

# Alternatives Analysis Update

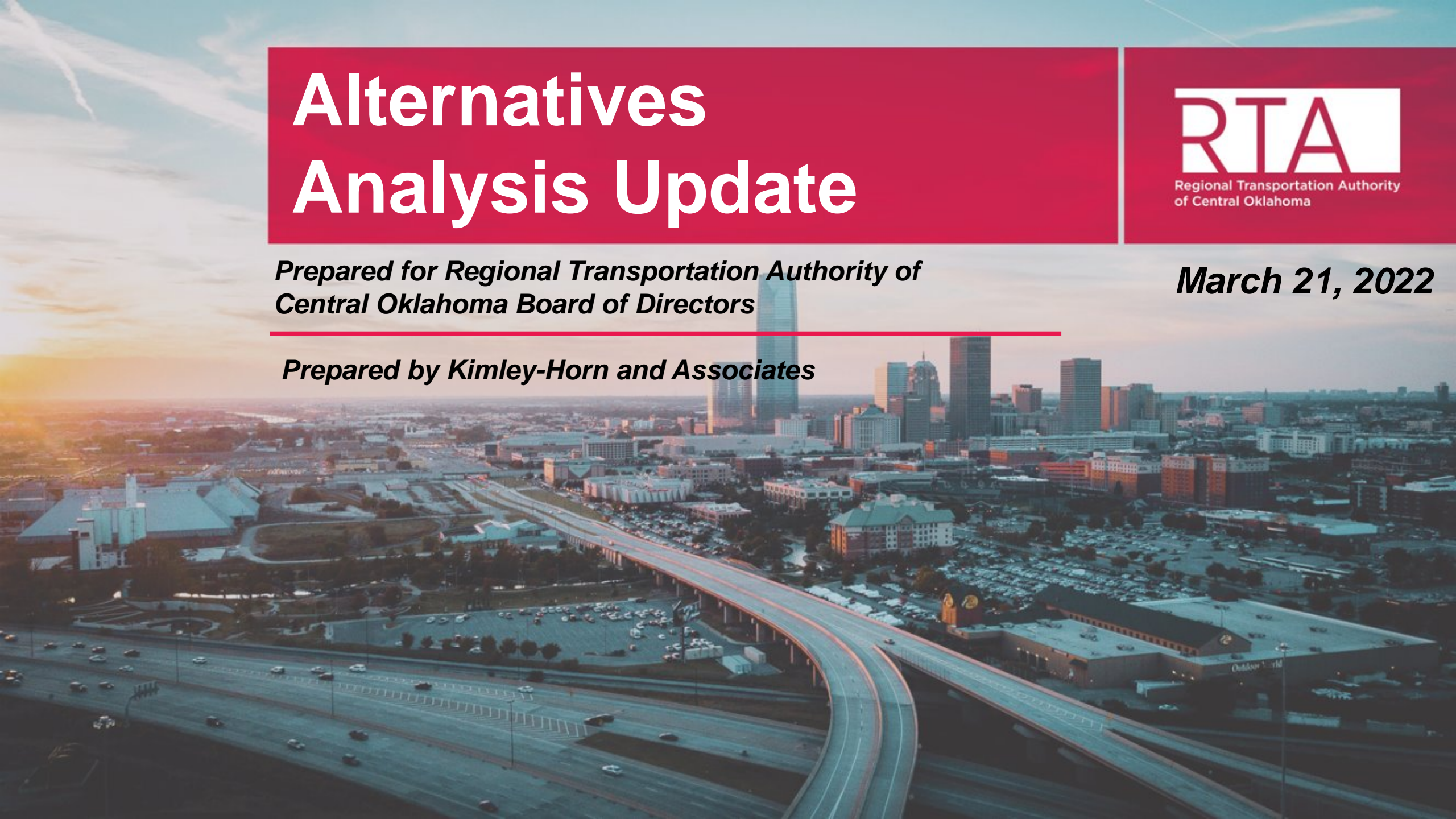


*Prepared for Regional Transportation Authority of  
Central Oklahoma Board of Directors*

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*March 21, 2022*

*Prepared by Kimley-Horn and Associates*



# Agenda

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- Introductions
- Alternatives Analysis Update
  - Recap Discovery Phase
  - Revised Alignments
  - Modes
  - Discussion of High-Potential Alignments
- Next Steps



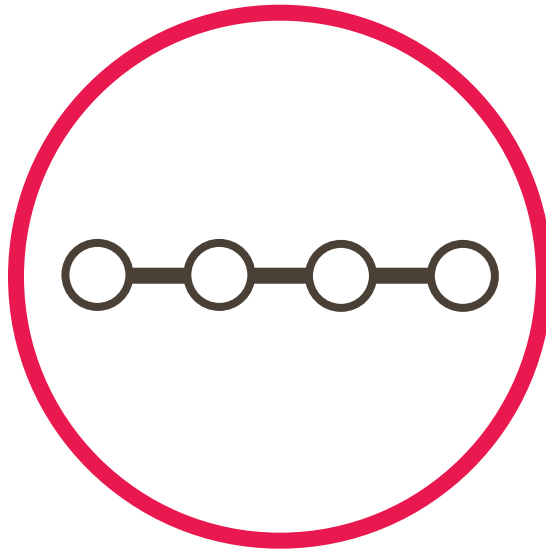
# ALTERNATIVES ANALYSIS UPDATE

# What still needs to be determined?

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**Options**



**Alignment**



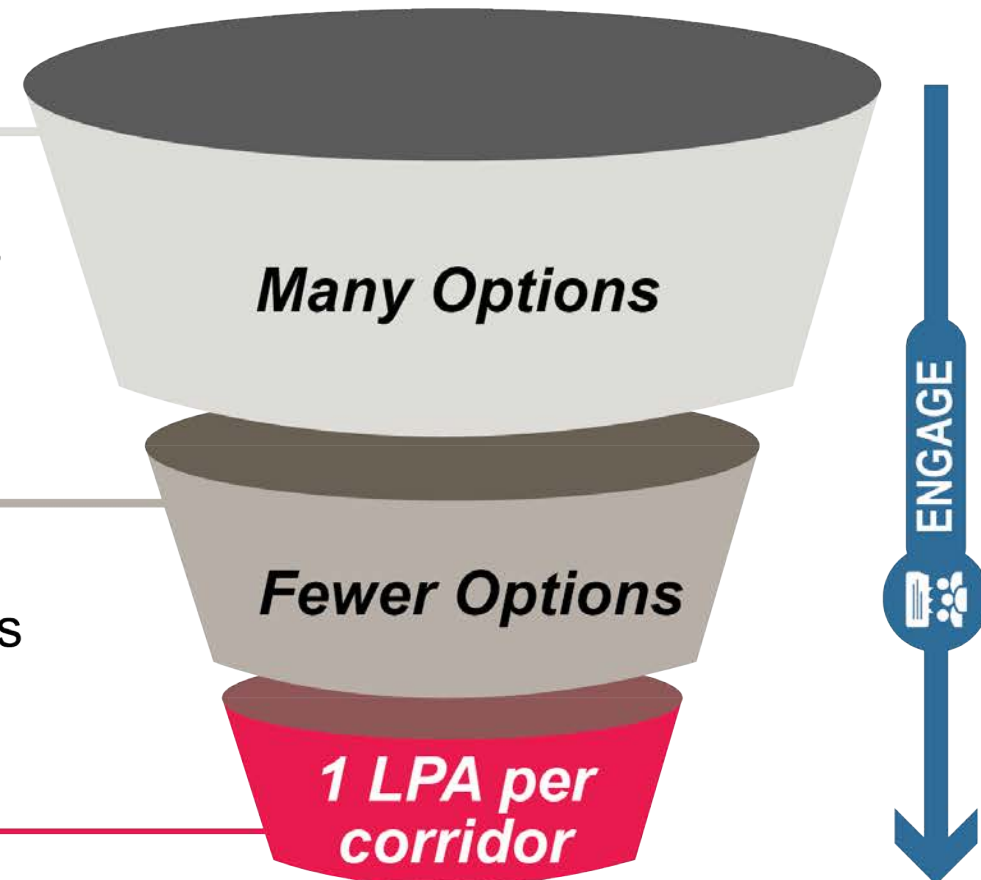
**Mode**



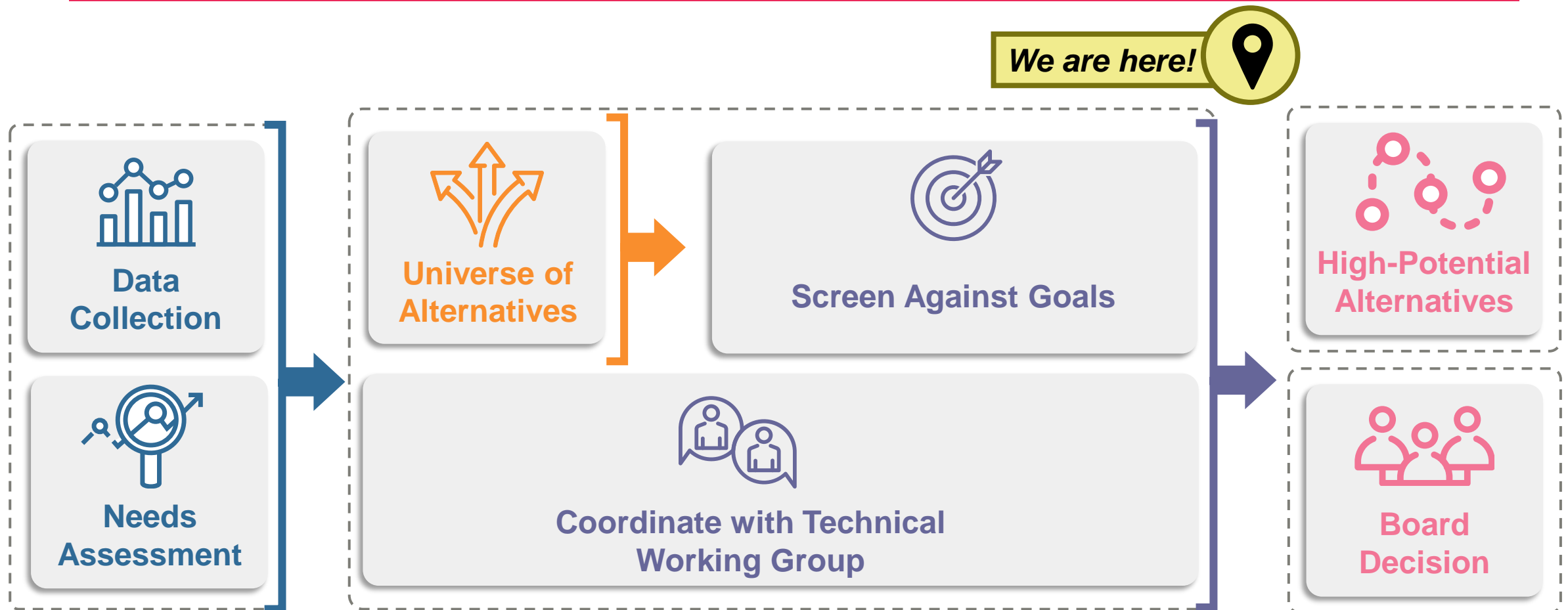
# Alternative Analysis (AA) Process



- 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



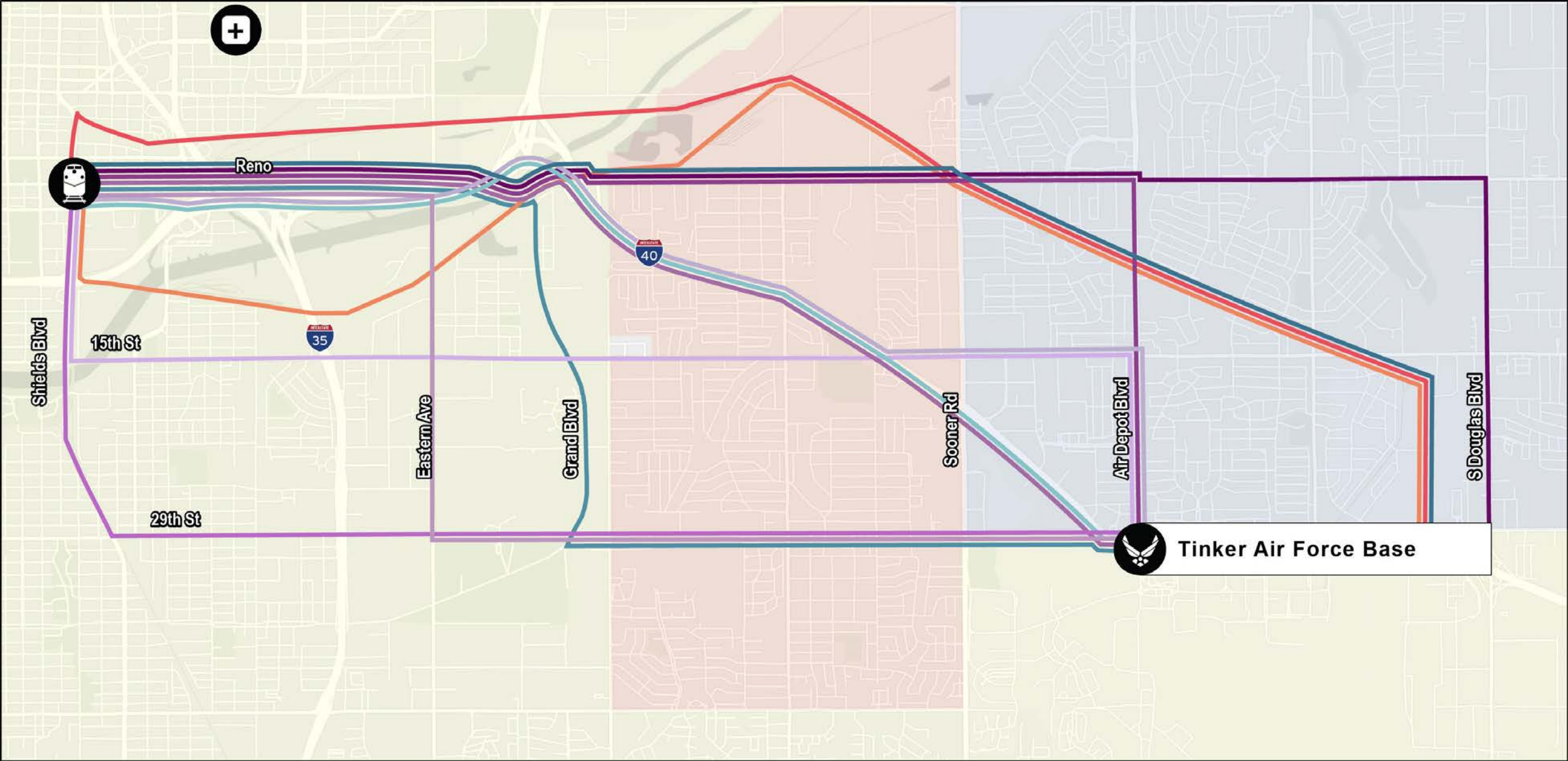
# Discover Phase Process



The background of the slide features a photograph of a train on tracks, viewed from a low angle looking down the length of the train. Overlaid on this photograph is a white line-art technical drawing of the same train and track system, creating a layered, engineering-like aesthetic. The text is centered over the middle of the image.

# RECAP DISCOVERY PHASE

# Universe of Alternatives





# Alternatives Analysis Initial Screening Criteria

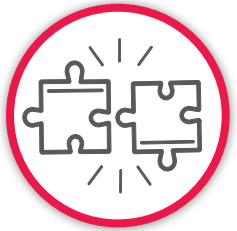
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**Improves Community Connections and Mobility**



**Interfaces with Major Potential Cost Elements**



**Compatible with Local Land Use and Transportation Plans**

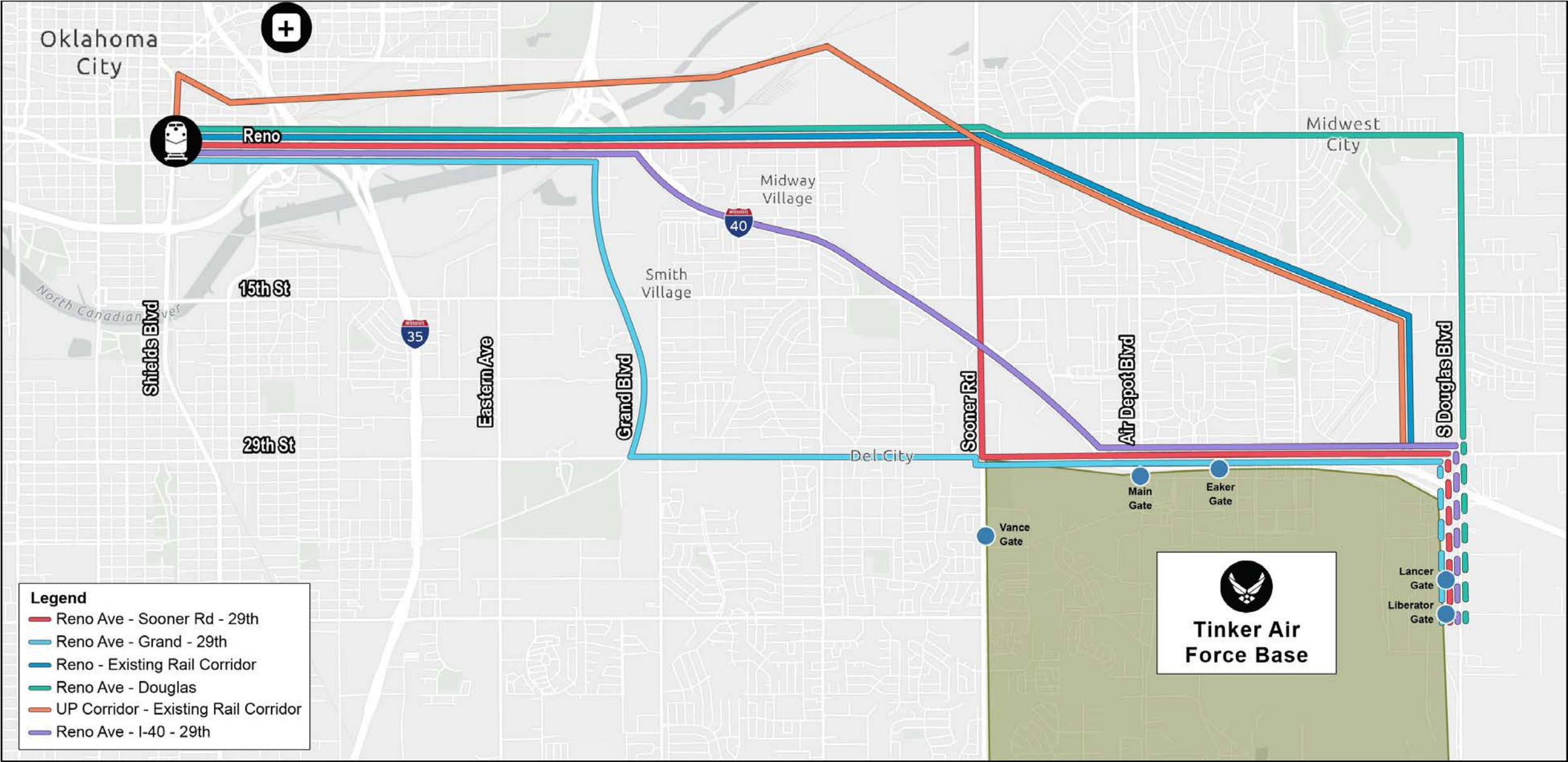


**Provides Economic Development Potential**



**Provides Access to Activity**

# Previous Alignments



The background of the slide features a photograph of a train on tracks, viewed from a low angle looking down the length of the train. Overlaid on this photograph is a semi-transparent technical line-art drawing of the same train and track system, showing various mechanical and structural details. The text "REVISED ALIGNMENTS" is centered over the image in a large, white, sans-serif font.

# REVISED ALIGNMENTS

# What has changed?

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**Some alignments no longer  
meaningfully serve member  
cities**



**Tinker AFB Coordination**



**Connectivity opportunities  
near Capitol Hill**



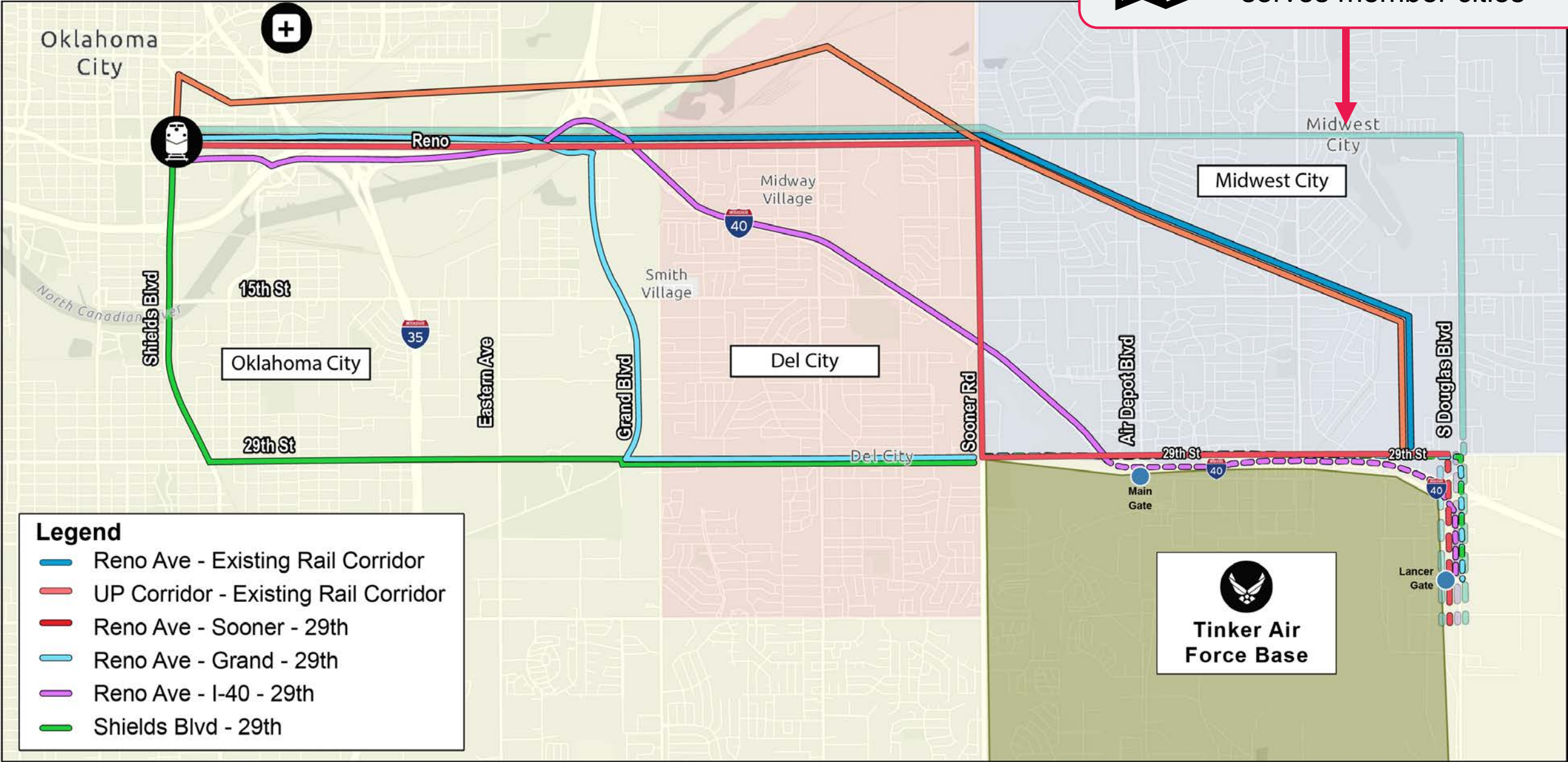
**Technical Working Group  
Feedback**



# Alignment Changes



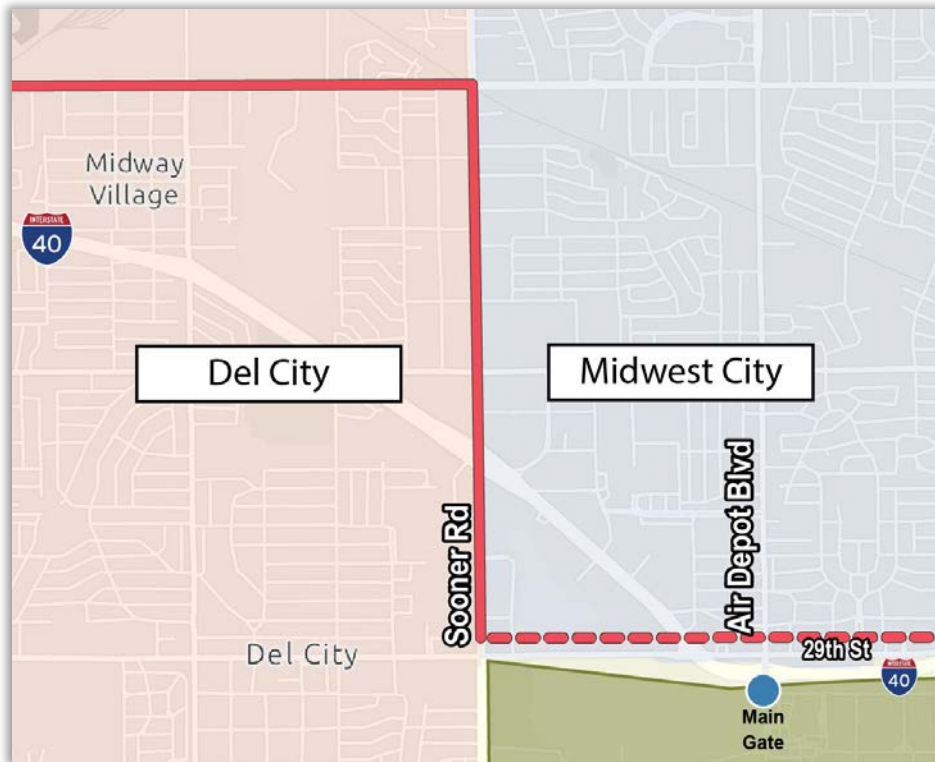
No longer meaningfully serves member cities



# Constraints: Reno to Sooner to 29<sup>th</sup>

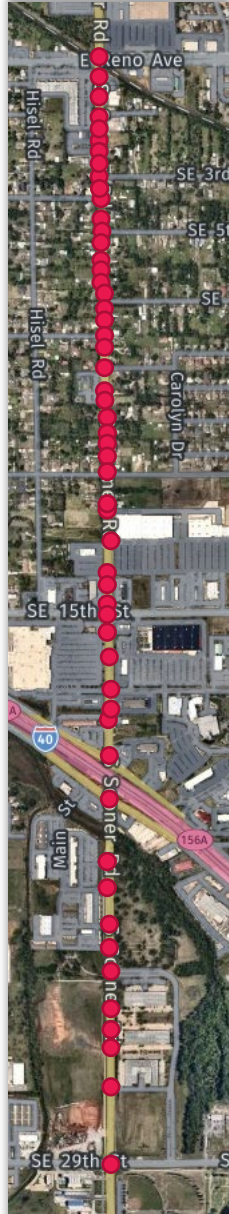
## City Boundary

- *Sooner Road is the boundary between Del City and Midwest City*



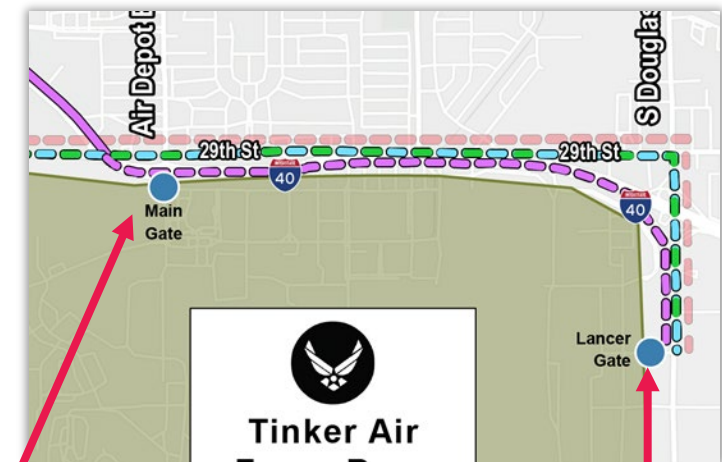
## ROW & Intersections

- *~100' of total available ROW, LRT requires 30' to 50'*
- *Intersections along the roadway create cost constraints and disruption to local access*



# Tinker Gate Analysis

- Main Gate and East Gate are most viable options
  - 24-hour gates
  - Commuter population typically enters at these gates
- Vance Gate was removed as it would primarily serve a limited, on-base population



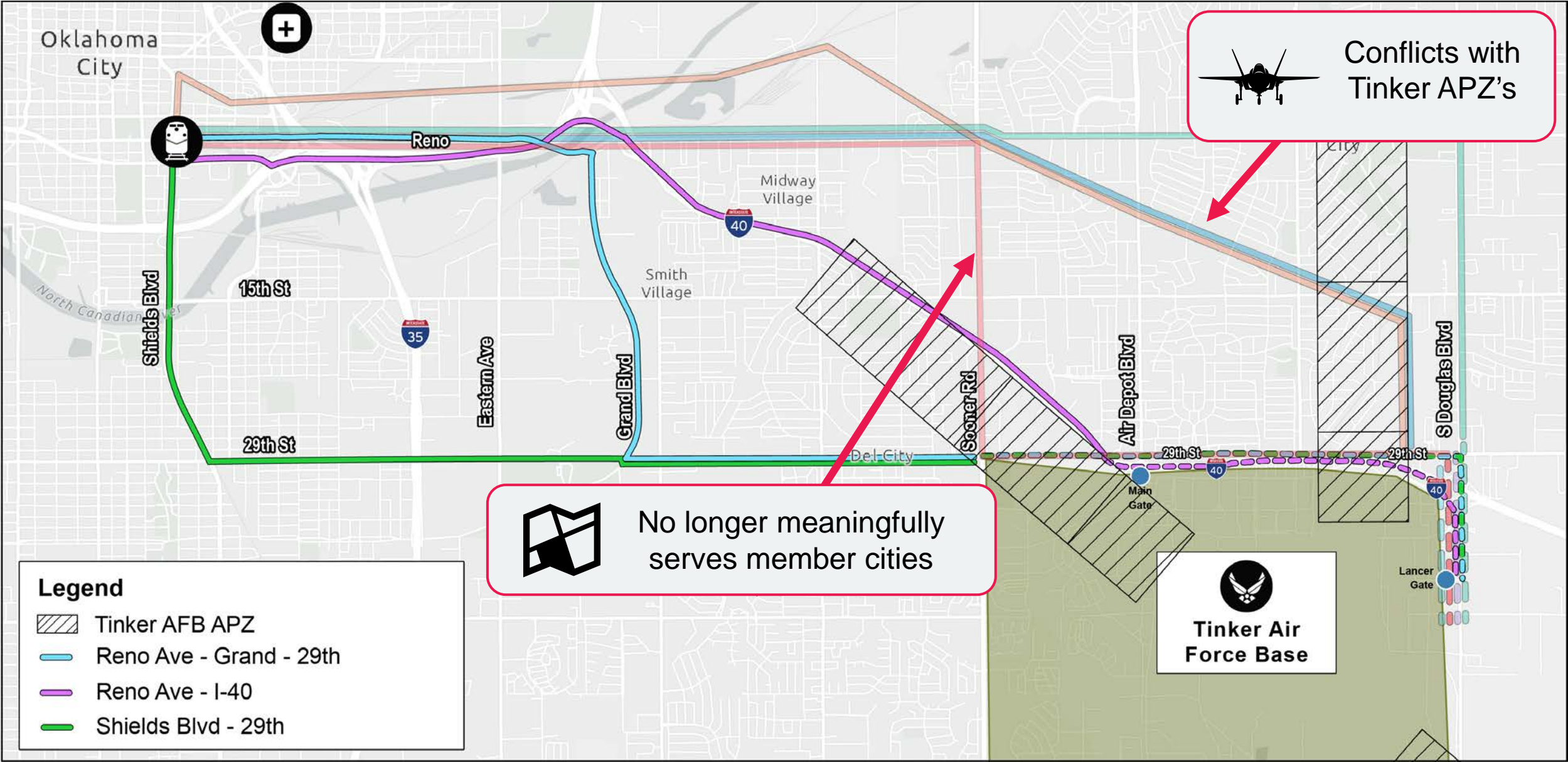
Current visitor access,  
24-hour gate

Closest to typical  
commuter buildings,  
24-hour gate

*Gate analysis is in review by TAFB and subject to change*

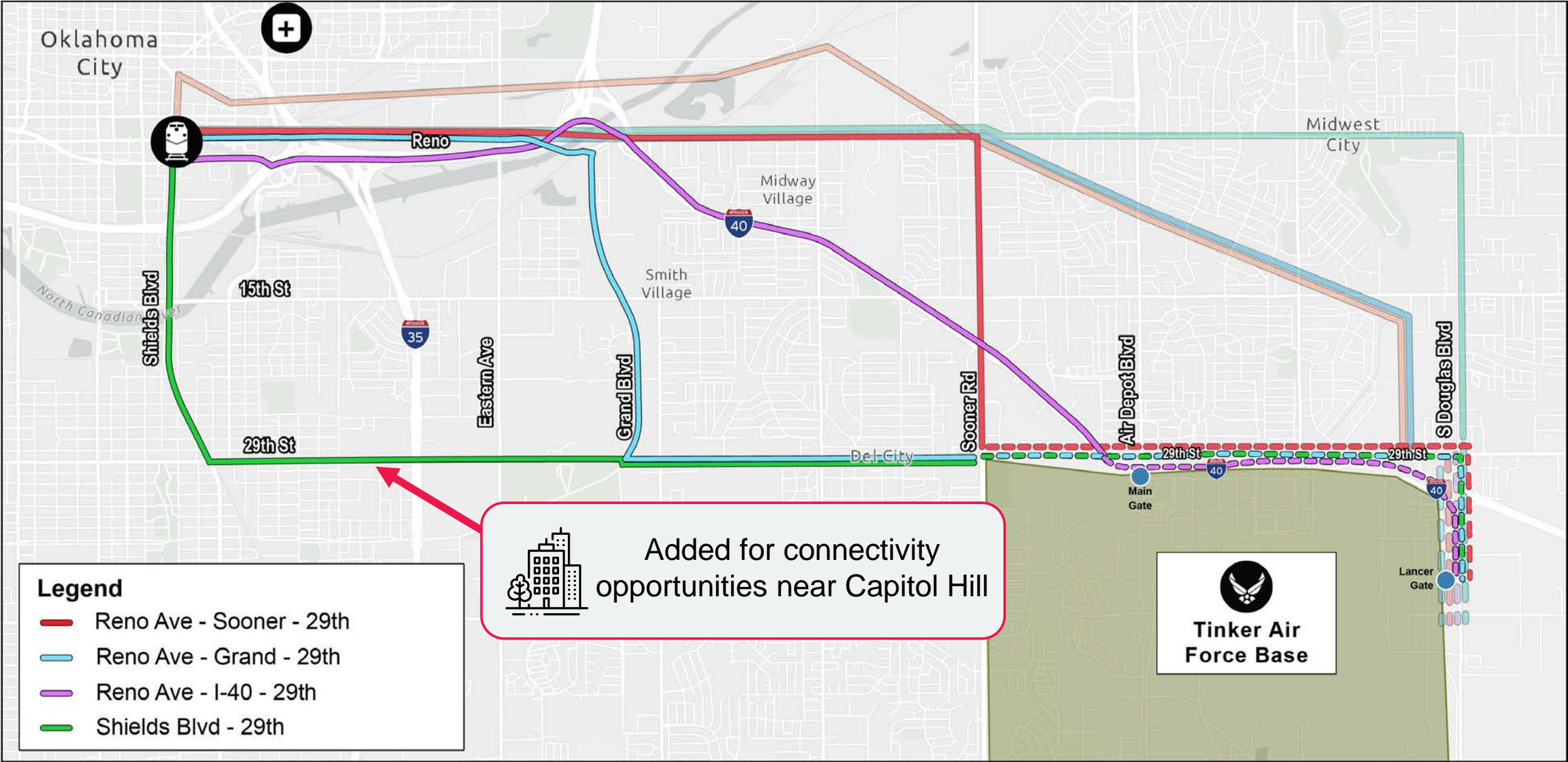


# Alignment Changes





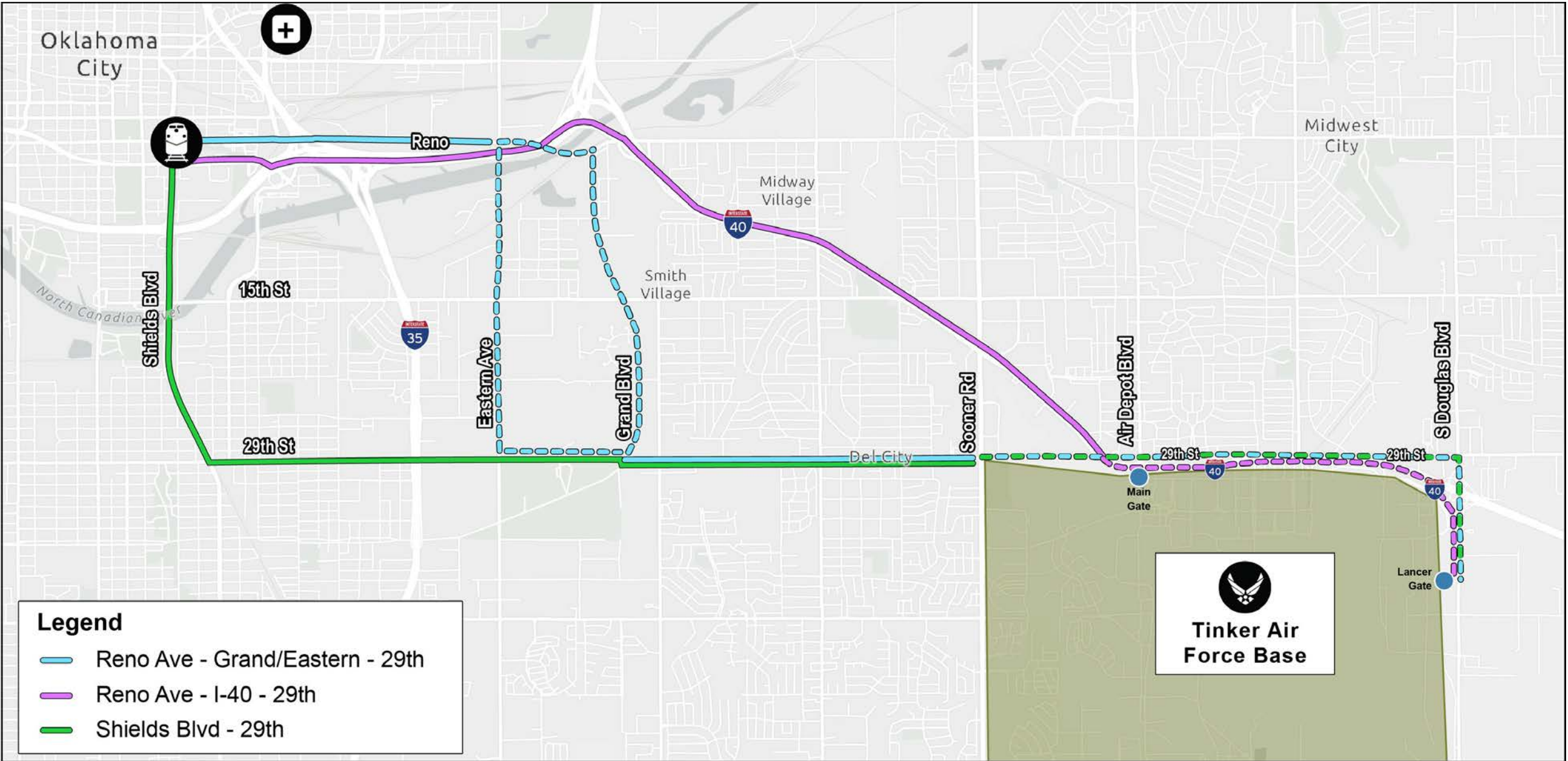
# Alignment Changes







# High-Potential Alignments



The background is a detailed line-art illustration of a train on tracks. The train is composed of several connected cars, each with multiple windows and doors. The tracks run parallel to the train, leading towards the horizon. On the right side of the tracks, there are various structures, possibly for power or signaling. A white vertical bar is positioned on the left side of the image, partially obscuring the train. The word "MODES" is written in large, white, sans-serif capital letters across the center of the image, overlapping the train and the white bar.

# MODES



# Regional High-Capacity Transit Modes

## Regional Transit



# BRT: Mixed-Traffic vs. Fixed Guideway

## Mixed Traffic

- Enhanced Bus Service
- Dedicated stations, limited stop service
- Lower initial investment, more investment to convert to LRT



## Dedicated Guideway

- Dedicated guideway separated from traffic flow
- Higher initial investment, more easily converted to LRT

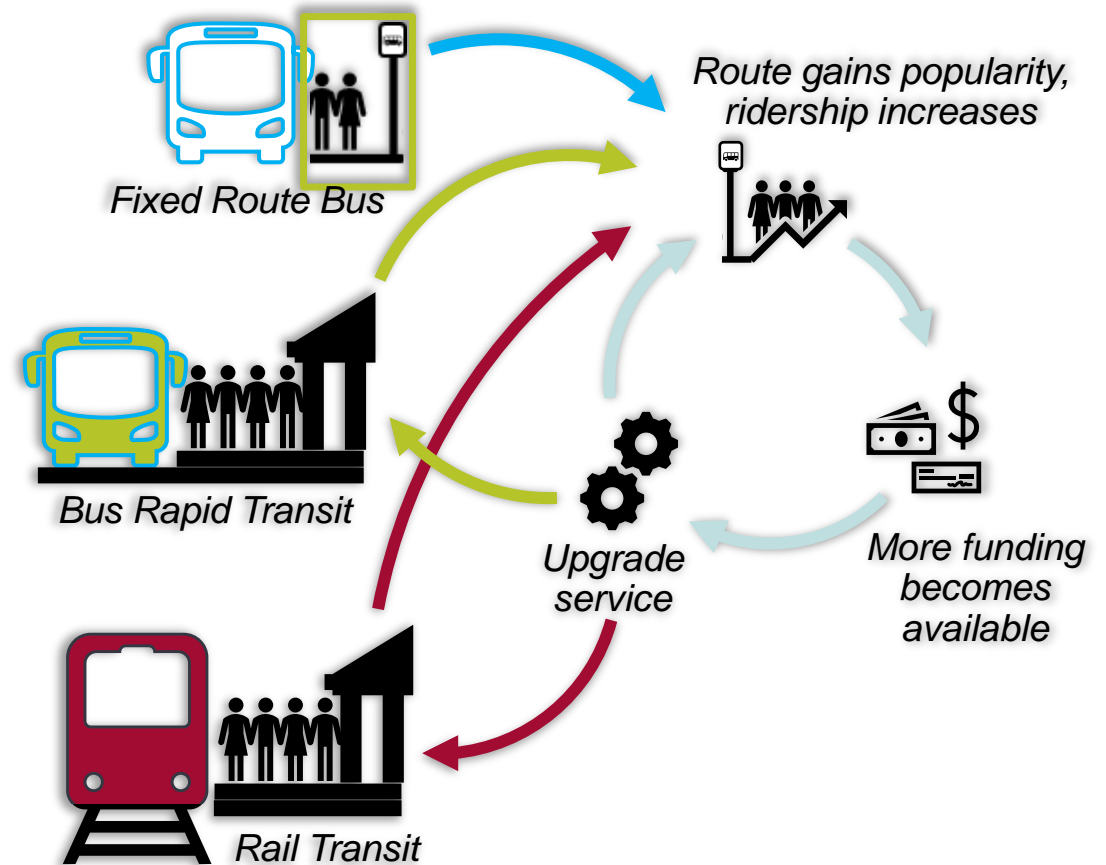


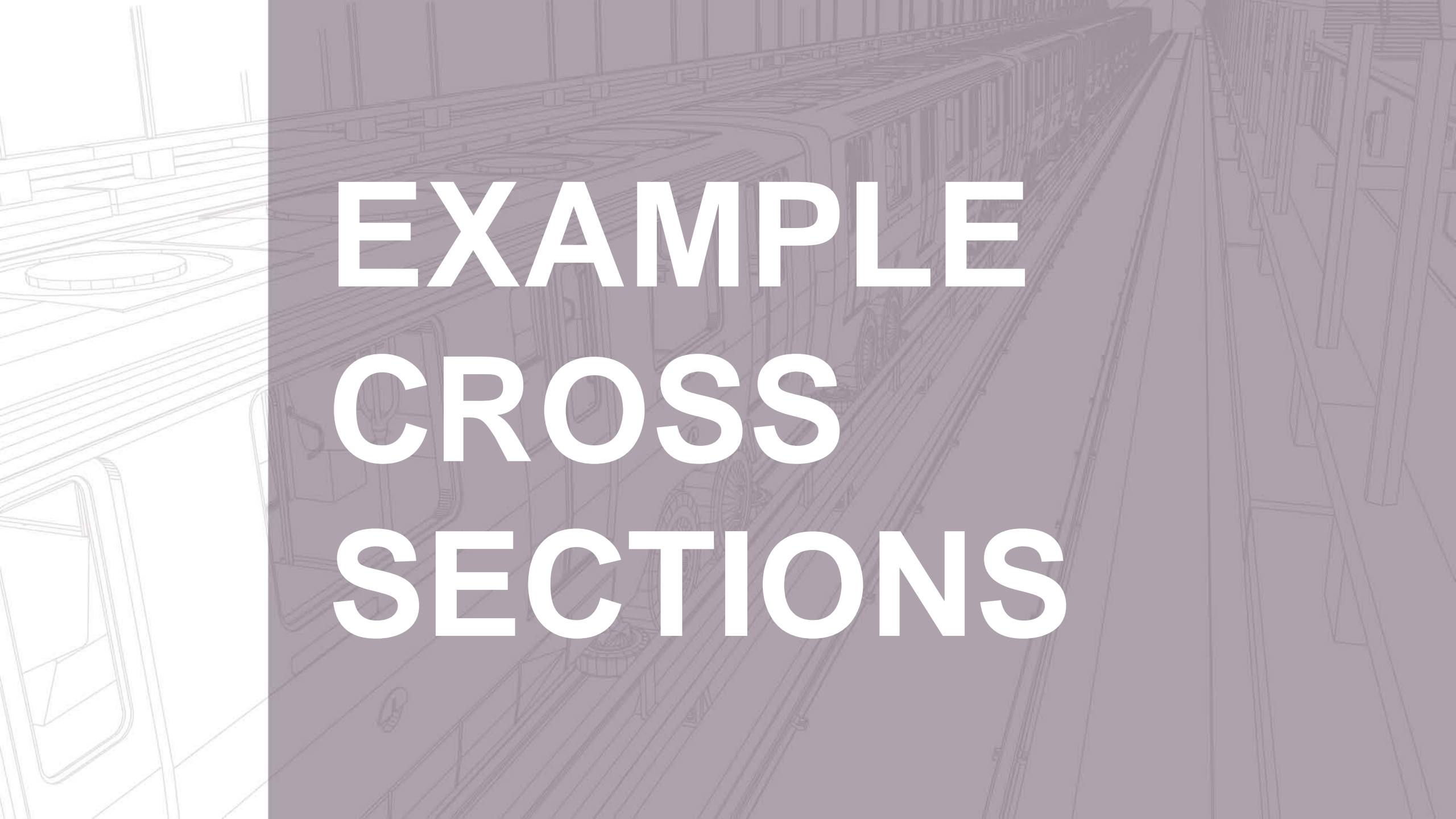


Feedback

# Transition from BRT to Rail Transit

- BRT Investment
  - Growth in ridership opportunity
  - Establish a transit culture
  - Spur economic growth along corridor
- Does Not Preclude Rail
  - As ridership grows and funding is available
  - Ability to leverage an existing RR corridor
- Land Use and Economic Development Opportunity
  - Investment in permanent transit features (e.g., stations) inspires station area growth

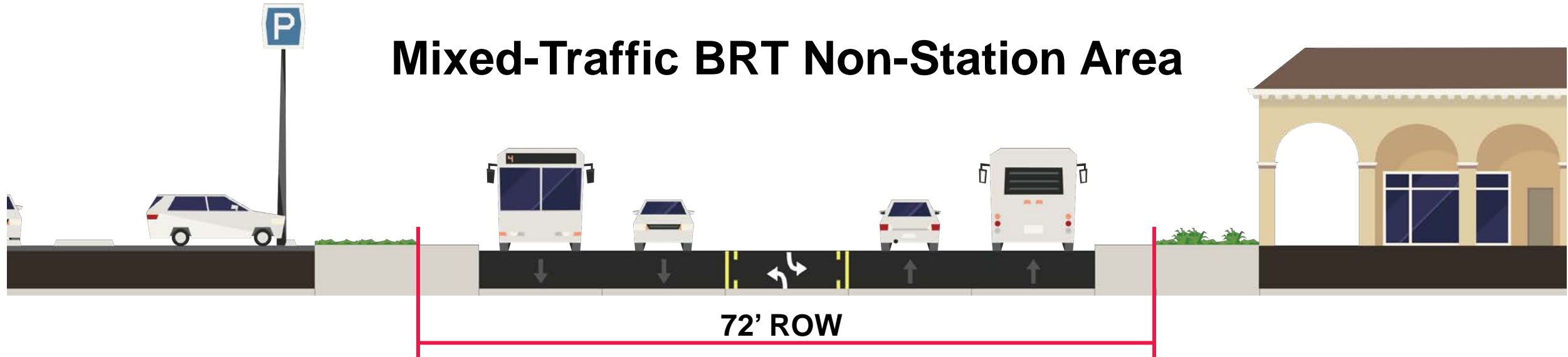




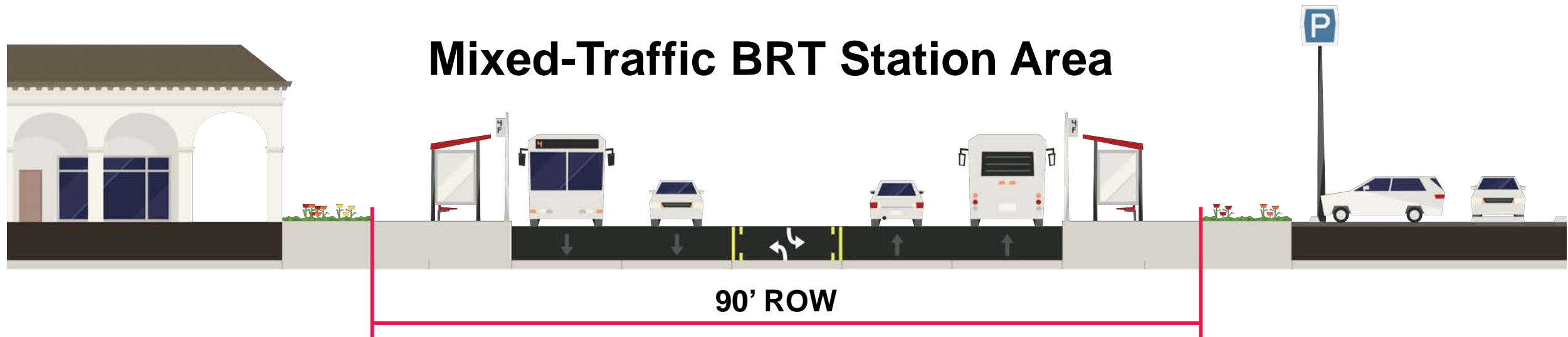
# EXAMPLE CROSS SECTIONS



## Mixed-Traffic BRT Non-Station Area



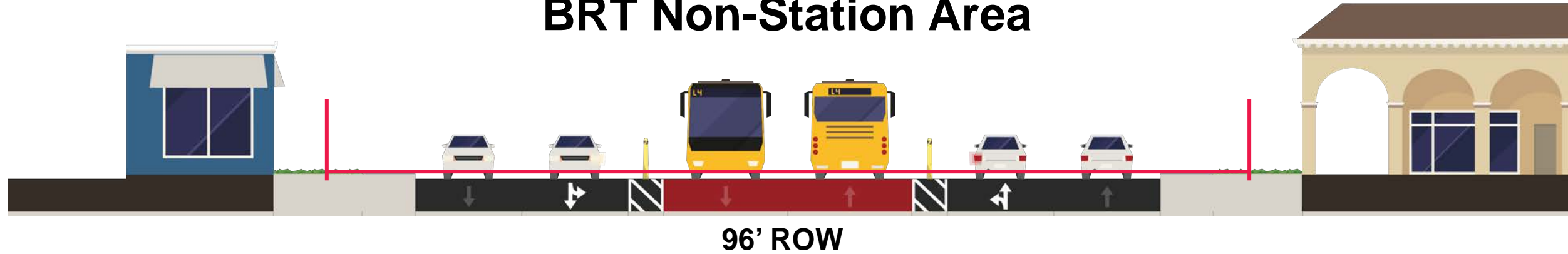
## Mixed-Traffic BRT Station Area



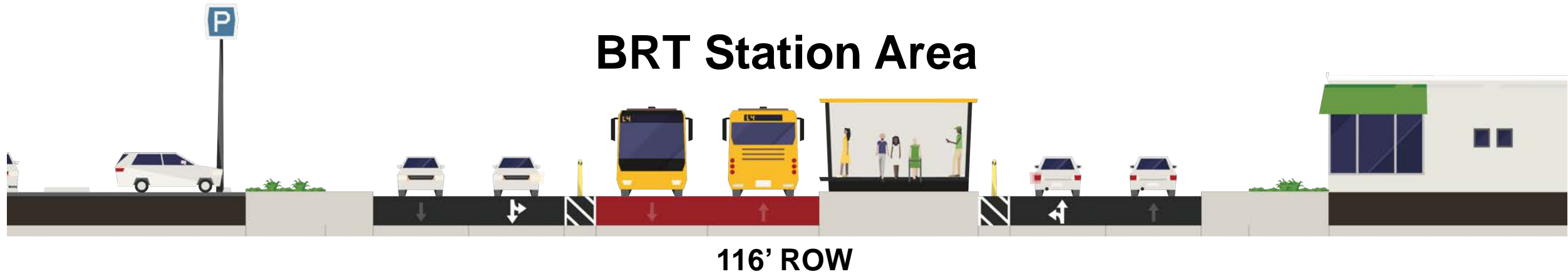
# Fixed Guideway BRT Cross Section

RTA

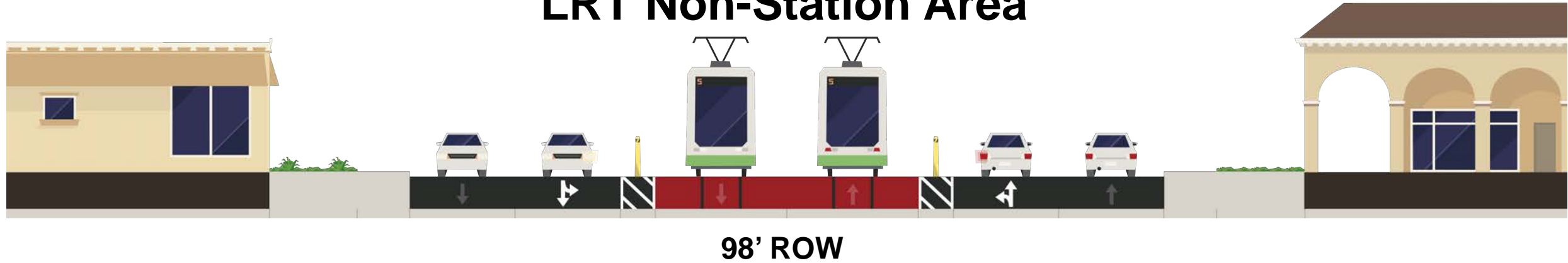
## BRT Non-Station Area



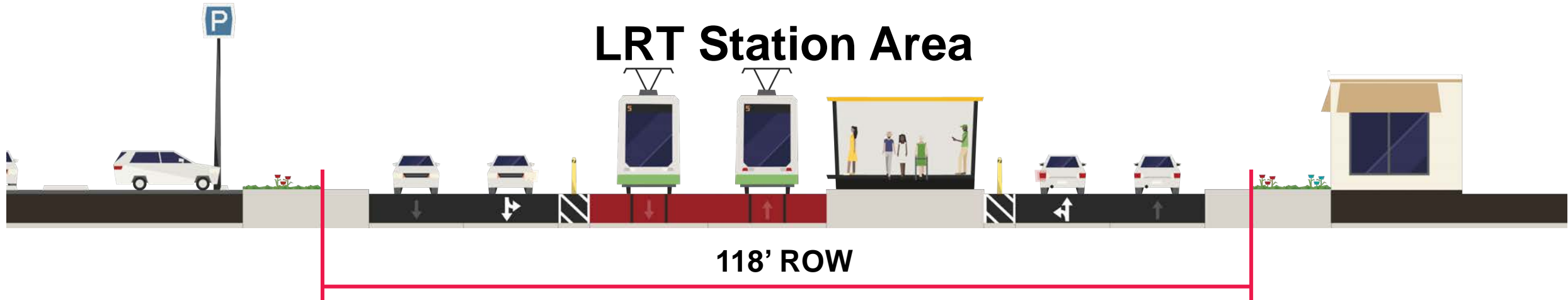
## BRT Station Area



## LRT Non-Station Area



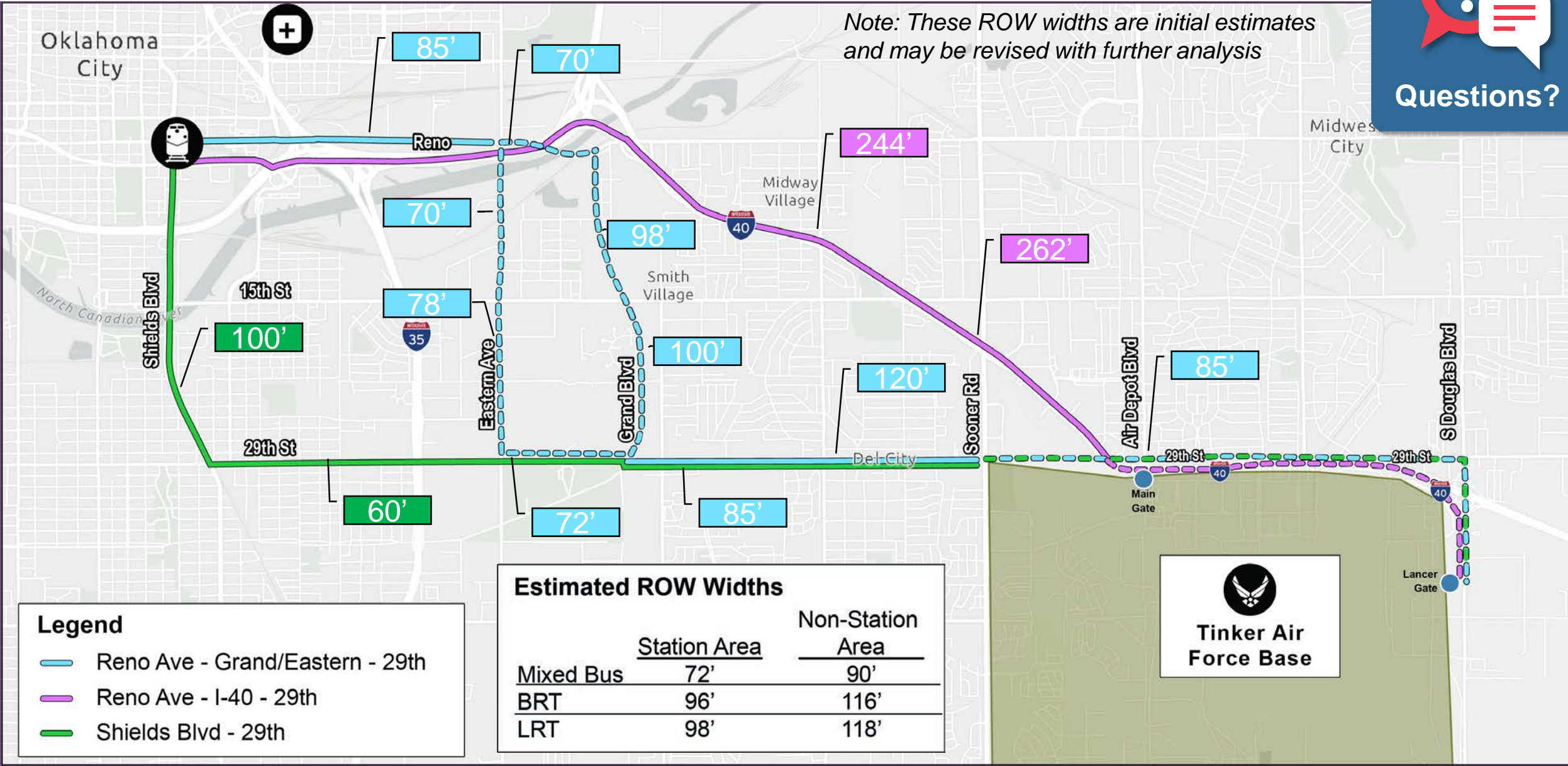
## LRT Station Area



# Existing ROW



Questions?





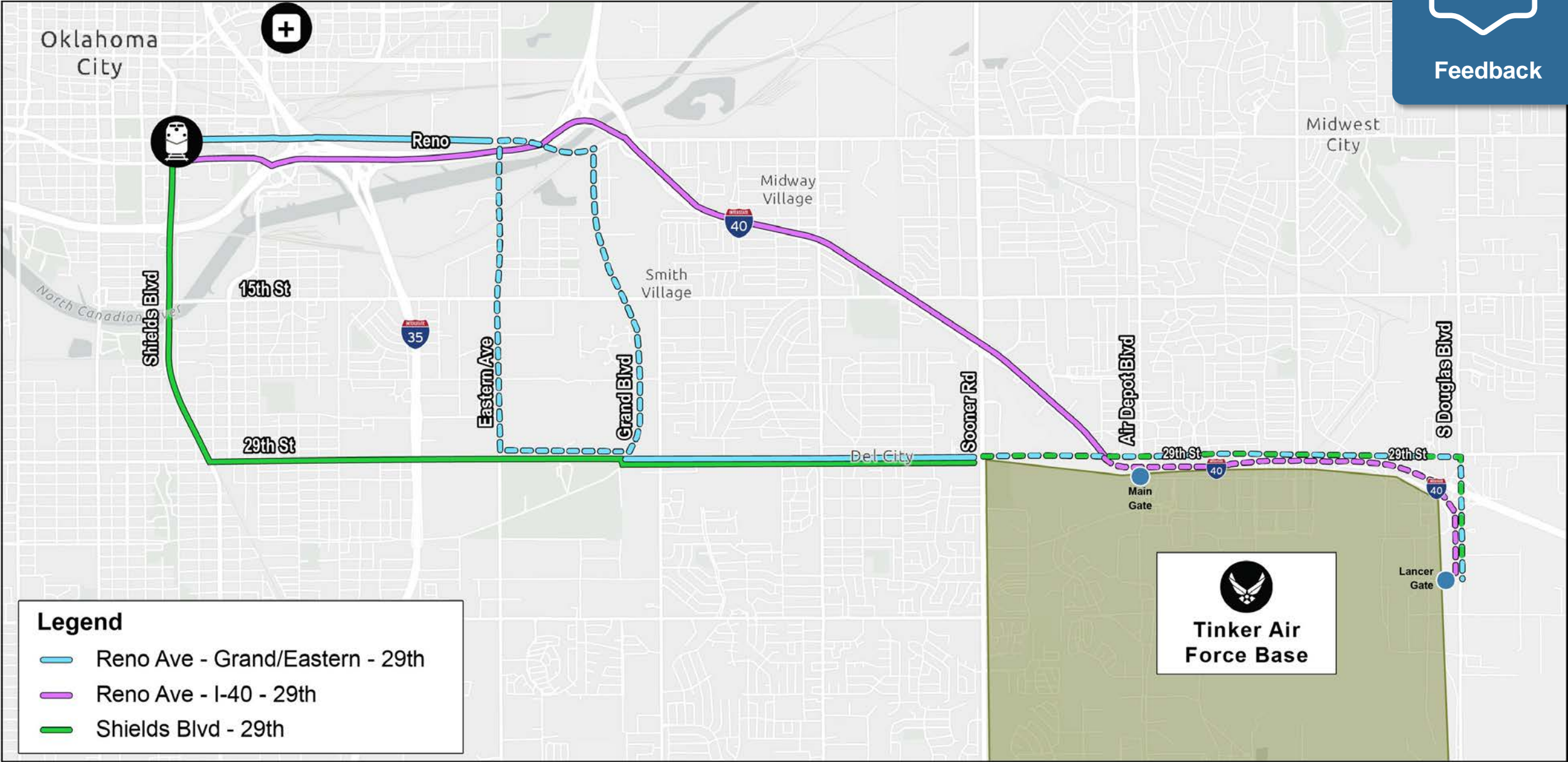


# DISCUSSION

# High-Potential Alignments



Feedback





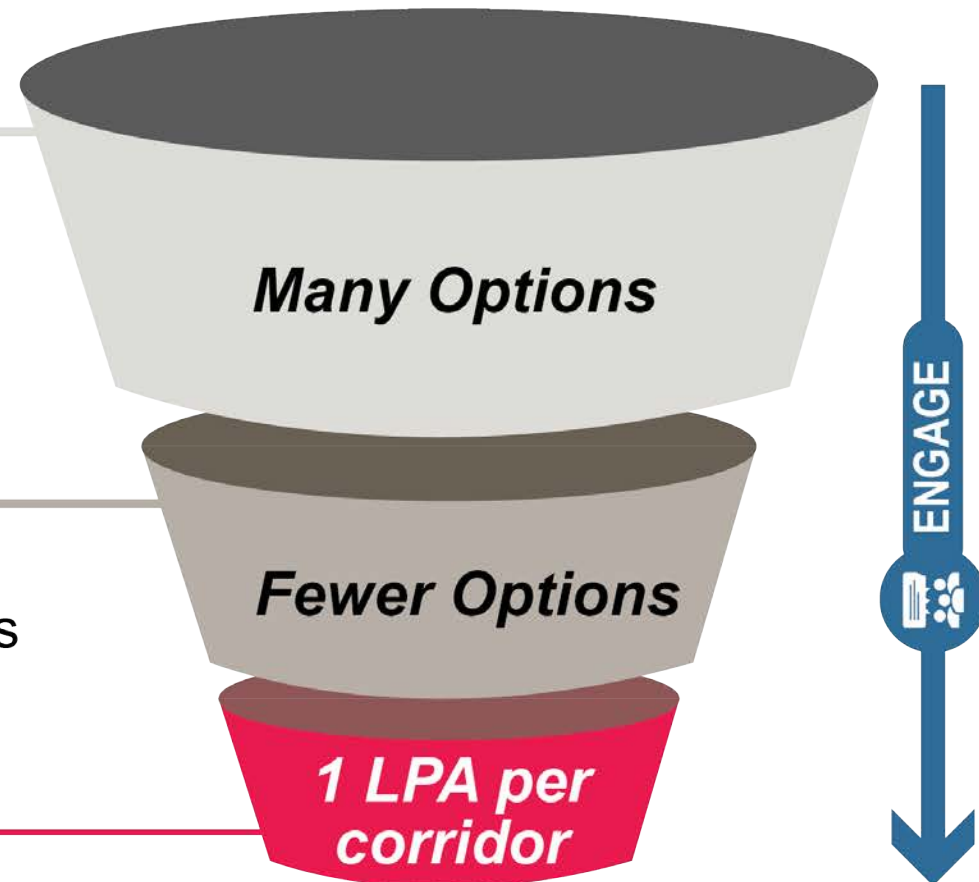
**NEXT STEPS**



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## Improves Connections

### Connect Activity Centers

- Number of Activity Centers/Corridors
- Access to community facilities

### Provide Access to Limited Mobility Populations

- Low Income
- Zero-Car Households
- Senior Communities

### Connect to Central OKC and Regional Destinations

- Station potential for Central OKC, Tinker AFB, etc.



## Economic Development

### Land Use Compatibility

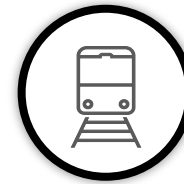
- Compatibility with current and future plans

### Population and Employment Density

- Corridor and station-area current and projected

### Redevelopment

- Corridor and station-area development potential



## Service and System

### Ridership Potential

- Estimated ridership threshold analysis

### Multimodal Connections

- Connections to pedestrian and bike facilities/trails
- Connections to Highways/Arterials

### Reliability, Convenience, and Frequency

- Dedicated ROW quantity
- Vehicle capacity and quantity



## Feasibility

### Capital and Operating Cost

- Per mile cost analysis
- Cost element analysis

### Engineering Constraints

- ROW and acquisition
- Major utilities
- Parking/Traffic operations

### Environmental and Social Justice

- Historic, Hazardous, Floodplains, Air Quality, Noise and Vibrations
- EJ block groups

# Look Ahead



March



TECHNICAL WORKING GROUP MEETING: EAST CORRIDOR



BOARD: ALTERNATIVES ANALYSIS UPDATE: EAST CORRIDOR

April



TECHNICAL COORDINATION MEETINGS

May



TECHNICAL WORKING GROUP MEETING: EAST CORRIDOR



BOARD: ALTERNATIVES ANALYSIS UPDATE: EAST CORRIDOR

May/June



PUBLIC ENGAGEMENT: N/S AND EAST CORRIDORS

June



BOARD: ALTERNATIVES ANALYSIS UPDATE: N/S AND EAST CORRIDORS

July



START FY2023 WORK PLAN





**THANK YOU!**