

## Tentative Scenario Summary

As planning for the Regional Freeway and Highway Program continues, a sizable gap has developed between the original budget and the current cost opinions recommended by the Arizona Department of Transportation (ADOT) for completing the Program's projects. In May 2009, a tentative scenario was presented to the Transportation Policy Committee (TPC) for consideration as a means for bridging the gap in the Program. The purpose of this briefing paper is to provide additional information about the tentative scenario.

The tentative scenario was developed using a blend of four key principles outlined below. Following this summary, a detailed technical report is provided.

### Management Strategies

In developing the tentative scenario, different options for improving the overall management of the Regional Freeway and Highway Program were reviewed. Savings in this category came from three sources:

- Construction Cost Savings – ADOT's five recent bids for construction projects related to the Program are 26% less than estimates. From current trends, these lower costs will stay with the economy for at least the next several years. MAG and ADOT recommend reducing construction cost opinions by 10 percent overall. This results in an estimated \$235 million savings.
- Right-of-Way Savings – Since 2007, Phoenix area real estate values have declined. Many economists anticipate it will take considerable time for the market to recover. In response, the recommendation is for ADOT to reduce right of way costs by seven percent by using a lower contingency factor.
- System-wide Cost Savings – The Program contains \$987 million for non-project specific costs in the following categories: Freeway Management System, Noise Mitigation, Maintenance, Right-of-Way administration, Preliminary Engineering, and Minor Projects. The latest 2009 ADOT cost opinion identifies these costs increasing by \$527 million over the life of the Program. The recommendation is for ADOT to reassess this opinion and lower the system-wide costs to the original Program amount of \$987 million.

The management strategies of the tentative scenario represent \$762 million in savings. Additional savings have also been identified and are reflected under the Value Engineering portion of the tentative scenario.

### Value Engineering

As part of the tentative scenario, the following value engineering measures are recommended for the following two corridors:

- Loop 202/South Mountain Freeway:
  - Reduce the footprint of the entire corridor from an ultimate ten-lane "outside-in" cross-section to match the cross-section used to construct the freeways built under Proposition 300.
  - Move the most expensive segment of the corridor, between Lower Buckeye Rd and Interstate 10/Papago from a curve-linear alignment in the vicinity of 55th Avenue to use existing 59th Avenue and its existing right-of-way.
  - Reconfigure the system interchange with Interstate 10/Papago to minimize right-of-way and improve the opportunity for direct high occupancy vehicle (DHOV) ramps in the future.

- Conduct a detailed value engineering of the drainage system throughout the corridor to decrease the need for additional right-of-way.

Estimated savings, including lower right-of-way contingency and overall reduction in construction costs, is \$570 million. As part of the tentative scenario, funding for the corridor is increased by \$833 million to \$1.9 billion.

- Loop 303 Freeway:
  - Construct an interim partial cloverleaf interchange at US-60/Grand Avenue.
  - Develop a lower cost alternative for the Interstate 10 system interchange.
  - Conduct a detailed value engineering of the drainage system for the corridor to decrease the need for additional right-of-way.
  - Defer construction of the freeway segment from MC-85/SR-801 north to Interstate 10.

Estimated savings for the corridor, including lower right-of-way contingency and overall reduction in construction costs is approximately \$1,149 million. As part of this tentative scenario, funding is increased by \$426 million to \$1,846 million.

The value engineering recommendations of the tentative scenario represent a savings of over \$1.7 billion. This figure includes a ten percent reduction in construction costs and seven percent savings from a lower right-of-way contingency.

## Deferrals

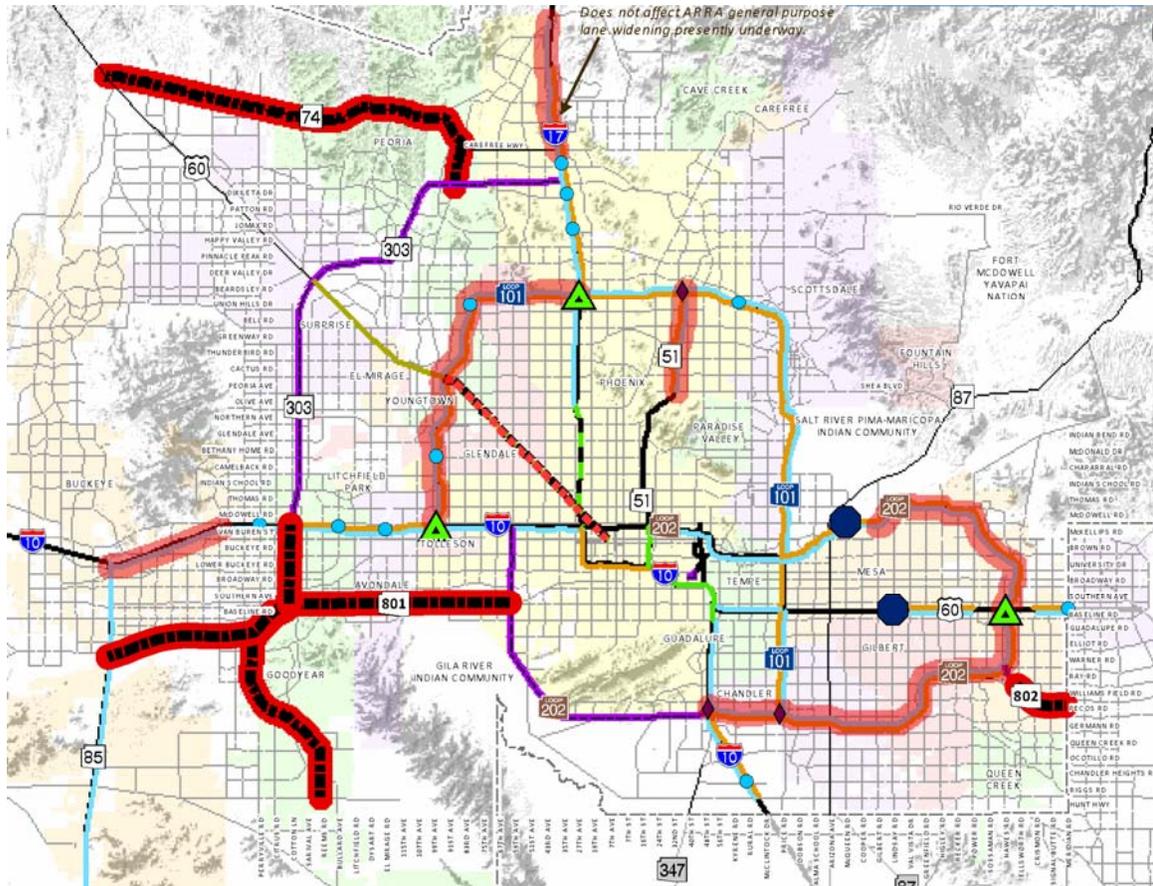
Together, the savings from management strategies and value engineering amount to \$2.5 billion, or 38 percent towards mitigating the \$6.6 billion gap in the Program. Despite these efforts, the tentative scenario includes project deferrals to meet the remaining 62% of the deficit. Although these projects are recommended for deferral, they are not removed from the Regional Transportation Plan (RTP). Instead, they become part of a new Phase V, representing FY2027 through FY2030, which will be reflected in the Regional Transportation Plan 2010 Update. It is important to note that the RTP must extend through FY2030 to comply with federal regulations that require a minimum 20-year planning horizon.

The deferral recommendations are based on the following principles:

- Constructing high occupancy vehicle (HOV) lanes wherever possible. As the MAG region has a non-attainment air quality designation, the Environmental Protection Agency (EPA) recommends transportation control measures (TCM), such as HOV lanes, be constructed prior to general purpose lanes. Freeways constructed under Proposition 300 were built in anticipation of HOV lanes, making their construction more economical compared to the construction of general purpose lanes. HOV lanes can be added for about three million dollars per mile. In addition, the construction of the HOV lanes will also involve the replacement of the cable barrier system with concrete barriers.
- Deferring additional general purpose lanes for portions of Loop 101, Loop 202, and SR-51 taking into account the RTP priorities and the projected traffic volumes and level of service. In most cases, the added general purposes lanes that are in the fourth phase (FY2021-FY2026) of the Program are deferred. In some corridors, projects identified in the third phase (FY2016-FY2020) are also recommended for deferral to deal with the Program deficit.

Using these principles, the project deferrals are illustrated in the accompanying figure. Notable general purpose lane deferrals include the SR-801 corridor (also known as the Interstate 10 Reliever Freeway), and south-

ern portion of the Loop 303, from MC85 to I-10, and SR-802/Williams Gateway Freeways. In summary, the project deferrals total approximately \$4.1 billion.



### Stay the Course

In November 2008, MAG and ADOT convened a peer review panel of industry experts to study the inner loop freeway system, including portions of Interstates 10 and 17, and provide advice on current project proposals. The panel’s remarks are timely as planning for Interstate 17 is underway to determine the future of a facility near the end of its service life. In view of these comments, the following recommendations for the tentative scenario are made as part of the “stay the course” principle:

- Making effective use of the more than \$1 billion slated for the Interstate 17 corridor by developing a continuous four general purpose lanes plus one HOV lane facility from the Interstate 10 “Split” interchange to the Loop 101/Agua Fria-Pima Freeways.
- Repackaging improvements along the Interstate 10/Papago Freeway from Loop 101 to Interstate 17 to improve the merging traffic conditions departing the Interstate 17 “Stack” interchange and facilitate the merging traffic movements from Loop 202/South Mountain at 59th Avenue.
- Providing \$30 million to improve the Interstate 10/Sky Harbor Boulevard interchange in anticipation of potential heightened security measures required for the airport by the Department of Homeland Security.

These stay the course recommendations are presented to improve the application of funding for the Regional Freeway and Highway Program in Phoenix urban core. With the exception of the additional funding request for the Interstate 10/Sky Harbor Boulevard interchange, no increase or decrease is recommended in funding for these projects.

### Conclusions and Recommendations

The following table summarizes approximate \$6.6 billion cost savings achieved with the strategies employed in tentative scenario.

Table 1  
**COST REDUCTIONS ACHIEVED IN THE TENTATIVE SCENARIO FOR  
THE REGIONAL FREEWAY AND HIGHWAY PROGRAM  
(COSTS IN MILLIONS)**  
Regional Freeway and Highway Program

		Balance
2009 Regional Freeway and Highway Program Cost Opinion:		\$15,952.4
Management Strategy savings from lower construction and system-wide costs	-\$762.3	\$15,190.1
Value Engineering savings in the Loop 202/South Mountain and Loop 303 Freeway corridors	-\$1,703.3	\$13,486.8
Deferral savings to Phase V	-\$4,125.2	\$9,361.6
Stay the Course changes	+\$30.0	\$9,391.6
<b>New Regional Freeway Program Cost Opinion:</b>		<b>\$9,391.6</b>

With project deferrals representing more than 60 percent of the effort to bridge the gap in the Regional Freeway and Highway Program, measures need to be taken to monitor the Program to identify opportunities for restoring the deferred projects to an early phase for construction. These include:

- Continual monitoring of available revenues for funding the Program;
- Incorporate future federal funding into the Regional Freeway and Highway Program;
- Identify opportunities for projects in deferred corridors to be alternately funded;
- Determine the possibility of using other federal funding sources and strategies for completing deferred projects;
- Working with ADOT to continually identify methods for delivering the project in a more effective manner; and
- Continue to work with MAG member agencies to preserve future rights-of-way for new corridors.

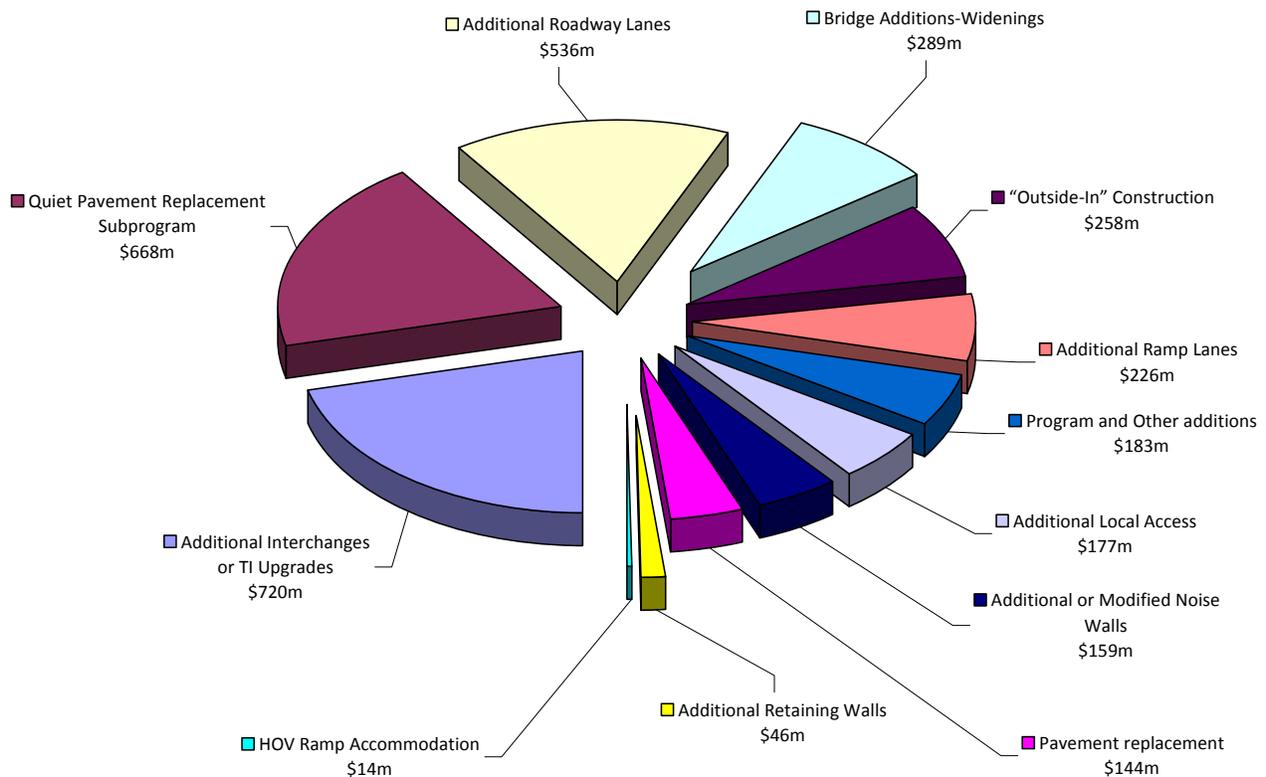
In addition, there are remaining challenges to scale the deferred projects to fit within the funding forecasted to be available in Phase V of the RTP.

## Tentative Scenario Technical Report

### Regional Freeway and Highway Program Financials

The 2003 Regional Transportation Plan identified the budget for the Regional Freeway and Highway Program as \$9,421.2 million, or roughly \$9.5 billion. The current ADOT cost opinion for completing the Program is \$15,952.4 million, or nearly \$16 billion. In June 2008, ADOT prepared a cost assessment of the Program, and identified the following as the key reasons for the dramatic increases:

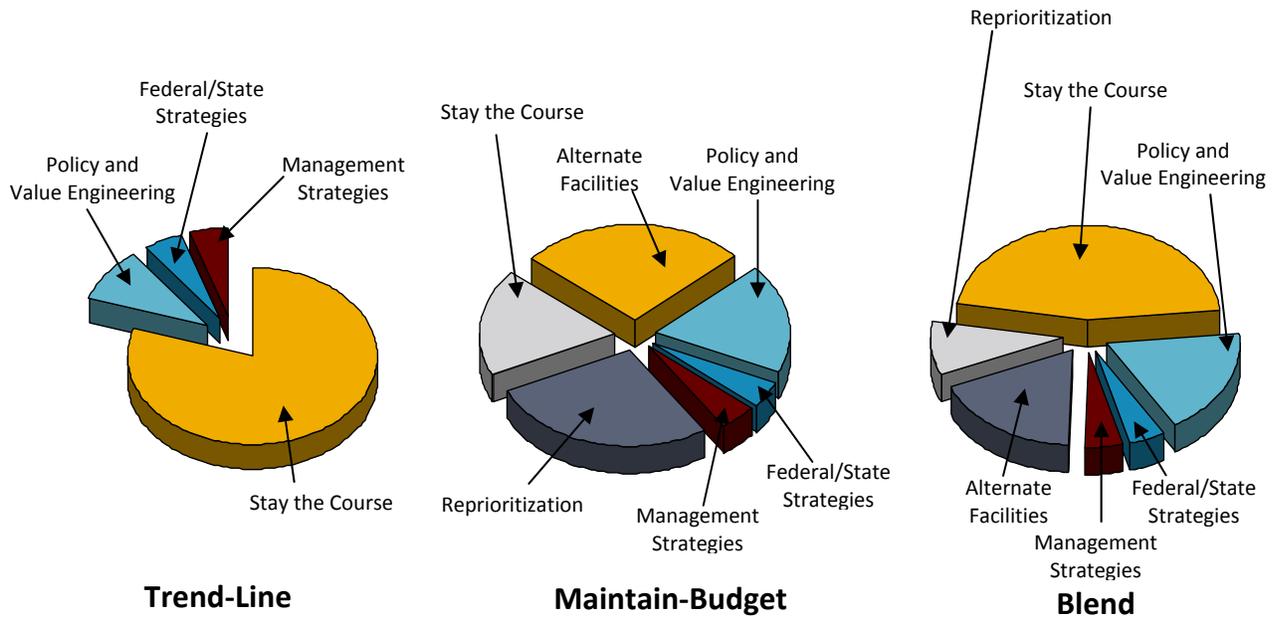
- Right-of-way price escalation from the middle part of this decade, estimated at \$1.1 billion;
- Inflation of construction materials and labor due to international demand for commodities and the domestic construction boom, estimated at \$2.0 billion; and
- Scope growth due to a variety of construction items illustrated in the following chart, estimated at \$3.5 billion.



As depicted, a deficit of \$6.6 billion is anticipated in the program. When the Program was established in the 2003 Regional Transportation Plan, contingencies were built into the budget to account for unforeseen factors, such as inflation and scope growth. However, while construction costs have risen, recent sales tax revenues have declined significantly. This unprecedented decline in revenues has effectively eliminated the contingencies built into the Program.

## Background for the Scenario

In November 2008, a presentation was made to the Transportation Policy Committee about the Regional Freeway and Highway Program deficit and described a methodology for bridging the funding gap. In the presentation, three management scenarios were presented for consideration:



- **Trend-Line**, a strategy keeping the current program priorities and strategies in-place, but extends the completion horizon for the program out from 2026;
- **Maintain-Budget**, a process extending the Program horizon year and through a process of reprioritization, management strategies, policy and value engineering, and alternate facilities, completes a Program with fewer projects than those envisioned in current Regional Transportation Plan; and
- **Blend**, a program considering multiple approaches – management strategies, value engineering, deferrals, and stay the course efforts – to mitigate the gap in the Regional Freeway and Highway program.

## Tentative Scenario Principles

After presenting these scenarios, the TPC provided general direction to consider the blend scenario. Several TPC members noted that either the trend-line or maintain budget scenario might meet fiscal goals, but that the 2025 travel demand need in the Phoenix metropolitan will still need to be met. The tentative scenario was developed using the blend scenario and based it upon four key principles outlined below.

## Management Strategies

In developing the tentative scenario, different options for improving the overall management of the Regional Freeway and Highway Program were reviewed. Savings in this category came from three sources: overall construction cost reduction, right-of-way contingency management, and controlling system-wide expenses.

**Construction**

Material costs and labor costs since the development of the Regional Transportation Plan in 2003 increased significantly starting in 2005 until early 2008 reflecting the dramatic increase in unit costs associated with roadway construction. According to ADOT studies, the increases outpaced inflation during this period, and increased construction costs by more than 60 percent in the two-year calendar period of 2006 and 2007. Most significantly, the costs for cement, aggregate, and asphalt saw increases in Arizona as the demand for these materials rose worldwide.

Since their peak in early 2008, however, unit costs for construction materials and labor have peaked and decreased significantly. Global demand for materials and the current economic recession have driven these costs down. In addition, higher unemployment has driven labor costs down as well. This reduction can be seen in the five recent construction bids received by the Arizona Department of Transportation for the projects identified in the following table. These recent bids are on the average 26 percent lower than the program estimates identified for their construction.

Table 2  
**RECENT CONSTRUCTION AWARDS COMPARED TO PROGRAM COSTS**  
**(COSTS IN MILLIONS)**  
Regional Freeway and Highway Program

Corridor	Construction Project	Bid Date	Program Cost	Bid Award*	Percent Difference
Loop 303	4-lane interim roadway from Happy Valley Rd to Lake Pleasant Pkwy	11/2008	\$153.8	\$121.0	-21.3%
Loop 202/Red Mountain	+1 HOV Lane from Loop 101/Pima-Price to Gilbert Dr	2/2009	\$33.0	\$24.7	-25.2%
Loop 303	4-lane interim roadway from Lake Pleasant Pkwy to I-17/Black Canyon	4/2009	\$113.6	\$83.4	-26.6%
I-10/Papago	+1 GP Lane from Verrado Way to Sarival Ave	5/2009	\$43.2	\$26.2	-39.4%
I-17/Black Canyon	+1 GP Lane from SR-74/Carefree Hwy to Anthem Way	5/2009	\$20.5	\$14.2	-30.7%
<b>Overall Totals:</b>			<b>\$364.1</b>	<b>\$269.5</b>	<b>-26.0%</b>

\*Bid award factored by 20% to account for ADOT construction oversight and contingencies.

Given these favorable costs, MAG, in consultation with ADOT and their Management Consultants, has recommended the program costs for future construction projects in the Regional Freeway and Highway Program be reduced by ten percent (10%). While the evidence reflected in the previous table suggest a more aggressive reduction may be warranted, a conservative approach was taken for reducing overall program costs for this tentative scenario. Economic indicators suggest that while these costs will remain lower than their peak from early 2008 through 2012, costs are expected to rise again in the future at a pace more consistent with inflation.

In the following table, the cost reductions by corridor are provided for those general purpose lanes and HOV projects expected to remain within the Regional Freeway and Highway Program through Phase IV. Cost reductions realized along Loop 202/South Mountain and Loop 303 are computed as part of the value engineering cost reductions discussed in the next section of this briefing paper.

Table 3  
**REDUCTION FROM LOWER CONSTRUCTION UNIT COSTS BY CORRIDOR**  
**(COSTS IN MILLIONS)**  
Regional Freeway and Highway Program

Corridor	Projects	RTP Costs	2009 ADOT Cost Opinion	Revised Cost Estimate	Cost Reduction
I-10/Papago	<ul style="list-style-type: none"> <li>▪ Perryville Rd interchange</li> <li>▪ El Mirage Rd interchange</li> </ul>	\$26.5	\$45.9	\$40.9	\$5.0
I-10/Maricopa	<ul style="list-style-type: none"> <li>▪ Local-Express Lanes from 32nd St to Baseline Rd</li> <li>▪ +1 GP lane from Baseline Rd to Loop 202/Santan-South Mountain</li> <li>▪ +1 GP Lane, +1 HOV Lane from Loop 202/Santan-South Mountain to Riggs Rd</li> </ul>	\$492.8	\$823.5	\$733.4	\$90.1
I-17/Black Canyon	<ul style="list-style-type: none"> <li>▪ +1 GP lane from AZ Canal to Loop 101/Agua Fria-Pima</li> </ul>	\$53.0	\$135.1	\$121.6	\$13.5
US-60/Superstition	<ul style="list-style-type: none"> <li>▪ +1 GP lane from Crismon Rd to Meridian Rd</li> <li>▪ Meridian Rd interchange</li> </ul>	\$35.6	\$39.0	\$35.1	\$3.9
Loop 101/Agua Fria	<ul style="list-style-type: none"> <li>▪ +1 HOV Lane from I-10/Papago to US-60/Grand Ave</li> <li>▪ +1 HOV Lane from US-60/Grand Ave to I-17/Black Canyon</li> </ul>	\$117.0	\$117.7	\$105.9	\$11.8
Loop 101/Pima	<ul style="list-style-type: none"> <li>▪ +1 GP Lane, +1 HOV Lane from I-17 to SR-51/Piestewa</li> <li>▪ +1 GP Lane from SR-51/Piestewa to Princess Dr</li> <li>▪ +1 GP Lane from Princess Dr to Shea Blvd</li> <li>▪ +1 GP Lane from Shea Blvd to Loop 202/Red Mountain</li> </ul>	\$275.0	\$379.1	\$341.2	\$37.9
Loop 101/Price	<ul style="list-style-type: none"> <li>▪ +1 GP Lane from Baseline Rd to Loop 202/Santan</li> </ul>	\$51.0	\$58.1	\$52.3	\$5.8
Loop 202/Red Mountain	<ul style="list-style-type: none"> <li>▪ +1 GP Lane from Loop 101/Pima-Price to Gilbert Dr</li> <li>▪ +1 HOV Lane from Gilbert Dr to Higley Rd</li> <li>▪ +1 HOV Lane from Higley Rd to US-60/Superstition</li> </ul>	\$130.0	\$156.3	\$140.7	\$15.6
Loop 202/Santan	<ul style="list-style-type: none"> <li>▪ +1 HOV Lane from US-60/Superstition to Dobson Rd</li> <li>▪ +1 HOV Lane from Dobson Rd to I-10/Maricopa</li> <li>▪ DHOV Ramps at I-10</li> <li>▪ DHOV Ramps at Loop 101/Price</li> </ul>	\$162.4	\$168.6	\$151.7	\$16.9
Loop 303	<ul style="list-style-type: none"> <li>▪ +1 GP Lane from US-60/Grand Ave to I-17/Black Canyon (full construction)</li> </ul>	\$290.3	\$335.4	\$301.9	\$33.5
SR-88/Apache Trail	<ul style="list-style-type: none"> <li>▪ Spot improvements at Fish Creek Hill</li> </ul>	\$1.8	\$1.7	\$1.5	\$0.2
<b>Totals:</b>		<b>\$1,635.4</b>	<b>\$2,260.2</b>	<b>\$2,026.1</b>	<b>\$234.1</b>

**Right-of-Way**

ADOT estimates right-of-way costs for the corridors of the Regional Freeway and Highway Program using a formula based upon prevailing commercial and residential appraisals for the areas in which projects are constructed. After this estimate is developed, the costs are applied a contingency factor to account for the transaction of the property. The contingency is design to account for items such as, but not limited to, closing costs, title transfers, real estate fees, legal fees, and relocation expenses. Prior to 2005, ADOT Right-of-Way recommended a 40 percent contingency be applied to their estimates, based upon previous experiences for delivering the Regional Freeway Program under Proposition 300.

However, in 2005, the Phoenix Metropolitan Area experienced a significant increase in property values, especially in the residential sector. According to ADOT estimates, right-of-way costs increased more than 80 per-

cent over baseline estimates. Given this considerable increase, and the difficulty in processing real estate transfers and relocations, ADOT Right-of-Way recommended the contingency be increased from 40 to 50 percent of the assessed value of the property. The combination of dramatic real estate value increases couple with the raise in contingency represented considerable increase in the Regional Freeway and Highway Program.

Starting in 2007, real estate values in the Phoenix metropolitan area began to decrease, significantly. Coupled with this decrease has been the residential “bubble burst” in housing values as over-valued properties and upwardly adjustable mortgages contributed to the largest decrease in real estate ever in the Valley. In fact, average residential property values are well below those seen in 2004 when Proposition 400 was approved by the voters of Maricopa County.

It is important to note that while residential values have decrease significantly, commercial properties have remain relatively steady in terms of growth in value. Commercial properties are predominant in areas where rights-of-way are sought for new freeways. Thus, an across the board reduction in overall right-of-way costs in the Regional Freeway and Highway Program was not included.

However, due to the much slower pace for real estate in the Valley overall, MAG believes it is appropriate for ADOT to lower the right-of-way contingency to 40 percent, which was used prior to 2005. This represents a seven percent (7%) decrease in right-of-way cost opinions. This reduction is reflected in the estimates along new freeway corridors and covers those estimates in the next section of this briefing paper.

### **System-wide Costs**

Funding is provided in the Regional Freeway and Highway Program for non-project specific activities for program delivery. These system-wide costs are grouped in six areas covering items such as the Freeway Management System to Noise Walls to Design. In the 2003 Regional Transportation Plan, a budget of \$987 million was identified to cover non-project specific costs.

Since the initiation of Proposition 400 in 2006, the non-project specific costs have risen dramatically to today’s estimate of more than \$1.5 billion, representing a greater than 50 percent increase. MAG is working with ADOT to lower these costs to be consistent with what was originally identified in the 2003 Regional Transportation Plan. The following table reflects these reductions.

Table 4  
**REDUCTIONS RECOMMENDED FOR SYSTEM-WIDE COSTS  
(COSTS IN MILLIONS)**  
Regional Freeway and Highway Program

Item	Covers	RTP Cost Estimate	ADOT Cost Opinion	Revised Program Cost	Cost Savings
Freeway Management System	<ul style="list-style-type: none"> <li>▪ Variable Message Signs</li> <li>▪ Improved Communications</li> <li>▪ Personnel Time</li> </ul>	\$116.8	\$152.7	\$116.8	\$35.9
Maintenance	<ul style="list-style-type: none"> <li>▪ Litter collection and education</li> <li>▪ Landscaping</li> <li>▪ General maintenance</li> </ul>	\$277.0	\$302.1	\$277.0	\$25.1
Noise Mitigation	<ul style="list-style-type: none"> <li>▪ Non-corridor specific mitigation</li> <li>▪ Quiet Pavement Program</li> </ul>	\$75.0	\$397.2	\$75.0	\$322.2
Right-of-Way	<ul style="list-style-type: none"> <li>▪ ROW administration</li> <li>▪ Advance purchases</li> </ul>	\$137.0	\$137.0	\$137.0	\$ --
Design	<ul style="list-style-type: none"> <li>▪ Design</li> <li>▪ Environmental</li> <li>▪ ADOT Staff</li> </ul>	\$372.2	\$472.8	\$372.2	\$100.6
Minor Projects	<ul style="list-style-type: none"> <li>▪ Arterial Improvements</li> <li>▪ Freeway Service Patrol</li> </ul>	\$9.0	\$52.9	\$9.1	\$43.8
<b>Totals:</b>		<b>\$987.0</b>	<b>\$1,514.7</b>	<b>\$987.1</b>	<b>\$527.6</b>

### Value Engineering

The Regional Freeway and Highway Program features construction of four new six-general purpose lane freeway corridors representing nearly 40 percent of the \$9.4 billion 2003 budget for the Program. According to current ADOT cost opinions, the estimates for these corridors have more than doubled since 2003, to where construction of these corridors alone would account for more than 80 percent of the 2003 budget. The following table summarizes the costs associated with these new corridors.

Table 5  
**COMPARISON OF NEW FREEWAY CORRIDOR COST OPINIONS  
(COSTS IN MILLIONS)**  
Regional Freeway and Highway Program

Corridor	Mileage	2003 RTP Cost Estimate	2009 ADOT Cost Opinion	Percent Increase
Loop 202/South Mountain	22.9	\$1,067.0	\$2,472.3	231%
Loop 303	40.0	\$1,420.0	\$2,995.2	211%
Arizona State Route 801 (Interstate 10 Reliever)	26.2	\$805.0	\$1,863.5	231%
SR-802/Williams Gateway	5.1	\$325.0	\$471.3	145%
<b>Totals:</b>	<b>94.2</b>	<b>\$3,617.0</b>	<b>\$7,803.3</b>	<b>216%</b>

MAG and ADOT conducted, with assistance from the Program’s Management Consultants, more than 40 hours of meetings to identify potential cost saving measures throughout the Regional Freeway and Highway Program. A majority of the discussions from these meetings focused upon the new freeway corridors and their construction costs. The term “Value Engineering” is used to summarize options for reducing the costs by considering alternate designs, cross-sections, or interchange geometries. As part of the Tentative Scenario, The Value Engineering recommendations are made for two of the four new freeway corridors: Loop 202/South Mountain and Loop 303 to mitigate the gap between revenue and cost for the Regional Freeway Highway Program. The following discusses the Value Engineering applications.

### Loop 202/South Mountain Freeway

Since its introduction in 1983, the South Mountain corridor has been planned as an important corridor for mobility throughout the Phoenix metropolitan area to provide a connection between the West and East Valleys south of the downtown. Although the corridor was a part of the original 1985 Proposition 300 Regional Freeway Program, and subsequently identified as ‘unfunded’ due to budget pressures in the early 1990s, planning for the corridor has continued since its original inception. The planning for the South Mountain corridor reached a high level when ADOT and the Federal Highway Administration (FHWA) began the federal Environmental Impact Statement (EIS) process in 2001.

The 2003 Regional Transportation Plan rejoined the South Mountain corridor into the Regional Freeway and Highway Program by providing funding for the freeway. With the certainty of funding for the corridor, the EIS process continued in the hopes of its completion and establishing a Record of Decision (ROD) (the conclusion of an EIS) by 2005. However, this process has not kept pace with the original schedule, and ADOT now anticipates a ROD on the corridor in early 2011.

It is important to understand the role that the EIS process plays in the South Mountain corridor. An EIS is prepared on transportation improvement projects when impacts on the natural and built environment are possible and there is a need for a mitigation plan. An EIS process and its concluding ROD are federally prescribed, and the final document will be a product of the FHWA. Given this importance, a completed EIS and ROD are necessary before ADOT can begin design and construction of the South Mountain corridor.

While ADOT cannot begin design and construction, the agency can, however, acquire right-of-way in the corridor using state and regional funds. ADOT has been using its hardship acquisition process for South Mountain right-of-way, and to date has spent more than \$70 million for parcels throughout the corridor’s 22.9 miles. The most significant locations where ADOT has obtained right-of-way, has been along the Pecos Rd segment of the corridor between 27th Avenue and Interstate 10/Maricopa in the Ahwatukee Foothills village of Phoenix.

The funding from the Regional Freeway and Highway Program for the South Mountain corridor was established at approximately \$1.067 billion. As ADOT continued to plan for the facility after this estimate was



made for the RTP, soaring construction and right-of-way costs, as well as scope growth, have increased the cost opinion for constructing the freeway to approximately \$2.472 billion. In an assessment of the corridor, ADOT has identified the following items responsible for cost increases:

- Adopting the “Outside-in” cross-section for the entire corridor, where ultimate grading is completed and future corridor widening is accomplished in the median for up to four new travel lanes
- Constructing an additional structure at the 51st Avenue interchange
- Acquiring sufficient right-of-way at the SR-801 (Interstate 10 Reliever) Freeway interchange to allow for DHOV connections
- Replacing the 63rd Avenue, 51st Avenue, and 33rd Avenue overcrossings of Interstate 10 to facilitate multi-lane entrance and exit ramps at the South Mountain system interchange

Several value engineering options were considered as possibilities for reducing the cost of the South Mountain corridor. The following summarizes the four options considered.

#### *Value Engineering Option: Facility Type*

During the discussions with ADOT and Management Consultants, a number of options were identified for the South Mountain corridor, including alternative facility types. With acceptance of the Interstate 10-Hassayampa Valley Roadway Framework Study by Regional Council in early 2008, a new roadway concept, dubbed the “Arizona Parkway” has been introduced to the Valley. One of the suggestions from these discussions was the possibility of construction the South Mountain corridor as an Arizona Parkway.

The Arizona Parkway is facility capable of up to eight-lanes within 200-ft of right-of-way. It is based upon a principle of prohibiting left-turns at intersections and relegating that movement to a directional crossover ramp, where traffic makes a U-Turn in the median and then returns to the intersection and completes the movement with a right-turn. These facilities have been constructed extensively in other parts of the United States, specifically Michigan, and have been show to carry upwards to 120,000 vehicles daily in an eight-lane construction. Also, these facilities have been proven to have dramatically lower crash rates than conventional arterials where left-turn movements are allowed.

The premise of the alternative was to construct South Mountain as an eight-lane Arizona Parkway for its entire length between Interstate 10/Papago and Interstate 10/Maricopa Freeways. MAG conducted analyses of the alternative facility using its Travel Demand Model and found the corridor’s 2030 volumes would range between 70,000 and 100,000 vehicles per day, well within the 120,000 capacity figure for a parkway. These forecast volumes are also well below the 140,000 to 180,000 vehicles per day a freeway would carry in the South Mountain corridor.

Given the differences between freeway and parkway, MAG studied the model results to determine that while the South Mountain corridor does carry the majority of the traffic, a fair amount is diverted off onto other arterial facilities. The most notable is Baseline Rd where traffic volumes could exceed 80,000 vehicles per day in some sections. This would require significant mitigation to the point where Baseline Rd may need to be as wide as 10-through lanes to accommodate the demand. In addition, MAG also discovered the travel time would increase substantially for the average trip in the South Mountain corridor, as the posted speed for a Parkway is recommended for 45 miles per hour, versus the 65 miles per hour limit for a freeway. When congestion is factored in, the travel time in the South Mountain corridor would be almost double for a parkway than that of a freeway.

Based on this analysis, the consideration of using the Arizona Parkway concept for the South Mountain corridor was dropped from further consideration. The Value Engineering attention then focused upon two other options for reducing construction costs in the corridor.

**Value Engineering: Reducing the Cross-Section**

The premise behind considering an Arizona Parkway construction had its basis in minimizing the impact of the South Mountain corridor’s construction by narrowing its footprint. The current cost opinion of \$2.472 billion for the corridor is based upon a cross-section known as “outside-in.” In this cross-section, ADOT initially constructs the outside of the pavement first to allow the addition of future traffic lanes in the median of the freeway. ADOT has adopted this construction technique for all new freeway corridors in the belief that the widening of the roadway footprint minimizes construction costs and the need for structural walls if the freeway is widen to the outside.

This cross-section is dramatically different from that used under Proposition 300 to build the three Loop 101 freeways, the SR-51/Piestewa extension (from Shea Blvd to Loop 101), and the two constructed Loop 202 freeways, Red Mountain and Santan. According ADOT’s analysis, the outside-in construction represents an increase of \$250 million for all 94-miles of new freeway construction that is part of the Regional Freeway and Highway Program. While this construction cost increase may seem relatively modest for a \$9.4 billion Program, it does not account for the added rights-of-way needed for drainage and desired side slopes of the cross-section. These costs are considerable, especially in the South Mountain corridor, where ADOT has estimated the right-of-way need to be in excess of \$1 billion.



Proposition 300 Cross-Section, looking north at SR-51/Piestewa from Cactus Rd overcrossing.

Given the expenses the outside-in cross-section entails, the tentative scenario recommends that ADOT to return the South Mountain cross-section to that used in Proposition 300. ADOT has already studied this recommendation and has found several benefits for the corridor by using this “Proposition 300” cross-section. The most significant finding can be found in the Pecos Road corridor, where ADOT already owns approximately 95% of the land needed for the cross-section the agency acquired through its right-of-way hardship program.

**Value Engineering: Alternative Alignment**

During the evaluation process, additional methods to reduce costs in the South Mountain corridor were analyzed. Following this analysis, it was determined that an alternate design option is possible for accommodating the most expensive segment in the corridor: the link between Lower Buckeye Rd and the Interstate 10/Papago Freeway system interchange. The current proposal has the South Mountain corridor following a curve-linear alignment along this segment that transitions the corri-

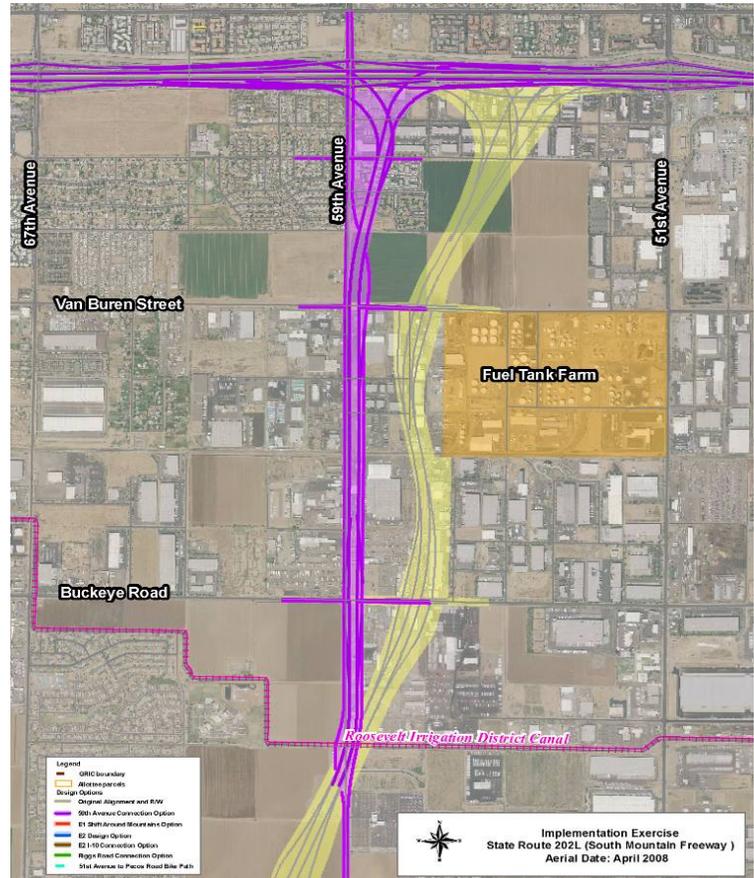


ADOT Right-of-Way signs along Pecos Road in Ahwatukee.

dor from approximately 61st Avenue at Lower Buckeye Rd to 55th Avenue at Interstate 10. This design brings the corridor close to an existing fuel tank farm located at Van Buren Street and 51st Avenue.

The key reason for a high cost opinion for this segment is the commercial real estate ADOT would need for right-of-way. After study and consultation with the City of Phoenix, the tentative scenario includes a recommendation to shift the South Mountain corridor connection with I-10 slightly to the west to 59th Avenue to take advantage of this corridor's existing right-of-way. It is also recommended that this design option consider a minimal footprint for the corridor allowing for only three general purpose lanes plus one HOV lane in each direction, as well as two general purpose lanes in each direction for frontage roads to provide for 59th Avenue local travel. This recommendation is similar to the proposal used to construct the Loop 101/Price Freeway segment between the US-60/Superstition and Loop 202/Santan Freeways. A depiction of this option is presented to the right.

After sharing this design concept with ADOT and the City of Phoenix, additional study by the project consultant for the South Mountain corridor identified several benefits for considering the 59th Avenue route. The first benefit is an estimated \$130 million in construction savings for this option over the 55th Avenue design. This is realized from using an existing right-of-way along 59th Avenue and developing a tighter system traffic interchange with Interstate 10. A second benefit is further separation of the corridor from the Fuel Tank Farm.



Design options for the South Mountain corridor segment between Lower Buckeye Rd and Interstate 10/Papago Freeway. The segment shaded in yellow represents the 55th Avenue alignment. The segment shaded in purple represents the 59th Avenue option recommended by MAG staff.

**Value Engineering: Additional Items**

MAG has recommended ADOT conduct a detailed value engineering of the drainage system throughout the corridor to decrease the need for additional right-of-way. Preliminary discussions with the project's management consultant suggest there could be as much as an additional \$130 million in savings could be realized in the corridor with this analysis.

**Value Engineering: Conclusions**

Discussion about value engineering topics for the South Mountain corridor began in January 2009 between ADOT and MAG. The value engineering recommendations in the tentative scenario for the Program are under study. In recent cost opinions for the corridor reflecting these value engineering changes, ADOT has de-

terminated the cost reductions could be more than those cited in this briefing paper to where two significant additions can be added to its construction. First, by returning to the cross-section used under Proposition 300, it would be possible to include construction of HOV lanes along the entire length of the South Mountain corridor during the initial construction. The added cost for HOV construction is approximately \$2.8 million per mile if completed at the time of initial construction versus the current cost of \$5.0 million per mile if constructed at a later time.

In addition to HOV construction, the current ADOT cost opinion includes a bicycle-pedestrian path along the South Mountain freeway and in the right-of-way between 17th Avenue in Ahwatukee and 51st Avenue in Laveen. According to current estimates, construction of this path is approximately \$15 million.

Given these value engineering recommendations, the cost opinion for the South Mountain corridor can be reduced from \$2.47 billion to \$1.90 billion. This represents approximately \$570 million in savings. The following table summarizes the value engineering recommendations for the corridor.

**Table 6**  
**VALUE ENGINEERING COST REDUCTIONS FOR**  
**LOOP 202/SOUTH MOUNTAIN FREEWAY CORRIDOR**  
**(COSTS IN MILLIONS)**  
Regional Freeway and Highway Program

		<b>Balance</b>
<b>Current ADOT Cost Opinion:</b>		<b>\$2,470.1</b>
Reduced ROW Contingency and Construction Costs	-\$204.1	\$2,032.4
Reducing the cross-section footprint	-\$105.2	\$2,236.5
Incorporating the 59th Avenue design option	-\$128.4	\$2,341.7
Incorporating drainage value engineering	-\$132.5	\$1,900.0
<b>Total Cost Reduction:</b>	<b>\$570.1</b>	

**Loop 303 Freeway**

Originally Loop 303 was part of the MAG Regional Plan in 1985, but dropped due to funding shortfalls. Prior to its reinstatement in the 2003 Regional Transportation Plan, the corridor underwent some development using local funding. Following the adoption of Regional Transportation Plan and voter approval of Proposition 400 in 2004, the design concept report and environmental studies for the corridor were completed. At this time, ADOT is constructing an interim four-lane facility between Happy Valley Rd and Interstate 17 in Peoria and Phoenix, and has hired the design consultants for the upgrade of the two-lane roadway to a six-lane freeway for the segment between Interstate 10 and US-60/Grand Avenue.

Loop 303 is a priority in the Regional Transportation Plan as it will provide service to a number of West Valley communities, which collectively represent a large area of growth in the MAG region. Communities in this area will need to be linked together and tied into the regional freeway network. In addition, if Loop 303 was not constructed, future growth would create



traffic congestion along many arterials in the West Valley. This growth requires the high level of service that only a controlled-access facility, such as Loop 303, can provide.

The Regional Transportation Plan funds construction of Loop 303 as a six-lane freeway in three segments starting in Goodyear at the junction of MC-85 (Buckeye Rd) and the SR-801 (Interstate 10 Reliever) freeway north to Interstate 10. The second segment has been identified from Interstate 10 north to US-60/Grand Avenue, and passes through Goodyear, Glendale, and Surprise. The final segment continues from US-60/Grand Avenue north and east to meet Interstate 17 near Lone Mountain Road, serving Surprise, Peoria, and Phoenix.

The funding from the Regional Freeway and Highway Program for Loop 303 was established at approximately \$1.420 billion. As ADOT continued to plan for the facility after this estimate was made for the RTP, soaring construction and right-of-way costs, as well as scope growth, have increased the cost opinion for constructing the freeway to approximately \$2.995 billion. In an assessment of the corridor, ADOT has identified the following items responsible for cost increases:

- Adopting the “Outside-in” cross-section for the entire corridor, where ultimate grading is completed and future corridor widening is accomplished in the median for up to four new travel lanes
- Purchasing additional right-of-way, necessary to a recent court judgment that dedicated a portion of existing Loop 303 right-of-way back to original property owners
- Adding Frontage Roads along the freeway between Southern Avenue and Interstate 10
- Realigning Interstate 10 for approximately two-miles to either side of Loop 303 to accommodate a five-level interchange with local access to Citrus Road, Sarival Avenue, Van Buren Street, McDowell Road, and Thomas Road
- Constructing directional ramps for Northern Parkway
- Reconfiguring the Bell Road, Happy Valley Road, and Lone Mountain Road interchanges from a traditional diamond to single-point urban interchanges
- Reconfiguring the US-60/Grand Avenue interchange as a three-level single-point urban with provision for realigning the BNSF Railroad
- Adding new traffic interchanges at 67th Avenue and 43rd Avenue
- Reconfiguring the Interstate 17 interchange to allow the future construction of DHOV ramps

Several value engineering options were considered for reducing the cost of the South Mountain corridor. The following summarizes the four options considered.

#### *Value Engineering: Reducing the Cross-Section*

The current cost opinion of \$2.995 billion for the Loop 303 corridor is based upon a cross-section known as “outside-in.” In this cross-section, ADOT initially constructs the outside of the pavement first to allow the addition of future traffic lanes in the median of the freeway. ADOT has adopted this construction technique for all new freeway corridors in the belief that the widening of the roadway footprint minimizes construction costs and the need for structural walls if the freeway is widened to the outside.

This cross-section is dramatically different from that used for the freeways constructed under Proposition 300. According to ADOT’s analysis, the outside-in construction represents an increase of \$250 million for all 94-miles of new freeway construction that is part of the Regional Freeway and Highway Program. While this construction cost increase may seem relatively modest for a \$9.4 billion Program, it does not account for the added

rights-of-way needed for drainage and desired side slopes of the cross-section. These costs are considerable, especially in the Loop 303 corridor, where ADOT has estimated the right-of-way need to be in excess of \$800 million.

Given the expenses the outside-in cross-section entails, the tentative scenario recommends that the Loop 303 cross-section be that used in Proposition 300.

**Value Engineering: US-60/Grand Avenue Interchange**

In the Regional Transportation Plan, the assumption was that the Loop 303/US-60 interchange would be a typical two-level local access interchange. Since the BNSF Railroad is adjacent to Grand Avenue, the interchange configuration was revised during the design concept report process to a three level stacked single-point urban interchange (“Stacked SPU”) to allow ramps to pass underneath the railroad. Additional retaining walls and structures are required to allow the ramps to pass beneath the railroad and Grand Avenue. Current ADOT cost opinions for this interchange are approximately \$200 million.

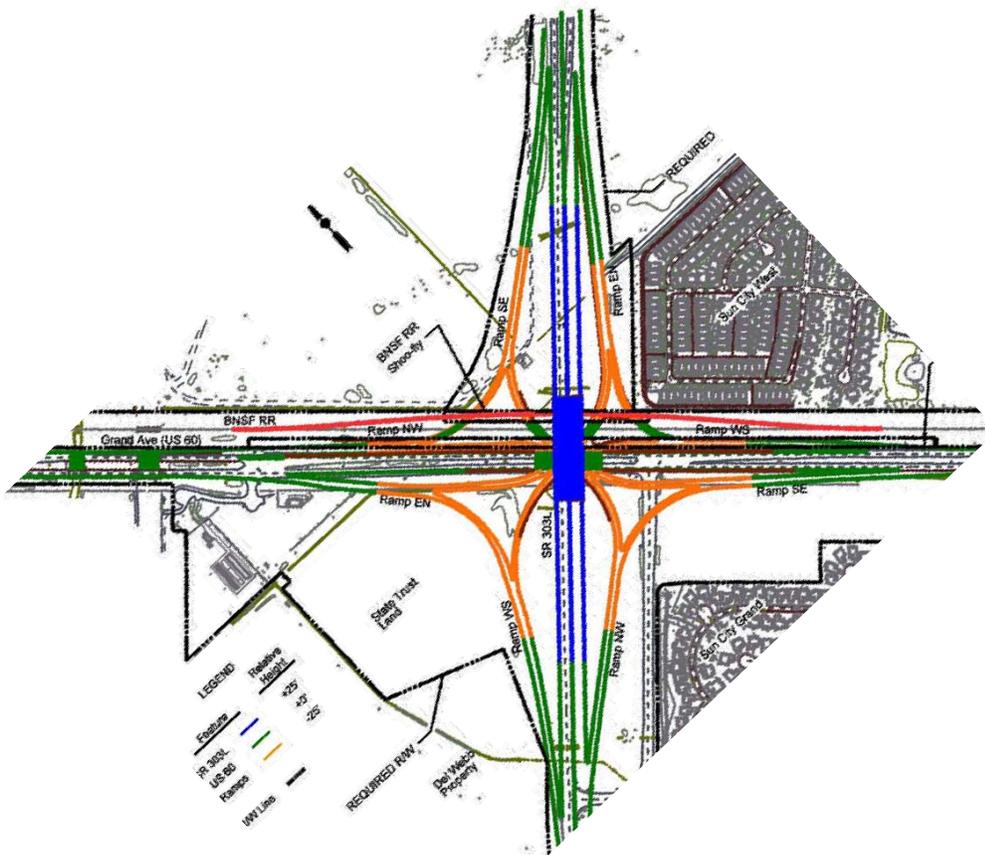


Figure 1 Three-level "Stacked SPU (Single Point Urban Interchange)" proposal for Loop 303/US-60.

Recognizing the importance of this interchange, several value engineering options to reduce the current cost opinion were examined. The most significant design requirement for this interchange is to avoid the BNSF Railroad. The current design does just that, at

considerable expense that involves relocation of the railroad to construct overcrossings of the ramp movements.

Since late 2007, MAG, the City of Surprise, ADOT, and the Maricopa County Department of Transportation have been conducting an access management plan for US-60 between SR-74 and Loop 303. During development of this plan, considerable study and alternatives were considered for the 163rd Avenue interchange to US-60, approximately a half-mile west of the Loop 303 interchange. These alternatives included optional configurations for the Loop 303 interchange. One proposal, in particular, considered the possibility of Loop 303 as a two-level interchange as originally conceived in the Regional Transportation Plan.

The two-level interchange option studied in the access management plan for Loop 303/US-60 is known as a partial cloverleaf, illustrated to the right. In this option, all movements between the freeway (Loop 303) and the arterial (US-60) are completed to one side of the arterial. The appeal of this design is the ability for it to completely avoid interference with the BNSF Railroad that is adjacent to Grand Avenue. Upon further analysis of the future travel demand by the study team, it was discovered that the resulting two at-grade ramp intersections with US-60 would operate during the evening peak hour at Level of Service (LOS) D<sup>1</sup> in the 2030 horizon. An evening peak hour LOS D meets the City of Surprise LOS standards.

When the cost opinions for this partial cloverleaf were developed, MAG determined that this configuration would cost approximately \$50 million. This figure represents a \$150 million savings over the three-level stacked SPUI configuration.

It is important to note that the Design Concept Report for the Loop 303 corridor did consider a partial cloverleaf alternative at the US-60 interchange. This alternative was dismissed; primarily because it exceeded a LOS C target that was being sought for traffic operations in the corridor.

Given the data related to the partial cloverleaf geometry, MAG recommends its construction as a value engineering item to reduce Loop 303 construction costs. However, this recommendation is made with the following conditions. First, the partial cloverleaf recommendation is offered as an interim condition for the interchange. Future travel conditions should be monitored, and the right-of-way maintained on the north side of Grand Avenue, to allow the eventual construction of the three-level stacked SPUI if traffic volumes warrant. This interim condition means construction of the Loop 303 overcrossings of US-60 and the BSNF railroad in their final location that would allow construction of the ultimate configuration and minimize throw-away. Second, MAG recommends deferring the \$150 million savings to Phase V of the RTP as a placeholder for this construction.

#### **Value Engineering: Interstate 10/Papago Freeway Interchange**

The RTP Regional Freeway and Highway Program has identified six new system interchanges for new freeway-to-freeway connections. The base assumption used in the RTP estimates for these interchanges was that two lane directional ramps would be used for half the ramps, and one lane directional ramps for the other half.



*Partial cloverleaf option for the Loop 303/US-60 interchange.*

<sup>1</sup> Level of Service is a qualitative term used by transportation engineers and planners to assess the traffic operations of a facility during a given period of time, such as the evening peak hour (which typically occurs between 4:30 and 5:30 p.m. on weekdays in the Phoenix metropolitan area). The scale ranges from LOS A to LOS F, representing free-flow to congested conditions, respectively. Most Valley communities target LOS D for their evening peak hour traffic operation, which represents a steady flow of traffic and minimal congested periods. LOS assessments are determined using capacity analysis techniques identified by the current edition of the Highway Capacity Manual, published by the Transportation Research Board.

The base assumptions also assumed that frontage roads would not be provided to restore local access in the vicinity of system interchanges as well.

The recommended configuration of the Loop 303/Interstate 10 interchange is for five levels that will require the Interstate 10 mainline be realigned for approximately two-miles to avoid impacting adjacent residential development. The configuration recommends half-diamond interchanges be provided on Interstate 10 at Sarival Avenue and Citrus Drive, and two-lane frontage roads constructed along to provide access between these two interchanges. Northbound and southbound frontage roads would also be constructed along Loop 303 between Thomas Road and Buckeye Road to replace the local access currently provided by Cotton Lane. This includes the Cotton Lane/Interstate 10 interchange.

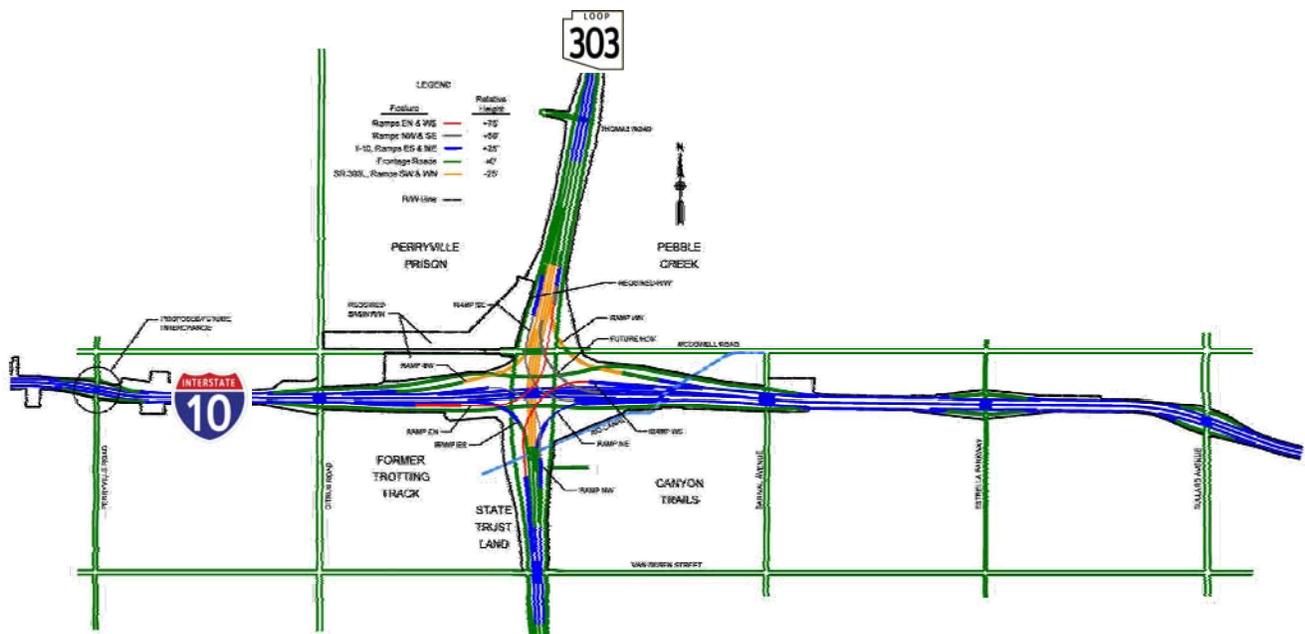


Illustration of the Loop 303/Interstate 10 interchange proposal. The line colors represent the relative height proposal for each component.

ADOT's current cost opinion for this interchange is recommended for \$760.4 million, which encompasses \$251.1 million for right-of-way, \$24.3 million for design, and \$485.0 million for construction. The analysis of this opinion places the cost of the Loop 303/Interstate 10 system interchange as the most expensive traffic interchange on the Regional Freeway System. This cost surpasses that of the junction of US-60/Loop 202 in Mesa, also known as the Super-red-tan interchange, which had been the most costly interchange at \$250 million in 2006. For another comparison, the current cost opinion is three times that of the US-93/Hoover Dam Bypass structure between Arizona and Nevada that is presently under construction for \$240 million (scheduled for completion in 2010).

Recent discussions with ADOT and a review of the construction and right of way cost assumptions for the project resulted in a revised cost opinion of \$518 million. The revised right of way estimate is \$150 million, construction is \$341 million, and the cost of the design is \$27 million. Even with the revised cost estimates,

this project is still significantly higher cost than comparable projects. At this point, ADOT has hired the final designer for the traffic interchange, and has begun an extensive value engineering process to reduce the costs. The tentative scenario for mitigating the \$6.6 billion gap in the Regional Freeway and Highway Program targets a reduction of \$370 million. This target reduces the cost of the Loop 303/Interchange 10 interchange from \$760.4 million to \$390.4 million.

**Value Engineering: Defer MC-85/SR-801 to Interstate 10 Segment**

While discussed in another section of this briefing paper, the tentative scenario includes the recommended full deferral of the SR-801 corridor from Phase IV to Phase V of the RTP. The intent for this segment of Loop 303 and SR-801, in the context of the Regional Transportation Plan, is to provide a continuous freeway connection alternative between SR-202L/South Mountain and Interstate 10/Papago Freeways. Without the SR-801 corridor, this intent does not exist. Thus, the recommendation is made to defer this segment from Phase III to Phase V of the RTP. This deferral of \$240 million helps mitigate the \$6.6 billion deficit in the program.

Although deferred, it is important that the final design and eventual construction of the Interstate 10 interchange be conducted in a manner that allows for its eventual construction to the south. The project development efforts for this segment of Loop 303, including design, be continued.

**Value Engineering: Additional Items**

MAG has recommended ADOT conduct a detailed value engineering of the drainage system throughout the corridor to decrease the need for additional right-of-way. Preliminary discussions with the project’s management consultant suggest there could be as much as an additional \$100 million in savings could be realized in the corridor with this analysis.

**Value Engineering: Conclusions**

The following table summarizes the principal value engineering recommendations and their cost savings in the Loop 303 corridor. Given these recommendations, the Program budget for Loop 303 can be reduced from \$2.995 billion to \$1.950 billion. Despite the reductions, the tentative scenario for the Regional Freeway and Highway Program includes an increase of \$520 million for funding the Loop 303 corridor as new 34-mile six-lane freeway between the Interstate 10/Papago and Interstate 17/Black Canyon Freeways.

Table 7  
**COST REDUCTIONS FOR LOOP 303 FREEWAY CORRIDOR**  
**(COSTS IN MILLIONS)**  
Regional Freeway and Highway Program

		<b>Balance</b>
	Current ADOT Cost Opinion:	\$2,995.2
Construct Partial Cloverleaf option for US-60/Grand Avenue interchange	-\$150.0	\$2,845.2
Incorporate value engineering decisions for the Interstate 10 interchange	-\$370.0	\$2,475.2
Reduced ROW Contingency and Construction Costs throughout corridor	-\$185.0	\$2,290.2
Defer Construction MC-85/SR-801 to Interstate 10 Segment	-\$240.0	\$2,050.2
Incorporating drainage value engineering	-\$100.0	\$1,950.2
<b>Total Cost Reduction:</b>	<b>\$1,045.0</b>	

### ***Northern Parkway Interchange Proposal***

The Loop 303 Design Concept Report was completed in coordination with the studies conducted for future Northern Parkway. The report identifies the need for a system interchange along Loop 303 at the future parkway. It illustrates this connection as a three level fully directional interchange to provide access between the two facilities. The design concept for this interchange was recently modified to incorporate a potential future connection to the west as identified in the Interstate 10-Hassayampa Valley Roadway Framework Study.

While the Regional Transportation Plan illustrates a connection between the two facilities, it does not identify funding for the interchange. Thus, the Loop 303 design plans allow for the purchase of right-of-way for the directional interchange and provide an interim connection to the interim construction of Northern Parkway that is presently envisioned by the City of Glendale.

Given the importance of Northern Parkway in the West Valley, a new project in Phase V of the RTP Regional Freeway and Highway Program is included to complete the directional ramp connections. Additional study is needed, and underway, to determine when this connection is needed.

### **Deferrals**

Together, the savings from management strategies and value engineering amount to \$2.5 billion, or 38 percent towards mitigating the \$6.6 billion gap in the Program. Despite these efforts, the tentative scenario includes project deferrals to meet the remaining 62% of the deficit.

Although these projects are recommended for deferral, they are not removed from the Regional Transportation Plan but rather are included in a new Phase V, representing FY2027 through FY2030. This new Phase V will be included in the Regional Transportation Plan 2010 Update currently under development. The deferral recommendations are based on the several criteria discussed below.

### **High Occupancy Vehicle (HOV) Lanes**

A primary theme in the tentative scenario is the construction of high occupancy vehicle (HOV) lanes wherever possible. Since their introduction along the Interstate 10/Papago Freeway in 1988, HOV lanes have been consistently planned throughout the Phoenix metropolitan area for all freeway corridors. These lanes have demonstrated their purpose for the region and have proven vital for multi-modal operations. The following discussion provides the reasoning behind the recommendation to build-out the HOV system.

- As part of that multi-modal operation, HOV lanes are an important part of day-to-day transit operations. HOV lanes are intended to provide a travel time savings for high occupancy vehicles, including buses, compared to vehicles traveling in the general purpose lanes. With an HOV network, transit services in the Valley receive federal credits for subsidizing their operations. The greater the mileage of the HOV network, the more federal credits an agency can receive.
- In addition to their people carrying capacity, HOV lanes also have purpose in air quality planning. The Environmental Protection Agency considers HOV lanes as transportation control measures (TCM) for improving air quality. In metropolitan planning areas with a non-attainment air quality designation, the EPA mandates constructing a TCM, such as HOV lanes.
- All freeways built under Proposition 300 were constructed in anticipation of the eventual addition of HOV lanes in the future. Two design features were incorporated into freeways built under Proposition 300 for their eventual addition. First, all freeway overcrossing structures were initially constructed with a deck that could be restriped for HOV lanes. Second, the roadways were constructed with sufficient width and an open median.

- Since the implementation of Proposition 400, HOV lane construction has proven to be some of the most cost-effective projects. During Phase I of Proposition 400, all HOV projects along SR-51/Piestewa (north of Shea Blvd to Loop 101) and Loop 101/Pima-Price (from SR-51 to Loop 202/Santan) have been developed within the budgets identified in the Regional Freeway and Highway Program.
- HOV lane construction enhances safety. The open median construction does have known safety issues on freeways with six or more lanes. To enhance safety, ADOT has installed cable barriers in the open medians on all Valley freeways to improve safety. However, these barriers do not prevent all vehicle crossovers compared to a median with a permanent concrete barrier dividing traffic operations. The HOV construction remedies this situation by building the barrier.

In the tentative scenario, all HOV lane projects identified in the Regional Freeway and Highway Program with the exception of one are included. The exception is for the Interstate 17 segment from SR-74/Carefree Highway to Anthem Way. ADOT is presently underway with a project on this segment to add a general purpose lane in each direction, thereby widening Interstate 17 to six-lanes. According to the latest travel demand estimates from the MAG model, the average volume for this segment of Interstate 17 is anticipated to be 109,000 vehicles per day by 2030. This translates to an acceptable Level of Service (LOS) D for this segment, suggesting the six general purpose lanes should be sufficient to accommodate projected demand.

### General Purpose Lanes

After HOV lanes, deferring additional general purpose lanes for portions of Loop 101, Loop 202, and SR-51 were considered taking into account the RTP priorities and the projected traffic volumes and level of service. In most cases, the added general purpose lanes that are in the fourth phase (FY2021-FY2026) of the Program are deferred. In some corridors, projects identified in the third phase (FY2016-FY2020) are also recommended for deferral to deal with the Program deficit.

The following table summarizes the travel demand data that was used to identify deferred general purpose lane projects. The table includes travel demand data and has been sorted in order from highest volume to lowest. Corresponding level of service (LOS) assessments are also provided to denote the LOS for the segment under the RTP ten-lane condition, and the LOS for the segment if two-lanes are removed (one in each direction).

Level of Service (LOS) is a qualitative term used by transportation engineers and planners to assess the traffic operations of a facility during a given period of time, such as the evening peak hour (which typically occurs between 4:30 and 5:30 p.m. on weekdays in the Phoenix metropolitan area). The scale ranges from LOS A to LOS F, representing free-flow to congested conditions, respectively. Most Valley communities target LOS D for their evening peak hour traffic operation, which represents a steady flow of traffic and minimal congested periods. LOS assessments are determined using capacity analysis techniques identified by the current edition of the Highway Capacity Manual, published by the Transportation Research Board.

Table 8  
**2028 TRAVEL DEMAND ESTIMATES BY CORRIDOR SEGMENTS  
TO ASSESS PROJECT DEFERRAL OF GENERAL PURPOSE LANES**  
Regional Freeway and Highway Program

Corridor	Segment	2028 Forecast Volume*	Program Number of Lanes**	Level of Service	Less One Lane**	Level of Service	Deferral?
Loop 101/Pima	Shea Blvd to SR-202L/Red Mountain	232,900	10	E	8	F	Yes
Loop 101/Price	SR-202L/Red Mountain to Baseline Rd	222,000	10	D	8	F	Yes
Loop 101/Price	Baseline Rd to SR-202L/Santan	221,800	10	D	8	F	Yes
Loop 101/Pima	Princess Dr to Shea Blvd	205,700	10	D	8	F	Yes
Loop 101/Pima	SR-51/Piestewa to Princess Dr	205,600	10	D	8	E	Yes
Loop 202/Red Mountain	Loop 101/Price-Pima to Gilbert Dr	203,700	10	D	8	E	Yes
Loop 101/Pima	I-17/Black Canyon to SR-51/Piestewa	200,900	10	D	8	E	Yes
Loop 202/Santan	Val Vista Dr to Dobson Rd	177,600	10	D	8	D	No
Loop 202/Santan	Dobson Rd to Interstate 10/Maricopa	174,400	10	C	8	D	No
Loop 101/Agua Fria	US-60/Grand to I-17/Black Canyon	172,200	10	C	8	D	No
Loop 202/Red Mountain	Gilbert Dr to Higley Rd	166,200	10	C	8	D	No
SR-51/Piestewa	Shea Blvd to SR-101L/Pima	158,600	10	C	8	D	No
Loop 101/Agua Fria	I-10/Papago to US-60/Grand	154,100	10	C	8	D	No
Loop 202/Santan	US-60/Superstition to Val Vista Dr	139,900	10	C	8	D	No
Loop 202/Red Mountain	Higley Rd to US-60/Superstition	131,900	10	C	8	C	No

\*Average segment volume, computed by modeled vehicle-miles traveled divided by distance

\*\*Includes HOV lanes

Data source: Volumes obtained from MAG Travel Demand Volume. LOS assessment based on methods for urban planning from the *Highway Capacity Manual*, Transportation Research Board, 2000 and *Quality/Level of Service Handbook*, Florida Department of Transportation, 2002.

As noted in the table, the top seven segments, in terms of forecast volume, would degrade to either LOS E or LOS F if their general purpose lane projects were deferred. Therefore, these projects are included in the tentative scenario for balancing the \$6.6 billion gap in the RTP Regional Freeway and Highway Program, and recommends deferring the remaining projects to Phase V of the RTP.

### Corridors

Of the four new freeway corridors identified in the RTP, value engineering principles were applied to two corridors to reduce their costs and mitigate the gap in the Program. The remaining two corridors, Arizona State Route 801 (known as the Interstate 10 Reliever) and SR-802/Williams Gateway Freeway, are recommended for complete or significant deferrals. The following discusses the reasoning behind these recommendations.

#### Arizona State Route 801

The Regional Transportation Plan funds the development of a reliever facility for the Southwest Valley: a six-lane freeway corridor parallel to and south of the existing Interstate 10. As studies for the Reliever facility began after voter approval of Proposition 400, ADOT assigned Arizona State Route 801 as the designation for the corridor. The RTP identifies construction of SR-801 in phases, with the initial phase fully funded for the

segment between Loop 303 and Loop 202/South Mountain Freeway. Between SR-85 and Loop 303, an interim facility, presumably a two-lane roadway, is included in the RTP.

The funding from the Regional Freeway and Highway Program for SR-801 was established at approximately \$805 million. As ADOT continued to plan for the facility after this estimate was made for the RTP, soaring construction and right-of-way costs, as well as scope growth, have increased the cost opinion for constructing the freeway to approximately \$1.864 billion. In an assessment of the corridor, ADOT has identified the following items responsible for cost increases:

- Adopting the “Outside-in” cross-section for the entire corridor, where ultimate grading is completed and future corridor widening is accomplished in the median for up to four new travel lanes
- Expanding the design of the Loop 303 interchange to facilitate overcrossings of the Union Pacific Railroad
- Incorporating a mile long structure for the SR-801 overcrossing of the Agua Fria River
- Expanding the Loop 202/South Mountain Freeway interchange to allow for a connections to Broadway Road and Rio Salado Parkway, and to permit a future DHOV connection

Construction of SR-801 has been identified as a Phase IV project in the RTP Regional Freeway and Highway Program. The current Freeway Life-Cycle Program identifies construction of the freeway between FY2023 and FY2025. Given this relatively late priority for constructing SR-801 and the high cost of completing the facility, SR-801 is included in the projects recommended for deferral to Phase V of the RTP.

With this deferral, planning efforts for the corridor should continue. This includes:

- Completing the SR-801 Environmental Assessment that is presently underway in the corridor to establish a center-line for the roadway for preservation purposes; and
- Maintaining a budget for advance right-of-way acquisition.

#### *SR-802/Williams Gateway Freeway*

The RTP Regional Freeway and Highway Program includes the Williams Gateway Freeway corridor as a new six lane freeway from Loop 202/Santan Freeway that extends south to Williams Gateway Airport, and then east to the Pinal County line. Within Pinal County, and not funded as part of the RTP, the facility would extend east to US-60 south of Apache Junction. Since voter approval of Proposition 400, ADOT has begun studies for this corridor and has designated the corridor as Arizona State Route 802.

The funding from the Regional Freeway and Highway Program for SR-802 was established at approximately \$325 million. As ADOT continued to plan for the facility after this estimate was made for the RTP, soaring construction and right-of-way costs, as well as scope growth, have increased the cost opinion for constructing the freeway to approximately \$471.3 million. In an assessment of the corridor, ADOT has identified the following items responsible for cost increases:

- Adopting the “Outside-in” cross-section for the entire corridor, where ultimate grading is completed and future corridor widening is accomplished in the median for up to four new travel lanes
- Providing movements in all directions at Ellsworth Road, instead of the half-interchange concept that was originally considered

Construction of SR-802/Williams Gateway corridor is identified as a Phase III project in the RTP. Presently, ADOT has underway studies for establishing an interim roadway between Loop 202/Santan and Ellsworth Road. This project would construct the system interchange at Loop 202. Given this level of effort, and the

third phase placement of the project in the RTP, the tentative scenario includes the construction of the interim facility to Ellsworth Road.

The remaining segments of the corridor would be deferred. The remaining segments were identified and programmed in the RTP in anticipation of funding source identified for the portion of the facility in Pinal County. Since the adoption of the RTP in 2003, that funding source has not been identified, nor is it likely to be any-time soon given the current economic conditions at the time of this briefing paper. Without an extension of SR-802 into Pinal County, the freeway would end at Meridian Road, a facility that would not be capable of handling the end of six-lane freeway.

Like SR-801, ADOT should complete the Environmental Assessment for SR-802 to establish the center-line and maintain a budget for early right-of-way acquisition. This permits the eventual construction of the freeway in Phase V of the RTP.

### **Arizona State Route 85**

This two-lane highway travels in a north-south direction in the southwest Valley, extending from Interstate 8 in Gila Bend to Interstate 10 in Buckeye. Along this segment, SR-85 is a major link for automobile and truck traffic traveling between the two interstates. This segment is also signed as a bypass route for Interstate 10 traffic traveling around Phoenix. Travel demand for SR-85 has been increasing steadily, taxing the capacity of the two-lane facility.

To address these needs, the RTP Regional Freeway and Highway Program funds the widening of SR-85 between Interstates 8 and 10 to a four-lane divided highway facility at \$118.6 million. The Plan also states that the design of this facility should allow for the ultimate construction to a freeway; but that effort is not funded in the RTP.

Since voter approval of Proposition 400, ADOT has begun planning and design efforts in the corridor and has established a cost opinion of \$251.0 million. Increasing construction costs and scope growth has accounted for the increases, which include:

- Realignments of SR-85, State Route B8, Maricopa Road, and Main Street in Gila Bend
- Added structures throughout the corridor

Through FY2010, ADOT has obligated approximately \$142.5 million for construction in the corridor. The remaining projects should be deferred to Phase V of the RTP. Additional planning is needed in the SR-85 corridor to coordinate future improvements.

### **Direct HOV (DHOV) Connections**

New Direct HOV connections (DHOV) are planned at a number existing freeway-freeway interchanges to enhance the HOV system connectivity. These locations were identified in a previous HOV System Plan and incorporated into the 2003 Regional Transportation Plan at the following six interchanges:

- SR-51/Loop 101 (Piestewa/Pima), from SR-51 on the south to/from Loop 101 on the east
- Interstate 17/Loop 101 (Black Canyon/Agua Fria), from I-17 on the south to/from Loop 101 on the west
- Interstate 10/Loop 101 (Papago/Agua Fria), from Loop 101 on the north to/from I-10 on the west
- US-60/Loop 202 (Superstition/Santa), from US-60 on the west to/from Loop 202 on the south
- Loop 101/Loop 202 (Price/Santan), from Loop 202 on the east to/from Loop 101 on the north

- Interstate 10/Loop 202 (Maricopa/Santan), from Loop 202 on the east to/from I-10 on the north

With the exception of Interstate 10/Loop 101 (Papago/Agua Fria) and Interstate 17/Loop 101 (Black Canyon/Agua Fria), all of the existing system interchanges have been designed to accommodate DHOV connections that have been included in the RTP. Although early in the study process, ADOT has noted how building these ramps will require significant reconstruction of the existing interchanges. Given this information, the two DHOV projects are recommended for deferral. The studies to determine the feasibility and construction costs should be completed however.

A third DHOV connection, at the US-60/Loop 202 (Superstition/Santan) interchange, should also be deferred. From travel demand modeling data, the projected volumes using this ramp are the lowest of the six DHOV ramp locations. In an effort to bridge the \$6.6 billion gap in the Program, this location is deferred to the Phase V of the RTP.

### Service Interchanges Deferrals

New service interchange projects would provide a new traffic interchange, or modify an existing traffic interchange on an existing freeway to improve access and mobility. The RTP Regional Freeway and Highway Program included 15 projects for either new or improved traffic interchanges throughout the freeway system. These locations are:

- Interstate 10-Papago/Bullard Avenue, new interchange
- Interstate 10-Papago/Perryville Rd, new interchange
- Interstate 10-Papago/El Mirage Rd, new interchange
- Interstate 10-Maricopa/Ray Rd, improve existing interchange
- Interstate 10-Maricopa/Chandler Heights Rd, new interchange
- Interstate 17-Black Canyon/Jomax Rd, new interchange
- Interstate 17-Black Canyon/Dixileta Dr, new interchange
- Interstate 17-Black Canyon/Dove Valley Rd, new interchange
- US-60-Superstition/Higley Rd, improve existing interchange
- US-60-Superstition/Lindsay Rd, new half interchange – ramps to/from US-60 on the east
- US-60-Superstition/Meridian Rd, new half interchange – ramps to/from US-60 on the east
- Loop 101-Agua Fria/Bethany Home Rd, new interchange
- Loop 101-Agua Fria/Beardsley Rd, new interchange
- Loop 101-Pima/64th St, new interchange
- Loop 202-Red Mountain/Mesa Dr, new interchange

Since voter approval of Proposition 400, ADOT has moved forward nine of these interchanges. Of the nine, five are open to traffic and another four are under construction with all completed by the end of 2010. For the remaining six interchanges, ADOT has either begun or will begin the planning, environmental, and design process for four locations.

The remaining two service interchange locations are in the City of Mesa at US-60/Superstition and Lindsay Road and Loop 202/Red Mountain and Mesa Drive. In consultation with the City, MAG is recommending deferral of both service interchanges to Phase V of the RTP.

### *US-60/Grand Avenue Interchanges*

This state highway, US-60, extends diagonally from the core of the urban area to the northwest corner of the MAG region. Grand Avenue provides a direct connection to communities in the northwest Valley. Because Grand Avenue is aligned diagonally across the regional grid and is parallel to the BNSF Railroad, it has a number of problem intersections. In the past, a number of Grand Avenue intersections have been addressed in the Life Cycle Program through construction of grade-separated interchanges. The RTP Regional Freeway and Highway Program calls for additional grade-separated interchanges and widening improvements south of Loop 303 to Van Buren St.

Phase IV of the RTP provides funding for the grade-separated interchanges between Loop 101 and Van Buren St at locations to be determined. Recent studies have recommended that the intersections at 19th Avenue-McDowell Rd be reconfigured for grade separation, and that the existing grade separations at 35th Avenue-Indian School Road and 51st Avenue-Bethany Home Road be improved as considered. ADOT is scheduled to begin a study process for this RTP segment, from Loop 101 to Van Buren Street, starting in FY2011.

Given their priority in Phase IV of the RTP, and that the actual project has not been fully defined, the tentative scenario includes a recommendation to defer construction of the grade separated interchanges to Phase V. The ADOT studies should move forward to provide better definition for Grand Avenue corridor projects. As these projects are defined, alternate funding sources, such as federal rail crossing safety funds, could be pursued that could be incorporated into the funding stream to improve US-60.

### **Right-of-Way Deferrals**

The RTP identifies funding in Phase IV to provide for right-of-way protection in two corridors: SR-74, from New River to US-60/Grand Avenue, and Loop 303, south of the Gila River to Patterson Road. In long range plans both of these corridors are recommended to become freeways to facilitate future growth. In view of the funding shortfall and the fourth phase priorities, these efforts are deferred to Phase V of the RTP.

### **Deferral Summary**

Table 9 summarizes all projects recommended for deferral to Phase V of the RTP Regional Freeway and Highway Program. The total value of the deferrals is \$4.125 billion. The table also identifies the phase the project is deferred from, and ADOT obligations through FY2010 to account for the efforts conducted to-date on these projects. Even though these projects are being recommended for deferral, they are not removed nor deleted from the Regional Transportation Plan.

Table 9  
**REDUCTION FROM PROJECT DEFERRALS BY CORRIDOR**  
**(COSTS IN MILLIONS)**  
Regional Freeway and Highway Program

Corridor	Projects (Phase)	RTP Costs	2009 ADOT Cost Opinion	Current Obligations	Cost Reduction
I-10/Papago	▪ +1 GP Lane from SR-85 to Verrado Way (IV)	\$61.8	\$50.5	--	\$50.5
I-10/Maricopa	▪ Local-Express Lanes from 32nd St to SR-51/Piestewa and Loop 202/Red Mountain (IV)	--	\$496.3	--	\$496.3
I-17/Black Canyon	▪ +1 HOV Lane from SR-74/Carefree Hwy to Anthem Way (IV) ▪ +1 GP Lane from Anthem Way to New River Rd (IV)	\$77.5	\$122.4	--	\$122.4
US-60/Grand Ave	▪ Grade separated interchanges for up to four locations (IV)	\$97.0	\$97.0	--	\$97.0
US-60/Superstition	▪ Lindsay Rd interchange (II)	\$4.6	\$8.8	--	\$8.8
SR-51/Piestewa	▪ +1 GP Lane from Shea Blvd to Loop 101/Pima (IV)	\$51.0	\$81.7	--	\$81.7
Loop 101/Agua Fria	▪ +1 GP Lane from I-10/Papago to US-60/Grand Ave (IV) ▪ DHOV Ramps to/from I-10/Papago on the East (IV) ▪ +1 GP Lane from US-60/Grand Ave to I-17/Black Canyon (IV) ▪ DHOV Ramps to/from I-17/Black Canyon on the South (IV)	\$319.0	\$477.4	\$17.2	\$460.2
Loop 202/Red Mountain	▪ Mesa Drive interchange (IV) ▪ + 1 GP Lane from Gilbert Rd to Higley Rd (IV) ▪ + 1 GP Lane from Higley Rd to US-60/Superstition (IV) ▪ DHOV Ramps to/from US-60/Superstition on the West (IV)	\$151.6	\$231.5	--	\$231.5
Loop 202/Santan	▪ +1 GP Lane from US-60/Superstition to Val Vista Rd (IV) ▪ +1 GP Lane from Val Vista Rd to Dobson Rd (IV) ▪ +1 GP Lane from Dobson Rd to I-10/Maricopa (IV)	\$195.0	\$268.7	\$1.1	\$267.6
SR-801	▪ Interim 2-lanes, SR-85 to Loop 303 (IV) ▪ New Freeway, +3 GP Lanes, Loop 303 to Loop 202/South Mountain (IV)	\$805.0	\$1,863.5	\$25.0	\$1,838.5
SR-802/Williams Gateway	▪ Ultimate facility, +3 GP Lanes, Loop 202/Santan to Ellsworth Rd (III) ▪ New Freeway, +3 GP Lanes, Ellsworth Rd to Meridian Rd (III)	\$170.0	\$316.0	--	\$316.0
SR-74/Carefree Hwy	▪ ROW Protection for future freeway (IV)	\$40.0	\$40.0	--	\$40.0
SR-85	▪ Ultimate freeway facility, Interstate 8 to Interstate 10 (III-IV)	\$118.6	\$257.2	\$142.5	\$114.7
<b>Totals:</b>		<b>\$2,029.3</b>	<b>\$4,311.0</b>	<b>\$185.8</b>	<b>\$4,125.2</b>

### Deferral Policy Consideration

With the introduction of deferrals, a policy will be needed for future Plan updates in the event additional funding is available in the Program through either higher future revenues or lower costs. One element of the policy would be that as projects are deferred to Phase V, the original priority of the project in RTP would be maintained to ensure that the projects deferred from an early phase would have priority for the additional funds.

Likewise, another element could be to capture any cost savings in a corridor and use the savings to complete the deferred projects in the same corridor. For example, if the construction bids for the Loop 303 between Interstates 10 and 17 come in under the program amount, then may be reasonable to consider applying those

savings to build the ultimate interchange of the Loop 303 and Grand Avenue, upgrade of the interchange at Northern Avenue, or the deferred segment between MC-85/SR-801 and Interstate 10.

### Stay the Course

In November 2008, MAG and ADOT convened a peer review panel of industry experts to study the inner loop freeway system and provide advice on current project proposals. The panel's principal recommendations include:

- Packaging future projects to minimize impacts to the Interstate 10/Interstate 17 "Stack" interchange; and
- Improving the utility of the Interstate 17 freeway south and west of Downtown Phoenix as an alternative to the deck park tunnel along Interstate 10.

These remarks are timely as planning for Interstate 17 is underway to determine the future of a facility nearing the end of its service life. In view of these comments, the following recommendations for this tentative scenario were developed as part of the "stay the course" principle:

- In the current program, approximately \$1 billion has been identified for improving Interstate 17 between the Interstate 10 "Stack" interchange and the Arizona Canal north of Downtown Phoenix. A portion of this funding is spread to improve Interstate 17 from the Interstate 10 "Split" interchange to the Interstate 10 "Stack" interchange. When coupled with project north of the Arizona Canal, a continuous four general purpose lanes plus one HOV lane facility would be created from the Interstate 10 "Split" interchange and the Loop 101/Agua Fria-Pima Freeways.
- Repackage improvements along the Interstate 10/Papago Freeway from Loop 101 to Interstate 17 to improve the merging traffic conditions departing the Interstate 17 "Stack" interchange and facilitate the merging traffic movements from Loop 202/South Mountain at 59th Avenue. This repackaged project is recommended to not exceed the \$79 million budget initially identified for the corridor in the Regional Freeway and Highway Program.
- In addition to the recommendations from the Peer Review Panel, the tentative scenarios includes \$30 million to accommodate improvements recommended by Phoenix Department of Aviation for the Interstate 10/Sky Harbor Boulevard interchange west of the airport. Aviation staff has noted how the current design may be inadequate in anticipation of potential heightened security measures required for the airport by the Department of Homeland Security.

These stay the course recommendations are presented to improve the application of funding for the Regional Freeway and Highway Program in urban core of the Phoenix metropolitan area. With the exception of the additional funding request for the Interstate 10/Sky Harbor Boulevard interchange, no increase or decrease is recommended in funding for these projects.

## Conclusions and Recommendations

With project deferrals representing more than 60 percent of the effort to bridge the gap in the Regional Freeway and Highway Program, measures need to be taken to monitor the Program to identify opportunities for restoring the deferred projects to an early phase for construction. These include:

- Continual monitoring of available revenues for funding the Program. In previous favorable economic times, Regional Area Road Funds (the half-cent sales tax) exceeded projections, creating extra funding. When favorable times return, these potential revenues should be used to construct the deferred projects.
- Incorporate future federal funding into the Regional Freeway and Highway Program. In 1991 and 1997, the federal surface transportation program (also known as the Highway Bill) was renewed and expanded with funding by the federal government, which translated into additional transportation funds for the MAG region. MAG in turn used the funds to bridge the gap in the previous Proposition 300 program and return projects to an earlier phase and construction. This scenario is highly likely in the near future as the current surface transportation program is scheduled to end in September 2009 and renewed thereafter.
- Identify opportunities for projects in deferred corridors to be alternately funded. In the current Arizona legislative session there has been considerable interest in passing legislation with the purpose of permitting Public-Private Partnerships (PPP) for infrastructure construction. However, most PPP opportunities are only considered by private sector investment when a project or corridor has been cleared environmentally. The environmental assessment process for both the SR-801 and SR-802/Williams Gateway corridors should be completed to clear them from an environmental perspective and to identify the centerline for each corridor.
- Determine the possibility of using other federal funding sources and strategies for completing deferred projects. For example rail safety funds may be available to the MAG region for constructing the deferred grade separated interchanges along US-60/Grand Ave due to its close proximity to the BNSF Railroad.
- Working with ADOT to continually identify methods for delivering the project in a more effective manner. As a critical part of this tentative scenario, MAG and ADOT staff have generated value engineering decisions for the Loop 202/South Mountain and Loop 303 Freeway corridors resulting in approximately \$1.7 billion in savings to the Program. This process should continue periodically as the Regional Freeway and Highway Program is updated in the future.
- Continue to work with MAG member agencies to preserve future rights-of-way for new corridors. As ADOT completes its environmental studies for future freeway corridors, efforts should be made to actively coordinate acquisitions with affected stakeholders and to identify the most economical manner for obtaining right-of-way. And, as these costs may again escalate in the future, ADOT should incorporate a tighter urban design profile for future corridors allowing the facility to be constructed in the least amount of right-of-way possible.

In addition to potentially returning projects to an earlier phase, value engineering and other improved project delivery approaches will be an essential part of scaling deferred projects to fit within the funding forecasted to be available in Phase V of the RTP.

## **Tentative Scenario Summary Tables**

Table 1 – Regional Freeway and Highway Program – By Corridor

Table 2 – Regional Freeway and Highway Program – By Phase

**Table 1 - Regional Freeway and Highway Program - By Corridor**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**

Note: Shaded segments represent projects recommended for partial or full deferral to a future phase of the Regional Transportation Plan.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>INTERSTATE 10/PAPAGO</b>										
SR-85 to SR-303L	GP	Add one lane in each direction; Sarival Ave to Verrado Way	5.0	IV	\$ 44.2	\$ 46.9	Improvements underway Funded by ARRA Scheduled completion in Fall 2011	\$ 29.9	\$ 29.9	\$ -
SR-85 to SR-303L	GP	Add one lane in each direction; Verrado Way to SR-85	7.0	IV	\$ 61.8	\$ 50.5	<b>Defer general purpose lane widening from Verrado Way to SR-85 to future phase</b>	\$ -	\$ -	\$ -
SR-303L to Dysart Rd	TI	Construct Bullard Ave interchange	-	I	\$ 9.2	\$ 13.7	Construction finished Open to traffic	\$ 9.7	\$ 9.7	\$ -
SR-303L to Dysart Rd	GP, HOV	Add two general purpose lanes and one HOV lane in each direction	5.0	II	\$ 54.0	\$ 109.4	Improvements underway Scheduled completion in Fall 2011	\$ 109.4	\$ 109.4	\$ -
SR-303L to Dysart Rd	TI	Construct Perryville Rd interchange	-	II	\$ 9.2	\$ 23.4	Move forward with present plans Lower cost opinion due to recent bids	\$ 21.1	\$ -	\$ 21.1
Dysart Rd to SR-101L	GP, HOV	Add one general purpose and one HOV lane in each direction	6.0	II	\$ 57.0	\$ 63.3	Improvements underway Scheduled completion in Fall 2011	\$ 61.7	\$ 61.7	\$ -
Dysart Rd to SR-101L	TI	Construct El Mirage Rd interchange	-	IV	\$ 17.3	\$ 22.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 19.8	\$ -	\$ 19.8
SR-101L/Agua Fria to I-17/Black Canyon	GP	Add one lane in each direction	7.0	I	\$ 79.0	\$ 424.0	Repackage project to match RTP funding; Reprogram construction to match timing of SR-202L/South Mountain connection at 59th Avenue	\$ 79.0	\$ 17.2	\$ 61.8
<b>Totals for Interstate 10/Papago Corridor:</b>					\$ 331.7	\$ 753.7		\$ 330.5	\$ 227.9	\$ 102.6
<b>INTERSTATE 10/MARICOPA</b>										
SR-51 to 40th St (CD Roads)	GP	Add General Purpose Lanes	3.0	II	\$ 120.0	\$ -	<b>Defer general purpose lane construction to future phase</b> Retain budget for reconstruction of West PHX Sky Harbor traffic interchange for security purposes	\$ 30.0	\$ -	\$ 30.0
40th St to Baseline Rd (CD Roads)	GP, HOV	Construct Local-Express Lane system, consisting of: - Reconstruct SR-143 interchange - Add two general purpose lanes in each direction - Add one HOV lane in each direction	6.0	I	\$ 380.0	\$ 495.0	Move forward with present plans Lower cost opinion due to recent bids	\$ 446.1	\$ 18.1	\$ 428.0
Baseline Rd to SR-202L/Santan	GP	Add one lane in each direction Reconstruct I-10 approach to US-60/Superstition system interchange	6.0	II	\$ 53.0	\$ 234.1	Move forward with present plans Lower cost opinion due to recent bids	\$ 202.4	\$ 8.1	\$ 194.3
SR-202L/Santan to Riggs Rd	HOV	Add one HOV lane in each direction	6.0	II	\$ 23.0	\$ 34.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 31.1	\$ -	\$ 31.1
SR-202L/Santan to Riggs Rd	GP	Add one lane in each direction	6.0	II	\$ 23.0	\$ 34.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 31.1	\$ 0.2	\$ 30.9
SR-202L/Santan to Riggs Rd	TI	Construct Chandler Heights Rd interchange	-	IV	\$ 13.8	\$ 25.4	Move forward with present plans Lower cost opinion due to recent bids	\$ 22.9	\$ -	\$ 22.9
<b>Totals for Interstate 10/Maricopa Corridor:</b>					\$ 612.8	\$ 823.5		\$ 763.4	\$ 26.4	\$ 737.1

**Table 1 - Regional Freeway and Highway Program - By Corridor**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**

Note: Shaded segments represent projects recommended for partial or full deferral to a future phase of the Regional Transportation Plan.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>INTERSTATE 17/BLACK CANYON</b>										
I-10/Maricopa (Split) to I-10/Papago (Stack)	HOV	Add one HOV lane in each direction	7.0	III	\$ 77.0	\$ 81.5	Segment in need of rehabilitation, improvements to include: - Add one HOV lane in each direction - Add one GP lane in each direction - Improve service interchange ramp connections and I-17 Frontage Roads	\$ 400.0	\$ 4.5	\$ 395.5
I-10/Papago (Stack) to Arizona Canal	GP	Add General Purpose Lanes (number unspecified and to be determined from study)	7.0	III	\$ 1,000.0	\$ 962.3	Revise design plan to include: - Add one GP lane in each direction - Improve service interchange ramp connections and I-17 Frontage Roads	\$ 600.0	\$ 2.3	\$ 597.7
Arizona Canal to SR-101L/Agua Fria and Pima Fwys	GP	Add one lane in each direction	6.0	II	\$ 53.0	\$ 135.1	Move forward with present plans Lower cost opinion due to recent bids	\$ 121.6	\$ 6.8	\$ 114.8
SR-101L/Agua Fria and Pima Fwys to SR-74/Carefree Hwy	GP, HOV	Add one general purpose and one HOV lane in each direction	9.0	I	\$ 169.0	\$ 330.6	Improvements underway Scheduled completion in Spring 2010	\$ 330.6	\$ 330.6	\$ -
SR-101L/Agua Fria and Pima Fwys to SR-74/Carefree Hwy	TI	Construct Jomax Rd and Dixileta Rd interchanges	-	I	\$ 27.6	\$ 41.2	Construction finished Opened to traffic	\$ 41.2	\$ 41.2	\$ -
SR-101L/Agua Fria and Pima Fwys to SR-74/Carefree Hwy	TI	Construct Dove Valley Rd interchange Advanced by the City of Phoenix	-	IV	\$ 18.4	\$ 22.7	Construction underway Scheduled completion in Summer 2010	\$ 22.7	\$ 22.7	\$ -
SR-74/Carefree Hwy to Anthem Way	GP, HOV	Add one general purpose and one HOV lane in each direction	5.0	IV	\$ 72.0	\$ 117.9	Improvements underway - Add one GP lane in each direction - Funded by ARRA - Scheduled completion in Fall 2010 <b>Defer urban section and HOV lanes to Future Phase</b>	\$ 16.8	\$ 16.8	\$ -
Anthem Way to New River Rd	GP	Add one lane in each direction	3.0	IV	\$ 26.0	\$ 25.0	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
Totals for Interstate 17/Black Canyon Corridor:					\$ 1,443.0	\$ 1,716.2		\$ 1,532.8	\$ 424.8	\$ 1,108.0
<b>US-60/GRAND AVE</b>										
SR-303L to SR-101L/Agua Fria	GP	Add one lane in each direction	10.0	I	\$ 39.0	\$ 51.2	Move forward with present plans Lower cost opinion due to recent bids	\$ 51.2	\$ 51.2	\$ -
SR-303L to SR-101L/Agua Fria	GP	Construct up to two additional grade separated traffic interchanges at locations to be determined	10.0	II	\$ 64.0	\$ 63.2	Move forward with present plans Lower cost opinion due to recent bids	\$ 63.2	\$ -	\$ 63.2
SR-101L/Agua Fria to Van Buren St	GP	Add one lane in each direction 83rd Ave to 99th Ave Spot Improvements throughout corridor in Glendale and Phoenix	11.0	I	\$ 30.0	\$ 48.7	Move forward with present plans Plans ready to bid	\$ 48.7	\$ 48.7	\$ -
SR-101L/Agua Fria to Van Buren St	GP	Construct at-grade intersection improvements at locations to be determined	11.0	II	\$ 20.0	\$ 23.3	Move forward with present plans Lower cost opinion due to recent bids	\$ 23.3	\$ 23.3	\$ -
SR-101L/Agua Fria to Van Buren St	TI	Construct up to three additional arterial grade separated traffic interchanges at locations to be determined	11.0	IV	\$ 97.0	\$ 97.0	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
Totals for US-60/Grand Ave Corridor:					\$ 250.0	\$ 283.5		\$ 186.5	\$ 123.2	\$ 63.2

**Table 1 - Regional Freeway and Highway Program - By Corridor**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**

Note: Shaded segments represent projects recommended for partial or full deferral to a future phase of the Regional Transportation Plan.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>US-60/SUPERSTITION</b>										
I-10 to SR-101L/Price Fwy	GP	Add one lane in each direction	4.5	I	\$ 9.0	\$ 25.0	Improvements underway Scheduled completion in Fall 2010	\$ 25.0	\$ 25.0	\$ -
SR-101L/Price to Val Vista Dr	TI	Construct Lindsay Rd interchange with ramps to/from West	-	II	\$ 4.6	\$ 8.8	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
Val Vista Dr to Power Rd	GP, HOV	Add two general purpose lanes and one HOV lane in each direction	4.0	I	\$ 85.0	\$ 96.0	Construction finished Open to traffic	\$ 96.0	\$ 96.0	\$ -
Crismon Rd to Meridian Rd	HOV	Add one HOV lane in each direction	2.0	III	\$ 31.0	\$ 30.2	Move forward with present plans Lower cost opinion due to recent bids	\$ 27.2	\$ -	\$ 27.2
Crismon Rd to Meridian Rd	TI	Construct Meridian Rd interchange with ramps to/from West	-	II	\$ 4.6	\$ 8.8	Move forward with present plans Lower cost opinion due to recent bids	\$ 7.9	\$ -	\$ 7.9
Totals for US-60/Superstition Corridor:					\$ 134.2	\$ 168.8		\$ 156.1	\$ 121.0	\$ 35.1
<b>US-93</b>										
Yavapai County to Wickenburg	GP	Construct interim Wickenburg Bypass	3.4	I	\$ 24.0	\$ 31.6	Improvements underway Scheduled completion in Spring 2010	\$ 31.6	\$ 31.6	\$ -
Total for US-93 Corridor:					\$ 24.0	\$ 31.6		\$ 31.6	\$ 31.6	\$ -
<b>SR-51/PIESTEWA</b>										
SR-101L/Pima to Shea Blvd	HOV, DHOV	- Add one HOV lane in each direction - Construct direct HOV ramp to SR-101L/Pima on the east	6.0	I	\$ 52.0	\$ 51.3	Construction finished Open to traffic	\$ 51.3	\$ 51.3	\$ -
SR-101L/Pima to Shea Blvd	GP	Add one lane in each direction	6.0	IV	\$ 51.0	\$ 81.7	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
Totals for SR-51/Piestewa Corridor:					\$ 103.0	\$ 133.0		\$ 51.3	\$ 51.3	\$ -
<b>LOOP 101/AGUA FRIA</b>										
MC-85 to Interstate 10	GP	Construct improvements along 99th Ave	-	I	\$ -	\$ 4.0	Improvements Underway Scheduled completion in 2010	\$ 4.0	\$ 4.0	\$ -
I-10 to US-60/Grand Ave	TI	Complete Bethany Home Rd interchange with ramps to/from North	-	I	\$ 10.0	\$ 9.4	Construction finished Open to traffic	\$ 9.4	\$ 9.4	\$ -
I-10 to US-60/Grand Ave	HOV	Add one HOV lane in each direction	10.0	III	\$ 53.0	\$ 53.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 48.2	\$ -	\$ 48.2
I-10 to US-60/Grand Ave	GP	Add one lane in each direction	10.0	IV	\$ 85.0	\$ 150.4	Obligated funds are for: - Frwy Management Sys construction - Improvmnts at Olive, Northern <b>Defer GP Lanes to Future Phase</b>	\$ 14.4	\$ 14.4	\$ -
I-10 to US-60/Grand Ave	DHOV	Construct Direct HOV Ramp to/from I-10/Papago on East	-	IV	\$ 60.0	\$ 68.1	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
US-60/Grand Ave to I-17	TI	Construct Beardsley Rd-Union Hills Rd interchange	-	II	\$ 24.8	\$ 28.8	Improvements underway Scheduled completion in Spring 2011	\$ 28.8	\$ 28.8	\$ -
US-60/Grand Ave to I-17	HOV	Add one HOV lane in each direction	12.0	IV	\$ 64.0	\$ 64.2	Move forward with present plans Lower cost opinion due to recent bids	\$ 57.8	\$ -	\$ 57.8
US-60/Grand Ave to I-17	GP	Add one lane in each direction	12.0	IV	\$ 102.0	\$ 177.8	Obligated funds are for: - Frwy Management Sys construction - Improvmnts at Thunderbird <b>Defer GP Lanes to Future Phase</b>	\$ 2.8	\$ 2.8	\$ -
US-60/Grand Ave to I-17	DHOV	Construct Direct HOV Ramp to/from I-17/Black Canyon on the South	-	IV	\$ 72.0	\$ 81.1	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
Totals for Loop 101/Agua Fria Corridor:					\$ 470.8	\$ 637.3		\$ 165.3	\$ 59.4	\$ 105.9

**Table 1 - Regional Freeway and Highway Program - By Corridor**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**

Note: Shaded segments represent projects recommended for partial or full deferral to a future phase of the Regional Transportation Plan.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>LOOP 101/PIMA</b>										
I-17 to SR-51	HOV	Add one HOV lane in each direction	7.0	II	\$ 37.0	\$ 37.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 33.8	\$ 5.4	\$ 28.3
I-17 to SR-51	GP	Add one lane in each direction	7.0	IV	\$ 59.0	\$ 93.5	Move forward with present plans to address highest volumes on the regional loop freeways Lower cost opinion due to recent bids	\$ 84.1	\$ 5.5	\$ 78.7
SR-51 to Princess Dr	TI	Construct 64th St interchange	-	I	\$ 16.6	\$ 31.4	Construction finished Will open after 64th St is complete	\$ 31.4	\$ 31.4	\$ -
SR-51 to Princess Dr	HOV	Add one HOV lane in each direction	6.0	II	\$ 29.0	\$ 18.8	Construction finished Open to traffic	\$ 18.8	\$ 18.8	\$ -
SR-51 to Princess Dr	GP	Add one lane in each direction	6.0	IV	\$ 51.0	\$ 86.0	Move forward with present plans to address highest volumes on the regional loop freeways Lower cost opinion due to recent bids	\$ 77.4	\$ 0.5	\$ 76.9
Princess Dr to Shea Blvd	HOV	Add one HOV lane in each direction	4.0	I	\$ 22.0	\$ 16.4	Construction finished Open to traffic	\$ 16.4	\$ 16.4	\$ -
Princess Dr to Shea Blvd	GP	Add one lane in each direction	4.0	IV	\$ 34.0	\$ 54.4	Move forward with present plans to address highest volumes on the regional loop freeways Lower cost opinion due to recent bids	\$ 49.0	\$ -	\$ 49.0
Shea Blvd to SR-202L/Red Mtn	HOV	Add one HOV lane in each direction	11.0	I	\$ 61.0	\$ 46.0	Construction finished Open to traffic Includes Chaparral improvements	\$ 46.0	\$ 46.0	\$ -
Shea Blvd to SR-202L/Red Mtn	GP	Add one lane in each direction	11.0	II	\$ 94.0	\$ 107.7	Move forward with present plans to address highest volumes on the regional loop freeways Lower cost opinion due to recent bids	\$ 96.9	\$ -	\$ 96.9
<b>Totals for Loop 101/Pima Corridor:</b>					\$ 403.6	\$ 491.6		\$ 453.6	\$ 123.9	\$ 329.8
<b>LOOP 101/PRICE</b>										
SR-202L/Red Mtn to Baseline Rd	HOV	Add one HOV lane in each direction	4.0	I	\$ 22.0	\$ 18.2	Improvements underway Scheduled completion in Fall 2009	\$ 18.2	\$ 18.2	\$ -
Baseline Rd to SR-202L/Santan	HOV	Add one HOV lane in each direction	6.0	I	\$ 31.0	\$ 25.9	Improvements underway Scheduled completion in Fall 2009	\$ 25.9	\$ 25.9	\$ -
Baseline Rd to SR-202L/Santan	GP	Add one lane in each direction	6.0	IV	\$ 51.0	\$ 58.1	Move forward with present plans to address highest volumes on the regional loop freeways Lower cost opinion due to recent bids	\$ 52.3	\$ -	\$ 52.3
<b>Totals for Loop 101/Price Corridor:</b>					\$ 104.0	\$ 102.2		\$ 96.4	\$ 44.1	\$ 52.3

**Table 1 - Regional Freeway and Highway Program - By Corridor**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**

Note: Shaded segments represent projects recommended for partial or full deferral to a future phase of the Regional Transportation Plan.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>SR-143/HOHOKAM</b>										
McDowell Rd to I-10/Maricopa	TI	Not identified in 2003 RTP Funding transferred to SR-143 from deleted SR-153 Sky Harbor Expwy	3.8	I	\$ -	\$ 36.6	Improvements identified as - Reconstruct Sky Harbor Blvd/SR-202S interchange to complete access to/from SR-143 on the south - Widen SR-143 overcrossing of Salt River as needed Move forward with present plans <i>Lower cost opinion due to recent bids</i>	\$ 36.6	\$ 36.6	\$ -
Totals for SR-143/Hohokam Corridor:					\$ -	\$ 36.6		\$ 36.6	\$ 36.6	\$ -
<b>LOOP 202/RED MOUNTAIN</b>										
I-10/SR-51 to Rural Rd	GP	Add general purpose lanes	7.0	I	\$ 67.0	\$ 178.1	Improvements underway Scheduled completion Spring 2011	\$ 178.1	\$ 178.1	\$ -
Rural Rd to SR-101L	GP	Add general purpose lanes	2.0	I	\$ 39.0	\$ 48.8	Improvements underway Scheduled completion Spring 2011	\$ 48.8	\$ 48.8	\$ -
SR-101L to Gilbert Rd	HOV	Add one HOV lane in each direction	6.0	I	\$ 32.0	\$ 27.4	Improvements underway Scheduled completion Spring 2011	\$ 27.4	\$ 27.4	\$ -
SR-101L to Gilbert Rd	GP	Add one lane in each direction	6.0	II	\$ 51.0	\$ 75.8	Move forward with present plans <i>Lower cost opinion due to recent bids</i>	\$ 68.2	\$ -	\$ 68.2
SR-101L to Gilbert Rd	TI	Construct Mesa Dr interchange with ramps to/from West	-	IV	\$ 4.6	\$ 15.0	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
Gilbert Rd to Higley Rd	HOV	Add one HOV lane in each direction	5.0	III	\$ 27.0	\$ 27.0	Move forward with present plans <i>Lower cost opinion due to recent bids</i>	\$ 24.3	\$ -	\$ 24.3
Gilbert Rd to Higley Rd	GP	Add one lane in each direction	5.0	IV	\$ 42.0	\$ 57.8	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
Higley Rd to US-60/Superstition	HOV	Add one HOV lane in each direction	10.0	IV	\$ 52.0	\$ 53.5	Move forward with present plans <i>Lower cost opinion due to recent bids</i>	\$ 48.2	\$ -	\$ 48.2
Higley Rd to US-60/Superstition	GP	Add one lane in each direction	10.0	IV	\$ 85.0	\$ 136.0	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
Higley Rd to US-60/Superstition	DHOV	Construct Direct HOV Ramp to/from US-60/Superstition on the West	-	IV	\$ 20.0	\$ 22.7	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
Totals for Loop 202/Red Mountain Corridor:					\$ 419.6	\$ 642.2		\$ 395.1	\$ 254.4	\$ 140.7
<b>LOOP 202/SANTAN</b>										
US-60/Superstition to Val Vista Rd	HOV	Add one HOV lane in each direction	11.0	IV	\$ 55.0	\$ 58.9	Move forward with present plans <i>Lower cost opinion due to recent bids</i>	\$ 53.0	\$ -	\$ 53.0
US-60/Superstition to Val Vista Rd	GP	Add one lane in each direction	11.0	IV	\$ 93.0	\$ 128.9	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
Val Vista Rd to Dobson Rd	HOV	Add one HOV lane in each direction	7.0	II	\$ 40.0	\$ 37.5	Move forward with present plans <i>Lower cost opinion due to recent bids</i>	\$ 33.8	\$ -	\$ 33.8
Val Vista Rd to Dobson Rd	GP	Add one lane in each direction	7.0	IV	\$ 59.0	\$ 82.0	Obligated funds are for Lindsay Rd to Gilbert Rd multi-modal path improvement <b>Defer GP Lanes to Future Phase</b>	\$ 1.1	\$ 1.1	\$ -
Dobson Rd to I-10/Maricopa Fwy	HOV, DHOV	Add one HOV lane in each direction Construct Direct HOV Ramp to/from Interstate 10 on the north	5.0	II	\$ 47.0	\$ 49.5	Move forward with present plans <i>Lower cost opinion due to recent bids</i>	\$ 44.6	\$ -	\$ 44.6
Dobson Rd to I-10/Maricopa Fwy	DHOV	Construct Direct HOV Ramp to/from SR-101L/Price on the North	-	III	\$ 20.4	\$ 22.7	Move forward with present plans <i>Lower cost opinion due to recent bids</i>	\$ 20.4	\$ -	\$ 20.4
Dobson Rd to I-10/Maricopa Fwy	GP	Add one lane in each direction	5.0	IV	\$ 43.0	\$ 57.8	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
Totals for Loop 202/Santan Corridor:					\$ 357.4	\$ 437.3		\$ 152.8	\$ 1.1	\$ 151.7

**Table 1 - Regional Freeway and Highway Program - By Corridor**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**  
Note: Shaded segments represent projects recommended for partial or full deferral to a future phase of the Regional Transportation Plan.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>LOOP 202/SOUTH MOUNTAIN</b>										
I-10/Papago Fwy to I-10/SR-202L Santan	GP	Construct new freeway, 3 general purpose lanes in each direction	22.0	II	\$ 1,067.0	\$ 2,472.3	Move forward with freeway plans for corridor, to include: - HOV Lane in each direction - Narrow cross-section matching Proposition 300 program construction - Alignment along 59th Avenue between Buckeye Rd and I-10 - Reconfigured I-10 interchange to allow for future DHOV access to/from East - Bicycle/Pedestrian Trail between 17th Ave and 51st Ave	\$ 1,900.0	\$ 61.3	\$ 1,838.7
Totals for Loop 202/South Mountain Corridor:					\$ 1,067.0	\$ 2,472.3		\$ 1,900.0	\$ 61.3	\$ 1,838.7
<b>LOOP 303</b>										
Riggs Rd to SR-801/MC-85	GP	Provide for ROW protection for extension of Loop 303 corridor	-	IV	\$ -	\$ 50.0	<b>Defer to future phase</b>	\$ -	\$ -	\$ -
SR-801/MC-85 to Interstate 10	GP	Construct new freeway, 3 general purpose lanes in each direction	5.0	III	\$ 230.0	\$ 390.2	<b>Defer to future phase</b> Finish Environmental Assessment and Design Concept Report efforts to identify corridor for ROW preservation by Goodyear	\$ -	\$ -	\$ -
Interstate 10/Papago to US-60/Grand Ave	GP	Construct new freeway, 3 general purpose lanes in each direction	15.0	II	\$ 545.0	\$ 1,872.0	Obligated funds are for advance construction of Bell Rd, Cactus Rd, and Waddell Rd interchanges and ROW  Move forward with freeway plans for corridor to include: - Narrow cross-section matching Proposition 300 program construction - Tighter construction of I-10 system interchange - interim construction of US-60 interchange - Lower cost opinion due to recent bids	\$ 1,196.4	\$ 112.1	\$ 1,084.3
US-60/Grand Ave to Interstate 17	GP	Construct interim facility, 2 general purpose lanes in each direction	18.0	I	\$ 354.8	\$ 347.6	Interim 4-l facility under construction Scheduled completion in 2011	\$ 347.6	\$ 347.6	\$ -
US-60/Grand Ave to Interstate 17	GP	Expand interim facility with one general purpose lane in each direction; finish freeway traffic interchanges	18.0	II	\$ 290.3	\$ 335.4	Move forward with present plans Lower cost opinion due to recent bids	\$ 301.9	\$ -	\$ 301.9
Totals for Loop 303 Corridor:					\$ 1,420.0	\$ 2,995.2		\$ 1,845.9	\$ 459.7	\$ 1,386.2

**Table 1 - Regional Freeway and Highway Program - By Corridor**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**

Note: Shaded segments represent projects recommended for partial or full deferral to a future phase of the Regional Transportation Plan.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>ARIZONA STATE ROUTE 801 (Interstate 10 Reliever)</b>										
SR-85 to SR-303L	GP	Construct interim facility, 1 general purpose lane in each direction	11.0	IV	\$ 83.0	\$ 211.0	<b>Defer to future phase</b> Finish Environmental Assessment and Design Concept Report efforts to identify corridor for ROW preservation by Buckeye and Goodyear	\$ -	\$ -	\$ -
SR-303L to Avondale Blvd	GP	Construct new freeway, 3 general purpose lanes in each direction	7.0	IV	\$ 352.2	\$ 790.5	<b>Defer to future phase</b> Finish Environmental Assessment and Design Concept Report efforts to identify corridor for ROW preservation by Goodyear and Avondale	\$ 13.5	\$ 13.5	\$ -
Avondale Blvd to SR-202L/South Mountain	GP	Construct new freeway, 3 general purpose lanes in each direction	6.0	IV	\$ 369.8	\$ 862.0	<b>Defer to future phase</b> Finish Environmental Assessment and Design Concept Report efforts to identify corridor for ROW preservation by Avondale and Phoenix	\$ 11.5	\$ 11.5	\$ -
<b>Totals for SR-801 Corridor:</b>					\$ 805.0	\$ 1,863.5		\$ 25.0	\$ 25.0	\$ -
<b>SR-802/WILLIAMS GATEWAY</b>										
SR-202L to Ellsworth Rd	GP	Construct new freeway, 3 general purpose lanes in each direction	2.0	III	\$ 155.0	\$ 235.3	Obligated funds are for advance ROW acquisition  Move forward with plans for Interim four-lane construction only (includes interchange with SR-202L/Santan) Lower cost opinion due to recent bids  <b>Defer ultimate construction to Future Phase</b>	\$ 183.4	\$ 28.3	\$ 155.1
Ellsworth Rd to Meridian Rd	GP	Construct new freeway, 3 general purpose lanes in each direction	3.0	III	\$ 170.0	\$ 236.0	<b>Defer to future phase</b> Finish Environmental Assessment and Design Concept Report efforts for entire corridor (including extension in Pinal County to US-60/SR-79) for ROW preservation by Mesa	\$ -	\$ -	\$ -
<b>Totals for SR-802/Williams Gateway Corridor:</b>					\$ 325.0	\$ 471.3		\$ 183.4	\$ 28.3	\$ 155.1
<b>SR-74/CAREFREE HIGHWAY</b>										
US-60/Grand Ave to SR-303L	GP	Construct passing lanes west of Lake Pleasant	25.1	I	\$ -	\$ 15.1	Improvements Underway Scheduled completion in 2010	\$ 10.1	\$ 10.1	\$ -
SR-303L to I-17	GP	Provide for ROW protection for future Lake Pleasant Fwy corridor	5.4	IV	\$ -	\$ 40.0	<b>Defer to future phase</b> Conduct future Environmental Assessment and Design Concept Report for freeway corridor ROW preservation by Peoria and Surprise	\$ -	\$ -	\$ -
<b>Totals for SR-74/Carefree Highway Corridor:</b>					\$ -	\$ 55.1		\$ 10.1	\$ 10.1	\$ -

**Table 1 - Regional Freeway and Highway Program - By Corridor**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**

Note: Shaded segments represent projects recommended for partial or full deferral to a future phase of the Regional Transportation Plan.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>SR-85</b>										
Interstate 8 to Hazen Rd	GP	Convert existing facility into four-lane divided highway	29.2	I	\$ 43.6	\$ 98.5	Corridor improvements underway between Hazen Rd and Maricopa Rd  ADOT cost opinion includes first phase of system interchange with Interstate 8  <b>Defer future improvements, including Interstate 8 interchange, to future phase</b>	\$ 78.5	\$ 78.5	\$ -
Hazen Rd to Interstate 10	GP	Convert existing facility into four-lane divided highway	5.6	I	\$ 74.9	\$ 152.5	Improvements underway Scheduled completion in 2011  <b>Defer full freeway section buildout between Hazen Rd and Interstate 10 to future phase</b>	\$ 64.0	\$ 64.0	\$ -
Totals for SR-85 Corridor:					\$ 118.6	\$ 251.0		\$ 142.5	\$ 142.5	\$ -
<b>SR-87</b>										
Gila County to Shea Blvd	GP	Construct spot improvements to corridor as needed	33.7	I	\$ 38.2	\$ 49.2	Improvements from Tonto Nat'l Forest Boundary to Dos S Ranch Rd identified Includes new Four Peaks Rd interchange  Move forward with present plans <i>Lower cost opinion due to recent bids</i>	\$ 49.2	\$ 49.2	\$ -
Totals for SR-87 Corridor:					\$ 38.2	\$ 49.2		\$ 49.2	\$ 49.2	\$ -
<b>SR-88/APACHE TRAIL</b>										
Pinal County to Gila County	GP	Construct spot improvements to corridor as needed	33.4	I	\$ 1.8	\$ 1.7	Improvements at Fish Creek Hill identified  Move forward with present plans <i>Lower cost opinion due to recent bids</i>	\$ 1.5	\$ 1.5	\$ -
Totals for SR-88/Apache Trail Corridor:					\$ 1.8	\$ 1.7		\$ 1.5	\$ 1.5	\$ -

**Table 1 - Regional Freeway and Highway Program - By Corridor**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**

Note: Shaded segments represent projects recommended for partial or full deferral to a future phase of the Regional Transportation Plan.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>SYSTEM-WIDE/FREEWAY MANAGEMENT SYSTEM</b>				flowing as smoothly as possible. Efforts in this system-wide category include providing for additional variable message signs,						
Freeway Management System	S/W	Phase I Expenditures	-	I	\$ 7.5	\$ 9.8	Efforts underway Scheduled completion in FY2010	\$ 9.8	\$ 9.8	\$ -
Freeway Management System	S/W	Phase II Expenditures	-	II	\$ 18.1	\$ 23.6	Reprogram cost opinion to match the original RTP estimate for Phase II	\$ 17.7	\$ -	\$ 17.7
Freeway Management System	S/W	Phase III Expenditures	-	III	\$ 41.9	\$ 54.8	Reprogram cost opinion to match the original RTP estimate for Phase III	\$ 41.0	\$ -	\$ 41.0
Freeway Management System	S/W	Phase IV Expenditures	-	IV	\$ 49.3	\$ 64.5	Reprogram cost opinion to match the original RTP estimate for Phase IV	\$ 48.3	\$ -	\$ 48.3
Totals for S/W Freeway Management System Program:					\$ 116.8	\$ 152.7		\$ 116.8	\$ 9.8	\$ 107.0
<b>SYSTEM-WIDE/MAINTENANCE</b>				education, landscaping, and other work items to maintain the condition of the Regional Freeway System.						
Landscaping, Liter, Maintenance	S/W	Phase I Expenditures	-	I	\$ 47.9	\$ 52.2	Efforts underway Scheduled completion in FY2010	\$ 52.2	\$ 52.2	\$ -
Landscaping, Liter, Maintenance	S/W	Phase II Expenditures	-	II	\$ 67.8	\$ 73.9	Reprogram cost opinion to match the original RTP estimate for Phase II	\$ 66.5	\$ -	\$ 66.5
Landscaping, Liter, Maintenance	S/W	Phase III Expenditures	-	III	\$ 76.8	\$ 83.8	Reprogram cost opinion to match the original RTP estimate for Phase III	\$ 75.4	\$ -	\$ 75.4
Landscaping, Liter, Maintenance	S/W	Phase IV Expenditures	-	IV	\$ 84.5	\$ 92.1	Reprogram cost opinion to match the original RTP estimate for Phase IV	\$ 82.9	\$ -	\$ 82.9
Totals for S/W Maintenance Program:					\$ 277.0	\$ 302.1		\$ 277.0	\$ 52.2	\$ 224.8
<b>SYSTEM-WIDE/NOISE MITIGATION</b>				those noise mitigation efforts identified in corridor-specific actions. These expenditures include additional noise walls and						
Noise Mitigation	S/W	Phase I Expenditures	-	I	\$ 55.0	\$ 67.2	Efforts underway Scheduled completion in FY2010	\$ 67.2	\$ 67.2	\$ -
Noise Mitigation	S/W	Phase II Expenditures	-	II	\$ 20.0	\$ 30.0	Reprogram cost opinion to match the original RTP estimate for Phase II	\$ 7.8	\$ -	\$ 7.8
Noise Mitigation	S/W	Phase III Expenditures	-	III	\$ -	\$ 150.0	Defer pavement preservation efforts to next phase	\$ -	\$ -	
Noise Mitigation	S/W	Phase IV Expenditures	-	IV	\$ -	\$ 150.0	Defer pavement preservation efforts to next phase	\$ -	\$ -	
Totals for S/W Noise Mitigation Program:					\$ 75.0	\$ 397.2		\$ 75.0	\$ 67.2	\$ 7.8
<b>SYSTEM-WIDE/RIGHT-OF-WAY</b>				period for the Regional Freeway system under Proposition 400.						
ROW	S/W	Phase I Expenditures	-	I	\$ 40.0	\$ 40.0	Efforts underway Scheduled completion in FY2010	\$ 40.0	\$ 40.0	\$ -
ROW	S/W	Phase II Expenditures	-	II	\$ 40.0	\$ 40.0	Move forward with present plans Lower cost opinion due to recent bids	\$ 40.0	\$ -	\$ 40.0
ROW	S/W	Phase III Expenditures	-	III	\$ 40.0	\$ 40.0	Move forward with present plans Lower cost opinion due to recent bids	\$ 40.0	\$ -	\$ 40.0
ROW	S/W	Phase IV Expenditures	-	IV	\$ 17.0	\$ 17.0	Move forward with present plans Lower cost opinion due to recent bids	\$ 17.0	\$ -	\$ 17.0
Totals for S/W Right-of-Way Program:					\$ 137.0	\$ 137.0		\$ 137.0	\$ 40.0	\$ 97.0

**Table 1 - Regional Freeway and Highway Program - By Corridor**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**

Note: Shaded segments represent projects recommended for partial or full deferral to a future phase of the Regional Transportation Plan.

RTP Segment	Project Type	RTP Proposal	Length (miles)	RTP Phase	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>SYSTEM-WIDE/DESIGN</b>				throughout the period for the Regional Freeway system under Proposition 400. Expenditures include the administration of the						
Design	S/W	Phase I Expenditures	-	I	\$ 112.1	\$ 142.4	Efforts underway Scheduled completion in FY2010	\$ 142.4	\$ 142.4	\$ -
Design	S/W	Phase II Expenditures	-	II	\$ 103.8	\$ 131.9	Reprogram cost opinion to match the original RTP estimate for Phase II	\$ 91.7	\$ -	\$ 91.7
Design	S/W	Phase III Expenditures	-	III	\$ 98.8	\$ 125.5	Reprogram cost opinion to match the original RTP estimate for Phase III	\$ 87.3	\$ -	\$ 87.3
Design	S/W	Phase IV Expenditures	-	IV	\$ 57.5	\$ 73.0	Reprogram cost opinion to match the original RTP estimate for Phase IV	\$ 50.8	\$ -	\$ 50.8
Totals for S/W Design Program:					\$ 372.2	\$ 472.8		\$ 372.2	\$ 142.4	\$ 229.8
<b>SYSTEM-WIDE/MINOR PROJECTS</b>				improvements on the Regional Freeway System under Proposition 400. Examples include, but may not be limited to, arterial						
Minor Projects	S/W	Phase I Expenditures	-	I	\$ 1.3	\$ 7.9	Efforts underway Scheduled completion in FY2010	\$ 7.9	\$ 7.9	\$ -
Minor Projects	S/W	Phase II Expenditures	-	II	\$ 2.6	\$ 15.0	Reprogram cost opinion to match the original RTP estimate for Phase II	\$ 0.4	\$ -	\$ 2.6
Minor Projects	S/W	Phase III Expenditures	-	III	\$ 2.6	\$ 15.0	Reprogram cost opinion to match the original RTP estimate for Phase III	\$ 0.4	\$ -	\$ 2.6
Minor Projects	S/W	Phase IV Expenditures	-	IV	\$ 2.6	\$ 15.0	Reprogram cost opinion to match the original RTP estimate for Phase IV	\$ 0.4	\$ -	\$ 2.6
Totals for S/W Minor Projects Program:					\$ 9.0	\$ 52.9		\$ 9.1	\$ 7.9	\$ 7.8
					2003 RTP Estimate	2009 ADOT Cost Opinion		Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
Totals for Regional Freeway and Highway Program:					\$ 9,416.7	\$ 15,931.3		\$ 9,496.8	\$ 2,622.8	\$ 6,880.6

**Table 2 - Regional Freeway and Highway Program - By Phase**

DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

Note: Shaded segments represent Proposition 400 construction projects completed or underway as of June 2009.

Route	Corridor	RTP Segment	Project Type	RTP Proposal	Length (miles)	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>PHASE I - FY2006 TO FY2010</b>											
I-10	Papago	SR-303L to Dysart Rd	TI	Construct Bullard Ave interchange	-	\$ 9.2	\$ 13.7	Construction finished Open to traffic	\$ 9.7	\$ 9.7	\$ -
I-10	Papago	SR-101L/Agua Fria to I-17/Black Canyon	GP	Add one lane in each direction	7.0	\$ 79.0	\$ 424.0	Repackage project to match RTP funding; Reprogram construction to match timing of SR-202L/South Mountain connection at 59th Avenue	\$ 79.0	\$ 17.2	\$ 61.8
I-10	Maricopa	40th St to Baseline Rd (CD Roads)	GP, HOV	Construct Local-Express Lane system, consisting of: - Reconstruct SR-143 interchange - Add two general purpose lanes in each direction - Add one HOV lane in each direction	6.0	\$ 380.0	\$ 495.0	Move forward with present plans Lower cost opinion due to recent bids	\$ 446.1	\$ 18.1	\$ 428.0
I-17	Black Canyon	SR-101L/Agua Fria and Pima Fwys to SR-74/Carefree Hwy	GP, HOV	Add one general purpose and one HOV lane in each direction	9.0	\$ 169.0	\$ 330.6	Improvements underway Scheduled completion in Spring 2010	\$ 330.6	\$ 330.6	\$ -
I-17	Black Canyon	SR-101L/Agua Fria and Pima Fwys to SR-74/Carefree Hwy	TI	Construct Jomax Rd and Dixileta Rd interchanges	-	\$ 27.6	\$ 41.2	Construction finished Opened to traffic	\$ 41.2	\$ 41.2	\$ -
US-60	Grand	SR-303L to SR-101L/Agua Fria	GP	Add one lane in each direction	10.0	\$ 39.0	\$ 51.2	Move forward with present plans Lower cost opinion due to recent bids	\$ 51.2	\$ 51.2	\$ -
US-60	Grand	SR-101L/Agua Fria to Van Buren St	GP	Add one lane in each direction 83rd Ave to 99th Ave Spot Improvements throughout corridor in Glendale and Phoenix	11.0	\$ 30.0	\$ 48.7	Move forward with present plans Plans ready to bid	\$ 48.7	\$ 48.7	\$ -
US-60	Superstition	I-10 to SR-101L/Price Fwy	GP	Add one lane in each direction	4.5	\$ 9.0	\$ 25.0	Improvements underway Scheduled completion in Fall 2010	\$ 25.0	\$ 25.0	\$ -
US-60	Superstition	Val Vista Dr to Power Rd	GP, HOV	Add two general purpose lanes and one HOV lane in each direction	4.0	\$ 85.0	\$ 96.0	Construction finished Open to traffic	\$ 96.0	\$ 96.0	\$ -
US-93	US-93	Yavapai County to Wickenburg	GP	Construct interim Wickenburg Bypass	3.4	\$ 24.0	\$ 31.6	Improvements underway Scheduled completion in Spring 2010	\$ 31.6	\$ 31.6	\$ -
SR-51	Piestewa	SR-101L/Pima to Shea Blvd	HOV, DHOV	- Add one HOV lane in each direction - Construct direct HOV ramp to SR-101L/Pima on the east	6.0	\$ 52.0	\$ 51.3	Construction finished Open to traffic	\$ 51.3	\$ 51.3	\$ -
SR-101L	Agua Fria	MC-85 to Interstate 10	GP	Construct improvements along 99th Ave	-	\$ -	\$ 4.0	Improvements Underway Scheduled completion in 2010	\$ 4.0	\$ 4.0	\$ -
SR-101L	Agua Fria	I-10 to US-60/Grand Ave	TI	Complete Bethany Home Rd interchange with ramps to/from North	-	\$ 10.0	\$ 9.4	Construction finished Open to traffic	\$ 9.4	\$ 9.4	\$ -
SR-101L	Pima	SR-51 to Princess Dr	TI	Construct 64th St interchange	-	\$ 16.6	\$ 31.4	Construction finished Will open after 64th St is complete	\$ 31.4	\$ 31.4	\$ -
SR-101L	Pima	Princess Dr to Shea Blvd	HOV	Add one HOV lane in each direction	4.0	\$ 22.0	\$ 16.4	Construction finished Open to traffic	\$ 16.4	\$ 16.4	\$ -
SR-101L	Pima	Shea Blvd to SR-202L/Red Mtn	HOV	Add one HOV lane in each direction	11.0	\$ 61.0	\$ 46.0	Construction finished Open to traffic Includes Chaparral improvements	\$ 46.0	\$ 46.0	\$ -

**Project Type Key:**

- GP - General Purpose Lane Widening
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- DHOV - Direct HOV Ramp connection
- S/W - System-wide Project

**Table 2 - Regional Freeway and Highway Program - By Phase**

DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

Note: Shaded segments represent Proposition 400 construction projects completed or underway as of June 2009.

Route	Corridor	RTP Segment	Project Type	RTP Proposal	Length (miles)	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
SR-101L	Price	SR-202L/Red Mtn to Baseline Rd	HOV	Add one HOV lane in each direction	4.0	\$ 22.0	\$ 18.2	Improvements underway Scheduled completion in Fall 2009	\$ 18.2	\$ 18.2	\$ -
SR-101L	Price	Baseline Rd to SR-202L/Santan	HOV	Add one HOV lane in each direction	6.0	\$ 31.0	\$ 25.9	Improvements underway Scheduled completion in Fall 2009	\$ 25.9	\$ 25.9	\$ -
SR-143	Hohokam	McDowell Rd to I-10/Maricopa	TI	Not identified in 2003 RTP Funding transferred to SR-143 from deleted SR-153 Sky Harbor Expwy	3.8	\$ -	\$ 36.6	Improvements identified as - Reconstruct Sky Harbor Blvd/SR-202S interchange to complete access to/from SR-143 on the south - Widen SR-143 overcrossing of Salt River as needed Move forward with present plans <del>Lower cost opinion due to recent bids</del>	\$ 36.6	\$ 36.6	\$ -
SR-202L	Red Mountain	I-10/SR-51 to Rural Rd	GP	Add general purpose lanes	7.0	\$ 67.0	\$ 178.1	Improvements underway Scheduled completion Spring 2011	\$ 178.1	\$ 178.1	\$ -
SR-202L	Red Mountain	Rural Rd to SR-101L	GP	Add general purpose lanes	2.0	\$ 39.0	\$ 48.8	Improvements underway Scheduled completion Spring 2011	\$ 48.8	\$ 48.8	\$ -
SR-202L	Red Mountain	SR-101L to Gilbert Rd	HOV	Add one HOV lane in each direction	6.0	\$ 32.0	\$ 27.4	Improvements underway Scheduled completion Spring 2011	\$ 27.4	\$ 27.4	\$ -
SR-303L	Estrella	US-60/Grand Ave to Interstate 17	GP	Construct interim facility, 2 general purpose lanes in each direction	18.0	\$ 354.8	\$ 347.6	Interim 4-l facility under construction Scheduled completion in 2011	\$ 347.6	\$ 347.6	\$ -
SR-74	Carefree Hwy	US-60/Grand Ave to SR-303L	GP	Construct passing lanes west of Lake Pleasant	25.1	\$ -	\$ 15.1	Improvements Underway Scheduled completion in 2010	\$ 10.1	\$ 10.1	\$ -
SR-85	SR-85	Interstate 8 to Hazen Rd	GP	Convert existing facility into four-lane divided highway	29.2	\$ 43.6	\$ 98.5	Corridor improvements underway between Hazen Rd and Maricopa Rd  ADOT cost opinion includes first phase of system interchange with Interstate 8  Defer future improvements, including Interstate 8 interchange, to future phase	\$ 78.5	\$ 78.5	\$ -
SR-85	SR-85	Hazen Rd to Interstate 10	GP	Convert existing facility into four-lane divided highway	5.6	\$ 74.9	\$ 152.5	Improvements underway Scheduled completion in 2011  Defer full freeway section buildout between Hazen Rd and Interstate 10 to future phase	\$ 64.0	\$ 64.0	\$ -
SR-87	Beeline Hwy	Gila County to Shea Blvd	GP	Construct spot improvements to corridor as needed	33.7	\$ 38.2	\$ 49.2	Improvements from Tonto Nat'l Forest Boundary to Dos S Ranch Rd identified Includes new Four Peaks Rd interchange  Move forward with present plans <del>Lower cost opinion due to recent bids</del>	\$ 49.2	\$ 49.2	\$ -
SR-88	Apache Trail	Pinal County to Gila County	GP	Construct spot improvements to corridor as needed	33.4	\$ 1.8	\$ 1.7	Improvements at Fish Creek Hill identified  Move forward with present plans Lower cost opinion due to recent bids	\$ 1.5	\$ 1.5	\$ -

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**Table 2 - Regional Freeway and Highway Program - By Phase**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**

Note: Shaded segments represent Proposition 400 construction projects completed or underway as of June 2009.

Route	Corridor	RTP Segment	Project Type	RTP Proposal	Length (miles)	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
S/W	FMS	Freeway Management System	S/W	Phase I Expenditures	-	\$ 7.5	\$ 9.8	Efforts underway Scheduled completion in FY2010	\$ 9.8	\$ 9.8	\$ -
S/W	Maintenance	Landscaping, Liter, Maintenance	S/W	Phase I Expenditures	-	\$ 47.9	\$ 52.2	Efforts underway Scheduled completion in FY2010	\$ 52.2	\$ 52.2	\$ -
S/W	Noise Mitigation	Noise Mitigation	S/W	Phase I Expenditures	-	\$ 55.0	\$ 67.2	Efforts underway Scheduled completion in FY2010	\$ 67.2	\$ 67.2	\$ -
S/W	ROW	ROW	S/W	Phase I Expenditures	-	\$ 40.0	\$ 40.0	Efforts underway Scheduled completion in FY2010	\$ 40.0	\$ 40.0	\$ -
S/W	Design	Design	S/W	Phase I Expenditures	-	\$ 112.1	\$ 142.4	Efforts underway Scheduled completion in FY2010	\$ 142.4	\$ 142.4	\$ -
S/W	Park N Ride	Minor Projects	S/W	Phase I Expenditures	-	\$ 1.3	\$ 7.9	Efforts underway Scheduled completion in FY2010	\$ 7.9	\$ 7.9	\$ -
<b>REGIONAL FREEWAY AND HIGHWAY PROGRAM TOTALS FOR PHASE I - FY2006 TO FY2010:</b>						<b>\$ 1,981.6</b>	<b>\$ 3,034.6</b>		<b>\$ 2,523.1</b>	<b>\$ 2,033.3</b>	<b>\$ 489.8</b>

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**Table 2 - Regional Freeway and Highway Program - By Phase**

DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

Note: Shaded segments represent Proposition 400 construction projects completed or underway as of June 2009.

Route	Corridor	RTP Segment	Project Type	RTP Proposal	Length (miles)	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>PHASE II - FY2011 TO FY2015</b>											
I-10	Papago	SR-303L to Dysart Rd	GP, HOV	Add two general purpose lanes and one HOV lane in each direction	5.0	\$ 54.0	\$ 109.4	Improvements underway Scheduled completion in Fall 2011	\$ 109.4	\$ 109.4	\$ -
I-10	Papago	SR-303L to Dysart Rd	TI	Construct Perryville Rd interchange	-	\$ 9.2	\$ 23.4	Move forward with present plans Lower cost opinion due to recent bids	\$ 21.1	\$ -	\$ 21.1
I-10	Papago	Dysart Rd to SR-101L	GP, HOV	Add one general purpose and one HOV lane in each direction	6.0	\$ 57.0	\$ 63.3	Improvements underway Scheduled completion in Fall 2011	\$ 61.7	\$ 61.7	\$ -
I-10	Maricopa	SR-51 to 40th St (CD Roads)	GP	Add General Purpose Lanes	3.0	\$ 120.0	\$ -	Defer general purpose lane construction to future phase Retain budget for reconstruction of West PHX Sky Harbor traffic interchange for security purposes	\$ 30.0	\$ -	\$ 30.0
I-10	Maricopa	Baseline Rd to SR-202L/Santan	GP	Add one lane in each direction Reconstruct I-10 approach to US-60/Superstition system interchange	6.0	\$ 53.0	\$ 234.1	Move forward with present plans Lower cost opinion due to recent bids	\$ 202.4	\$ 8.1	\$ 194.3
I-10	Maricopa	SR-202L/Santan to Riggs Rd	HOV	Add one HOV lane in each direction	6.0	\$ 23.0	\$ 34.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 31.1	\$ -	\$ 31.1
I-10	Maricopa	SR-202L/Santan to Riggs Rd	GP	Add one lane in each direction	6.0	\$ 23.0	\$ 34.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 31.1	\$ 0.2	\$ 30.9
I-17	Black Canyon	Arizona Canal to SR-101L/Agua Fria and Pima Fwys	GP	Add one lane in each direction	6.0	\$ 53.0	\$ 135.1	Move forward with present plans Lower cost opinion due to recent bids	\$ 121.6	\$ 6.8	\$ 114.8
US-60	Grand	SR-303L to SR-101L/Agua Fria	GP	Construct up to two additional grade separated traffic interchanges at locations to be determined	10.0	\$ 64.0	\$ 63.2	Move forward with present plans Lower cost opinion due to recent bids	\$ 63.2	\$ -	\$ 63.2
US-60	Grand	SR-101L/Agua Fria to Van Buren St	GP	Construct at-grade intersection improvements at locations to be determined	11.0	\$ 20.0	\$ 23.3	Move forward with present plans Lower cost opinion due to recent bids	\$ 23.3	\$ 23.3	\$ -
US-60	Superstition	Crison Rd to Meridian Rd	TI	Construct Meridian Rd interchange with ramps to/from West	-	\$ 4.6	\$ 8.8	Move forward with present plans Lower cost opinion due to recent bids	\$ 7.9	\$ -	\$ 7.9
SR-101L	Agua Fria	US-60/Grand Ave to I-17	TI	Construct Beardsley Rd-Union Hills Rd interchange	-	\$ 24.8	\$ 28.8	Improvements underway Scheduled completion in Spring 2011	\$ 28.8	\$ 28.8	\$ -
SR-101L	Pima	I-17 to SR-51	HOV	Add one HOV lane in each direction	7.0	\$ 37.0	\$ 37.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 33.8	\$ 5.4	\$ 28.3
SR-101L	Pima	SR-51 to Princess Dr	HOV	Add one HOV lane in each direction	6.0	\$ 29.0	\$ 18.8	Construction finished Open to traffic	\$ 18.8	\$ 18.8	\$ -
SR-101L	Pima	Shea Blvd to SR-202L/Red Mtn	GP	Add one lane in each direction	11.0	\$ 94.0	\$ 107.7	Move forward with present plans to address highest volumes on the regional loop freeways Lower cost opinion due to recent bids	\$ 96.9	\$ -	\$ 96.9
SR-202L	Red Mountain	SR-101L to Gilbert Rd	GP	Add one lane in each direction	6.0	\$ 51.0	\$ 75.8	Move forward with present plans Lower cost opinion due to recent bids	\$ 68.2	\$ -	\$ 68.2
SR-202L	Santan	Val Vista Rd to Dobson Rd	HOV	Add one HOV lane in each direction	7.0	\$ 40.0	\$ 37.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 33.8	\$ -	\$ 33.8
SR-202L	Santan	Dobson Rd to I-10/Maricopa Fwy	HOV, DHOV	Add one HOV lane in each direction Construct Direct HOV Ramp to/from Interstate 10 on the north	5.0	\$ 47.0	\$ 49.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 44.6	\$ -	\$ 44.6

**Project Type Key:**

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**Table 2 - Regional Freeway and Highway Program - By Phase**

DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

Note: Shaded segments represent Proposition 400 construction projects completed or underway as of June 2009.

Route	Corridor	RTP Segment	Project Type	RTP Proposal	Length (miles)	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
SR-202L	South Mountain	I-10/Papago Fwy to I-10/SR-202L Santan	GP	Construct new freeway, 3 general purpose lanes in each direction	22.0	\$ 1,067.0	\$ 2,472.3	Move forward with freeway plans for corridor, to include: - HOV Lane in each direction - Narrow cross-section matching Proposition 300 program construction - Alignment along 59th Avenue between Buckeye Rd and I-10 - Reconfigured I-10 interchange to allow for future DHOV access to/from East - Bicycle/Pedestrian Trail between 17th Ave and 51st Ave	\$ 1,900.0	\$ 61.3	\$ 1,838.7
SR-303L	Estrella	Interstate 10/Papago to US-60/Grand Ave	GP	Construct new freeway, 3 general purpose lanes in each direction	15.0	\$ 545.0	\$ 1,872.0	Obligated funds are for advance construction of Bell Rd, Cactus Rd, and Waddell Rd interchanges and ROW  Move forward with freeway plans for corridor to include: - Narrow cross-section matching Proposition 300 program construction - Tighter construction of I-10 system interchange - interim construction of US-60 interchange - Lower cost opinion due to recent bids	\$ 1,196.4	\$ 112.1	\$ 1,084.3
SR-303L	Estrella	US-60/Grand Ave to Interstate 17	GP	Expand interim facility with one general purpose lane in each direction; finish freeway traffic interchanges	18.0	\$ 290.3	\$ 335.4	Move forward with present plans Lower cost opinion due to recent bids	\$ 301.9	\$ -	\$ 301.9
S/W	FMS	Freeway Management System	S/W	Phase II Expenditures	-	\$ 18.1	\$ 23.6	Reprogram cost opinion to match the original RTP estimate for Phase II	\$ 17.7	\$ -	\$ 17.7
S/W	Maintenance	Landscaping, Liter, Maintenance	S/W	Phase II Expenditures	-	\$ 67.8	\$ 73.9	Reprogram cost opinion to match the original RTP estimate for Phase II	\$ 66.5	\$ -	\$ 66.5
S/W	Noise Mitigation	Noise Mitigation	S/W	Phase II Expenditures	-	\$ 20.0	\$ 30.0	Reprogram cost opinion to match the original RTP estimate for Phase II	\$ 7.8	\$ -	\$ 7.8
S/W	ROW	ROW	S/W	Phase II Expenditures	-	\$ 40.0	\$ 40.0	Move forward with present plans Lower cost opinion due to recent bids	\$ 40.0	\$ -	\$ 40.0
S/W	Design	Design	S/W	Phase II Expenditures	-	\$ 103.8	\$ 131.9	Reprogram cost opinion to match the original RTP estimate for Phase II	\$ 91.7	\$ -	\$ 91.7
S/W	Park N Ride	Minor Projects	S/W	Phase II Expenditures	-	\$ 2.6	\$ 15.0	Reprogram cost opinion to match the original RTP estimate for Phase II	\$ 0.4	\$ -	\$ 2.6
<b>REGIONAL FREEWAY AND HIGHWAY PROGRAM TOTALS FOR PHASE II - FY2011 TO FY2015:</b>						\$ 2,958.1	\$ 6,079.2		\$ 4,649.8	\$ 435.9	\$ 4,216.1

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**Table 2 - Regional Freeway and Highway Program - By Phase**

DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

Note: Shaded segments represent Proposition 400 construction projects completed or underway as of June 2009.

Route	Corridor	RTP Segment	Project Type	RTP Proposal	Length (miles)	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>PHASE III - FY2016 TO FY2020</b>											
I-17	Black Canyon	I-10/Maricopa (Split) to I-10/Papago (Stack)	HOV	Add one HOV lane in each direction	7.0	\$ 77.0	\$ 81.5	Segment in need of rehabilitation, improvements to include: - Add one HOV lane in each direction - Add one GP lane in each direction - Improve service interchange ramp connections and I-17 Frontage Roads	\$ 400.0	\$ 4.5	\$ 395.5
I-17	Black Canyon	I-10/Papago (Stack) to Arizona Canal	GP	Add General Purpose Lanes (number unspecified and to be determined from study)	7.0	\$ 1,000.0	\$ 962.3	Revise design plan to include: - Add one GP lane in each direction - Improve service interchange ramp connections and I-17 Frontage Roads	\$ 600.0	\$ 2.3	\$ 597.7
US-60	Superstition	Crismon Rd to Meridian Rd	HOV	Add one HOV lane in each direction	2.0	\$ 31.0	\$ 30.2	Move forward with present plans Lower cost opinion due to recent bids	\$ 27.2	\$ -	\$ 27.2
SR-101L	Agua Fria	I-10 to US-60/Grand Ave	HOV	Add one HOV lane in each direction	10.0	\$ 53.0	\$ 53.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 48.2	\$ -	\$ 48.2
SR-202L	Red Mountain	Gilbert Rd to Higley Rd	HOV	Add one HOV lane in each direction	5.0	\$ 27.0	\$ 27.0	Move forward with present plans Lower cost opinion due to recent bids	\$ 24.3	\$ -	\$ 24.3
SR-202L	Santan	Dobson Rd to I-10/Maricopa Fwy	DHOV	Construct Direct HOV Ramp to/from SR-101L/Price on the North	-	\$ 20.4	\$ 22.7	Move forward with present plans Lower cost opinion due to recent bids	\$ 20.4	\$ -	\$ 20.4
SR-802	Williams Gateway	SR-202L to Ellsworth Rd	GP	Construct new freeway, 3 general purpose lanes in each direction	2.0	\$ 155.0	\$ 235.3	Obligated funds are for advance ROW acquisition  Move forward with plans for Interim four-lane construction only (includes interchange with SR-202L/Santan) Lower cost opinion due to recent bids  Defer ultimate construction to Future Phase	\$ 183.4	\$ 28.3	\$ 155.1
S/W	FMS	Freeway Management System	S/W	Phase III Expenditures	-	\$ 41.9	\$ 54.8	Reprogram cost opinion to match the original RTP estimate for Phase III	\$ 41.0	\$ -	\$ 41.0
S/W	Maintenance	Landscaping, Liter, Maintenance	S/W	Phase III Expenditures	-	\$ 76.8	\$ 83.8	Reprogram cost opinion to match the original RTP estimate for Phase III	\$ 75.4	\$ -	\$ 75.4
S/W	Noise Mitigation	Noise Mitigation	S/W	Phase III Expenditures	-	\$ -	\$ 150.0	Defer pavement preservation efforts to next phase	\$ -	\$ -	\$ -
S/W	ROW	ROW	S/W	Phase III Expenditures	-	\$ 40.0	\$ 40.0	Move forward with present plans Lower cost opinion due to recent bids	\$ 40.0	\$ -	\$ 40.0
S/W	Design	Design	S/W	Phase III Expenditures	-	\$ 98.8	\$ 125.5	Reprogram cost opinion to match the original RTP estimate for Phase III	\$ 87.3	\$ -	\$ 87.3
S/W	Park N Ride	Minor Projects	S/W	Phase III Expenditures	-	\$ 2.6	\$ 15.0	Reprogram cost opinion to match the original RTP estimate for Phase III	\$ 0.4	\$ -	\$ 2.6
<b>REGIONAL FREEWAY AND HIGHWAY PROGRAM TOTALS FOR PHASE III - FY2016 TO FY2020:</b>						\$ 1,623.5	\$ 1,881.6		\$ 1,547.5	\$ 35.1	\$ 1,514.7

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**Table 2 - Regional Freeway and Highway Program - By Phase**

DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)

Note: Shaded segments represent Proposition 400 construction projects completed or underway as of June 2009.

Route	Corridor	RTP Segment	Project Type	RTP Proposal	Length (miles)	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>PHASE IV - FY2021 TO FY2026</b>											
I-10	Papago	SR-85 to SR-303L	GP	Add one lane in each direction; Sarival Ave to Verrado Way	5.0	\$ 44.2	\$ 46.9	Improvements underway Funded by ARRA Scheduled completion in Fall 2011	\$ 29.9	\$ 29.9	\$ -
I-10	Maricopa	SR-202L/Santan to Riggs Rd	TI	Construct Chandler Heights Rd interchange	-	\$ 13.8	\$ 25.4	Move forward with present plans Lower cost opinion due to recent bids	\$ 22.9	\$ -	\$ 22.9
I-17	Black Canyon	SR-101L/Agua Fria and Pima Fwys to SR-74/Carefree Hwy	TI	Construct Dove Valley Rd interchange Advanced by the City of Phoenix	-	\$ 18.4	\$ 22.7	Construction underway Scheduled completion in Summer 2010	\$ 22.7	\$ 22.7	\$ -
I-17	Black Canyon	SR-74/Carefree Hwy to Anthem Way	GP, HOV	Add one general purpose and one HOV lane in each direction	5.0	\$ 72.0	\$ 117.9	Improvements underway - Add one GP lane in each direction - Funded by ARRA - Scheduled completion in Fall 2010 Defer urban section and HOV lanes to Future Phase	\$ 16.8	\$ 16.8	\$ -
SR-101L	Agua Fria	I-10 to US-60/Grand Ave	GP	Add one lane in each direction	10.0	\$ 85.0	\$ 150.4	Obligated funds are for: - Frwy Management Sys construction - Improvmnts at Olive, Northern	\$ 14.4	\$ 14.4	\$ -
SR-101L	Agua Fria	US-60/Grand Ave to I-17	HOV	Add one HOV lane in each direction	12.0	\$ 64.0	\$ 64.2	Move forward with present plans Lower cost opinion due to recent bids	\$ 57.8	\$ -	\$ 57.8
I-10	Papago	Dysart Rd to SR-101L	TI	Construct El Mirage Rd interchange	-	\$ 17.3	\$ 22.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 19.8	\$ -	\$ 19.8
SR-101L	Pima	I-17 to SR-51	GP	Add one lane in each direction	7.0	\$ 59.0	\$ 93.5	Move forward with present plans to address highest volumes on the regional loop freeways Lower cost opinion due to recent bids	\$ 84.1	\$ 5.5	\$ 78.7
SR-101L	Pima	SR-51 to Princess Dr	GP	Add one lane in each direction	6.0	\$ 51.0	\$ 86.0	Move forward with present plans to address highest volumes on the regional loop freeways Lower cost opinion due to recent bids	\$ 77.4	\$ 0.5	\$ 76.9
SR-101L	Pima	Princess Dr to Shea Blvd	GP	Add one lane in each direction	4.0	\$ 34.0	\$ 54.4	Move forward with present plans to address highest volumes on the regional loop freeways Lower cost opinion due to recent bids	\$ 49.0	\$ -	\$ 49.0
SR-101L	Price	Baseline Rd to SR-202L/Santan	GP	Add one lane in each direction	6.0	\$ 51.0	\$ 58.1	Move forward with present plans to address highest volumes on the regional loop freeways Lower cost opinion due to recent bids	\$ 52.3	\$ -	\$ 52.3
SR-202L	Red Mountain	Higley Rd to US-60/Superstition	HOV	Add one HOV lane in each direction	10.0	\$ 52.0	\$ 53.5	Move forward with present plans Lower cost opinion due to recent bids	\$ 48.2	\$ -	\$ 48.2
SR-202L	Santan	Val Vista Rd to Dobson Rd	GP	Add one lane in each direction	7.0	\$ 59.0	\$ 82.0	Obligated funds are for Lindsay Rd to Gilbert Rd multi-modal path improvement Defer GP Lanes to Future Phase	\$ 1.1	\$ 1.1	\$ -
SR-202L	Santan	US-60/Superstition to Val Vista Rd	HOV	Add one HOV lane in each direction	11.0	\$ 55.0	\$ 58.9	Move forward with present plans Lower cost opinion due to recent bids	\$ 53.0	\$ -	\$ 53.0

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**Table 2 - Regional Freeway and Highway Program - By Phase**

**DRAFT - PROGRAM STILL UNDER STUDY (Costs in Millions)**

Note: Shaded segments represent Proposition 400 construction projects completed or underway as of June 2009.

Route	Corridor	RTP Segment	Project Type	RTP Proposal	Length (miles)	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
SR-801	Gila River	SR-303L to Avondale Blvd	GP	Construct new freeway, 3 general purpose lanes in each direction	7.0	\$ 352.2	\$ 790.5	Finish Environmental Assessment and Design Concept Report efforts to identify corridor for ROW preservation by Goodyear and Avondale	\$ 13.5	\$ 13.5	\$ -
SR-801	Gila River	Avondale Blvd to SR-202L/South Mountain	GP	Construct new freeway, 3 general purpose lanes in each direction	6.0	\$ 369.8	\$ 862.0	Finish Environmental Assessment and Design Concept Report efforts to identify corridor for ROW preservation by Avondale and Phoenix	\$ 11.5	\$ 11.5	\$ -
SR-101L	Agua Fria	US-60/Grand Ave to I-17	GP	Add one lane in each direction	12.0	\$ 102.0	\$ 177.8	Obligated funds are for: - Frwy Management Sys construction - Improvmnts at Thunderbird Defer GP Lanes to Future Phase	\$ 2.8	\$ 2.8	\$ -
S/W	FMS	Freeway Management System	S/W	Phase IV Expenditures	-	\$ 49.3	\$ 64.5	Reprogram cost opinion to match the original RTP estimate for Phase IV	\$ 48.3	\$ -	\$ 48.3
S/W	Maintenance	Landscaping, Liter, Maintenance	S/W	Phase IV Expenditures	-	\$ 84.5	\$ 92.1	Reprogram cost opinion to match the original RTP estimate for Phase IV	\$ 82.9	\$ -	\$ 82.9
S/W	Noise Mitigation	Noise Mitigation	S/W	Phase IV Expenditures	-	\$ -	\$ 150.0	Defer pavement preservation efforts to next phase	\$ -	\$ -	\$ -
S/W	ROW	ROW	S/W	Phase IV Expenditures	-	\$ 17.0	\$ 17.0	Move forward with present plans Lower cost opinion due to recent bids	\$ 17.0	\$ -	\$ 17.0
S/W	Design	Design	S/W	Phase IV Expenditures	-	\$ 57.5	\$ 73.0	Reprogram cost opinion to match the original RTP estimate for Phase IV	\$ 50.8	\$ -	\$ 50.8
S/W	Park N Ride	Minor Projects	S/W	Phase IV Expenditures	-	\$ 2.6	\$ 15.0	Reprogram cost opinion to match the original RTP estimate for Phase IV	\$ 0.4	\$ -	\$ 2.6
<b>REGIONAL FREEWAY AND HIGHWAY PROGRAM TOTALS FOR PHASE IV - FY2021 TO FY2026:</b>						\$ 1,710.5	\$ 3,178.3		\$ 776.4	\$ 118.6	\$ 660.0

**Project Type Key:**

- GP - General Purpose Lane Widening
- HOV - High Occupancy Vehicle Lane Widening
- TI - New Traffic Interchange
- DHOV - Direct HOV Ramp connection
- S/W - System-wide Project

**Table 2 - Regional Freeway and Highway Program - By Phase**

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Note: Shaded segments represent Proposition 400 construction projects completed or underway as of June 2009.

Route	Corridor	RTP Segment	Project Type	RTP Proposal	Length (miles)	2003 RTP Estimate	2009 ADOT Cost Opinion	Proposed Action	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
SR-85	SR-85	Interstate 8 to Hazen Rd	GP	Convert existing facility into full freeway, including interchange with Interstate 8	29.2	\$ 43.6	\$ 98.5	Deferred from Phase I	\$ 200.3	\$ -	\$ 200.3
SR-85	SR-85	Hazen Rd to Interstate 10	GP	Convert existing facility into full freeway	5.6	\$ 74.9	\$ 152.5	Deferred from Phase I	\$ 88.5	\$ -	\$ 88.5
I-10	Maricopa	SR-51 to 40th St (CD Roads)	GP	Add General Purpose Lanes	3.0	\$ 120.0	\$ -	Deferred from Phase II	\$ 496.3	\$ -	\$ 496.3
US-60	Superstition	SR-101L/Price to Val Vista Dr	TI	Construct Lindsay Rd interchange with ramps to/from West	-	\$ 4.6	\$ 8.8	Deferred from Phase II	\$ 7.7	\$ -	\$ 7.7
SR-303L	Estrella	SR-801/MC-85 to Interstate 10	GP	Construct new freeway, 3 general purpose lanes in each direction	5.0	\$ 230.0	\$ 390.2	Deferred from Phase III	\$ 343.4	\$ -	\$ 343.4
SR-802	Williams Gateway	SR-202L to Ellsworth Rd	GP	Construct new freeway, 3 general purpose lanes in each direction	2.0	\$ 155.0	\$ 235.3	Full six-lanes deferred from Phase III	\$ 50.9	\$ -	\$ 50.9
SR-802	Williams Gateway	Ellsworth Rd to Meridian Rd	GP	Construct new freeway, 3 general purpose lanes in each direction	3.0	\$ 170.0	\$ 236.0	Deferred from Phase III	\$ 207.7	\$ -	\$ 207.7
S/W	Noise Mitigation	Noise Mitigation	S/W	Phase III Expenditures	-	\$ -	\$ 150.0	Pavement preservation deferred	\$ 150.0	\$ -	\$ 150.0
I-10	Papago	SR-85 to SR-303L	GP	Add one lane in each direction; Verrado Way to SR-85	7.0	\$ 61.8	\$ 50.5	Deferred from Phase IV	\$ 44.4	\$ -	\$ 44.4
I-10	Papago	Dysart Rd to SR-101L	TI	Construct El Mirage Rd interchange	-	\$ 17.3	\$ 22.5	Deferred from Phase IV	\$ 19.8	\$ -	\$ 19.8
I-17	Black Canyon	Anthem Way to New River Rd	GP	Add one lane in each direction	3.0	\$ 26.0	\$ 25.0	Deferred from Phase IV	\$ 22.0	\$ -	\$ 22.0
US-60	Grand	SR-101L/Agua Fria to Van Buren St	TI	Construct up to three additional arterial grade separated traffic interchanges at locations to be determined	11.0	\$ 97.0	\$ 97.0	Deferred from Phase IV	\$ 85.4	\$ -	\$ 85.4
SR-51	Piestewa	SR-101L/Pima to Shea Blvd	GP	Add one lane in each direction	6.0	\$ 51.0	\$ 81.7	Deferred from Phase IV	\$ 71.9	\$ -	\$ 71.9
SR-101L	Agua Fria	I-10 to US-60/Grand Ave	GP	Add one lane in each direction	10.0	\$ 85.0	\$ 150.4	Deferred from Phase IV	\$ 132.3	\$ -	\$ 132.3
SR-101L	Agua Fria	I-10 to US-60/Grand Ave	DHOV	Construct Direct HOV Ramp to/from I-10/Papago on East	-	\$ 60.0	\$ 68.1	Deferred from Phase IV	\$ 59.9	\$ -	\$ 59.9
SR-101L	Agua Fria	US-60/Grand Ave to I-17	GP	Add one lane in each direction	12.0	\$ 102.0	\$ 177.8	Deferred from Phase IV	\$ 156.5	\$ -	\$ 156.5
SR-101L	Agua Fria	US-60/Grand Ave to I-17	DHOV	Construct Direct HOV Ramp to/from I-17/Black Canyon on the South	-	\$ 72.0	\$ 81.1	Deferred from Phase IV	\$ 71.4	\$ -	\$ 71.4
SR-202L	Red Mountain	SR-101L to Gilbert Rd	TI	Construct Mesa Dr interchange with ramps to/from West	-	\$ 4.6	\$ 15.0	Deferred from Phase IV	\$ 13.2	\$ -	\$ 13.2
SR-202L	Red Mountain	Gilbert Rd to Higley Rd	GP	Add one lane in each direction	5.0	\$ 42.0	\$ 57.8	Deferred from Phase IV	\$ 50.9	\$ -	\$ 50.9
SR-202L	Red Mountain	Higley Rd to US-60/Superstition	GP	Add one lane in each direction	10.0	\$ 85.0	\$ 136.0	Deferred from Phase IV	\$ 119.7	\$ -	\$ 119.7
SR-202L	Red Mountain	Higley Rd to US-60/Superstition	DHOV	Construct Direct HOV Ramp to/from US-60/Superstition on the West	-	\$ 20.0	\$ 22.7	Deferred from Phase IV	\$ 20.0	\$ -	\$ 20.0
SR-202L	Santan	US-60/Superstition to Val Vista Rd	GP	Add one lane in each direction	11.0	\$ 93.0	\$ 128.9	Deferred from Phase IV	\$ 113.4	\$ -	\$ 113.4
SR-202L	Santan	Val Vista Rd to Dobson Rd	GP	Add one lane in each direction	7.0	\$ 59.0	\$ 82.0	Deferred from Phase IV	\$ 72.2	\$ -	\$ 72.2
SR-202L	Santan	Dobson Rd to I-10/Maricopa Fwy	GP	Add one lane in each direction	5.0	\$ 43.0	\$ 57.8	Deferred from Phase IV	\$ 50.9	\$ -	\$ 50.9
SR-303L	Estrella	Riggs Rd to SR-801/MC-85	GP	Provide for ROW protection for extension of Loop 303 corridor	-	\$ -	\$ 50.0	Deferred from Phase IV	\$ -	\$ -	\$ -
SR-303L	Estrella	I-10 to US-60/Grand Ave	GP	Complete construction of traffic interchange to three-level "Stacked SPUI" geometrics at US-60/Grand Ave	-	\$ -	\$ 150.0	Deferred from Phase II	\$ 150.0	\$ -	\$ 150.0
SR-303L	Estrella	I-10 to US-60/Grand Ave	GP	Complete construction of directional ramp connections to Northern Parkway	-	\$ -	\$ 80.0	New project	\$ 80.0	\$ -	\$ 80.0
SR-801	Gila River	SR-85 to SR-303L	GP	Construct interim facility, 1 general purpose lane in each direction	11.0	\$ 83.0	\$ 211.0	Deferred from Phase IV	\$ 185.7	\$ -	\$ 185.7
SR-801	Gila River	SR-303L to Avondale Blvd	GP	Construct new freeway, 3 general purpose lanes in each direction	7.0	\$ 352.2	\$ 790.5	Deferred from Phase IV	\$ 695.6	\$ -	\$ 695.6
SR-801	Gila River	Avondale Blvd to SR-202L/South Mountain	GP	Construct new freeway, 3 general purpose lanes in each direction	6.0	\$ 369.8	\$ 862.0	Deferred from Phase IV	\$ 758.6	\$ -	\$ 758.6
SR-74	Carefree Hwy	SR-303L to I-17	GP	Provide for ROW protection for future Lake Pleasant Fwy corridor	5.4	\$ -	\$ 40.0	Deferred from Phase IV	\$ 40.0	\$ -	\$ 40.0
S/W	Noise Mitigation	Noise Mitigation	S/W	Phase IV Expenditures	-	\$ -	\$ 150.0	Pavement preservation deferred	\$ -	\$ -	\$ 150.0

**Project Type Key:**

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<b>REGIONAL FREEWAY AND HIGHWAY PROGRAM TOTALS FOR PHASE V - FY2026 TO FY2030:</b>						\$ 2,521.9	\$ 4,709.1		\$ 4,558.5	\$ -	\$ 4,558.5
						2003 RTP Estimate	2009 ADOT Cost Opinion		Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
<b>Totals for Regional Freeway and Highway Program:</b>						\$ 9,416.7	\$ 15,931.3		\$ 14,055.2	\$ 2,622.8	\$ 11,439.0

**Project Type Key:**

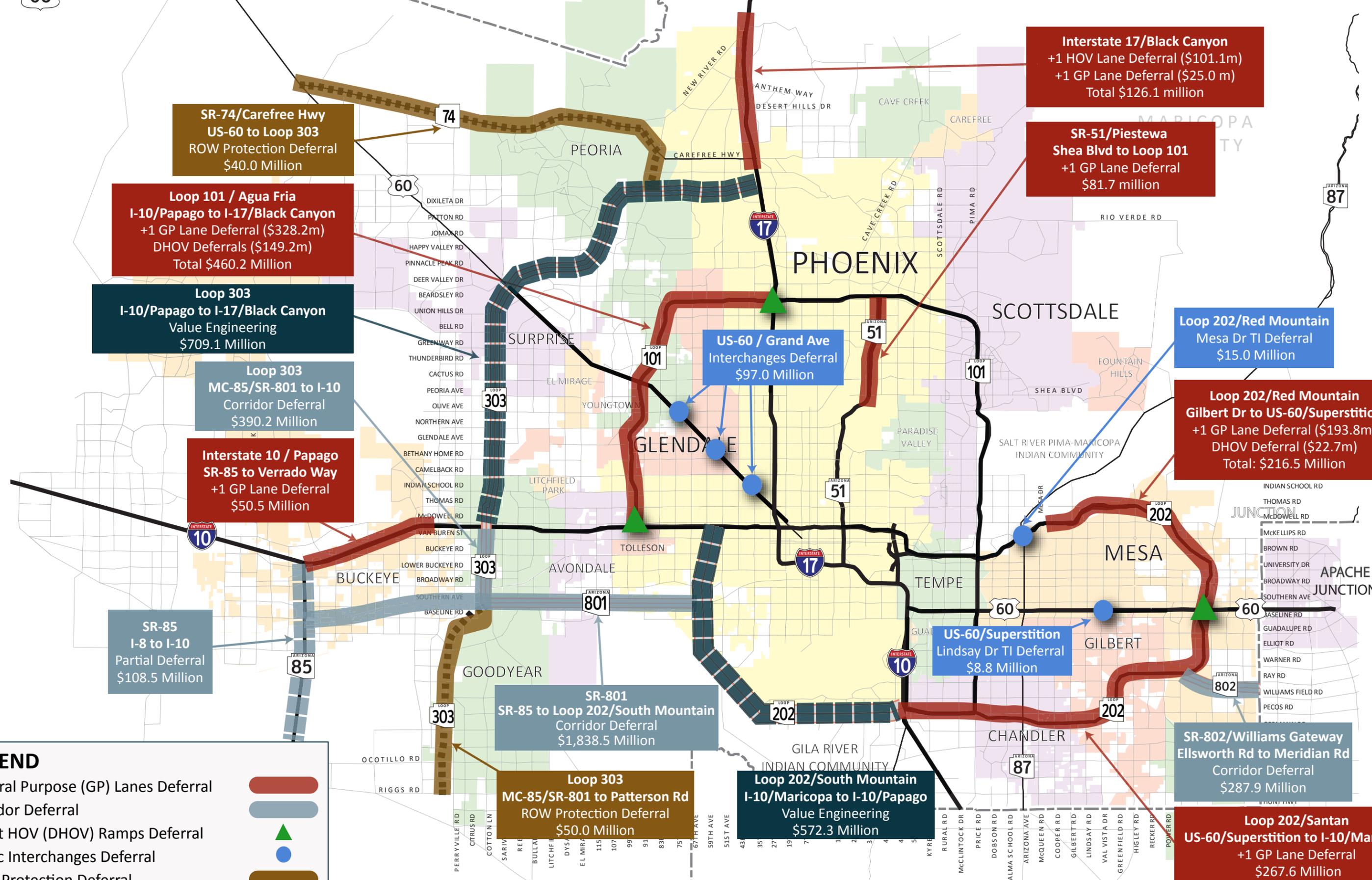
- GP - General Purpose Lane Widening
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## **Tentative Scenario – Maps**

Map 1 – 2003 Regional Transportation Plan Planned Freeway/Highway Improvements

Map 2 – Recommended RTP Segment Projects for Deferral to Future Phase

Map 3 – Recommended RTP Segments for Funding through FY2026



## TENTATIVE SCENARIO PROJECT CHANGES

Regional Freeway and Highway Program

# 2010 Update Regional Transportation Plan

**DRAFT**

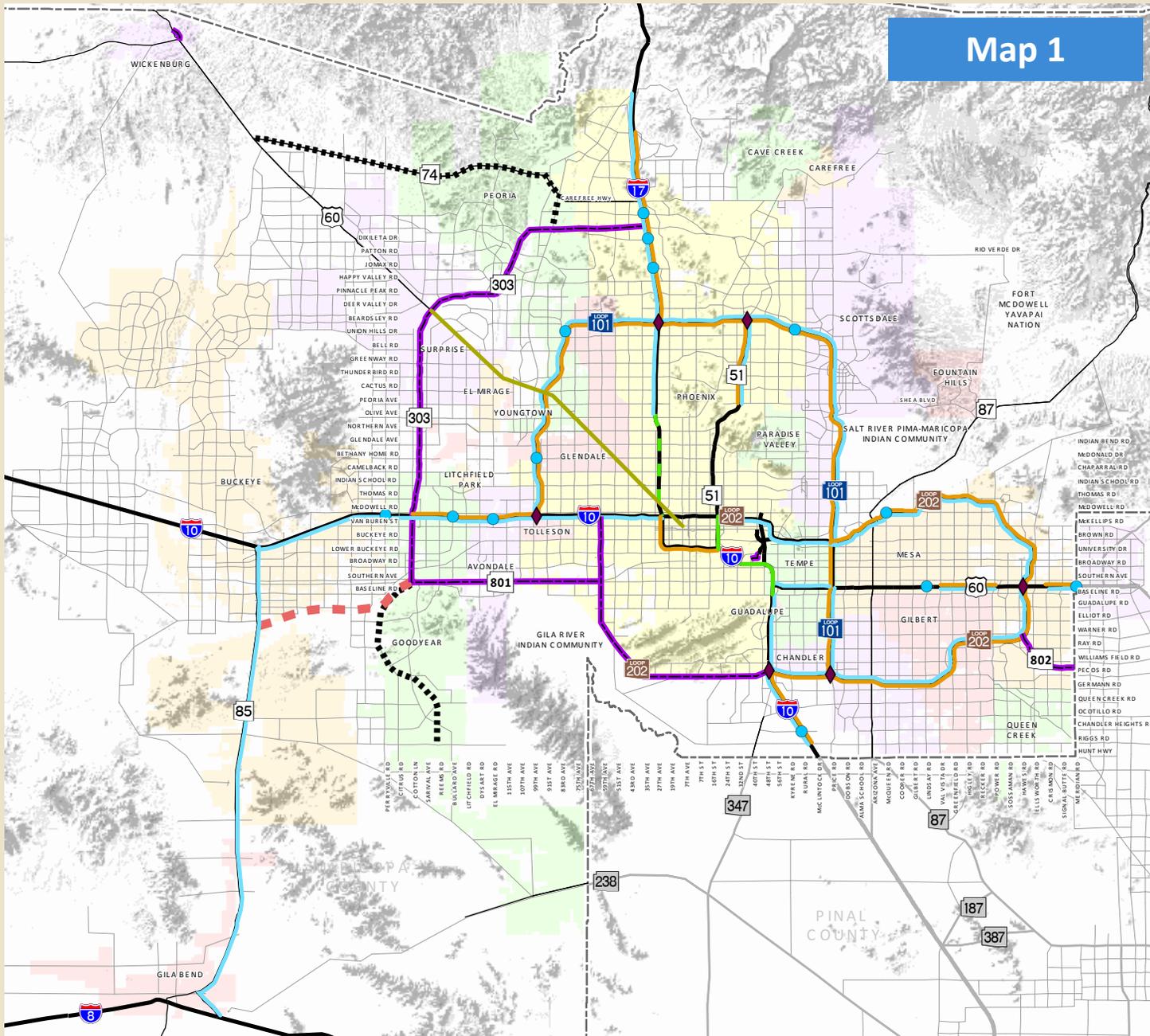


**MARICOPA  
ASSOCIATION of  
GOVERNMENTS**

## Planned Freeway/Highway Improvements

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

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



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.



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DRAFT



Recommended RTP  
Segment Projects for  
Deferral to Future Phases

- Freeway/Highways Deferred
- General Purpose Lanes Deferred
- New Traffic Interchanges Deferred
- Grand Ave Traffic Interchanges Deferred
- New HOV Ramps Deferred
- New Traffic Interchange
- Grand Avenue Corridor Improvements
- New High Occupancy Vehicle Lanes
- New General Purpose Lanes
- Corridor Capacity Improvements
- Long Term Capacity Improvements
- New Freeway/Highway Construction
- County Boundary
- Existing Freeway
- Other Roads

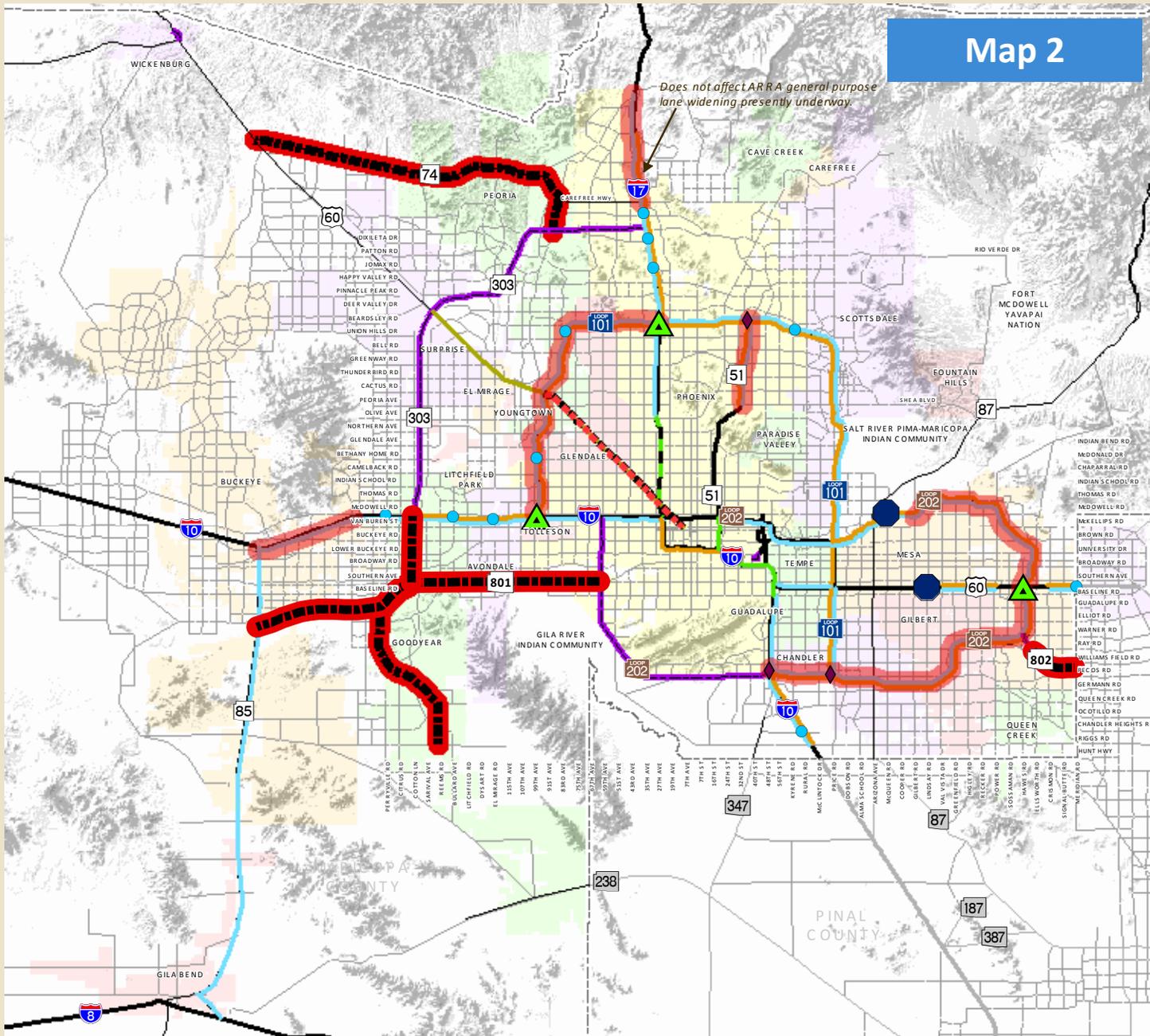
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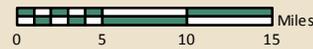
MARICOPA COUNTY

Map 2

Does not affect ARRA general purpose lane widening presently underway.



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# 2010 Update Regional Transportation Plan

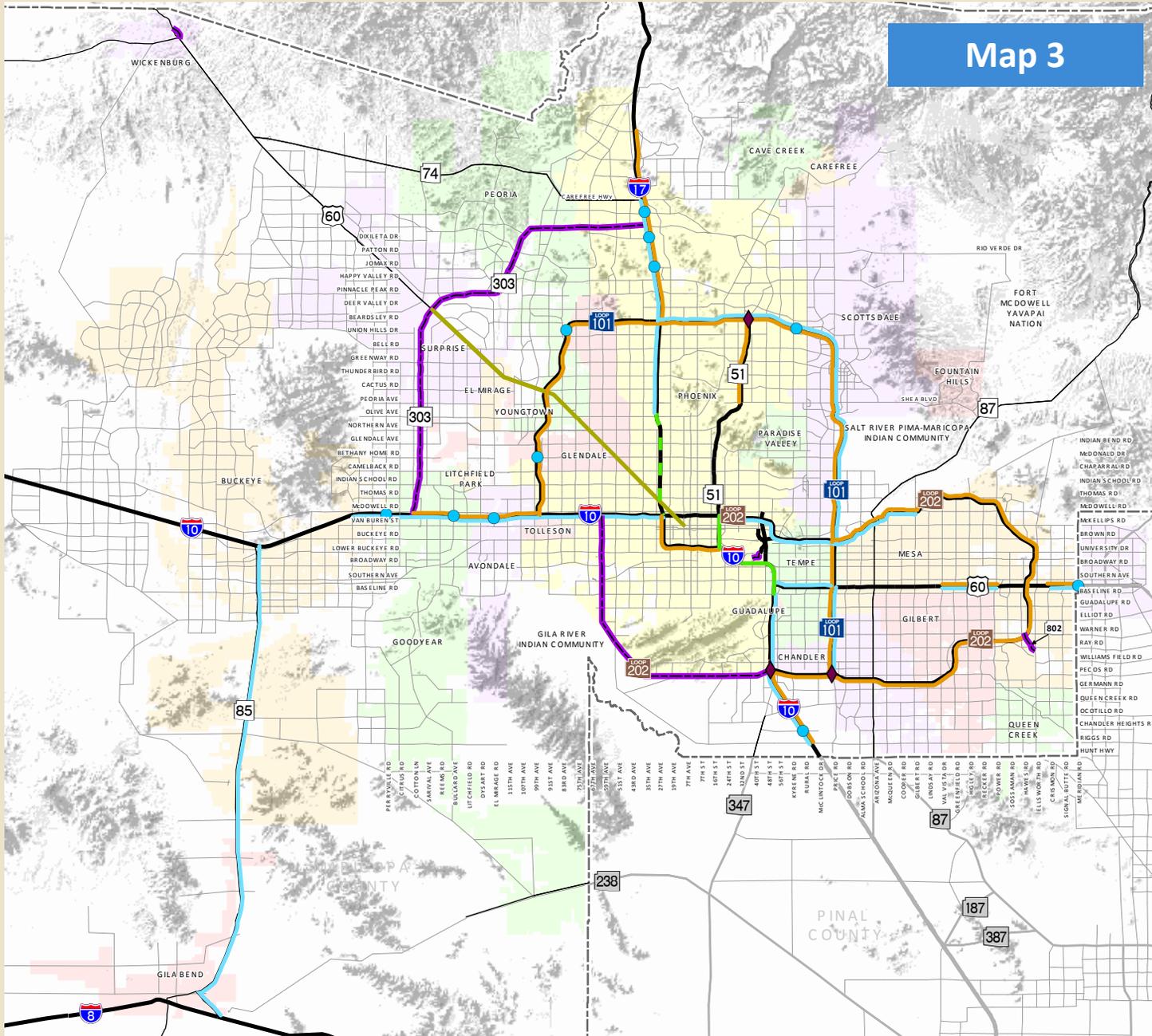
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## Recommended RTP Segments for Funding Through FY 2026

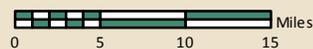
- New Traffic Interchange
- New High Occupancy Vehicle Ramp Connection
- Grand Avenue Corridor Improvements
- New High Occupancy Vehicle Lanes
- New General Purpose Lanes
- Corridor Capacity Improvements
- Long Term Capacity Improvements
- New Freeway/Highway Construction
- County Boundary
- Existing Freeway
- Other Roads

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**Map 3**

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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.

## **Tentative Scenario Presentation**

June 17, 2009 Transportation Policy Committee

Corridor-by-Corridor Summary of the Tentative Scenario for the Regional Freeway and Highway Program  
Regional Transportation Plan 2010 Update

Transportation Policy Committee  
June 17, 2009

# Regional Freeway and Highway Program Transportation Planning Update Proposition 400



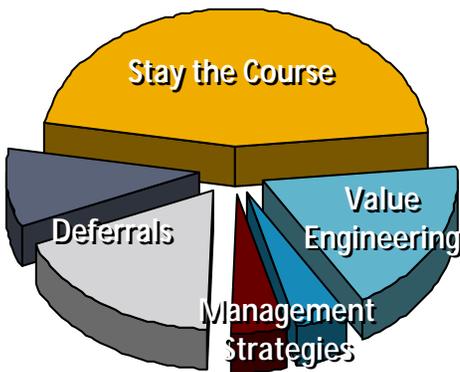
# Regional Freeway and Highway Program Financials

<b>Regional Freeway and Highway Program Prop 400 Budget</b>	<b>\$9,421.2 million</b>
2009 ADOT Cost Opinion for the Program	\$15,952.4 million
Projects Obligated thru FY2010	\$2,716.1 million
ADOT Cost Opinion for completing the Program	\$13,236.3 million
<b>Available Funding for balance of Regional Freeway Program</b>	<b>\$6,610.0 million</b>
<b>Program Deficit</b>	<b>\$6,626.3 million</b>



*Looking west at I-10/Maricopa from the 40th St Overcrossing*

# Tentative Scenario FOR BRIDGING THE GAP



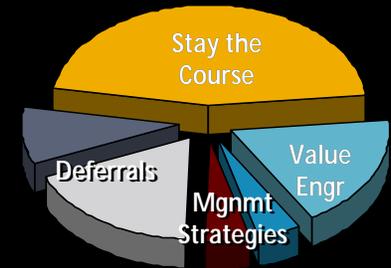
Looking east at SR-101L/Agua Fria from the 67th Ave Overcrossing

- **Management Strategies**
  - Construction
  - Right-of-Way
  - System-wide Costs
- **Value Engineering**
  - Redefine Cross Sections
  - Alternate Alignments
  - System Traffic Interchanges
- **Deferrals**
  - Priorities consistent with RTP
  - HOV Construction
- **Stay the Course**
  - Maintain core enhancements

# Anticipated Savings

## Regional Freeway and Highway Program

**DRAFT**  
Program still  
under study.



<b>Current ADOT Cost Opinion</b>	<b>\$15,952.4 million</b>
Value Engineering/Planning Recommendations	<i>-\$1,615.1 million</i>
Project Deferrals	<i>-\$4,007.6 million</i>
Lower ROW Contingency and Construction Costs	<i>-\$502.7 million</i>
Reduce System-wide costs	<i>-\$428.8 million</i>
<b>NEW COST OPINION</b>	<b>\$9,398.2 million</b>
<b>NET SAVINGS</b>	<b>\$6,554.2 million</b>



Underneath the I-10/I-17 "Stack" interchange

# Corridor Summary

## TENTATIVE SCENARIO

**DRAFT**  
Program still  
under study.

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### Fiscal Year Phasing:

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I FY2006-FY2010

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II FY2011-FY2015

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III FY2016-FY2020

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IV FY2021-FY2026

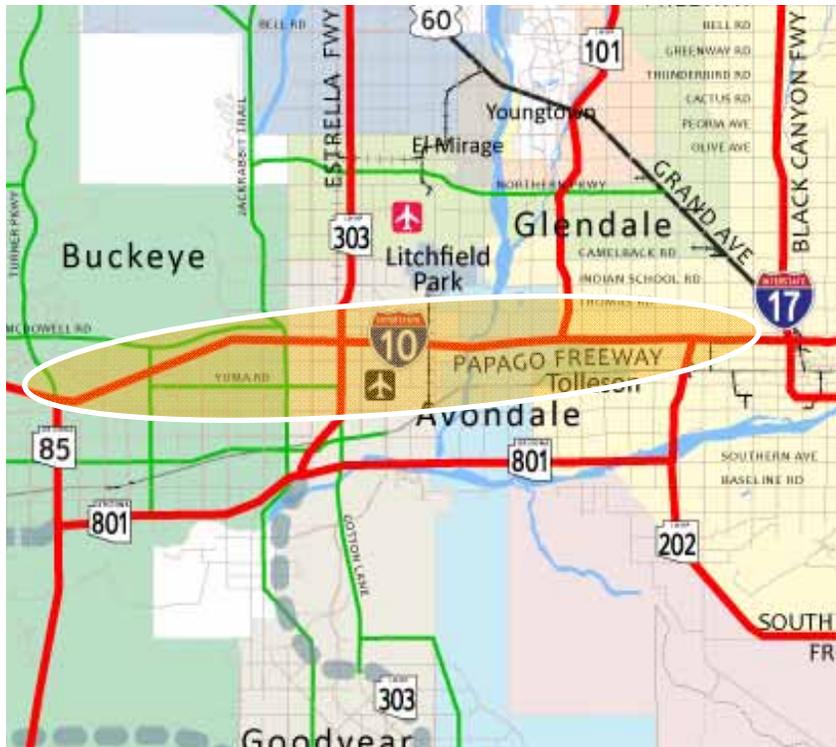
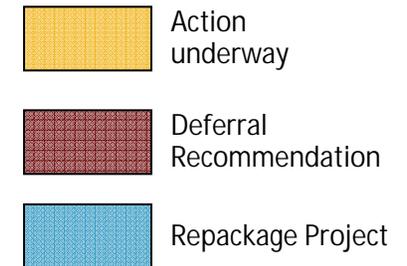
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V FY2027-FY2030



*Looking north at SR-51/Piewstawa Fwy from the Cactus Rd Overcrossing*

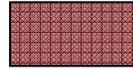
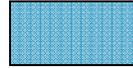
# Interstate 10/Papago Fwy

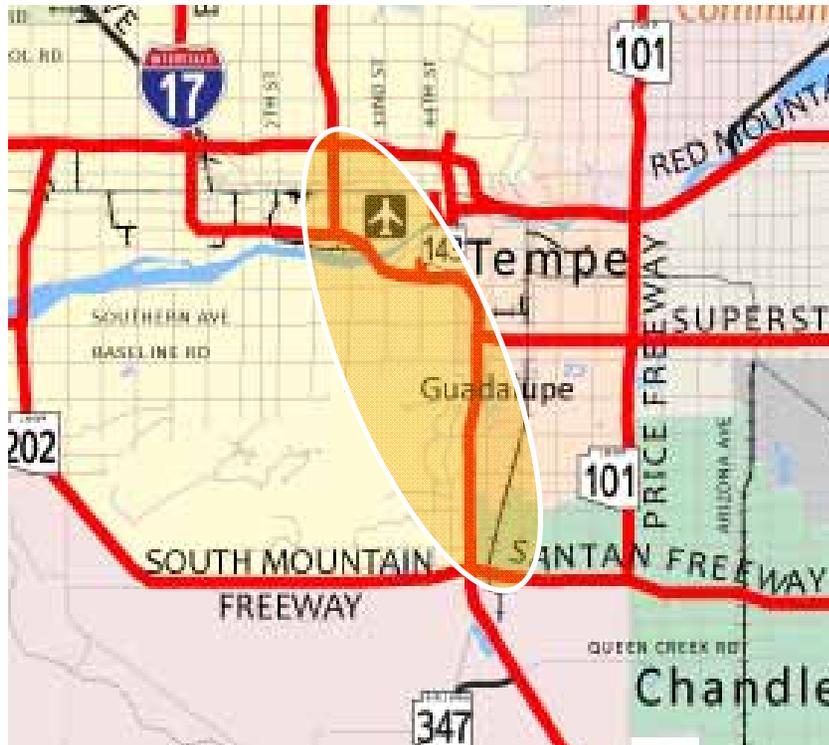


Projects			
SEGMENT	ACTION	COMMENTS	PHASE
SR-85 to SR-303L	+1 GP	SR-85 to Verrado	V
	+1 GP	Sarival to Verrado ARRA Project/2011	IV
SR-303L to Dysart Rd	+ 2 GP + 1 HOV	Underway Fall 2010	II
	TI	Perryville Rd	II
Dysart Rd to SR-101L	+ 1 GP +1 HOV	Underway Fall 2010	II
	TI	El Mirage Rd	IV
SR-101L to Interstate 17	+ 1 GP	Repackage to match estimate	I

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$331.7 million	\$753.7 million	\$330.5 million	\$227.9 million	\$102.6 million

# Interstate 10/Maricopa Fwy

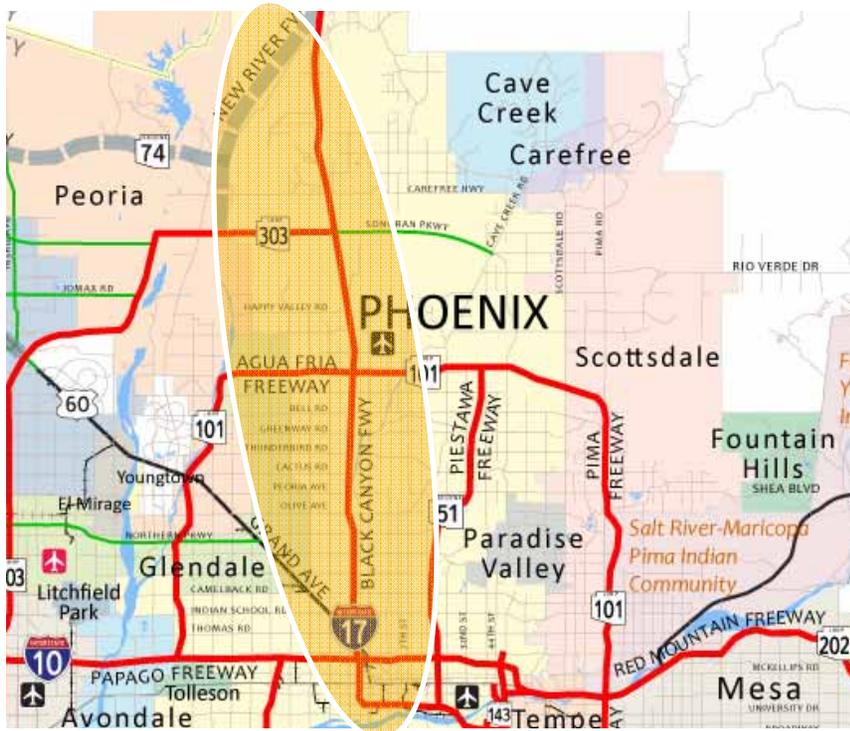
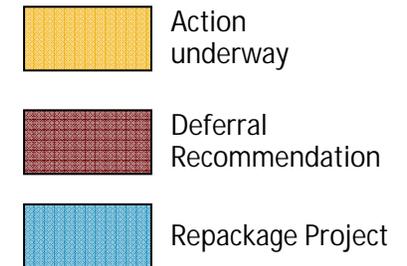
-  Action underway
-  Deferral Recommendation
-  Repackage Project



Projects			
SEGMENT	ACTION	COMMENTS	PHASE
SR-51 to 40th St	Local-Express Lanes		V
	TI	West Sky Harbor Access	II
40th St to Baseline Rd	Local-Express Lanes		I
Baseline Rd to SR-202L	+1 GP		II
SR-202L to Riggs Rd	+1 GP +1 HOV		II
	TI	Chandler Heights Rd	IV

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$612.8 million	\$823.5 million	\$763.4 million	\$26.4 million	\$737.1 million

# Interstate 17/Black Canyon Fwy



Projects			
SEGMENT	ACTION	COMMENTS	PHASE
I-10 Split to I-10 Stack	+1 HOV	Repackage to Add +1 GP, +1 HOV	III
I-10 Stack to Arizona Canal	+2 GP	Repackage for Add +1 GP	III
Arizona Canal to SR-101L	+1 GP		II
SR-101L to SR-74	+2 GP +1 HOV	Underway Summer 2010	I
SR-74 to Anthem Way	+1 GP	ARRA Project 2011	IV
	+1 HOV	Urban profile construction	V
Anthem Way to New River Rd	+1 GP		V

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$1,443.0 million	\$1,716.2 million	\$1,532.8 million	\$424.8 million	\$1,108.0 million

# US-60/Grand Avenue

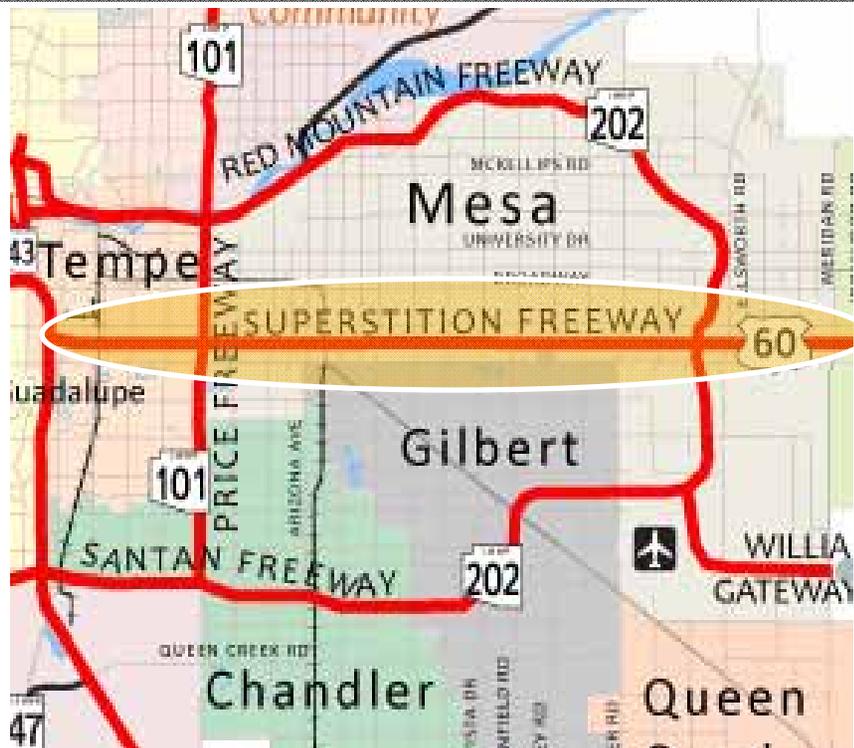
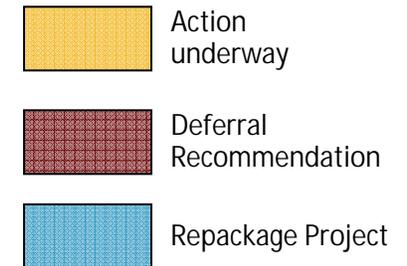
-  Action underway
-  Deferral Recommendation
-  Repackage Project



Projects			
SEGMENT	ACTION	COMMENTS	PHASE
SR-303L to SR-101L	+ 1 GP	Underway 2011	I
	TI	Up to two locations	II
SR-101L to Van Buren St	+ 1 GP 83rd Ave to 99th Ave	Underway 2011	I
	Spot Improvements	Locations TBD	II
	TI	Up to three locations	V

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$250.0 million	\$283.5 million	\$186.5 million	\$123.2 million	\$63.2 million

# US-60/Superstition Fwy

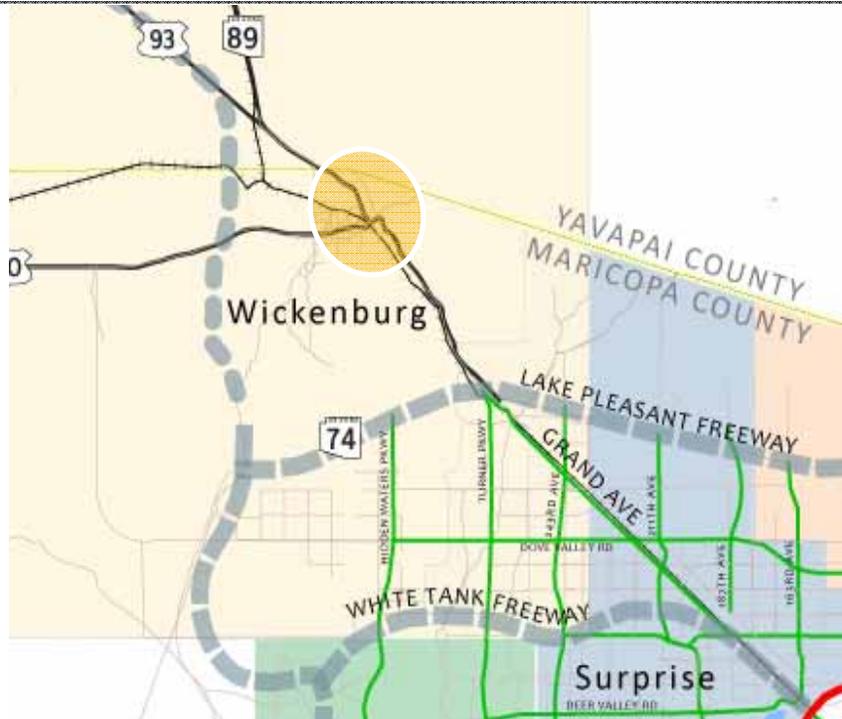


Projects			
SEGMENT	ACTION	COMMENTS	PHASE
I-10 to SR-101L	+1 GP	Underway Fall 2010	I
SR-101L to Val Vista Dr	TI	Lindsay Rd	V
Val Vista Dr to Power Rd	+ 2 GP + 1 HOV	Open to Traffic	I
Power Rd to Crismon Rd	+ 1 HOV	Open to Traffic	I
Crismon Rd to Meridian Rd	+ 1 GP + 1 HOV		III
	TI	Meridian Rd	II

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$134.2 million	\$168.8 million	\$156.1 million	\$121.0 million	\$35.1 million

# U.S. Highway 93

-  Action underway
-  Deferral Recommendation
-  Repackage Project



Projects			
SEGMENT	ACTION	COMMENTS	PHASE
US-60 to Yavapai County	Interim Bypass	Underway Spring 2010	I

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$24.0 million	\$31.6 million	\$31.6 million	\$31.6 million	\$ -

# SR-51/Piestawa Fwy

-  Action underway
-  Deferral Recommendation
-  Repackage Project



Projects			
SEGMENT	ACTION	COMMENTS	PHASE
Shea Blvd to SR-101L	+1 GP		V
	+1 HOV	Open to Traffic	I
	DHOV	To/From SR-101L East; Open to Traffic	I

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$103.0 million	\$133.0 million	\$51.3 million	\$51.3 million	\$ -

# Loop 101/Agua Fria Fwy

-  Action underway
-  Deferral Recommendation
-  Repackage Project



Projects			
SEGMENT	ACTION	COMMENTS	PHASE
Interstate 10 to US-60	+ 1 HOV		III
	+ 1 GP		V
	DHOV	To/From I-10 East	V
US-60 to Interstate 17	TI	Beardsley Rd-Union Hills Connector	II
	+ 1 HOV		IV
	+ 1 GP		V
	DHOV	To/From I-17 South	V

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$470.8 million	\$637.3 million	\$165.3 million	\$59.4 million	\$105.9 million

# Loop 101/Pima Fwy

-  Action underway
-  Deferral Recommendation
-  Repackage Project



Projects			
SEGMENT	CONCEPT	COMMENTS	PHASE
Interstate 17 to SR-51	+1 HOV		II
	+1 GP		IV
SR-51 to Princess Dr	+1 HOV	Open to Traffic	II
	+1 GP		IV
Princess Dr to Shea Blvd	+1 HOV	Open to Traffic	I
	+1 GP		II
Shea Blvd to SR-202L	+1 HOV	Open to Traffic	I
	+1 GP		II

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$403.6 million	\$491.6 million	\$453.6 million	\$123.9 million	\$329.8 million

# Loop 101/Price Fwy

-  Action underway
-  Deferral Recommendation
-  Repackage Project

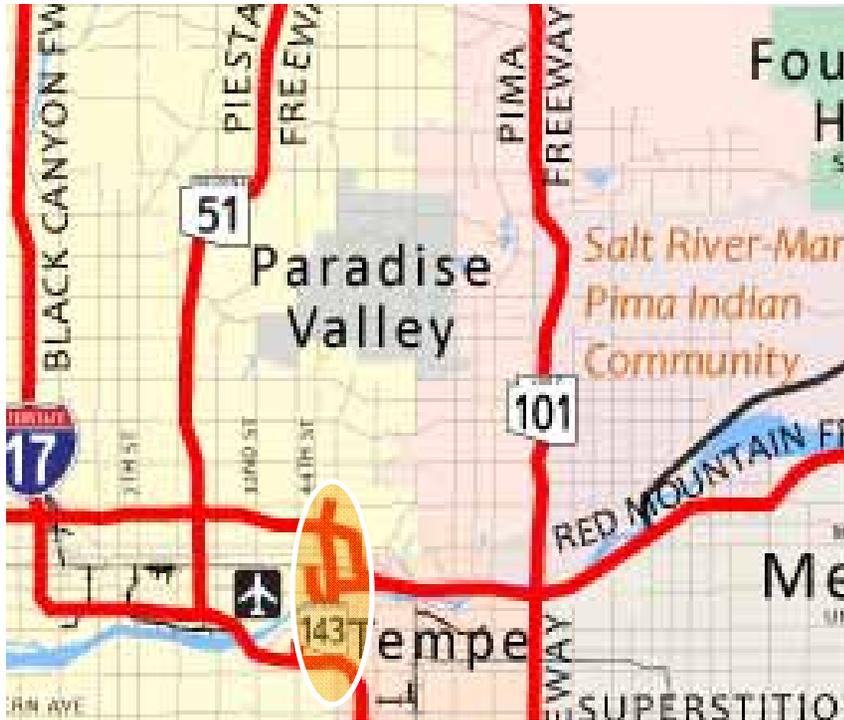


Projects			
SEGMENT	ACTION	COMMENTS	PHASE
SR-202L/Red Mountain to Baseline Rd	+1 HOV		I
Baseline Rd to SR-202L/ Santan	+1 HOV		I
	+ 1 GP		IV

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$104.0 million	\$102.2 million	\$96.4 million	\$44.1 million	\$52.3 million

# SR-143/Hohokam Expressway

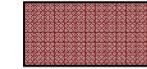
-  Action underway
-  Deferral Recommendation
-  Repackage Project

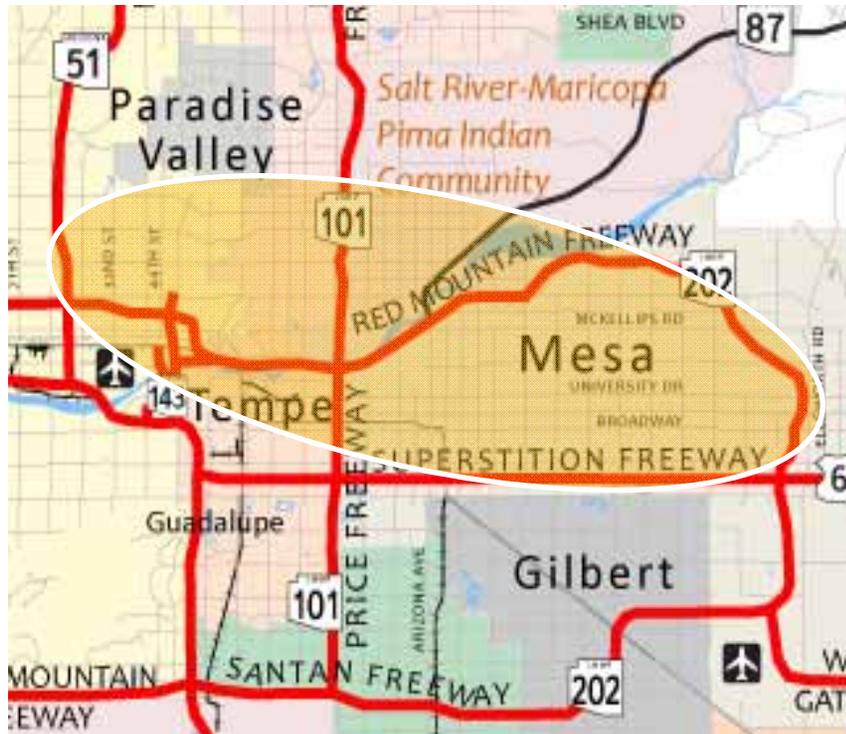


Projects			
SEGMENT	ACTION	COMMENTS	PHASE
McDowell Rd to Interstate 10	TI	Reconstruct Sky Harbor Blvd/SR-202S Ramps to complete access	I

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$ -	\$36.6 million	\$36.6 million	\$36.6 million	\$ -

# Loop 202/Red Mountain Fwy

	Action underway
	Deferral Recommendation
	Repackage Project

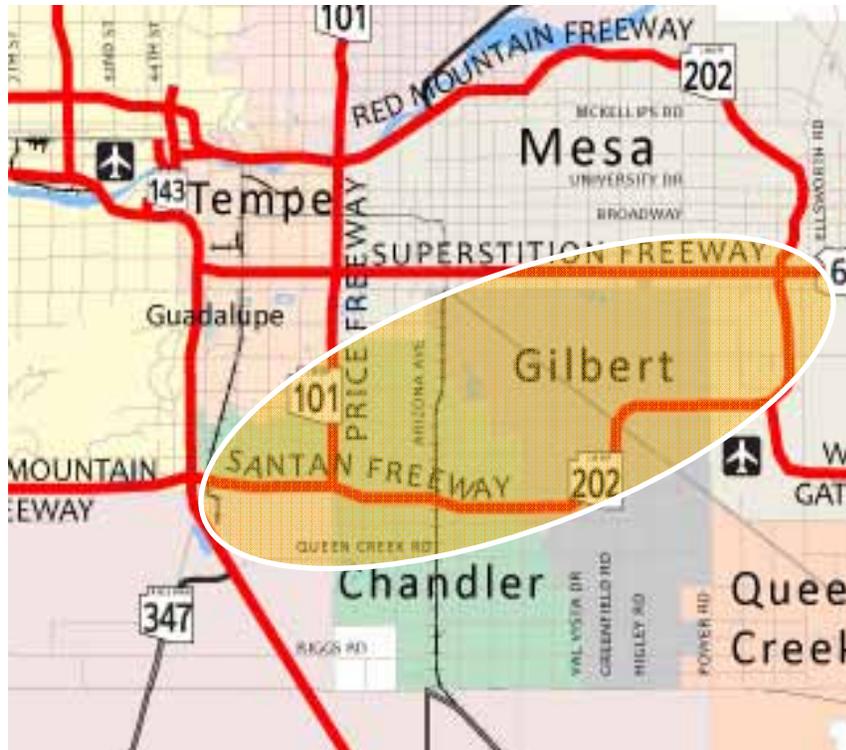


Projects			
SEGMENT	CONCEPT	COMMENTS	PHASE
I-10/SR-51 to Rural Rd	+1 GP Eastbound	Underway Spring 2011	I
Rural Rd to SR-101L	+1 GP		II
SR-101L to Gilbert Rd	+1 HOV	Underway Spring 2011	I
	+1 GP		II
	TI	Mesa Dr	V
Gilbert Rd to Higley Rd	+1 HOV		III
	+1 GP		V
Higley Rd to US-60	+ 1 HOV		
	+1 GP		V
	DHOV	To/From US-60 West	V

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$419.6 million	\$642.2 million	\$395.1 million	\$254.4 million	\$140.7 million

# Loop 202/Santan Fwy

	Action underway
	Deferral Recommendation
	Repackage Project

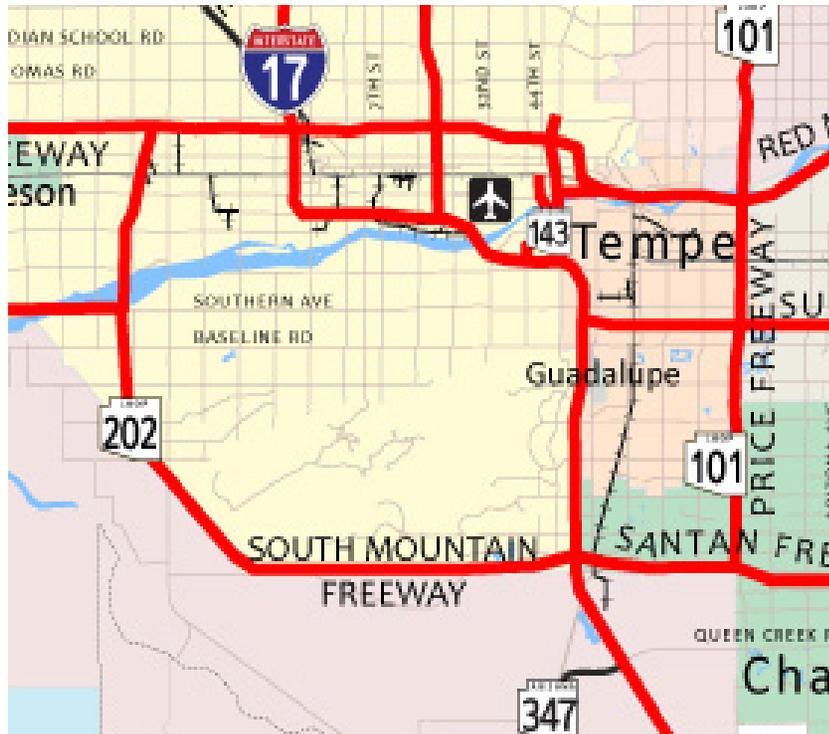


Projects			
SEGMENT	ACTION	COMMENTS	PHASE
Interstate 10 to Dobson Rd	+1 HOV		II
	DHOV	To/From I-10 North	II
	DHOV	To/From SR-101L North	III
Dobson Rd to Val Vista Rd	+1 GP		V
	+1 HOV		II
Val Vista Rd to US-60	+1 GP		V
	+1 HOV		IV

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$357.4 million	\$437.3 million	\$152.8 million	\$1.1 million	\$151.7 million

# Loop 202/South Mountain Fwy

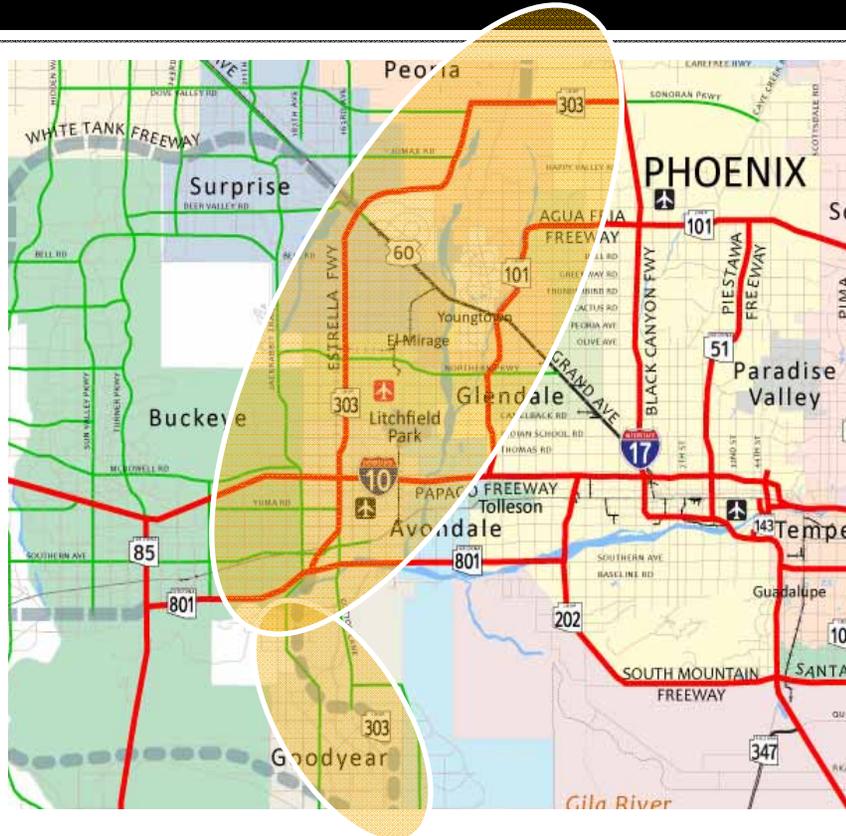
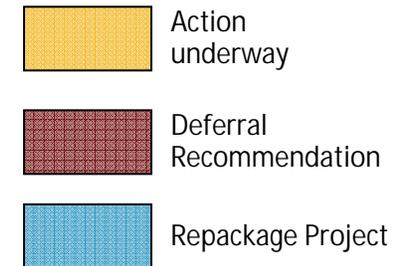
-  Action underway
-  Deferral Recommendation
-  Repackage Project



Projects			
SEGMENT	ACTION	COMMENTS	PHASE
Interstate 10/ Papago to Interstate 10/ SR-202L Santan	+3 GP – new freeway	Move forward with freeway plans to include 3 GP lanes plus 1 HOV lane	I, II

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$1,067.0 million	\$2,472.3 million	\$1,900.0 million	\$61.3 million	\$1,838.7 million

# Loop 303

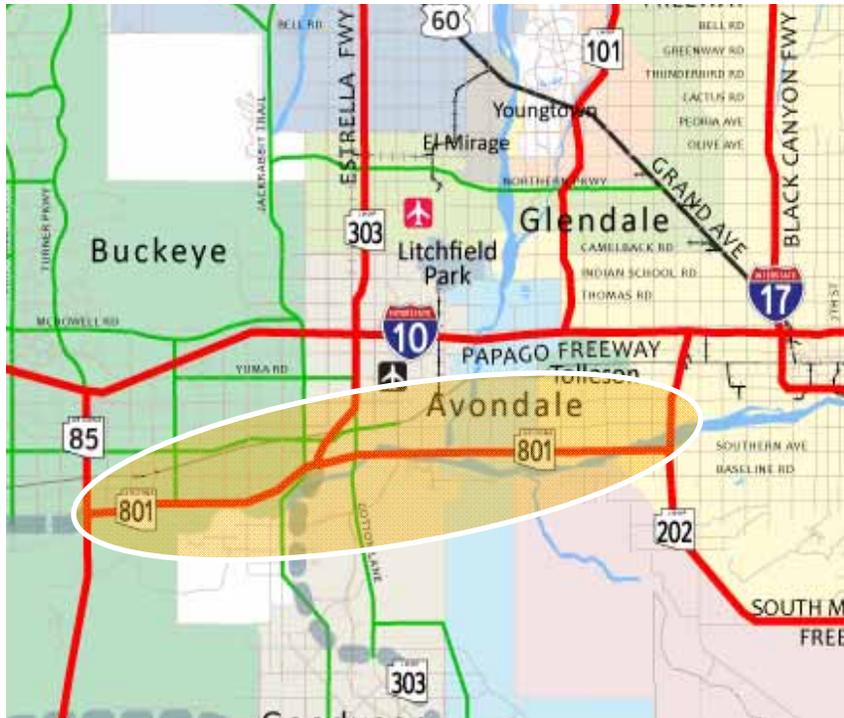


Projects			
SEGMENT	ACTION	COMMENTS	PHASE
Riggs Rd to SR-801/MC-85	ROW		V
SR-801/MC-85 to Interstate 10	+ 3 GP – new freeway		V
Interstate 10 to US-60	+ 3 GP – new freeway		II
	TI	Northern Pkwy interchange	V
	TI	Complete US-60 interchange	V
US-60 to Interstate 17	+ 2 GP – Interim rdwy	Underway Open 2011	I
	+ 1 GP – finish fwy		II

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$1,420.0 million	\$2,995.2 million	\$1,845.9 million	\$459.7 million	\$1,386.2 million

# Arizona State Route 801

-  Action underway
-  Deferral Recommendation
-  Repackage Project



Projects			
SEGMENT	ACTION	COMMENTS	PHASE
SR-85 to SR-303L	+1 GP – interim facility	Complete EA to identify alignment	V
SR-303L to SR-202L	+3 GP – new freeway		V

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$805.0 million	\$1,863.5 million	\$25.0 million	\$25.0 million	\$ -

# SR-802/Williams Gateway Fwy

-  Action underway
-  Deferral Recommendation
-  Repackage Project

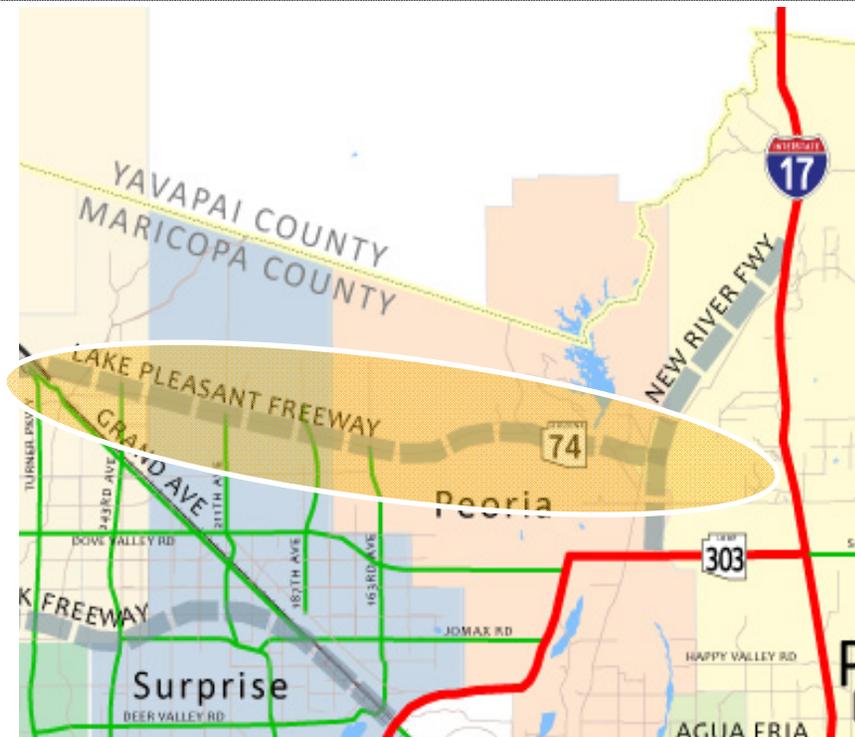


Projects			
SEGMENT	ACTION	COMMENTS	PHASE
SR-202L to Ellsworth Rd	+3 GP – new freeway	SR-202L interchange and interim 2 GP lanes	III
		+ 1 GP Lane and finish freeway	V
Ellsworth Rd to Meridian Rd	+ 3 GP – new freeway		V

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$325.0 million	\$471.3 million	\$183.4 million	\$28.3 million	\$155.1 million

# SR-74/Carefree Highway

	Action underway
	Deferral Recommendation
	Repackage Project

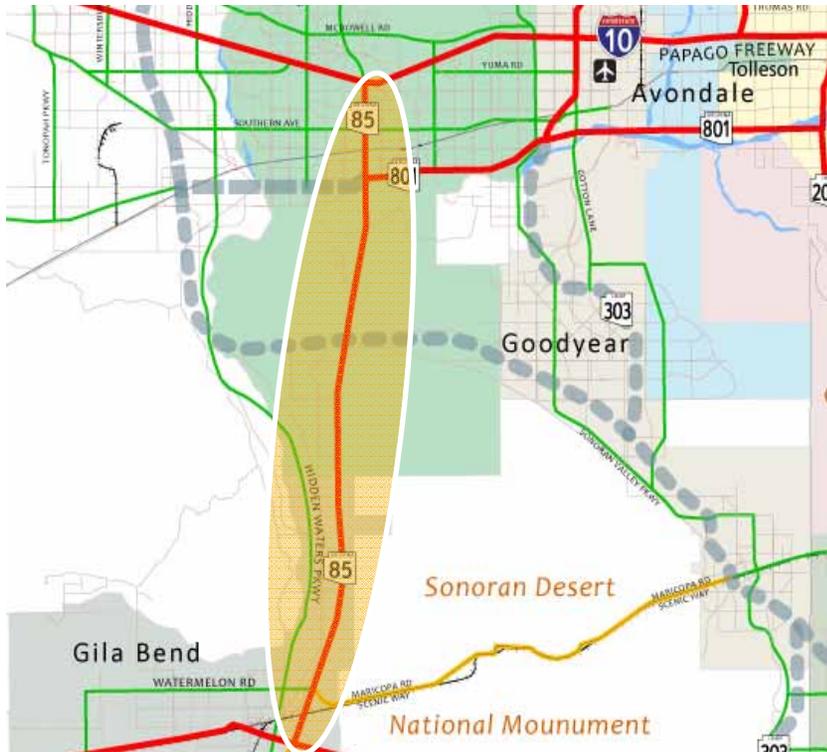


Projects			
SEGMENT	ACTION	COMMENTS	PHASE
US-60 to SR-303L Spur	Passing Lanes	Underway Open 2010	I
	ROW	Conduct EA and DCR for Lake Pleasant Fwy corridor preservation	V
SR-303L Spur to Interstate 17	ROW		V

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$48.0 million	\$55.1 million	\$10.1 million	\$10.1 million	\$ -

# Arizona State Route 85

	Action underway
	Deferral Recommendation
	Repackage Project

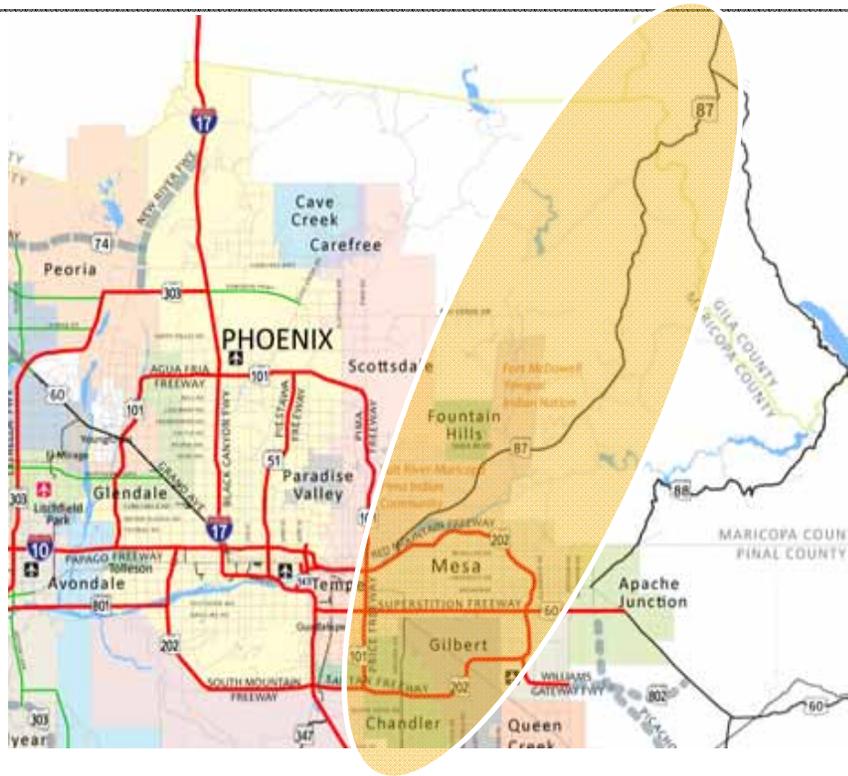


Projects			
SEGMENT	ACTION	COMMENTS	PHASE
Interstate 10 to Hazen Rd	+1 GP	ARRA project Underway 2010-2011	I
	Full freeway construction		V
Hazen Rd to Interstate 8	+1 GP	Underway 2010-2011	I
	Full freeway construction	Includes Interstate 8 interchange	V

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$118.6 million	\$251.0 million	\$142.5 million	\$142.5 million	\$ -

# Arizona State Route 87

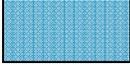
-  Action underway
-  Deferral Recommendation
-  Repackage Project

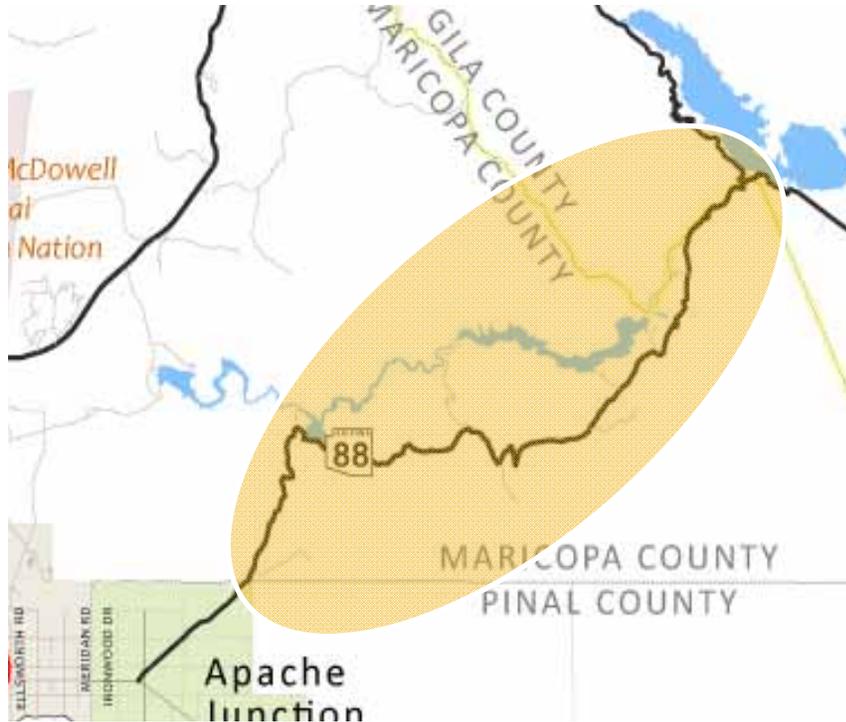


Projects			
SEGMENT	ACTION	COMMENTS	PHASE
Gila County to Shea Blvd	Spot Improvements	Includes Four Peaks Rd interchange	I

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$38.2 million	\$49.2 million	\$49.2 million	\$49.2 million	\$ -

# SR-88/Apache Trail

-  Action underway
-  Deferral Recommendation
-  Repackage Project



Projects			
SEGMENT	ACTION	COMMENTS	PHASE
Pinal County to Gila County	Spot Improvements	Fish Creek Hill improvements	I

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$1.8 million	\$1.7 million	\$1.5 million	\$1.5 million	\$ -

# System-wide Improvements



- Freeway Management System
- Maintenance
- Noise Mitigation
- Right-of-Way
- Design
- Minor Projects

2003 RTP Estimate	2009 ADOT Cost Opinion	Estimate for Proposed Action	Funding obligated thru FY2010	Remainder for Proposed Action
\$987.0 million	\$1,514.7 million	\$987.1 million	\$319.5 million	\$667.6 million

# Next Steps

- Incorporate the proposed changes into the Regional Freeway and Highway Life Cycle Program
  - Align with expected cash flows.
  - Refine phases as needed.
- Incorporate into Regional Transportation Plan 2010 Update



*Looking west at US-60/Superstition from the Super-Red-Tan interchange*

**"It takes less time to do a thing right than it does to explain why you did it wrong."**

**HENRY WADSWORTH LONGFELLOW, AMERICAN POET**

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**602 254-6300**

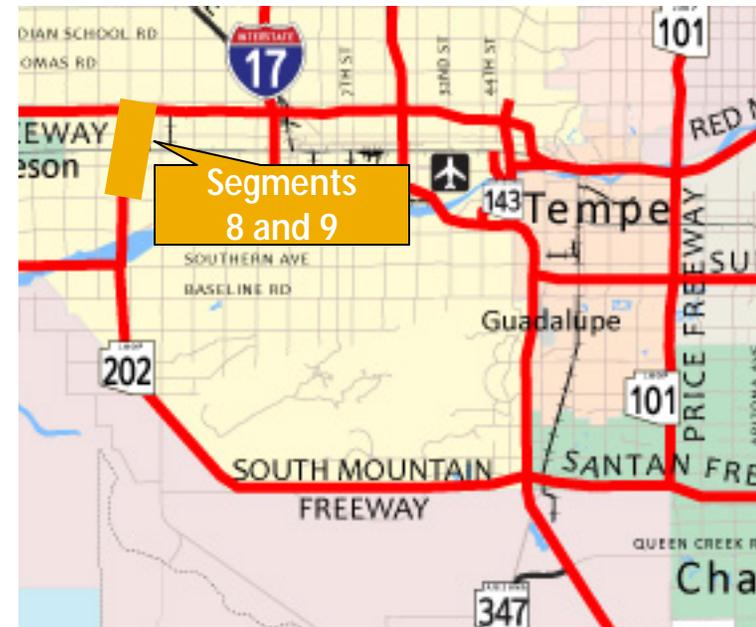


# Options

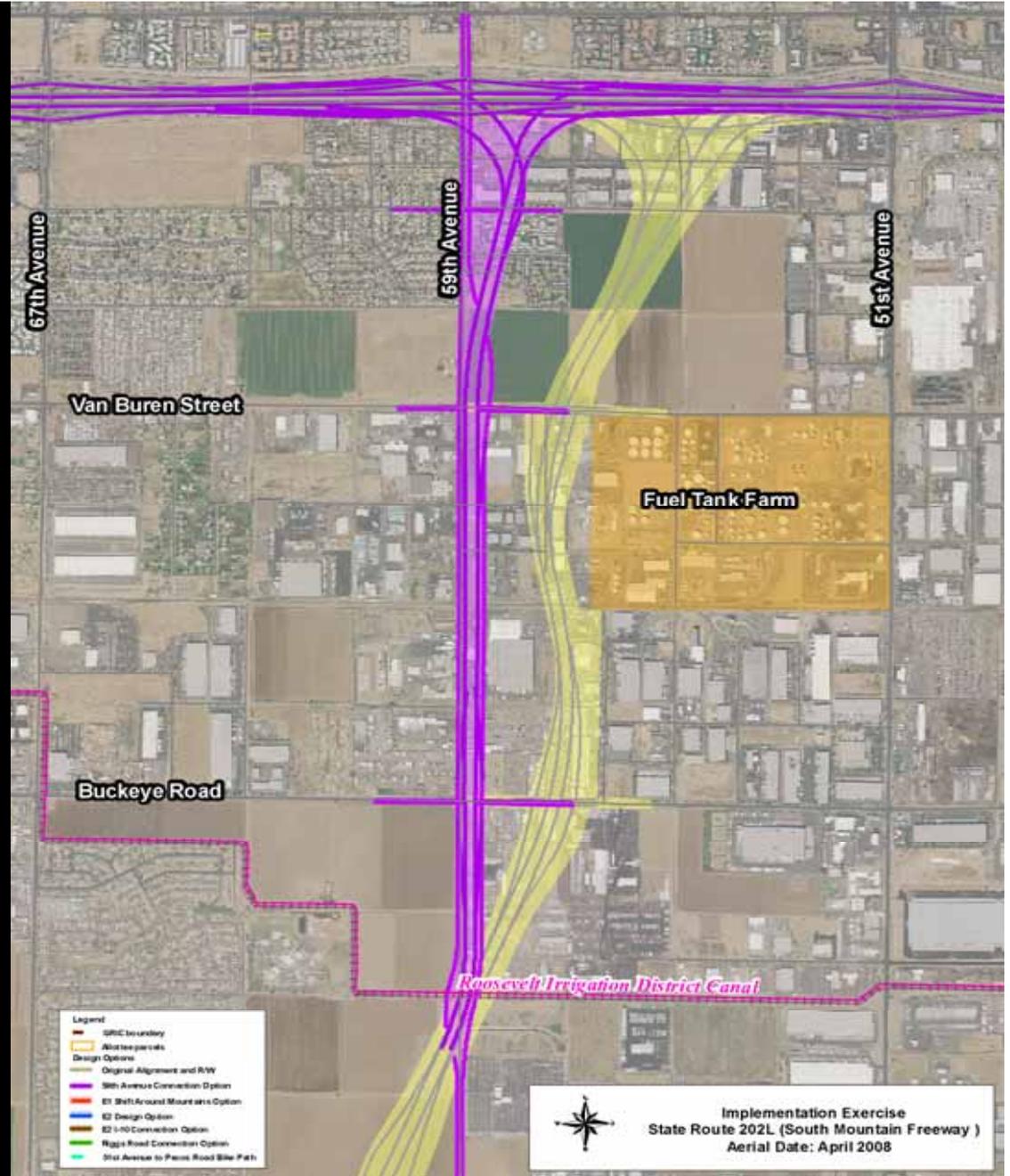
## South Mountain Corridor

FROM JANUARY 2009  
PRESENTATION

- Continue with current plans for 6-lane construction; clear and obtain ROW for ultimate 10-lane freeway
- Construct as a 6-lane freeway only with provision for HOV lanes in median
- “SR-51 Option” – Build freeway within narrower ROW footprint
- Construct as an Arizona Parkway in Freeway ROW
- Construct as an Arizona Parkway in Parkway ROW
- No Build



# 59th Avenue Option South Mountain Corridor



# "Prop 300" Cross-Section



*SR-51, looking north from Cactus Rd Overcrossing*

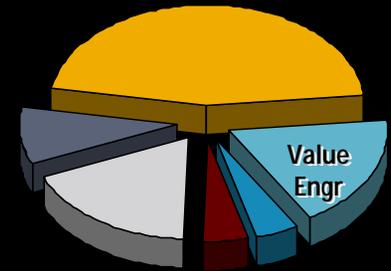
# "Prop 300" Cross Section

ADOT owns 95% of the Right-of-Way along Pecos Rd



# Anticipated Savings South Mountain Corridor

**DRAFT**  
Program still  
under study.



RTP Budget for South Mountain	\$1,067.0 million
Current ADOT Cost Opinion	\$2,470.1 million
Use 59th Avenue versus "55th Avenue"	- \$128.4 million
Use "Prop 300" Cross Section versus current proposal	- \$105.2 million
Lower ROW Contingency and Construction Costs	- \$204.1 million
Other potential savings from Value Engineering	- \$132.5 million
<b>NEW COST OPINION</b>	<b>\$1,900.0 million</b>
<b>NET SAVINGS</b>	<b>\$570.1 million</b>

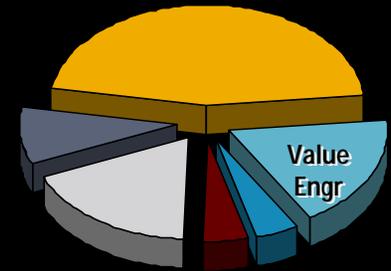






# Anticipated Savings Loop 303 Corridor

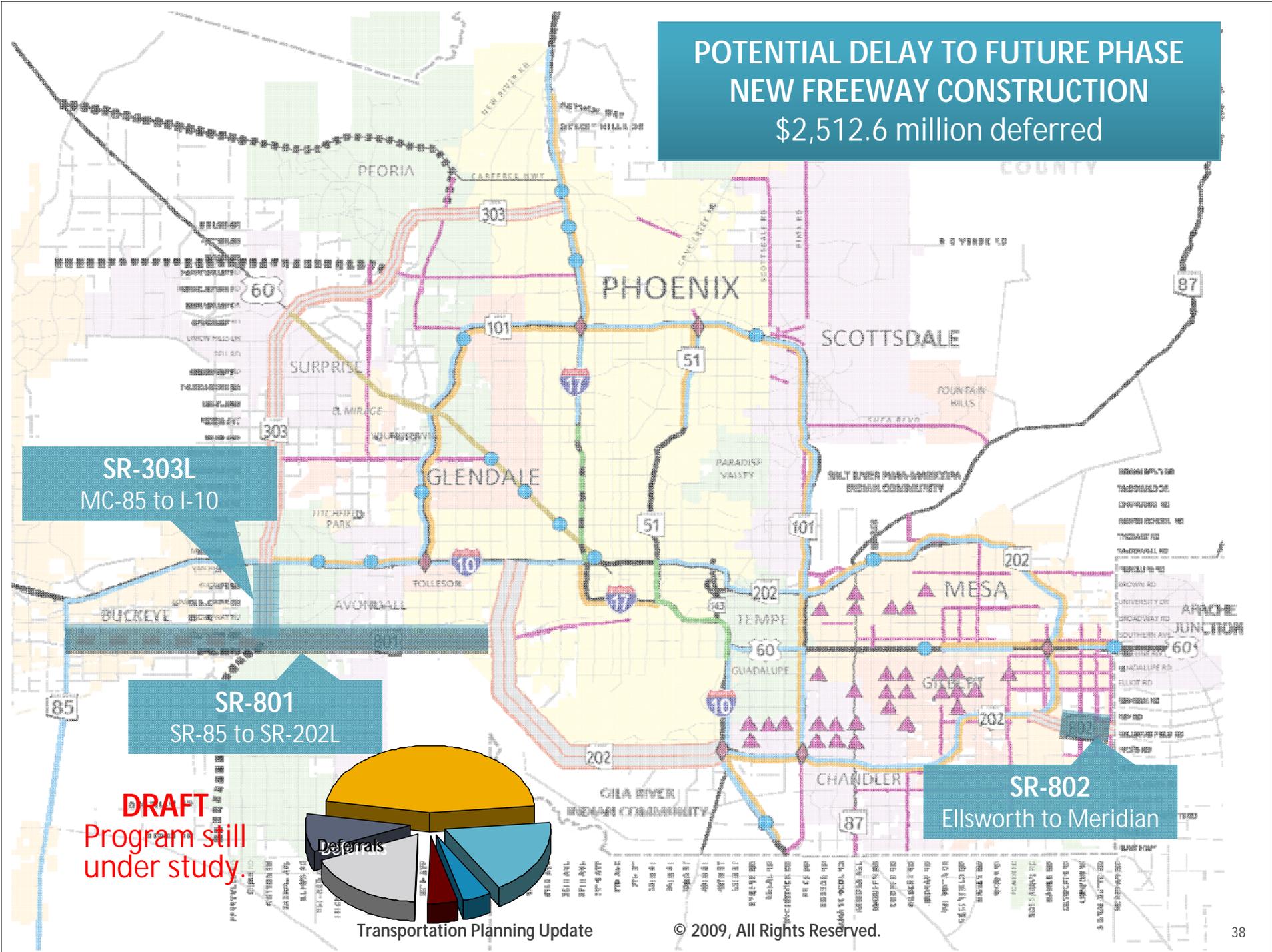
**DRAFT**  
Program still  
under study.



RTP Budget for Loop 303	\$1,420.0 million
Current ADOT Cost Opinion	\$3,054.0 million
Use US-60 partial cloverleaf versus Stacked SPUI	- \$150.0 million
Simplify Interstate 10 TI	- \$370.0 million
Lower ROW Contingency and Construction Costs	- \$185.0 million
Defer construction of MC-85 to Interstate 10 Segment	- \$240.0 million
Other potential savings from Value Engineering	- \$100.0 million
<b>NEW COST OPINION</b>	<b>\$2,009.0 million</b>
<b>NET SAVINGS</b>	<b>\$1,045.0 million</b>



**POTENTIAL DELAY TO FUTURE PHASE  
NEW FREEWAY CONSTRUCTION**  
\$2,512.6 million deferred



**POTENTIAL DELAY TO FUTURE PHASE  
ADD GENERAL PURPOSE LANES  
\$1,194.8 million deferred**

**I-17/Black Canyon  
SR-74 to New River Rd**

**SR-101L/Agua Fria  
I-10 to I-17**

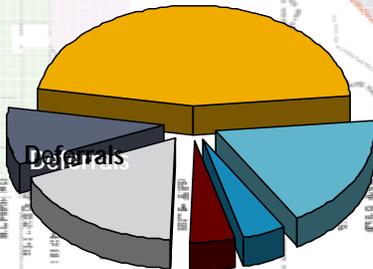
**SR-51/Piestawa  
Shea Blvd to SR-101L**

**I-10/Papago  
SR-85 to Verrado Way**

**SR-202L/Red Mountain  
Gilbert Rd to US-60**

**SR-202L/Santan  
US-60 to I-10**

**DRAFT**  
Program still  
under study.



Transportation Planning Update

**POTENTIAL DELAY TO FUTURE PHASE  
ADD DHOV RAMPS AND TIS**  
\$300.2 million deferred

**I-17 South to  
SR-101L West DHOV**

**I-10/Papago  
El Mirage Rd TI**

**US-60/Grand  
Phase IV TIs**

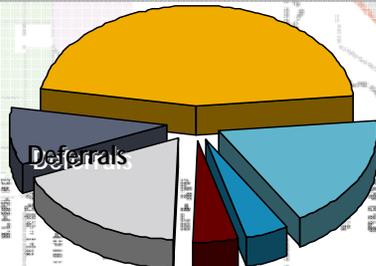
**SR-202L/Red Mountain  
Mesa Dr TI**

**I-10 West to  
SR-101L North DHOV**

**US-60/Superstition  
Lindsay Rd TI**

**US-60 West to  
SR-202L North DHOV**

**DRAFT**  
Program still  
under study.



Transportation Planning Update

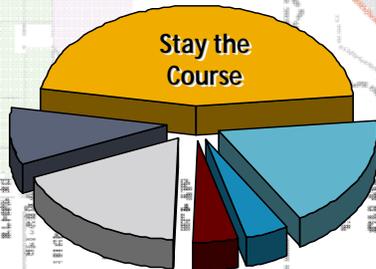
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# OTHER POTENTIAL PROGRAM RECOMMENDATIONS

I-10/Papago  
At West PHX Sky Harbor

I-17/Black Canyon  
I-10 Split to AZ Canal

**DRAFT**  
Program still  
under study.



Transportation Planning Update