030		
T53	Elliot Road	6.29	18.31	24.61	18.38	42.99	2011	2014	Route 108 - Elliot Road
T54	Gilbert Road	9.77	22.95	32.71	25.06	57.77	2010		Route 136 - Gilbert Road
T55	Glendale Avenue	21.01	18.86	39.87	18.77	58.64	2006	2008	Route 70 - Glendale Avenue
T56	Greenfield Road	0.00	0.00	0.00	9.99	9.99	2030		
T57	Hayden/McClintock	12.40	45.00	57.40	45.24	102.64	2006	2021	Route 81 - Hayden Road/McClintock Drive
T58	Indian School Road	0.00	2.83	2.83	5.92	8.75	2032		
T59	Litchfield Road	0.00	0.00	0.00	4.20	4.20	2035		Designated as illustrative project in FY 2010.
T60	Main Street	16.23	30.95	47.19	31.09	78.27	2009		Route 40 - Apache/Main Street
T61	McDowell/McKellips	5.13	17.69	22.81	17.59	40.40	2013		Route 17 - McDowell Road
T62	Peoria Ave./Shea	14.13	12.58	26.71	12.51	39.22	2006		Route 106 - Peoria Road/Shea Boulevard
T63	Power Road	9.66	20.01	29.67	20.08	49.75	2011		Route 184 - Power Road
T64	Queen Creek Road	0.00	0.00	0.00	1.04	1.04	2035		
T65	Ray Road	0.00	0.00	0.00	11.81	11.81	2031		
T66	Scottsdale/Rural	62.21	66.90	129.11	67.16	196.27	2006	2007	Route 72 - Scottsdale/Rural Road
T67	Tatum / 44th Street	0.00	0.00	0.00	0.55	0.55	2030		

Map Code	Route	Expenditures: through FY 2016: (YOE Dollars)	Est. Future Costs: FY 2017 - 2026 (2016 Dollars)	Total Est. Costs: FY 2006-2026 (2016 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2016 Dollars)	Total Est. Costs: FY 2006-2035 (2016 and YOE Dollars)	Funding Start (Fiscal Year)	Sched. Imprv. (Fiscal Year)	Other Project Information
T68	Thomas Road	2.20	8.67	10.86	8.63	19.49	2014	2031	Route 29 - Thomas Road
T69	University Drive	1.04	16.70	17.75	27.08	44.82	2020		Route 30 - University Drive
T70	Van Buren	2.99	9.83	12.82	9.77	22.59	2013		Route 3 - Van Buren Street
T71	Waddell/Thunderbird	1.96	9.60	11.56	10.16	21.72	2015		Route 138 - Thunderbird Road
	TOTAL	**266.73**	**469.41**	**736.14**	**563.42**	**1,299.55**			

TABLE C-3
TRANSIT LIFE CYCLE PROGRAM - BUS OPERATIONS: OTHERS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2016 and Year of Expenditure Dollars in Millions)

Route	Expenditures: through FY 2016: (YOE Dollars)	Est. Future Costs: FY 2017-2026 (2016 Dollars)	Total Est. Costs: FY 2006-2026 (2016 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2016 Dollars)	Total Est. Costs: FY 2006-2035 (2016 and YOE Dollars)	Service Start (Fiscal Year)	Other Project Information
ADA Paratransit	167.56	287.83	455.39	305.55	760.94	2006	
Regional Passenger Support Services	73.68	75.53	149.21	72.93	222.14	2006	
Existing Local Service	8.02	6.20	14.22	6.23	20.45	2006	
Existing Express Service	36.33	26.17	62.51	26.19	88.69	2006	
Rural/Non-Fixed Route Service	4.03	3.65	7.68	3.69	11.37	2006	
Vanpool Service	0.00	0.00	0.00	0.00	0.00	2006	Vanpool operations are funded entirely through fares
Safety and Security Costs	5.11	8.00	13.11	5.01	18.12	2006	
RPTA Planning and Administration	41.61	39.94	81.55	38.58	120.13	2006	Primarily funded through RPTA's allocation from Regional Area Road Fund
TOTAL	**336.34**	**447.32**	**783.66**	**458.17**	**1,241.84**		

TABLE C-4
TRANSIT LIFE CYCLE PROGRAM - BUS CAPITAL: FACILITES
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2016 and Year of Expenditure Dollars in Millions)

Category	Expenditures: through FY 2016: (YOE Dollars)	Est. Future Costs: FY 2017 - 2026 (2016 Dollars)	Total Est. Costs: FY 2006-2026 (2016 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2016 Dollars)	Total Est. Costs: FY 2006-2035 (2016 and YOE Dollars)	No. of Units Construc./ Installed through FY 2016	Tot. No. of Units to be Construc./ Installed through FY 2026	Tot. No. of Units to be Construc./ Installed through FY 2035	Other Project Information
Arterial BRT Right-of-Way and Improvements	24.04	0.00	24.04	73.11	97.15	25	25	51	
Bus Stop Pullouts/Improvements	4.27	0.00	4.27	0.00	4.27	424	424	424	Major reduction in planned bus stop improvements beginning in FY 2011 due to funding shortfall.
Dial-a-Ride and Rural Bus Maintenance Facilities	0.00	0.00	0.00	12.99	12.99	0	0	1	Rural facility was postponed beyond 2031 and 1 DAR facilities is started
Intelligent Transportation Systems (ITS) / Vehicle Management Systems (VMS)	8.88	23.51	32.39	0.00	32.39				Funding designated for system wide radio communications. Also see note below.
Park & Ride Lots	63.69	9.59	73.28	6.31	79.59	6	11	12	
Standard Bus Maintenance Facilities	106.52	0.00	106.52	92.27	198.79	2	2	3	Additional costs for expansion and rehabilitation in FY2027-2035)
Transit Centers (4 Bay)	1.93	1.52	3.46	13.05	16.50	0	2	7	
Transit Centers (6 Bay)	0.21	2.51	2.72	7.51	10.23	0	1	3	
Transit Centers (Major Activity Centers)	4.86	0.00	4.86	8.97	13.82	1	1	2	
Vanpool Vehicle Maintenance Facilities	0.00	0.00	0.00	0.00	0.00	0	0	0	Project was postponed indefinitely
Contingency	0.00	0.00	0.00	0.00	0.00				
TOTAL	**214.39**	**37.14**	**251.53**	**214.21**	**465.74**				

TABLE C-5
TRANSIT LIFE CYCLE PROGRAM - BUS CAPITAL: FLEET
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2016 and Year of Expenditure Dollars in Millions)

Category	Expenditures: through FY 2016: (YOE Dollars)	Est. Future Costs: FY 2017 - 2026 (2016 Dollars)	Total Est. Costs: FY 2006-2026 (2016 and YOE Dollars)	Est. Future Costs: FY2027 - 2035 (2016 Dollars)	Total Est. Costs: FY 2006-2035 (2016 and YOE Dollars)	No. of Units Acquired through FY 2016	Tot. No. of Units to be Acquired through FY 2026	Tot. No. of Units to be Acquired through FY 2035	Other Project Information
Paratransit	17.05	24.49	41.55	31.13	72.68	244	603	872	
Fixed Route	323.36	465.97	789.32	341.49	1,130.82	650	1,503	1,999	
Rural Route	2.04	2.63	4.68	4.11	8.78	16	23	32	
Vanpool	22.89	34.61	57.50	35.45	92.95	623	1,541	2,231	
TOTAL	**365.34**	**527.70**	**893.05**	**412.18**	**1,305.23**				

TABLE C-6

TRANSIT LIFE CYCLE PROGRAM - LIGHT RAIL TRANSIT/HIGH CAPACITY TRANSIT: SUPPORT INFRASTRUCTURE EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035

(2016 and Year of Expenditure Dollars in Millions)

Facilitiy	Expenditures: through FY 2016 (Year of Expenditure Dollars)				Est. Future Costs: FY 2017-2026 (2016 Dollars)	Tot. Costs: FY 2006-2026 (2016 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2016 Dollars)	Tot. Costs: FY 2006-2035 (2016 and YOE Dollars)	Target Opening Date	Project Length (Center-line Miles)	Other Project Information
	Design	R/W	Construc.	Total							
CPEV Regional Reimbursements	0.00	0.00	272.40	272.40	0.00	272.40	0.00	272.40	12 / 2008	20	Includes final disbursement request
Central Mesa Extension: Main St./Sycamore to Main St./Mesa Dr. *	4.25	0.00	0.00	4.25	0.00	4.25	0.00	4.25	03/2016	3.1	AA Costs
Northwest Extension Phase 1: 19th Ave/Bethany Home to 19th Ave/Dunlop	3.19	0.00	0.00	3.19	0.00	3.19	0.00	3.19	03/2016	3.2	
Tempe Streetcar: Main St./ Rural Rd. to Southern Ave.	6.72	0.00	0.00	6.72	0.00	6.72	0.00	6.72	06/2017	2.6	Project added in FY 2012 to cover AA costs as part of infrasturcture support.
Gilbert Road: Main St./Mesa Dr. to Main St./Gilbert Rd.	0.95	0.00	0.00	0.95	0.00	0.95	0.00	0.95	07/2018	1.9	AA Costs - Project funded by City of Mesa
Capitol/I-10 West Phase I: Washington Ave./Central Ave. to Capitol	9.48	0.00	0.00	9.48	2.51	11.99	0.00	11.99	12/2023	2	AA Costs
Capitol/I-10 West Phase II: Capitol to 79th Ave.	0.00	0.00	0.00	0.00	2.17	2.17	0.00	2.17	12/2030	9	AA Costs
Glendale Link: 19th Ave./Bethany Home to Downtown Glendale	2.74	0.00	0.00	2.74	5.10	7.83	0.00	7.83	10/2026	5	AA Costs

Facilitiy	Expenditures: through FY 2016 (Year of Expenditure Dollars)				Est. Future Costs: FY 2017-2026 (2016 Dollars)	Tot. Costs: FY 2006-2026 (2016 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2016 Dollars)	Tot. Costs: FY 2006-2035 (2016 and YOE Dollars)	Target Opening Date	Project Length (Center-line Miles)	Other Project Information
	Design	R/W	Construc.	Total							
Northwest Extension Phase 2: 19th Ave./Dunlop to Metrocenter	1.44	0.00	0.00	1.44	5.17	6.61	0.00	6.61	12/2023	1.8	AA & Draft EA
South Central: Washington/Jefferson to Baseline Rd.	5.04	0.00	0.00	5.04	3.07	8.10	0.00	8.10	10/2023	5	AA & EA/CE - Project funded by City of Phoenix
Northeast Phoenix Link: Indian School Rd./Central Ave. to Paradise Valley Mall	0.31	0.00	0.00	0.31	8.19	8.50	0.00	8.50	9/2035	12	AA & Draft EA
50th Street LRT Station	0.79			0.79	21.83	22.62	0.00	22.62	5/2019		New project adding a station on CPEV line
Systemwide Support Infrastructure	9.94	0.00	56.75	65.66	97.62	163.28	59.41	222.69	N/A		
System Planning and Capital Project Development	33.17	0.00	0.00	33.17	49.99	83.16	49.61	132.78	N/A		
Utility Reimbursements											Reclassified to be included in each corridor project
TOTAL	**78.02**	**0.00**	**329.15**	**406.14**	**195.65**	**601.79**	**109.02**	**710.81**			

TABLE C-7
TRANSIT LIFE CYCLE PROGRAM - LIGHT RAIL TRANSIT/HIGH CAPACITY TRANSIT: ROUTE EXTENSIONS
EXPENDITURES AND ESTIMATED FUTURE COSTS: FY 2006-2026, FY 2027-2035
(2016 and Year of Expenditure Dollars in Millions)

Map Code	Facilitiy	Expenditures: through FY 2016 (Year of Expenditure Dollars)				Est. Future Costs: FY 2017-2026 (2016 Dollars)	Tot. Costs: FY 2006-2026 (2016 and YOE Dollars)	Est. Future Costs: FY 2027-2035 (2016 Dollars)	Tot. Costs: FY 2006-2035 (2016 and YOE Dollars)	Target Opening Date	Project Length (Center-line Miles)	Other Project Information
		Design	R/W	Construc.	Total							
T85	Central Mesa Extension: Main St./Sycamore to Main St./Mesa Dr. *	7.91	17.89	156.41	182.21	8.30	190.51	0.00	190.51	11/2015	3.1	
T82	Northwest Extension Phase 1: 19th Ave/Bethany Home to 19th Ave/Dunlop	18.72	75.15	232.15	326.02	3.49	329.51	0.00	329.51	07/2016	3.2	
T84	Tempe Streetcar: Main St./ Rural Rd. to Southern Ave.	1.20	0.00	0.00	1.20	163.35	164.54	0.00	164.54	08/2018	2.6	Permission to enter Project Development in 2013
T86	Gilbert Road: Main St./Mesa Dr. to Main St./Gilbert Rd.	13.04	0.01	0.10	13.15	128.41	141.56	0.00	141.56	10/2018	1.9	Project is funded by City of Mesa
T81	Capitol/I-10 West Phase I: Washington Ave./Central Ave. to Capitol	0.00	0.00	0.00	0.00	153.03	153.03	0.00	153.03	12/2023	2.0	
	Capitol/I-10 West Phase II: Capitol to 79th Ave.	0.00	0.00	0.00	0.00	125.80	125.80	721.39	847.19	12/2030	9.0	
T80	Glendale Link: 19th Ave./Bethany Home to Downtown Glendale	0.00	0.00	0.00	0.00	399.11	399.11	0.00	399.11	10/2026	5.0	
T82B	Northwest Extension Phase 2: 19th Ave./Dunlop to Metrocenter	0.00	0.00	0.00	0.00	232.49	232.49	0.00	232.49	12/2023	1.6	
	South Central: Washington/Jefferson to Baseline Rd.	0.00	0.00	0.00	0.00	585.49	585.49	0.00	585.49	10/2023	5.0	Project is funded by City of Phoenix
T83	Northeast Phoenix Link: Indian School Rd./Central Ave. to Paradise Valley Mall	0.00	0.00	0.00	0.00	9.29	9.29	989.68	998.98	9/2035	12.0	Project begins in FY 33
	TOTAL	**40.87**	**93.05**	**388.67**	**522.58**	**1,808.75**	**2,331.33**	**1,711.08**	**4,042.40**			

TABLE C-8
TRANSIT LIFE CYCLE PROGRAM - BUS RAPID TRANSIT/EXPRESS
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 - FY 2016

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings: through FY 2016 (Thousands)	Farebox Revenues: through FY 2016 (YOE Dollars)	Annual Average Boardings: through FY 2016 (Thousands)	Annual Average Farebox Revenues: through FY 2016 (YOE Dollars)	Other Project Information
T1	Ahwatukee Connector	2031	14.7	30.0					
T2	Ahwatukee Express	2006	20.8	160.3	654.0	1,401,377	130.8	280,300	
T3	Anthem Express	2031	30.4	77.4					
T4	Apache Junction Express	2027	37.4	76.4					
T5	Arizona Avenue Arterial BRT	2011	12.0	221.2	1,731.7	1,662,095	288.6	277,000	
T6	Avondale Express	2020	19.0	77.6					
T7	Black Canyon Freeway Corridor	2031	16.6	67.7					
T8	Buckeye Express	2030	43.7	66.9					
T9	Chandler Boulevard Arterial BRT	2032	18.5	226.6					
T10	Deer Valley Express	2006	13.6	188.2	900.2	1,429,493	180.0	285,900	
T11	Desert Sky Express	2006	22.6	89.1	520.4	724,549	104.1	144,900	
T12	East Loop 101 Connector	2009	44.6	45.9	37.3	160,578	4.7	20,100	
T13	Grand Avenue Limited	2006	25.9	17.5	135.2	256,167	12.3	23,300	
T14	Loop 303 Express	2031	38.1	77.8					
T15	Main Street Arterial BRT	2009	13.0	295.2	2,434.6	2,185,432	304.3	273,200	
T16	North Glendale Express	2008	29.6	61.1	399.0	823,208	44.3	91,500	
T17	North I-17 Express	2031	34.4	87.6					
T18	North Loop 101 Connector (Surprise to Scottsdale)	2008	31.6	105.3	57.5	77,989	19.2	26,000	
T19	Papago Fwy Connector	2009	30.0	53.4	443.4	701,876	55.4	87,700	
T20	Peoria Express	2031	24.1	73.6					
T21	Pima Express	2030	35.4	72.2					
T22	Red Mountain Express	2009	32.8	69.0	450.3	669,594	56.3	83,700	
T23	Red Mountain Fwy Connector	2032	19.2	78.5					

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings: through FY 2016 (Thousands)	Farebox Revenues: through FY 2016 (YOE Dollars)	Annual Average Boardings: through FY 2016 (Thousands)	Annual Average Farebox Revenues: through FY 2016 (YOE Dollars)	Other Project Information
T24	Santan Express	2032	44.9	228.9					
T25	Scottsdale/Rural Arterial BRT	2035	13.2	282.8					
T26	South Central Avenue	2013	9.4	29.2					
T27	South Central Avenue Arterial BRT	2031	11.4	120.9					
T28	SR 51 Express	2006	22.3	128.3	541.6	1,047,606	108.3	209,500	
T29	Superstition Fwy Connector	2028	17.5	26.8					
T30	Superstition Springs Express	2032	31.9	162.5					
T31	West Loop 101 Connector	2009	31.4	39.5	320.7	446,077	40.1	55,800	
	TOTAL				**8,625.9**	**11,586,041**	**1,348.4**	**1,858,900**	

TABLE C-9
TRANSIT LIFE CYCLE PROGRAM - REGIONAL GRID
ROUTE CHARACTERISTICS AND USAGE SUMMARY: FY 2006 - FY 2016

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings: through FY 2016 (Thousands)	Farebox Revenues: through FY 2016 (YOE Dollars)	Annual Average Boardings: through FY 2016 (Thousands)	Annual Average Farebox Revenues: through FY 2016 (YOE Dollars)	Other Project Information
T40	59th Avenue	2006	16.2	161.0	3,692.2	2,916,286	335.7	265,100	
T41	83rd Avenue/75th Avenue	2030	21.4	542.4					
T42	99th Avenue	2032	16.5	401.3					
T43	Alma School Rd.	2006	19.1	75.0	902.4	641,203	82.0	58,300	
T44	Arizona Avenue/Country Club	2006	16.3	191.4	2,647.4	3,519,375	240.7	319,900	
T45	Baseline Road	2013	19.6	162.4	1,383.5	1,896,109	345.9	474,000	
T45	Dobson Road	2009	15.7	295.7	5,126.9	4,220,389	640.9	527,500	
T45	Southern Avenue	2006	28.1	568.8	10,732.6	8,457,510	975.7	768,900	
T46	Bell Road (via 303)	2022	38.1	1,138.5					
T47	Broadway	2011	27.8	93.3	1,036.7	844,640	172.8	140,800	
T48	Buckeye Road (Litchfield Road to Central Ave.)	2035	22.7	586.5					
T49	Camelback Road	2006	28.5	17.1	389.5	307,349	35.4	27,900	
T50	Chandler Blvd.	2008	32.7	471.5	3,226.0	3,850,420	358.4	427,800	
T51	Dunlap/Olive Avenue	2031	14.3	411.7					
T52	Dysart Road	2030	21.0	311.9					
T53	Elliot Road	2011	21.9	109.1	675.4	569,121	112.6	94,900	
T54	Gilbert Road	2010	20.9	232.6	1,680.9	1,545,190	240.1	220,700	
T55	Glendale Avenue	2006	32.7	240.3	9,725.7	4,598,899	884.2	418,100	
T56	Greenfield Road	2030	15.2	369.3					
T57	Hayden/McClintock	2006	29.7	235.9	2,838.1	2,177,095	258.0	197,900	
T58	Indian School Road	2032	30.4	879.1					
T59	Litchfield Road	2035	21.5	523.8					
T60	Main Street	2009	17.3	343.5	4,817.6	4,033,714	602.2	504,200	
T61	McDowell/McKellips	2013	41.8	114.7	1,463.7	784,961	365.9	196,200	
T62	Peoria Ave./Shea	2006	43.0	249.4	3,109.9	2,699,848	282.7	245,400	
T63	Power Road	2011	14.2	275.6	778.9	752,928	129.8	125,500	

Map Code	Route	Service Start (Fiscal Year)	Route Length (Miles)	Annual Bus-Miles of Service (Thousands)	Total Boardings: through FY 2016 (Thousands)	Farebox Revenues: through FY 2016 (YOE Dollars)	Annual Average Boardings: through FY 2016 (Thousands)	Annual Average Farebox Revenues: through FY 2016 (YOE Dollars)	Other Project Information
T64	Queen Creek Road (Pecos P&R to Power Road)	2035	12.0	293.4					
T65	Ray Road	2031	18.4	447.9					
T66	Scottsdale/Rural	2006	28.9	915.4	14,463.9	16,582,489	1,314.9	1,507,500	
T67	Tatum / 44th Street	2030	22.8	682.2					
T68	Thomas Road	2014	26.7	770.5	1,044.4	489,116	348.1	163,000	
T69	University Drive (to Ellsworth Road)	2020	27.8	802.2		250,400			
T70	Van Buren	2013	23.4	76.9	932.6	467,448	233.2	116,900	
T71	Waddell/Thunderbird	2015	27.9	692.4	253.4	131,868	126.7	65,900	
	TOTAL				**70,921.7**	**61,736,358**	**8,085.9**	**6,866,400**	

Appendix D

Performance Monitoring and Assessment

TABLE D-1
TRAVEL TIME INDEX FOR SELECTED FREEWAY CORRIDORS (GENERAL PURPOSE LANES)

Freeway	Direction	From	To	AM Peak Period TTI			PM Peak Period TTI		
				2013	2014	% change	2013	2014	% change
I-10	EB	AZ 85	Loop 303	1.067	1.053	-1.27%	1.032	1.013	-1.89%
	WB	Loop 303	AZ 85	1.031	1.034	0.33%	1.025	1.033	0.84%
I-10	EB	Loop 303	Loop 101 Agua Fria	1.063	1.094	2.95%	1.025	1.029	0.36%
	WB	Loop 101 Agua Fria	Loop 303	1.043	1.040	-0.28%	1.040	1.047	0.74%
I-10	EB	Loop 101 Agua Fria	I-17	1.774	1.855	4.59%	1.065	1.041	-2.31%
	WB	I-17	Loop 101 Agua Fria	1.050	1.043	-0.61%	1.333	1.385	3.93%
I-10	EB	I-17	SR 51	1.339	1.440	7.56%	1.309	1.315	0.40%
	WB	SR 51	I-17	1.067	1.084	1.62%	2.506	2.359	-5.86%
I-10	EB	SR 51	US 60	1.096	1.100	0.38%	1.600	1.588	-0.76%
	WB	US 60	SR 51	1.168	1.216	4.10%	1.205	1.217	0.95%
I-10	EB	US 60	Loop 202 Santan	1.052	1.051	-0.05%	1.220	1.232	0.95%
	WB	Loop 202 Santan	US 60	1.507	1.594	5.76%	1.110	1.089	-1.88%
I-17	NB	I-10 Maricopa	I-10 Papago	1.072	1.077	0.40%	1.409	1.424	1.08%
	SB	I-10 Papago	I-10 Maricopa	1.335	1.379	3.34%	1.092	1.106	1.31%
I-17	NB	I-10 Papago	Peoria Ave	1.074	1.087	1.19%	1.441	1.429	-0.83%
	SB	Peoria Ave	I-10 Papago	1.400	1.523	8.77%	1.114	1.113	-0.09%
I-17	NB	Peoria Ave	Loop 101 Agua Fria	1.075	1.087	1.08%	1.134	1.151	1.46%
	SB	Loop 101 Agua Fria	Peoria Ave	1.272	1.272	0.00%	1.077	1.090	1.20%
I-17	NB	Loop 101 Agua Fria	Loop 303	1.047	1.037	-1.02%	1.037	1.035	-0.16%
	SB	Loop 303	Loop 101 Agua Fria	1.039	1.036	-0.33%	1.027	1.015	-1.20%
US 60	EB	I-10	Loop 101 Price	1.061	1.053	-0.74%	1.203	1.205	0.18%
	WB	Loop 101 Price	I-10	1.354	1.456	7.53%	1.084	1.074	-0.95%
US 60	EB	Loop 101 Price	Val Vista Dr	1.062	1.055	-0.63%	1.158	1.174	1.35%
	WB	Val Vista Dr	Loop 101 Price	1.289	1.320	2.41%	1.062	1.055	-0.62%
US 60	EB	Val Vista Dr	Loop 202 Santan	1.061	1.048	-1.19%	1.043	1.044	0.06%
	WB	Loop 202 Santan	Val Vista Dr	1.041	1.049	0.71%	1.039	1.035	-0.38%
US 60	EB	Loop 202 Santan	Goldfield Rd	1.058	1.049	-0.87%	1.073	1.072	-0.11%
	WB	Goldfield Rd	Loop 202 Santan	1.049	1.042	-0.67%	1.040	1.032	-0.80%
SR 51	NB	I-10	Glendale Ave	1.098	1.108	0.92%	1.335	1.317	-1.28%
	SB	Glendale Ave	I-10	1.326	1.406	6.03%	1.161	1.197	3.15%
SR 51	NB	Glendale Ave	Loop 101 Pima	1.084	1.075	-0.79%	1.096	1.099	0.29%
	SB	Loop 101 Pima	Glendale Ave	1.165	1.185	1.77%	1.058	1.052	-0.57%

TABLE D-1 (continued)
TRAVEL TIME INDEX FOR SELECTED FREEWAY CORRIDORS (GENERAL PURPOSE LANES)

Freeway	Direction	From	To	AM Peak Period TTI			PM Peak Period TTI		
				2013	2014	% change	2013	2014	% change
SR 143	NB	I-10	McDowell Rd	1.085	1.070	-1.40%	1.072	1.059	-1.23%
	SB	McDowell Rd	I-10	1.083	1.062	-1.95%	1.206	1.213	0.60%
Loop 101 Agua Fria	NB	I-10	Union Hills Dr	1.076	1.067	-0.91%	1.067	1.056	-0.99%
	SB	Union Hills Dr	I-10	1.067	1.055	-1.15%	1.067	1.067	0.03%
Loop 101 Agua Fria	NB/EB	Union Hills Dr	I-17	1.188	1.224	3.02%	1.042	1.028	-1.26%
	WB/SB	I-17	Union Hills Dr	1.048	1.047	-0.13%	1.130	1.152	1.96%
Loop 101 Price	NB	Loop 202 Santan	US 60	1.324	1.343	1.41%	1.099	1.093	-0.56%
	SB	US 60	Loop 202 Santan	1.100	1.087	-1.19%	1.221	1.235	1.12%
Loop 101 Price	NB	US 60	Loop 202 Red Mountain	1.312	1.310	-0.17%	1.077	1.082	0.46%
	SB	Loop 202 Red Mountain	US 60	1.085	1.073	-1.06%	1.724	1.668	-3.30%
Loop 101 Pima	NB	Loop 202 Red Mountain	Pima Rd / 90th St	1.289	1.374	6.61%	1.152	1.140	-0.99%
	SB	Pima Rd / 90th St	Loop 202 Red Mountain	1.086	1.097	1.07%	1.437	1.440	0.26%
Loop 101 Pima	NB	Pima Rd / 90th St	Pima Rd / Princess Dr	1.072	1.072	0.02%	1.099	1.099	0.03%
	SB	Pima Rd / Princess Dr	Pima Rd / 90th St	1.089	1.099	0.96%	1.119	1.118	-0.13%
Loop 101 Pima	NB/WB	Pima Rd / 90th St	SR 51	1.050	1.046	-0.37%	1.222	1.265	3.48%
	EB/SB	SR 51	Pima Rd / 90th St	1.199	1.249	4.12%	1.041	1.044	0.30%
Loop 101 Pima	WB	SR 51	I-17	1.062	1.066	0.37%	1.374	1.480	7.71%
	EB	I-17	SR 51	1.479	1.537	3.91%	1.065	1.063	-0.15%
Loop 202 Red Mountain	EB	I-10	Washington St	1.081	1.073	-0.72%	1.081	1.084	0.35%
	WB	Washington St	I-10	1.230	1.282	4.19%	1.328	1.289	-2.99%
Loop 202 Red Mountain	EB	Washington St	Loop 101 Price	1.068	1.046	-2.08%	1.186	1.205	1.62%
	WB	Loop 101 Price	Washington St	1.263	1.312	3.94%	1.049	1.043	-0.53%
Loop 202 Red Mountain	EB	Loop 101 Price	McDowell Rd	1.097	1.073	-2.14%	1.084	1.093	0.80%
	WB	McDowell Rd	Loop 101 Price	1.118	1.132	1.27%	1.056	1.047	-0.81%
Loop 202 Red Mountain	EB/SB	McDowell Rd	US 60	1.113	1.079	-3.13%	1.020	0.996	-2.31%
	NB/WB	US 60	McDowell Rd	1.041	1.035	-0.57%	1.039	1.027	-1.10%
Loop 202 Santan	EB	I-10	Loop 101 Price	1.078	1.053	-2.30%	1.047	1.030	-1.59%
	WB	Loop 101 Price	I-10	1.057	1.060	0.28%	1.047	1.044	-0.27%
Loop 202 Santan	EB	Loop 101 Price	Lindsay Rd	1.087	1.065	-2.01%	1.188	1.204	1.42%
	WB	Lindsay Rd	Loop 101 Price	1.187	1.212	2.13%	1.053	1.047	-0.56%
Loop 202 Santan	EB/NB	Lindsay Rd	US 60	1.087	1.053	-3.12%	1.037	1.037	0.04%
	SB/WB	US 60	Lindsay Rd	1.070	1.052	-1.61%	1.028	1.021	-0.66%

TABLE D-2
AVERAGE AM PEAK PERIOD SPEED FOR SELECTED FREEWAY CORRIDORS

Freeway Corridor	Dir	From	To	Average AM Peak Period Speed (mph)							
				General-purpose Lanes				HOV Lanes			
				2013	2014	2015	% Change 2014 to 2015	2013	2014	2015	% Change 2014 to 2015
I-10 Papago	EB	83rd Ave	I-17	46.9	47.8	40.3	-15.7%	52.2	52.3	46.4	-11.3%
	WB	I-17	83rd Ave	67.2	66.1	65.6	-0.8%	68.2	68.0	67.3	-1.0%
I-10 Papago	EB	I-17	SR 51/Loop 202	52.1	55.2	45.7	-17.2%	62.3	63.8	62.4	-2.3%
	WB	SR 51/Loop 202	I-17	63.1	63.8	63.7	-0.2%	70.7	71.3	70.6	-0.9%
I-10 Maricopa	EB	SR 51/Loop 202	US 60	62.0	62.4	60.9	-2.4%	68.3	68.3	67.8	-0.8%
	WB	US 60	SR 51/Loop 202	57.9	58.4	56.5	-3.3%	63.8	64.7	62.7	-3.0%
I-10 Maricopa	EB	US 60	Chandler Blvd	65.1	65.7	65.0	-1.1%	71.9	72.9	72.6	-0.4%
	WB	Chandler Blvd	US 60	43.8	47.9	39.7	-17.2%	60.1	63.3	57.6	-8.9%
I-17	NB	Maricopa TI	I-10	61.4	62.5	61.8	-1.0%	n/a	n/a	n/a	n/a
	SB	I-10	Maricopa TI	49.5	49.7	44.5	-10.4%	n/a	n/a	n/a	n/a
I-17	NB	I-10	Peoria Ave	58.7	58.4	58.0	-0.8%	59.7	59.4	59.2	-0.3%
	SB	Peoria Ave	I-10	50.9	50.2	46.1	-8.2%	53.4	54.8	51.0	-7.0%
I-17	NB	Peoria Ave	Loop 101	not available	63.7	63.0	-1.0%	not available	74.1	72.9	-1.6%
	SB	Loop 101	Peoria Ave	not available	56.6	54.8	-3.0%	not available	68.7	67.5	-1.7%
SR 51	NB	I-10/Loop 202	Glendale Ave	62.7	62.3	61.3	-1.6%	63.1	63.6	62.9	-1.1%
	SB	Glendale Ave	I-10/Loop 202	55.1	55.3	not available	not available	54.9	61.2	not available	not available
SR 51	NB	Glendale Ave	Loop 101	66.7	67.1	67.5	0.5%	71.9	73.7	74.1	0.5%
	SB	Loop 101	Glendale Ave	61.4	63.8	62.1	-2.7%	66.9	70.3	69.1	-1.7%
Loop 202 Red Mountain	EB	I-10/SR 51	Loop 101	66.9	66.7	66.2	-0.7%	71.2	72.9	71.8	-1.5%
	WB	Loop 101	I-10/SR 51	57.1	58.4	53.9	-7.7%	64.4	65.7	62.9	-4.3%
Loop 202 Red Mountain	EB	Loop 101	Gilbert Rd	not available	67.4	not available	not available	not available	not available	not available	not available
	WB	Gilbert Rd	Loop 101	not available	66.3	not available	not available	not available	not available	not available	not available
US 60	EB	I-10	Loop 101	63.4	64.7	64.5	-0.3%	66.9	69.3	69.3	0.0%
	WB	Loop 101	I-10	51.4	52.1	44.0	-15.5%	not available	not available	not available	not available
US 60	EB	Loop 101	Val Vista Dr	64.9	65.2	64.4	-1.2%	67.6	67.8	68.8	1.5%
	WB	Val Vista Dr	Loop 101	60.7	60.2	58.2	-3.4%	69.6	69.4	69.3	-0.2%
US 60	EB	Val Vista Dr	Loop 202	67.4	67.5	67.6	0.2%	70.0	70.8	72.9	3.0%
	WB	Loop 202	Val Vista Dr	69.7	69.6	69.2	-0.5%	71.6	73.9	73.4	-0.8%
SR 143	NB	I-10	Loop 202/McDowell Rd	not available	55.5	56.1	1.2%	n/a	n/a	n/a	n/a
	SB	Loop 202/McDowell Rd	I-10	not available	61.6	61.2	-0.6%	n/a	n/a	n/a	n/a
Loop 101 Price	NB	Loop 202 Santan	US 60	54.3	57.7	51.8	-10.2%	66.6	68.6	65.6	-4.4%
	SB	US 60	Loop 202 Santan	67.3	67.7	66.2	-2.1%	74.9	75.6	74.8	-1.1%
Loop 101 Price	NB	US 60	Loop 202 Red Mountain	57.1	60.2	55.2	-8.4%	70.4	73.0	71.5	-2.1%
	SB	Loop 202 Red Mountain	US 60	68.0	62.1	68.0	9.5%	75.5	75.9	76.0	0.2%
Loop 101 Pima	NB	Loop 202 Red Mountain	90th St	52.8	not available	not available	not available	64.6	not available	not available	not available
	SB	90th St	Loop 202 Red Mountain	65.4	not available	not available	not available	72.2	not available	not available	not available
Loop 101 Pima	NB	90th St	Pima Rd	66.4	not available	not available	not available	70.7	not available	not available	not available
	SB	Pima Rd	90th St	66.9	not available	not available	not available	73.0	not available	not available	not available
Loop 101 Pima	EB	SR 51	Pima Rd	59.9	61.4	58.3	-5.0%	63.4	70.8	69.0	-2.6%
	WB	Pima Rd	SR 51	70.2	70.8	70.9	0.1%	74.5	75.4	75.5	0.1%
Loop 101 Pima	EB	I-17	SR 51	49.9	52.2	46.1	-11.7%	not available	not available	not available	not available
	WB	SR 51	I-17	69.4	69.6	69.3	-0.4%	not available	not available	not available	not available
Loop 101 Agua Fria	EB	Union Hills Dr	I-17	not available	not available	58.0	not available	not available	not available	69.0	not available
	WB	I-17	Union Hills Dr	not available	not available	70.7	not available	not available	not available	76.8	not available
Loop 101 Agua Fria	NB	Northern Ave	Union Hills Dr	not available	not available	64.2	not available	not available	not available	not available	not available
	SB	Union Hills Dr	Northern Ave	not available	not available	66.2	not available	not available	not available	not available	not available
Loop 101 Agua Fria	NB	I-10	Northern Ave	not available	not available	66.3	not available	not available	not available	75.7	not available
	SB	Northern Ave	I-10	not available	not available	65.9	not available	not available	not available	not available	not available

Source: ADOT FMS

n/a = not applicable

TABLE D-3
AVERAGE PM PEAK PERIOD SPEED FOR SELECTED FREEWAY CORRIDORS

Freeway Corridor	Dir	From	To	Average PM Peak Period Speed (mph)							
				General-purpose Lanes				HOV Lanes			
				2013	2014	2015	% Change 2014 to 2015	2013	2014	2015	% Change 2014 to 2015
I-10 Papago	EB	83rd Ave	I-17	66.4	66.5	65.7	-1.2%	67.6	67.7	67.7	0.1%
	WB	I-17	83rd Ave	57.3	57.7	52.6	-8.8%	61.0	61.2	56.8	-7.2%
I-10 Papago	EB	I-17	SR 51/Loop 202	56.0	54.0	49.6	-8.1%	63.3	62.2	60.0	-3.4%
	WB	SR 51/Loop 202	I-17	36.9	40.1	30.3	-24.5%	43.8	46.6	36.0	-22.8%
I-10 Maricopa	EB	SR 51/Loop 202	US 60	46.7	48.3	40.7	-15.6%	54.3	54.6	47.4	-13.3%
	WB	US 60	SR 51/Loop 202	58.0	57.6	54.6	-5.2%	64.3	63.8	62.1	-2.6%
I-10 Maricopa	EB	US 60	Chandler Blvd	55.2	57.9	54.9	-5.0%	65.9	67.3	65.0	-3.4%
	WB	Chandler Blvd	US 60	61.4	61.9	60.4	-2.3%	68.0	70.1	69.9	-0.4%
I-17	NB	Maricopa TI	I-10	48.3	47.9	40.8	-14.9%	n/a	n/a	n/a	n/a
	SB	I-10	Maricopa TI	60.6	59.7	57.7	-3.4%	n/a	n/a	n/a	n/a
I-17	NB	I-10	Peoria Ave	45.3	47.4	44.6	-6.0%	50.4	51.3	49.5	-3.4%
	SB	Peoria Ave	I-10	60.5	59.5	58.4	-1.9%	59.7	61.0	59.8	-1.9%
I-17	NB	Peoria Ave	Loop 101	not available	59.9	59.1	-1.4%	not available	70.1	68.7	-2.1%
	SB	Loop 101	Peoria Ave	not available	62.7	60.9	-2.8%	not available	73.1	71.7	-1.9%
SR 51	NB	I-10/Loop 202	Glendale Ave	53.9	55.2	50.3	-8.8%	59.6	60.3	57.7	-4.3%
	SB	Glendale Ave	I-10/Loop 202	61.2	59.1	not available	not available	57.8	63.2	not available	not available
SR 51	NB	Glendale Ave	Loop 101	64.3	65.3	63.4	-2.8%	70.0	71.9	70.3	-2.2%
	SB	Loop 101	Glendale Ave	67.6	68.4	68.0	-0.6%	70.3	73.4	73.1	-0.4%
Loop 202 Red Mountain	EB	I-10/SR 51	Loop 101	62.1	61.3	58.1	-5.3%	69.1	70.1	66.3	-5.4%
	WB	Loop 101	I-10/SR 51	60.2	60.7	59.1	-2.7%	67.4	68.0	69.2	1.7%
Loop 202 Red Mountain	EB	Loop 101	Gilbert Rd	not available	65.4	not available	not available	not available	not available	not available	not available
	WB	Gilbert Rd	Loop 101	not available	68.8	not available	not available	not available	not available	not available	not available
US 60	EB	I-10	Loop 101	59.3	60.8	57.3	-5.7%	65.6	67.7	65.7	-3.0%
	WB	Loop 101	I-10	65.1	65.0	64.0	-1.6%	not available	not available	not available	not available
US 60	EB	Loop 101	Val Vista Dr	62.5	63.4	59.1	-6.8%	68.9	68.7	67.6	-1.5%
	WB	Val Vista Dr	Loop 101	66.2	66.8	66.5	-0.5%	68.2	70.2	70.8	0.8%
US 60	EB	Val Vista Dr	Loop 202	67.8	68.1	67.7	-0.6%	70.6	70.8	72.2	2.0%
	WB	Loop 202	Val Vista Dr	69.5	69.9	69.5	-0.5%	70.5	72.5	73.3	1.1%
SR 143	NB	I-10	Loop 202/McDowell Rd	not available	55.0	55.3	0.6%	n/a	n/a	n/a	n/a
	SB	Loop 202/McDowell Rd	I-10	not available	56.2	55.7	-0.9%	n/a	n/a	n/a	n/a
Loop 101 Price	NB	Loop 202 Santan	US 60	65.5	66.4	65.2	-1.8%	72.3	73.0	72.5	-0.8%
	SB	US 60	Loop 202 Santan	58.2	58.9	56.2	-4.5%	68.0	69.7	66.5	-4.7%
Loop 101 Price	NB	US 60	Loop 202 Red Mountain	67.4	67.0	66.5	-0.8%	75.6	76.5	77.3	1.1%
	SB	Loop 202 Red Mountain	US 60	42.7	41.8	37.0	-11.7%	60.5	63.2	56.5	-10.5%
Loop 101 Pima	NB	Loop 202 Red Mountain	90th St	60.4	not available	not available	not available	68.6	not available	not available	not available
	SB	90th St	Loop 202 Red Mountain	50.7	not available	not available	not available	62.7	not available	not available	not available
Loop 101 Pima	NB	90th St	Pima Rd	63.7	not available	not available	not available	69.5	not available	not available	not available
	SB	Pima Rd	90th St	66.0	not available	not available	not available	72.6	not available	not available	not available
Loop 101 Pima	EB	SR 51	Pima Rd	69.0	69.9	69.9	0.1%	68.2	76.0	76.2	0.3%
	WB	Pima Rd	SR 51	58.8	59.0	52.3	-11.3%	67.9	68.0	62.5	-8.1%
Loop 101 Pima	EB	I-17	SR 51	66.6	66.5	65.0	-2.3%	not available	not available	not available	not available
	WB	SR 51	I-17	54.0	53.5	47.6	-11.0%	not available	not available	not available	not available
Loop 101 Agua Fria	EB	Union Hills Dr	I-17	not available	not available	68.2	not available	not available	not available	75.7	not available
	WB	I-17	Union Hills Dr	not available	not available	60.4	not available	not available	not available	68.9	not available
Loop 101 Agua Fria	NB	Northern Ave	Union Hills Dr	not available	not available	64.9	not available	not available	not available	not available	not available
	SB	Union Hills Dr	Northern Ave	not available	not available	63.5	not available	not available	not available	not available	not available
Loop 101 Agua Fria	NB	I-10	Northern Ave	not available	not available	66.0	not available	not available	not available	74.1	not available
	SB	Northern Ave	I-10	not available	not available	60.5	not available	not available	not available	not available	not available

Source: ADOT FMS

n/a = not applicable

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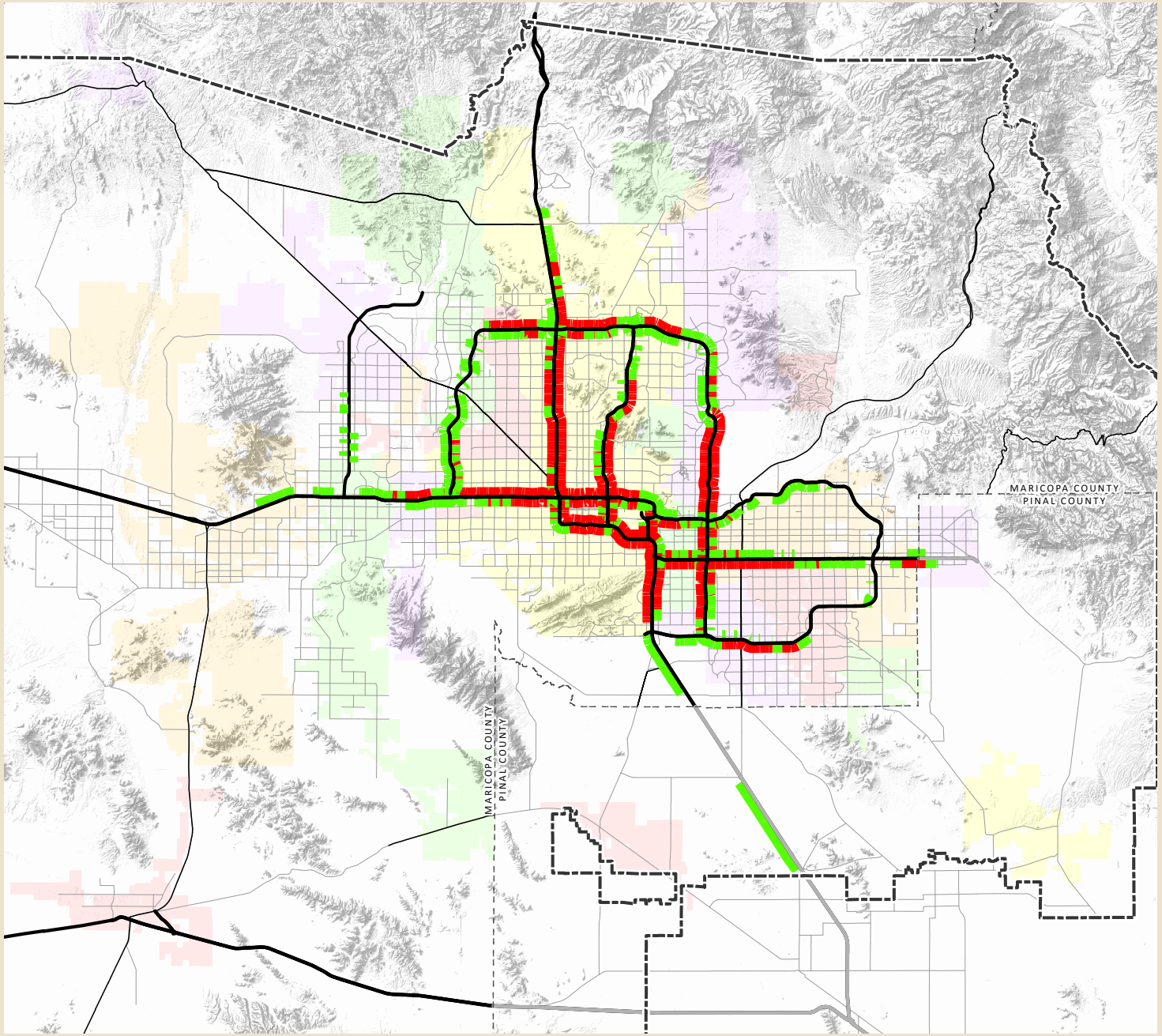
Fig.D-1

REGIONAL TRANSPORTATION PLAN

MARICOPA ASSOCIATION of GOVERNMENTS

2015 Base Year Network: Freeway PM Peak Period Level of Service



- Levels C & D
- Levels E & F
- Freeways
- Highways
- Other Roads
- Metropolitan Planning Area Boundary
- County Boundary

Regional transportation facilities in Pinal County are planned by the Central Arizona Association of Governments (CAAG).

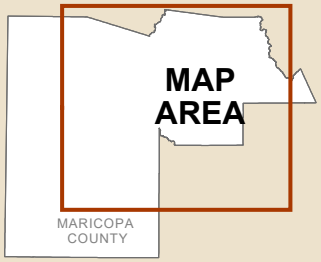


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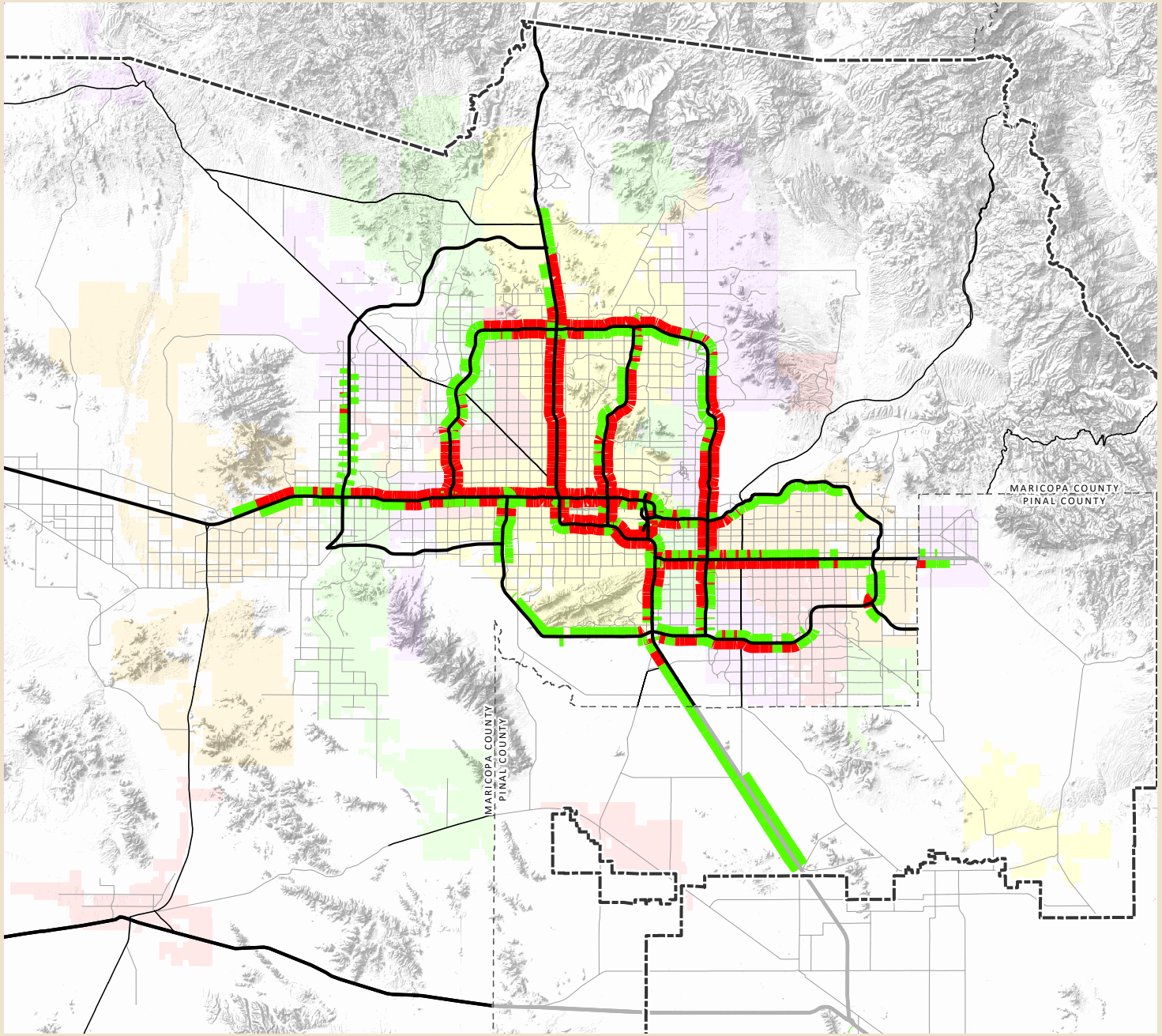
Fig. D-2

REGIONAL TRANSPORTATION PLAN

MARICOPA ASSOCIATION of GOVERNMENTS

2025 RTP Network: Freeway PM Peak Period Level of Service



- Levels C & D
- Levels E & F
- Freeways
- Highways
- Other Roads
- Metropolitan Planning Area Boundary
- County Boundary

Regional transportation facilities in Pinal County are planned by the Central Arizona Association of Governments (CAAG).

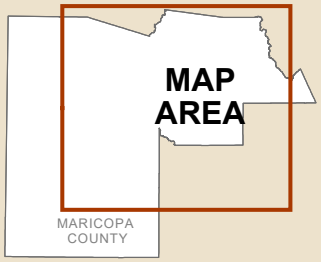


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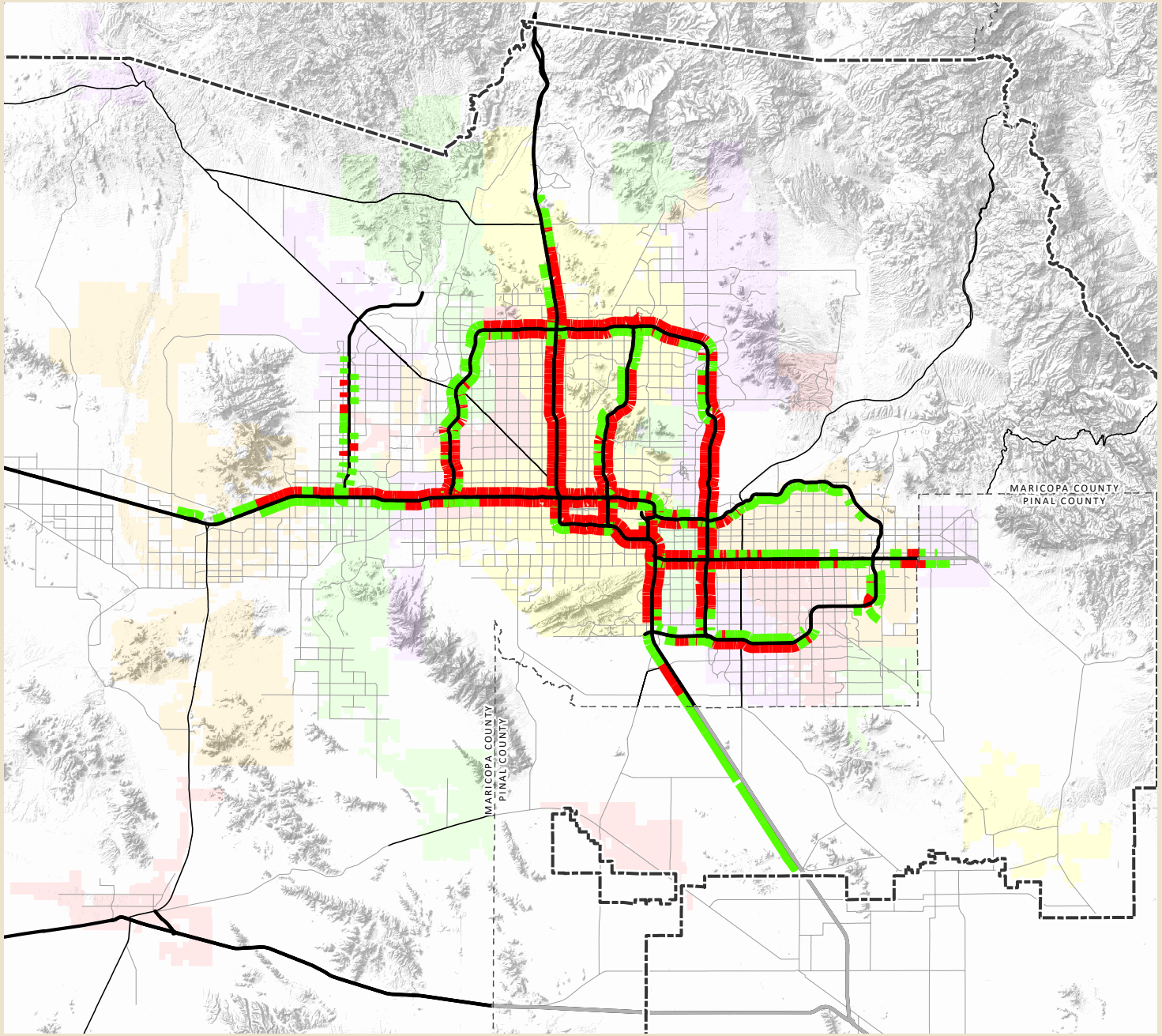
Fig. D-3

REGIONAL TRANSPORTATION PLAN

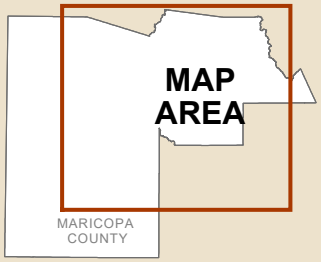
MARICOPA ASSOCIATION of GOVERNMENTS

2025 No Build Network: Freeway PM Peak Period Level of Service



- Levels C & D
- Levels E & F
- Freeways
- Highways
- Other Roads
- Metropolitan Planning Area Boundary
- County Boundary

Regional transportation facilities in Pinal County are planned by the Central Arizona Association of Governments (CAAG).



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Appendix E

2015 Annual Report Data Sources

TABLE E-1

2016 ANNUAL REPORT DATA SOURCES

From ADOT:

- 2016 RTPFP Project Expenditures Report for MAG 09 13 16.xlsx
  E-mail: 2016 RTPFP Expenditure Report, 9/13/2016, 3:08 PM

- July 2016 MAG Certification Cash Flow Ext.xlsx
  E-mail: July 2016 MAG Certification Cash Flow, 9/6/2016, 9:39 AM

- Maricopa County Transportation Excise Tax – Forecasting Process and Results
  FY 2016-2026, September 2015.

From MAG:

- JB – 2016 Ann Rept. – Arterial Appdx JB 7-14-16.xls
  E-mail: RTP Info, 7/20/2016, 10:28 AM

- JB 16 Ann. Rept. – Table 5-3 (For John 5-20-16).xls
  E-mail: RTP Info, 7/20/2016, 10:28 AM

- JB – 16 Ann. Rept. – Chap. 7 Tables (For John 5-20-16).xls
  E-mail: RTP Info, 7/20/2016, 10:28 AM

- Database: RAFR Revenues
  Source: V-Drive/Revenues/RARF/Ongoing RARF Revenues 2017 (as of Oct. 2016)

- 16 Ann Report – Chap 09 FINAL.doc
  Email: Monique de los Rios Urban Chapt 9 Email 1, 9/15/16 3:04 PM &
  Monique de los Rios Urban Chapt 9 Email 5, 9/16/16 1:49 PM

- Copy of 2016 Chapter 9 Tables.xlsx
  Source: Monique de los Rios Urban Chapt 9 Email 2, 9/15/16 3:26 PM

- 2016 Table D-1.xlsx , 2016 Table D-1 (2).xlsx, 2016 Table D-2.xlsx, 2016 Table D-3.dlsx, FMS_Instrumented_Corridors.pdf
  Source: Monique de los Rios Urban Chapt 9 Email 3, 9/15/16 3:26 PM

From RPTA:

- 2016 Ann. Rept. – Chap. 8 Tables (submitted 9-7-16).xlsx
  E-mail: Annual Report Tables, 9/7/2016, 10:30 AM

- 2016 Ann. Rept. – Transit Apdx Tables (submitted 9-19-16).xlsx
  E-mail: Re: Annual Report Tables, 9/19/2016, 3:30 PM

- 2016 Ann. Rept. – Table 5-3 (submitted 9-7-16).xlsx
  E-mail: Annual Report Tables, 9/7/2016, 10:30 AM