For information and discussion.

Update on the Central Phoenix Transportation Framework Study

Transportation Review Committee
August 29, 2013

MARICOPA ASSOCIATION of GOVERNMENTS

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MAG Framework Studies

BUILDING A QUALITY ARIZONA
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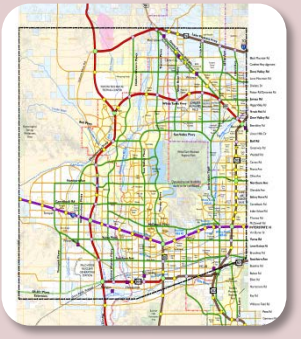

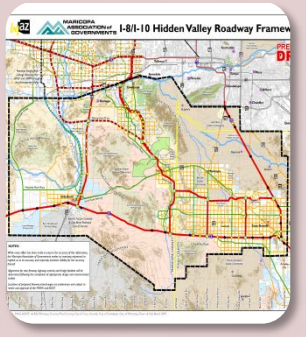

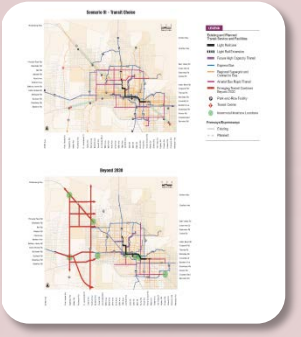

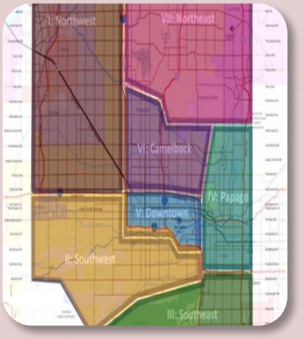

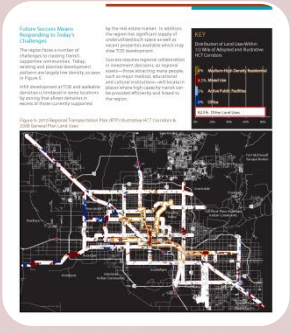

Interstate 10/ Hassayampa Valley Roadway Framework Study

Interstates 8 and 10/ Hidden Valley Transportation Framework Study

Regional Transit Framework Study

Central Phoenix Transportation Framework Study

Hassayampa Framework Study for the Wickenburg Area

Freight Transportation Framework Study

Sustainable Transportation and Land Use Integration Study

Inform the Planning Process > MAG REGIONAL TRANSPORTATION PLAN

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Project Timeline
CENTRAL PHOENIX TRANSPORTATION FRAMEWORK STUDY

2011

- Project Initiation.
- Data Collection and Analysis.
- **Public Outreach: Focus Groups and Geographic Dialogues.**
- Identify Range of Alternatives and Possibilities:
  - Freeways.
  - Arterials.
  - Transit.
  - Bikes.
  - Pedestrians.
- Contrast between current and future needs.

2012

- Deficiency Analysis on Eight Million Population Scenario.
- **Initial Planning Charette – Improvement Strategies "Definition of Possibilities."**
- Catalogue in Master Database and assess implementation potential.
- Determine Study Output.
- **Second Planning Charette – I-10/I-17 "Spine Corridor" to inform the Corridor Master Plan**.

2013

- Planning Paper Work Products.
- Planning Partner and Partner Agency Reviews.
- Recommendations.
- **Strategies and Policy Recommendations to inform the NexGen Regional Transportation Plan.**

We are here.

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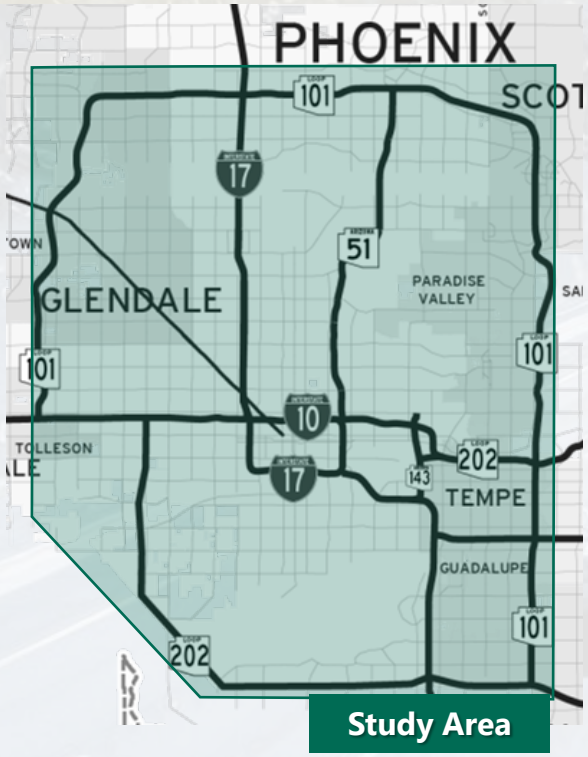
Central Phoenix Transportation Framework Study



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"Big Ideas"

FROM OUTREACH AND CHARETTE ACTIVITIES

- Advanced Transportation Management Strategies.
- Arizona Parkways.
- Support for Commuter Rail lines.
- **Complete Streets.**
- More Direct High Occupancy Vehicle (DHOV) Ramps from the freeways.
- Improve Freeway Interchange efficiencies.
- Better High Capacity Transit Linkages.
- Consider Congestion Pricing Strategies.
- Target high-volume intersections with improvements.
- **"Last Mile Strategies" to provide better transit and ridesharing opportunities.**
- Better multi-modal connections to defined activity centers.
- Improved pedestrian and bicycle connections between jurisdictions.
- **Road diets.**
- Plan for system maintenance.

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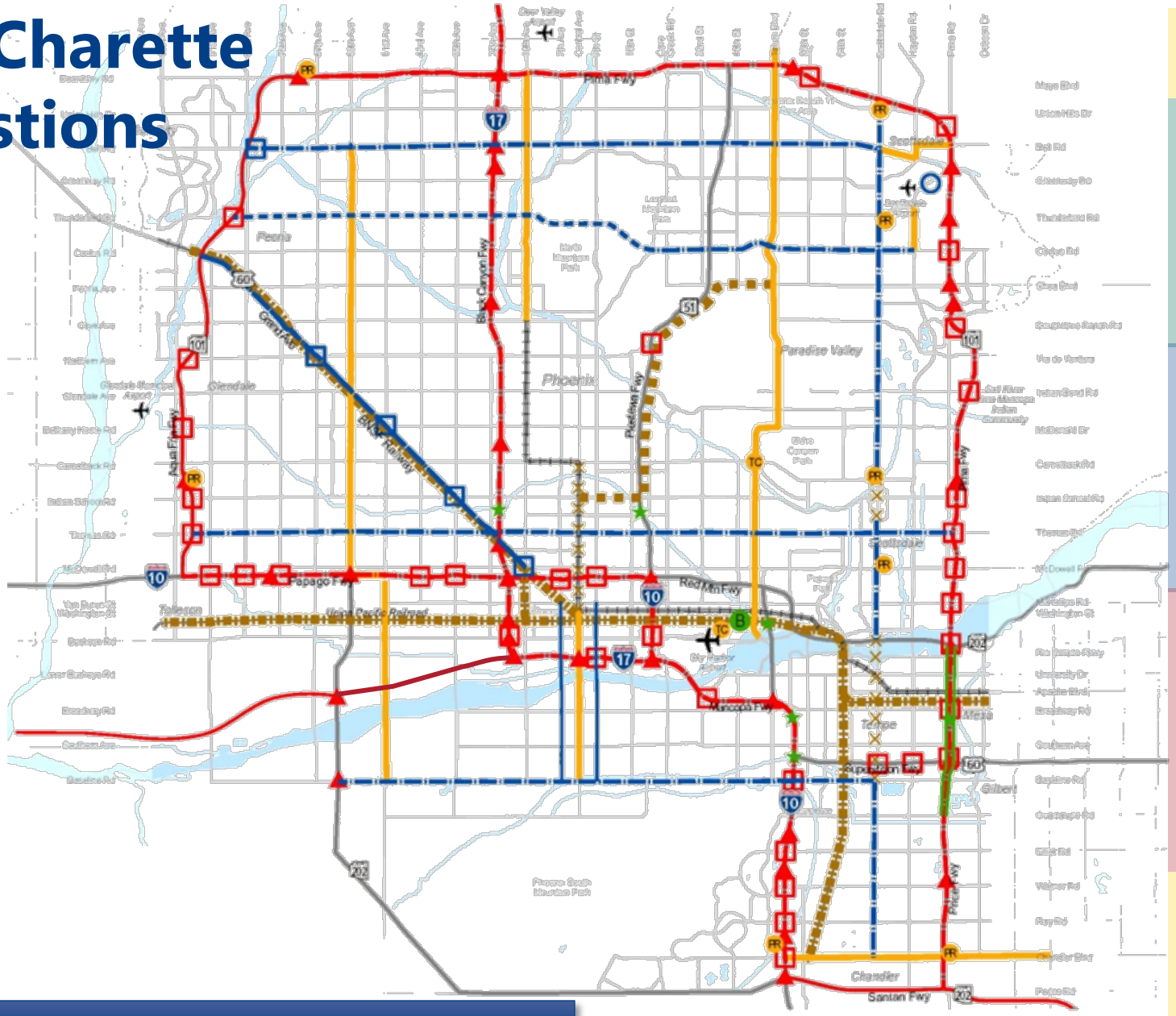
Initial Charette Suggestions



More than 200 Project Possibilities Identified.

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Assessment of Improvement Strategies

- Cataloging and developing a database of the more than 200 potential projects.
- Includes mapping and coding of strategies.
- Ratings using the **EPA-DOT-HUD Livability-Sustainability Criteria**.
- Identified work products.

Choice Lane Exit Ramps.

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Work Products

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Improvement Strategies

"Spine Corridor"

Freeway System Plan

SR-30 Corridor Extension

Park-and-Ride

DHOVs

ATM Deployment

Roadway Maintenance

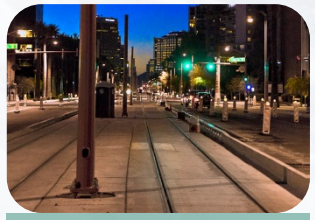
DDI

Indirect Left Turn Arterial Concepts

Arterial Intersections

Transit Strategies

Pedestrian/Bicycle Strategies



Executive Summary Poster

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Interstate 10/Interstate 17 "Spine" Corridor Workshop

- Participants:
  - ADOT
  - City of Chandler
  - City of Phoenix
  - City of Tempe
  - FHWA
  - MAG
  - Valley Metro
- Consultant representatives from **design-build projects** and **other state Departments of Transportation**.

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Path Forward Defined

the spine

Spot Improvements

- Immediate Needs addressing bottlenecks.
- Within ADOT Rights-of-Way (ROW).
- Near Term Construction.

CORRIDOR MASTER PLAN

12-18 Months

- Joint Project Management.
- MAG Procurement.
- **Identify Corridor Operating Principles.**
- **Coordinate with Stakeholders.**
- Frame next environmental and design efforts.

Environmental Studies

- Joint Project Management.
- ADOT Procurement.
- **Multiple Studies and Efforts.**
- Consistent with Corridor Master Plan.

Design, Construction, Operation

- Implementation.

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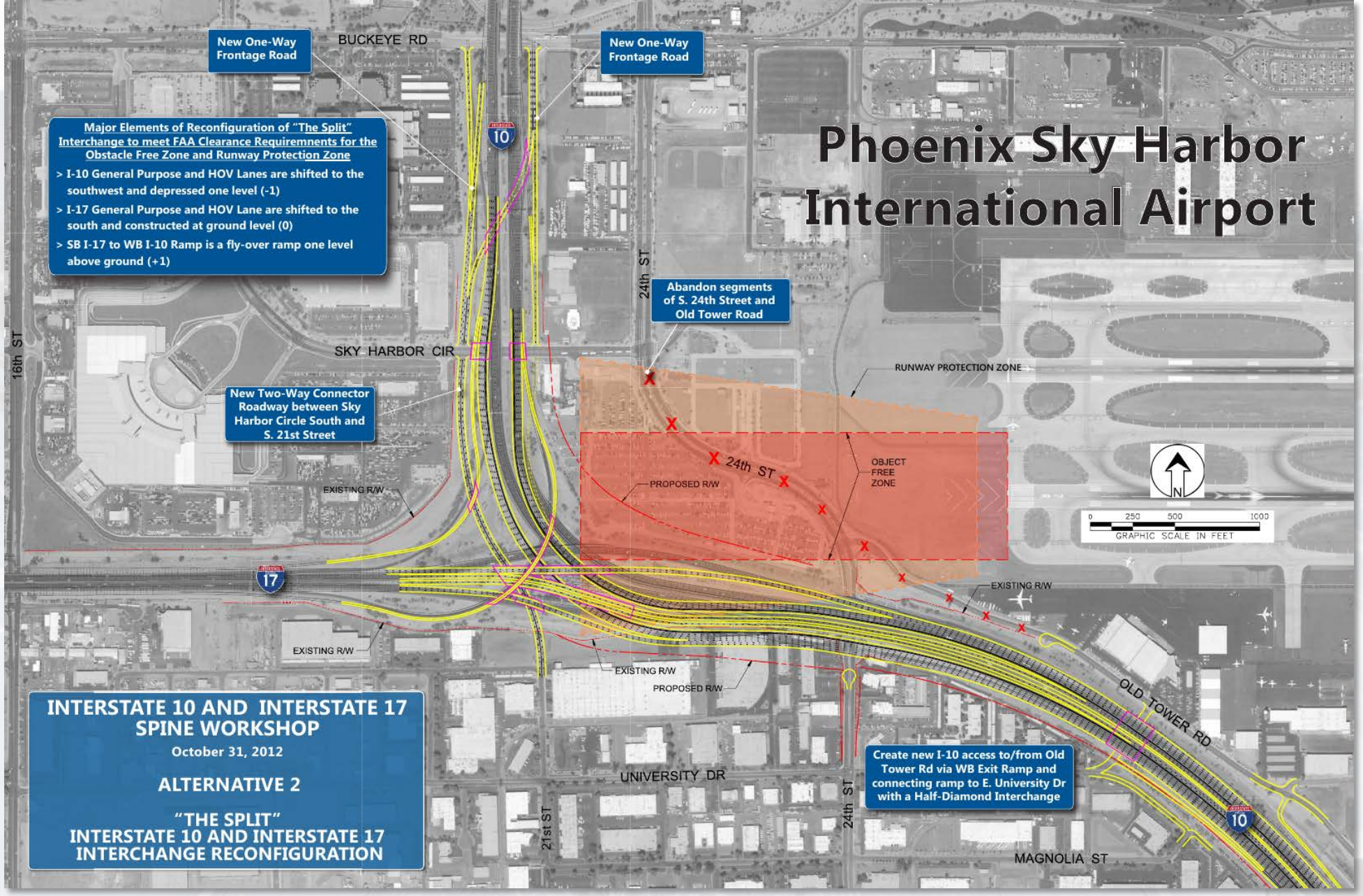

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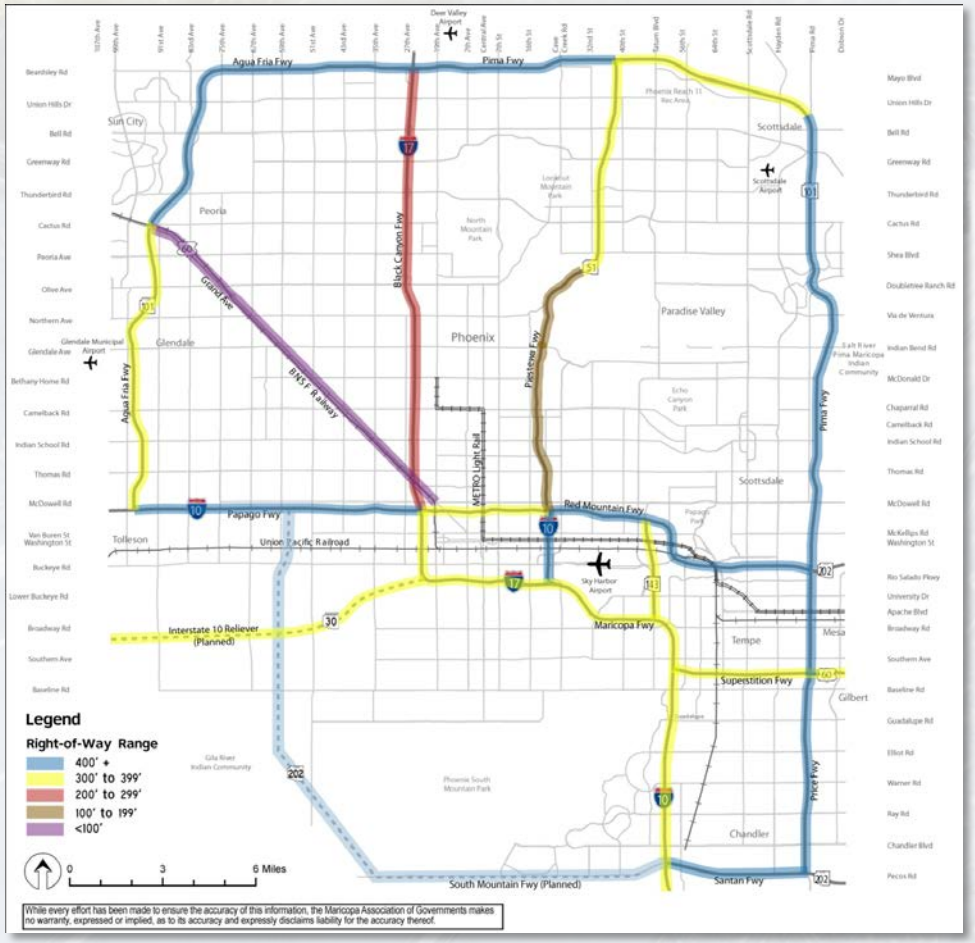
Freeway System Plan



Roadway Key (Color)	Right of Way Range
Blue	Greater than 400-ft
Yellow	300-ft to 399-ft
Red	200-ft to 299-ft
Brown	100-ft to 199-ft
Violet	Less than 100-ft

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Freeway System Plan

Red Corridor (Interstate 17) with Frontage Roads

Base Condition
6-lane freeway segment with HOV and Frontage Roads (3+1) [Right-of-way width = 202 ft; 302 ft with Frontage Road]

Frontage Road (Minimum)	Offset (Minimum)	Side Slope	Buffer to Barrier	Shoulder	Auxiliary	General Purpose	General Purpose	General Purpose	Buffer - Pavement Markings Only	High Occupancy Vehicle	Shoulder	Buffer to Barrier	Concrete Median Barrier	Buffer to Barrier	Shoulder	High Occupancy Vehicle	Buffer - Pavement Markings Only	General Purpose	General Purpose	General Purpose	Auxiliary	Shoulder	Buffer to Barrier	Side Slope	Offset (Minimum)	Frontage Road (Minimum)
50	10	8	2	10	12	12	12	12	4	12	4	2	2	2	4	12	4	12	12	12	12	10	2	8	10	50

Scenario A – Reduced General Purpose Lane Width; Reduced Inside Shoulder
8-lane freeway segment with HOV and Frontage Roads (4+1) [Right-of-way width = 202 ft; 302 ft with Frontage Road]

Frontage Road (Minimum)	Offset (Minimum)	Side Slope	Buffer to Barrier	Shoulder	Auxiliary	General Purpose	General Purpose	General Purpose	General Purpose	High Occupancy Vehicle	Shoulder	Buffer to Barrier	Concrete Median Barrier	Buffer to Barrier	Shoulder	High Occupancy Vehicle	General Purpose	General Purpose	General Purpose	General Purpose	Auxiliary	Shoulder	Buffer to Barrier	Side Slope	Offset (Minimum)	Frontage Road (Minimum)
50	10	10	2	8	11	11	11	11	11	11	2	2	2	2	2	11	11	11	11	11	11	8	2	10	10	50

Scenario B – Reduced General Purpose Lane Width; Reduced Inside Shoulder, no buffer between HOV and GP lanes and Retaining Walls
10-lane freeway segment with HOV and Frontage Roads (5+1) [Right-of-way width = 202 ft; 302 ft with Frontage Road]

Frontage Road (Minimum)	Offset (Minimum)	Retaining Wall with Barrier	Buffer to Barrier	Shoulder	Auxiliary	General Purpose	General Purpose	General Purpose	General Purpose	General Purpose	High Occupancy Vehicle	Shoulder	Buffer to Barrier	Concrete Median Barrier	Buffer to Barrier	Shoulder	High Occupancy Vehicle	General Purpose	General Purpose	General Purpose	General Purpose	General Purpose	Auxiliary	Shoulder	Buffer to Barrier	Retaining Wall with Barrier	Offset (Minimum)	Frontage Road (Minimum)
50	2	6	2	8	11	11	11	11	11	11	12	2	2	2	2	2	12	11	11	11	11	11	11	8	2	6	2	50

Scenario C – Express Lanes – Dual Lane
10-lane freeway segment with 2-lane HOV and Frontage Roads (5+2) [Right-of-way width = 202 ft; 302 ft with Frontage Road]

Frontage Road (Minimum)	Offset (Minimum)	Retaining Wall with Barrier	Buffer to Barrier	Shoulder	Auxiliary	General Purpose	General Purpose	General Purpose	General Purpose	General Purpose	Shoulder	Buffer -Barrier - Buffer	Shoulder	High Occupancy Vehicle	High Occupancy Vehicle	Shoulder	Buffer to Barrier	Concrete Median Barrier	Buffer to Barrier	Shoulder	High Occupancy Vehicle	High Occupancy Vehicle	Shoulder	Buffer -Barrier - Buffer	Shoulder	General Purpose	General Purpose	General Purpose	General Purpose	General Purpose	Auxiliary	Shoulder	Buffer to Barrier	Retaining Wall with Barrier	Offset (Minimum)	Frontage Road (Minimum)
50	8	12	10	10	11	11	11	11	11	11	2	6	10	12	12	4	2	2	2	4	12	12	10	6	2	11	11	11	11	11	11	10	10	12	8	50

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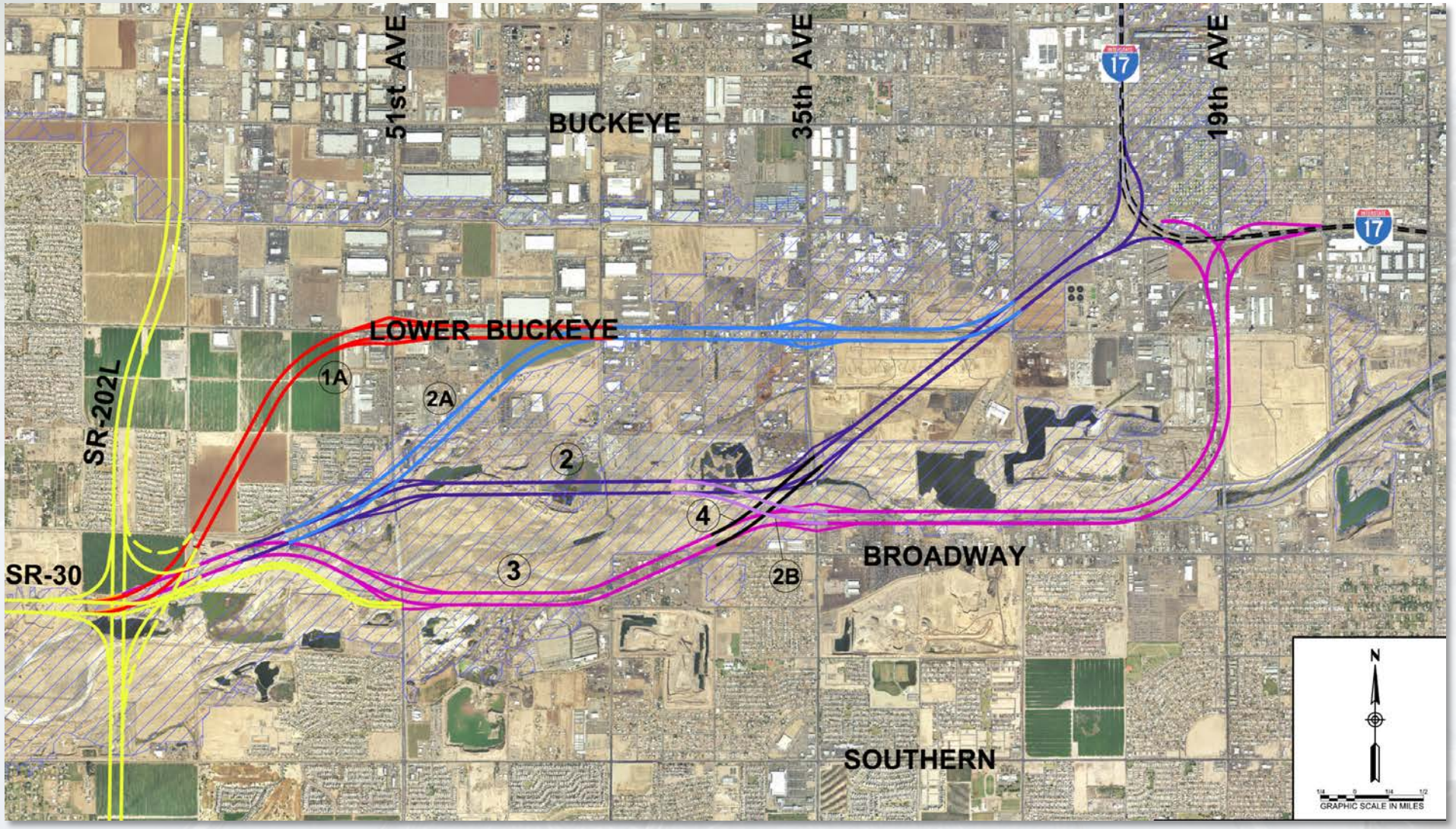
SR-30 Corridor Extension



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Park-and-Ride

Case studies of Best Practices were conducted for **San Diego**, **Denver**, and **Seattle** to:

- Define integration with freeway system.
- Establish background for **development and character of future Direct HOV (DHOV) Ramps** on the freeway system, including:
  - Physical features.
  - Operational conditions.
  - Benefits.

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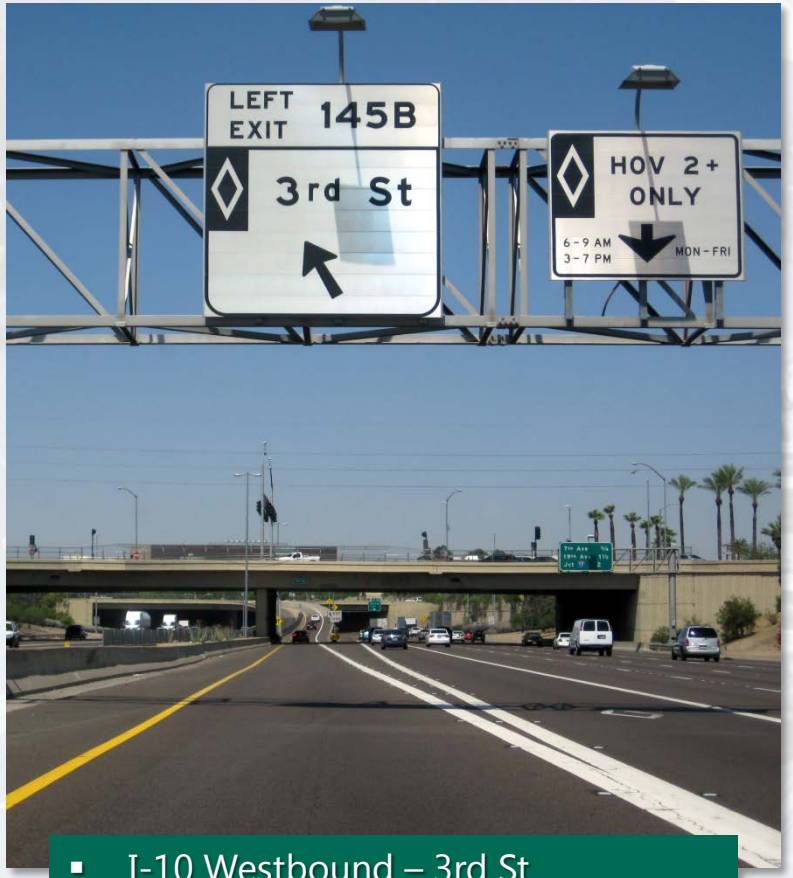
What and where are DHOVs?



- I-10 Westbound – 3rd St
- I-10 Eastbound – 3rd Ave/5th Ave
- I-10 Westbound -79th Ave

- I-10 West to/from SR-202L East
- I-10 East to/from SR-51 North
- I-10 West to/from US-60 East

- SR-51 South to/from SR-101L Pima
- I-10 West to/from SR-202L Santan
- SR-101L Price to/from SR-202L Santan
- **SR-101L/Maryland Ave**

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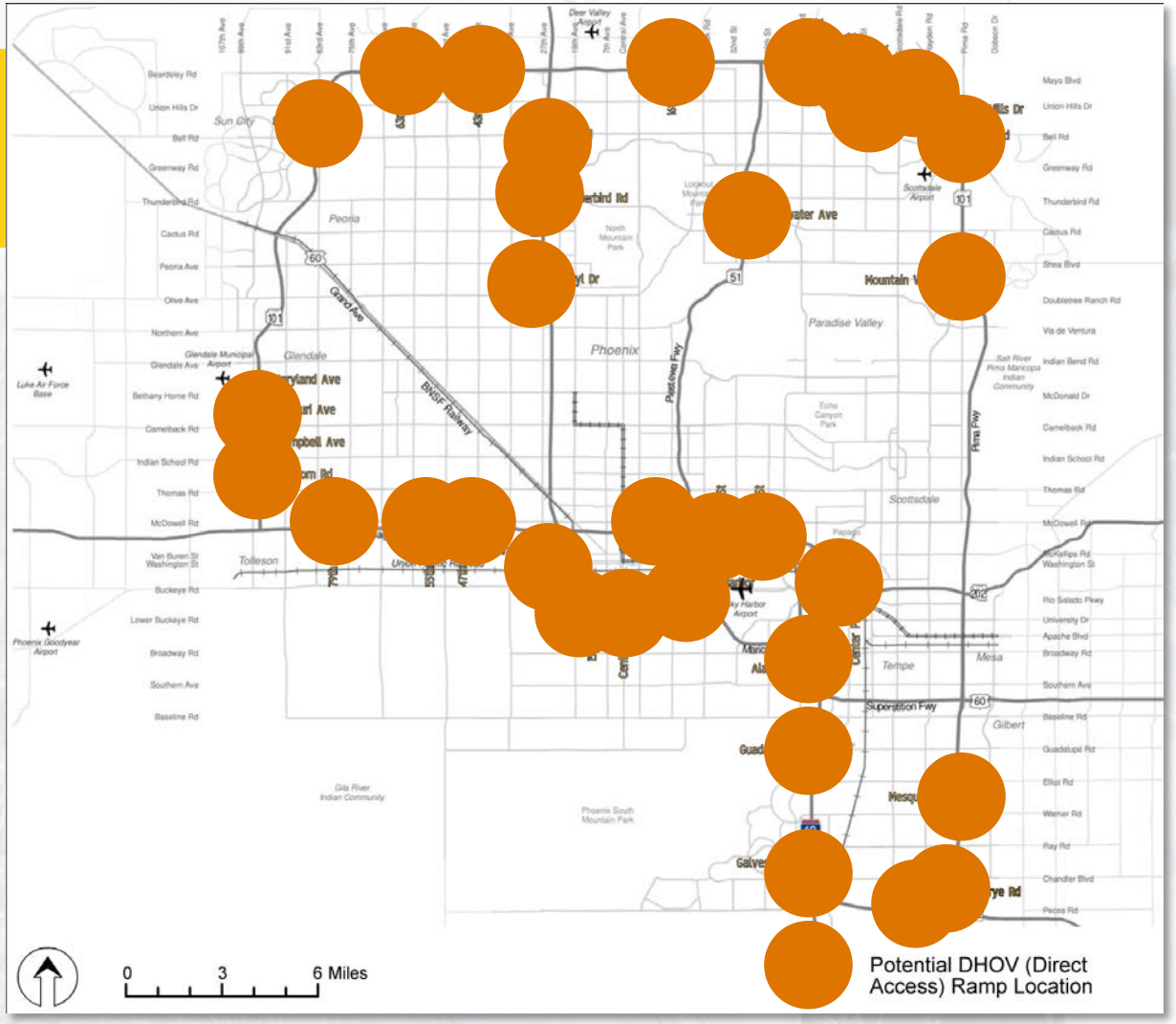
Direct High-Occupancy Vehicle (DHOV) Ramps

- Over **35 locations** identified from the Planning Charette.
- Narrowed to best candidate locations based on system and land use compatibility.
- Concept drawings developed to illustrate connectivity with arterial road system and possible park-and-ride lots.



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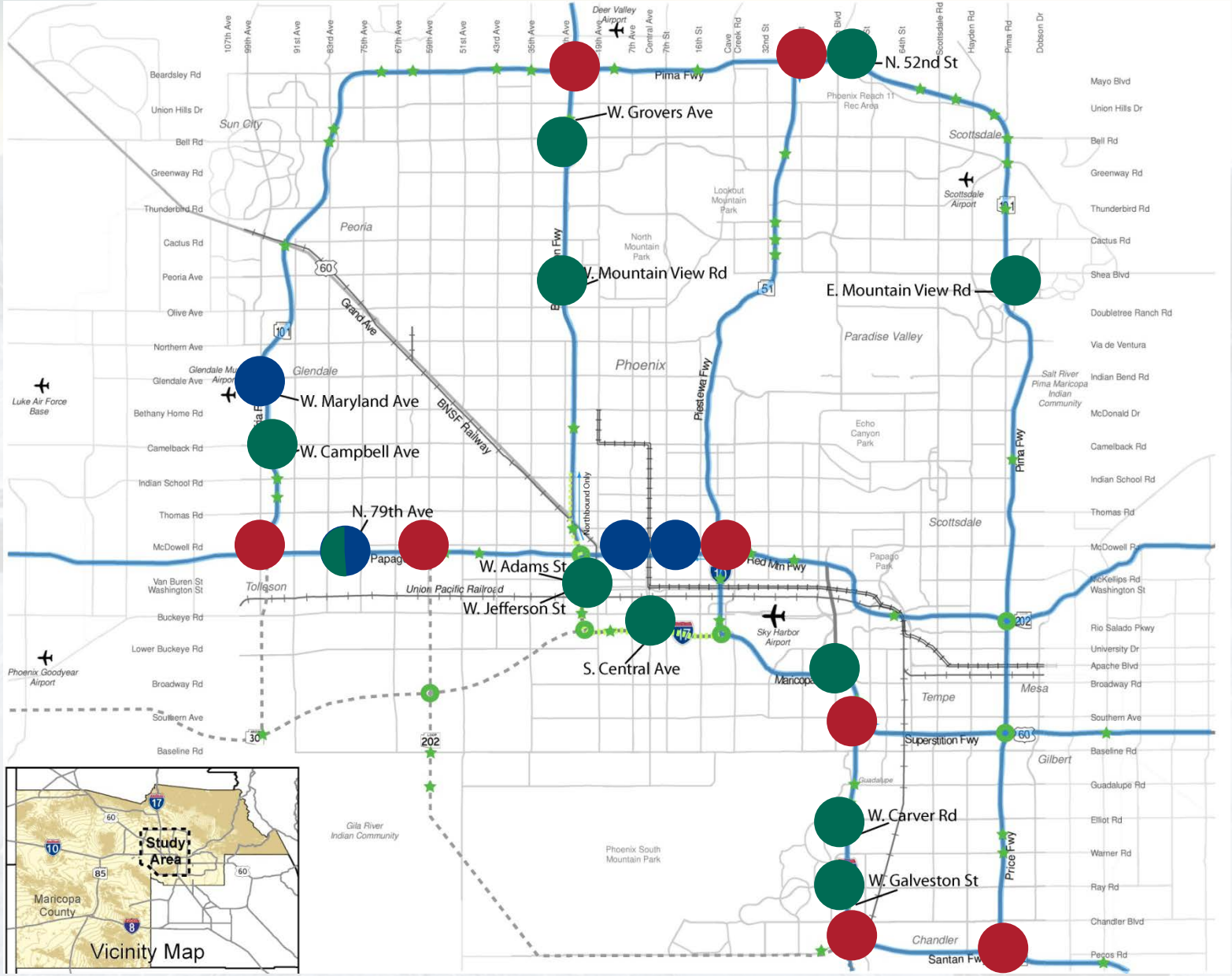
DHOV Ramps

- RTP existing and proposed DHOV ramp locations.
- RTP existing and proposed DHOV ramp arterial locations.
- Candidate DHOV ramp locations.



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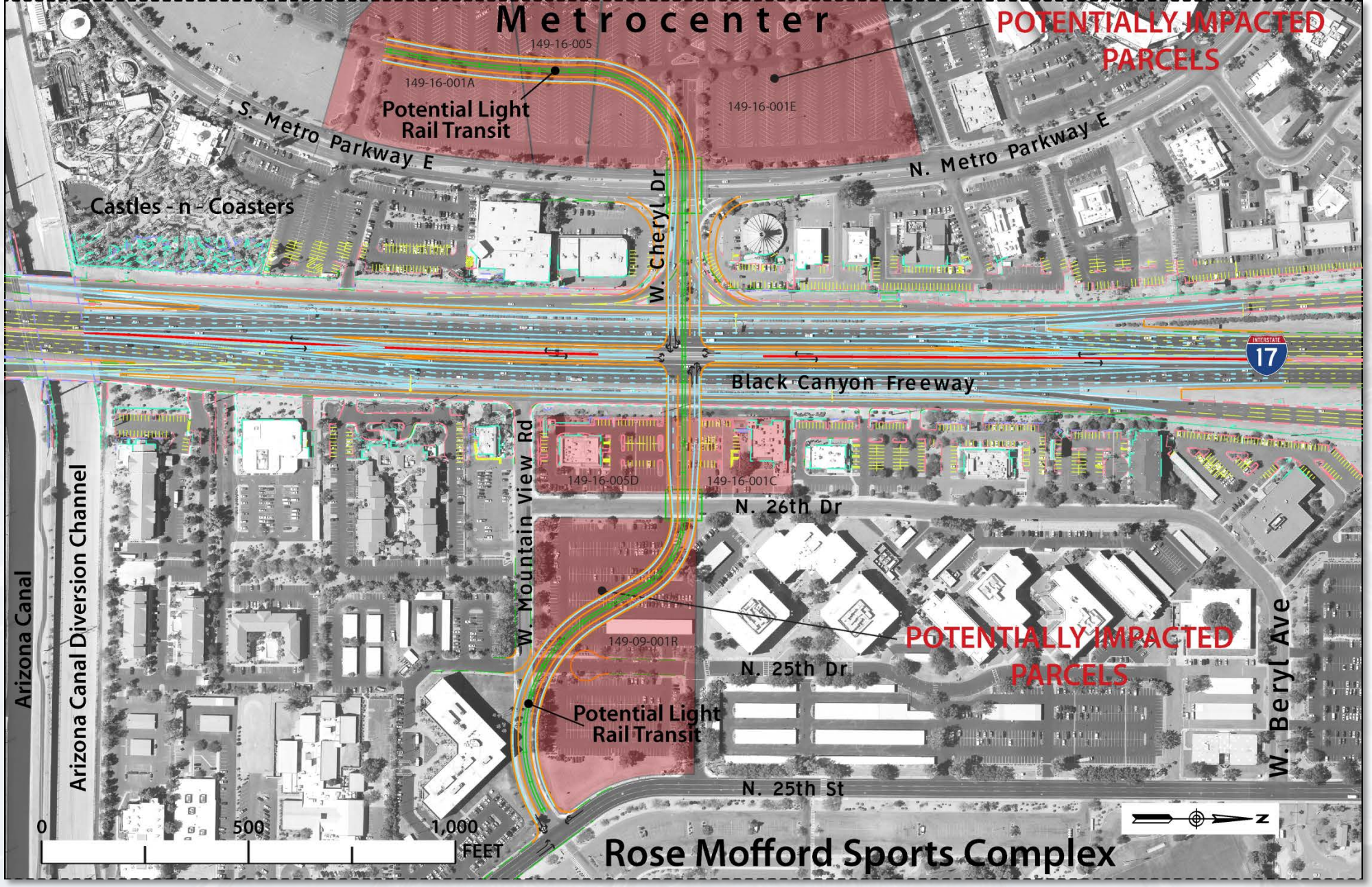

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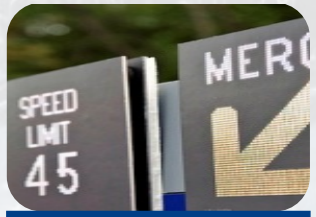

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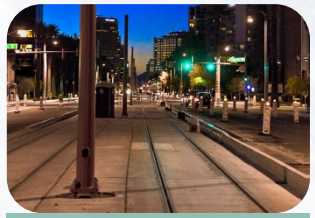

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