


Austin Transportation Department




Urban Rail Briefing
City Council Work Session

June 14, 2011

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Austin Transportation Department

Agenda Overview



- **Introduction and Overview**
- **How does urban rail address our mobility issues? (Why rail?)**
- **What is Urban Rail's Route and Technology?**
- **How should urban rail be managed?**
- **What is financing plan status? What is the Federal role?**
- **Timeline and planned public involvement**
- **Questions & Answers**

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An Austin with an integrated mobility network for the entire community that provides:

- Safe and efficient alternatives;
- Supports connected development around activity centers and corridors; and
- Respects the limitations of our natural resources as we respond to the region's rapid growth.



Source: ASMP Project Prioritization Process for Transportation Investments, April 2010.

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• **Austin Transportation Department (ATD) Roles & Responsibilities**

- **Deliver a balanced, multi-modal system**
 - Create sustainable transportation system
 - Maximize efficiency of existing infrastructure
 - Increase travel options
 - Develop coordinated investment strategy (Pedestrian, Bicycle, Roads & Transit)



• **Cross-Departmental Team**

- | | |
|-------------------------------|---|
| – ATD | – EGRSO |
| – Public Works | – Planning & Development Review |
| – Finance | – Neighborhood Housing and Community Development |
| – Law | – Austin Water Utility |
| – Real Estate | – Watershed Protection |
| – Austin Energy | – CLMD |
| – Government Relations | |

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**Strategic Mobility Plan Delivers
A multi-modal approach:**

- MoPac/Ben White Interchange completion project
- Downtown Signal Retiming
- ★ – Bicycle-Pedestrian Projects
- ★ – MoPac Express Lanes
- ★ – I-35 Corridor Project
- ★ – I-35 at 51st Interchange
- ★ – “Y” at Oak Hill Improvements
- ★ – Airport, MLK, East Riverside, and North Burnet/Lamar Corridor Plans
- *Urban Rail System*

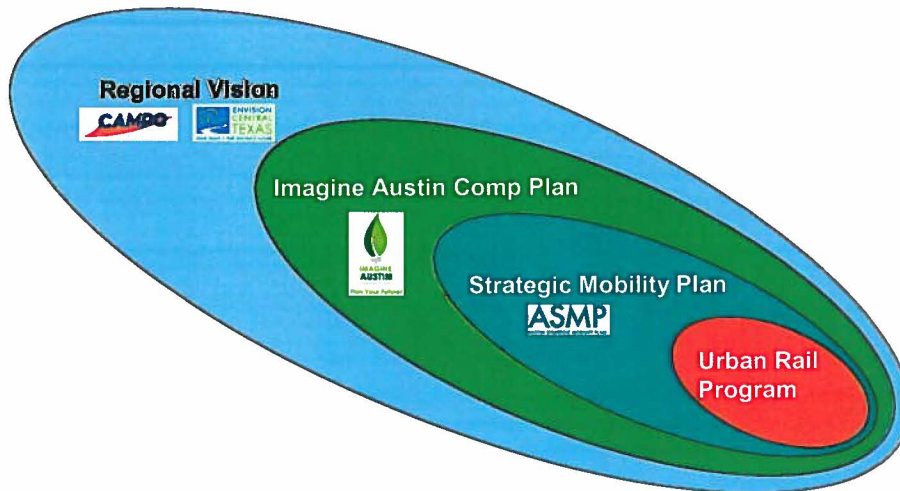


★ 2010 Bond Projects

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- **Approved FY10 CIP Budget for Long-Range Transportation Program, Sep. '09**
 - Strategic Mobility Plan (Gap Analysis)
 - Urban Rail Studies
- **Launched Austin Strategic Mobility Program, Nov. '09**
 - Multi-modal transportation solutions for roadway, bicycle and pedestrian, and transit options
- **Authorized series of Urban Rail Studies**
 - Alternatives Evaluation & Conceptual Engineering Study, Oct. '09
 - Pre-NEPA Environmental Studies, Oct. '09
 - Economic Impact Analysis, Dec. '09
 - Advanced Conceptual Engineering, Dec. '09
 - NEPA Environmental Study, Feb. '11
- **Directed 2010 Interim Bond Package; Timeline for Urban Rail Proposal, Mar. '10**
- **Authorized Interlocals for Regional Rail Planning**
 - Lone Star Rail District, May '10
 - Capital Metro (Regional Travel Demand Model and Regional Transit System Plan), Feb. '11

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• **Strategic Mobility Plan (ASMP) Findings**

- Austin & Travis County doubled in population between 1990 and 2010
- 750,000 people to be added within 30 years (*Imagine Austin*)
- 200% increase in Vehicle Miles Traveled on Austin area roadways between 1980 and today
- Demand on roadway network is growing faster than network capacity
- 44 hours/year Central Texans spent stuck in traffic (*TTI*)
- 200 hours/year Central Texans will spend stuck in traffic without substantial transportation improvements
- 72% of all Austinites commute by driving alone

- **Key Takeaways from Strategic Mobility Plan**

- Austin's population is expected to double in 25 years
- The region's employment core – UT, Capitol Complex, Downtown – are full at peak travel times, limiting growth
- Central Austin's mature roadway system has no room to expand
- We risk losing taxable property base by doing nothing
- Improved mobility calls for providing options



- **Key Takeaways from Strategic Mobility Plan**

- Address transportation network efficiency
- Develop a multimodal solution
- Integrate and coordinate regionally (partner)

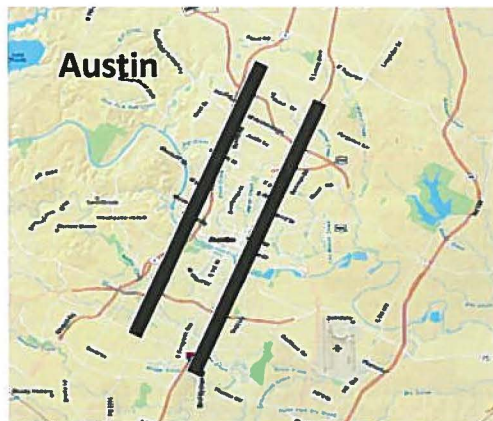


How can we address our Transportation Challenges?



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Austin lacks freeway ring(s)...



Ring Cities

Dallas

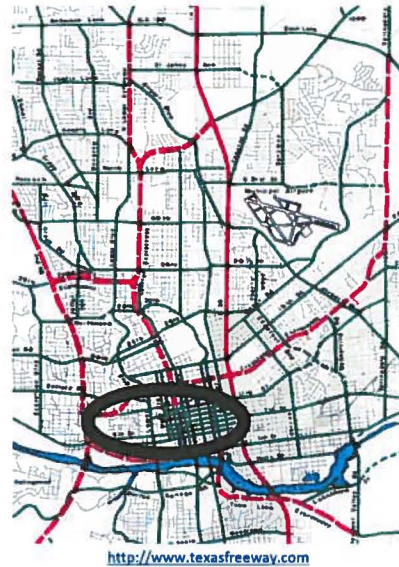


Houston



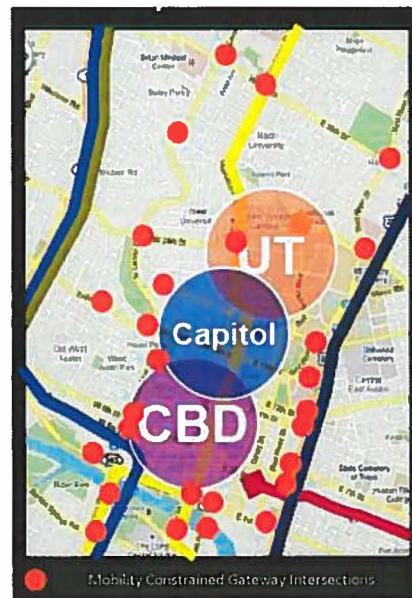
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- **TxDOT 1962 Freeway Plan**
 - **Central Freeway**
 - North Lamar / Guadalupe
 - **Crosstown Freeway**
 - 12th / 15th Streets
 - **Riverside / Town Lake Freeway**
 - Cesar Chavez/Riverside



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- **Central Austin**
 - Regional anchor for Central Texas
 - Primary economic, cultural, and educational destination
 - Growth engine and major revenue generator for Austin
- **Surrounded by constrained gateway intersections**



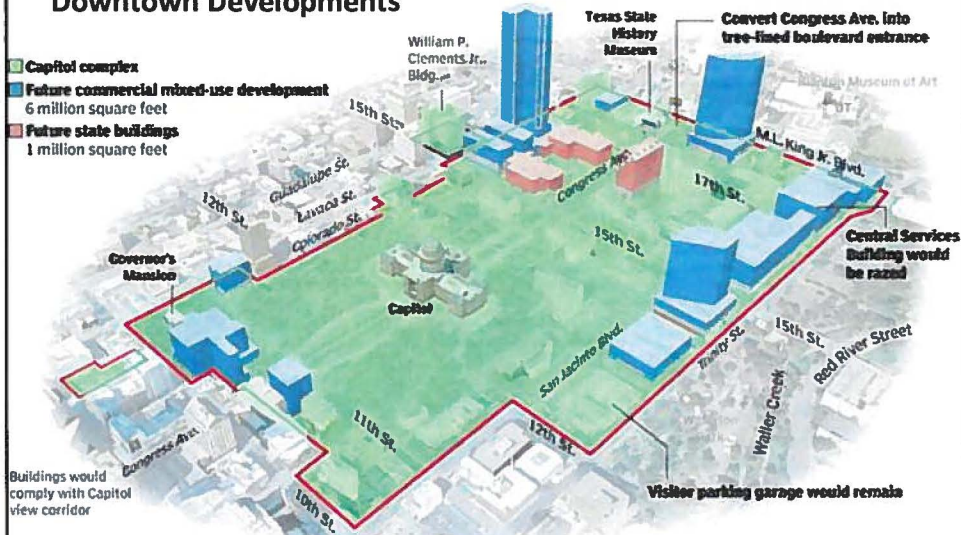
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Near-Term Central Austin Projects



Downtown Developments

- Capitol complex
- Future commercial mixed-use development
6 million square feet
- Future state buildings
1 million square feet



Sources: Texas Facilities Commission, renderings by Aundre S. Dukes

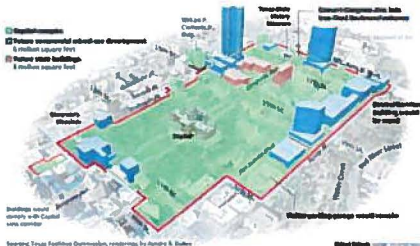
Robert Calzada AMERICAN STATESMAN

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Near Term Central Austin Projects



Downtown Developments



Capitol Complex Growth Plan (Potential 5000 to 7000 new employees)

Development Pipeline (Potential 5000 to 8000 new employees)

Near-Term Pipeline

- Federal Courthouse (5th & San Antonio)
- Cirrus Logic Office (6th & West)
- Hyatt Place (3rd & San Jacinto)
- Vermont Multifamily Highrise (8th & Nueces)
- Mixed Use Highrise (5th & Congress)
- 416 Congress Hotel (4th & Congress)
- Capitol Terrace Highrise (Lavaca & 14th)
- Block 51 Residential (5th & Nueces)
- Block 52 Mixed Use Tower (Guadalupe & 5th)
- Green Water Development Site (2nd & West)
- Seaholm Development (Caesar Chavez & Lamar)
- Stubbs Venue Expansion (8th & Red River)
- Episcopal Church National Archives (7th and Trinity)
- East Block/Shoal Creek Walk (5th & Bowie)
- SevenRio (7th & Rio Grande)
- Convention Center Hotel (2nd & Congress)
- Travis County Complex (4th and Guadalupe)

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Near Term Central Austin Projects



Downtown Developments



Near-Term Pipeline

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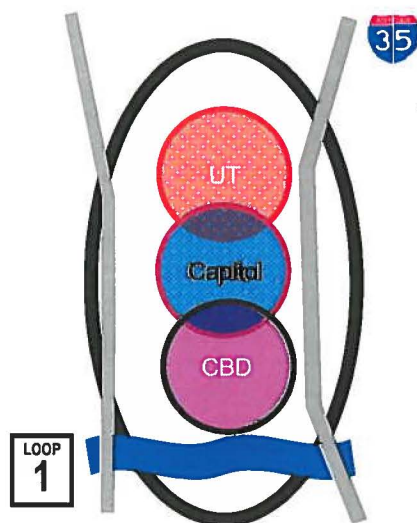
Capitol Complex + Pipeline (Potential 10,000 to 15,000 new employees)

Capitol Complex Growth Plan (Additional 5000 to 7000 employees)

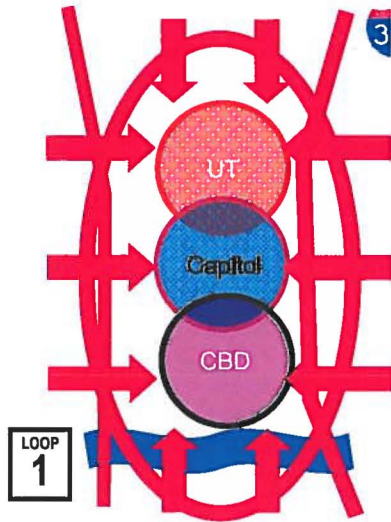
Development Pipeline (Additional 5000 to 8000 employees)

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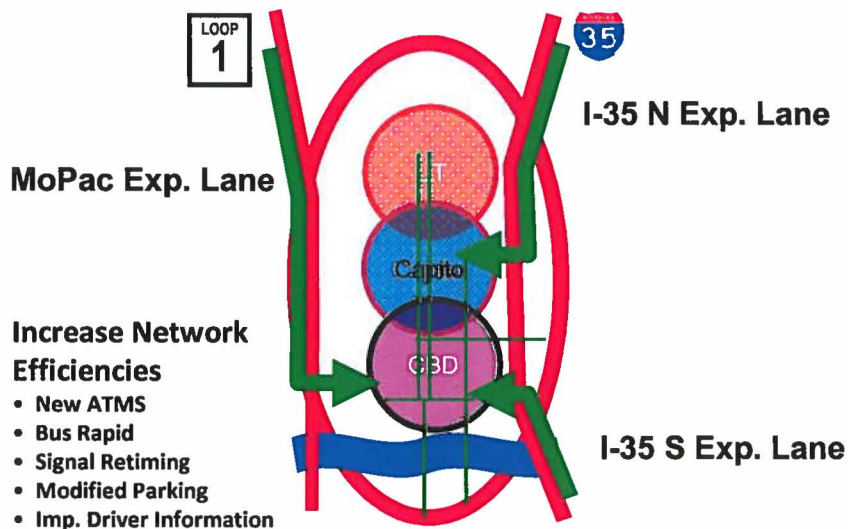
How Does Our Mobility Constraint Affect Austin?



- What is the cause of our mobility problem and what can we do about it?



- Existing freeways are full
- Existing Arterials are constrained
- Results in ring of congestion or constraint



Roads Only

Potential Roadway Capacity Improvements:
4,000 to 5,000 New People/Hr

Assuming 2-hour Peak:
8,000 to 10,000 People/Commute

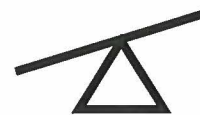
Increase Network

Near Term Development Pipeline
(Potential 10K to 15K new employees)
Exceeds Roads Only Solution

• Emp. Driver Information

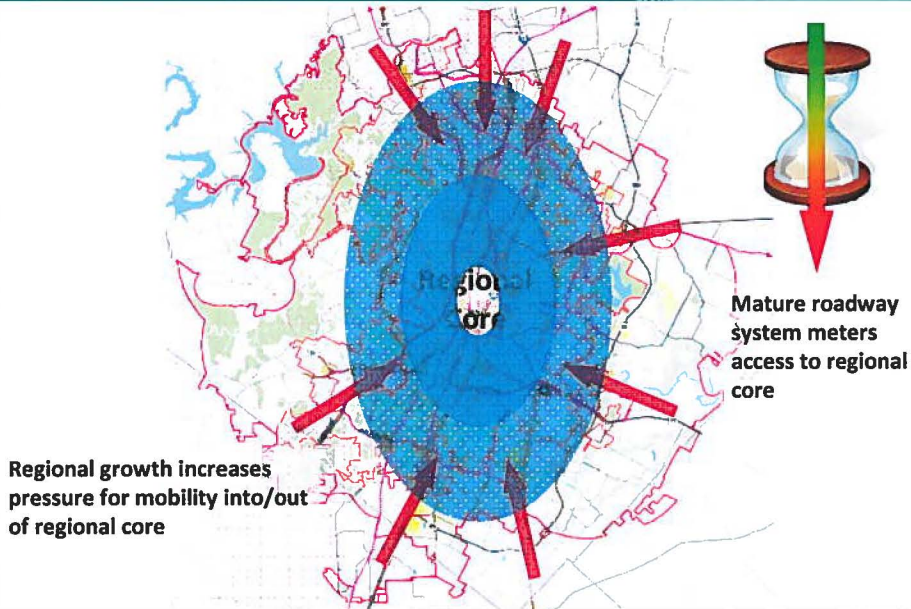
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- **Community Tipping Point**
 - 30 minute trip
 - 2 million regional population
 - Congestion builds, mobility is limited



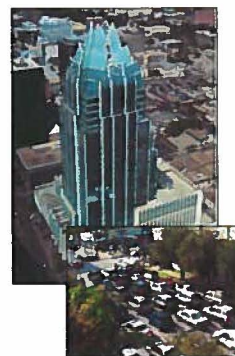
- **Personal Choices**
 - Find alternative route (cut-through traffic)
 - Relocate residents/businesses to key destinations (CBD/affordability)
 - Relocate to avoid key destinations (sprawl or move out of region)
 - Choose another mode of transportation (pedestrian, bikes, improved commuter transit)

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The continued vitality and economic health of our city and our region are at risk due to a lack of mobility

- The mobility systems serving our business and cultural core are inadequate to meet existing demand and future growth
- Health of the core determines health of the region
- Roadway investments are important but not enough to meet development pipeline
- New transportation investments, providing viable travel options, are needed to increase mobility



What is our Strategic approach?

- Address transportation network efficiency
- Develop a multimodal solution
- Integrate and coordinate regionally (partner)



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- Address transportation system gaps and bottlenecks
 - Access to/from urban core
 - Improve efficiency
- Provide transportation options (multimodal options)
 - Focus on commuter services
- Foster regional integration and cooperation
- Invest in economic development and sustainable growth
- Provide a safe transportation system
- Ensure environmental stewardship and neighborhood coordination

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Transportation Options Considered

- New/Expanded Roadways – *Constrained and not enough*
- Express Lanes – *Investments in process* (MoPac, I-35)
- Efficiency improvements of existing roads – *Investments in process*
 - Driver information technologies
 - Signal improvements
 - Gap elimination
 - Interchange improvements
 - Bicycle and pedestrian improvements
- Rapid Bus – *Investments in process* (N. Lamar/S. Congress & N. Burnet/S. Lamar)
- Regional Rail Network (City of Austin, Capital Metro, Lone Star) – *Planning and investments in process*



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Can Urban Rail respond to our Mobility needs?



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Improve the mobility, connectivity, and sustainability of Central Austin:

- **Provide greater mobility options**
- **Improve person-moving capacity**
- **Improve access and linkages to major activity centers and commuter and regional rail**
- **Support the City's environmental, public health, planning, and economic development goals**
- **Encourage investment**

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- **Provide direct connections between key destinations.**

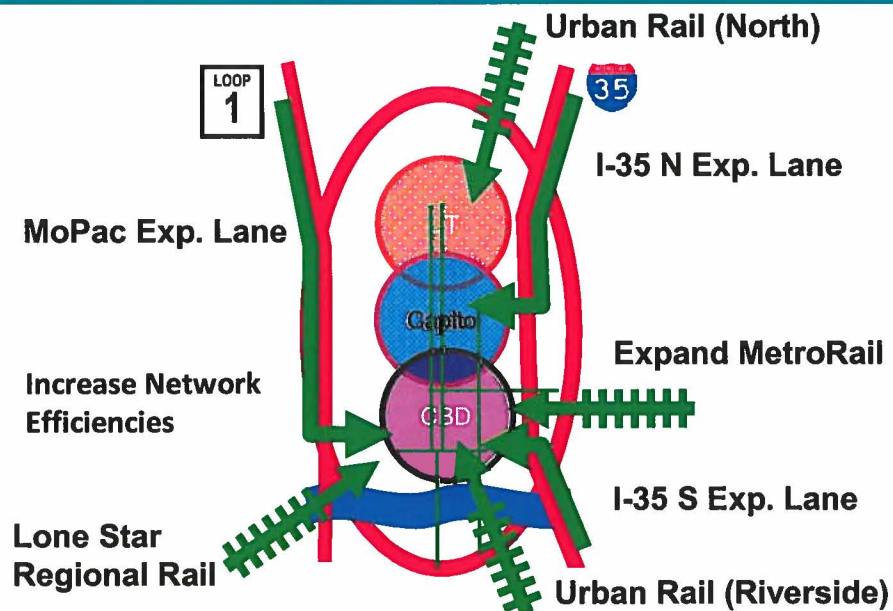
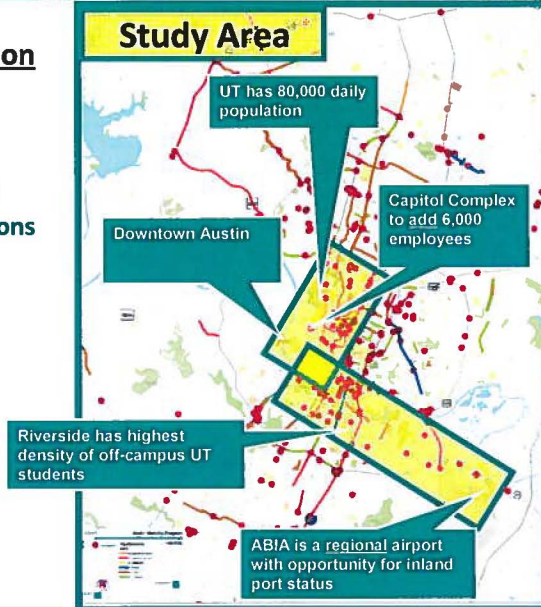
Mueller	Downtown / CBD
The University of Texas	East Riverside Corridor
State Capitol Complex	Airport (ABIA)
- **Expand connectivity to the emerging regional rail system (Red Line, Green Line, LSTAR)**
- **Increase transportation network capacity in constrained rights-of-way**
- **Provide alternatives to automobiles**
- **Attract and sustain development within the region's core**
- **Improve air quality**

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Serves the city and the region

• Study Area

- Based on stakeholder input
- Connects regional destinations within Central Austin



Multimodal

Potential Roadway Capacity Improvements:
4,000 to 5,000 New People/Hr by Roadway

Potential Rail Capacity Improvements:
7,000 to 10,000 New People/Hr by Rail

Assuming 2-hour Peak:
20,000 to 30,000 People/Commute

Efficiencies

Near Term Development Pipeline

(Potential 10K to 15K new employees)

Multimodal meets growth needs with room



No-Build



Better Bus



Urban Rail

Serves the city and the region

- **Study Area**
 - Based on stakeholder input
 - Connects regional destinations within Central Austin
- Serves as *keystone* to regional transit system



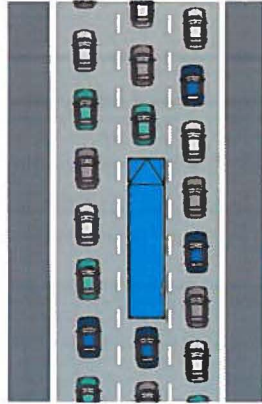
• Transit Technologies Considered

Mode	Criteria							TOTAL
	Moderate speed	Moderate capacity	Ease of boarding	Fits within urban environs	Distinctive vehicles	Good performance	Low infrastructure need	
Conventional Bus	3	3	1	3	1	1	3	15
Better Bus	3	3	2	3	3	2	3	19
BRT	2	3	3	2	3	2	1	16
Streetcar/Urban Rail	3	3	3	3	3	3	3	21
LRT	2	1	3	2	2	3	1	14
Commuter Rail	2	1	3	1	2	2	2	13
Regional Rail	1	1	3	1	1	1	1	9
Heavy Rail	1	1	3	1	1	1	1	9
Monorail	1	1	3	2	3	2	1	13
People Mover	1	1	3	1	2	3	1	12

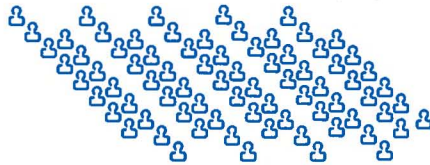


Including Personal Rapid or Pod Transit Technologies

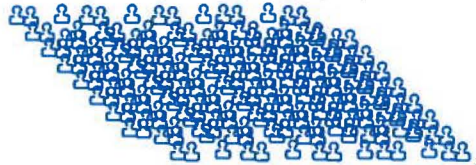
Efficiency – People-Moving Capacity



19 cars + 1 bus = 88 people



16 cars + 1 bus + 1 train = 249 people



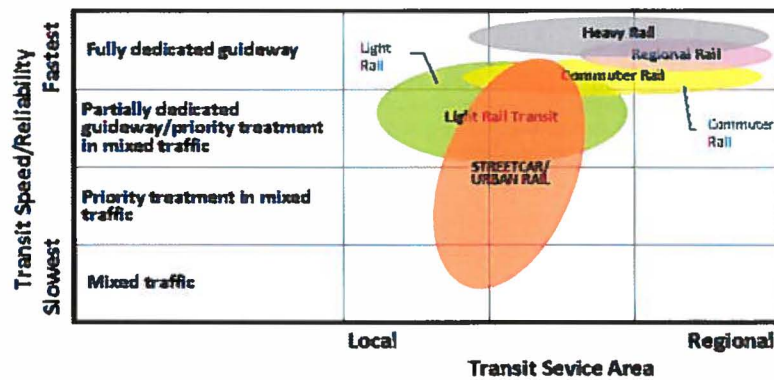
Transit/right turn only lane

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Serving Central Austin



• Rail Technologies Considered



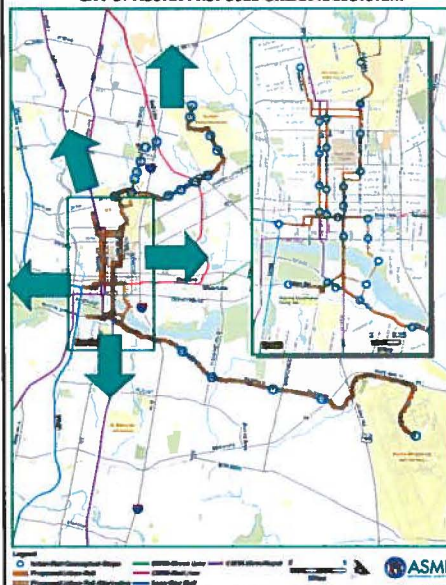
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What is Urban Rail's Route?



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CITY OF AUSTIN PROPOSED URBAN RAIL SYSTEM



Basic System Elements:

- 16.5 Miles, electrified, double tracked
- Maximizes Dedicated Trackway
- Two N-S Routes thru CBD
- Expansion opportunities
- Multi-phased delivery



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Defining a First Investment (First Phase)

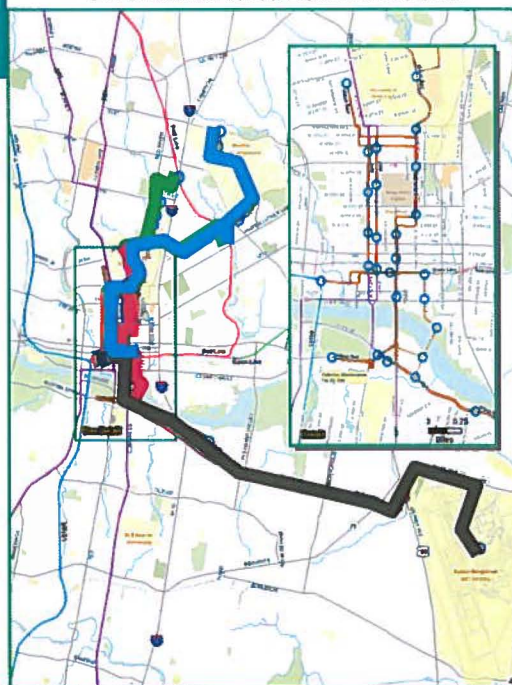


- **Provide direct connections to key destinations**
 - Connect UT–Capitol–CBD
 - Cross Lady Bird Lake/connect to Riverside
 - Connect to ABIA
 - Connect to Mueller
- **Expand connectivity to the emerging regional rail system (Red Line, Green Line, LSTAR).**
 - Connect to Red Line in CBD
 - Connect to Red Line N/E of UT
 - Connect to Regional Rail (LSTAR)
 - Connect with Regional Bus Investments
- **Increase transportation network capacity in constrained rights-of-way.**
 - Break through “Ring of Constraint”
 - Provide Opportunity for Park & Ride at End(s)
- **Provide alternatives to automobiles.**
 - Serve Existing or New Ridership
- **Attract and sustain development within the region’s core**
 - Maximize Econ Dev opportunities
 - Ability to be funded within local financial capacity (City + partnerships)
 - Maximize opportunity for partnerships
 - Maximize opportunity for federal participation (now or in the future)
- **Improve air quality**
 - Serve Existing or New Ridership
 - Provide Park & Ride at End(s)
 - Serve Existing or New Ridership
- **Other Key Criteria**
 - Provide opportunity to locate an O&M Facility
 - Operable during special events (self redundancy)
 - Provide logical terminl
 - Provide independent operability
 - Minimize risk of failure (environmental risk, cost risk, etc.)

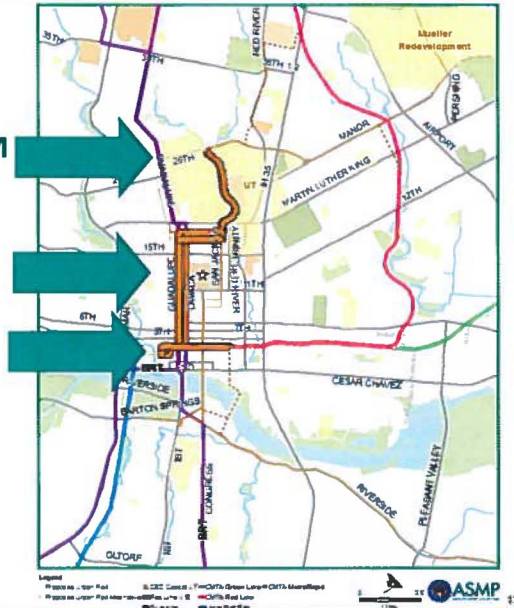
Defining a First Investment

- CBD West/Capitol/UT
- CBD East/Capitol/UT
- Downtown to Red Line
- UT to Riverside Corridor
- Downtown to Airport
- Downtown to Mueller
- Full System or Combinations of parts

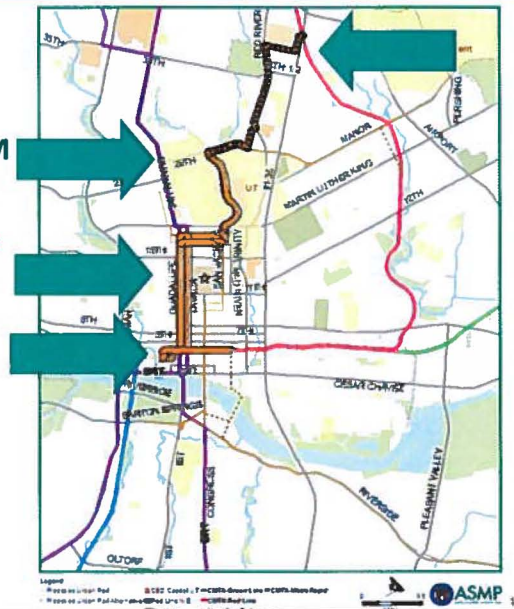
CITY OF AUSTIN PROPOSED URBAN RAIL SYSTEM



- **CBD West /Capitol/UT**
 - 2.9 miles
 - Capital Cost \$250 to \$260M
 - Annual O&M \$8–11 M
 - Provides single maintenance facility opportunity

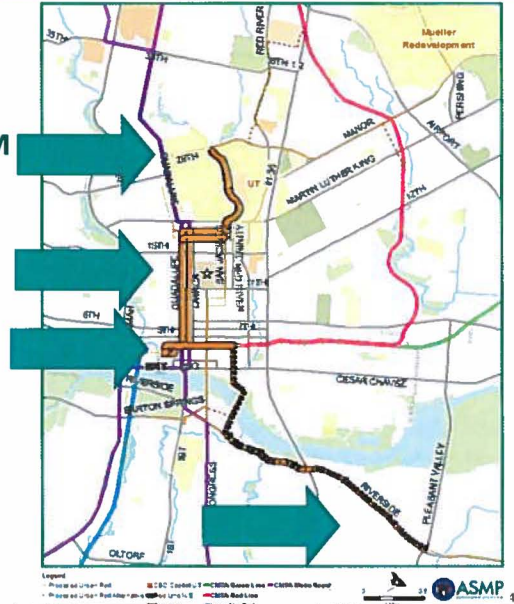


- **Downtown to Red Line**
 - 4.6 miles
 - Capital Cost \$365 to \$380M
 - Annual O&M \$10 to \$15M
 - Provides two maintenance facility opportunities
 - Opportunity for P&R at north end



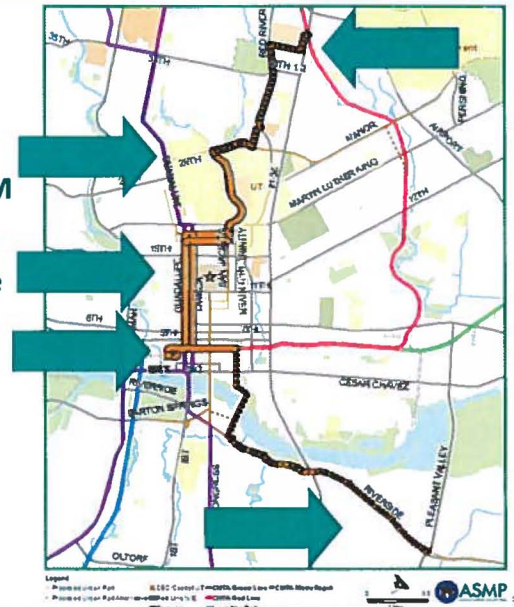
• **UT to Riverside**

- 6.0 miles
- Capital Cost \$540 to \$560M
- Annual O&M \$10 to \$18M
- Provides multiple maintenance facility opportunities
- Opportunity for P&R at south end



• **Riverside to CBD West/
Capitol/UT to Red Line**

- 7.8 miles
- Capital Cost \$655 to \$680M
- Annual O&M \$12–21M
- Provides two maintenance facility opportunities
- Opportunity for P&R at north and south end



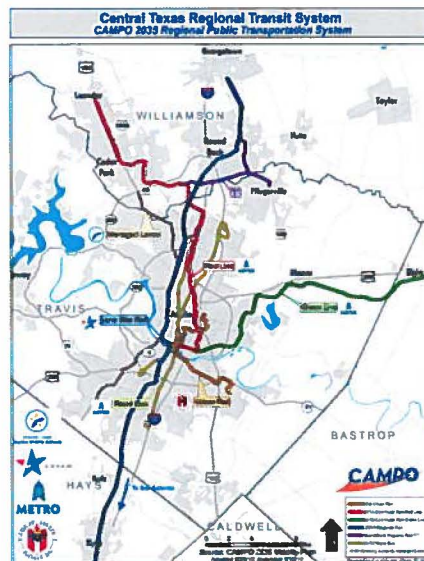
How should urban rail be managed?



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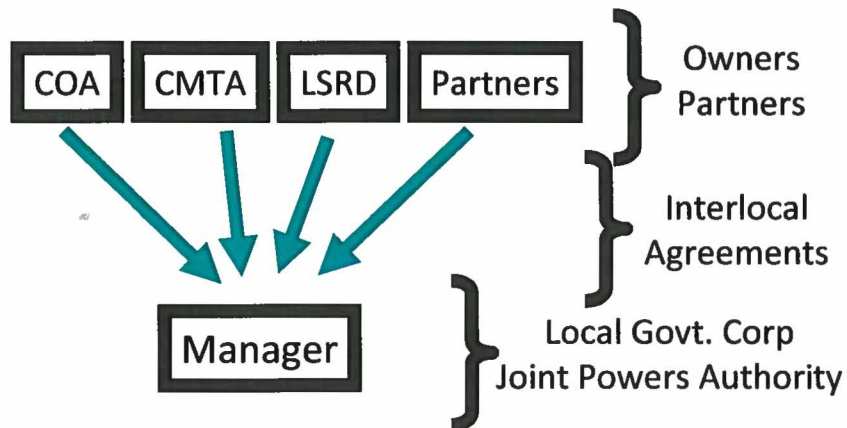
How do we operate and manage the evolving system?

- Self-Operate
 - Contract with private-sector operator
- Contract with one of the other operating agencies
 - Cap Metro/Lone Star/Mobility Authority
- Partner with one or more agencies to form joint operating authority



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Cooperative Management



RAIL



MetroRail

- Red Line to Leander
- Green Line to Manor/Elgin
- Georgetown-Round Rock 'T'



Lone Star Rail

- Georgetown to San Antonio



Urban Rail

- Old Airport to New Airport

BUS



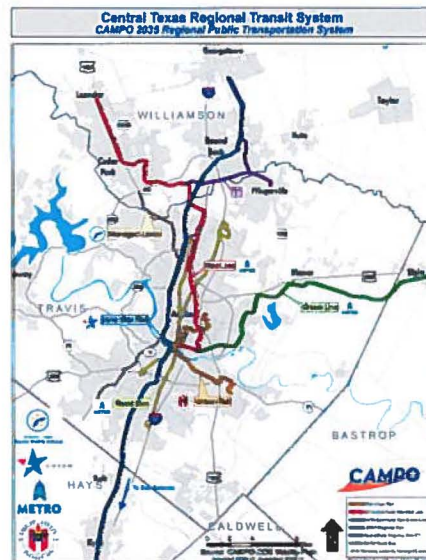
Bus Rapid Transit

- South and North Lamar
- South Congress, Burnet Rd
- Park and Rides



Managed Lanes

- Mopac - Downtown to Parmer



What is financing plan status? What is the Federal role?



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- **City's Financial and Administrative Services Department assisting with preliminary financial analysis of urban rail**
 - Using preliminary capital and operating cost estimates to identify timing and amount of funding needs for an initial phase
 - Assessing potential funding sources
 - Major sources could include federal funding, general obligation debt, and tax increment financing.
 - Exploring innovative financing tools and techniques
- **Work plan shared with Council in May, estimated completion in September or October**
 - Coordinating urban rail financial analysis as part of City-wide capital needs assessment to help Council weigh funding priorities
 - Overall effort to consider credit rating agency criteria, tax impact

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- **New Starts**

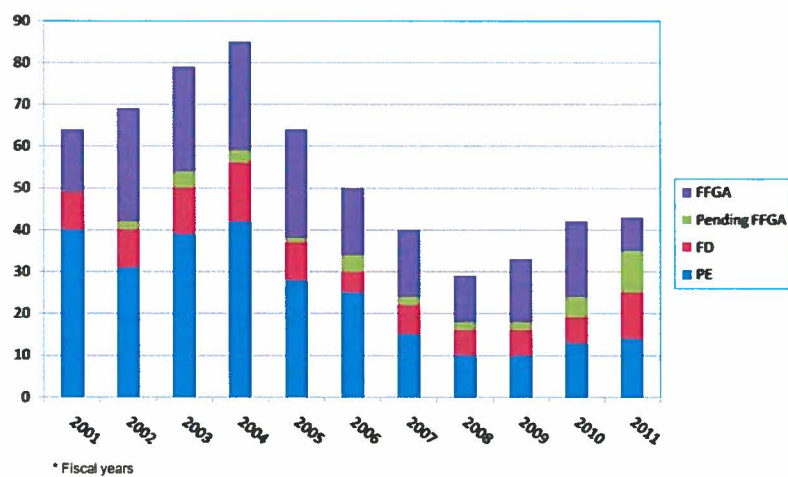
- **Annual Funding of \$1.6 billion in FY 10 and \$1.6 billion FY 11**
 - Administration seeking \$3.26 billion in FY 12
- **Projects more than \$250 M in project cost and seeking more than \$75 million in Federal New Starts funds**
 - 80/20 match but most localities provide 50 percent
- **Heavy rail, light rail, commuter rail, bus rapid transit (BRT) with dedicated lanes or streetcars**

- **Criteria for Evaluating Projects**

- **Project Effectiveness** – Land use and Economic Development matter more than travel time
- **Financial Plan** – local financial commitment for both capital and operations and maintenance is crucial
- **Ridership** – employment, housing, regional attractors and travel time

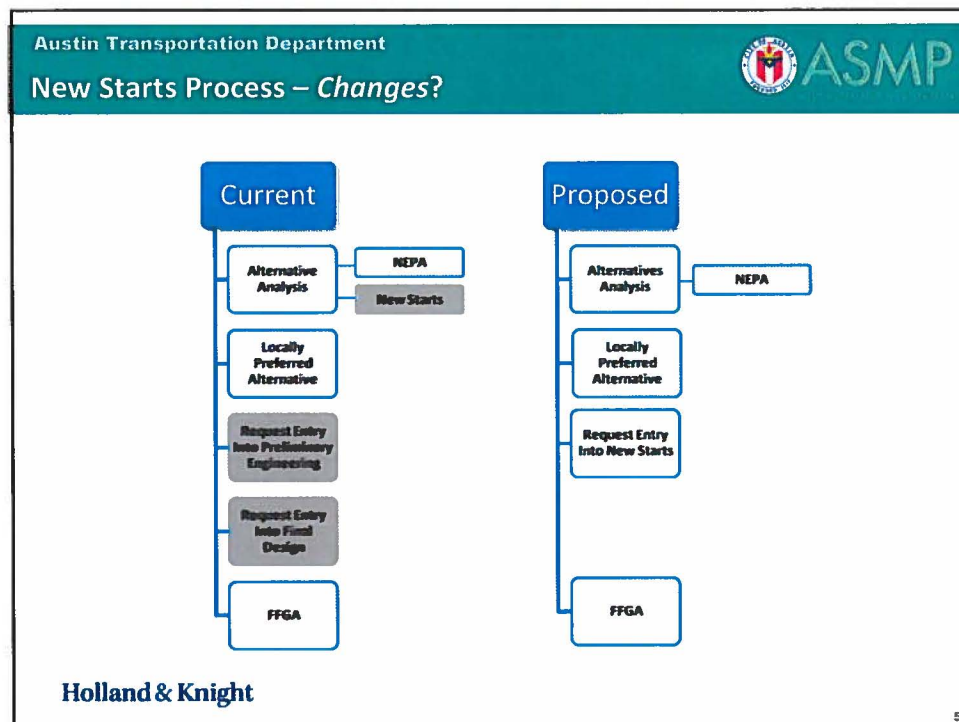
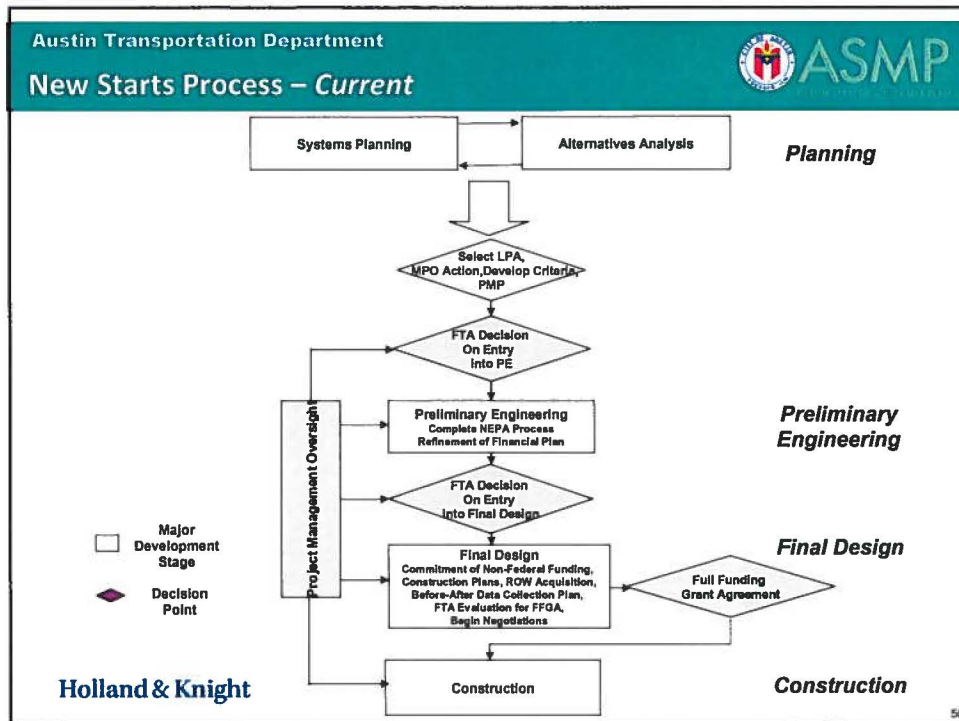
Holland & Knight

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New Starts Process – *Changes?*

- **Intended to**
 - Have AA emerge out of a locally driven process
 - Expedite project approval process
 - Facilitate innovative project delivery (e.g., design-build)
 - Attract private sector funding
- **Will enable project sponsors to secure funding earlier in project development process**
 - No longer have to wait until final design
- **No agreement on**
 - New Starts criteria
 - Actions necessary to demonstrate readiness to enter New Starts/Small Starts

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Positioning Project for New Starts Funding

- **Land Use and Zoning**
 - Adopt ordinances that enhance density in project corridor
 - Develop station area and project corridor land use plans
- **Economic Development**
 - Existing and planned development in project corridor
 - Developer agreements, adoption of tax increment financing district or private sector investment to build stations
- **Financial capacity**
 - Demonstrate adequate funding to build, operate and maintain system
 - City will bear cost of early project work (Alternatives Analysis, NEPA and Preliminary Engineering) but funding for PE and Final Design are counted as local match)
 - Successful bond election for capital funding is a strong signal of community support and will enhance prospect for New Starts funding

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Strengths of Project Corridor

- **Key Regional Attractors**

- University of Texas – large student population and many campus events that result in off-peak ridership
- State, County and City office buildings and many employees
- Healthy downtown with a mix of commercial, retail and housing already in place

- **Opportunities for Development in Corridor**

- Mostly portions of city blocks and not large undeveloped areas
- City can guide development to project corridor through land use and zoning decisions

- **FTA emphasis on land use and economic development and reduced focus on travel time**

- **Strong existing bus ridership**

- Demonstrate use of transit in project corridor
- Serve transit-dependent and student populations already

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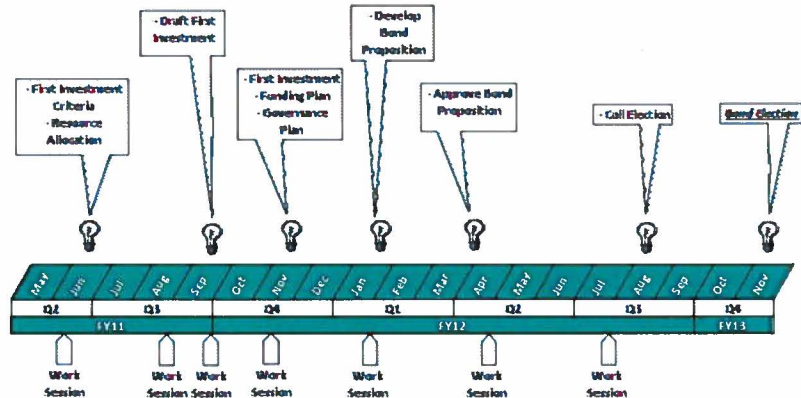
Community Questions?

Timeline and Public Involvement



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- Briefing today is first in a series of workshops and decision points this year



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- Public Involvement activities for NEPA Environmental Studies, Alternatives Analysis and Regional Transit System Planning Efforts
 - Stakeholder/community meetings and briefings
 - Prepare and publish Scoping document
 - Newsletter and website updates
 - Open Houses and web-based community surveys
 - Special outreach to underserved communities
 - Publish and circulate Draft Environmental document
 - Conduct public hearings
 - Coordinate Regional Transit System Planning Outreach efforts

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- **Improve efficiency of transportation system to assure economic vitality and sustainability**
- **Develop multimodal system to improve access and safety**
- **Integrate and coordinate regionally**



Questions and Discussion?