

CENTRAL CORRIDOR HIGH-CAPACITY TRANSIT STUDY

Recommended Locally Preferred Alternative Briefing

May 22, 2014

Austin City Council Meeting

Austin City Hall, Council Chambers



Agenda

- 1) Project Connect
- 2) Phase 2 Overview
- 3) Recommended Locally Preferred Alternative (LPA)
- 4) Funding Approach
- 5) Governance Approach
- 6) Next Steps



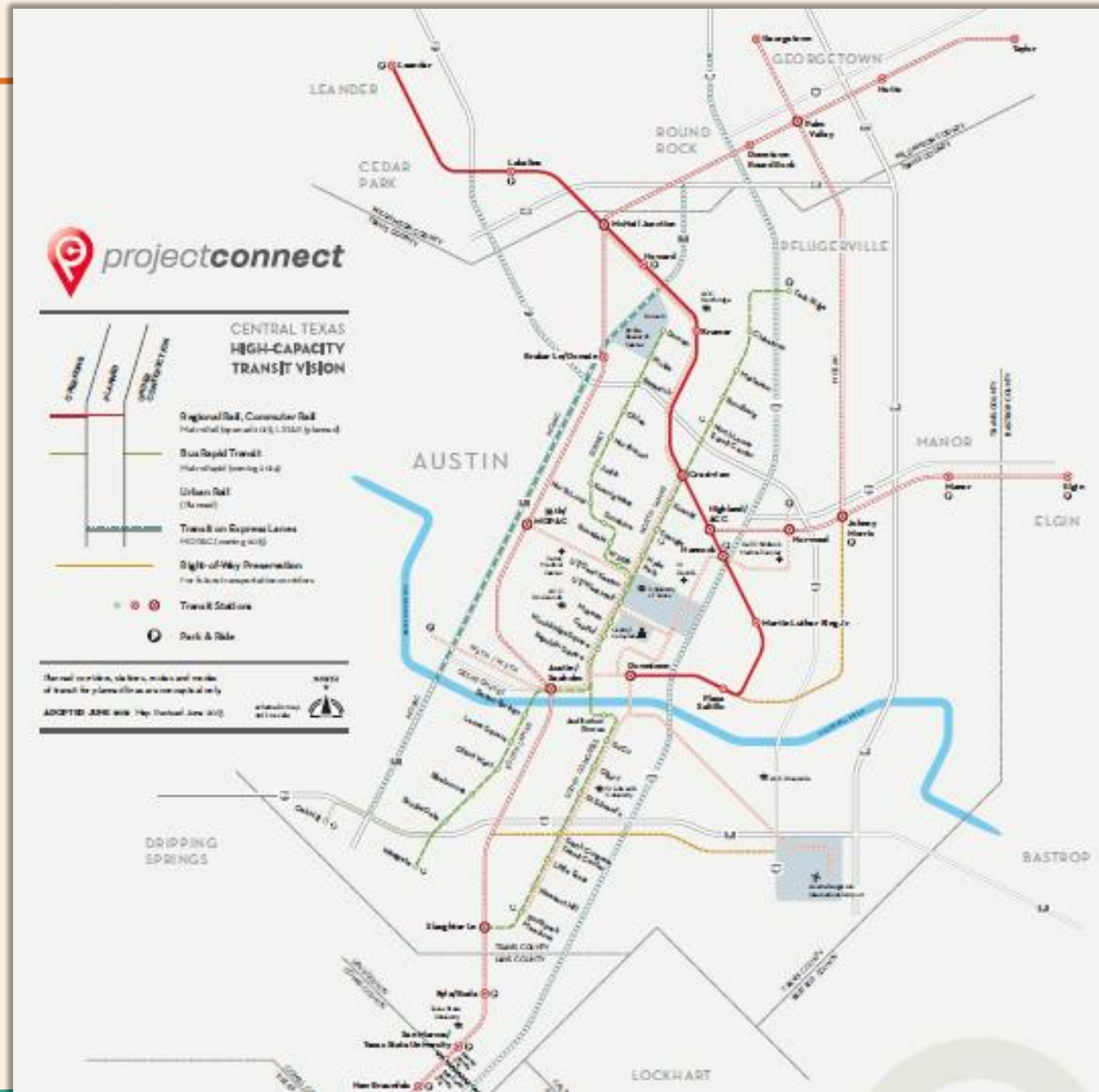
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Project Connect

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Project Connect Vision

- System
 - 25 Centers & ABIA
 - 4 Counties/13 Cities
- Funding
 - \$4B Total Capital
 - Can Fund:
 - \$1.9B (49%) Capital
 - \$82M O&M
- Organization
 - ILA for Early Project Development
 - Framework for Regional Organization and 'Single System' Integration





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Phase 2 Overview



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Central Corridor Work Plan Phases

Decision-Making Process

- Phase 1: Select Priority Sub-Corridor
 - ‘Where are we going...next?’
- Phase 2: Select Locally Preferred Alternative (LPA)
 - ‘How will we get there?’



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Phase 2 Work Plan & Schedule

Decision-Making Process

- Phase 2: Select Locally Preferred Alternative (LPA)

Current Progress

Central Corridor High-Capacity Transit Study Work Plan							
				2013	2014		
				6	7	8	9
				Dec	Jan	Feb	Mar
Phase 2 Select Draft Locally Preferred Alternative (LPA)	Step 4: Identify Preliminary Alternatives	Task 9	Project Purpose				
		Task 10	Process – Methodology & Criteria				
		Task 11	Identify & Screen Preliminary Alternatives – Service, Mode & Alignment				
	Step 5: Define Final Alternatives	Task 12	Define Final Alternatives – Mode & Alignment				
	Step 6: Evaluate Alternatives	Task 13	Evaluate Final Alternatives				
	Step 7: Select LPA	Task 14	Select Draft Locally Preferred Alternative (LPA)				
			Decision				

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Phase 2 Public Involvement



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Phase 2 Public Involvement Summary

- 57 stakeholder briefings
- 4 stakeholder workshops
- 2 public workshops
- 4 public panels
- 8 community outreach events

Through 5/20

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Upcoming Activities

- SpeakUpAustin discussions
- Webinars
- Public Open Houses in May-July
 - Starting May 27th, St. David's Episcopal Church
- Social Media engagement
- Presence at various community events and festivals

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Upcoming Activities cont.

- 5/22 Parkway Health and Wellness Fair
- 5/27 Planning Commission
- 5/29 VIN Etching Event – South Austin
- 6/02 VIN Etching Event – North Austin
- 6/04 Capital Metro Access Advisory Committee
- 6/05 Austin Chamber Transportation Committee
- 6/07 Kealing Neighborhood Association



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Upcoming Activities cont.

- 6/09 Comprehensive Planning Subcommittee
- 6/09 Waterfront Planning Board
- 6/09 South River City Citizens
- 6/10 UTC
- 6/10 Sierra Club
- 6/10 Imagine Austin Meet-Up

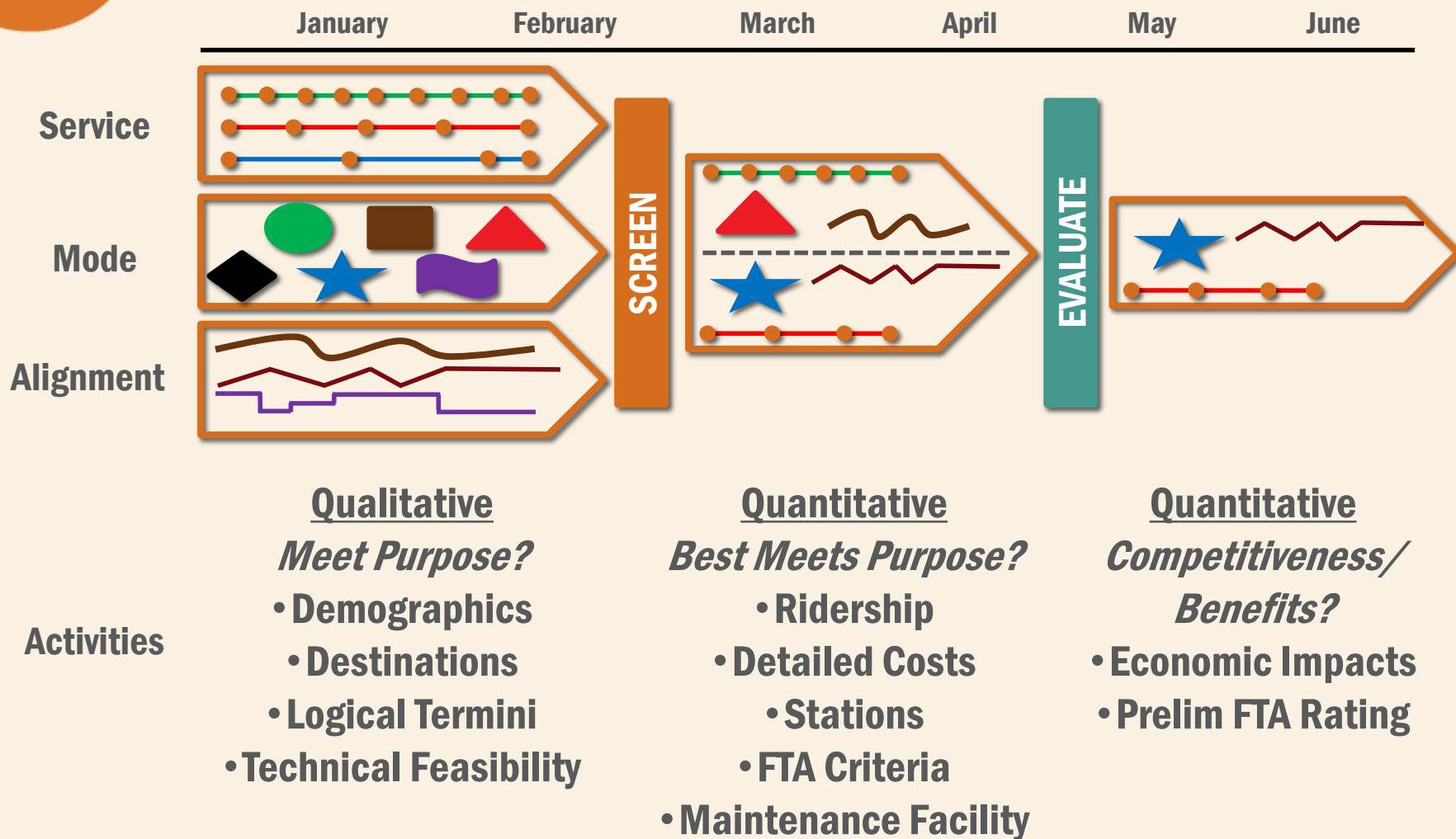




Evaluation of Final Alternatives

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Evaluation Process



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Target Service Profile

Reliability

Mostly Dedicated

Mixed Traffic

Transit Priority/
Pre-emption

Dedicated
Guideway

Separated
Guideway

Fully Separated
Guideway

Frequency

10 - 15

5 minutes

60 minutes

Stop Spacing

1/2 - 1 mile

< 1/4 mile

> 5 miles

Speed

20-30 avg.

10 mph

55 mph maximum (including stops)

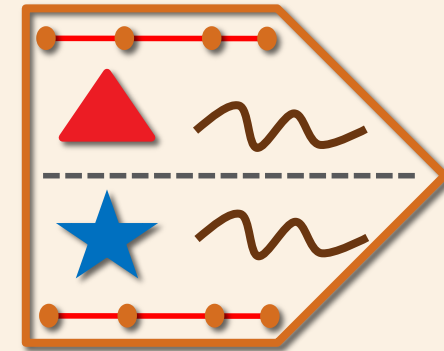
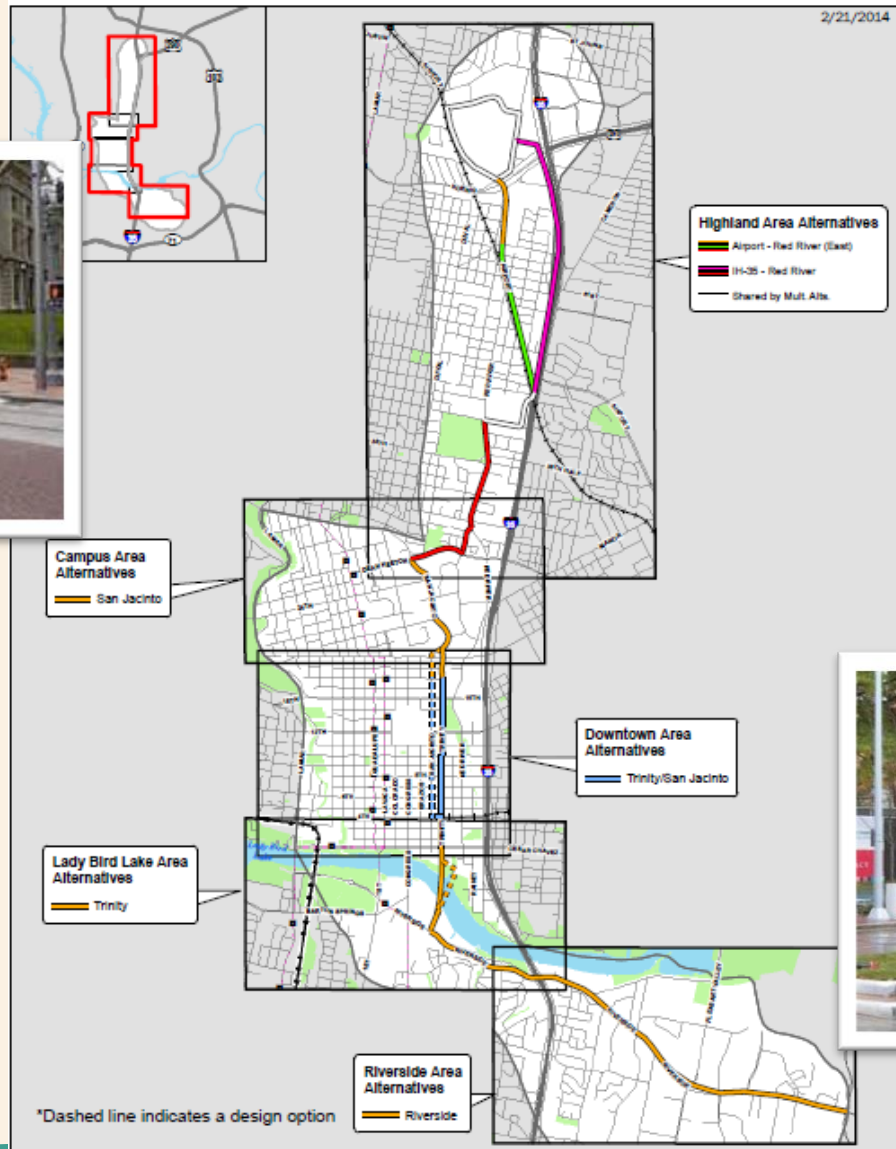
60 mph

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Final Alternatives



Urban Rail



Bus Rapid Transit





Mode Evaluation



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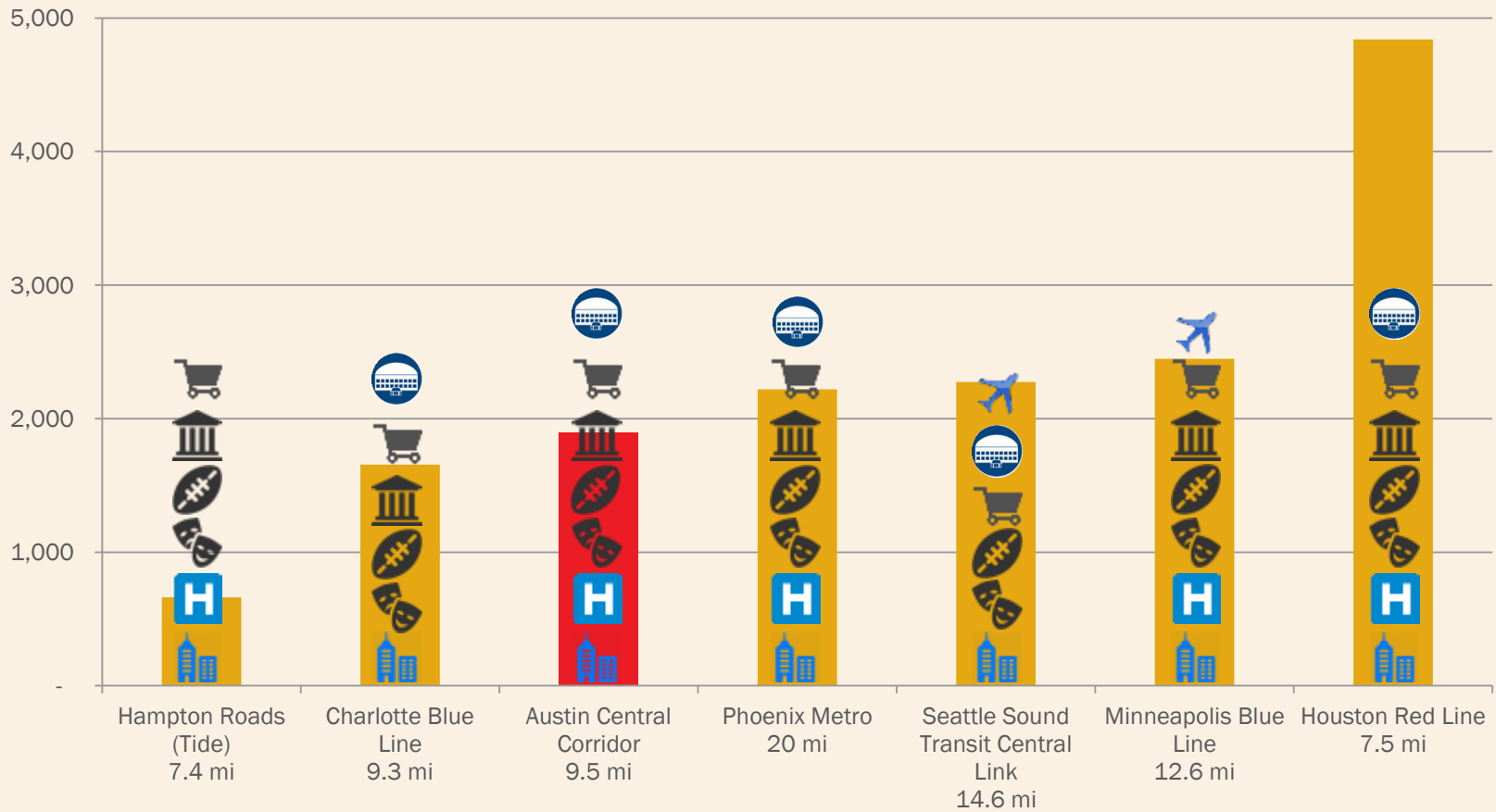
Preliminary Ridership Estimates Based on Target Service Profile

	Urban Rail	BRT
Assumed vehicle capacity	170	85
Peak frequency	10 minutes	10 minutes
Anticipated daily demand	16,000 – 20,000	15,000 – 19,000
Anticipated weekday peak-hour demand	2,500	2,300
Maximum Demand Between Any Two Stations	1,100	950

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LRT Ridership Comparison

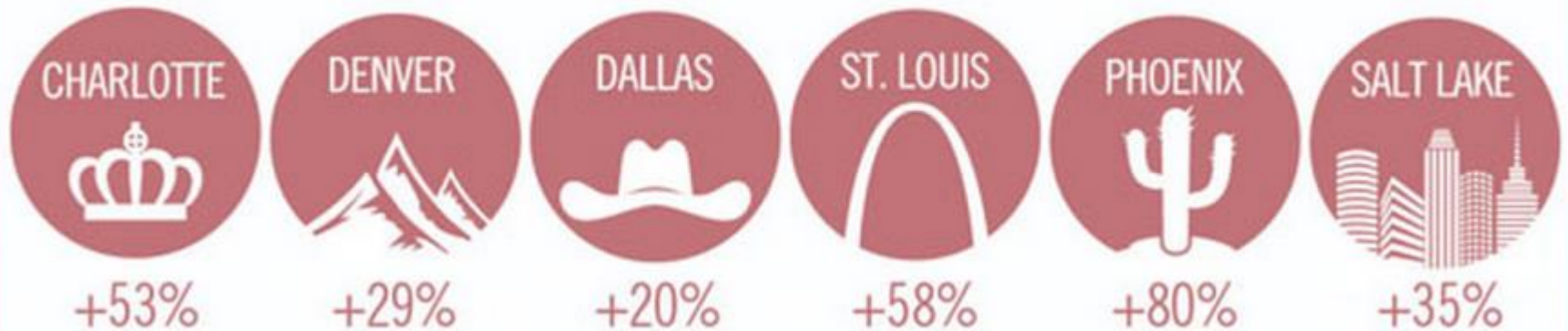
Ridership per mile



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LRT Ridership Reality Check.

Actual weekday light rail ridership above projections in opening year.



From Charlotte Area Transit System (CATS)

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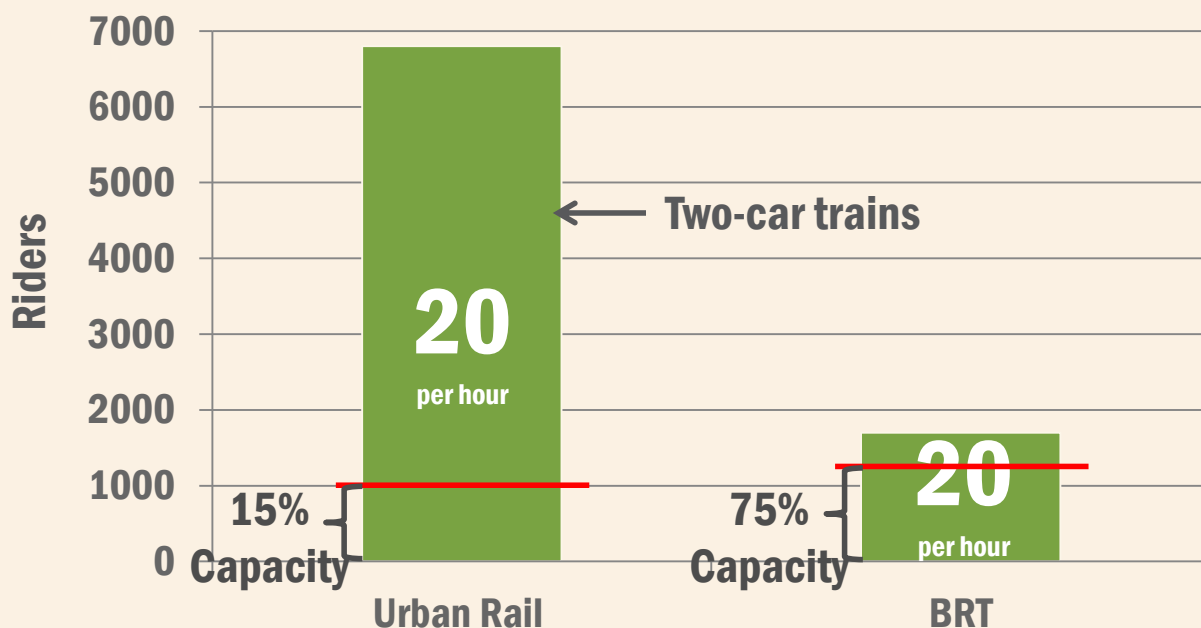
Mode Evaluation

	Urban Rail	BRT – 4 minute
Ridership	+	+
Travel Time	0	0
Initial Vehicle Cost	0	+
Annual O&M + Lifecycle	0	0
Vehicle Emissions	+	---
Economic Development	++	+
Traffic Impacts	0	--
ROW Impacts	0	+
System Expansion Capacity	+	-- --

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System Capacity

System Capacity at 3-minute Headways



- Minimum headway for reliable service is 3-minutes
- No capacity for system expansion with BRT
- Urban Rail is the appropriate mode to meet system needs

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Mode Decision: Urban Rail

**Initial
Capital Cost**

ROW Impacts

O&M +
Life Cycle Cost

Emissions Economic
Development

Traffic
Impacts

Travel Time

**System
Capacity**

BRT

Urban Rail



Alignment Evaluation: Hancock


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Hancock Alternatives



- Grade separation desired with Red Line
- Consideration of I-35 improvements

East Tunnel Option =====

- Estimated Cost: \$220M
- Portal on 41st 
- Below-grade station at Red Line
- Potential tunnel extension under I-35 towards Mueller

West Tunnel Option =====

- Estimated Cost: \$180M
- At-grade station and portal on Red River
- Red Line transfer at Highland or new station on Airport

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Hancock Alternatives

	West Tunnel	East Tunnel
Ridership	0	+
Travel Time	+	0
Capital Cost	0	--*
Annual O&M	0	0
Economic Development	+	++
Traffic Impacts	0	0
ROW Impacts	0	--
Connectivity	--	+
System Expansion	--	+

* Opportunities for value engineering

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Alignment Decision: Hancock East

Capital Cost
ROW Impacts

Connectivity
System Ridership
Expansion
Economic Development

Hancock West

Hancock East



Alignment Evaluation: Lady Bird Lake

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Lady Bird Lake thru Downtown

Bridge -- Est. Cost: \$175M



Station



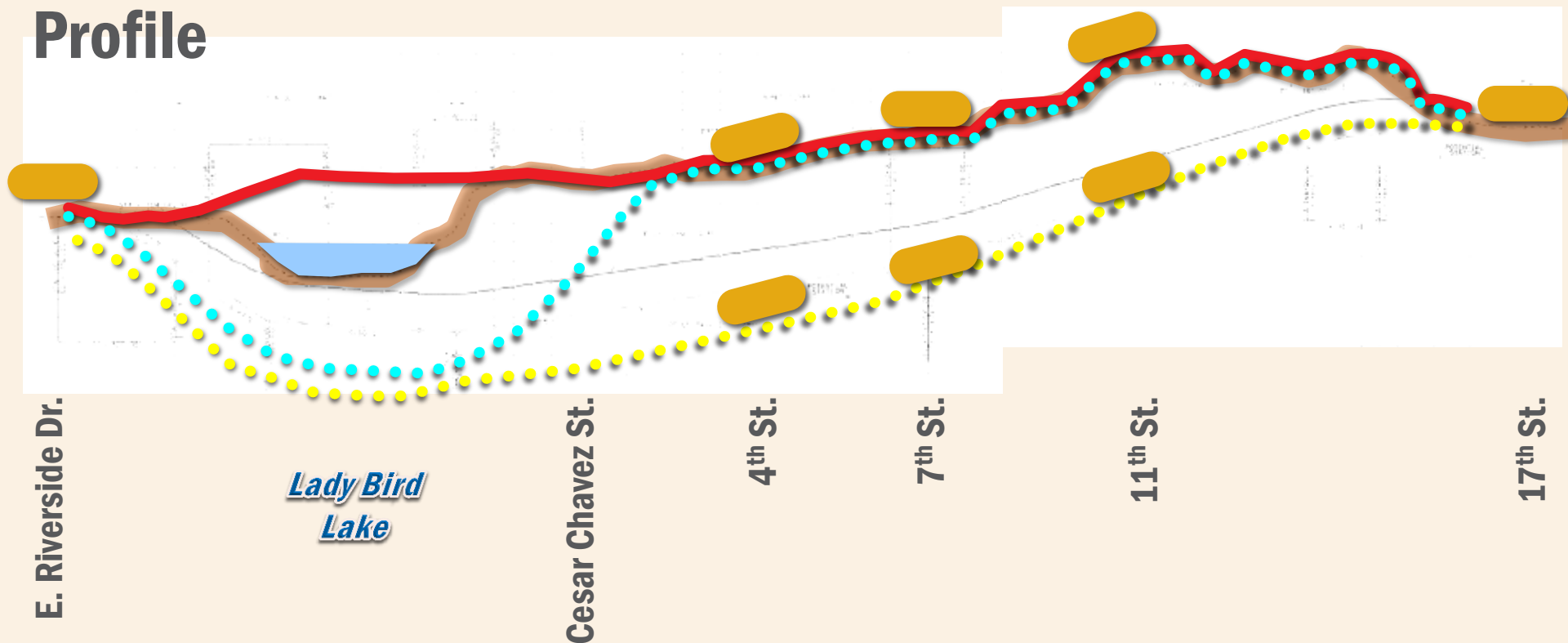
Short Tunnel -- Est. Cost: \$215M



Long Tunnel -- Est. Cost: \$470M



Profile



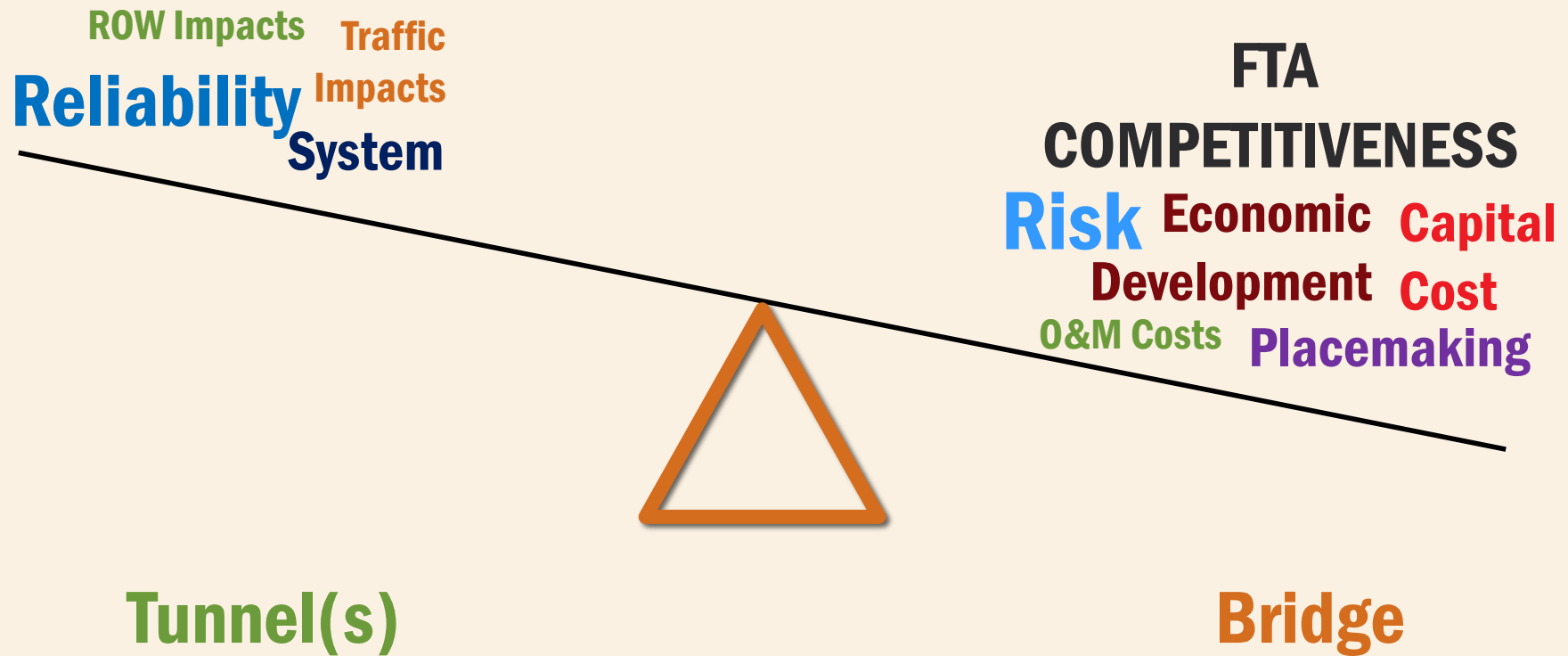
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Lady Bird Lake Alternatives

	Bridge	Short Tunnel	Long Tunnel
Ridership	0	0	0
Travel Time	0	0	0
Capital Cost	+	-	--
Annual O&M	+	0	-
Economic Development	++	+	0
Traffic Impacts	0	0	++
ROW Impacts	-	0	+
Connectivity	0	0	0
System Expansion	0	0	0
Placemaking	++	+	-
Reliability	0	+	++
FTA Competitiveness	0	--	--
Project Implementation Risk	0	--	--

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Alignment Decision: Bridge



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Recommended Locally Preferred Alternative (LPA)

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Recommended Locally Preferred Alternative (LPA)

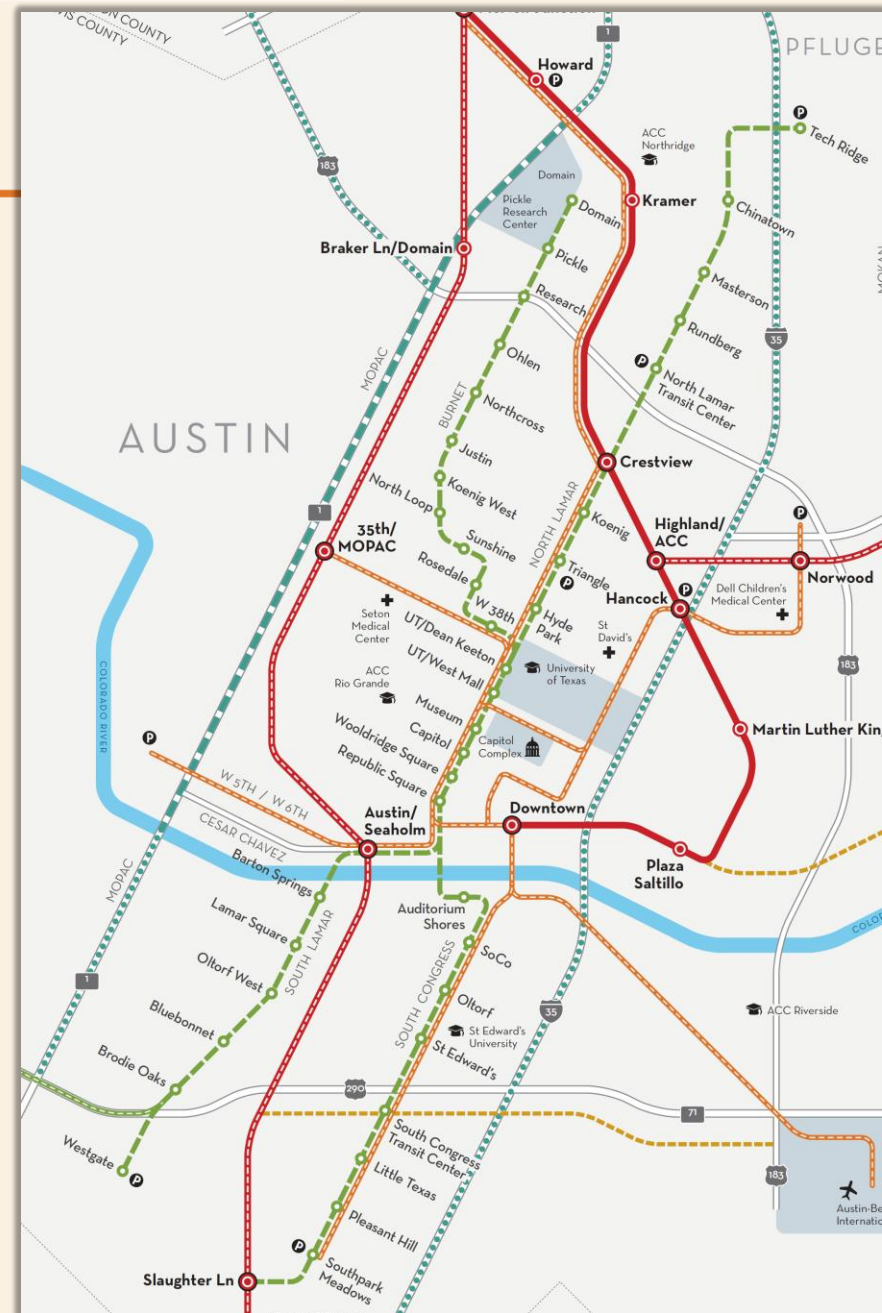
- 9.5-mile Urban Rail route, double-track and electrified
 - Bridge across Lady Bird Lake
 - East tunnel at Hancock Center under Red Line
- 16 Stations with 4 park and rides
- Estimated 16,000 – 20,000 daily Ridership by 2030
 - 10,000 new transit riders to system
- Travel Times
 - Grove to Convention Center (3.9 miles) – 11 min
 - ACC Highland to Convention Center (5.6 miles) – 17 min
- Total Capital Cost: \$1.38 B (2020)
- Annual O&M Costs: \$22 M (2022)



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Urban Rail “Layer” System Concept

- Identification of Central Corridor LPA informs definition of Urban Rail “Layer” of Project Connect Vision
- Next steps
 - Urban Rail system concept development
 - Additional project definition
 - Update Project Connect Vision following LPA selection



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Capital Cost for Recommended LPA

Capital Cost Category	Estimated Cost (2020 Year of Expenditure)
Construction	\$730 M
Vehicles	\$40 M
Right-of-Way	\$40 M
Professional services	\$240 M
Total contingencies	\$330 M
Total	\$1.38 B

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Cost Comparison – Other LRT Systems

System/Line	Length (miles)	Total Cost (Current \$)	2020 Dollars (@ 3%/year esc.)	Relative Current Cost per Mile
Houston SE Corridor	6.6	\$823 M (2012)	\$1.1 B	\$163.7 M
Houston N Corridor	5.3	\$756 M (2013)	\$958 M	\$181.4 M
Portland-Milwaukie	7.3	\$1.49 B (2013)	\$1.9 B	\$258.6 M
MSP Central Corridor	9.8	\$957 M (2013)	\$1.2 B	\$123.7 M
Austin Urban Rail	9.5	\$1.13 B (2014)	\$1.38 B	\$144.8 M

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O&M Cost for Recommended LPA

- \$22 M annually beginning 2022
 - \$15.5 M in 2013\$
- What's included?
 - Operating plan (vehicle hours, peak vehicles, stations, track, etc.)
 - Overhead (general & administrative, non-vehicle main work hours, energy consumption, other utilities, insurance, etc.)
 - Actual unit costs from Capital Metro
 - Resource productivity factors from peers
 - Assumed contracted O&M and 4% annual inflation

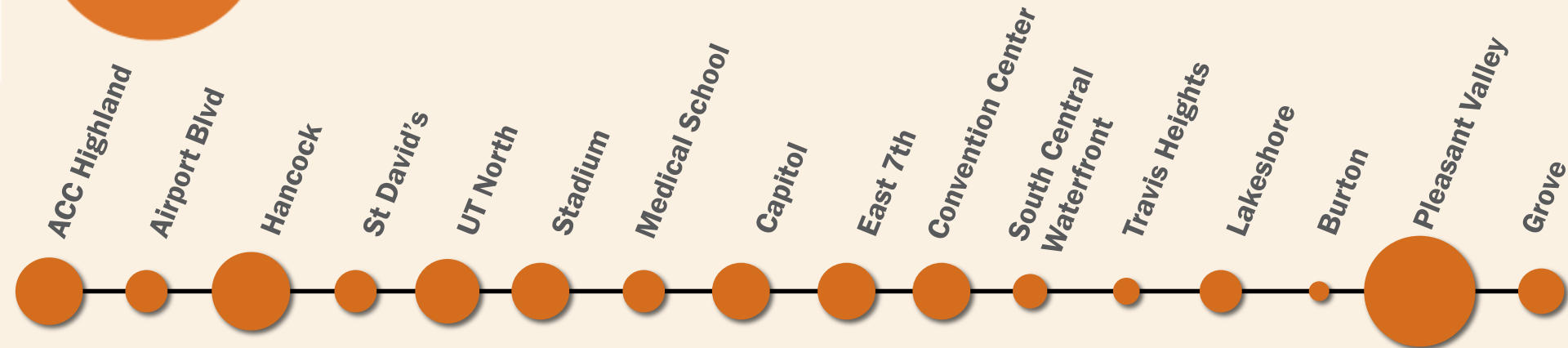
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O&M Cost Comparison – Peer LRT Systems

System/Line	Length (mi)	Annual O&M Costs (Current \$M)	O&M Cost per Revenue Hour
Seattle Central Link	19	\$51.4	\$711
Charlotte Blue Line	5	\$17.5	\$625
Minneapolis Blue Line	15	\$27.9	\$416
Houston Red Line	9	\$17.4	\$268
Phoenix Valley Metro	22	\$28.9	\$395
Hampton Roads Tide	7	\$12.7	\$487
Austin Urban Rail (est)	9.5	\$15.5 (\$22 in 2022)	\$443

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Relative Station Activity (Preliminary)



- Pleasant Valley represents nearly 18% of all station activity
- Highland is a strong commuter station, but under-represented
- Strong balance between north and south
 - AM peak is stronger in the NB direction (1.3 NB:1 SB)
 - Even distribution of passengers in downtown and at UT
- Off-peak ridership (25% of daily)
 - Indicates strong all-day demand
- Hancock Center has strong ridership due to Red Line connectivity and park-and-ride

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Potential Economic Development Impacts

- Developed by UT Center for Sustainable Development
- Uses Envision Tomorrow+ (Sustainable Places Project Analytic Tool)
- 3D Development Visualizations



Image showing potential development

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Project Influence on Economic Development

Potential Economic Impact of Investment within ½-mile of Recommended LPA	Low Estimate	High Estimate
Added Population	14,400	17,700
Added Employment	14,700	26,800
2030 Annual Property Tax Revenue*	\$31.6 M	\$44.4 M
2030 Annual Sales Tax Revenue*	\$5.90 M	\$10.8 M
Total 2030 Annual Tax Revenue*	\$37.5 M	\$55.2 M
Building Value	\$6.3 B	\$9.1 B
ROI on recommended LPA - ratio of private development along the route due to the public investment	5:1	7:1

* City of Austin only

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Project Influence on (Economic) Development

- What does this mean?
 - Project attracts and concentrates development from elsewhere in the city
 - Regional population and employment control totals unchanged
 - Compact and connected development reinforces Imagine Austin centers concept
 - Benefits of concentrated development
 - Likely higher quality/value than dispersed growth would otherwise yield
 - Fewer vehicle miles traveled (VMTs) per capita – trips stay in project corridor
 - Lower carbon footprint per capita

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Economic Impact of Construction

- Based on new \$1.4B capital investment
 - Local construction and professional services (\$880M)
 - Results in \$1.6B to \$2.4B economic impact
 - Direct/indirect jobs – 27,000 to 33,000
 - Source: URS
 - Not all capital (\$150M to \$200 M) stays in region
 - Vehicle manufacturing
 - Rail and other specialty equipment
 - Conservative estimate
 - Other industry models predict > \$3.6B in economic output

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FTA New Starts Competitiveness

Individual Criteria Ratings

- ✓ Mobility Improvements (16.66%)
- ✓ Environmental Benefits (16.66%)
- ✓ Congestion Relief (16.66%)
- ✓ Economic Development (16.66%)
- ✓ Cost-Effectiveness (16.66%)
- ✓ Land Use (16.66%)
- ✓ Current Condition (25%)
- Commitment of Funds (25%)
- ✓ Reliability/Capacity (50%)

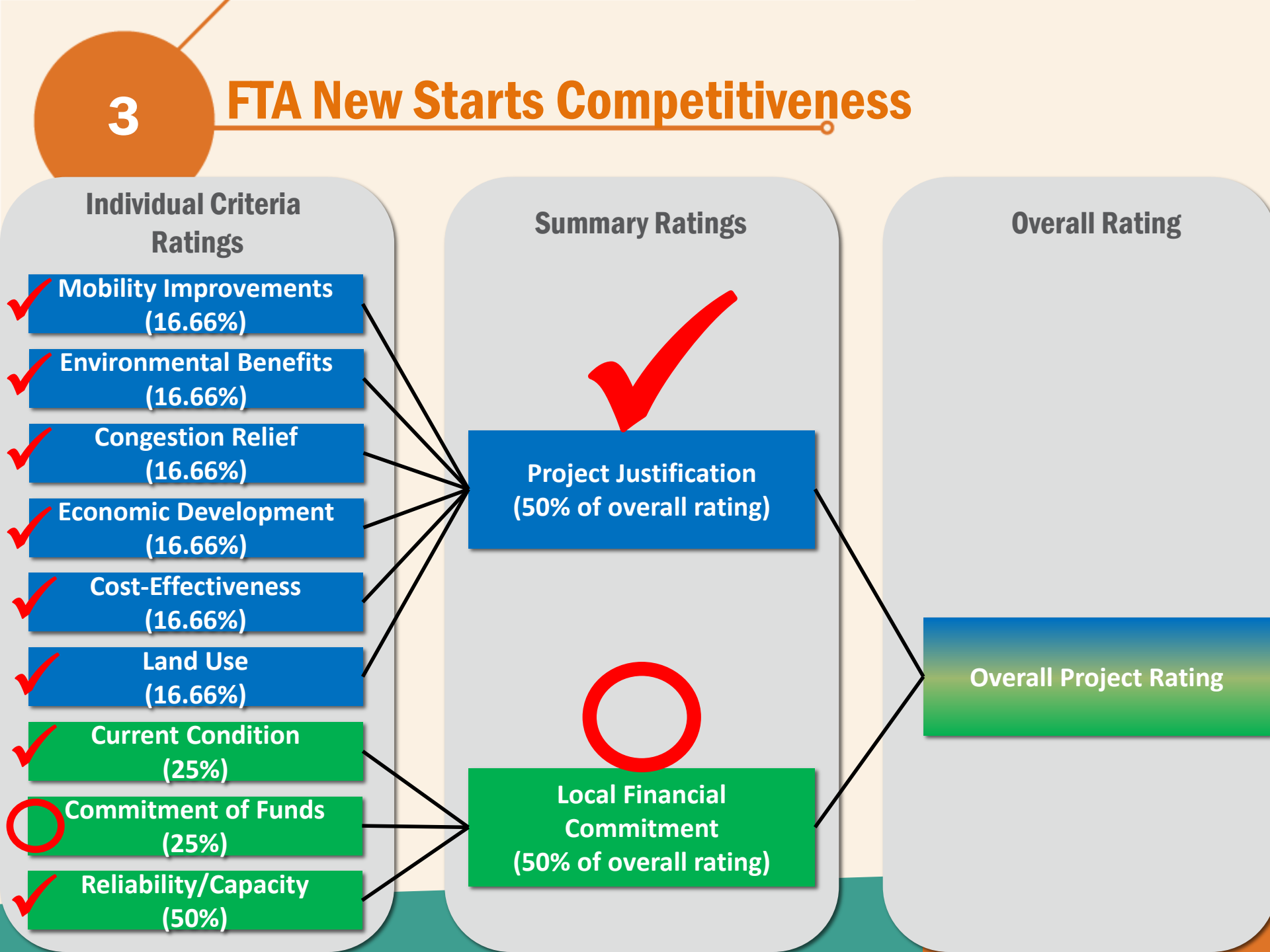
Summary Ratings

Project Justification
(50% of overall rating)

Local Financial
Commitment
(50% of overall rating)

Overall Rating

Overall Project Rating



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Funding Approach

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Funding Approach

City of Austin

GO Bonds

FTA New Starts

Capital
\$1.38 B

Parking Revenue

1/4¢ Funds

Potential PID

Capital Metro

Sales Tax

Fare Revenue

Other (Advertising/
Naming Rights, Private,
and In-kind Contributions)

1/4¢ Funds

FTA Section 5307

Operations Savings

O&M
\$22 M per year

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Capital Funding Approach

- 50% Local – 50% FTA
- *City of Austin – lead local funding partner for urban rail capital*
- Local Funding Source – General Obligation (GO) Bonds
 - Tax rate increase necessary to add debt capacity
 - Bond issuances and tax increases phased over time
 - Initial bond issuance would affect FY15-16 tax rate

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O&M Funding Approach

- *Capital Metro – lead funding partner for urban rail O&M*
- Capital Metro currently developing comprehensive long-range funding strategies
 - 20-year planning horizon
 - Planning efforts consistent with FTA financial capacity requirements and focus on “state of good repair”
- Financial planning reflects prudent financial practices

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Governance Approach

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Governance Approach: Partnership

“Owner”



Builds on 2013 Project Connect High-Capacity Transit Interlocal Agreement

“Operator”



Acts in an advisory role to the actual governing bodies, who would be responsible for setting policy



Policy Level

Joint City-Capital Metro Policy Advisory Board
Members Appointed by Each Agency



Robert Goode

Executive Level

Joint Executive Team (JET) Framework
Continues



METRO
Linda Watson

Project Level

Urban Rail Project Director

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Next Steps

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Housing/Transit/Jobs Action Team

- Resolution 20140327-037 creating an interdepartmental and interagency Action Team
- Align programs and policies with the Federal Transit Administration (FTA) New Starts guidelines
- Neighborhood Housing and Community Development (NHCD), Planning and Development Review (PDR), Austin Transportation (ATD), Economic Development (EDD), Capital Planning (CPO), Sustainability (SO), and Austin Resource Recovery (ARR), Capital Metro
- Work plan and evaluation process for 6/2 Comprehensive Planning and Transportation Committee (CPT) of Council
- Currently identifying programs and policies that relate to FTA New Starts criteria



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Road to the LPA

- Capital Metro Board, May 20th
 - Briefing to Special Board Session
- City Council, May 22nd
 - Briefing at regular meeting
- CCAG #14, June 13th
 - Develop recommendation for Council & Board
- Council & Board, June 17th
 - Briefing to Special Joint Session
- Capital Metro Board, June 23rd
 - Action on recommended LPA
- City Council, June 26th
 - Action on recommended LPA
- City Council, August 7th
 - Action on bond election

May						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

June						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

July						
August						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

THANK YOU

More Information:

Project Connect &
Central Corridor HCT Study

projectconnect.com

