

COMMUTER RAIL

System Planning



March 25, 2009

MAG Overview

What is Commuter Rail?

- Meets Federally mandated structural requirements for rolling stock
- Overall regulation by Federal Railroad Administration (FRA)
- Can share ROW, track with freight, intercity rail



What is Commuter Rail?

- Larger, heavier, roomier than light rail
- Higher maximum speed, slower acceleration and deceleration, still has good travel time and reliability
- Typically longer station spacing with emphasis on park-and-rides



What is Commuter Rail?

- Locomotive-hauled coaches
- Diesel Multiple Units (DMUs)



North American Commuter Rail Systems



- "Heritage" Systems (Pre-1985)
- "New" Systems (Since 1985)
- Open by 2010
- In design or planning

Commuter Rail Market

- Regular Routine
- Home-to-Destination Trip
- Importance on Time
- Wants
 - On-time Performance
 - Clean Equipment
 - Secure Stations/Parking Lots



Trip Purpose

- **Commuters – Daily, Morning & Afternoon**
- **Mid-Day, Evenings, Weekends – Occasional Trips/Events**
- **Transfer Connections to Other Transit Services (Bus/LRT)**



Service Area



LIGHT RAIL



STATION SPACING: 1/2 TO 1 MILE **SYSTEM EXTENT:** 15 TO 20 MILES
MAXIMUM SPEED: 65 MPH **AVERAGE SPEED (WITH STOPS):** 25 MPH



COMMUTER RAIL



STATION SPACING: 5 TO 7+ MILES **SYSTEM EXTENT:** 20 TO 75 MILES
MAXIMUM SPEED: 79 MPH **AVERAGE SPEED (WITH STOPS):** 45 MPH



INTERCITY RAIL



STATION SPACING: 20 TO 30 MILES **SYSTEM EXTENT:** 50 TO 300 MILES
MAXIMUM SPEED: 110 MPH **AVERAGE SPEED (WITH STOPS):** 55 MPH

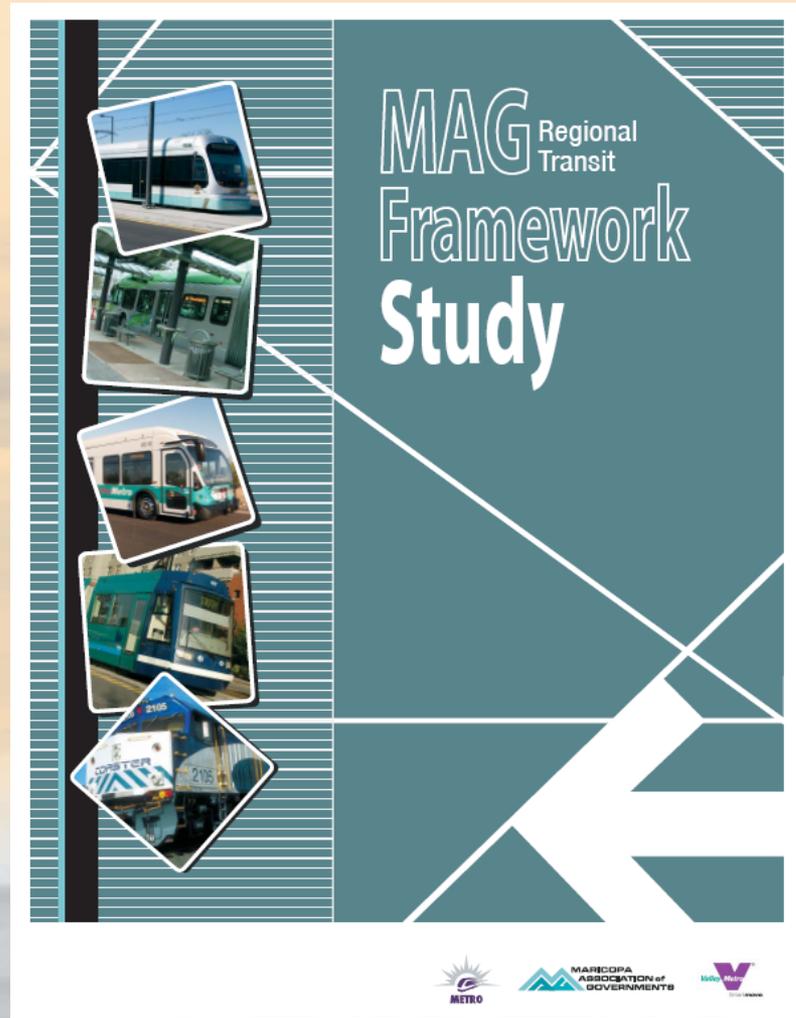
Passenger Amenities

- Comfortable Seating
- Reading Lights
- Rest Rooms
- Luggage Racks
- Bike Racks
- Computer Connections
- Computerized Information
- Quiet Cars



MAG Commuter Rail Regional Planning

Regional Transit Framework Study



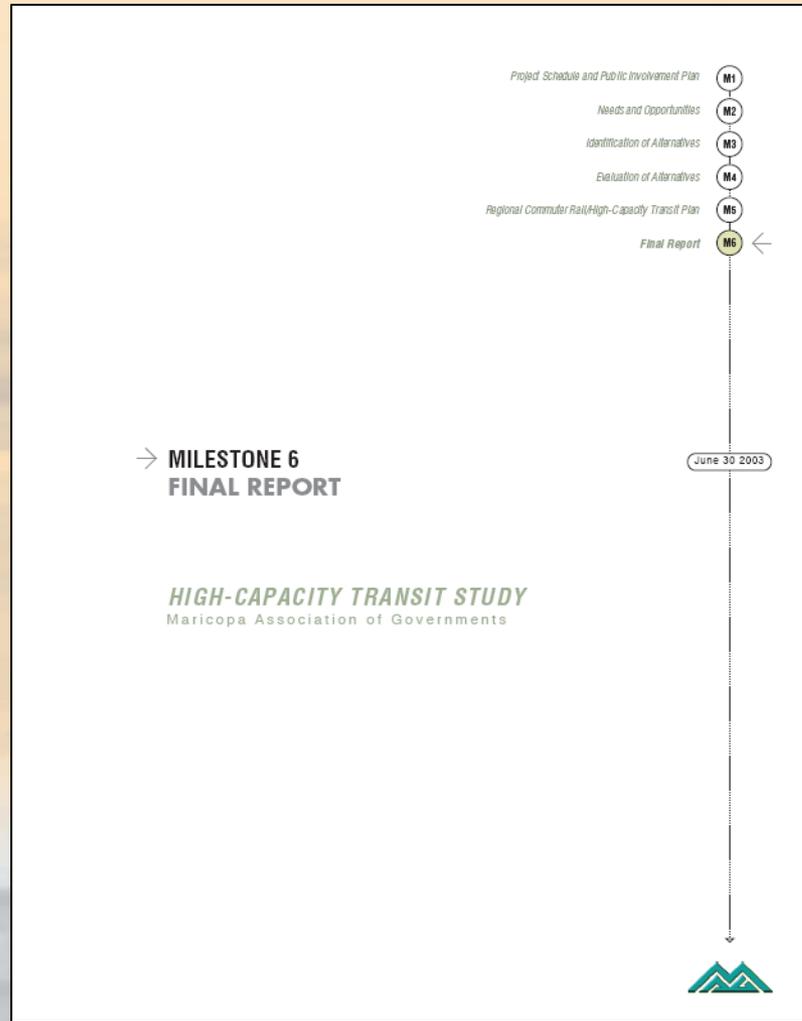
Regional Transit Framework Study

Project Goals:

- Provide alternative multi-modal scenarios for policy makers to consider
- Enable the prioritization of multi-modal components into a regional framework for staged implementation
- Define long range transit needs
- Provide tools for future policy decisions

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High Capacity Transit Study

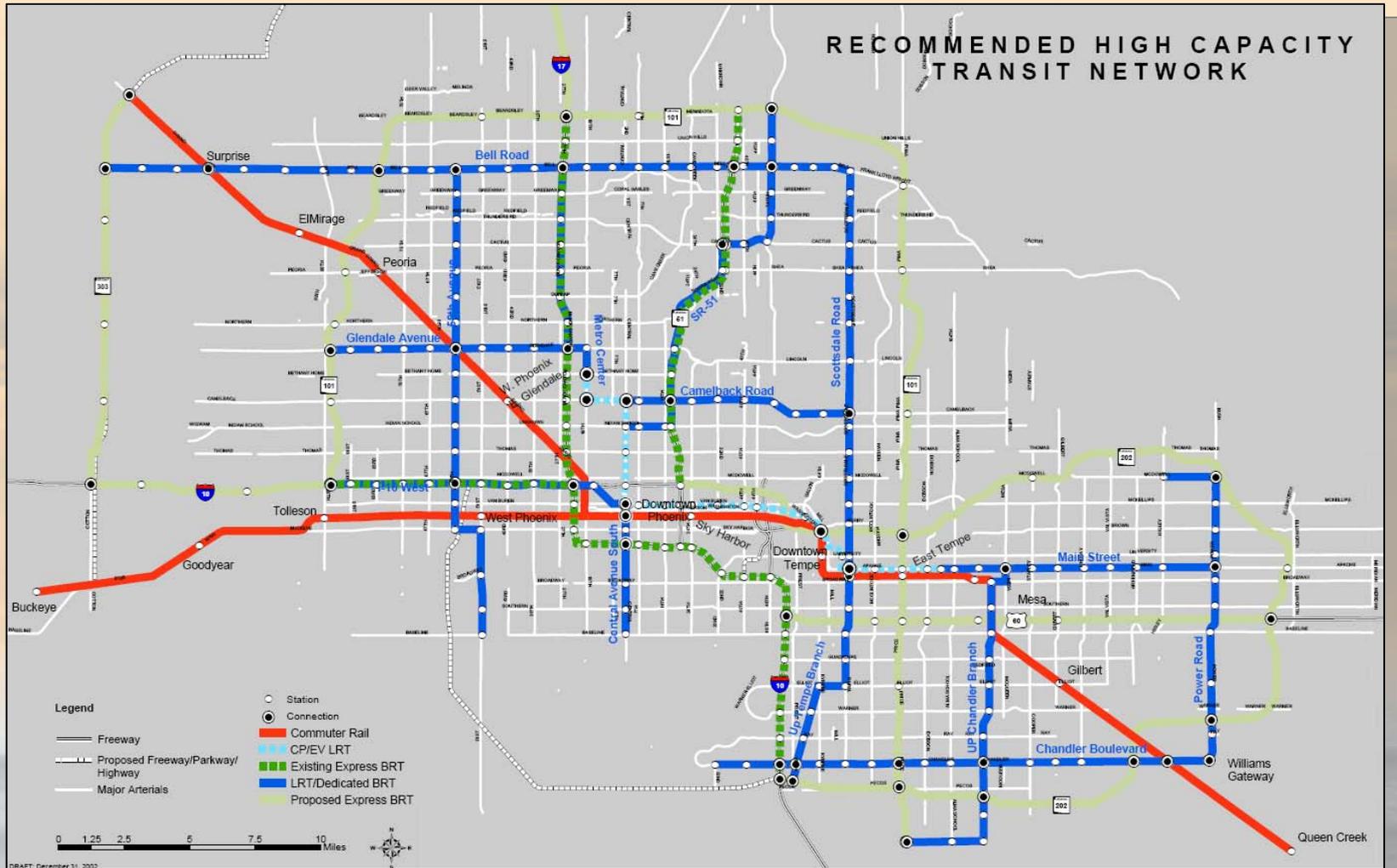


High Capacity Transit Study

- Completed June 2003
- Identified HCT Corridors for implementation into RTP
- Three technologies examined:
 - Commuter Rail
 - Light Rail
 - Bus Rapid Transit



High Capacity Transit Study



High Capacity Transit Study

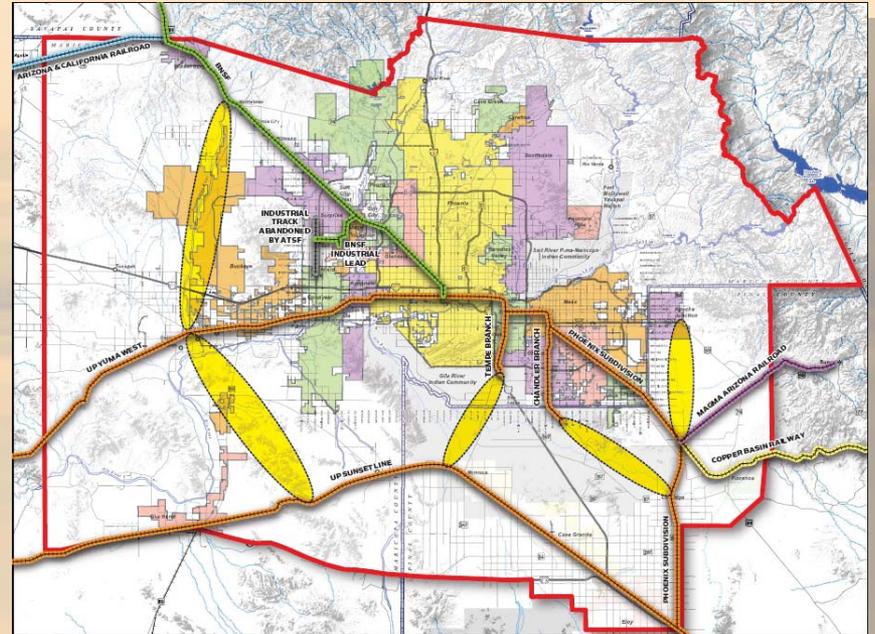
- **Short Term (0-15 yrs):**
 - Negotiations and major investment studies commence
- **Mid-Term (15-30 yrs) :**
 - Peak period only service
- **Long-Term (30+ yrs):**
 - Maximum amount of service corridors can handle

Commuter Rail Strategic Plan



Commuter Rail Strategic Plan

- Define the steps needed to be taken for Maricopa and Northern Pinal Counties to plan for and potentially implement commuter rail service.



Commuter Rail Strategic Plan

Potential Commuter Rail Corridors

- BNSF/Grand Avenue
- UP Mainline/Southeast
- UP Mainline/Chandler
- UP Mainline/Tempe
- UP Mainline/Yuma West
- Possible Extensions/Northern Pinal County
- 12 Implementation Steps for Future Actions

Commuter Rail Strategic Plan

- **Get Started Scenario**
 - This scenario would focus on implementing commuter rail in a single corridor
 - Less complex coordination, potential low cost of entry, more simple administration, governance and funding
 - Examples: NorthStar Commuter Rail in Minneapolis and the Trinity Railway Express connecting Dallas to Fort Worth



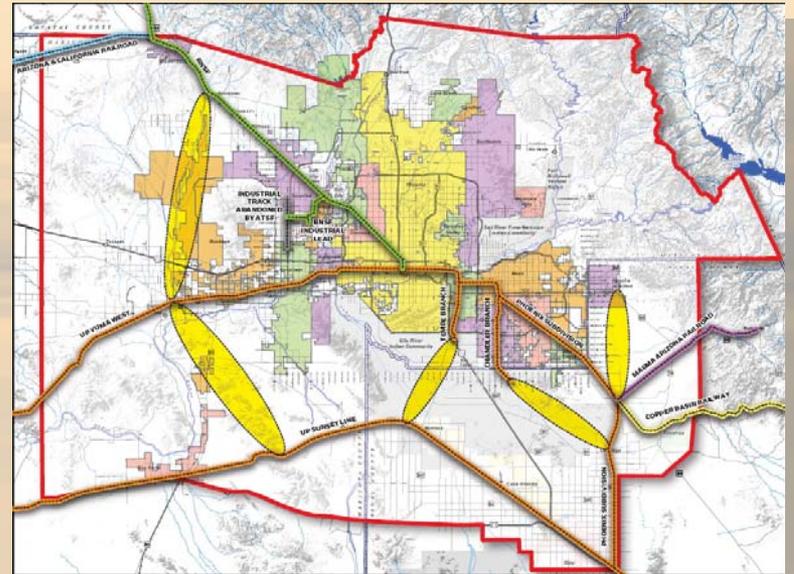
Commuter Rail Strategic Plan

- **Starter System Scenario**
 - This scenario would include multiple corridors and could focus on more than one congested corridor.
 - Relatively low cost of entry, and the possibility to upgrade the system over time.
 - Examples: Salt Lake City Frontrunner, and the Virginia Railway Express that connects the Northern Virginia area with Washington, DC.



Commuter Rail Strategic Plan

- **Regional System Scenario**
 - This scenario would focus on implementing commuter rail in multiple corridors simultaneously.
 - Transportation mobility, promotes sustainability, shape regional growth, more costly, more complex.
 - Examples: Metrolink commuter rail in Los Angeles and the Denver FasTracks transit expansion program.



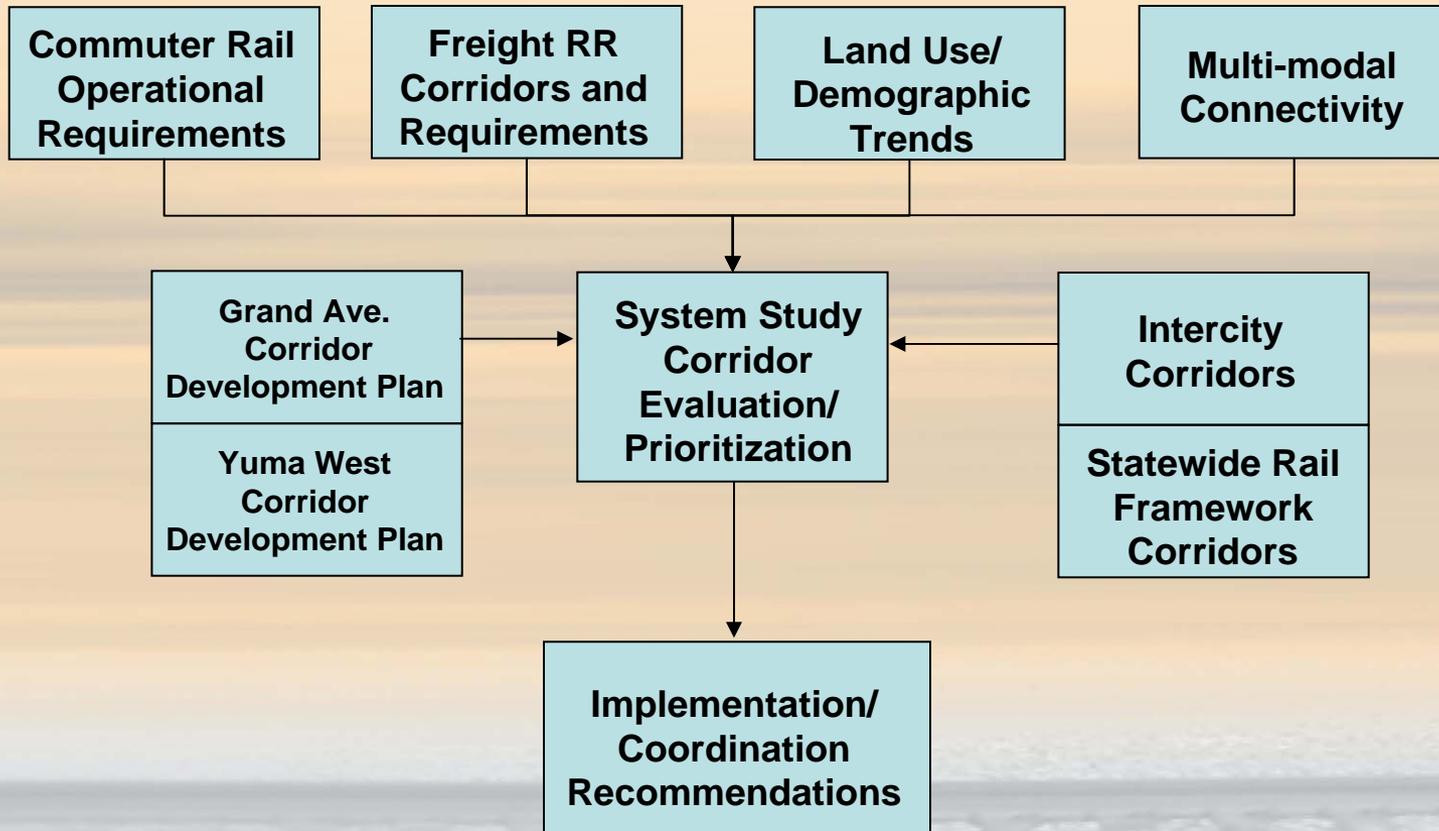
System Study

System Study

- **Both existing freight and possible extensions will be evaluated as part of the study**
- **Establish priorities for implementing commuter rail service through evaluation of:**
 - **Ridership Potential**
 - **Operating Strategies**
 - **Capital and Operating Costs**
- **System study may recommend:**
 - **Additional corridor development plans (2010)**
 - **More detailed study of Grand Avenue and/or Yuma West**

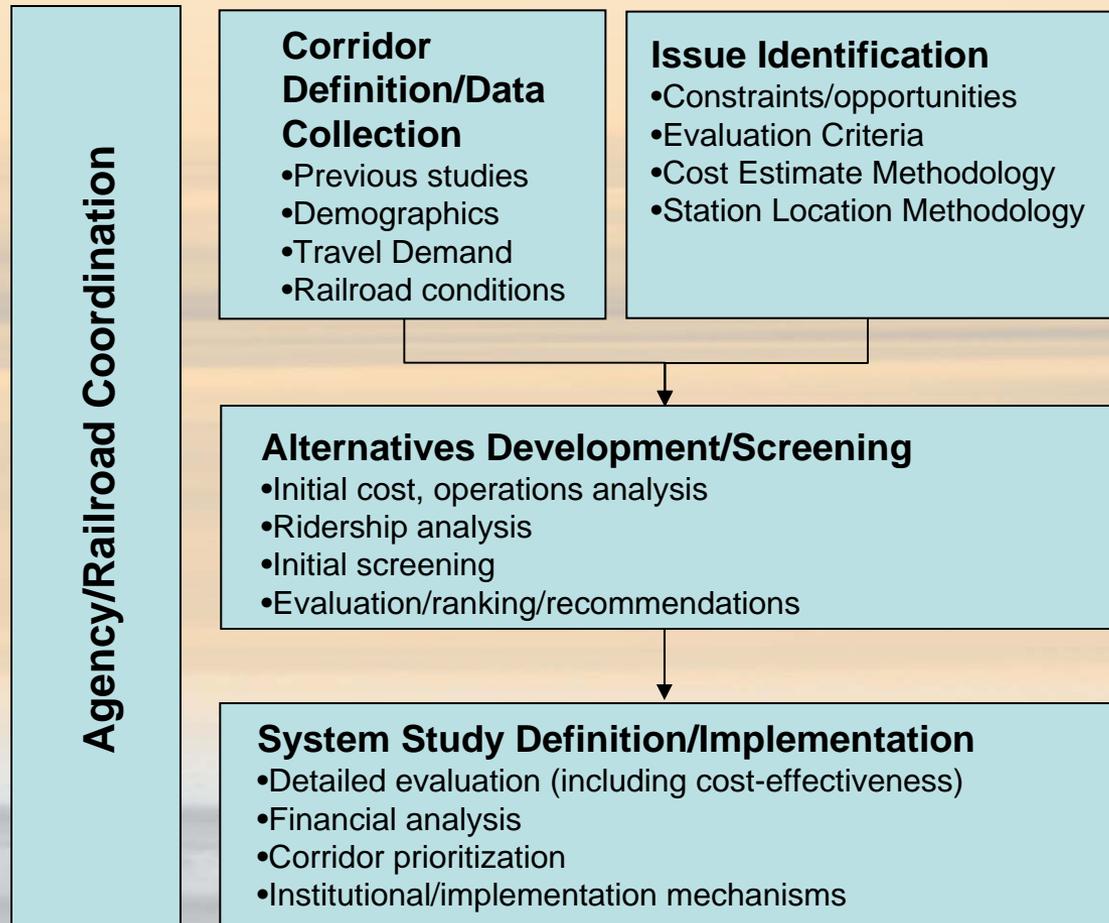
System Study

Rail Coordination Process



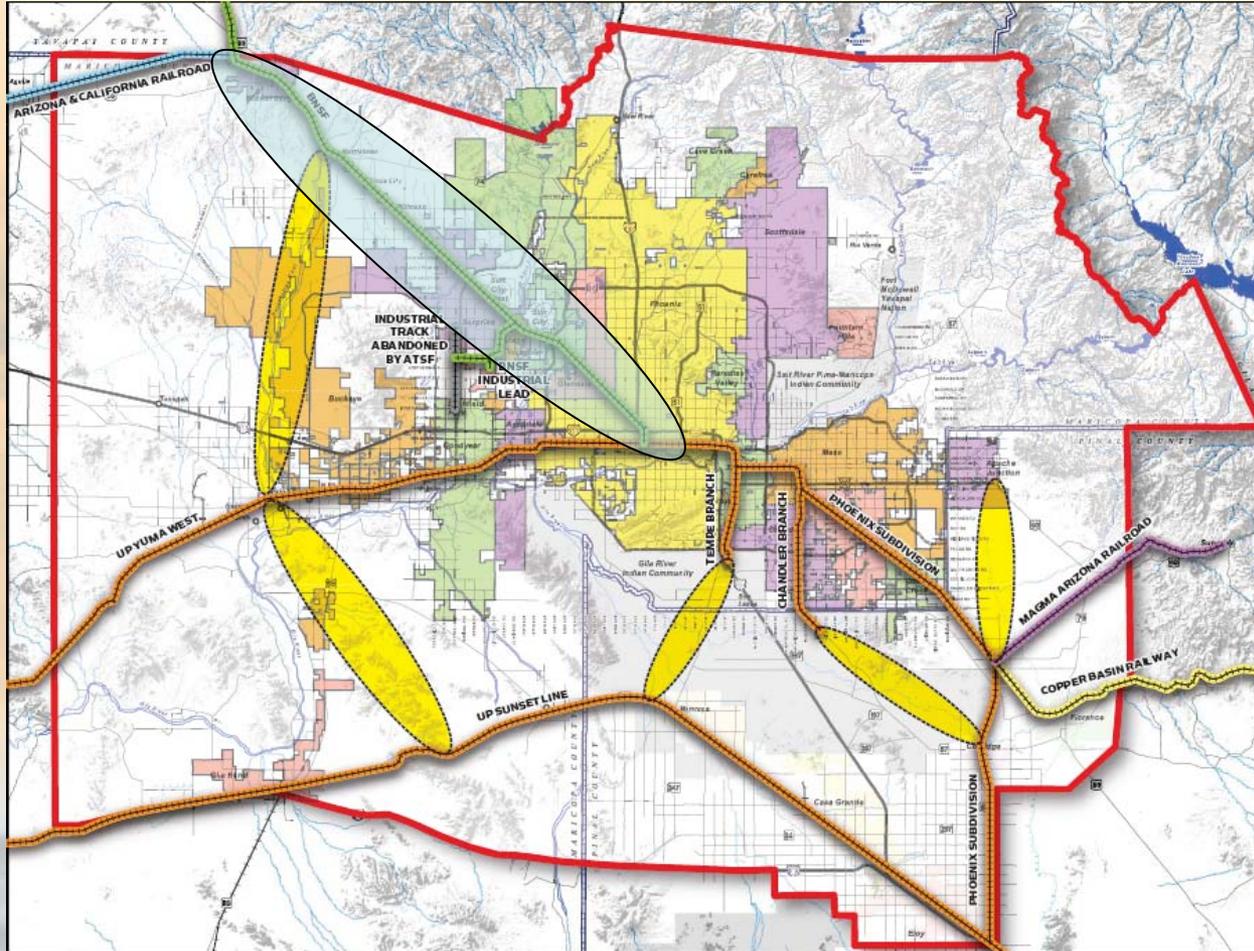
System Study

System Study – Key Elements



Grand Avenue Corridor Development Plan

Grand Avenue Corridor Development Plan



Grand Avenue Corridor Development Plan

- Examine the feasibility of implementing commuter rail service between Phoenix and Wickenburg, Arizona, a distance of approximately 54 miles.
- Will describe the elements necessary to successfully implement commuter rail transit service in the Grand Avenue Corridor.



Proximity of BNSF railway to Grand Avenue

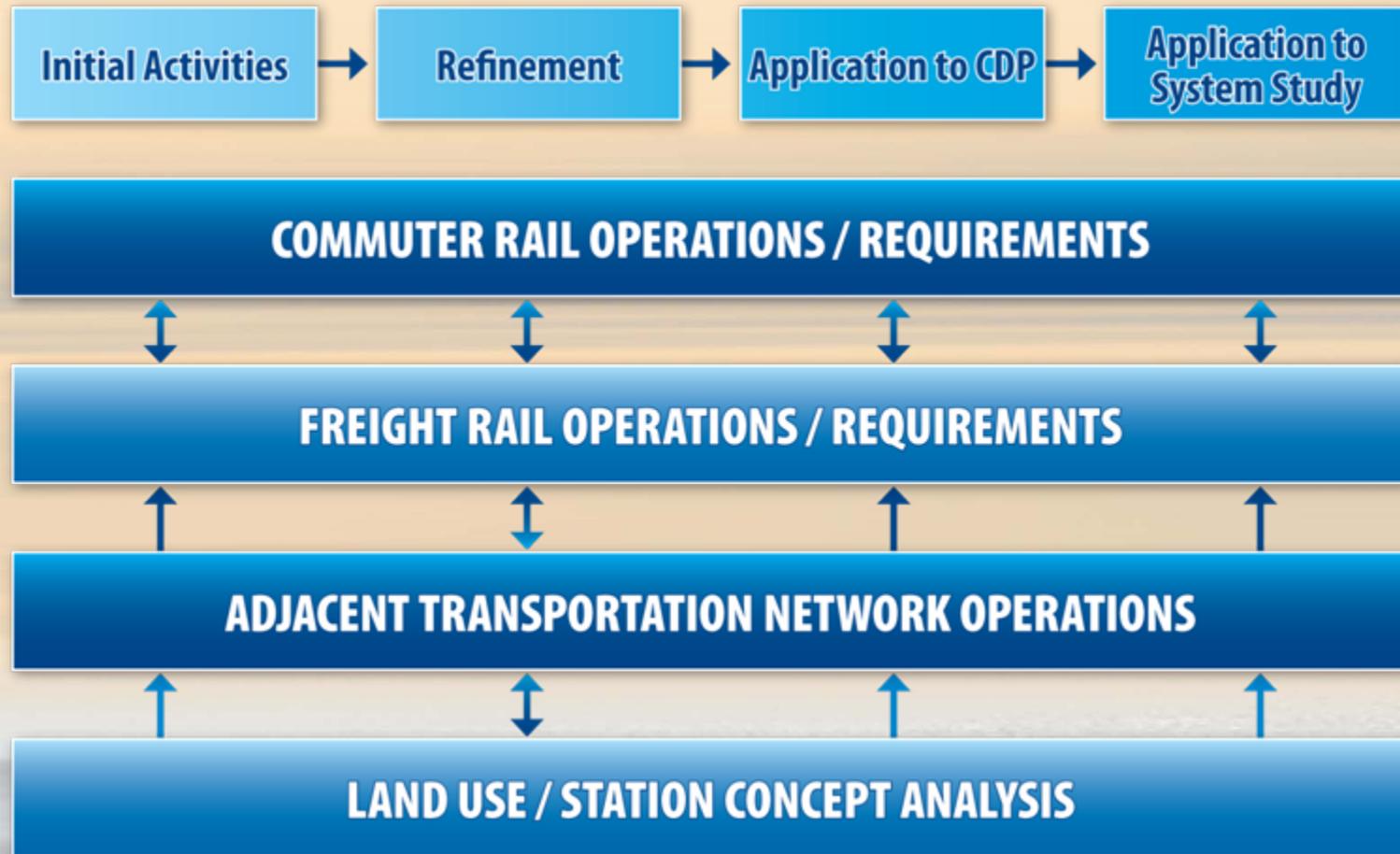


BNSF Rail at Grand Avenue and 19th Avenue
looking north

Grand Avenue Corridor Development Plan

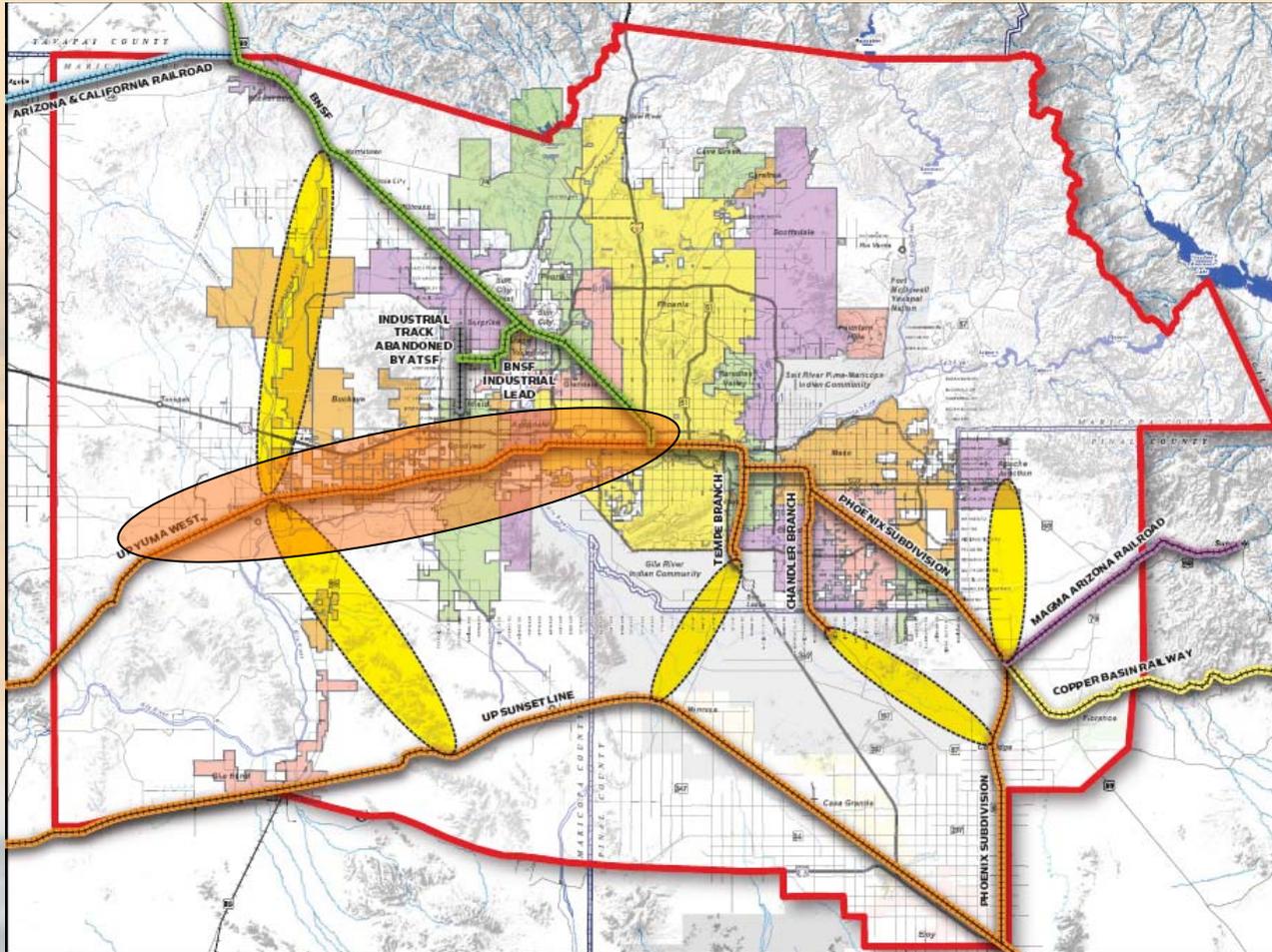
- **The development plan includes evaluation of the following:**
 - Existing documentation,
 - Ongoing public involvement,
 - An inventory of the existing BNSF rail line,
 - Development of a conceptual commuter rail operating plan,
 - Identification of infrastructure improvements necessary for the implementation of commuter rail service,
 - Development of capital cost estimates, and the
 - Development of annual operating cost estimates for commuter rail service.

Grand Avenue Corridor Development Plan



Yuma West Corridor Development Plan

Yuma West Corridor Development Plan



Yuma West Corridor Development Plan

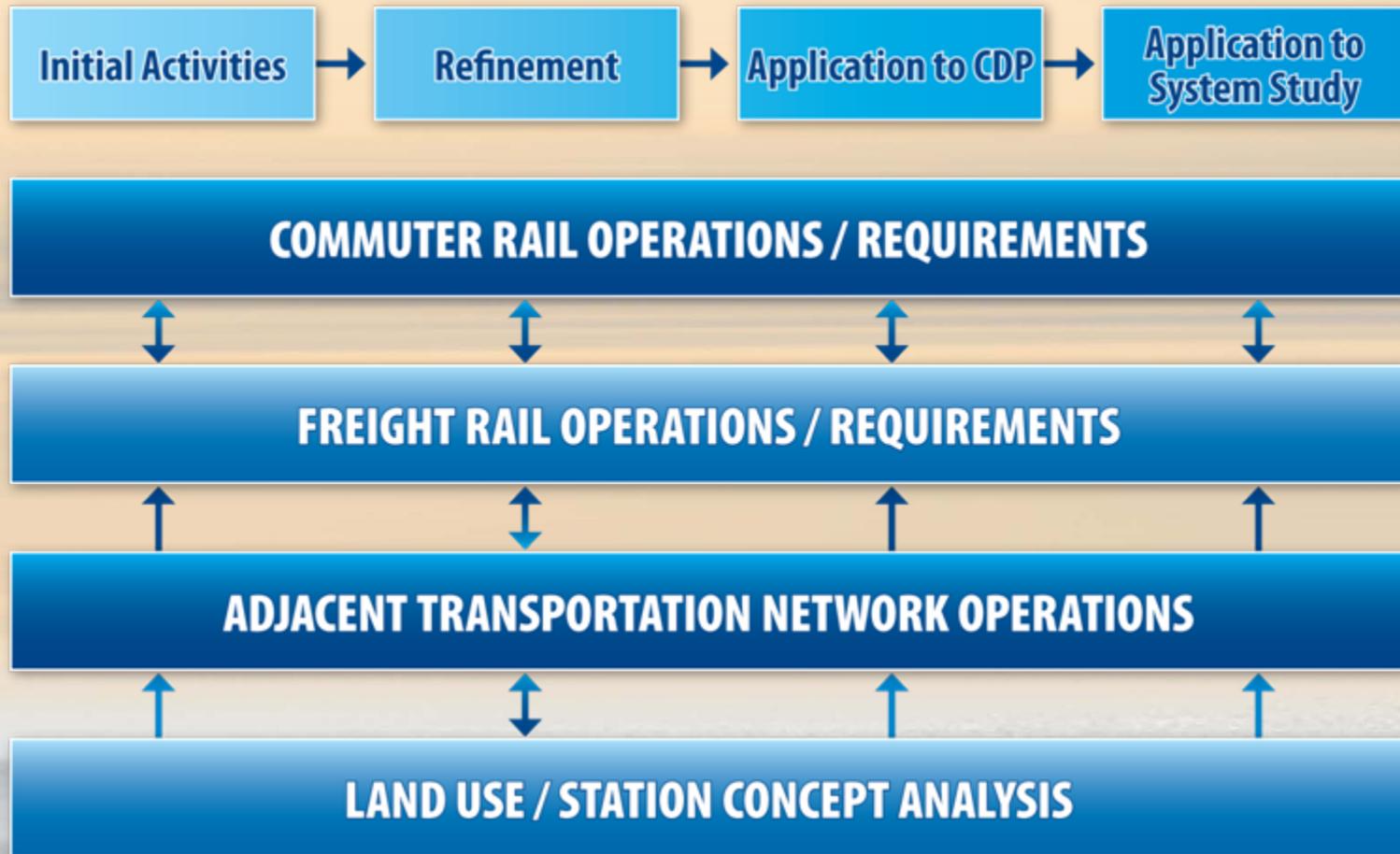
- Examine the feasibility of implementing commuter rail service along the UP Yuma West rail line between Buckeye in the west and either the Union Station in downtown Phoenix or to the UP Tempe Branch line in Tempe, Arizona.
- Will describe the elements necessary to successfully implement commuter rail transit service in the Yuma West Corridor.



Yuma West Corridor Development Plan

- **The development plan includes evaluation of the following:**
 - Existing documentation,
 - Ongoing public involvement,
 - An inventory of the existing BNSF rail line,
 - Development of a conceptual commuter rail operating plan,
 - Identification of infrastructure improvements necessary for the implementation of commuter rail service,
 - Development of capital cost estimates, and the
 - Development of annual operating cost estimates for commuter rail service.

Yuma West Corridor Development Plan



Questions?