

# FY 2020 – 2024

## Five Year Program

## Study Session

February 15, 2019

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Director for Multimodal Planning Division

# 2020-2024 Tentative Program Discussion

- ▶ Background
- ▶ Overview of Asset Condition
- ▶ P2P Process
- ▶ Tentative 5-Year Highway Delivery Program
- ▶ MAG; Tentative Program
- ▶ PAG; Tentative Program
- ▶ Airport Program
- ▶ Next Steps

# Background

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

# Overview of Asset Condition



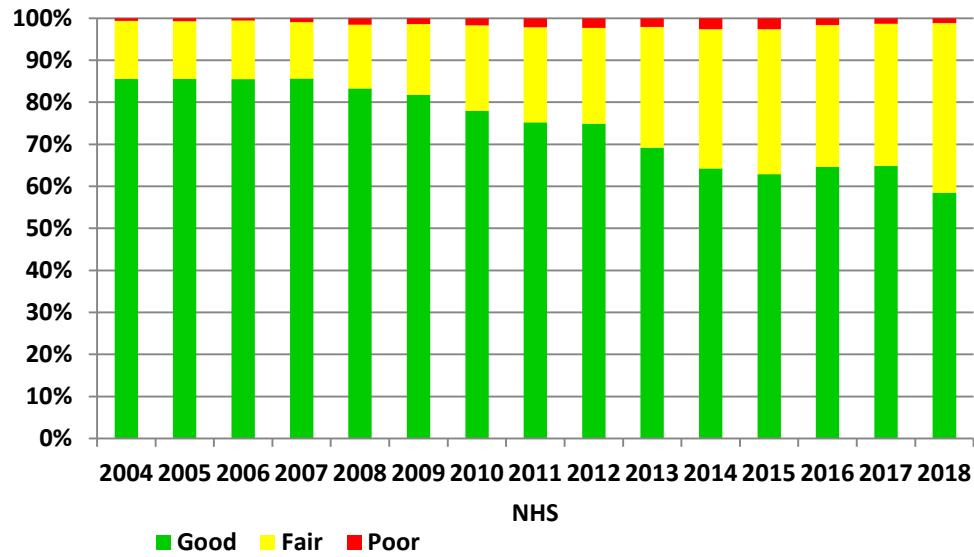
# \$22.4 Billion = Value of State Highway System Infrastructure

**\$22.4  
Billion**

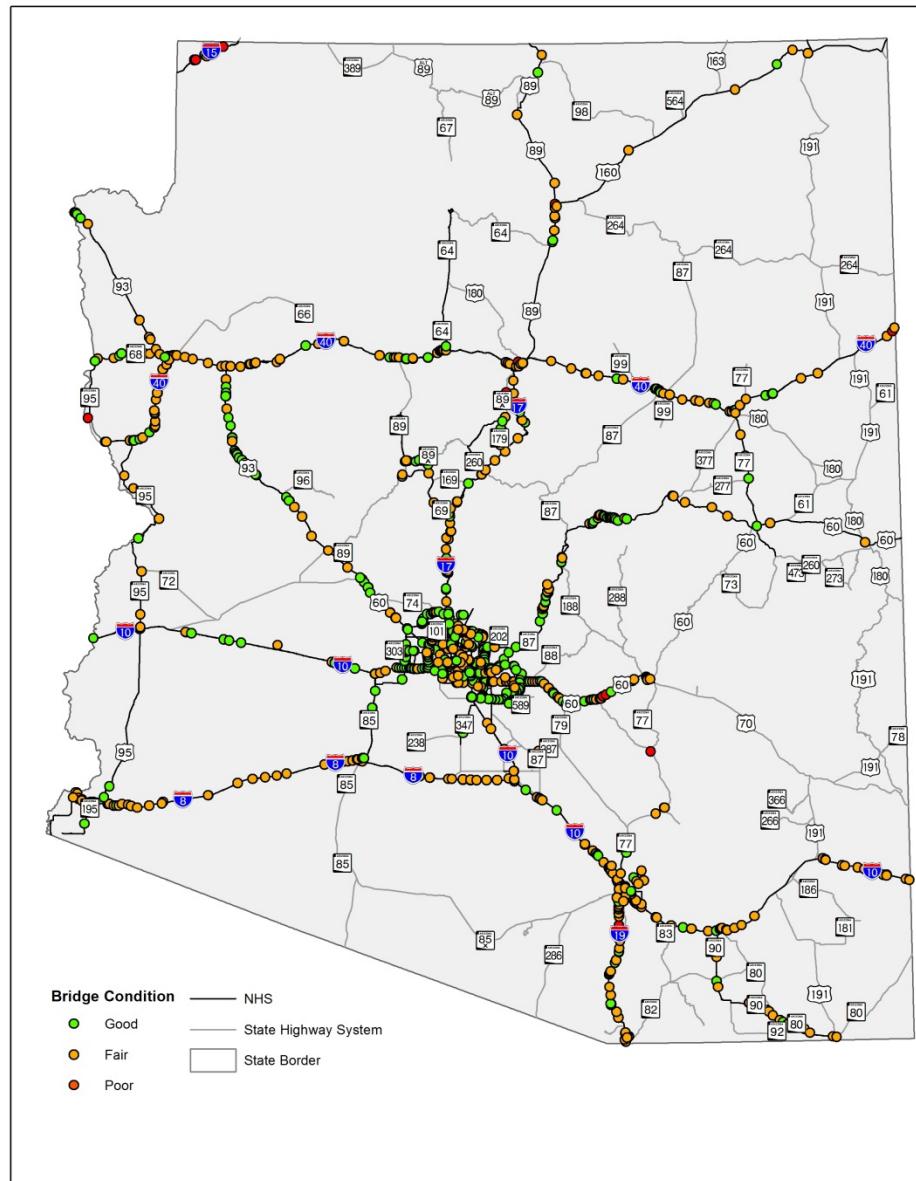
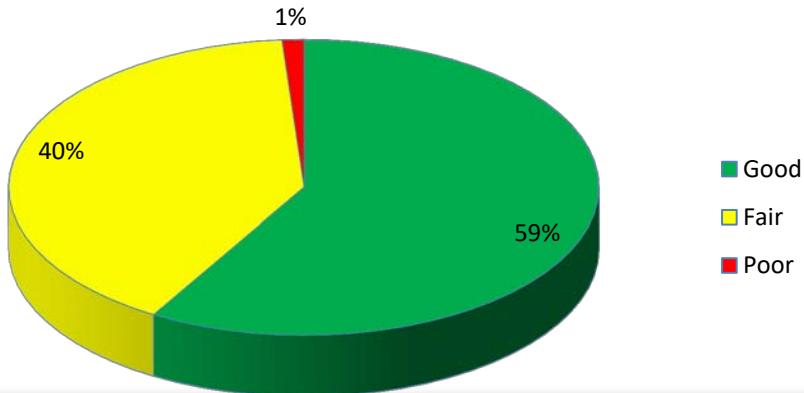


Without a commitment to preservation, the system would cost \$250 billion to replace.

## Bridge Condition



## Overall Bridge Condition 2018



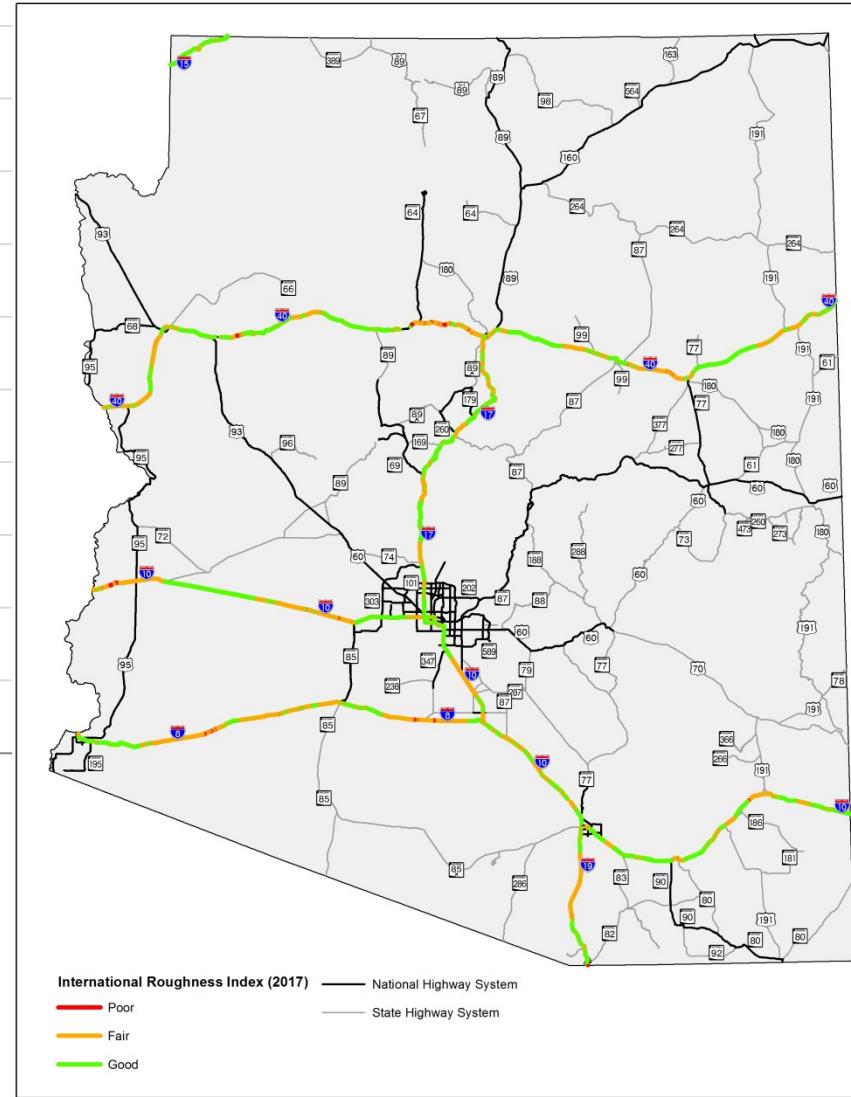
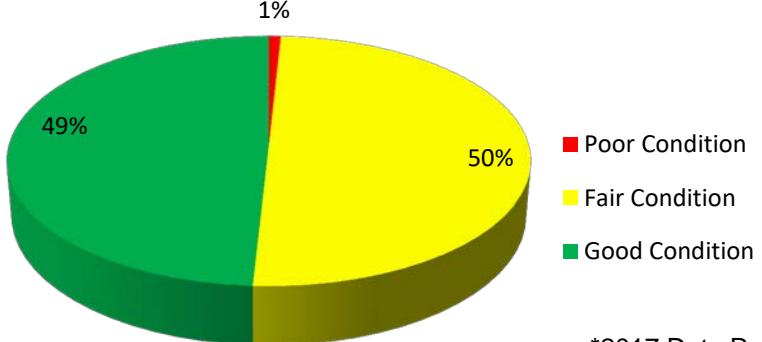
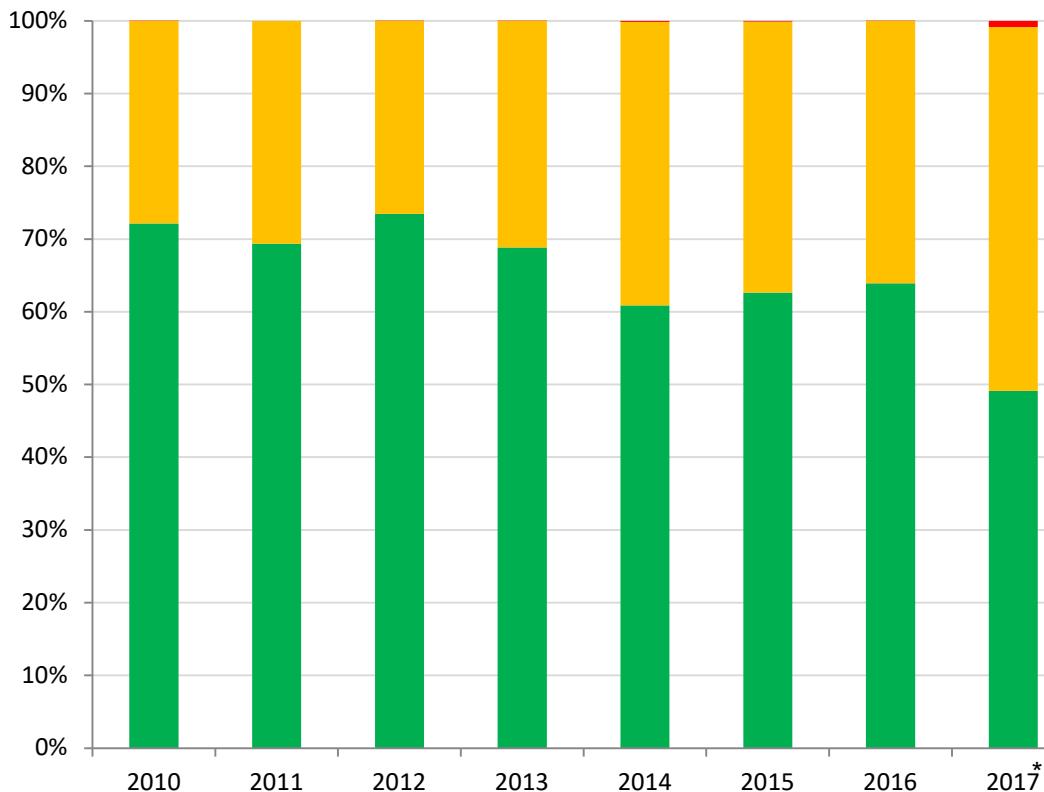
# Bridge Ratings

**Good:** Primary structural components have no problems or only very minor deterioration.

**Fair:** Primary structural components are sound but have some concrete deterioration or erosion around piers or abutments caused by flowing water (scour).

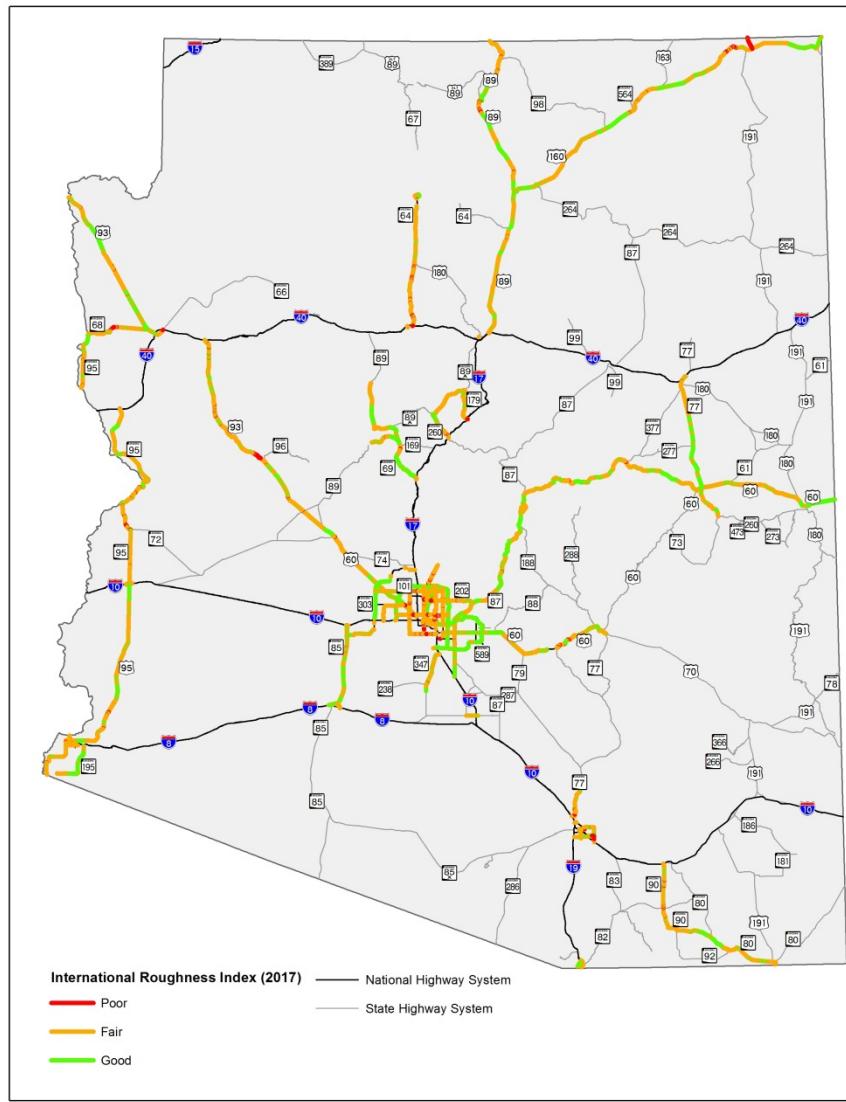
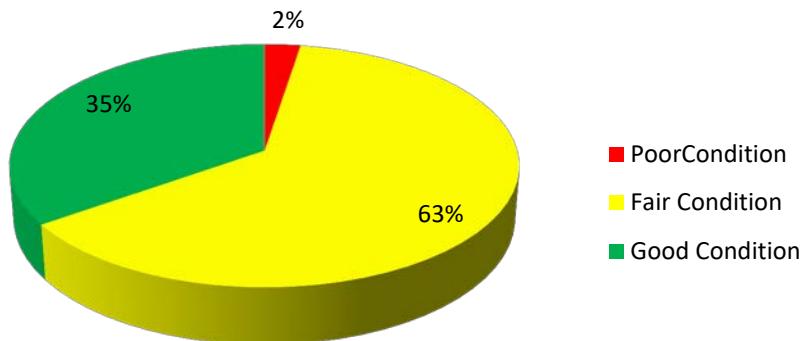
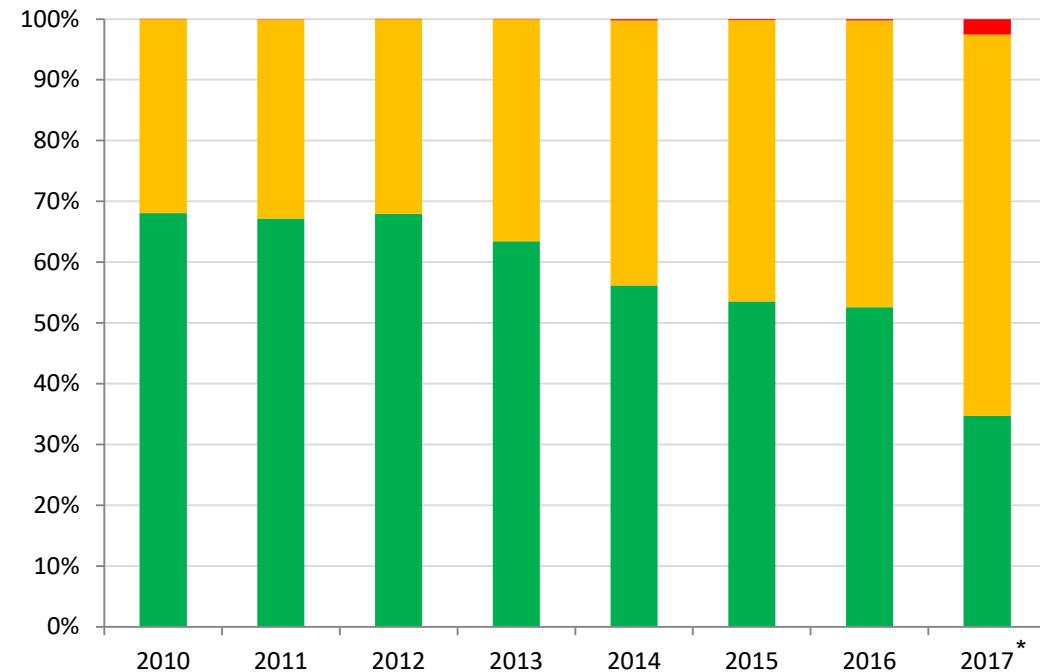
**Poor:** Advanced concrete deterioration, scour or seriously affected primary structural components. A poor condition bridge is not necessarily unsafe. Unsafe bridges are closed.

# Pavement Condition: Interstate Highway System



\*2017 Data Reflects a change in the method of collecting the pavement data

# Pavement Condition: Non-Interstate NHS



\*2017 Data Reflects a change in the method of collecting the pavement data

# Pavement Ratings

- ▶ **Good** – Smooth road surface, with little cracking and no ruts or potholes.
- ▶ **Fair** – Moderate amounts of cracking that lead to increased roughness of the road surface. Shallow ruts in the wheel path.
- ▶ **Poor** – Numerous cracks, rough road surface, ruts in the wheel path, potholes and disintegration of the road surface.

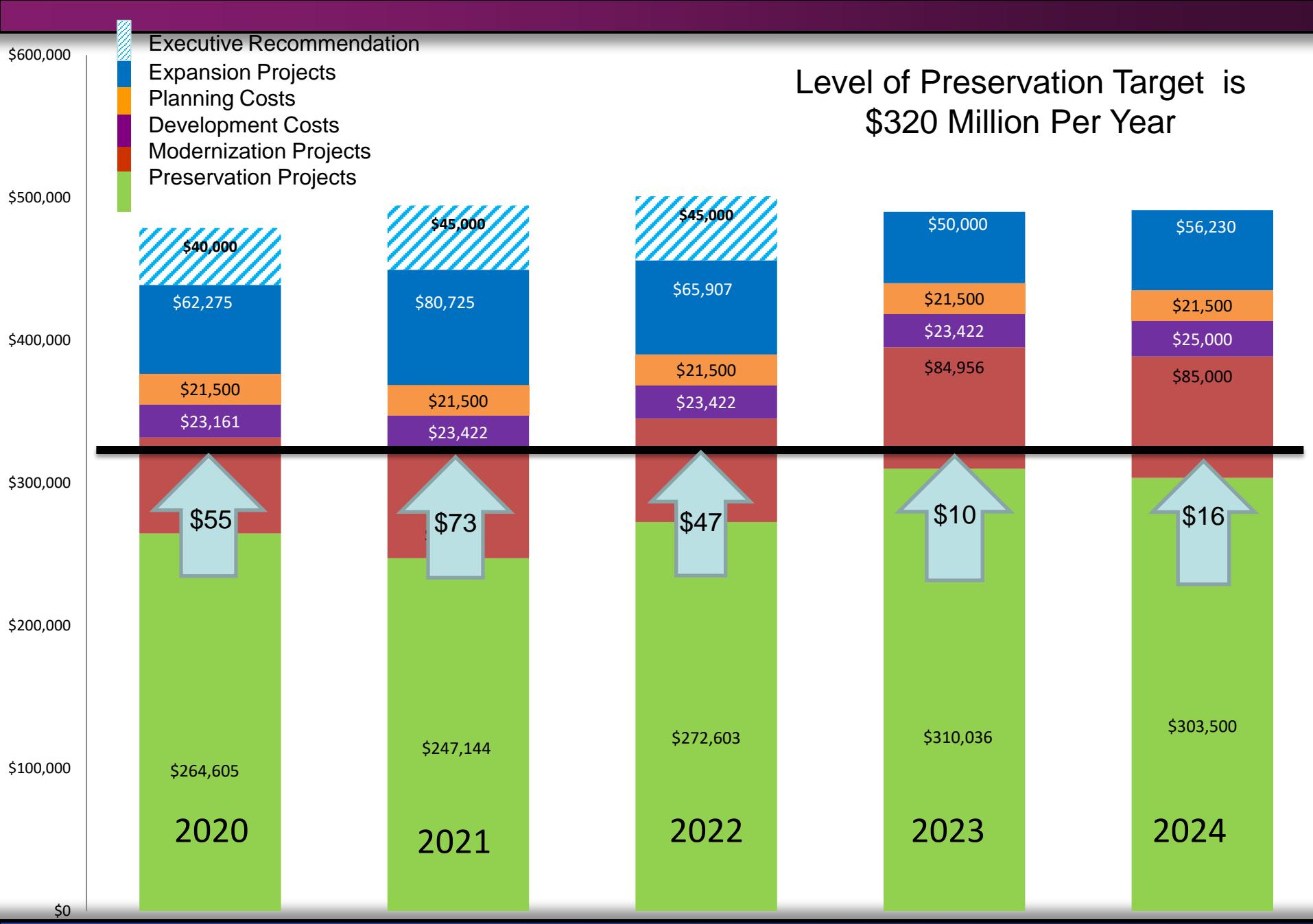


## Categories of Highway Need/Investment

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- ▶ ***Preservation:*** Investment to keep pavement smooth and maintain bridges
- ▶ ***Modernization:*** Non-capacity investment that improves safety & operations (e.g. adding shoulders or smart technology)
- ▶ ***Expansion:*** Investment that adds capacity to the highway system (e.g. new roads, added lanes or new interchanges)

<b>PRESERVATION</b> Activities that preserve infrastructure by sustaining asset condition or extending asset service life	<b>MODERNIZATION</b> Improvements that upgrade efficiency, functionality, and safety without adding capacity	<b>EXPANSION</b> Improvements that add capacity through the addition of new facilities and/or services
<b>Eligible Work Types</b>	<b>Eligible Work Types</b>	<b>Eligible Work Types</b>
<b>Preservation Treatments</b> <ul style="list-style-type: none"> <li>• Surface Seal</li> <li>• Thin Overlay</li> <li>• Deck Joint</li> <li>• Deck Overlay</li> </ul> <b>Rehabilitation</b> <ul style="list-style-type: none"> <li>• Minor Mill &amp; Fill</li> <li>• Major Overlays or Resurfacing</li> <li>• Substructure retrofitting</li> </ul> <b>Reconstruction</b> <ul style="list-style-type: none"> <li>• Major Rehabilitation at the end of pavement service life</li> <li>• Reconstructing bridges that are structurally deficient</li> <li>• Bridge Rehab/Replacement (NOT due to functional obsolescence)</li> </ul>	Widening existing lanes / shoulders  Intersection and interchange reconfiguration  Enhancements to address functional obsolescence  Traffic control and management  Safety modifications / enhancements  ITS modifications / enhancements  Bicycle lane improvements  Rockfall Mitigation  Stormwater Mitigation	New routes  New lanes  New rail  New intersection / interchange  Intersection / Interchange capacity enhancement
<b>Policy Goal:</b> Manage assets to reduce life cycle costs, set and manage preservation targets, and ensure safe, reliable operation of the transportation system	<b>Policy Goal:</b> Improve safety and reliability, reduce congestion, improve economic vitality, increase multimodal usage	<b>Policy Goal:</b> Provide capacity to improve mobility, reduce congestion, and support economic productivity



# **PLANNING TO PROGRAMMING (P2P)**

- Funding – Due to limited funding, projects must be prioritized to insure the limited funds are utilized on projects which provide the highest value and satisfy the greatest need.
- Performance Measures – Due to requirements mandated by the Federal Highway Administration, programmed projects must provide an improvement in the performance measures which include; Safety, Infrastructure Condition, Congestion Reduction...
- Compliance with objectives and goals provided in the Long Range Transportation Plan.

# P2P Scoring Breakdown

## Technical Score

Prioritized By:

- Pavement, Bridge, Safety, ITS, Rest areas, POE, Geohazard, Freight, Bike & Ped, Corridor Profile Studies

Technical Score

35% of  
Overall P2P  
Score

## P2P Policy Score

### Applied

- Economic Criteria
- Mobility Criteria

Policy Score

10% of  
Overall P2P  
Score

## P2P Safety Score

### Applied

Prioritized By:

- Safety Analyst Level of Safety Service Score (LOSS)

Safety Analytics Score

25% of  
Overall P2P  
Score

## District Score

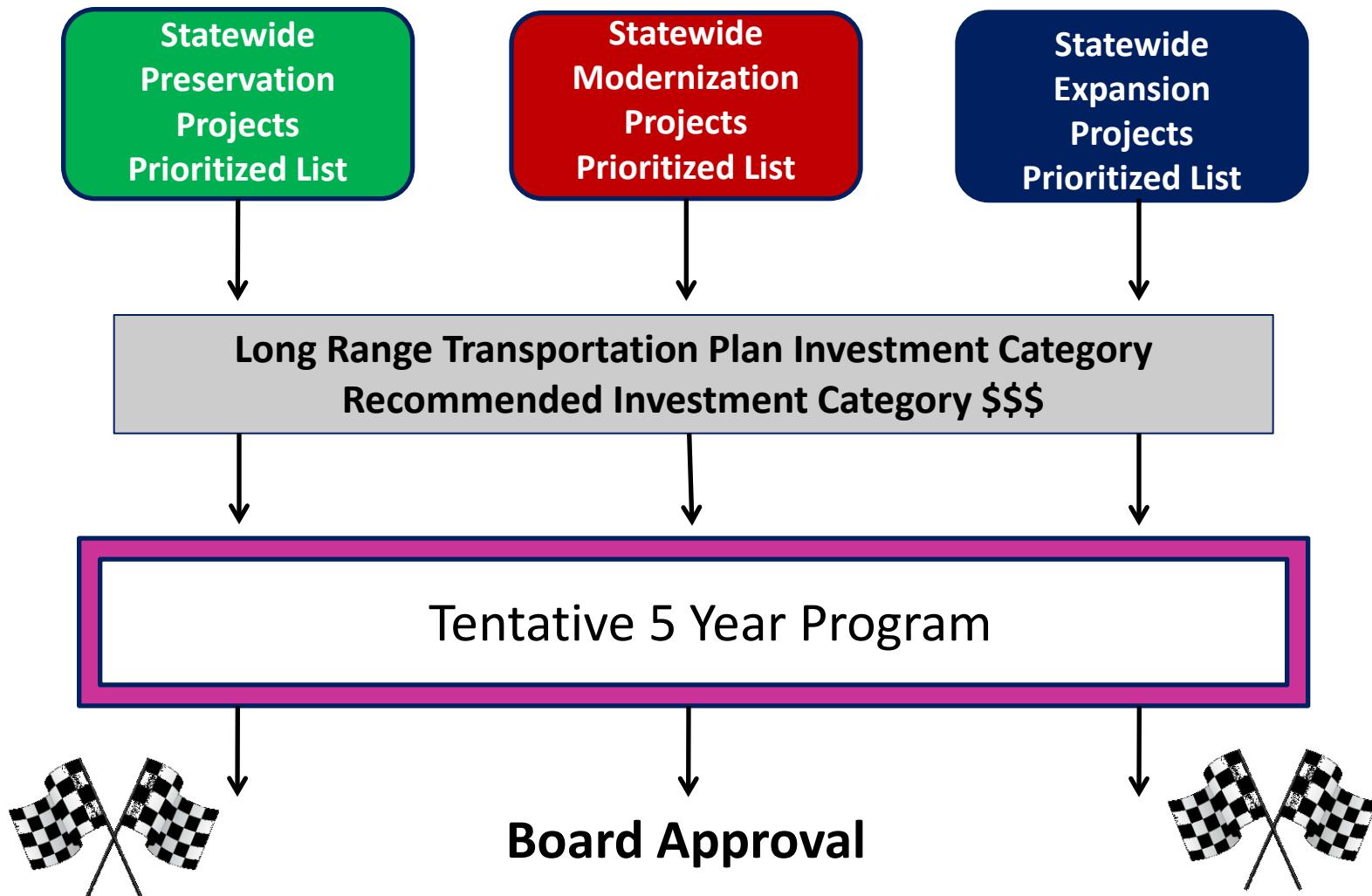
Prioritized By:

- Regional Needs
- Engineering Judgement

District Score

30% of  
Overall P2P  
Score

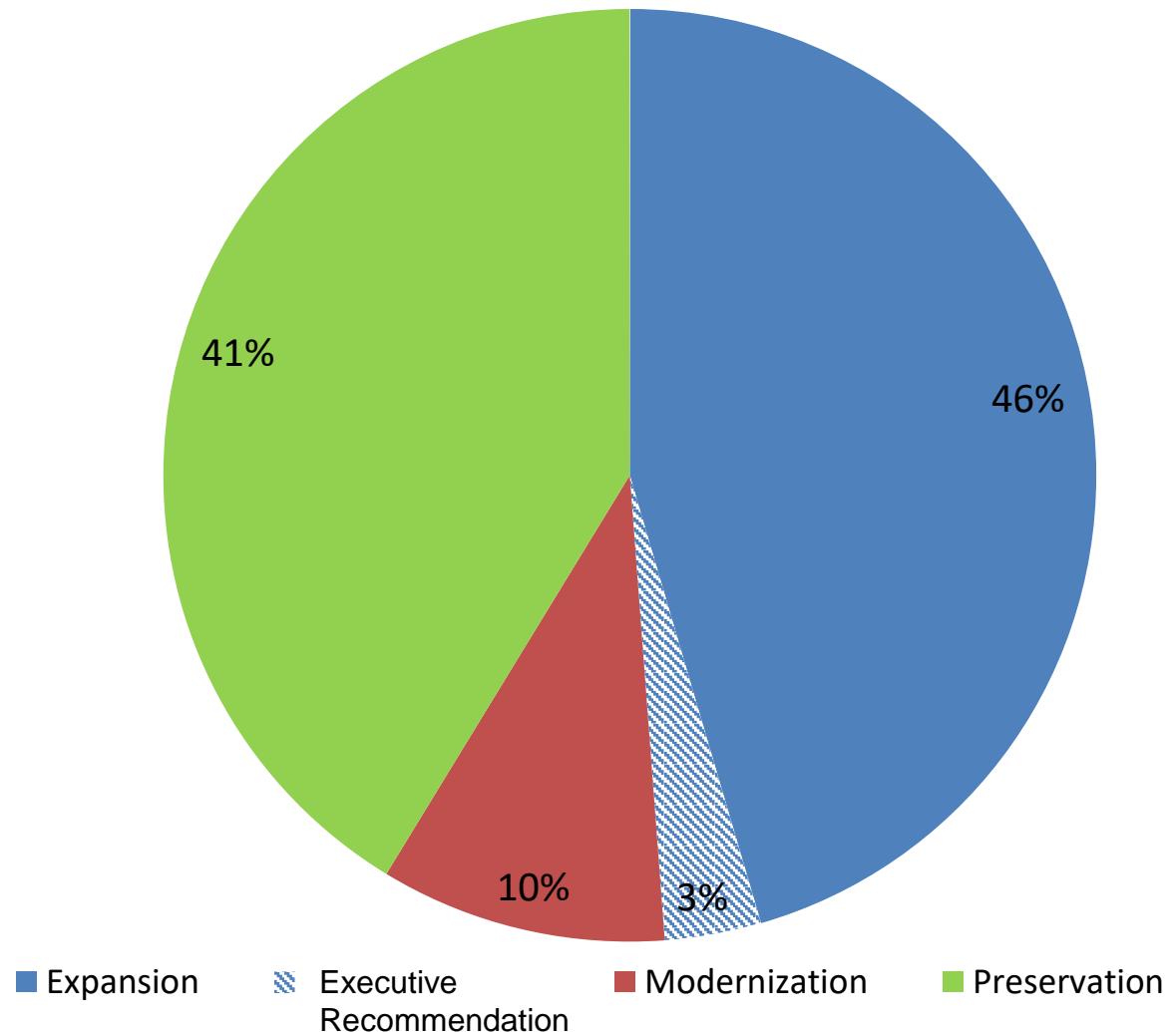
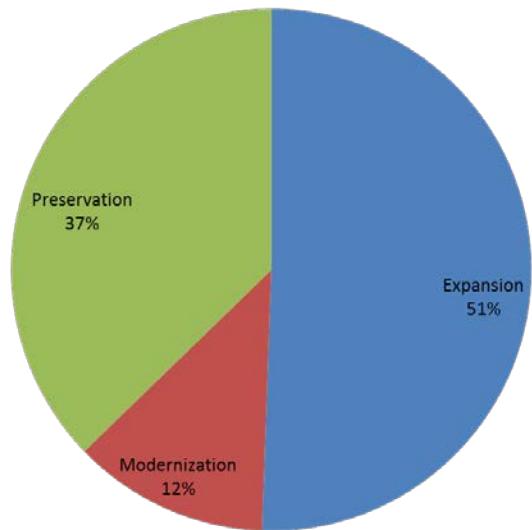
# Develop Five Year Program



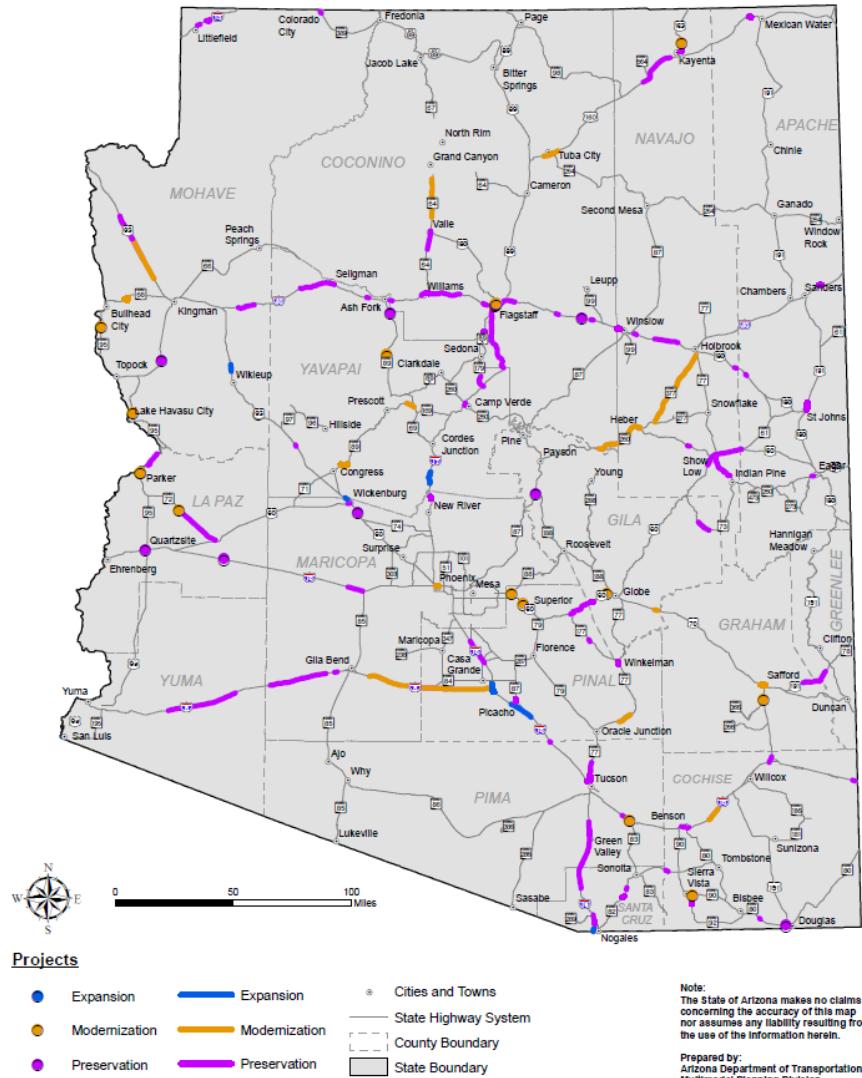
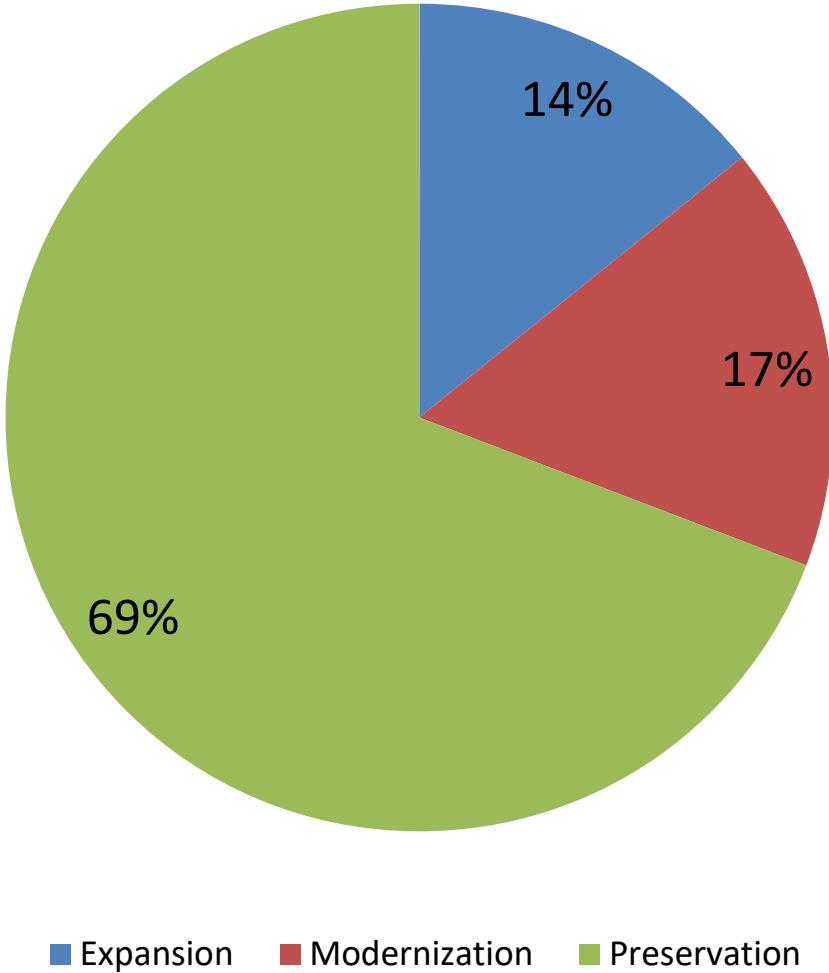
Includes MAG & PAG Funding

# 2020-2024 Tentative Facilities Construction Program

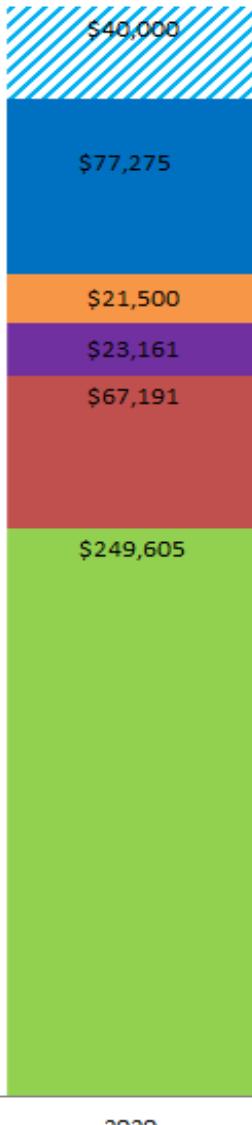
## 2019-2023 Facilities Construction Program



# Greater Arizona Tentative 5-Year Highway Delivery Program(FY20-FY24)



# FY20 Expansion Projects – \$77.3M



**\$10.2M 4th Street Bridge over I-40  
Flagstaff Partnership Project 50/50  
Share w/City of Flagstaff**



**\$10M; I-40/US93 West Kingman TI  
(Phase I) RIGHT OF WAY**



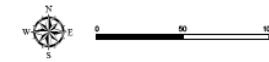
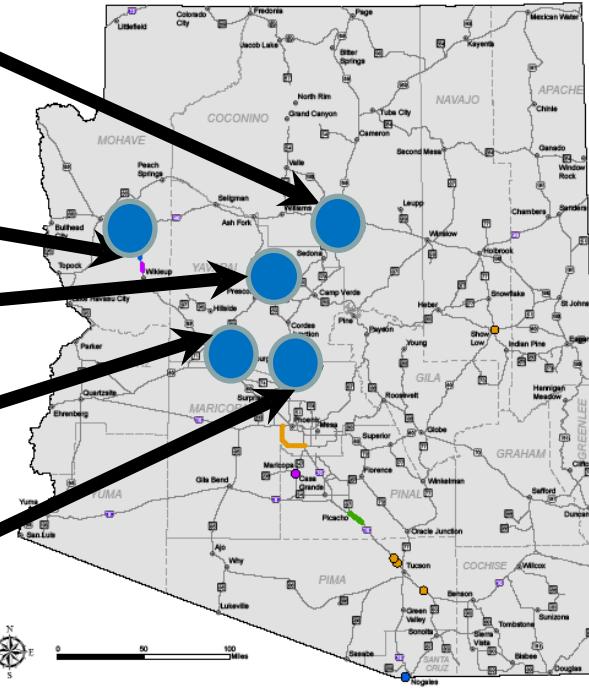
**FY 20 \$1.3; SR-69 Prescott  
Lakes Parkway R/W**



**\$41M; US93 The Gap**



**\$15M; Design I-17 Anthem to Sunset Point  
\$40M; Construct I-17 Anthem to Sunset Point  
(Executive Recommendation)  
\$50M; I-17 Widening North of Anthem (MAG FY20)**



**Expansion Projects**  
**Planning Costs**  
**Development Costs**  
**Modernization Projects**  
**Preservation Projects**  
**Executive  
Recommendation**



**\$8.7M; SR-69 Prescott Lakes Parkway**



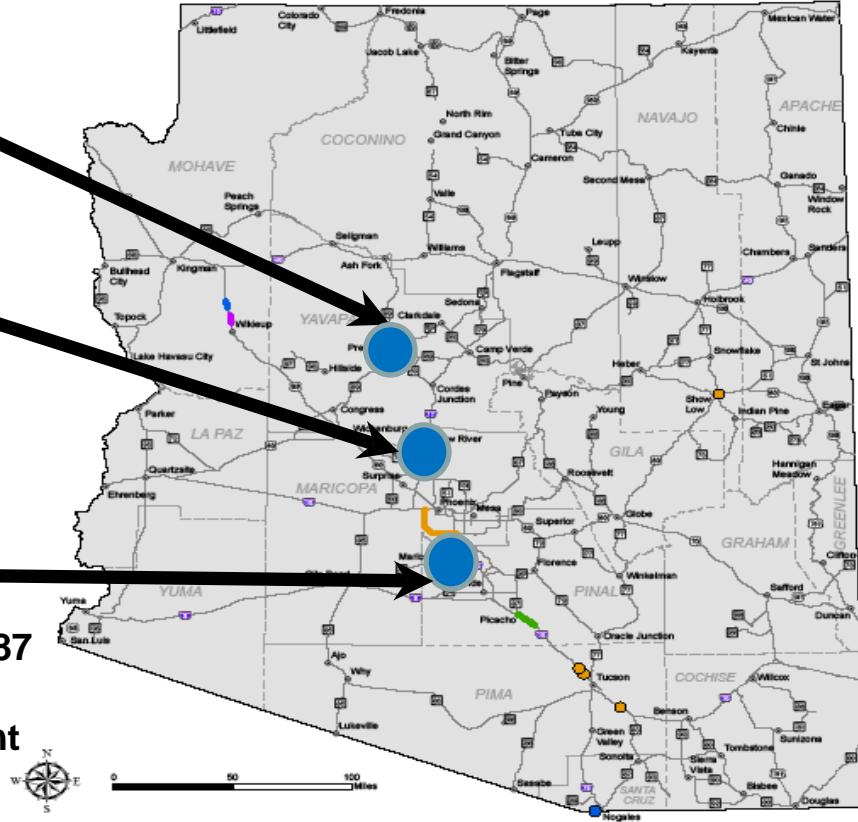
**\$62M; I-17 Anthem to Sunset Point  
(\$45M Executive Recommendation)**



**\$10M; I-10 SR-202 to SR-387  
Finish DCR, Scoping,  
Environmental Assessment**

- Expansion Projects
- Planning Costs
- Development Costs
- Modernization Projects
- Preservation Projects
- Executive Recommendation

# FY21 Expansion Projects – \$80.7M



\$45,000

\$65,907

\$21,500

\$23,422

\$72,486

\$272,603

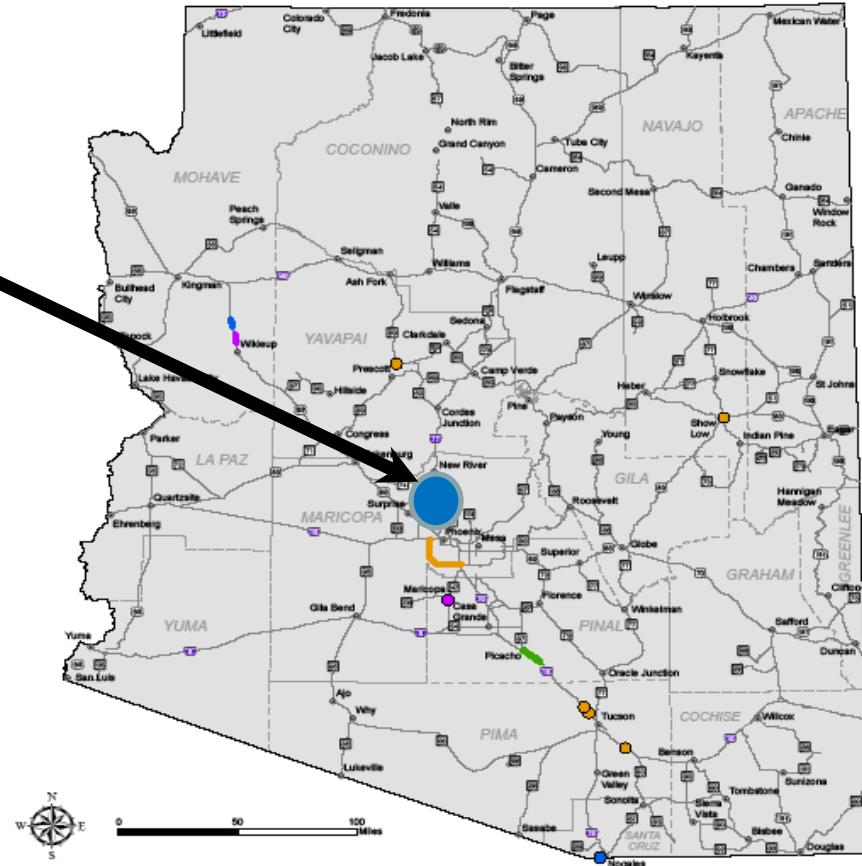


**\$65M; I-17 Anthem to Sunset Point  
\$45M; (Executive Recommendation)**

- Expansion Projects
- Planning Costs
- Development Costs
- Modernization Projects
- Preservation Projects

Executive Recommendation

# FY22 Expansion Project





**\$62.4M; I-17 Anthem to Sunset Point (5YR Program FY21)**  
**\$65.9M; I-17 Anthem to Sunset Point (5YR Program FY22)**  
**\$15M; I-17 Anthem to Sunset Point (5Yr Program FY 20) Design**  
**\$130M; Executive Recommendation FY 20,21,22**  
**\$50M; I-17 Widening North of Anthem (MAG FY 20)**  
**\$323.3M Total**



Segment	From MP	To MP	Estimated Cost (Initial DCR)	
Design	229	252	\$	34,200,000
Anthem to Black Canyon City	229	245	\$	179,000,000
Black Canyon City to Sunset Pt	245	252	\$	106,300,000
<b>TOTAL</b>		\$	<b>319,500,000</b>	

# FY23 Expansion Project – \$50M

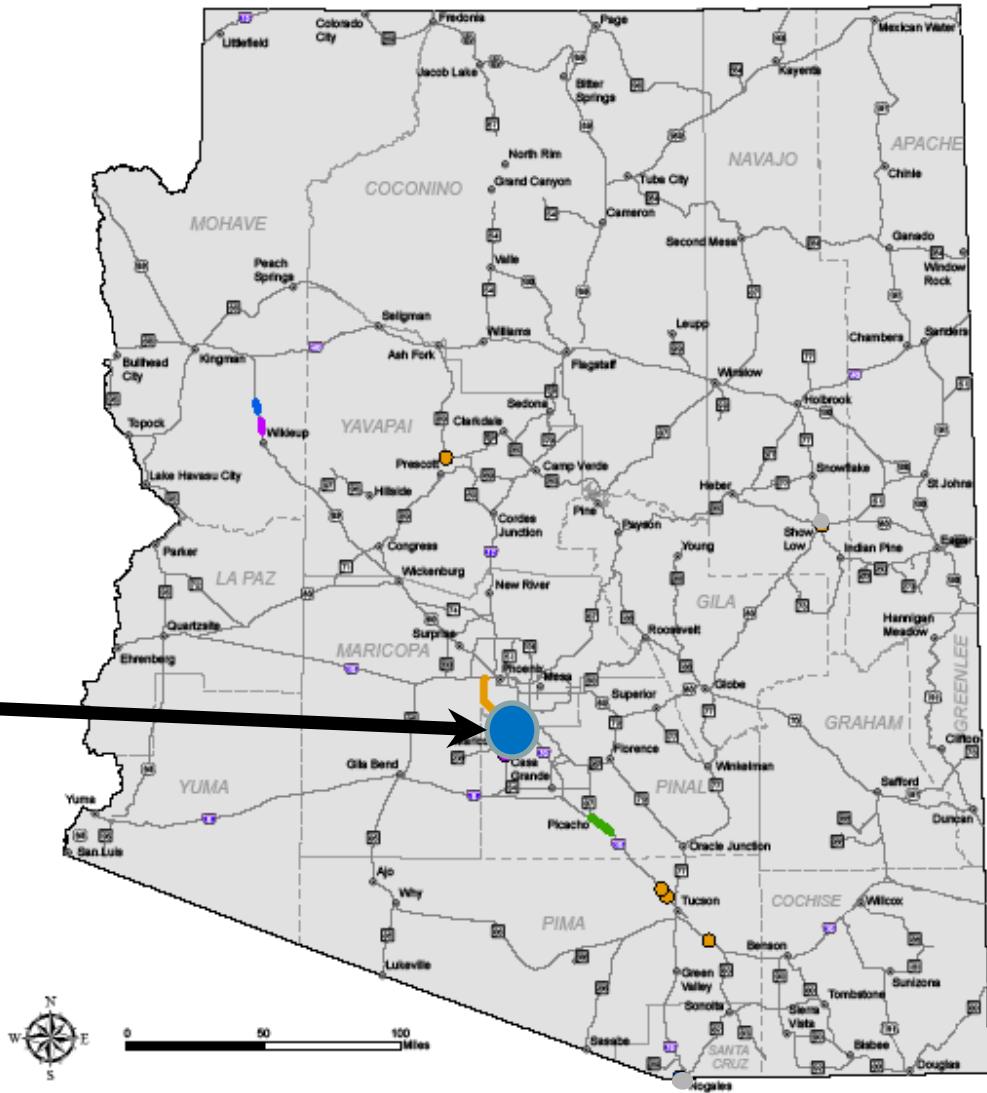


**\$50M; I-10 First Segment**



- Expansion Projects
- Planning Costs
- Development Costs
- Modernization Projects
- Preservation Projects

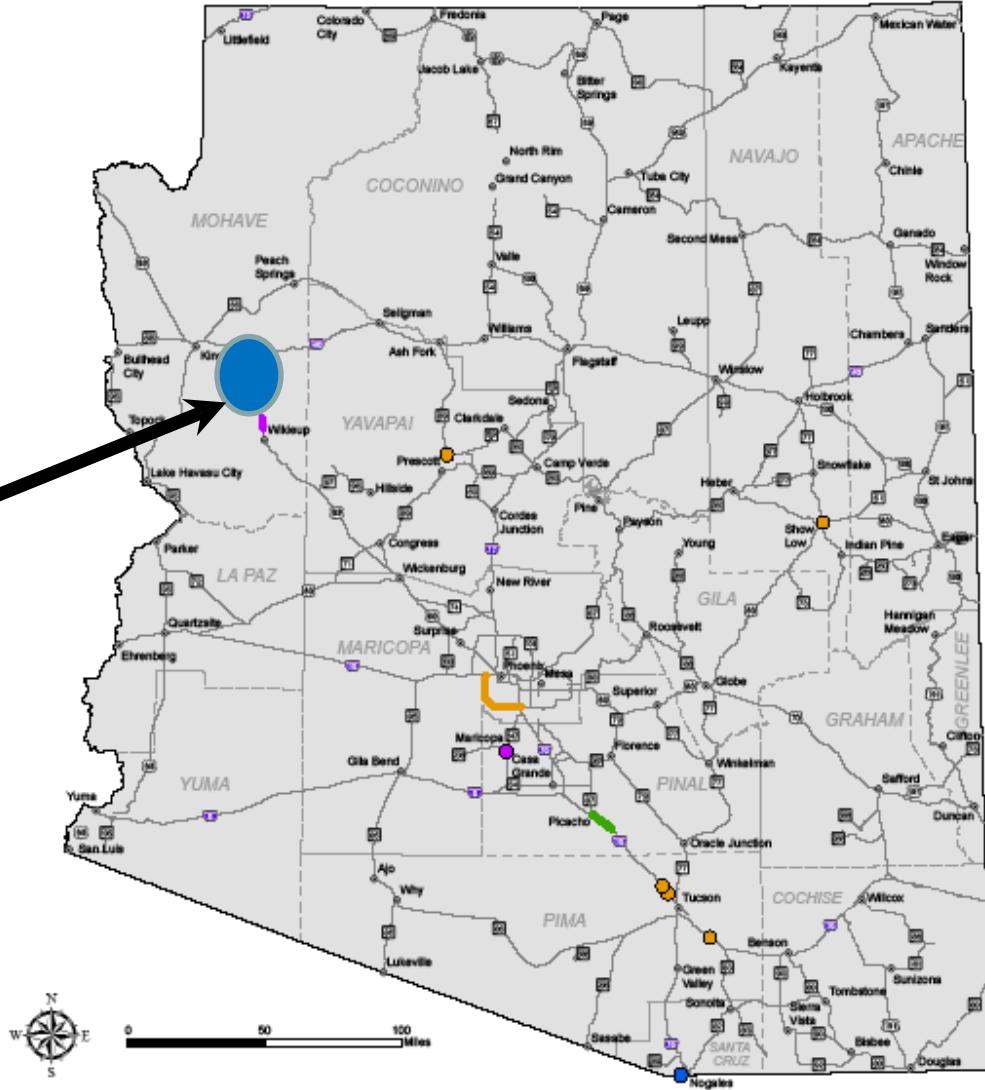
2023.





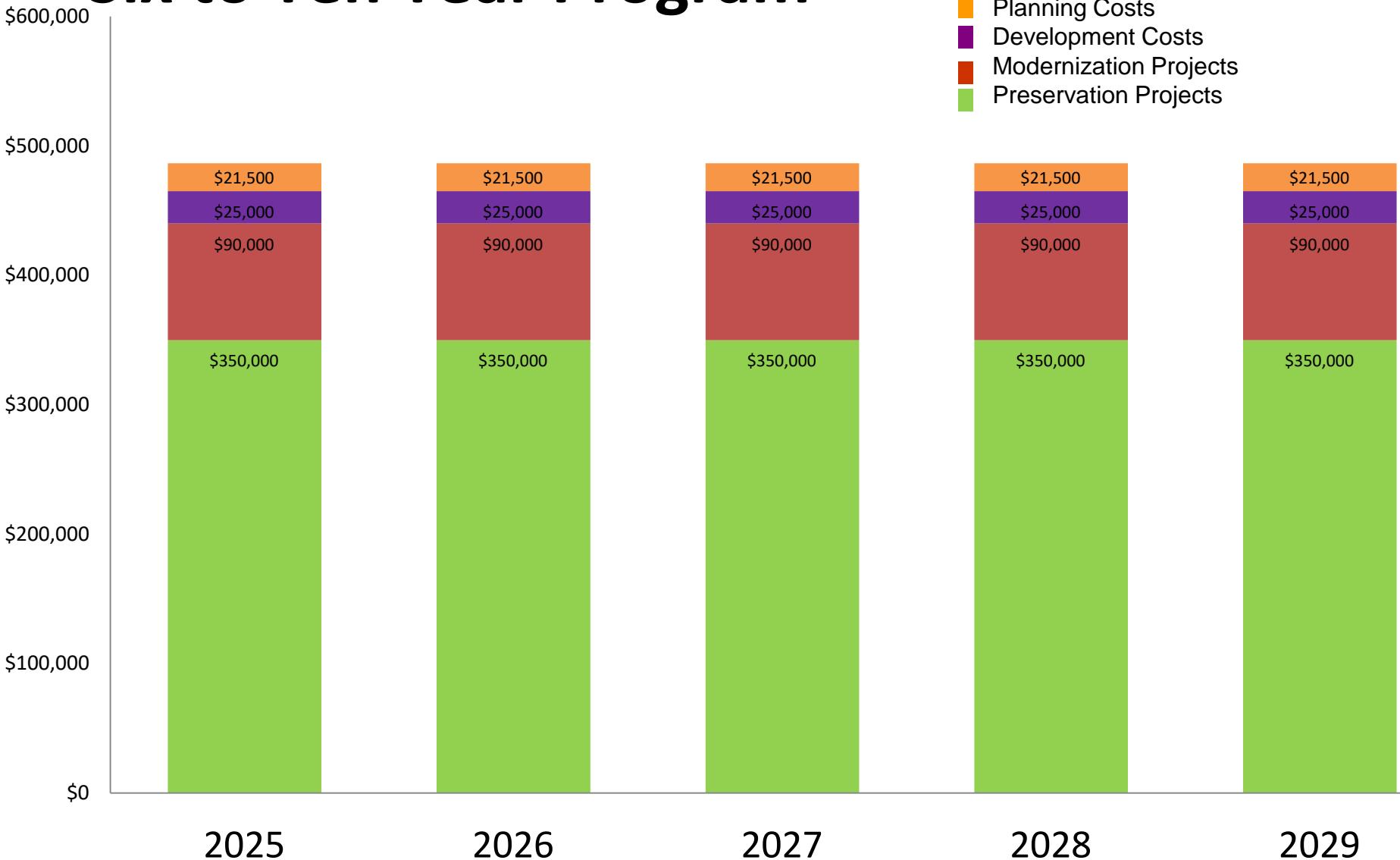
# FY24 Expansion Project – \$56.2M

**\$56.2M; I-40/US93  
West Kingman TI**



- Expansion Projects
- Planning Costs
- Development Costs
- Modernization Projects
- Preservation Projects

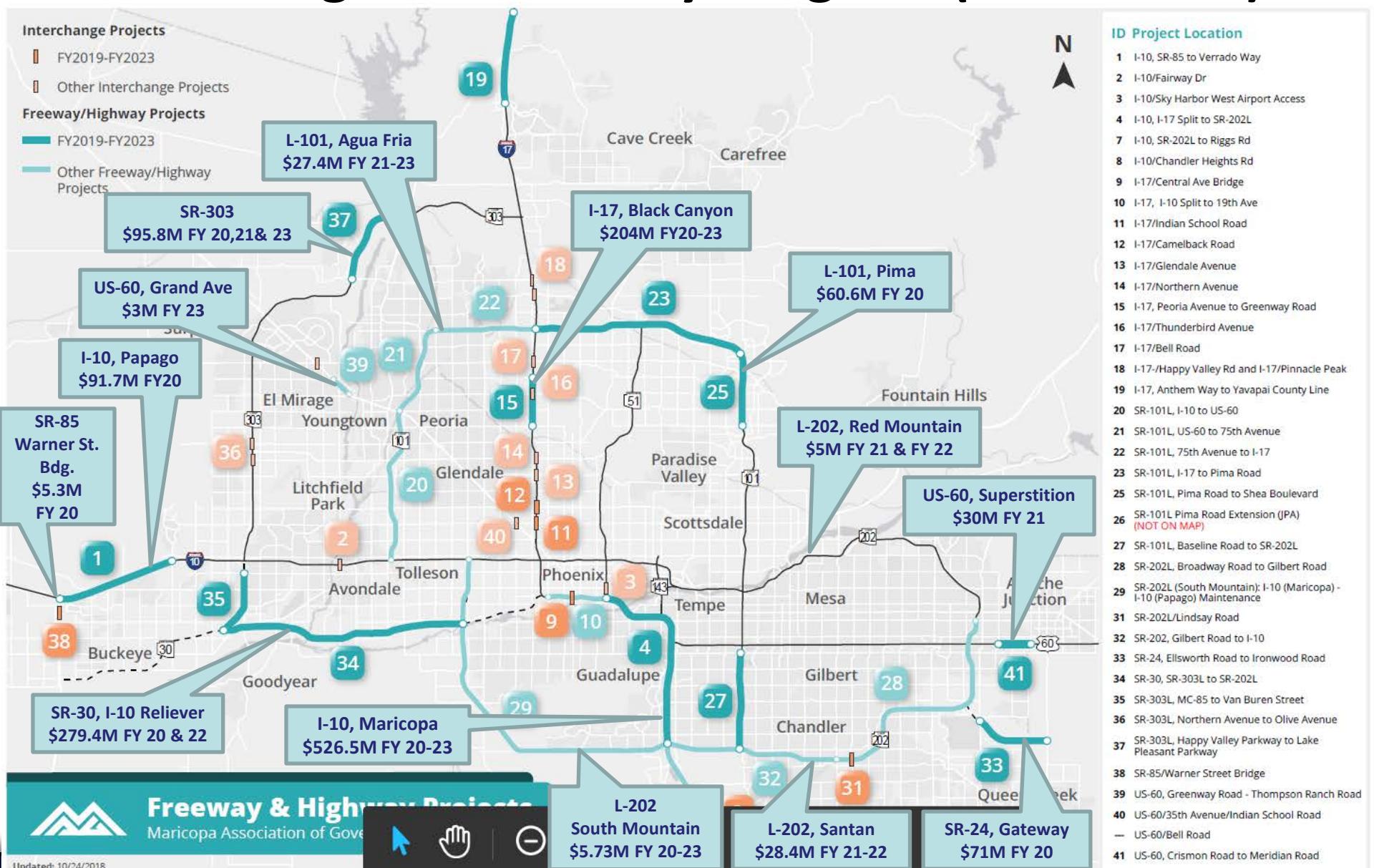
# Six to Ten Year Program



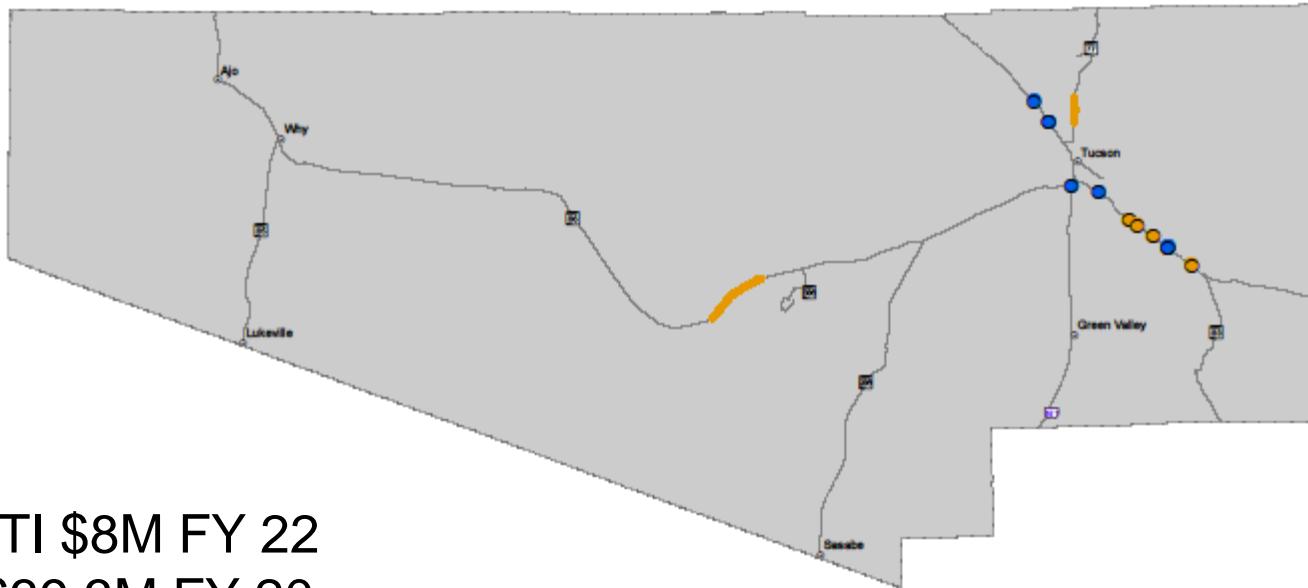
# P2P Top 10

Project Name		Total Project Cost	P2P Rank
I-10; SR-202L – SR-51 Interchange (Mini Stack)	MAG	\$300,000,000	1
SR-347 Riggs Road Intersection	MAG	\$600,000	2
I-10; SR-202L to SR-387	MAG	\$189,000,000	3
US-60; SR-303L – to SR-202L	MAG	\$425,000,000	4
I-40; Lone Tree TI	GA	\$121,900,000	5
I-40/I-17 System Interchange Improvements	GA	\$82,000,000	6
I-10; SR-101L to SR-202L (Santan Freeway)	MAG	\$775,000,000	7
I-19; Between I-10 and Valencia Road (South of Tucson)	PAG	\$625,000,000	8
I-40; I-17 to MP 202 Widen to 3 Lanes	GA	\$106,000,000	9
I-10; East of I-19 MP 260-MP274	GA	\$1,860,000,000	10
Total cost all Projects		<b>\$4,484,500,000</b>	

# MAG Regional Freeway Program (FY20- FY24)



# PAG Tentative Program (FY20- FY24)



- I-10 Country Club Rd TI \$8M FY 22
- I-10 Houghton Rd TI \$39.3M FY 20
- I-10 Ina to Ruthrauff \$109.2M FY 20-22
- I-10 Kino Pkwy TI \$8M FY 21
- I-10 Ruthrauff TI \$101.8M FY21
- I-19 Irvington TI \$10M FY 21&22
- SR-77 I-10 – River \$1M FY 21
- SR-77 River – Calle Concordia \$12.4M FY20
- SR-210 / I-10 TI \$20M FY 22



# 2020-2024

# TENTATIVE

Five-Year Transportation  
Facilities Construction Program

Airport Capital Improvement Program



Mesa Falcon Field Airport of the Year

# Airport Capital Improvement Program (ACIP)

## Five-Year Development Program – Fiscal Year 2019

Program	Amount
Federal/State/Local match (FSL)	\$5,000,000
State/Local (SL)	\$0
Airport Pavement Preservation (APMS)	\$5,000,000
Airport Development Loans	\$0
Grand Canyon Airport	\$785,000
State Planning Services	\$800,000
Total Airport Capital Improvement Program	\$11,588,000

# Airport Capital Improvement Program (ACIP)

## Five-Year Development Program - Fiscal Year **2020**

• <b>Federal Match Grants (FSL)</b>	<b>\$5,000,000</b>
• <b>State-Local Grants (SL)</b>	<b>\$9,000,000</b>
• <b>Airport Pavement Management Preservation (APMS)</b>	<b>\$5,500,000</b>
• <b>Grand Canyon National Park Airport(GCN)</b>	<b>\$4,500,000</b>
• <b>ADOT Airport Development Group Projects(AERO)</b>	<b>\$ 900,000</b>
<b>Total Program</b>	<b>\$24,900,000</b>

# Next Steps

- ▶ Public Hearings
  - March 15 Tucson
  - April 12 Flagstaff
  - May 17 Phoenix
- ▶ Study Session June 4 in Phoenix
- ▶ Present Final Program to STB; June 21st Pinetop-Lakeside
- ▶ Program must be delivered to Governor by June 30<sup>th</sup>
- ▶ FY 20 begins July 1<sup>st</sup>, 2019