

# FY 2016 – 2020 Draft Tentative Five-Year Transportation Facilities Construction Program

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Planning & Programming Group Manager

# 2016-2020 Tentative Program Discussion

- ▶ Background
- ▶ Planning to Programming (P2P)
- ▶ Overview of Asset Condition
- ▶ STB; Tentative 5-Year Highway Delivery Program
- ▶ ADOT; 6-10 Year Highway Development Program
- ▶ PAG; Tentative Program
- ▶ MAG; Tentative Program
- ▶ STB; Airport Program
- ▶ Next Steps

# Background

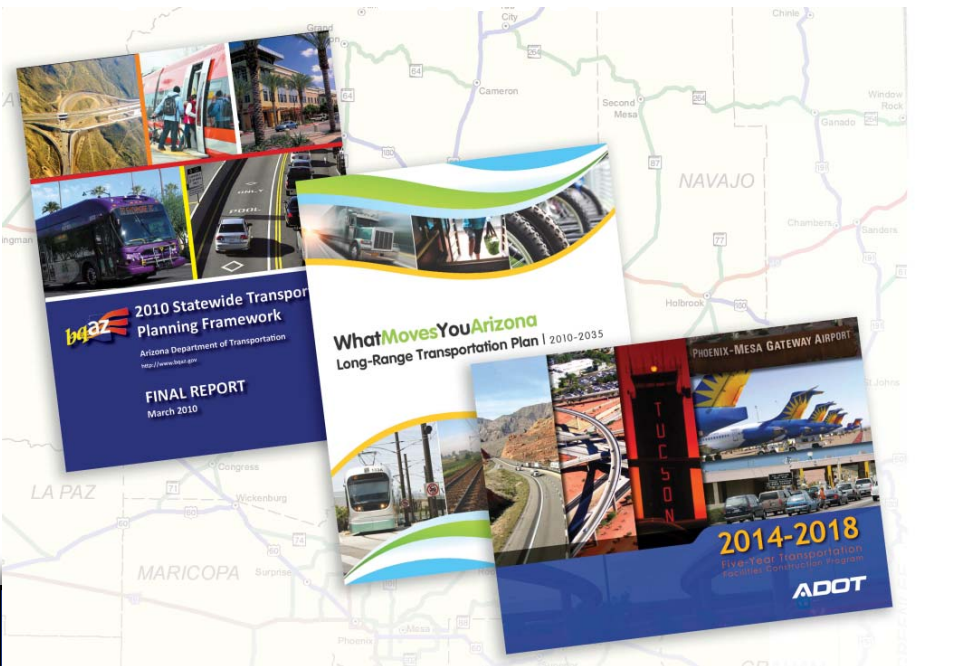
- ▶ Developed collaboratively with STB, ADOT (ITD, FMS, MPD) and Regional Partners
- ▶ Demonstrates how federal and state dollars will be obligated over the next five years, and planned over the following 5 Years.
- ▶ Approved annually
- ▶ Fiscal year starts each July 1
- ▶ Must be fiscally constrained – STB Five Year Program
- ▶ Must be financially constrained – ADOT, Development Program

# MAP-21

- ▶ Federal Transportation Reauthorization; enacted October 1, 2012
- ▶ Requires a National Highway Performance Program
  - “It is in the interest of the United States to focus the Federal-aid highway program on the following national goals:”***
  - Safety
  - Infrastructure Condition
  - Congestion Reduction
  - System Reliability
  - Freight Movement and Economic Vitality
  - Environmental Sustainability
- ▶ Planning to Programming Linkages (P2P)
  - Preparation for MAP-21 Performance Program

# Planning to Programming Linkage (P2P)

## ADOT Vision and Long-Range Plan Implementation for Performance Based Programming



# VISIONING to PROGRAMMING

March 2011

How do transportation projects move from initial visioning stages to programming (funding for construction)?

## VISION

## PLAN

## PROGRAM

### ▼ UNIVERSE OF PROJECTS

The existing universe of projects was defined through the bQAZ Statewide Transportation Planning Framework.



### ▼ PROJECT TYPE

Projects are sorted into four main project categories

### \$\$ PERCENTAGE ▼ OF FUNDS

Goals and objectives from the Long-Range Transportation Plan are used to determine funding for projects in each category

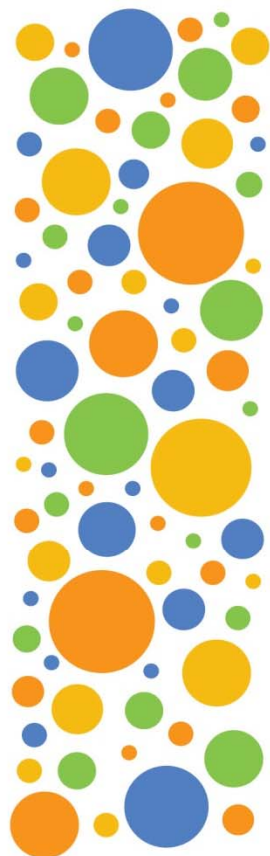
### ▼ PERFORMANCE SCORING

Projects are scored based upon specific "Performance Measure" criteria (such as pavement condition, congestion levels, travel time)



### ▼ PRIORITIZATION

Best performing projects are programmed to receive funding through the 5-Year Plan <sup>1 2 3</sup>



#### PROJECT TYPE



#### MODERNIZATION

add shoulders  
straighten curves % →



#### EXPANSION

add lanes  
new highways  
HOV lanes % →



#### PRESERVATION

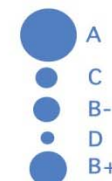
pavement  
bridges % →



#### NON-HIGHWAY MODES

rail  
transit  
air % →

#### PERFORMANCE CRITERIA



#### 5 - YEAR PLAN

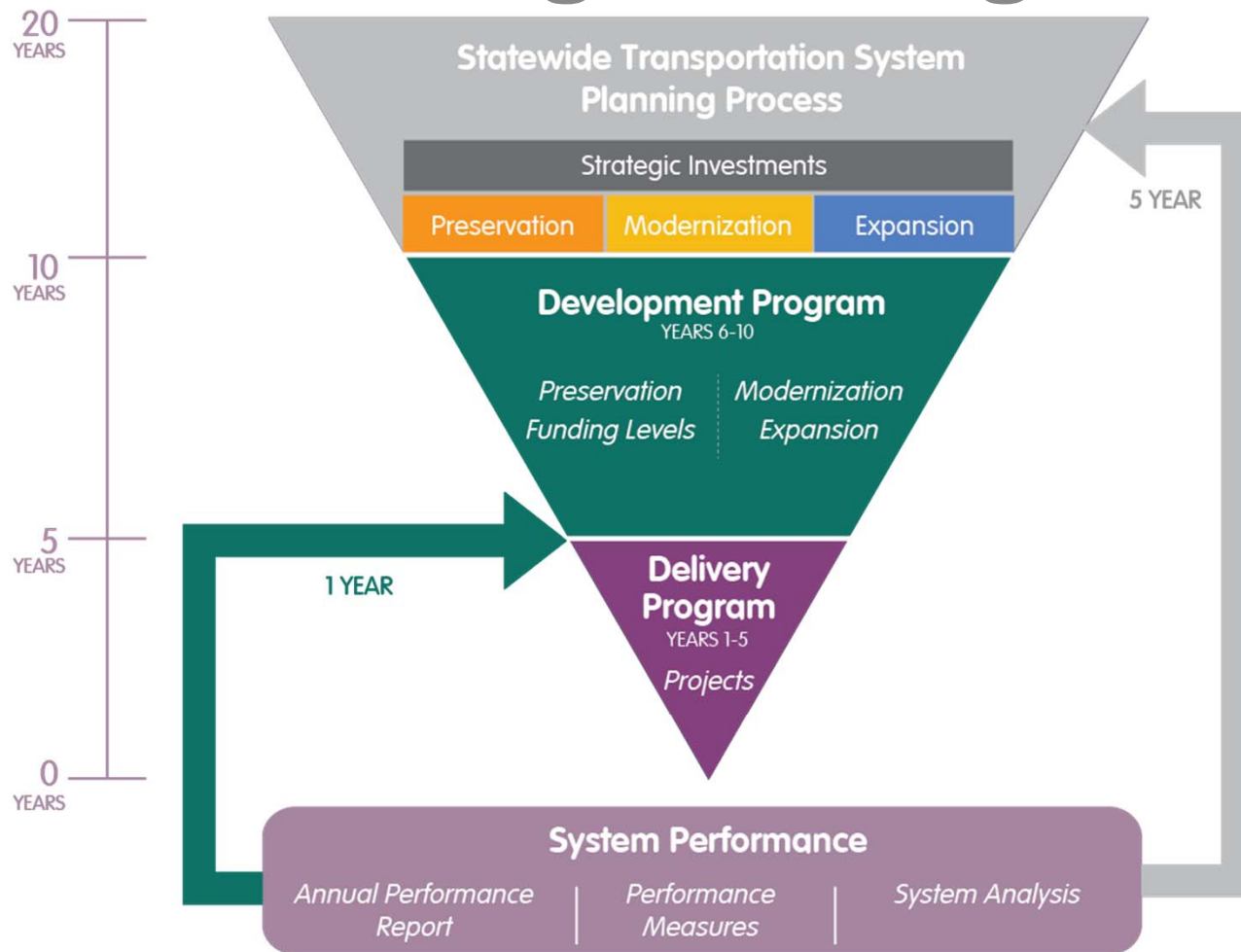


# P2P Link Goal

To create a performance-based  
process that links planning to  
programming

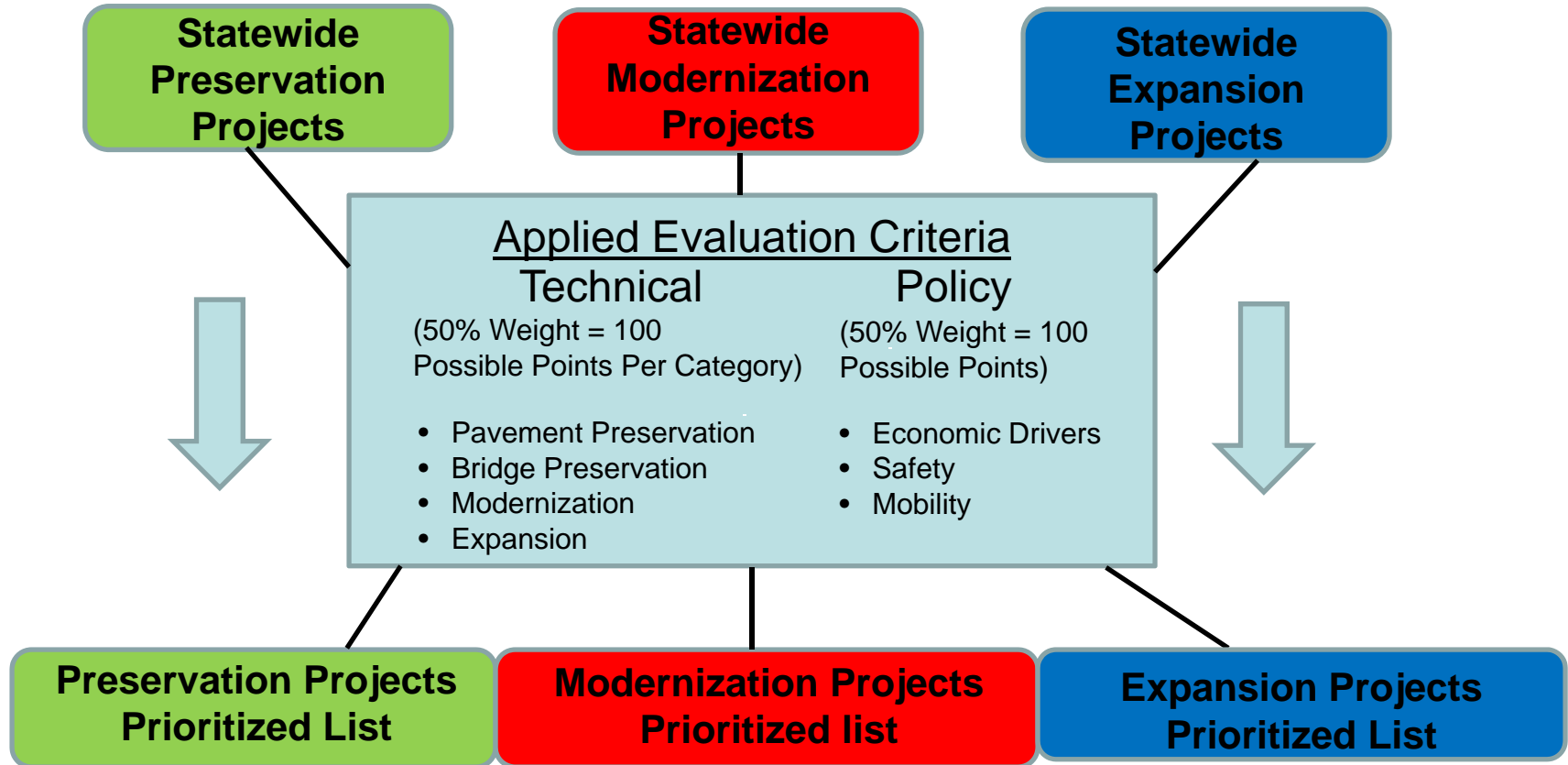
*transparent, defensible, logical,  
reproducible*

# Linking Planning to Programming





# Planning to Programming Project Prioritization Process



# Evaluation Criteria – Technical and Policy

**Project Score =**

Technical Criteria (50% Weight)  
– apply appropriate set by  
investment category project type

Pavement Preservation Projects Criteria

Bridge Preservation Projects Criteria

Modernization Projects Criteria

Expansion Projects Criteria

(Max Points = 100)

+

Policy Criteria (50% Weight)  
applied to all 3 investment  
category project types

Economic Drivers

Safety

Mobility

(Max Points = 100)

Technical Score + Policy Score = Project Score (Max 200 Points)

# Overview of Asset Condition



**\$19.7 Billion = Value of State Highway System Infrastructure**

**\$19.7  
Billion**



Without a commitment to preservation, the system would cost \$200 billion to replace.




# Preservation Saves Money!

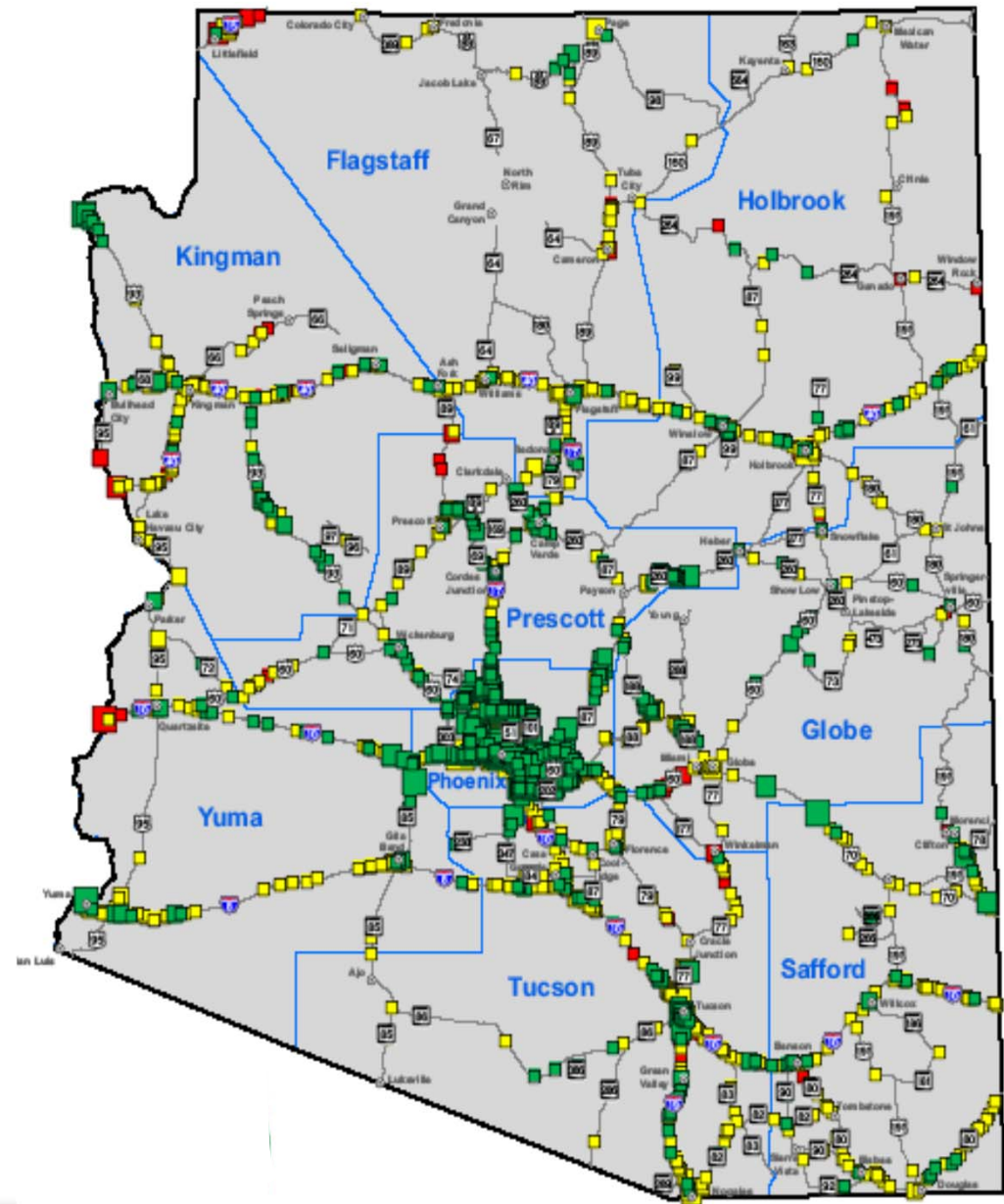
- ▶ Pay now or pay much more later
- ▶ Public feedback continuously indicates that maintaining the current transportation system in a state of good repair should be of high priority \*
- ▶ MAP-21 specifically addresses system performance:
  - National performance measures are being established
  - State targets will follow
  - States will be expected to meet established targets
- ▶ MAP-21 requires a performance- and risk based approach to transportation planning and programming

\* Identifying Customer-Focused Performance Measures – ATRC Report 655 – October 2010



# Bridge Condition: State Highway System, 2013

	Condition	Count	Percentage
	Good	910	42%
	Fair	1153	53%
	Poor	106	5%
	Total:	2169	



## Ideal Wash On SR-186 Near Willcox

Before



After



# SR-77 Dripping Springs Wash Bridge

Before



After





# SR-87 Limestone Wash Bridge

Before

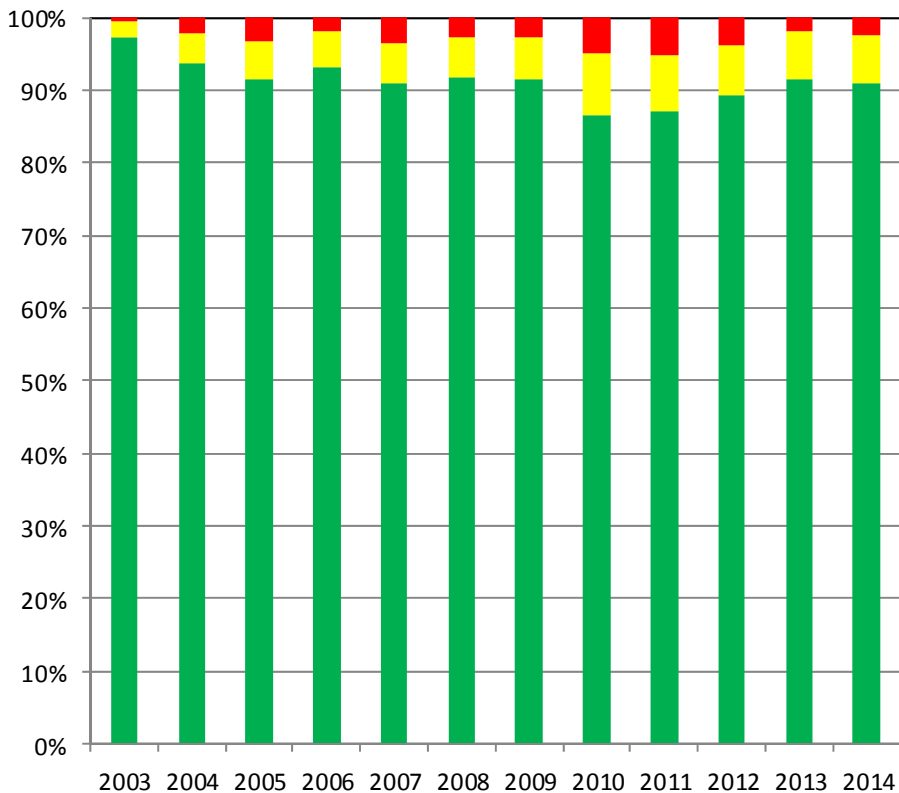


After

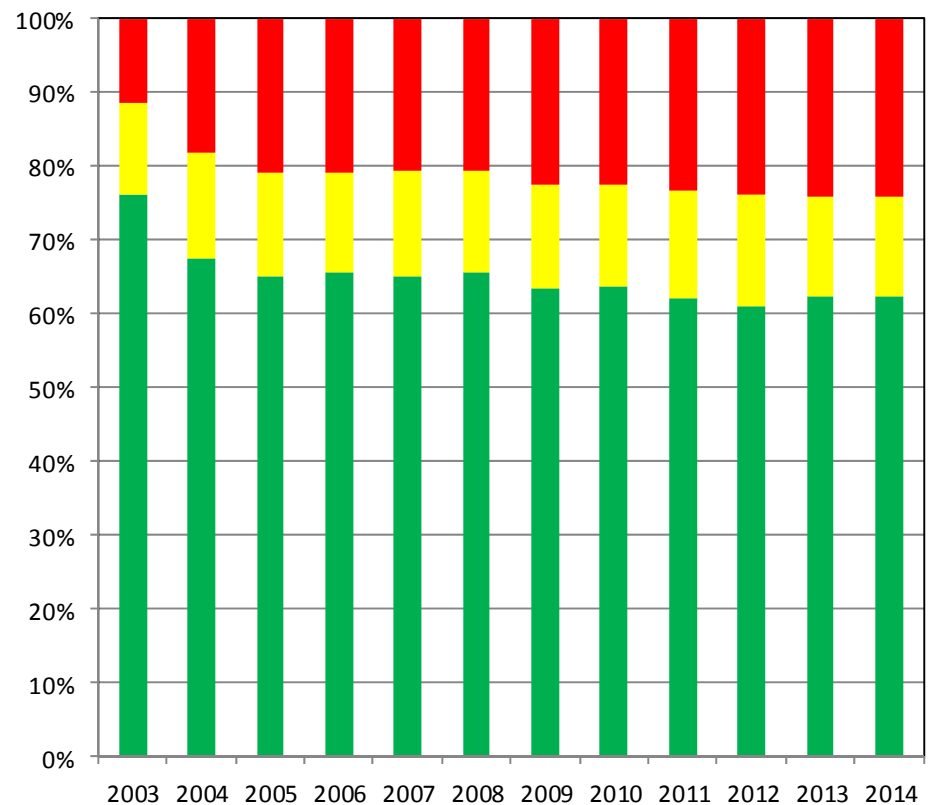


# Losing Ground on Pavement Conditions

Interstate Pavement Condition – ADOT Definition



Non-Interstate Pavement Condition – ADOT Definition



# SR-85 Ajo Project Tucson District

Before



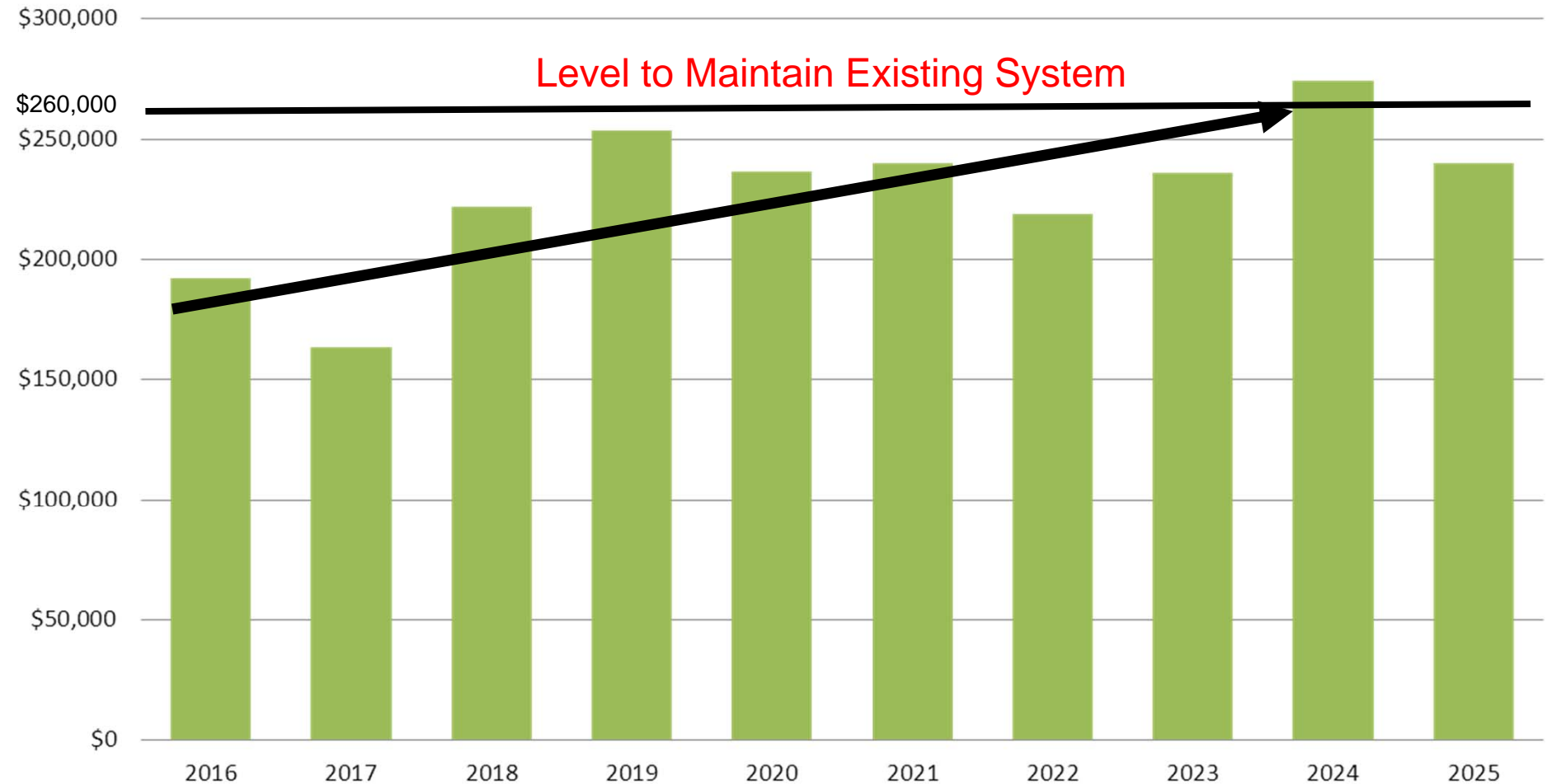
After





# Preservation funding proposed FY16-FY25

## Preservation

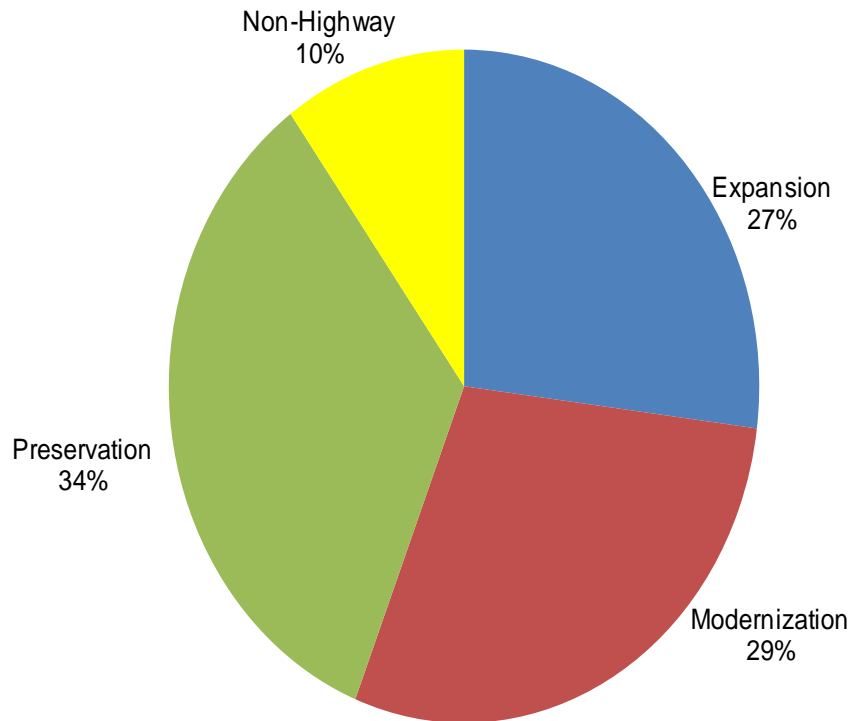


# Tentative 5-Year Highway Delivery Program



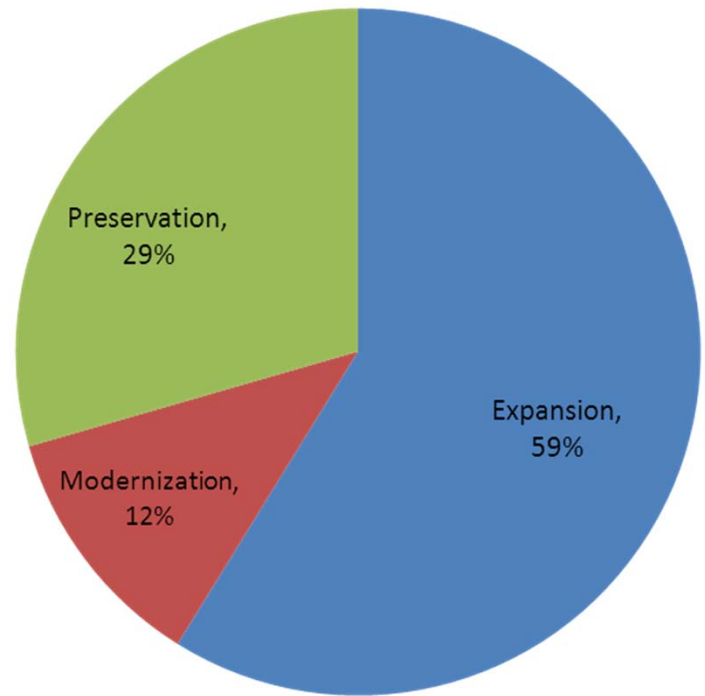
# ADOT's Long Range Plan

## ► Recommended Investment Choice (RIC)



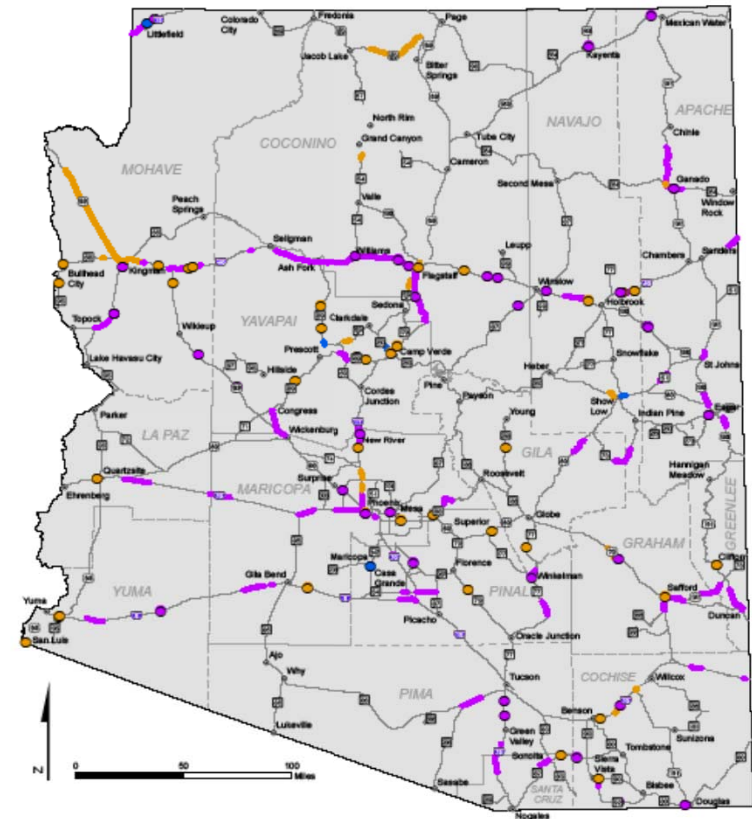
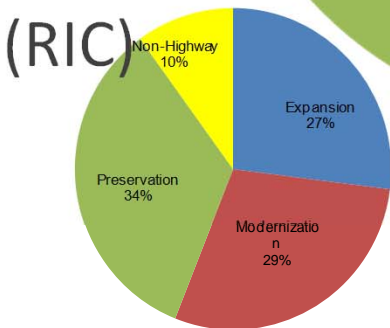
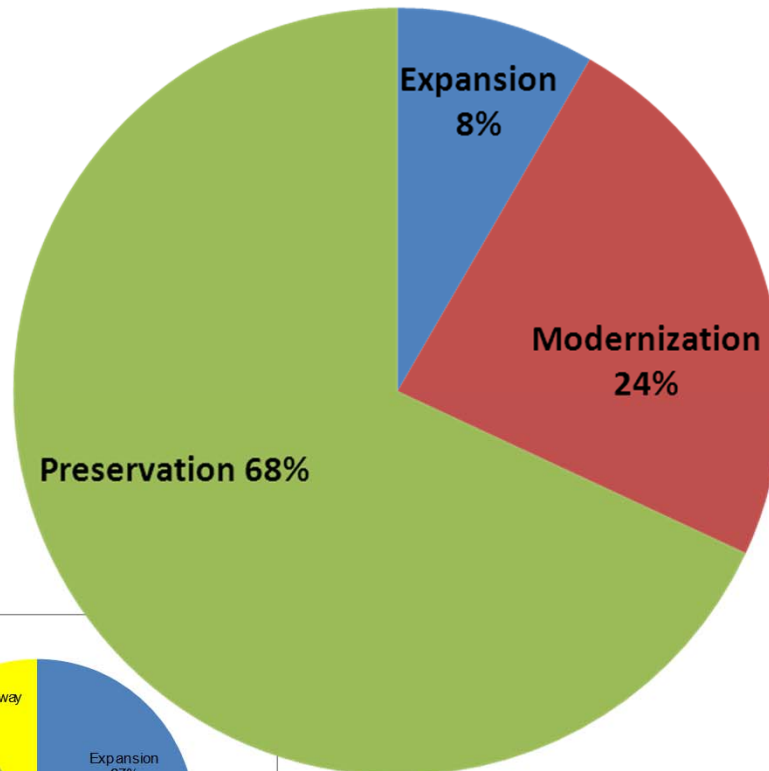
## 2016-2020 Tentative Facilities Construction Program

Greater AZ, MAG & PAG



# Greater Arizona Tentative 5-Year Highway Delivery Program(FY16- FY20)

Tentative 2016-2020 Five-Year  
Transportation Facilities Construction Program



## Projects

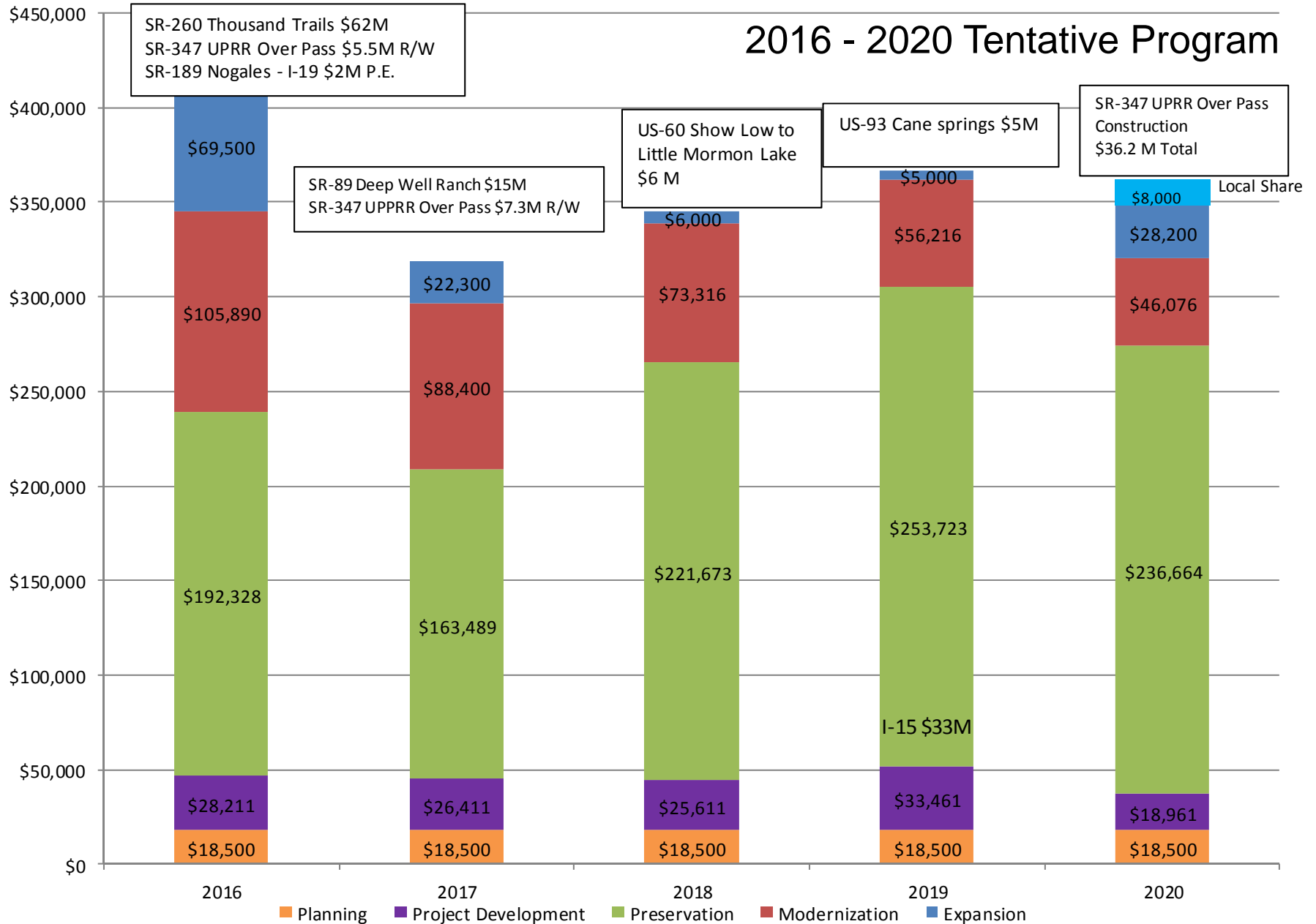
- Expansion
- Modernization
- Preservation
- Expansion
- Modernization
- Preservation
- \* Cities and Towns
- State Highway System
- County Boundary
- State Boundary

Note:  
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Prepared by:  
Arizona Department of Transportation  
Multimodal Planning Division  
Transportation Analysis GIS Section  
602.712.7333 January 2016

ADOT

# 2016 - 2020 Tentative Program

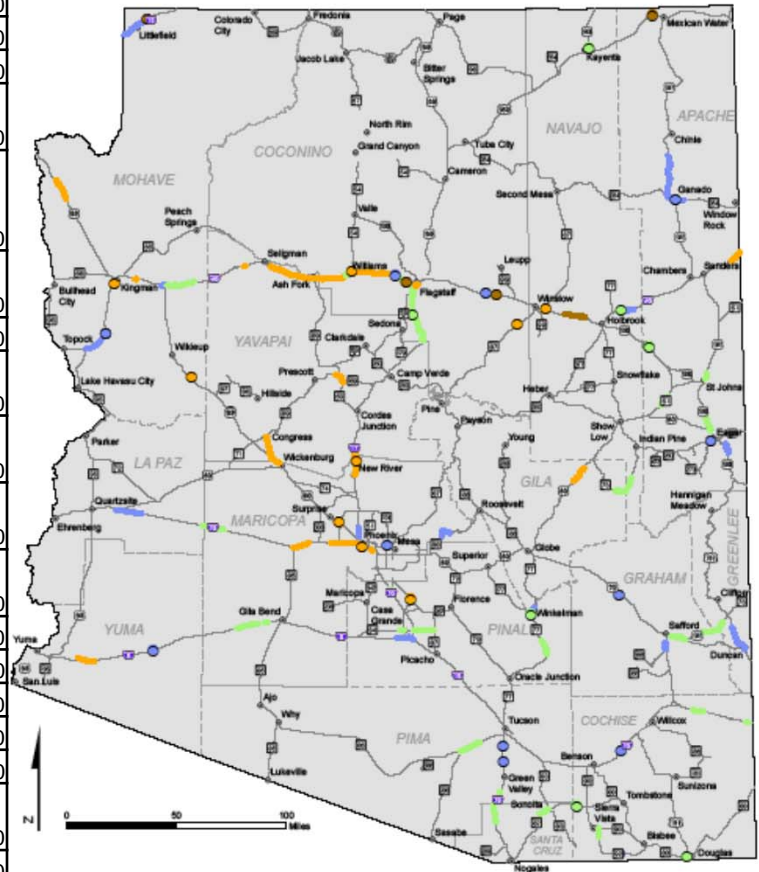




# Preservation Program (FY16- FY20)

RT	LOCATION	D	Type of Work	CFY	COST(\$000)
8	BIANCO RD - JCT I-10	T	Pavement Preservation	2016	\$12,700
10	US 60 - MP 42	Y	Pavement Preservation	2016	\$20,300
15	NEVADA STATE LINE - MP 13	F	Pavement Preservation	2016	\$18,200
40	WILLOW CREEK BRIDGE EB, STR #1592,1594,1595 & 1768	K	Bridge Preservation	2016	\$7,000
40	BUTLER AVE TI OP & 4TH ST OVERPASS, STR #2076, 2077, 1182 & 1183	F	Bridge Preservation	2016	\$500
40	TWIN ARROWS TI UNDERPASS, STR #1363	F	Bridge Preservation	2016	\$3,000
69	JCT SR 169 - MENDECINO DRIVE	P	Pavement Preservation	2017	\$7,100
73	FORT APACHE - LOCUST STREETS	G	Pavement Preservation	2018	\$6,040
40	HOLY MOSES WASH BRIDGE, EB# 1833 & WB #1834	K	Bridge Preservation	2017	\$2,000
40	COTTONWOOD BRIDGE, EB #519 & WB #520	H	Bridge Preservation	2017	\$4,500
17	NEW RIVER ROAD - COLDWATER ROAD	P	Pavement Preservation	2017	\$20,600
69	JCT SR 169 - MENDECINO DRIVE	P	Pavement Preservation	2017	\$7,100
93	WILLOW BEACH - WHITE ROAD	K	Pavement Preservation	2017	\$9,800
8	MP 96 - PALOMA ROAD	Y	Pavement Preservation	2018	\$11,480
10	DYSART ROAD - BLACK CANYON HWY	E	Pavement Preservation	2018	\$26,500
10	COUNTY LINE TO SALOME ROAD	Y	Pavement Preservation	2018	\$11,480
17	YAVAPAI- COCONINO COUNTY LINE -I-40	F	Pavement Preservation	2018	\$16,360
19	MP 21.1- MP 31.8	T	Pavement Preservation	2018	\$12,230
19	CANOA RANCH REST AREA - DUVAL MINE ROAD TI	T	Pavement Preservation	2018	\$11,325
40	GARLAND PRAIRE - PARKS TI	F	Pavement Preservation	2018	\$27,400
40	PARKS TI - RIORDAN BRIDGE	F	Pavement Preservation	2018	\$13,000
40	US-93 - Willow TI	K	Pavement Preservation	2018	\$12,630
89	JCT US 93 - JCT SR 71	P	Pavement Preservation	2016	\$4,700

**Tentative 2016-2020 Five-Year  
Transportation Facilities Construction Program  
Preservation Projects**



## Projects



**ADOT**

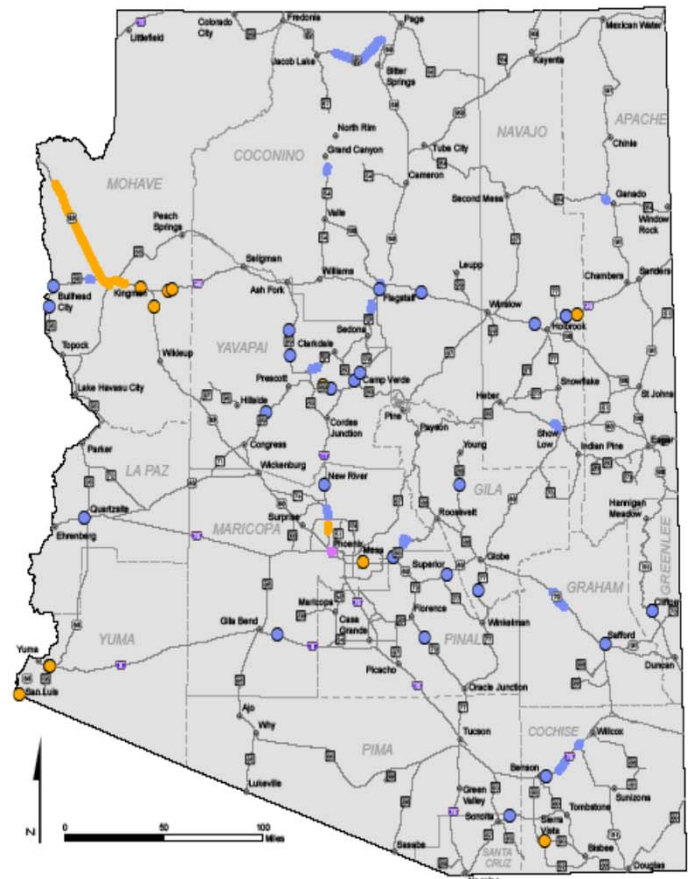
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Prepared by:  
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Multimodal Planning Division  
Transportation Analysis GIS Section  
900.712.7333 January 2016

# Modernization Program (FY16- FY20)

RT	LOCATION	D	Type Of Work	CFY	COST(\$000)
264	BURNSIDE - FISH WASH	H	Construct Shoulder Widening	2016	\$10,300
89	OVERLOOK - JW POWELL BLVD	F	Construct Shoulder Widening	2016	\$8,892
70	BYLAS AREA	S	SAFETY IMPROVEMENTS	2016	\$7,493
8	ARABY ROAD TI RECONSTRUCTION	Y	Construct Roundabouts	2017	\$8,045
93	WIILOW BEACH - WHITE HILLS ROAD	K	Construct Shoulder Widening	2017	\$15,000
95	SR 95 @ MOHAVE RD	Y	Construction	2017	\$4,939
999	RURAL INTELLIGENT TRANSPORTATION SYSTEMS VARIOUS ROUTES I-10,SR 89A,US 60, US 191,I-40	N	Install DMS Signs	2017	\$4,600
40	WILLOW SPRINGS	K	Rock fall Mitigation	2017	\$4,407
95	US 95 AND 8E INTERSECTION	Y	Construct Roundabout	2017	\$4,200

Tentative 2016-2020 Five-Year  
Transportation Facilities Construction Program  
Modernization Projects



## Projects

- 2016
- 2017
- 2018
- 2019
- 2020
- \* Cities and Towns
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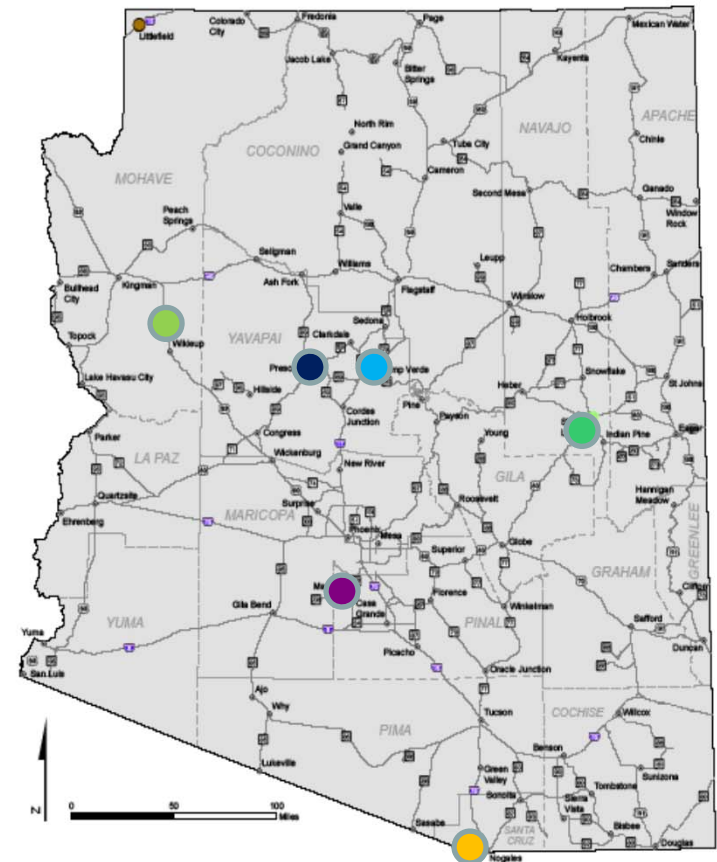
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Transportation Analysis GIS Section  
602.712.7355 January 2016

**ADOT**

# Expansion Program (FY16- FY20)

RT	LOCATION	D	Type Of Work	CFY	COST(\$000)
260	THOUSAND TRAILS - I-17	P	Construct Improvements	2016	\$62,000
347	UNION PACIFIC RR CROSSING	T	Right of Way	2016	\$5,500
189	NOGALES TO I-19	T	Environmental	2016	\$2,000
89	JCT SR 89A - DEEP WELL RANCH ROAD	P	Widen corridor to improve capacity, operations and safety	2017	\$15,000
347	UNION PACIFIC RR CROSSING	T	Right of Way	2017	\$7,300
60	SHOW LOW TO LITTLE MORMON LAKE	G	Widen Roadway	2018	\$6,000
93	CANE SPRINGS	K	Design 4-lane divided highway	2019	\$5,000
347	UNION PACIFIC RR CROSSING	T	Construction	2020	\$36,200

Tentative 2016-2020 Five-Year  
Transportation Facilities Construction Program  
Expansion Projects



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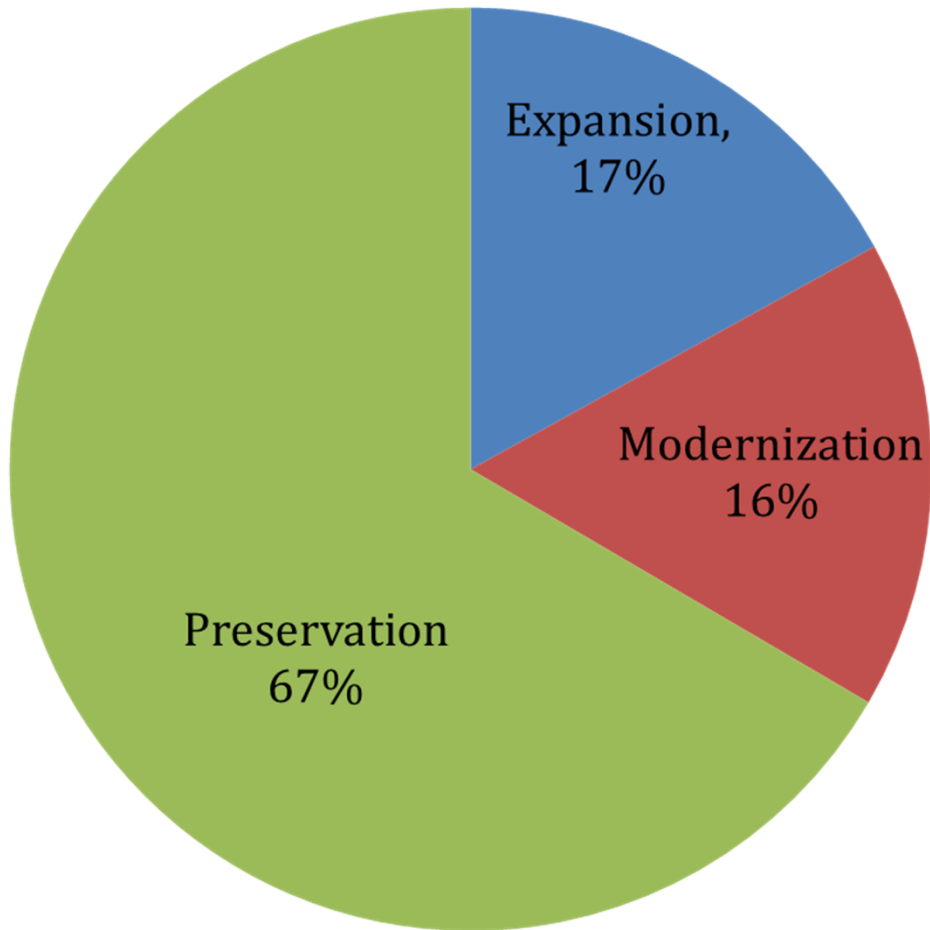
ADOT

# Summary of the Tentative Program FY16-20

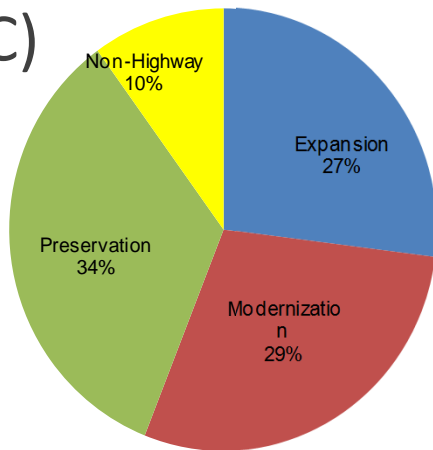
- ▶ Updated Project Costs
- ▶ SR-260 Thousand Trails in FY 2016
- ▶ SR-347 UPRR Overpass Right of way Phase in FY 2016
- ▶ SR-189 Preliminary Design Phase in FY 2016
- ▶ SR-89; Deep Well Ranch Road to SR-89A in FY 2017
- ▶ US-60 Show Low to Little Mormon Lake in FY 2018
- ▶ US-93 Cane Springs Design in FY 2019
- ▶ I-15 Bridge #1 Replacement in FY 19; \$33M
- ▶ Construction for the SR-347 UPRR Overpass for \$28,200 with \$8,000 to come from Local Area

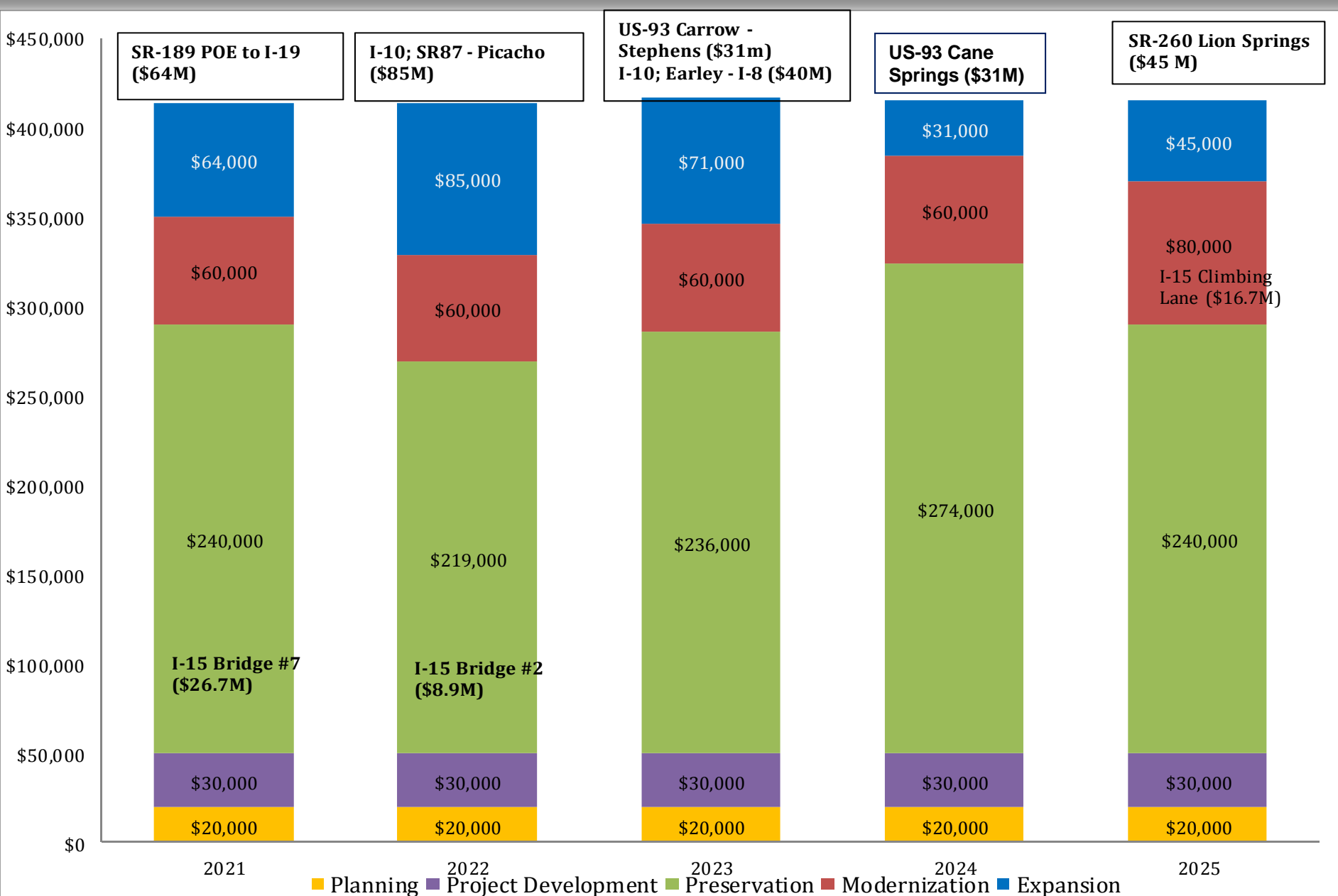
# Year 6-10 (FY21 – FY25)

## Greater Arizona



(RIC)



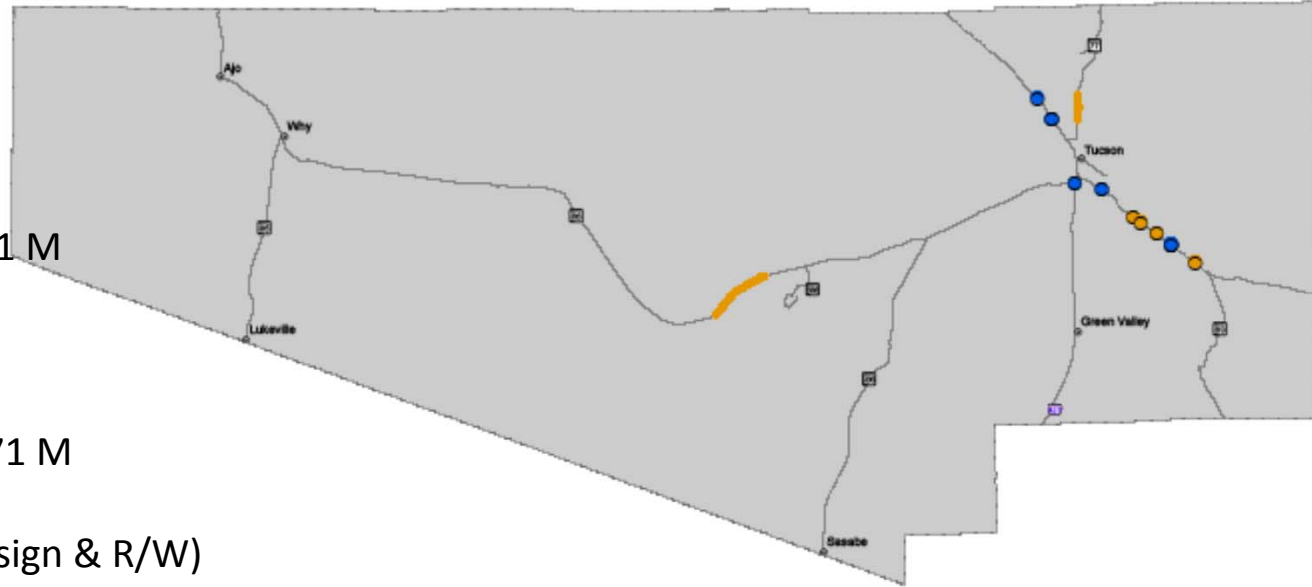


# PAG; Tentative Program (FY16-20)





# PAG Tentative Program(FY16- FY20)



## 2016 / 2017

I-10; Ina Road TI - \$85 M

## 2016 / 2019

I-10; Houghton Road TI - \$41 M

## 2017 / 2018

I-10; Ruthrauff TI - \$104 M

## 2018 / 2020

I-10; Country Club Rd TI - \$71 M

## 2019 / 2020

I-10; Kino Rd TI - \$14 M (Design & R/W)

## 2020

I-10; Park Ave TI - \$5 M (Design Only)

## 2018

I-19; Ajo Way TI, Phase II - \$30 M

## 2019

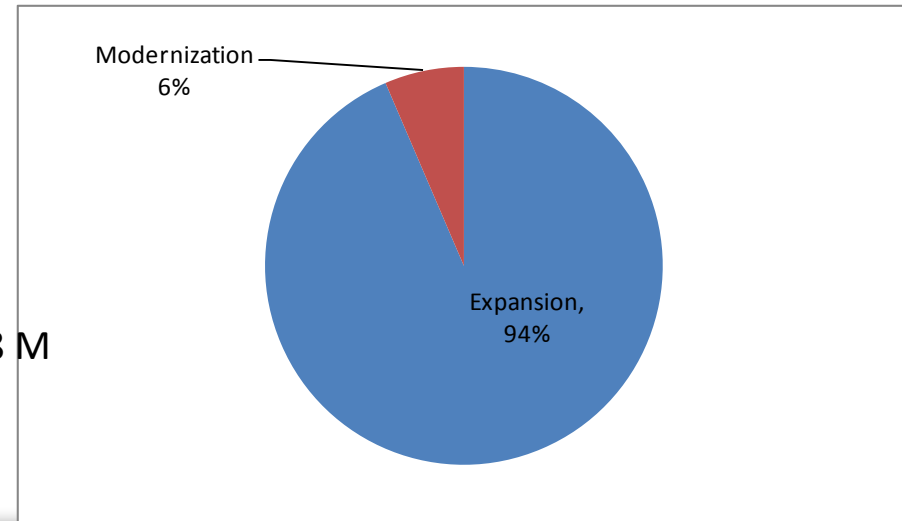
I-19; Irvington Road TI - \$10 M (Design & R/W)

## 2016

SR86; San Isidro Rd Segment (MP 123.9-128.8) - \$8 M

## 2018

SR86; Fresnal – MP 123.9 - \$10 M





# PAG Tentative Program(FY16- FY20)

Route	Location	Type of Work	Funding	FY	Cost (\$000)
I-10	Ina Road TI	Construct TI	RTA	2016	\$32,718
I-10	Ina Road TI	Construct TI	NH	2017	\$52,000
I-10	Houghton Road TI	Design TI	NH	2016	\$4,000
I-10	Houghton Road TI	Utility Relocation	STP	2017	\$2,000
I-10	Houghton Road TI	Right of Way	STP	2017	\$4,250
I-10	Houghton Road TI	Construct TI	STP	2019	\$25,000
I-10	Houghton Road TI	Construct TI	PAG 2.6%	2019	\$5,000
I-10	Ruthrauff Road TI	R/W, Utility & Env.	STP	2017	\$1,500
I-10	Ruthrauff Road TI	R/W, Utility & Env.	RTA	2017	\$16,500
I-10	Ruthrauff Road TI	Construct TI	RTA	2018	\$42,900
I-10	Ruthrauff Road TI	Construct TI	STP	2018	\$43,583
I-10	Country Club Road TI	Design TI	PAG 2.6%	2018	\$1,700
I-10	Country Club Road TI	Design TI	STP	2018	\$3,250
I-10	Country Club Road TI	R/W, Utility & Env.	NH	2019	\$5,000
I-10	Country Club Road TI	R/W, Utility & Env.	STP	2020	\$10,725
I-10	Country Club Road TI	Construct TI	STP	2020	\$50,000
I-10	Kino Road TI	Design TI	STP	2019	\$8,000
I-10	Kino Road TI	R/W, Utility & Env.	STP	2020	\$6,000
I-10	Park Ave TI	Design TI	STP	2020	\$5,000
I-19	Ajo Way TI, Phase II	Construct TI	STP	2018	\$29,800
I-19	Irvington Road TI	Design TI	PAG 2.6%	2019	\$4,000
I-19	Irvington Road TI	R/W, Utility & Env.	STP	2020	\$6,000
SR86	San Isidro Rd. Segment	Construct Shoulder Widening	STP	2016	\$1,250
SR86	San Isidro Rd. Segment	Construct Shoulder Widening	PAG 2.6%	2016	\$7,000
SR86	Fresnal - MP 123.9	Construct Shoulder Widening	STP	2018	\$700
SR86	Fresnal - MP 123.9	Construct Shoulder Widening	PAG 2.6%	2018	\$9,300

# MAG Area Regional Transportation Plan Freeway Program



# MAG Area Freeway Program (FY16- FY20)

**2016-2020 Contingent On MAG Regional Council Approval**

SR 202L; South Mountain - \$1.48 B

## 2016

US60; Thompson Ranch (Thunderbird) TI - \$7 M

SR85; Warner St. Bridge - \$5.3 M

## 2016 -2019

SR 303L; I-10 Interchange, Phase II - \$83 M

SR 303L: Van Buren St – MC85 - \$11.5 M

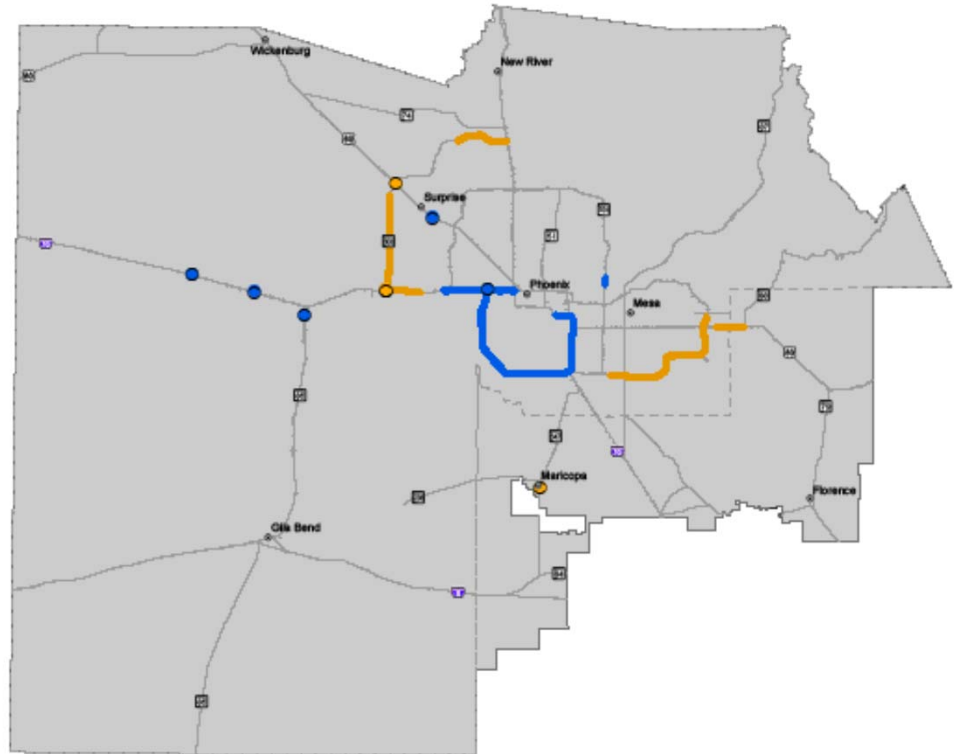
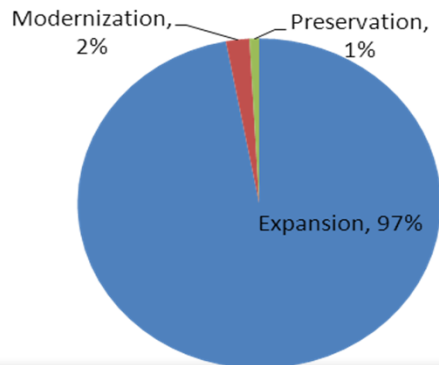
**2016/2020**

I-10: Broadway Rd – Baseline Rd - \$26.2

I-10; 32<sup>nd</sup> St to SR 202L - \$267 M

**2020**

US60; Crismon Rd – Meridian Rd - \$26.5 M



# MAG Tentative Program(FY16- FY20)

Route	Location	Type of Work	Funding	FY	Cost (\$000)
I-10, Maricopa	Broadway Rd - Baseline Rd	Design widening R/W	NHPP/ RARF	2016	\$26,220
I-10, Maricopa	32nd St - SR202L, Near Term Improvements	Construct widening	NHPP / RARF	2019/ 2020	\$267,070
US 60, Grand Ave	Thompson Ranch (Thunderbird) TI	Construct TI	RARF	2016	\$7,000
US60, Superstition	Crismon Rd - Meridian Rd	Construct HOV/GPL	NHPP	2020	\$26,500
SR85	Warner St Bridge	Construct bridge	RARF	2016	\$5,300
SR303L	I-10/SR303L TI, Phase II	Construct TI	NHPP/ RARF	2016	\$83,000
SR303L	Van Buren St - MC85	Design new freeway	RARF	2019	\$11,500
SR202L, South Mt.	I-10 Maricopa, MP 54 to I-10 Papago, MP 76 (Design-Build-Maintain)	Preliminary Engineering	NHPP / RARF	2016- 2018	\$15,100
SR202L, South Mt.	I-10 Maricopa, MP 54 to I-10 Papago, MP 76 (Design-Build-Maintain)	Design-Const-Maintain	NHPP / RARF	2016- 2019	\$1,049,676
SR202L, South Mt.	I-10 Maricopa, MP 54 to I-10 Papago, MP 76 (Design-Build-Maintain)	R/W Acquisition	NHPP / RARF	2016- 2018	\$407,906





2016-2020 Tentative

Five-Year Transportation Facilities Construction Program

Airport Capital Improvement Program



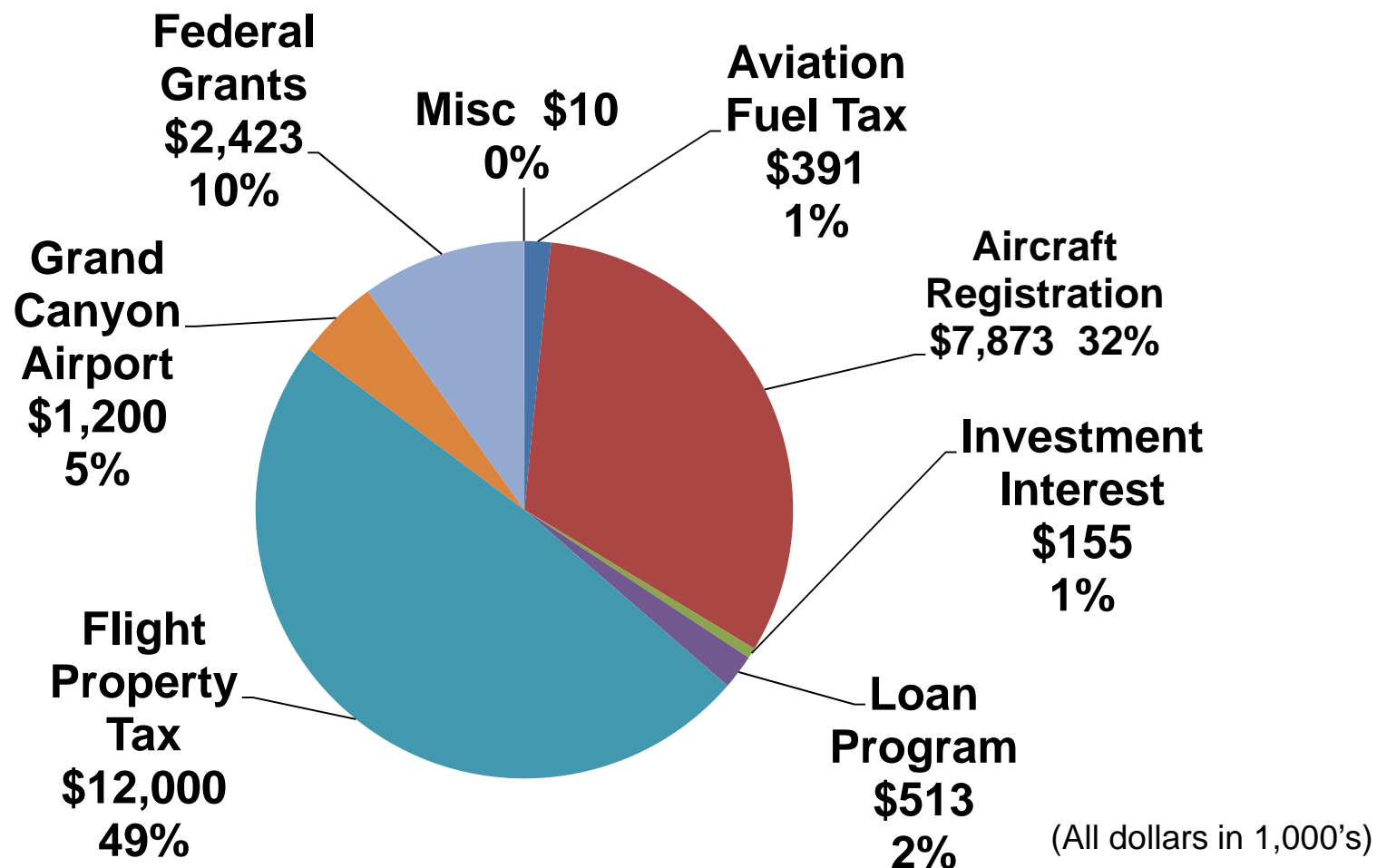
Prescott Airport Ernest A. Love Field - 2014 Arizona Airport of the Year

# Arizona Revised Statutes

- Title 28 – Transportation, Chapter 25 - Aviation
  - ARS 28 - 8202 State Aviation Fund
    - “C. The department shall administer monies that are appropriated by the legislature from the state aviation fund.”
    - “D. The board shall distribute monies appropriated to the department from the state aviation fund...The board shall distribute these monies according to the needs for these facilities as determined by the board.”

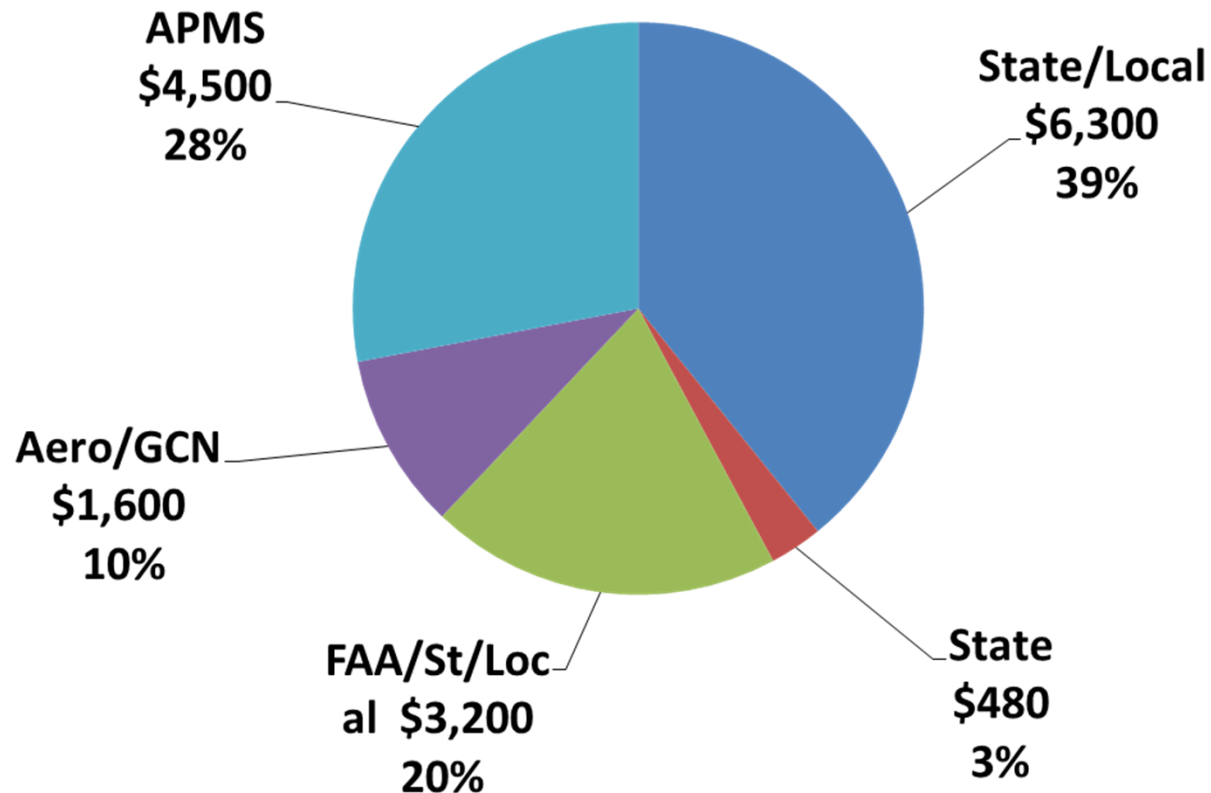
# Arizona State Aviation Fund

Revenue for FY 2014 - \$24,563,000



# Arizona State Aviation Fund

Expenditures for FY 2014 - \$16,080



(All dollars in 1,000's)



# Airport Capital Improvement Program (ACIP)

## Five-Year Development Program - Fiscal Year 2016

• Federal Match Grants (FSL)	\$ 3,500,000
• State-Local Grants (SL)	\$14,360,000
• Airport Pavement Preservation (APMS)	\$ 5,678,000
• Airport Development Loans	\$ 0
• State Planning Services	\$ 3,500,000
<hr/>	
• Total Program	\$27,038,000

# Next Steps

- ▶ Public Hearings
  - March 20 Tucson
  - April 17 Phoenix
  - May 15 Chino Valley
- ▶ Study Session May 26 in Phoenix
- ▶ Present Final Program to STB; June 19<sup>th</sup> for approval
- ▶ Program must be signed by Governor by June 30<sup>th</sup>
- ▶ FY 16 begins July 1<sup>st</sup>, 2015

# I-15 Implementation Plan

I-15 Recommended Program 2019 - 2063														Cumulative Bridge Cost 50-Years	Residual Bridge Value 2063
Construct. Year	2019	2020	2022	2025	2030	2035	2040	2043	2048	2053	2058	2063			
Bridge 1	20,548					733			1,143	241				23,398	27,563
<b>PROGRAM</b>	<b>35,450</b>														
Bridge 2			4,122		97	34,661			1,165				1,815	42,521	43,000
<b>PROGRAM</b>			<b>8,900</b>			<b>40,000</b>									
Bridge 3		7,861				16,722			1,185				1,846	27,614	19,218
<b>PROGRAM</b>						<b>19,650</b>									
Bridge 4	378	42			3,733		18,321			809				23,283	24,330
<b>PROGRAM</b>							<b>24,450</b>								
Bridge 5a	423				13,018			600			934	416		15,391	18,184
<b>PROGRAM</b>					<b>18,275</b>										
Bridge 5b	466				12,845			582			907	644		15,444	17,607
<b>PROGRAM</b>					<b>18,275</b>										
Bridge 7		15,859					687			1,070	371			17,987	22,501
<b>PROGRAM</b>		<b>26,650</b>													
Paving				3,225		36,825			3,225		36,825				
<b>PROGRAM</b>				<b>3,225</b>		<b>36,825</b>									
Climb Lane				13,450											
<b>PROGRAM</b>				<b>13,450</b>											
<b>Program</b>	<b>35,450</b>	<b>26,650</b>	<b>8,900</b>	<b>16,675</b>	<b>36,550</b>	<b>96,475</b>	<b>24,450</b>	-	-	-				<b>245,150 Recommended Program</b>	

Maintain Bridge Costs ONLY (i.e. No Refurb. / Improvements)		
Bridge	Cumulative Bridge Cost 50-Years	Residual Bridge Value 2063
Bridge 1	32,557	1,537
Bridge 2	24,769	14,753
Bridge 3	20,365	1,409
Bridge 4	15,152	9,878
Bridge 5a	10,178	8
Bridge 5b	11,497	2,113
Bridge 7	23,426	1,710
	<b>137,944</b>	<b>31,408</b>

With only maintenance provided, the bridges will not have the structural deficiencies addressed, and are therefore still at risk to closure/ failure, with virtually no residual value after spending nearly \$140 Million to maintain them.

By comparison, an increased investment of 20% spread over the next 40 years will result in widened bridge superstructures that will provide value for at least 60 years into the future.

A 20% increase in Program Cost...

Yields 60 Years of added bridge life.

X,XXX Raw bridge costs needed to maintain bridge to current standards. (Items not programmed separately are part of ADOT Bridge Program cost.)

XX,XXX Programmed Recommendations, including bridge, roadway, safety, and rockfall work within the project limits.

All costs are shown in \$1,000 increments (i.e. 466 is equal to \$466,000)