FAST FORWARD

Move the economy.
Find A Solution with Transit.

OPEN HOUSE

January 19, 2011

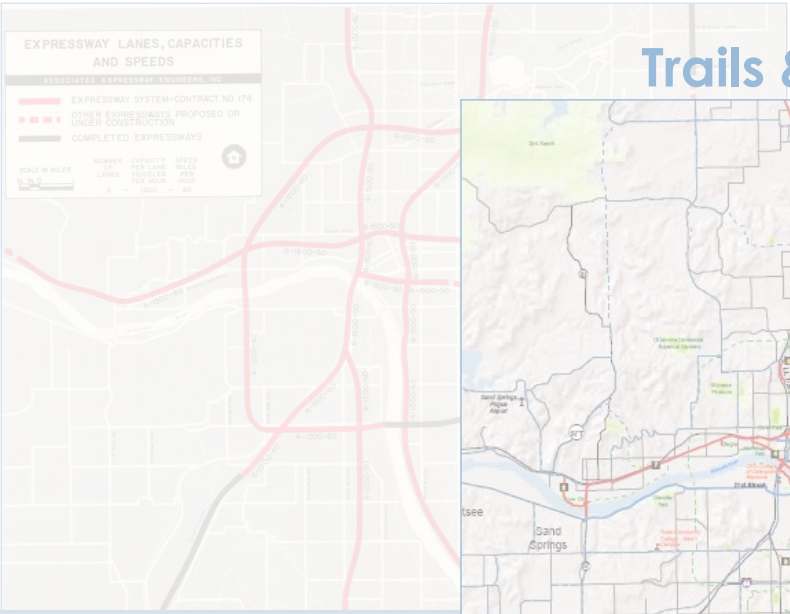
Regional Transit System Plan (RTSP)

SYMPOSIUM AGENDA

1:30	Introduction
1:45	12 Steps to Transit Success
2:30	Break
2:45	How Transit Moves the Economy
3:30	Break
3:45	Panel Discussion on Transit and Economic Development

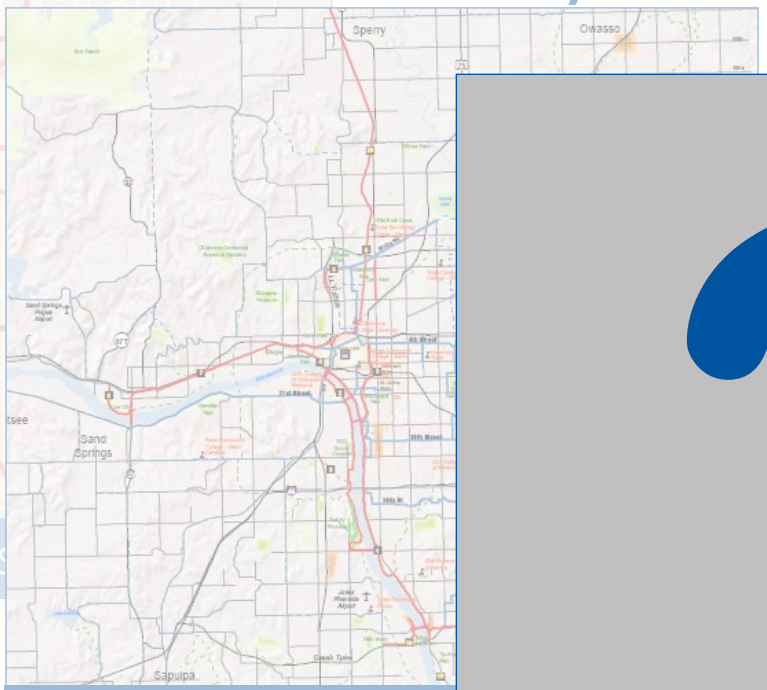
TRANSPORTATION PLANNING-
Regional History

Streets & Freeways



1961 Tulsa Expres

Trails & Bikeways



1999 Regional Trail

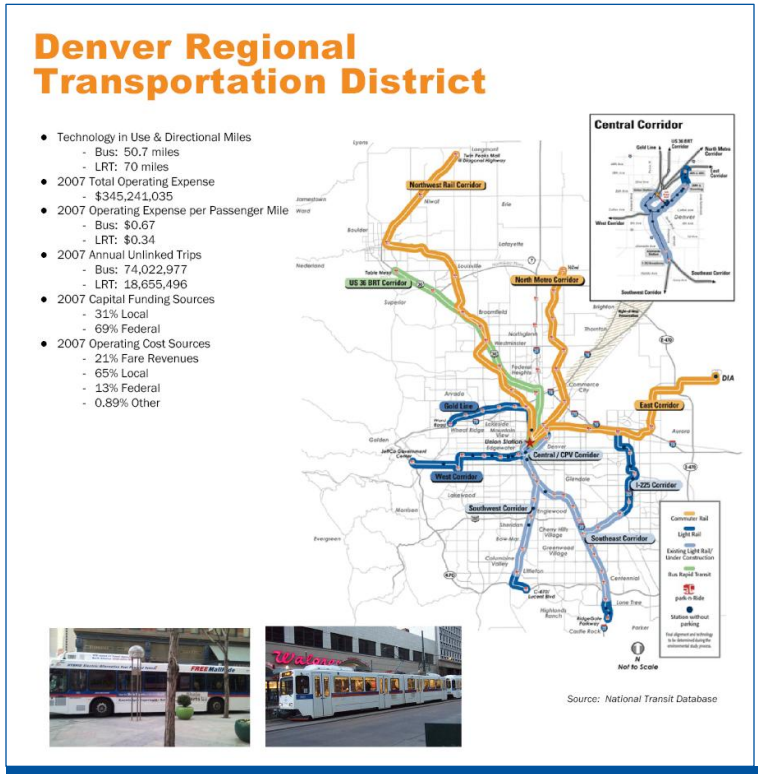
Transit

2011 Regional Transit System Plan

REGIONAL TRANSIT SYSTEM PLAN PURPOSE

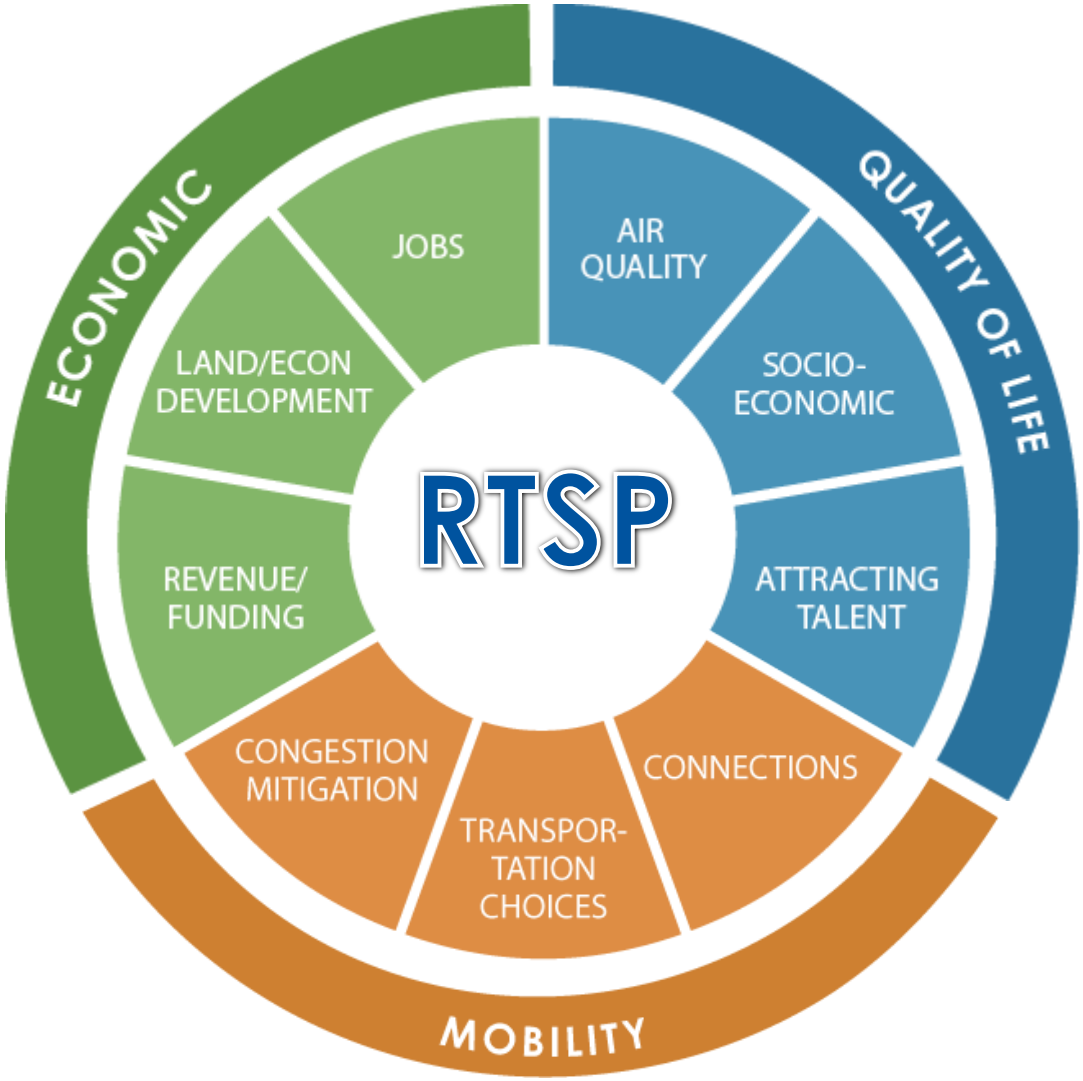
A plan to…

- Develop a **long-range**, **multimodal** and **comprehensive** transit development program
- Guide regional and local **transit initiatives**
- Identify a **financially viable** transit program
- Recommend improvements eligible for **federal funding**

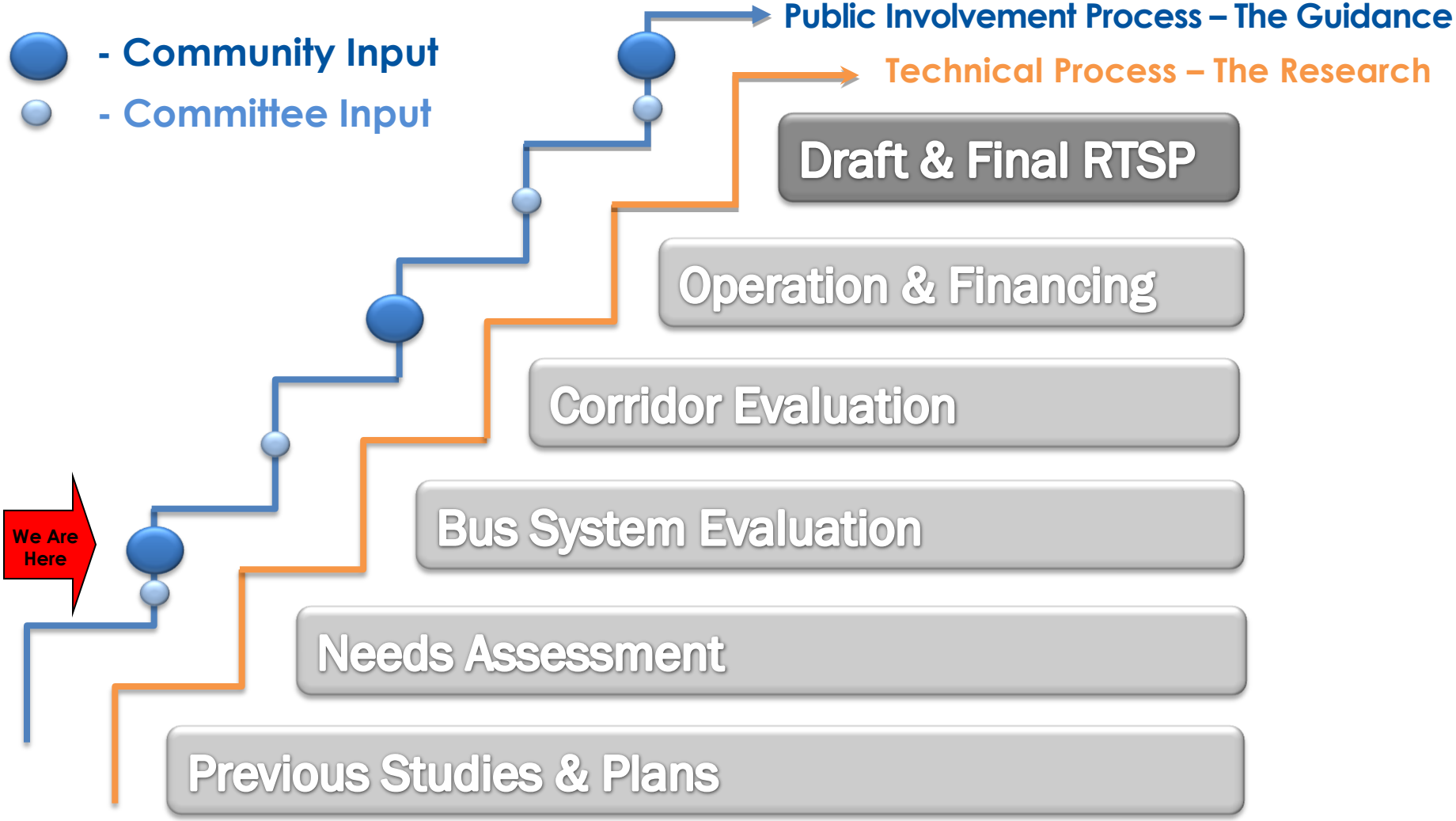


Denver FasTrack System Plan

RTSP BENEFITS



RTSP PROCESS



PREVIOUS PLANS

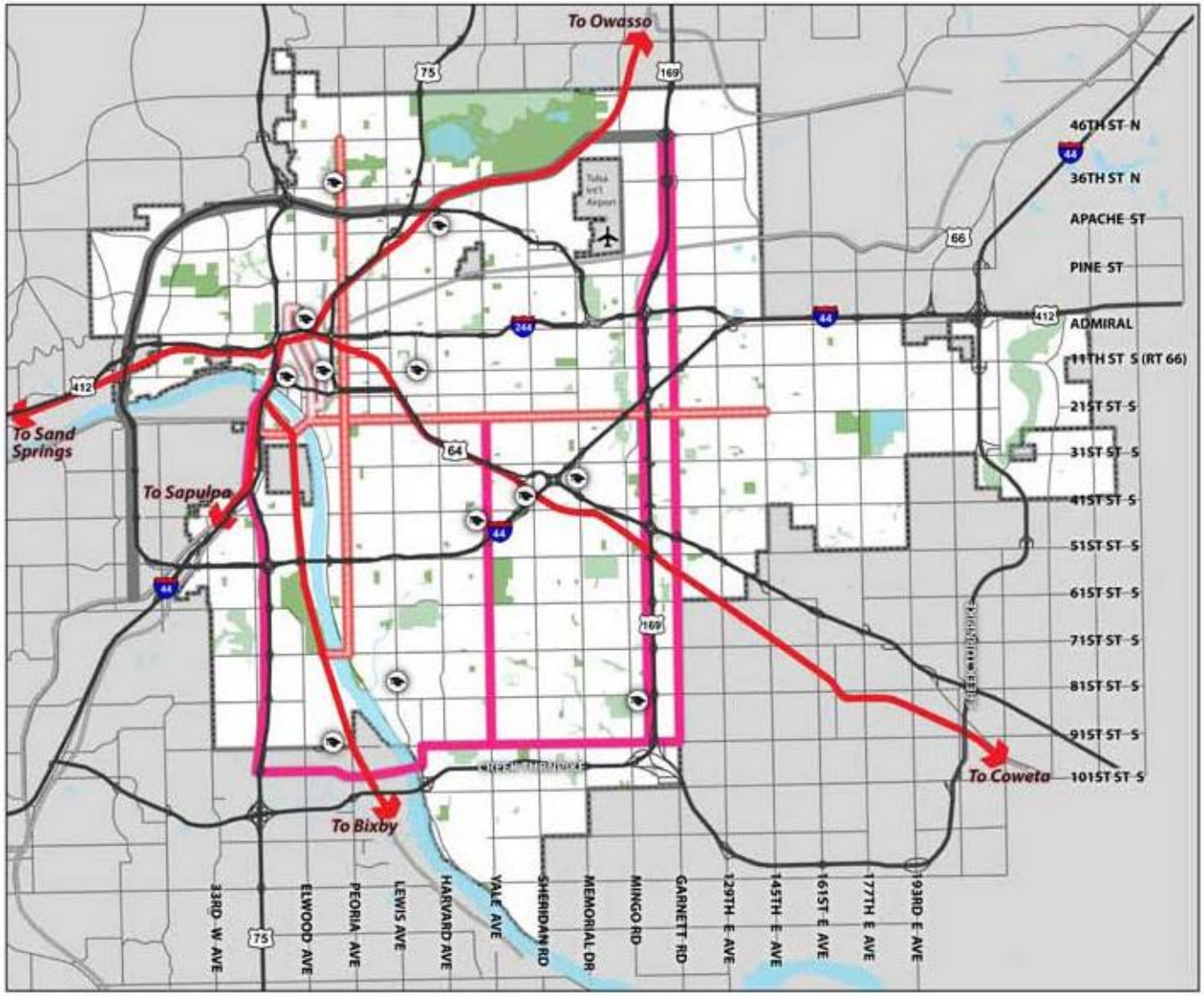
Previous Plans and Studies reviewed:

- **Tulsa Transit Bus Service Needs Assessment** - Metropolitan Tulsa Transit Authority (2010)
- **PLANiTULSA:** Tulsa Comprehensive Plan - City of Tulsa (2010)
- **Downtown Area Master Plan** - City of Tulsa (2010)
- **Rail Transit Strategic Plan** -INCOG (2008)
- **Transportation Planning Capacity Building Peer Exchange:** The Land Use and Transportation Connection - INCOG (2008)
- **Owasso Demographic and Economic Base Study** - City of Owasso (2008)
- **Tulsa Regional Coordinated Public Transit -Human Services Transportation Plan** - INCOG (2007)
- **Broken Arrow to Tulsa Mass Transit Feasibility Study** - Metropolitan Tulsa Transit Authority (2007)
- **Sand Springs Strategic Plan** - City of Sand Springs (2006)
- **Jenks Comprehensive Plan** - City of Jenks (2006)
- **Destination 2030 Long Range Transportation Plan** - INCOG (2005)
- **Broken Arrow Downtown Master Plan** - City of Broken Arrow (2005)
- **Tulsa Regional Intelligent Transportation Systems (ITS) Implementation Plan** - Oklahoma Department of Transportation (2003)
- **Bixby Comprehensive Plan** - City of Bixby (2001)

TRANSIT VISION

PLANiTulsa

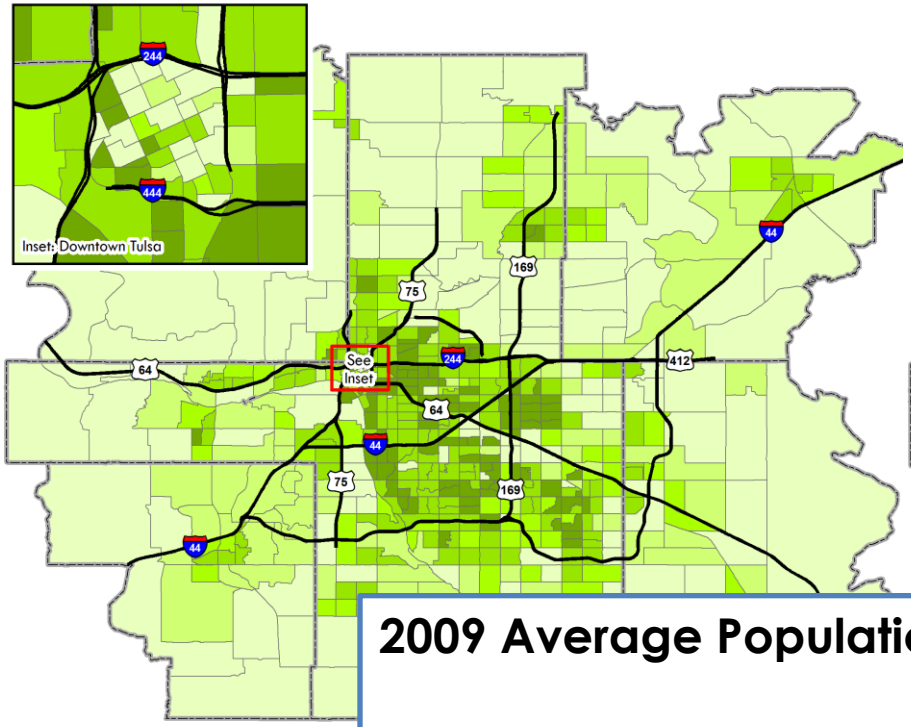
- Rail Transit
- Streetcar
- Frequent Bus
- Bus Rapid Transit
- Freight Corridor
- Parks
- Open Space



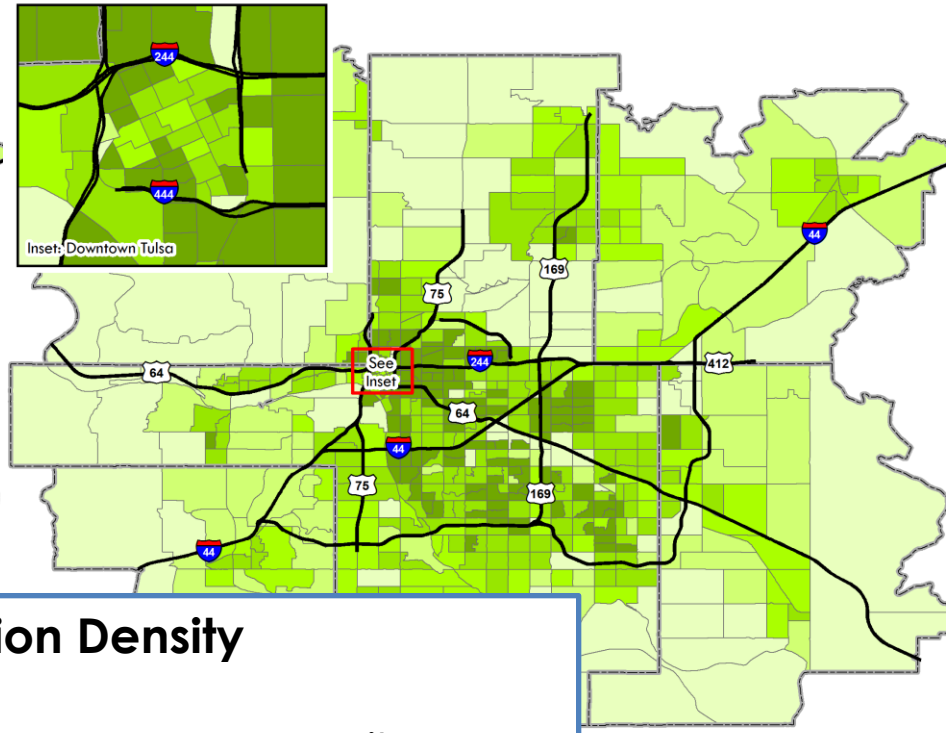
PLANiTULSA
OUR PLAN. OUR FUTURE.

INITIAL FINDINGS

Population Density



2005



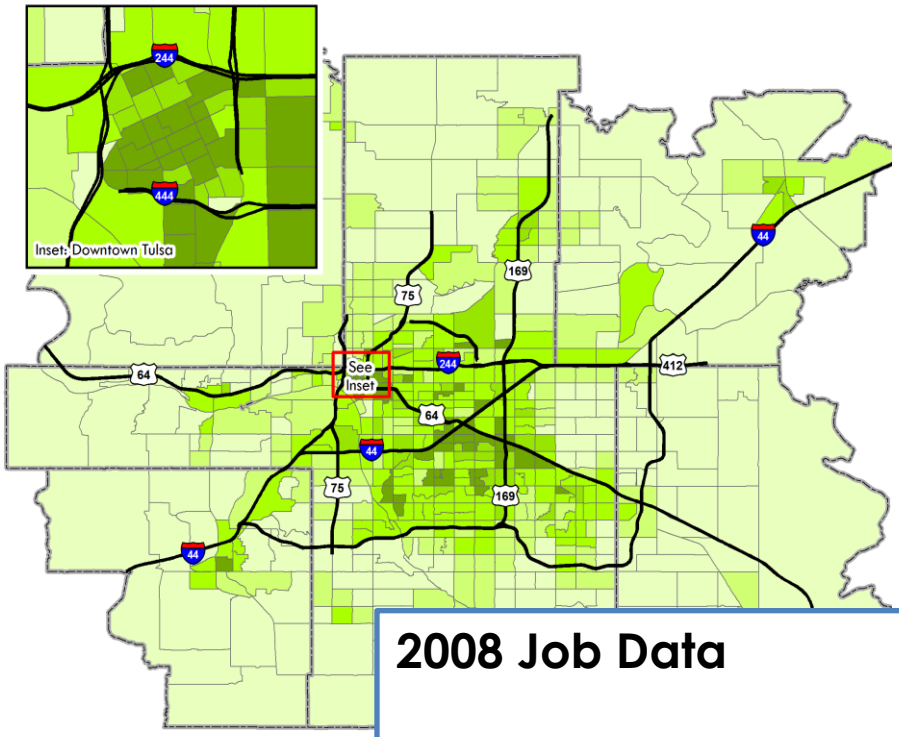
2035

2009 Average Population Density

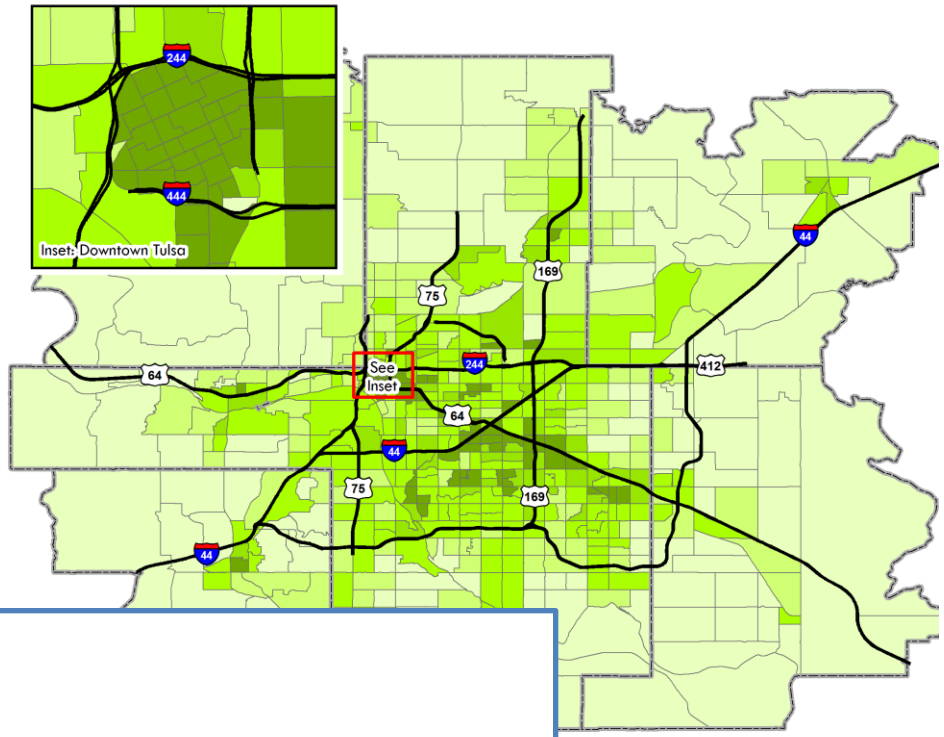
- City of Tulsa: 2,100 persons per sq. mile
- Tulsa County: 960 persons per sq. mile
- City of OKC: 923 persons per sq. mile
- City of Charlotte: 2,232 persons per sq. mile
- City of Nashville: 1,134 persons per sq. mile

INITIAL FINDINGS

Employment Density



2005



2035

2008 Job Data

- 369,000 jobs in study area
- 131,000 jobs within 1 mile of Broken Arrow Expressway Corridor – **35% of total jobs**

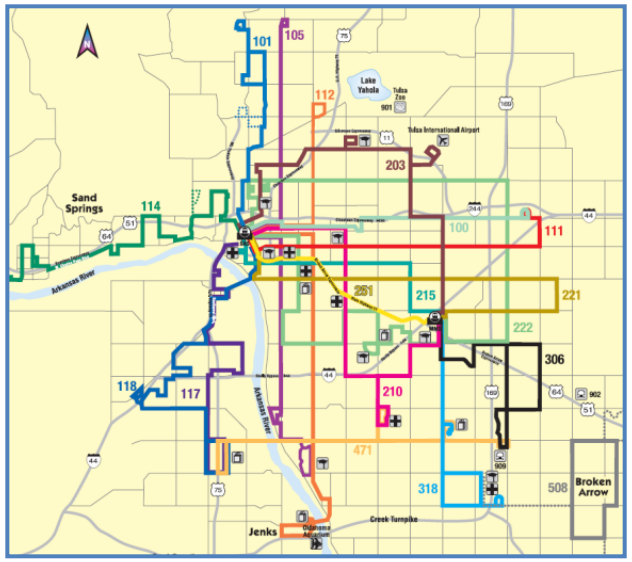
Source: Bureau of Labor Statistics

BUS SYSTEM EVALUATION

Tulsa Transit

Improvements in Progress

- CNG-fueled bus fleet conversion
- Wi-Fi on express buses
- Low-floor LIFT Program vehicles
- Web-based trip planner
- Bus shelter upgrades



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BUS SYSTEM EVALUATION

Bus System Evaluation Process

Long Term Vision

Near-Term Plan

Existing Service Review

Peer Assessment

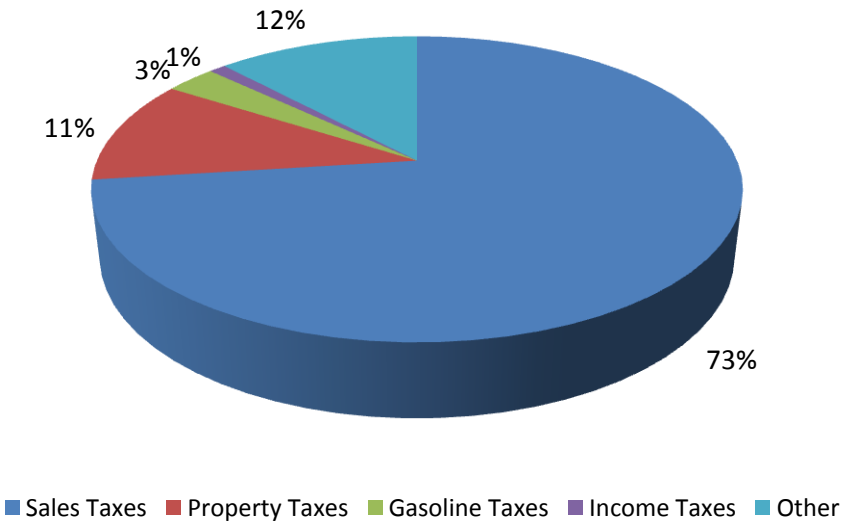
Organization and Financing

Existing Conditions

Organizational – Financial Issues

- Limited Financial Resources
- Dependent Upon Annual Local General Fund Appropriations
- Limited State Funding For Transit
- Competitive Environment for Federal Funding for Major Capital Projects
- State Enabling Legislation for Regional Transit Authority

Local Dedicated Funding Sources for Operations: Nationwide Totals (2008)



Source: National Transit Database, 2008

TECHNOLOGY OPTIONS

BUS

CONVENTIONAL BUS

EXPRESS BUS

BUS RAPID TRANSIT (BRT)

RAIL

STREETCAR

COMMUTER RAIL TRANSIT (CRT)

LIGHT RAIL TRANSIT (LRT)

TECHNOLOGY OPTIONS

LOCAL BUS, STREETCAR

EXPRESS BUS

BUS RAPID TRANSIT, LIGHT RAIL, COMMUTER RAIL

- Less capacity
- Streetscape serves as station
- Supports linear development
- Lower capital investment cost
- Short trip length
- Slower speed
- Frequent stops

- More capacity
- High investment in stations
- Supports nodal development
- Higher capital investment cost
- Long trip length
- Higher speed
- Less-frequent stops

TECHNOLOGY OPTIONS

Density Preferences

Density

Low Density Residential & Employment

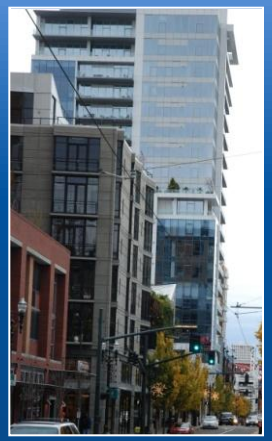
Local Bus

Medium Density Residential & Employment

Bus Rapid Transit

Medium to High Density Residential & Employment

Commuter Rail



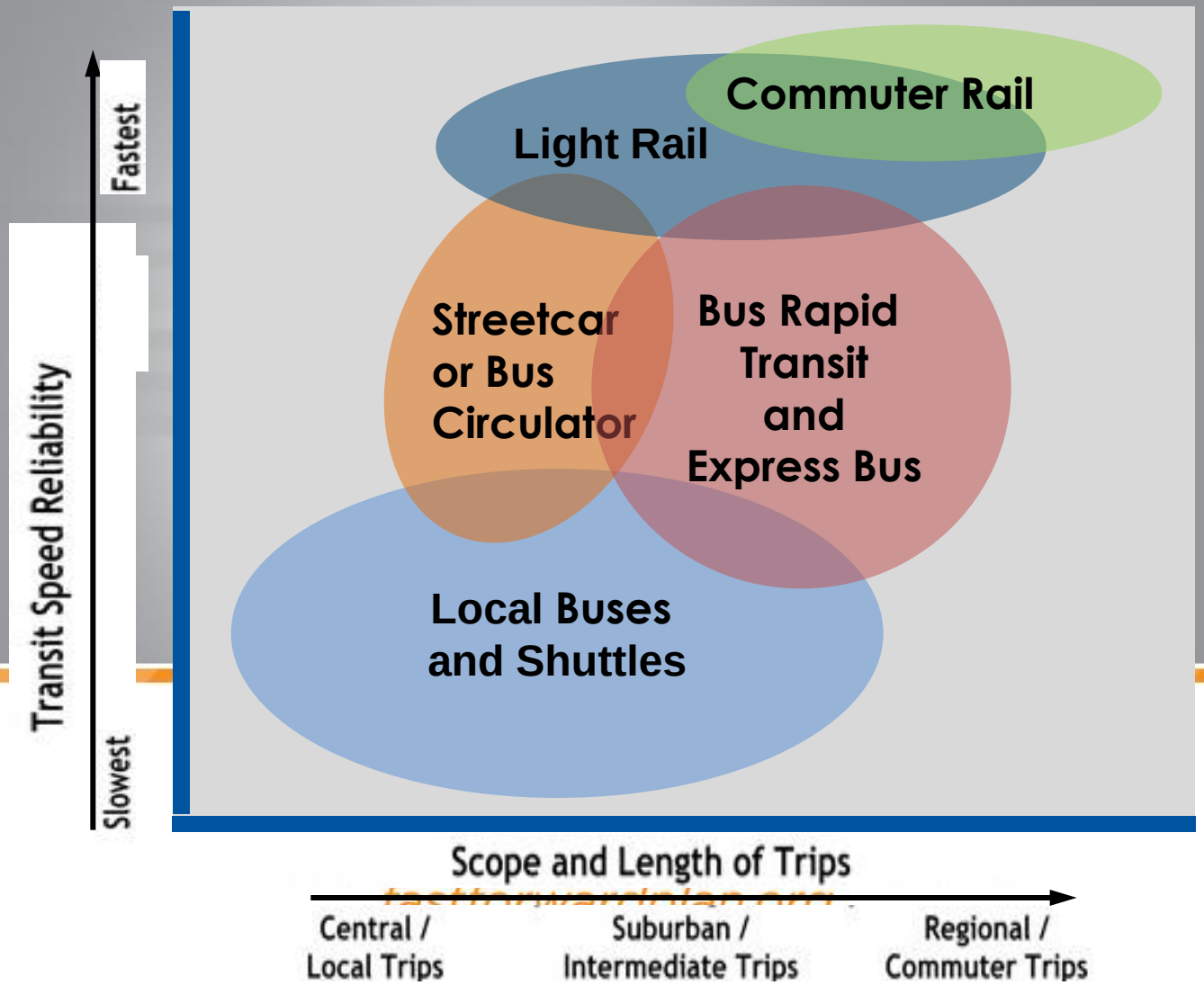
High Density Residential & Employment

Light Rail

Urban Circulator

Streetcar or Bus

TECHNOLOGY OPTIONS



CONVENTIONAL BUS

Average Speed	12 – 15 mph (urban), 60 mph (express)
Design	Suitable for low density corridors
Seating Capacity	40 passengers
Typical Line Length	Varies
Station Spacing	Every block or more
Capital Costs	Vehicle Costs

- **Operates in mixed traffic on existing streets**

- **Examples:** *Tulsa, Dallas, Fort Worth, Austin, Houston*

BUS RAPID TRANSIT

Average Speed	20-30mph, 65 mph max
Design	Suitable for high-ridership corridors, signal priority preferred
Seating Capacity	40-60 passengers
Typical Line Length	8-15 miles
Station Spacing	0.5 – 1 mile
Capital Costs	$5 - $35 million/mile

- **Operates in dedicated lane and mixed traffic**

- **Examples:** *Los Angeles, CA; Eugene, OR; Las Vegas, NV; Cleveland, OH; Baltimore, MD*

MODERN STREETCAR

Average Speed	8-12 mph 45 mph max
Design	Dense urban areas, such as downtown
Seating Capacity	30 seated 70 standing
Typical Line Length	2-6 miles
Station Spacing	0.25 – 0.50 miles
Capital Costs	$20 - $30 mil/mile

- **Electric powered vehicles running on steel rails in mixed-traffic or in dedicated lane**

- **Examples:** *Portland, OR; Tacoma, WA; Seattle, WA*

LIGHT RAIL TRANSIT

Average Speed	25–40 mph, 70 mph max
Design	Elevated or protected for street traffic, signals and pedestrians
Seating Capacity	70 passengers per car, 2 cars coupled per train
Typical Line Length	6 – 25 miles
Station Spacing	0.25 – 5 miles
Capital Costs	$50 - $90 mil/mile

- **Electric powered vehicles running on steel rails in separate, dedicated guideway**

- **Examples:** *Dallas & Houston, TX; San Diego, CA; Charlotte, NC; Minneapolis, MN; Phoenix, AZ; Denver, CO; Los Angeles, CA*

COMMUTER RAIL TRANSIT

Average Speed	40 – 95 mph
Design	Suitable for long commuter travel applications
Seating Capacity	100 – 150 passengers per coach car, linked in trains
Typical Line Length	25 – 100 miles
Station Spacing	3 – 15 miles
Capital Costs	$10 - $30 mil/mile

- **Diesel powered (self-propelled or locomotive push/pull) operating in dedicated railroad right-of-way**

- **Examples:** *Trinity Railway Express (Dallas & Fort Worth), Red Line (Austin), Metrolink (Southern CA), Rail Runner Express (Albuquerque-Santa Fe, NM), Sounder (WA)*

MONORAIL TRANSIT

Average Speed	25 – 40 mph
Design	Suitable to serve continual, consistent trip (i.e. airports or theme parks)
Seating Capacity	60 – 160 passengers per car
Typical Line Length	2 – 8 miles
Station Spacing	.5 – 1 mile
Capital Costs	$50 - $100 mil/mile

- **Rubber tire vehicle on beam support with electric power supply operating in elevated dedicated guideway**

- **Examples:** *Las Vegas, Seattle, Disney Theme Parks*

HEAVY RAIL TRANSIT

Average Speed	30 – 60 mph
Design	Heavy transit capacity in high density environments
Seating Capacity	60 – 80 passengers per car, linked in trains
Typical Line Length	10 – 30 miles
Station Spacing	.75 – 2 miles
Capital Costs	$100 - $250 mil/mile

- **Electric powered vehicles operating in dedicated guideway**

- **Examples:** *New York City, Chicago, Washington DC, Boston*

HIGH SPEED RAIL TRANSIT

South Central Corridor

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  in U.S.
- "Phasec
  rail infras
- Emergin
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- ODOT p
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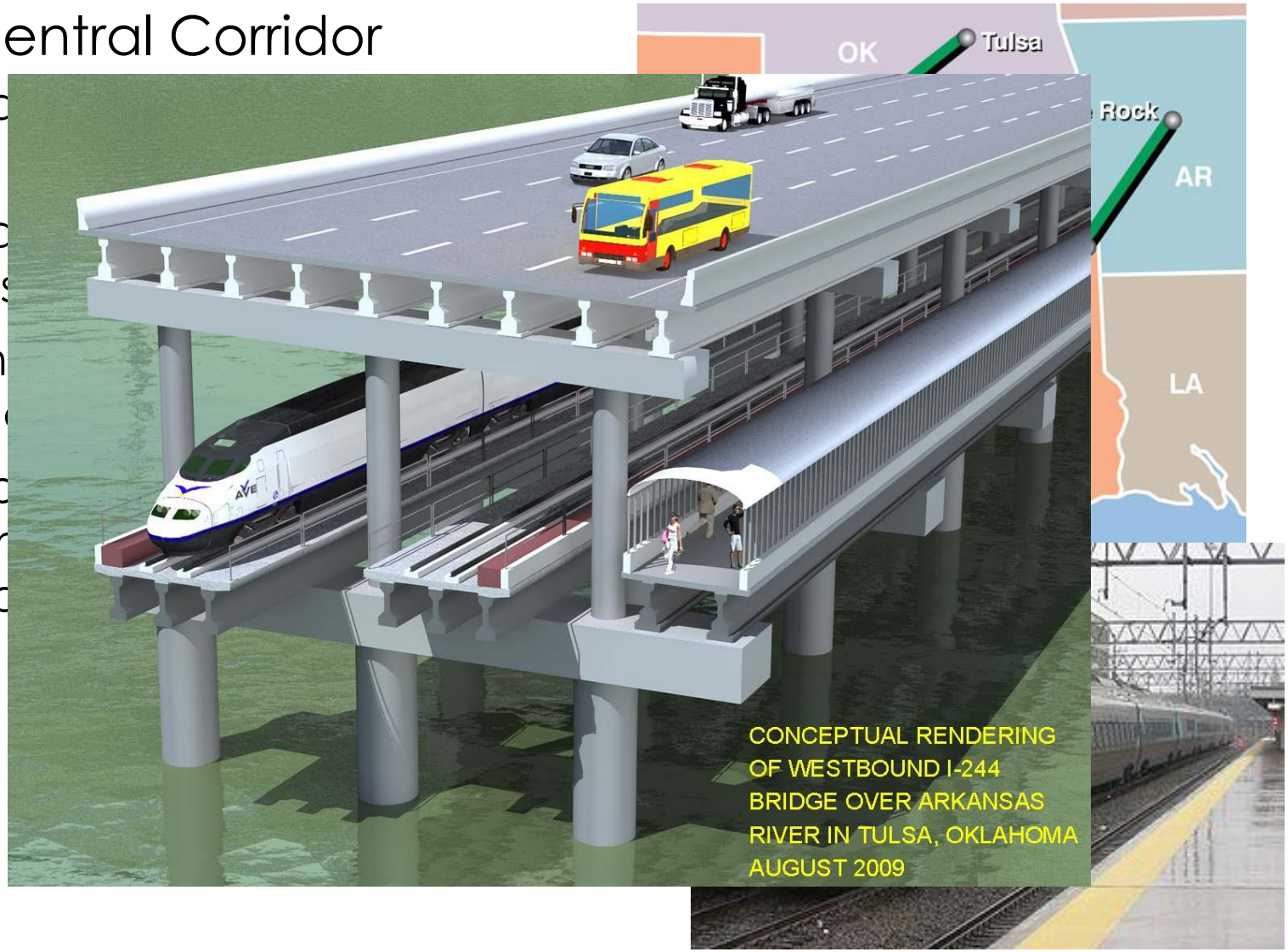
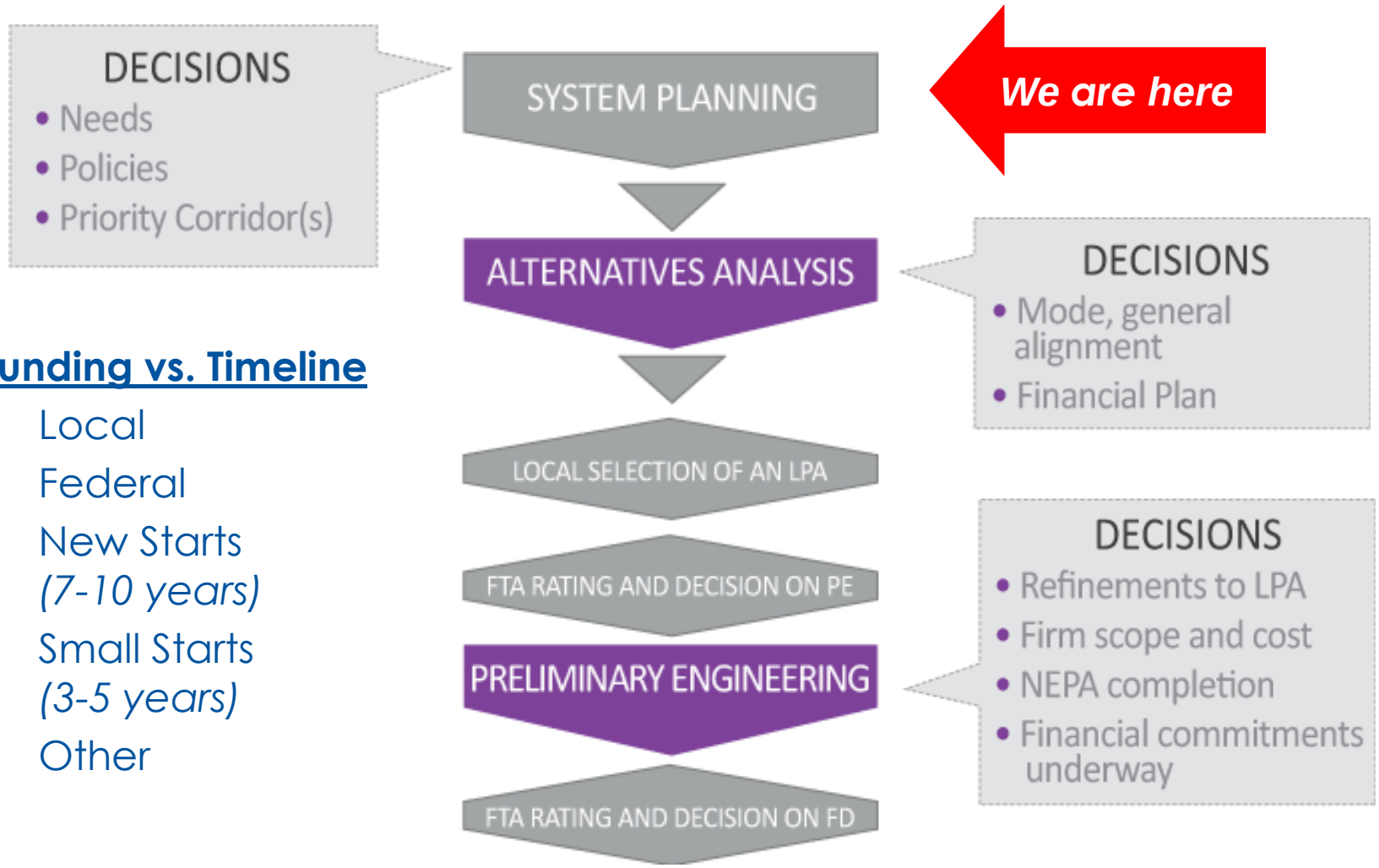


BEYOND THE RTSP



Funding vs. Timeline

- Local
- Federal
- New Starts *(7-10 years)*
- Small Starts *(3-5 years)*
- Other

Thank you for participating!

FAST FORWARD

Move the economy.
Find A Solution with Transit.

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Phone (918) 584-7526 FAX (918) 583-1024

fastforwardplan.org