Urban Rail: 
Using Modern Streetcar to Connect Regional Service

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Austin ......

• 14th Largest City in US
  – 2010 Population: 790K (City); 1.7M (region)
  – Third fastest growing city in the nation (population doubling every 20 years)
  – Median age 30

• Economy
  – “Number 1 Boom Town for the next Decade”, Forbes Magazine
  – No. 2 Performing US Metro Region in 2010, Milken Institute

• Employment:
  – Government,
  – Hi-Tech Manufacturing,
  – Banking/Legal/Venture Capital,
  – Education

Austin Core:
Downtown, Capitol, Univ. Of Texas
  • 30% of regional employment
  • 60 thousand students
  • Pipeline Development
    – UT – 15,000
    – Capitol – 15,000 to 20,000
    – Downtown – 8,000 to 10,000
Austin Region Has a Problem:

Our vitality & economic health are at risk... due to a lack of mobility at region’s core:

Transportation networks serving our core are inadequate to meet existing demand/future growth.

Economic health of the core determines vitality of region.

Roadway investments are important but not sufficient to meet growth pipeline.
Land Use and Transportation

Regional Vision
CAMPO 2035

Nested Planning Model

Imagine Austin Comp Plan

Strategic Mobility Plan

Rail Planning

Regional Land Use Transportation Alignment

City of Austin Land Use and Vision

Multi-modal Transportation Strategy

City of Austin Rail Program
Regionally Focused Partnership

MetroRail & BRT
- Red Line to Leander
- Green Line to Manor/Elgin
- Georgetown-Round Rock ‘T’
- Rapid Bus (Lamar/Congress)

Lone Star Rail
- Georgetown to San Antonio
- Bergstrom Spur

Urban Rail
- Connect commuter & Intercity rail with major employment centers
Need for Rail in Austin

Technology Objectives:

• Facilitate economic development and community land use goals
• Allow incremental local investment in regional system (scalable and/or interoperability)
• Maneuver within existing street grid (90-foot turn radius, use of traffic signal grid, running speeds up to 45 mph)
• Minimize off-vehicle infrastructure (preserve sidewalk capacity for economic activities)
• Minimize construction disruption
Within downtown, Austin needs to maximize sidewalk space and remaining blocks for maximum economic benefits.
Need for Rail in Austin

Technology Objectives:

• Operate in both mixed-flow & dedicated track-ways, interact with pedestrians
• Fully accessible frequent stops within core
• Ability to escape ring of constrained gateways
• Vehicles that couple or run independently, depending on time of day, travel demand, routing (desirable)
• Flexibility in power source (desirable)
Traditional Service Concepts

Commuter Rail

Traditional Light Rail

Modern Streetcar

DMU CR Vehicle
Austin, TX

LRT Vehicle
Minneapolis, MN

Modern SC Vehicle
Portland, OR
Desired Service: Austin

Modern Street Car Service
- Close stop spacing (3 to 4 block spacing)
- Minimal off-vehicle infrastructure
- Emphasis on collection and distribution
- Minimum turning radii requirements
- Maximum flexibility
- Ability to operate in mixed traffic, pedestrian environments if necessary
- Off-vehicle ticketing
- Primary employment centers (less than 3 mi)
Desired Service: Austin

**Urban Rail**

**Light Rail Service**
- Stop spacing typically ½ mile or more
- Opportunity for more extensive off-vehicle infrastructure
- Emphasis on moving between stations
- Longer turning radii for speed and comfort
- Ability to operate in exclusive or semi-exclusive rights-of-way
- Off-vehicle ticketing
- Primarily outside primary employment centers (4 to 7 miles from City Center)
Urban Rail Proposal: Austin

Proposed System Elements:

- 16.5 Miles, electric/hybrid, double tracked system (4 to 6 mi runs from primary destinations)
- Provide direct connectivity to downtown, Capitol, Univ. of Texas
- Forms backbone of regional rail system using modern streetcar or similar technology
- Maximizes dedicated track-way
- Multi-phased delivery (regional system – local investment)
- Scalable with Inter-operability opportunities
Urban Rail Proposal: Austin

Dedicated lanes or mixed flow traffic ability for maximum efficiency

Maneuverability to negotiate tight street corners (90ft Radii)

Minimize off-vehicle infrastructure to allow for economic use of sidewalks
19 cars + 1 bus = 88 people

16 cars + 1 bus + 1 train = 249 people

Transit/right turn only lane
Urban Rail Proposal: Austin

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