



# **MAG MANAGED (EXPRESS) LANES NETWORK DEVELOPMENT STRATEGY – PROJECT UPDATE**

Regional Council  
October 24, 2012

# Overview of the Study Effort

## MAG MANAGED (EXPRESS) LANES NETWORK DEVELOPMENT STRATEGY – PHASE I

- First phase in the project development process:
  - Will determine network feasibility and implementation strategy.
  - Establish the “rules of the game.”



# Overview of the Study Effort

## MAG MANAGED (EXPRESS) LANES NETWORK DEVELOPMENT STRATEGY – PHASE I

- Project will be finished by later this year (2012).
- Stakeholder involvement at key milestones.



**We are Here**

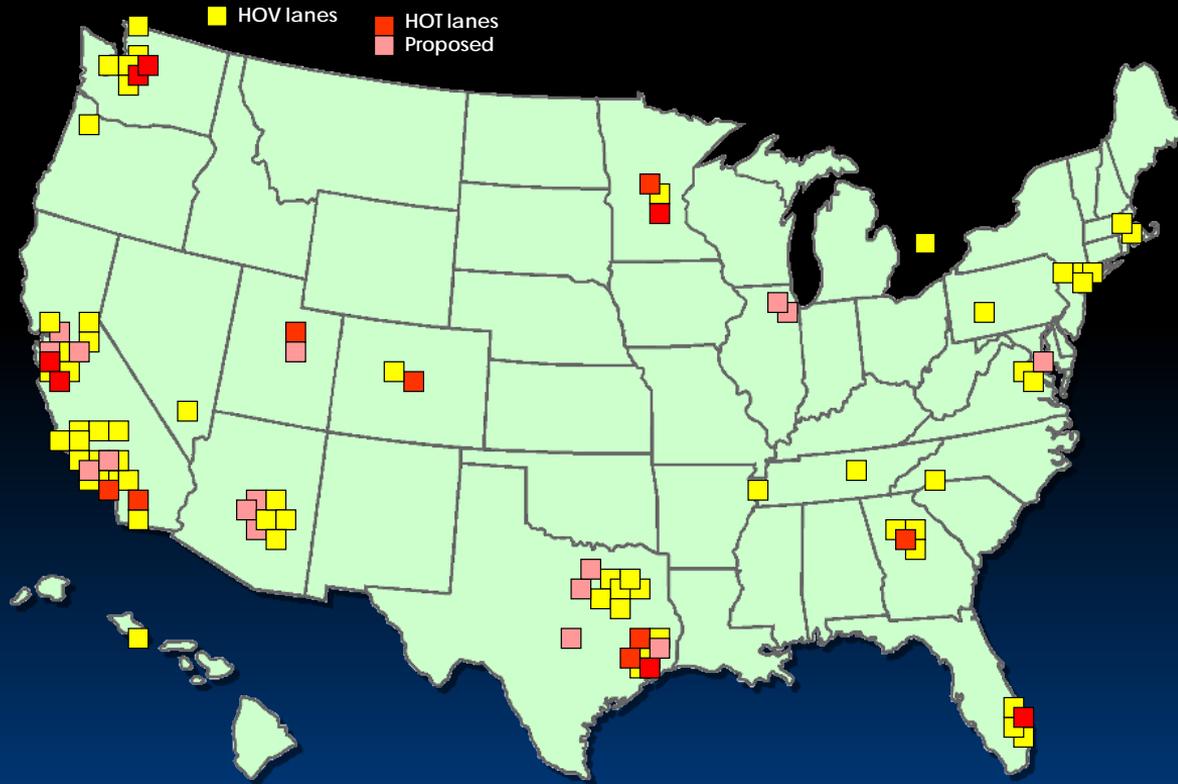
# Managed Lanes Concept

- Managed Lanes are dedicated lanes for one or more user groups.
- Proactively managed to provide better reliability and/or level-of-service.
- **Primary benefit is travel time savings and reliability.**



Express Lanes, Orange County, CA.

# Lane Management Strategies



**Fifteen** projects in U.S. currently use congestion pricing.

# Lane Management Strategies

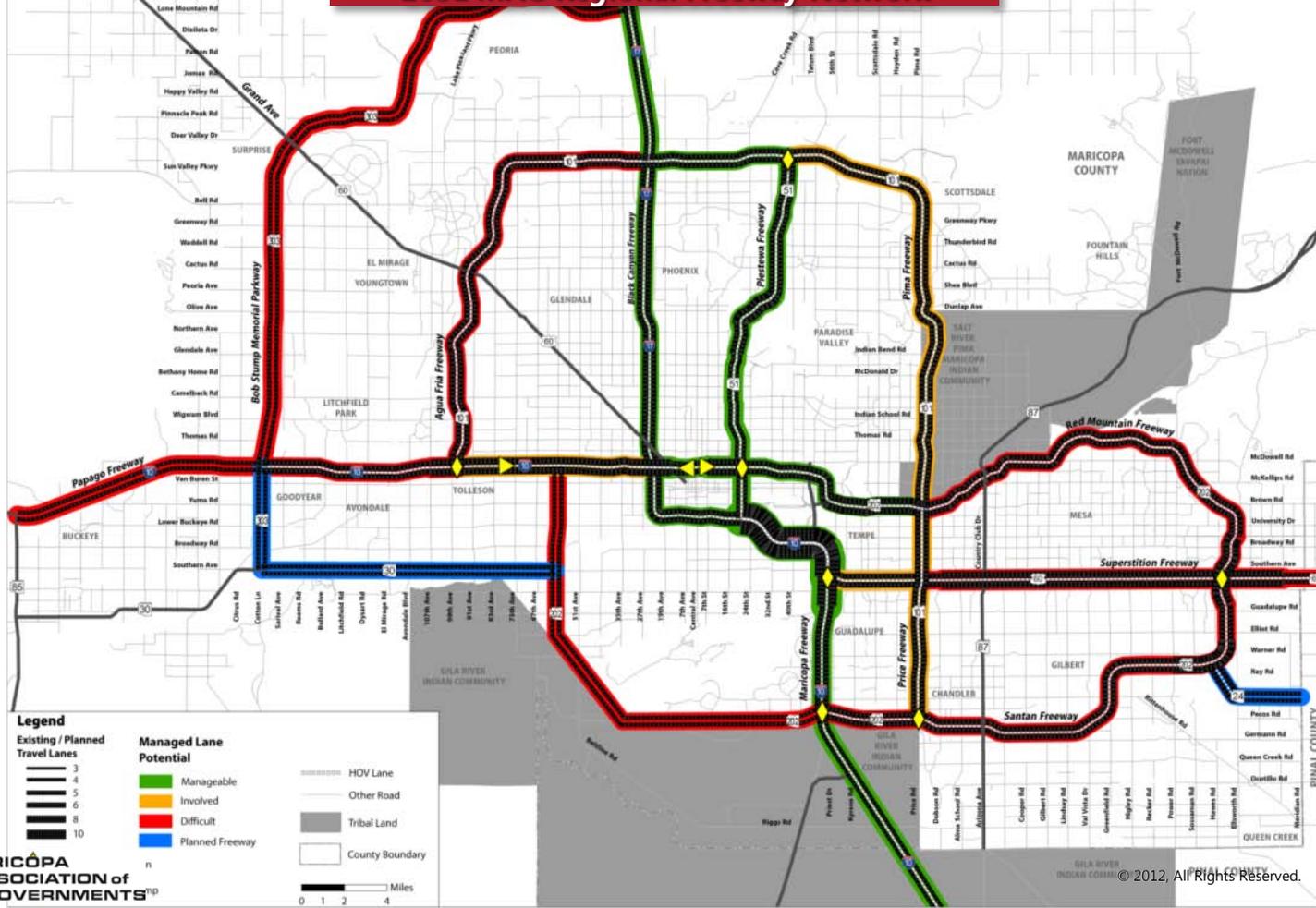
- Four mega-projects valued between **\$1.8 billion and \$2.6 billion** are currently being constructed in the U.S.:
  - Capital Beltway (I-495) in Northern Virginia (near Washington, DC).
  - IH-635 LBJ Freeway in Dallas, Texas.
  - North Tarrant Expressway in Dallas, Texas.
  - I-595 in Fort Lauderdale, Florida.



 Capital Beltway, Northern Virginia.

# Screening for Capacity Needs

## 2031 MAG Regional Freeway Network



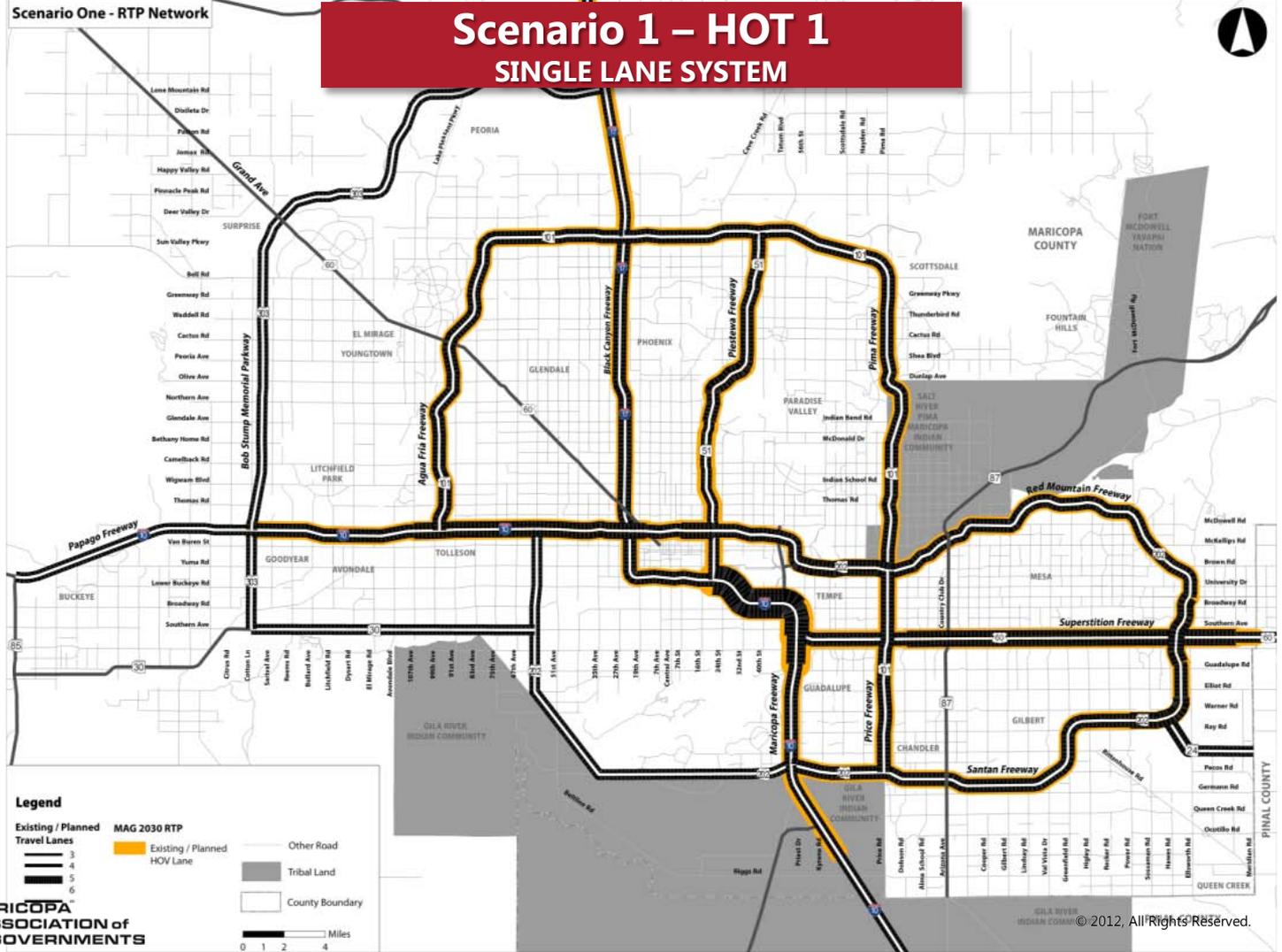
**Legend**

<b>Existing / Planned Travel Lanes</b>	<b>Managed Lane Potential</b>	<b>Other Road</b>
3	Manageable	HOV Lane
4	Involved	Other Road
5	Difficult	Tribal Land
6	Planned Freeway	County Boundary
8		
10		

Miles  
0 1 2 4



# Scenario 1 – HOT 1 SINGLE LANE SYSTEM



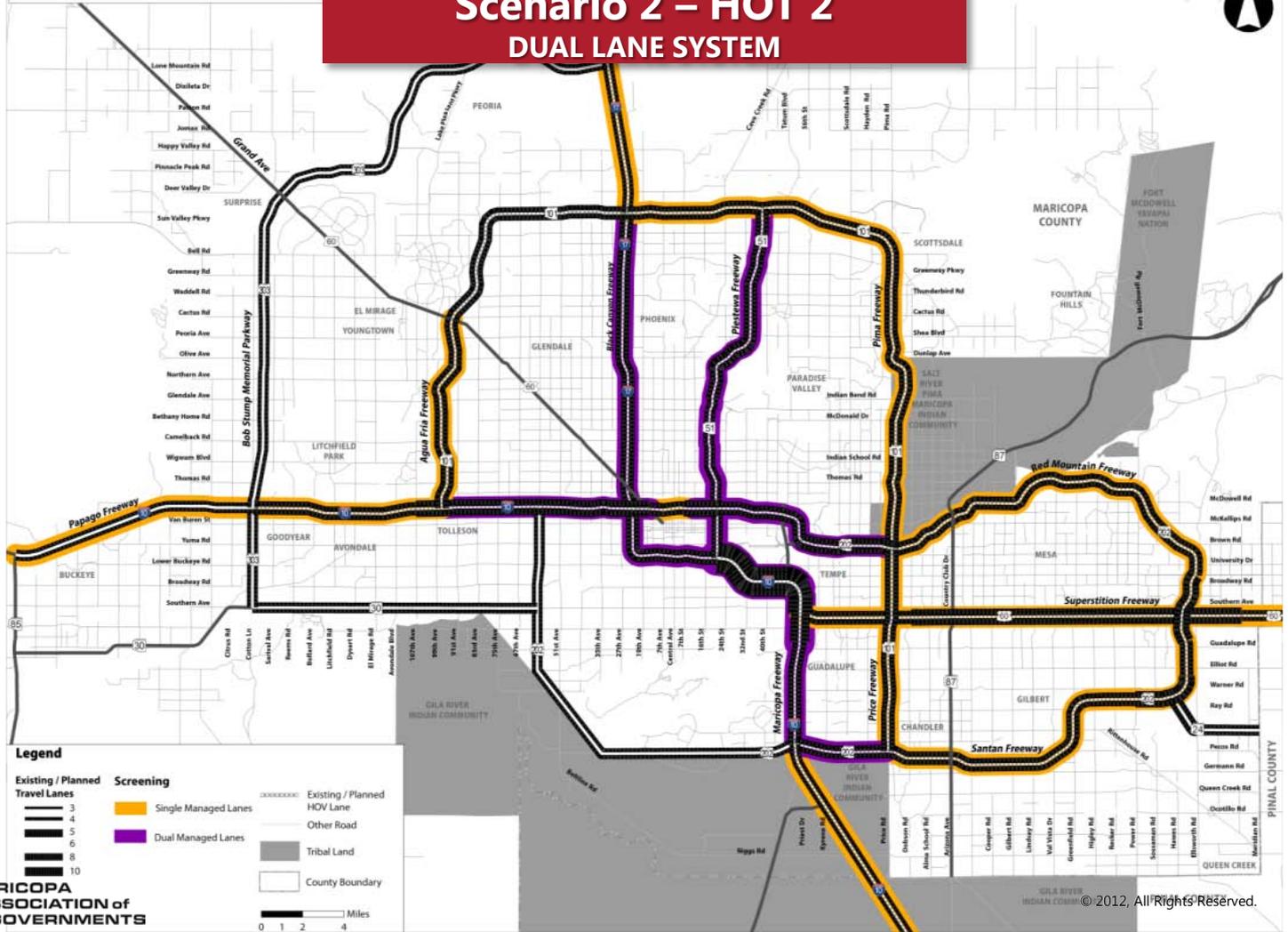
### Legend

Existing / Planned Travel Lanes	MAG 2030 RTP Existing / Planned HOV Lane	Other Road
3	4	Tribal Land
4	5	County Boundary
5	6	
6		

0 1 2 4 Miles



# Scenario 2 – HOT 2 DUAL LANE SYSTEM



**Legend**

<b>Existing / Planned Travel Lanes</b>	<b>Screening</b>	Existing / Planned HOV Lane
3	Single Managed Lanes	Other Road
4	Dual Managed Lanes	Tribal Land
5		County Boundary
6		
8		
10		

0 1 2 4 Miles



# Toll and Revenue Modeling

- Used ECONorthwest's Rapid Toll Optimization Model (RapidTOM).
- Based on MAG Travel Demand Model – accounts for competition from existing arterial street network.
- Assumes HOV 2+ Operation.
- Results developed on a time-of-day basis.



# Construction and Operation Assumptions

- Tolling Infrastructure.
- Roadway and Structural.
- Network Operations and Maintenance:
  - Toll Systems.
  - Roadway Systems.



# Performance Summary Criterion

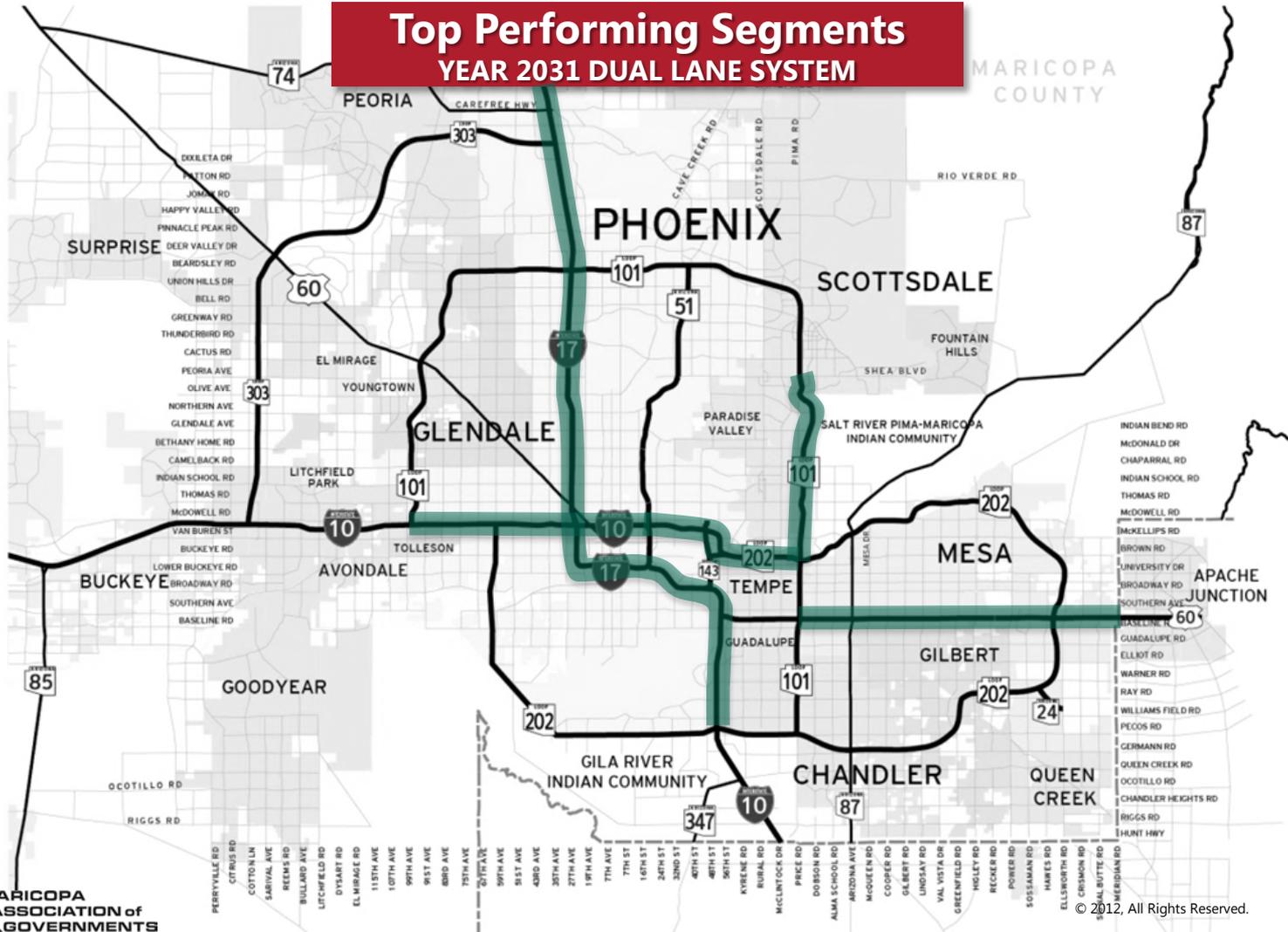
- Level of Service.
- Peak Period Travel Time Savings:
  - Per mile.
  - In minutes.
- Travel Speed.
- Monetary:
  - Annual Revenue.
  - Single Lane Construct.
  - Dual Lane Construct.





# Top Performing Segments

## YEAR 2031 DUAL LANE SYSTEM



# MAG Managed (Express) Lanes Network Summary

Topic	Comment
Does Network provide reliability?	Yes.
Is it possible to construct?	Yes. <ul style="list-style-type: none"><li>▪ Lane Separation.</li><li>▪ Access Treatments.</li></ul>
Are there legislative issues?	Yes. <ul style="list-style-type: none"><li>▪ Hours of Operation.</li><li>▪ Toll enforcement.</li><li>▪ Rate setting.</li></ul>
Is there sufficient revenue recovery?	Toll and Revenue forecasts favorable.
<b>Is this network feasible?</b>	<b>Yes.</b> <ul style="list-style-type: none"><li>▪ Policy recommendation needed.</li><li>▪ Additional studies needed for implementation.</li></ul>



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