East Corridor Update

Regional Transportation Authority of Central Oklahoma

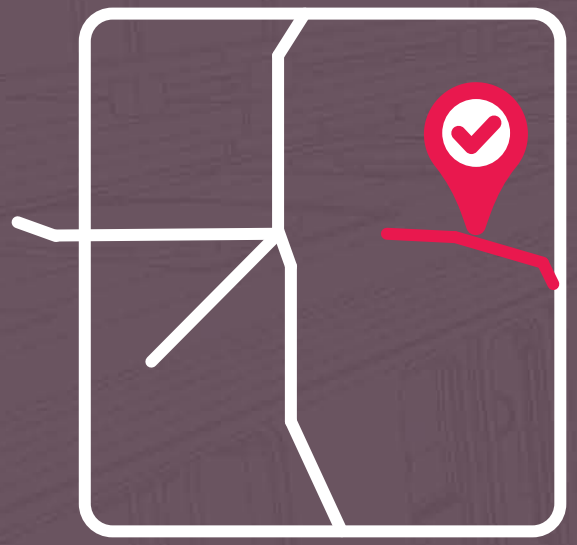
Prepared for the Regional Transportation Authority of Central Oklahoma Board of Directors

March 15, 2023

Prepared by Kimley-Horn and Associates

Agenda

- February Board Meeting Recap
- East Corridor Findings
  - Corridor-based findings
  - Mode-based findings
- Engagement Summary
- Summary and Recommendation
- Next Steps

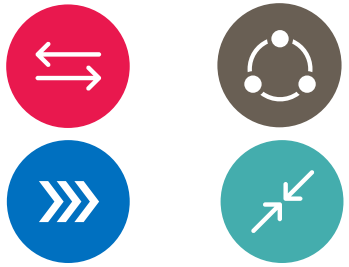


EAST CORRIDOR UPDATE

Transit System Plan Goals & Objectives

Mobility & Connectivity

Objective:
Increase regional transportation choices by connecting activity centers with high-capacity transit that is fast and reliable.



Equity & Accessibility

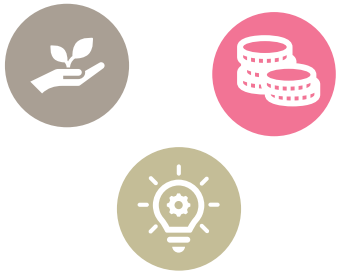
Objective:
Implement a safe and accessible system for all people that creates a community with options.

Land Use & Economic Development

Objective:
Develop a transit system that inspires economic development to promote growth in the region and national competitiveness.

Sustainability & Viability

Objective:
Provide a cost-effective and sustainable system that invests resources responsibly.



Alternative Analysis (AA) Process

1 DISCOVER

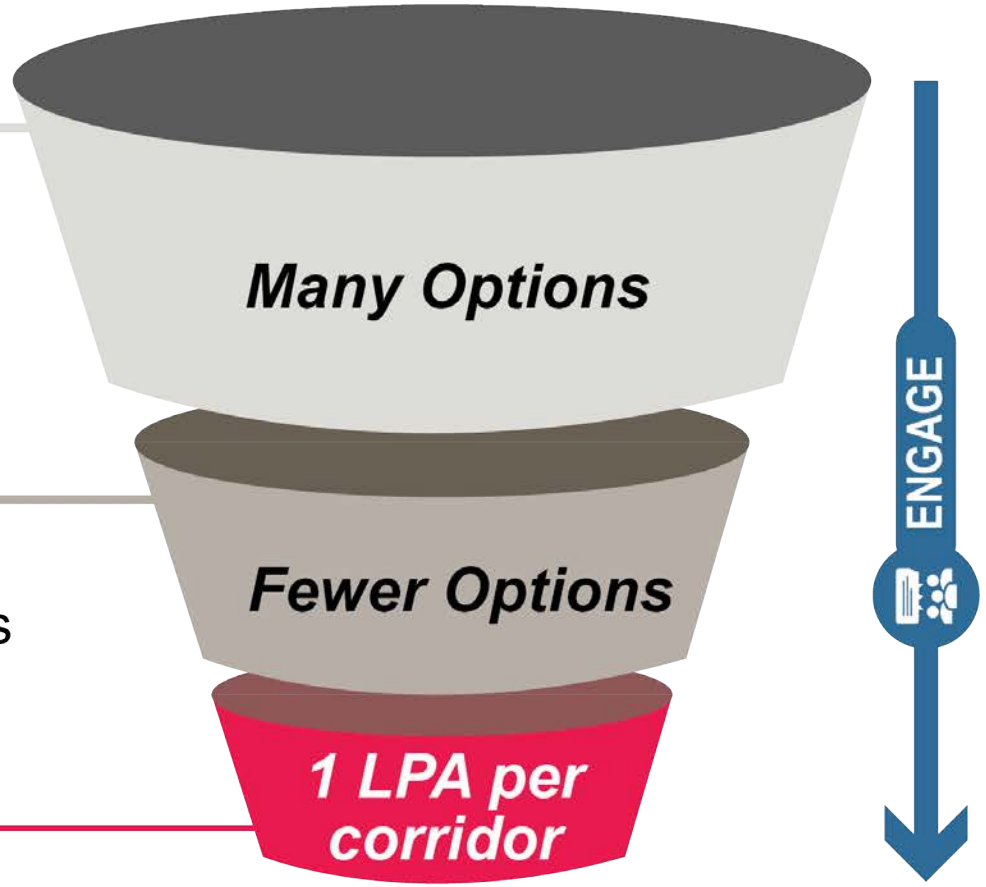
- Define all reasonable alternatives
- Screen against goals & objectives

2 REFINE

- Advance remaining alternatives
- Perform detailed technical analysis

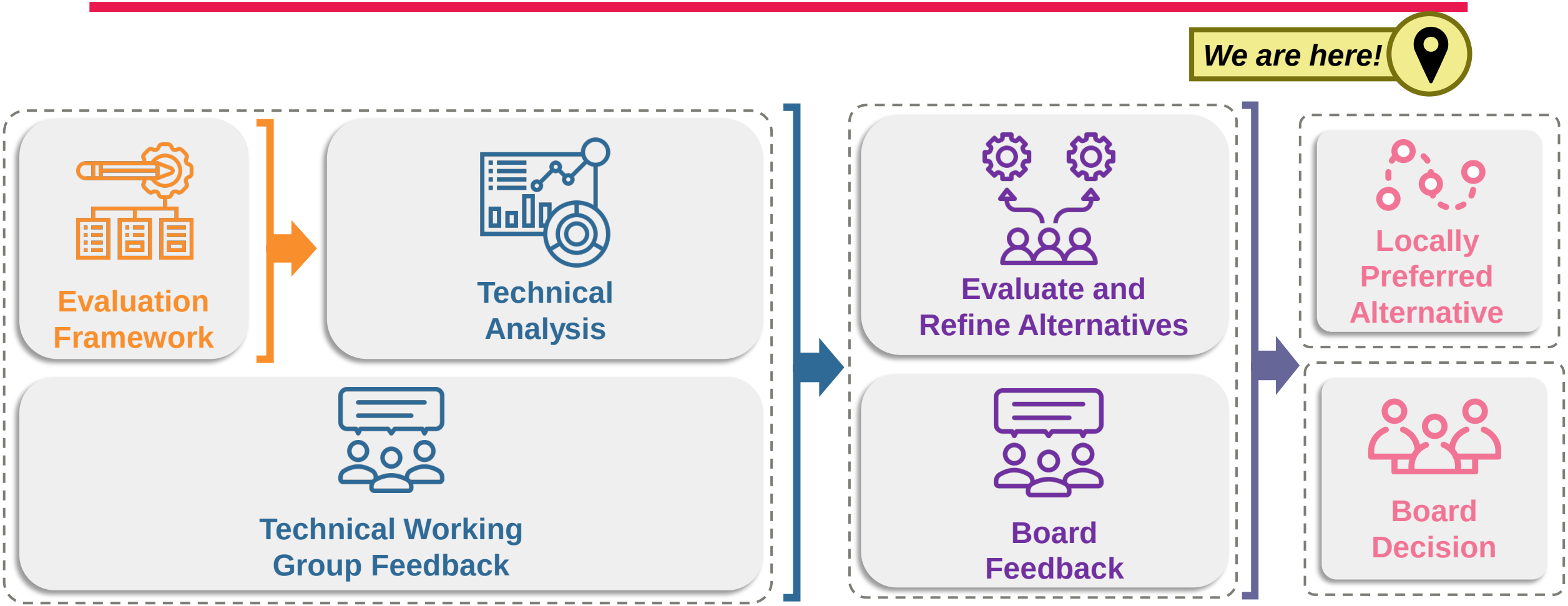
3 SELECT

- Board consideration of LPA



Refine and Select Phase Process

We are here!



FEBRUARY BOARD MEETING RECAP

February Board Meeting Topics

Addressable market analysis and base transit capture

Discussion of the relationship between development and ridership

What is STOPS Modeling?

A federally-compliant transit ridership model

STOPS is:

- ✓ Based on modelled population/employment growth through the RTP by ACOG
- ✓ Incorporating broad existing travel times/patterns

STOPS is not:

- ✓ Accounting for specific development growth
- ✓ A predictor of regional transit usage and travel patterns
- ✓ Based on individual origin-destination pairs

Ridership: What can we control?

Outside RTA's Sphere of Influence

This is the context in which you operate

- Existing Population and Jobs
- Land Use and Development
- Roadway Congestion
- Downtown Parking Rates

Within RTA's Sphere of Influence

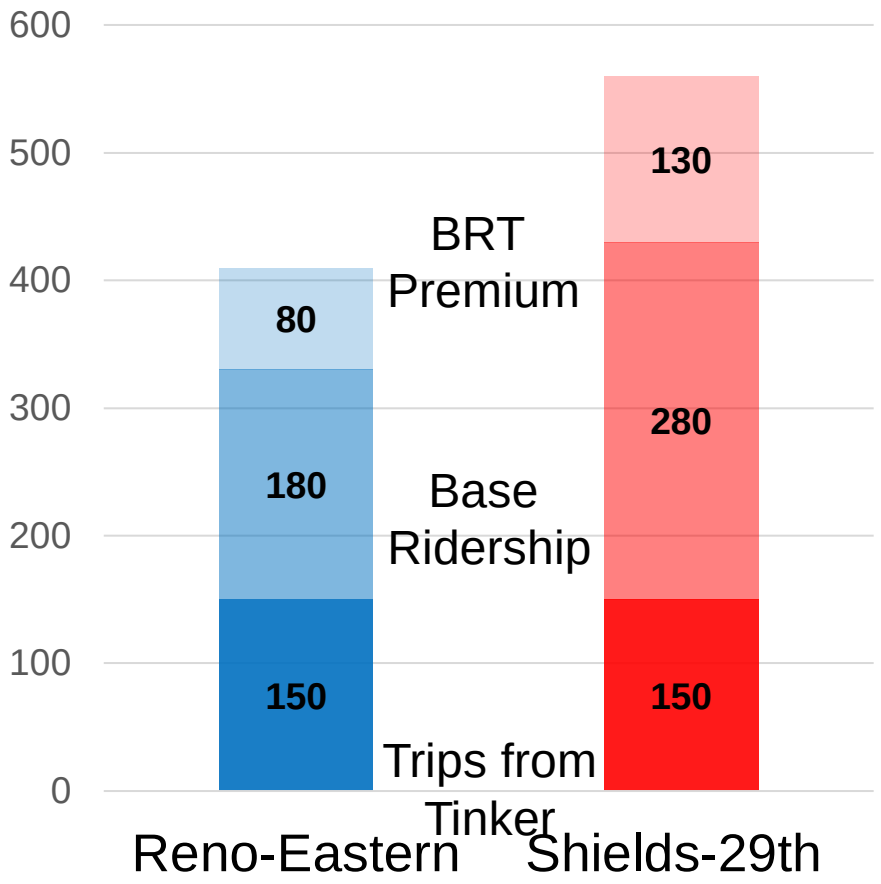
These are the levers you can control

- Service Type: Frequency and Pattern
- Travel Time (Competitiveness with Auto)
- Station Access
- Fares
- TOD Policy

STOPS does not account for these items

Estimated Weekday Boardings

	Half-Mile Buffer Population	Estimated Weekday Boardings per 100 Residents	Estimated Tinker Ridership	Estimated Boardings	Estimated Boardings per Station
Reno-Eastern	4,700	5.6	150	410	30
Shields-29th	7,400	5.6	150	560	60



*Estimated Boardings = (Half-Mile Buffer Population / 100) * Estimated Boardings per 100 Residents*

Peer Ridership Comparison

RTA

Peer LRT

Peer Dedicated Guideway BRT

Peer Mixed-Guideway BRT

Shields-29th

Reno-Eastern

Average Weekday Ridership by Station

1,200
1,000
800
600
400
200
0

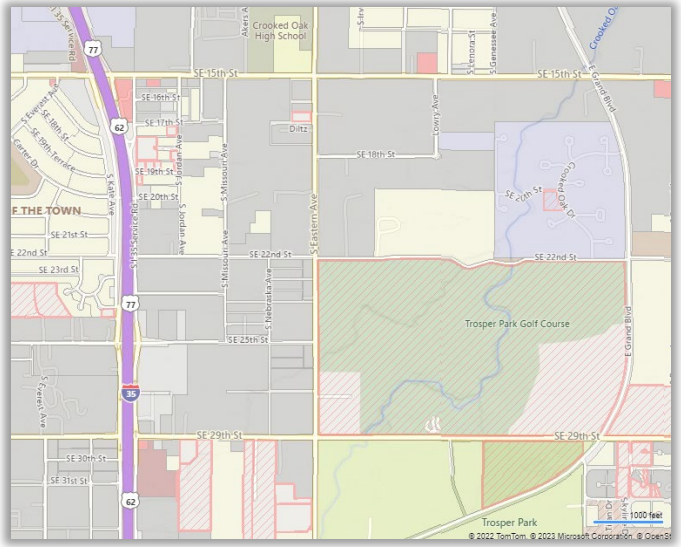
5,000
10,000
15,000
20,000
25,000
30,000

Average Station Area Population (Half-Mile)

Key Takeaway

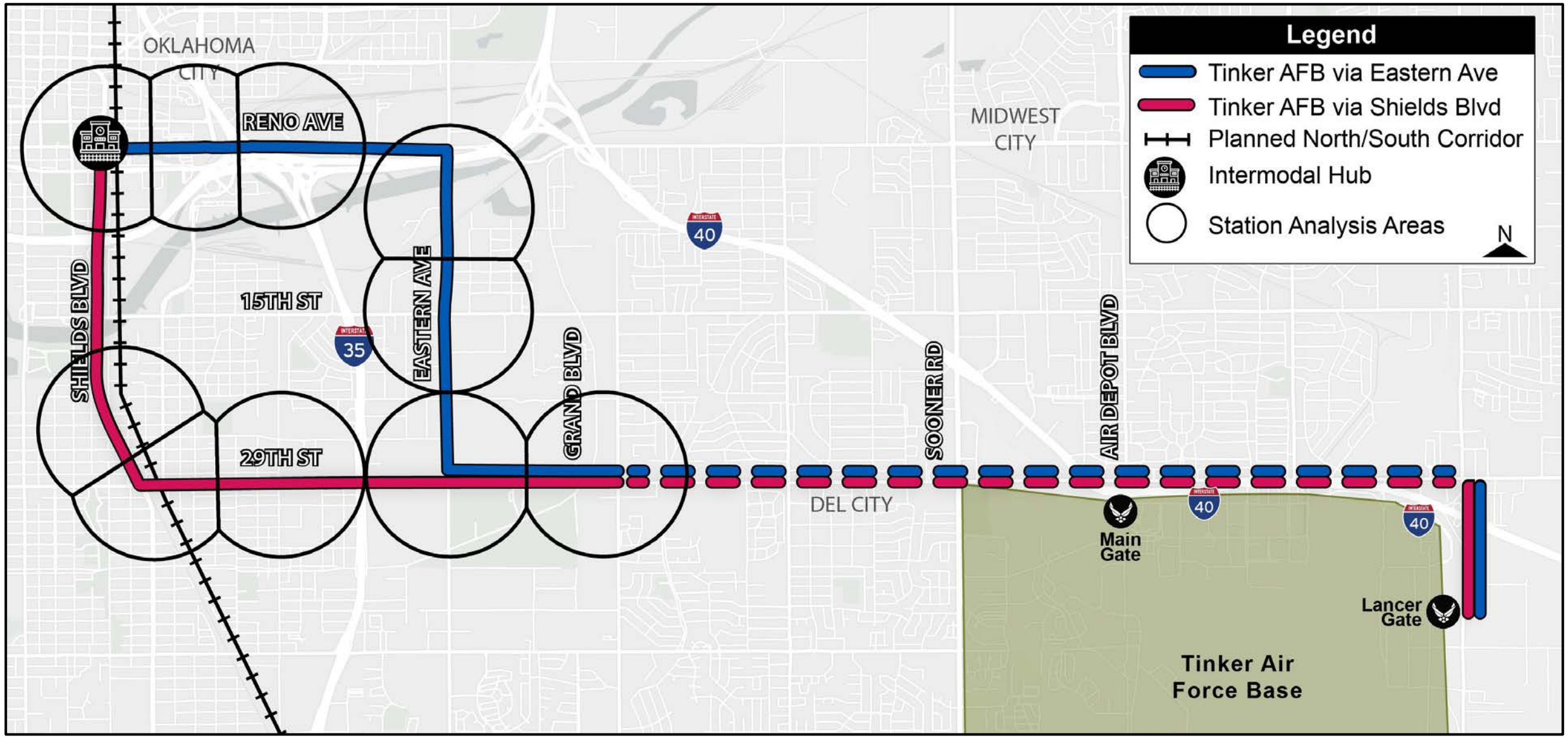
New development is crucial to achieving ridership goals

Local zoning should support/encourage development in station areas



EAST CORRIDOR FINDINGS

Alternatives for Technical Evaluation



Alternatives Analysis Findings

RTA

	Reno – Eastern *Mixed-Traffic*	Reno – Eastern *Dedicated Guideway*	Shields – 29th *Mixed-Traffic*	Shields – 29th *Dedicated Guideway*
Corridor Based Findings	Serves a diverse population Provides access to large future developments	Serves a diverse population Provides access to large future developments	Serves transit markets	Serves transit markets
Mode Based Findings	Is cost effective Minimize impact to adjacent properties Minimizes traffic operations impacts	Quick travel times Scalable service Prepares corridor for LRT conversion	Is cost effective Minimize impact to adjacent properties Minimizes traffic operations impacts	Quick travel times Scalable service Prepares corridor for LRT conversion

CORRIDOR-BASED FINDINGS

Alternatives Analysis Findings – Alignment

RTA

	Reno – Eastern *Mixed-Traffic*	Reno – Eastern *Dedicated Guideway*	Shields – 29th *Mixed-Traffic*	Shields – 29th *Dedicated Guideway*
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Key Findings: Reno-Eastern

Reno-Eastern

Serves a diverse population

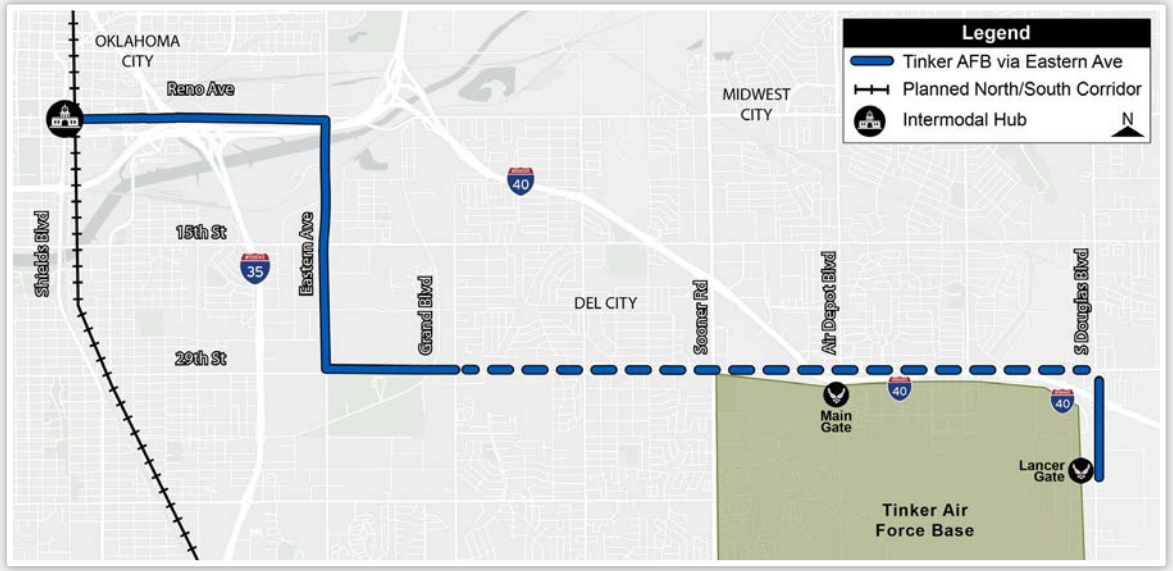
Provides access to large planned developments

- Chickasaw Nation Development
- Development pressure from Bricktown moving east

Room for growth - large future market potential

High capacity for TOD

- Large vacant parcels available for development
- Underutilized industrial land adjacent to corridor



Key Findings: Shields-29th

Shields-29th

Serves existing transit markets

- Slightly higher ridership projections

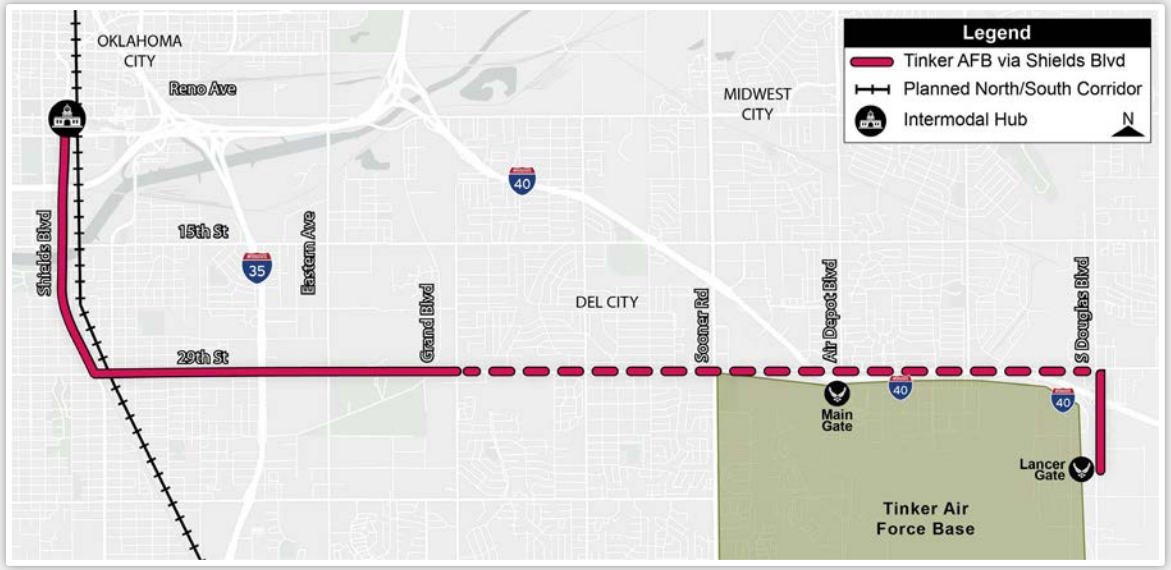
Potential overlap with MAPS 4 BRT Project

Challenges to TOD

- Smaller parcels discourage vertical development
- Fragmented ownership
- Fewer catalytic sites

Mix of existing land uses

- Residential, commercial, and light industrial



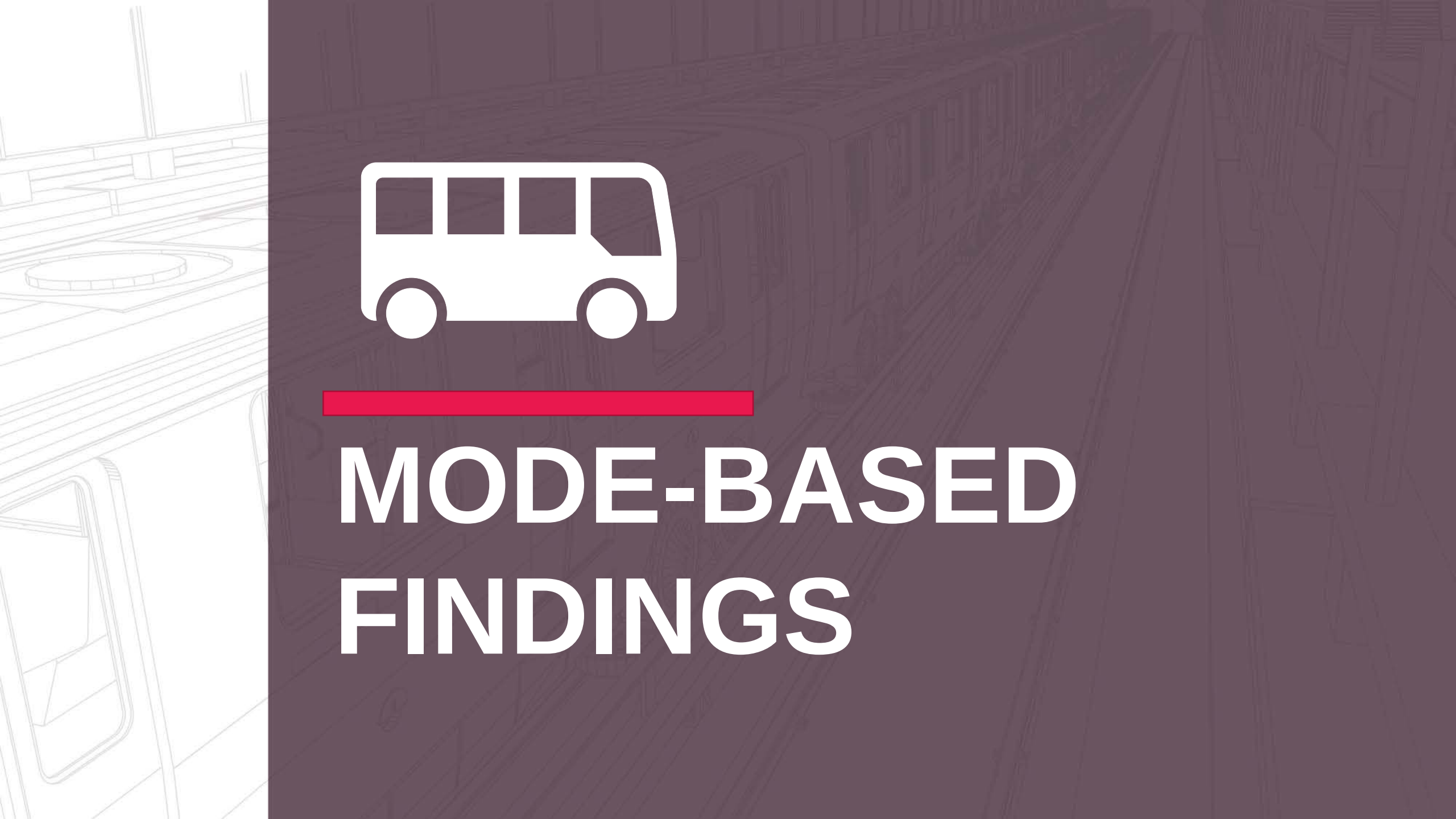
Alignment Comparison

Reno-Eastern

- Access to planned developments
- High capacity for TOD
- Room for growth - large future market potential

Shields-29th

- Serves existing transit markets
- Challenges to TOD
- Potential overlap with MAPS 4



MODE-BASED FINDINGS

Alternatives Analysis Mode Findings

RTA

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Modal Considerations

Mixed Traffic BRT

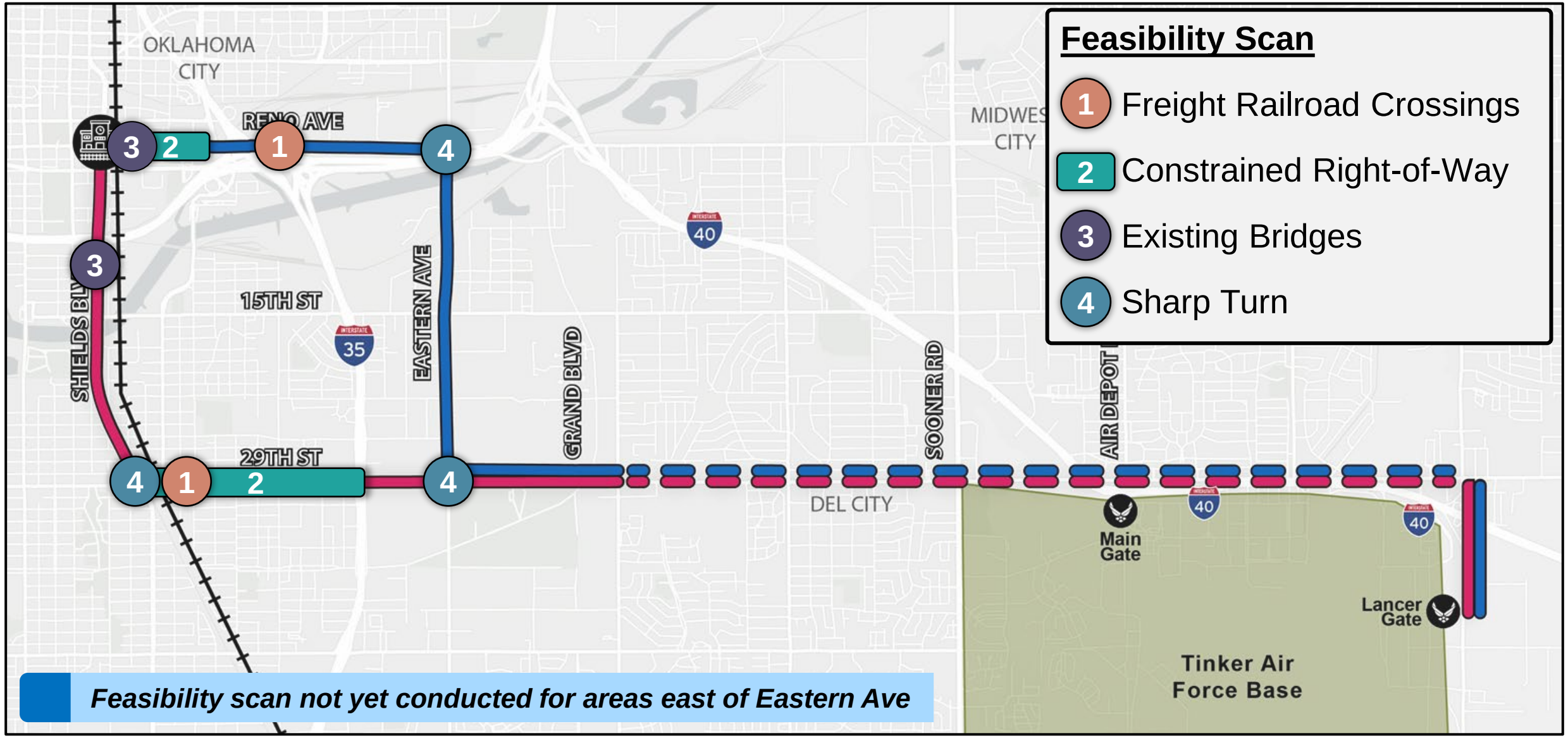
Less than 50% Dedicated ROW

Center-Running Dedicated Guideway BRT/LRT

More than 50% Dedicated ROW

100% Dedicated ROW

Engineering Constraints – Cost Drivers

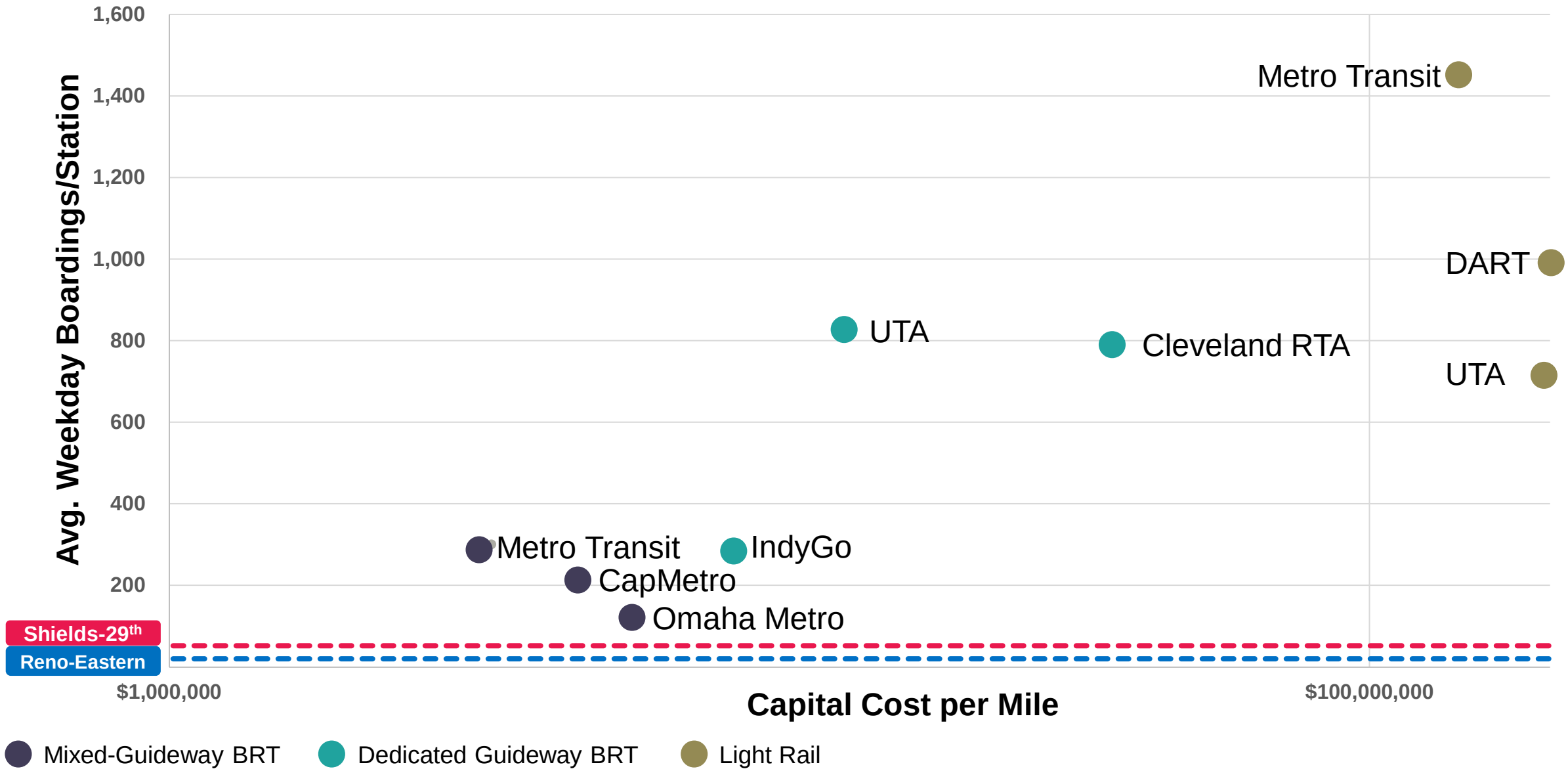


Peer Systems – Costs and Ridership

RTA

Mode	Average Capital Cost/Mile (2022 Dollars)	Average Weekday Boardings/Station (Based on Peers)	Peer Systems
Bus Rapid Transit Mixed Traffic 	$7 million $$$	115 – 300	ORBT, Omaha EMBARK, OKC CapMetro, Austin UTA, Salt Lake City
Bus Rapid Transit Dedicated Guideway 	$47 million $$$	270 – 830	PRT, Pittsburgh IndyGO, Indianapolis UTA, Salt Lake City RTA, Cleveland
Light Rail Transit 	$108 million $$$	720 – 1,440	CapMetro, Austin RTD, Denver Metro Transit, Twin Cities Valley Metro, Phoenix

Peer Systems – Ridership & Cost



System Wide Cost Estimates (2022 USD)

RTA Identified Corridor	Mode	Capital Cost Estimate	Operations and Maintenance Cost** (Initial estimates)
North-South Corridor	Commuter Rail	TBD*	At least $10M/year
East Corridor	Mixed Traffic BRT OR Center-Running Dedicated Guideway BRT/LRT	~$7M to $105M/mile (Based on peers)	~$3M-$6M/year
West Corridor	TBD	TBD	TBD
Airport Corridor	TBD	TBD	TBD
Total		$	$

N/S Capital Cost Estimate is in development

****Not including necessary financing costs***

Key Findings: Light Rail

Low Ridership
- Existing and future ridership market would be below peers

Cost
- Light rail presents significantly higher cost

Lack of Available ROW
- Midwest and Del City right of ways present challenges to construction of LRT

Recommendation:
- Proceed with BRT alternatives

ENGAGEMENT SUMMARY

By the Numbers

RTA

Virtual Town Hall Engagement

March 2021

65
Live Zoom Participants

95
Facebook Live Views

50
Questions & Comments

In-Person Community Engagement

September 2022

580
Total Engagements

18
Events Attended

92
Survey Responses

Virtual Town Hall Engagement

June 2022

242
Live Zoom Participants

976
Facebook Live Views

50
Social Media Posts

35
Town Hall Views at RTAMoves.com*

Online Engagement at RTAMoves.com

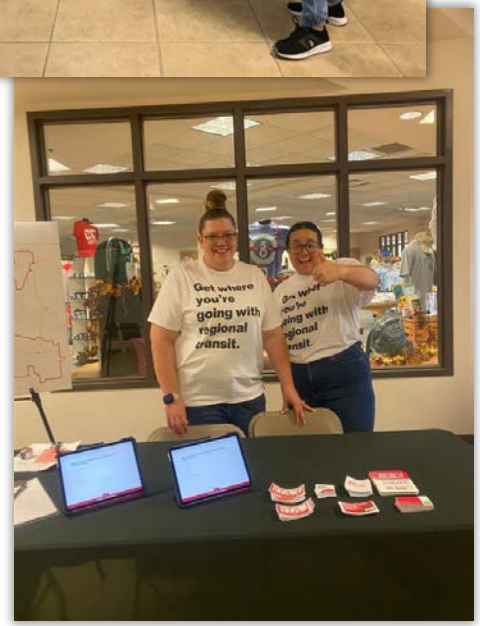
6,619
Total Visits

1,685
Unique Users

**Town Hall recording posted only for June meeting*

Key Takeaways

- Community partners (Tinker AFB, Norman, Edmond, OKC) are excited about regional transit solutions
- Professors and students at universities are interested in more educational outreach efforts
- Growth and change in Central Oklahoma is driving interest in regional transportation
- Park-and-ride facilities and real-time passenger information most preferred amenities among respondents

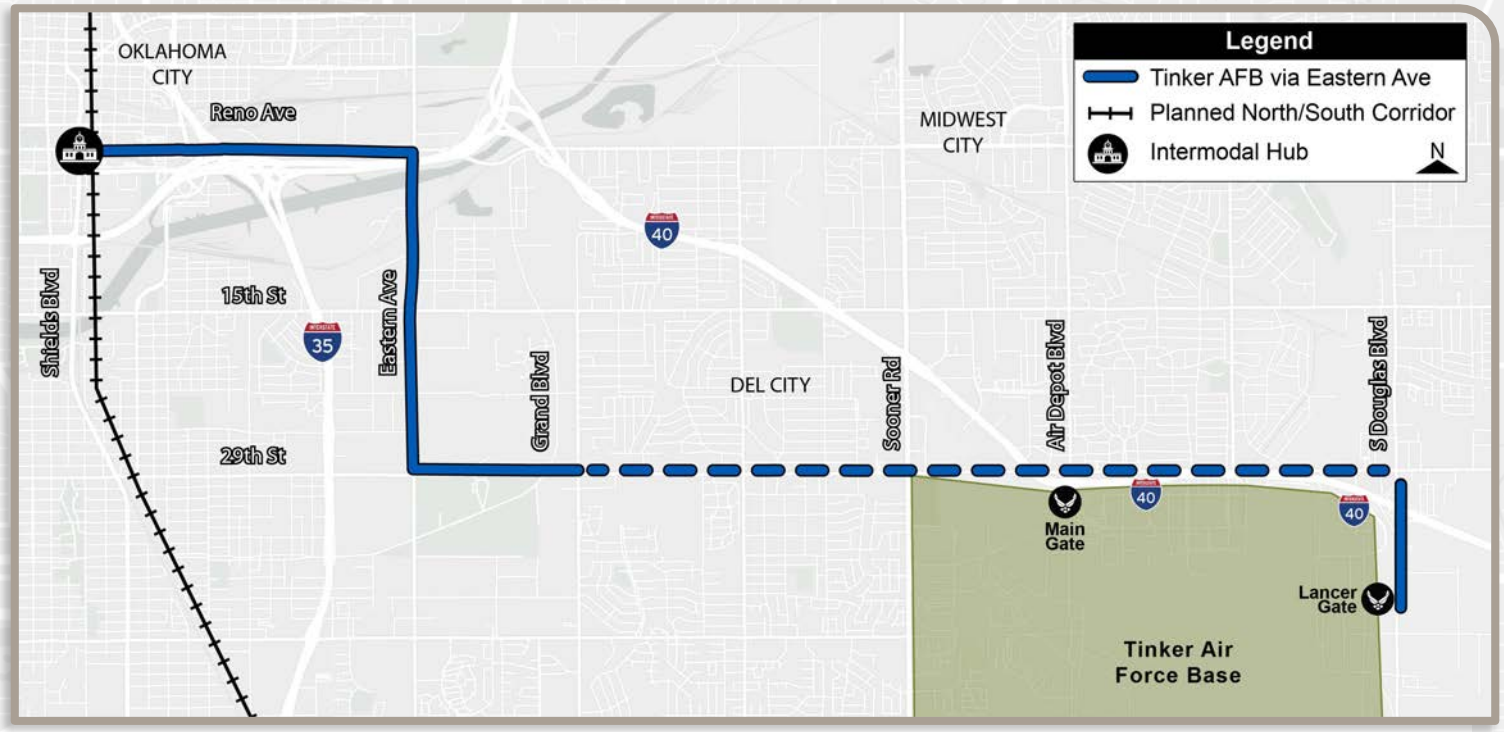


SUMMARY

East Corridor Recommendation

RTA

Bus Rapid Transit



Recommended Alternative

Mode: *Bus Rapid Transit*

Alignment: *Santa Fe Depot with Lancer Gate via Reno Avenue, Eastern Avenue, 29th Street, and Douglas Boulevard*

What is a Locally Preferred Alternative?

Community's preferred mode and alignment that meets identified goals and objectives

LPA identifies:

- ✓ Feasible alignment
- ✓ Mode
- ✓ Planning level information (i.e., cost and ridership estimates)

LPA does not:

- ✓ Result in a fully designed system
- ✓ Preclude modifications to alignments, modes, and stations

NEXT STEPS

Work Plan

RTA

March 2023 CORRIDOR ANALYSIS SUMMARY AND LPA RECOMMENDATION

May 2023 DISCUSSION OF LPA RECOMMENDATION FOR NORTH/SOUTH AND EAST CORRIDORS

June 2023 *BOARD SELECTION OF LOCALLY PREFERRED ALTERNATIVES FOR NORTH/SOUTH AND EAST CORRIDORS*

DISCUSSION