

Alternatives Analysis Update



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

February 16, 2022

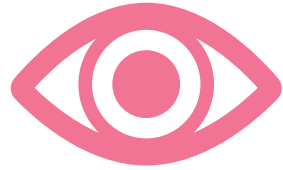
Prepared by Kimley-Horn and Associates



Agenda

- Engagement Status
- North/South Corridor Feasibility Study Update
 - Recap Draft Service Vision
 - Cost Estimates
 - Freight Service Coordination
- Next Steps

Current Engagement



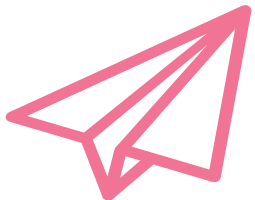
4,500
Website Views



30
Comments



112
Survey Responses



Local Media



Press Release



Social Media



Emails

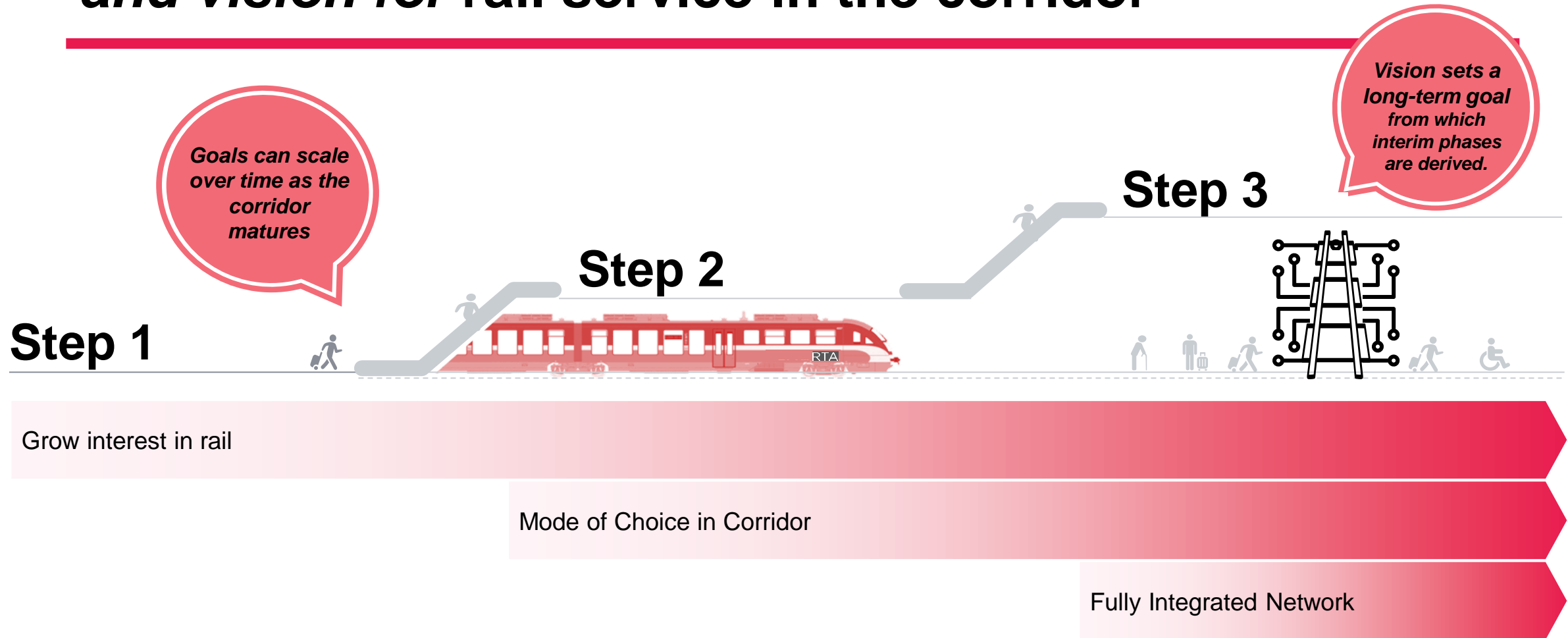


N/S CORRIDOR UPDATE



RECAP: DRAFT SERVICE VISION

The RTA Board determines the *strategic policy goals and vision for rail service in the corridor*



Draft Service Vision

Step 1

Starter Service:

- 12 Round Trips
- 60 Min Peak
- 120 Min Off-Peak

Phased Investment Plan

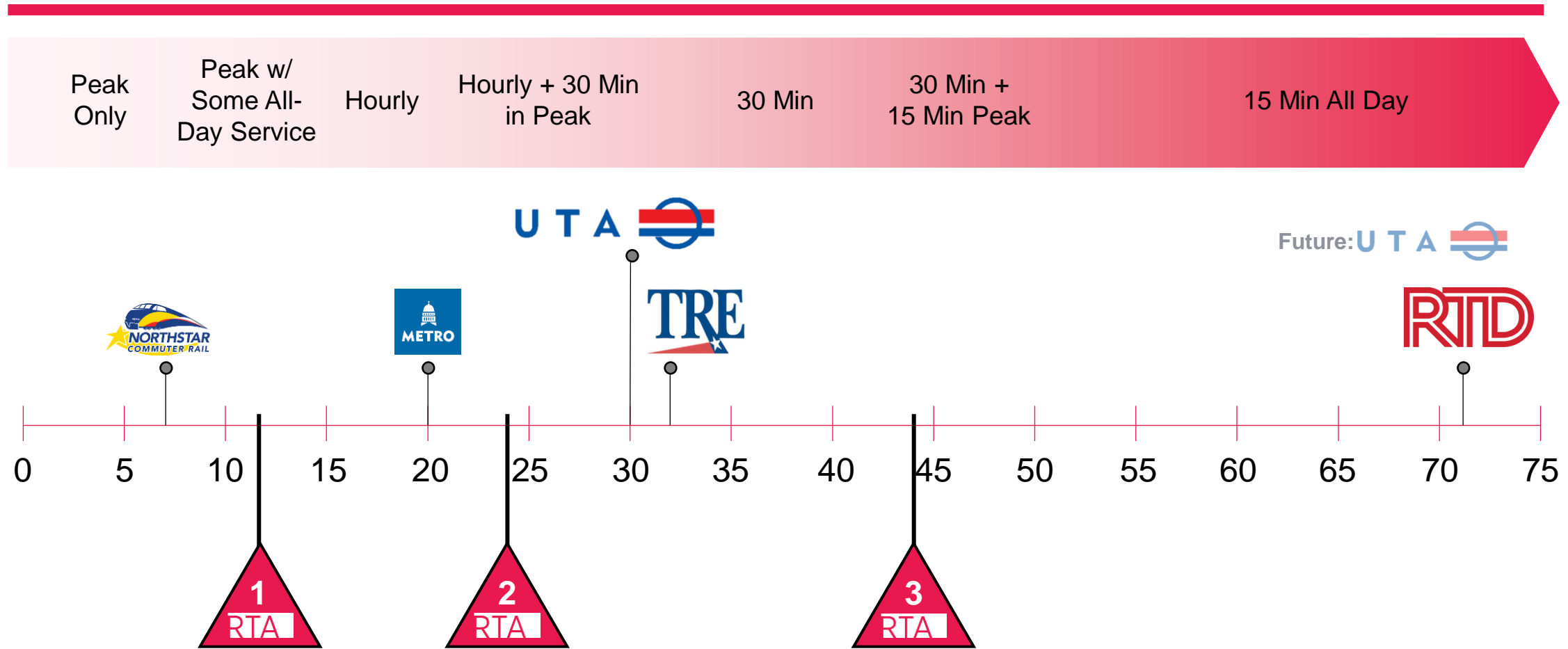


Step 3

Maximum Service:

- 44 Round Trips
- 15 Min Peak
- 30 Min Off-Peak

RTA Steps relative to Peers





COST ESTIMATING

Cost Estimating Components

CAPITAL COSTS, FINANCING, AND FEES



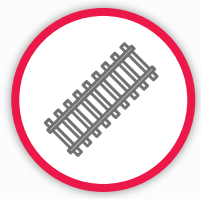
**Equipment and
Facilities**



Financing



Infrastructure



Access Fees

OPERATIONS AND MAINTENANCE COSTS



**Station
Maintenance**



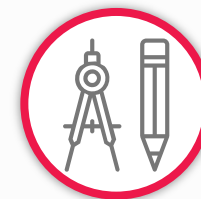
**Transportation
Operations**




**Equipment
Maintenance**



**Maintenance of
Right-of-Way**



**General and
Administrative**



OPERATIONS AND MAINTENANCE COST

RTA Operations & Maintenance Cost Model Project Plan

			Status
1	Develop cost inputs from comparable systems	» Identify relevant costs: fuel, maintenance, wages, etc... from peer systems	✓
2	Standardize Cost Units	» Convert comparable costs into scalable unit costs	✓
3	Develop Input Calculations	» Develop model calculations for inputs	Progress Check
4	Model Concept Costs	» Estimate operating concepts costs	Progress Check

What are the major operations and maintenance cost elements?



Transportation Operations

General operation of trains (fuel, staff, etc.)



Maintenance of Right-of-Way

Basic upkeep of track (repairs, inspection, cleaning)



Station Maintenance

General maintenance (utilities, cleaning, security)



Equipment Maintenance

Labor and materials to maintain the trains








General and Administrative

Management and staff (planning, admin, HR, etc.)

Some costs have efficiencies from economy of scale.

Normalized Operations & Maintenance Cost Elements

Major Cost Element	Description of Elements	Normalized Unit Costs
 Transportation (operations)	<p>General operation of trains: Fuel and direct operating costs and train personnel salaries and benefits</p>	<p>Vehicle revenue hours</p>
 Maintenance of Right-of-Way	<p>Basic upkeep of the track: Minor repairs, inspection, and brush clearing</p>	<p>Rail miles and usage</p>
 Station Maintenance	<p>Basic Station Maintenance: Utilities, cleaning, and security</p>	<p>Per platform</p>
 Equipment Maintenance	<p>Labor and materials to maintain the trains: Including repairs, parts, the maintenance shop building and its upkeep</p>	<p>Revenue train hours</p>
 General & Administrative	<p>Back of house management and staff: Planning, admin, HR, etc. and their salaries and benefits along with office maintenance costs</p>	<p>Vehicle revenue hours</p>

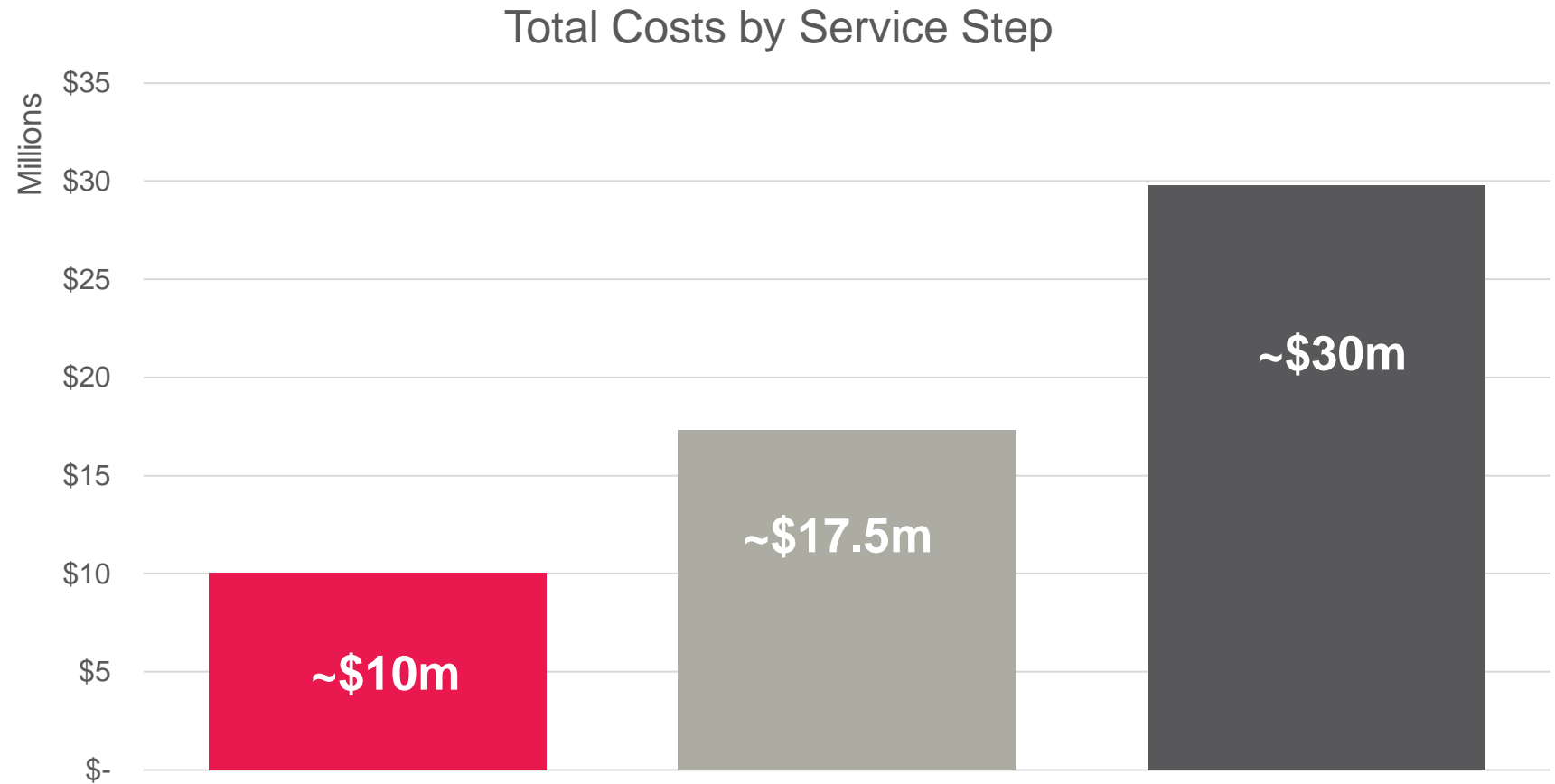
Some costs have efficiencies from economy of scale.

Estimated Annual Operations & Maintenance Costs

- Step 1 Service
(12 round trips)
- Step 2 Service
(24 round trips)
- Step 3 Service
(44 round trips)

Conclusion

Annual operations and maintenance costs range from ~\$10 to ~\$30 million



All Operations and Maintenance Costs in 2021 Nominal Dollars

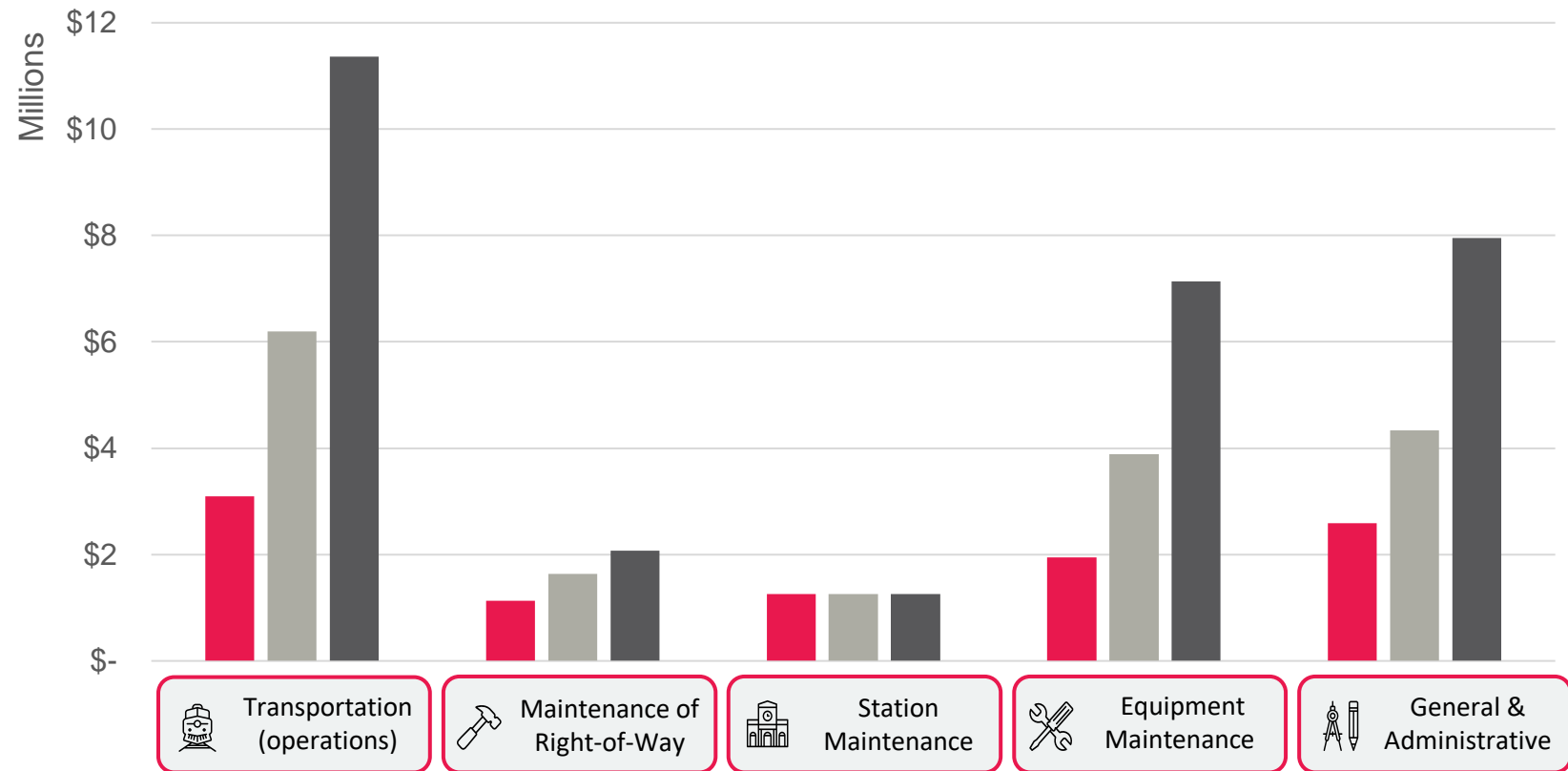
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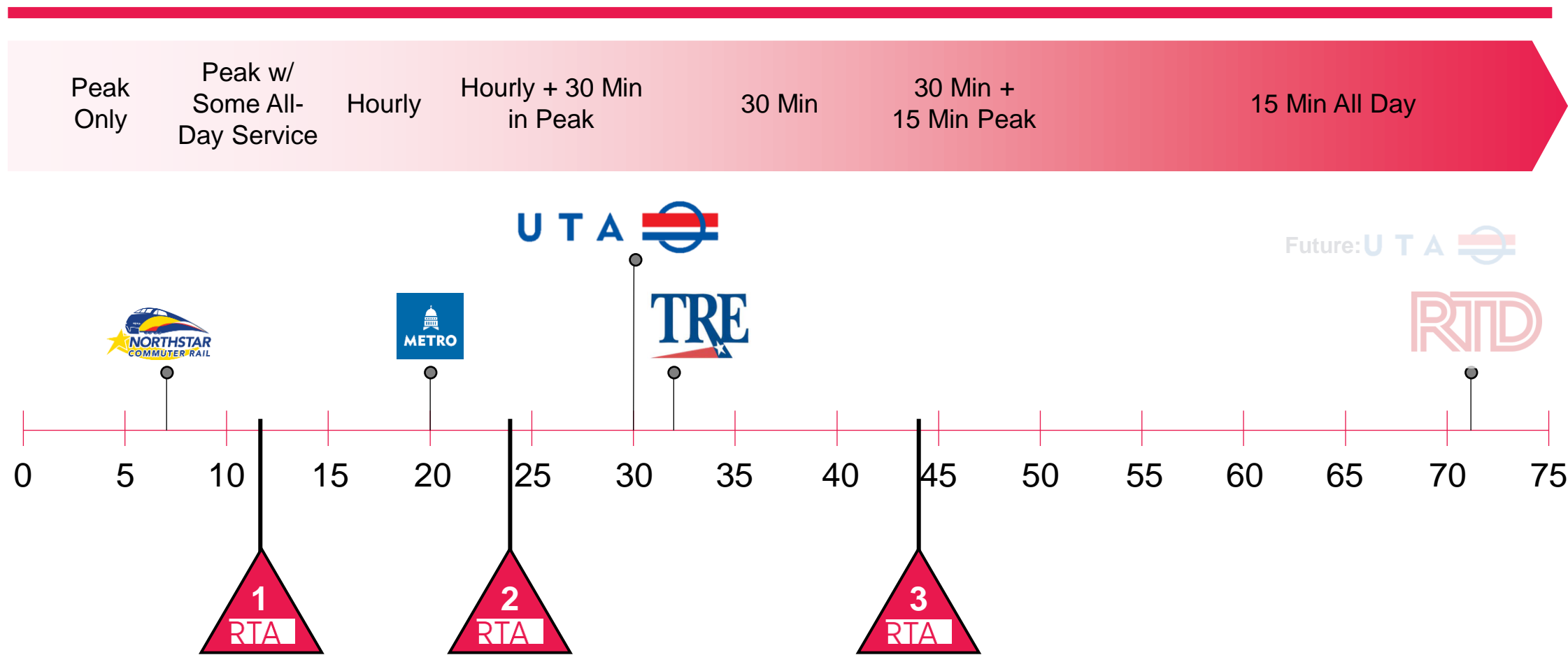
Annual operations & maintenance costs are driven by transportation operations, equipment maintenance, and general & administrative

Service Plan Costs by Cost Elements



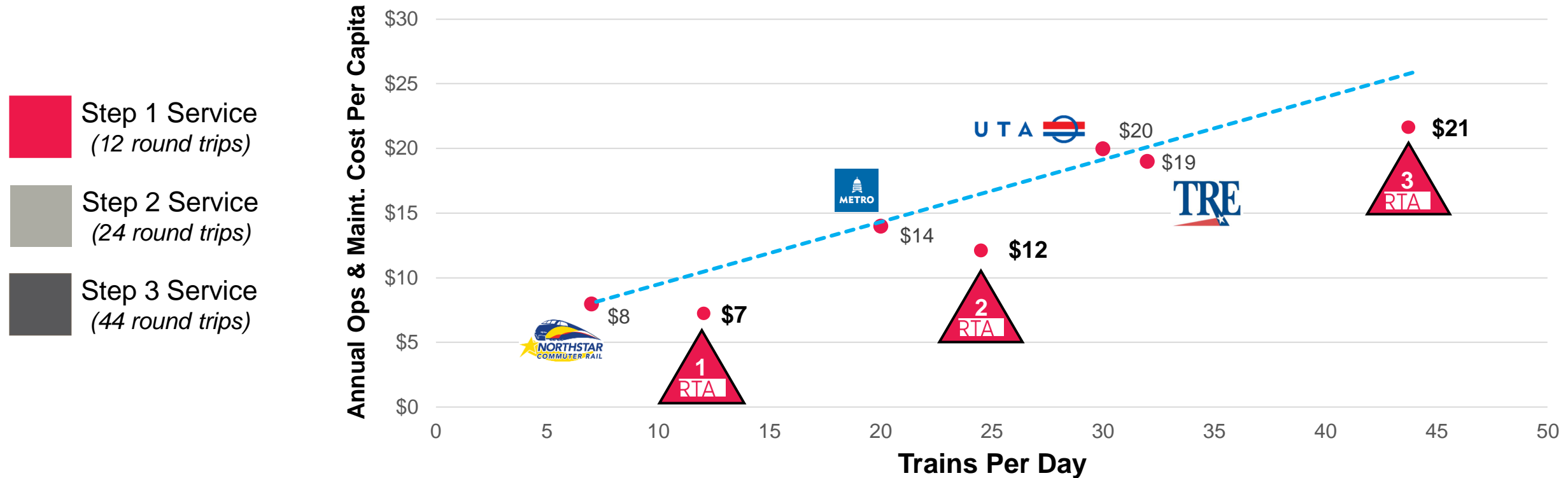
All Operations and Maintenance Costs in 2021 Nominal Dollars

RTA Steps relative to Peers



Peer Railroad Comparison – Per Capita Annual Operations and Maintenance Costs

Per Capita Annual Operations & Maintenance Cost by Trains Per Day



Annual metropolitan area per capita operations and maintenance costs for each service step are \$7, \$12, and \$21, in line with peer and national rail spending

All Operations and Maintenance Costs in 2021 Nominal Dollars

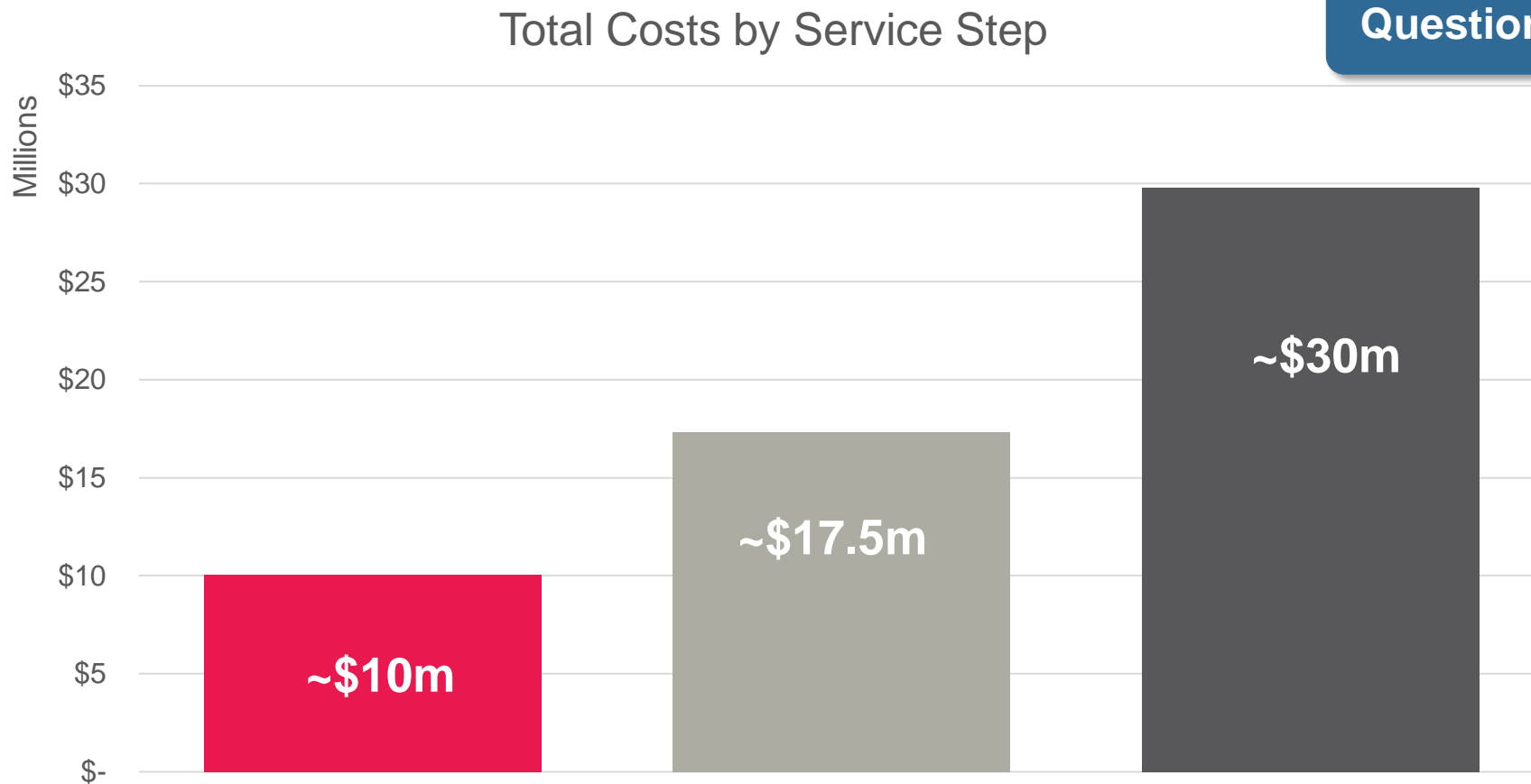
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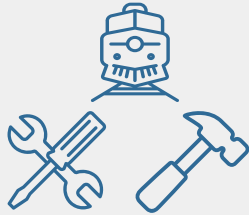
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Annual operations and maintenance costs range from ~\$10 to ~\$30 million



All Operations and Maintenance Costs in 2021 Nominal Dollars

Conclusions



Operations and Maintenance Costs are largely driven by:

- Transportation Operations
- Equipment maintenance
- General and Administration



Operations and Maintenance Costs for Service Step One are estimated to be ~10 million



Cost Efficiencies can be realized as the system scales



Capital Costs, Financing Costs, and Fees are *not* included in this estimate



Questions?



CAPITAL COSTS, FINANCING AND FEES

Cost Estimating Components

CAPITAL COSTS, FINANCING, AND FEES



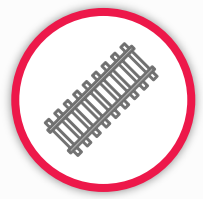
**Equipment and
Facilities**



Financing



Infrastructure



Access Fees

OPERATIONS AND MAINTENANCE COSTS



**Station
Maintenance**



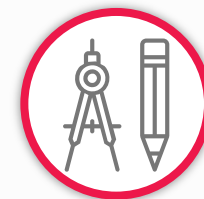
**Transportation
Operations**



**Equipment
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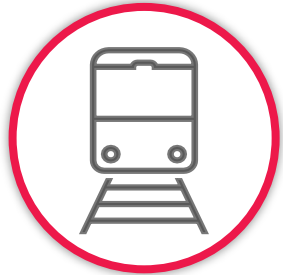
**Maintenance of
Right-of-Way**



**General and
Administrative**



Capital Costs, Access Fees and Financing Costs



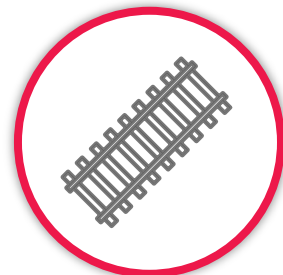
Equipment and Facilities

- Vehicles
- Yards
- Maintenance shop



Infrastructure

- Signals
- Sidings
- Stations
- Interlocking
- Grade crossings



Access Fees

- BNSF access fee



Financing Costs

- Annual costs associated with servicing debt to implement improvements

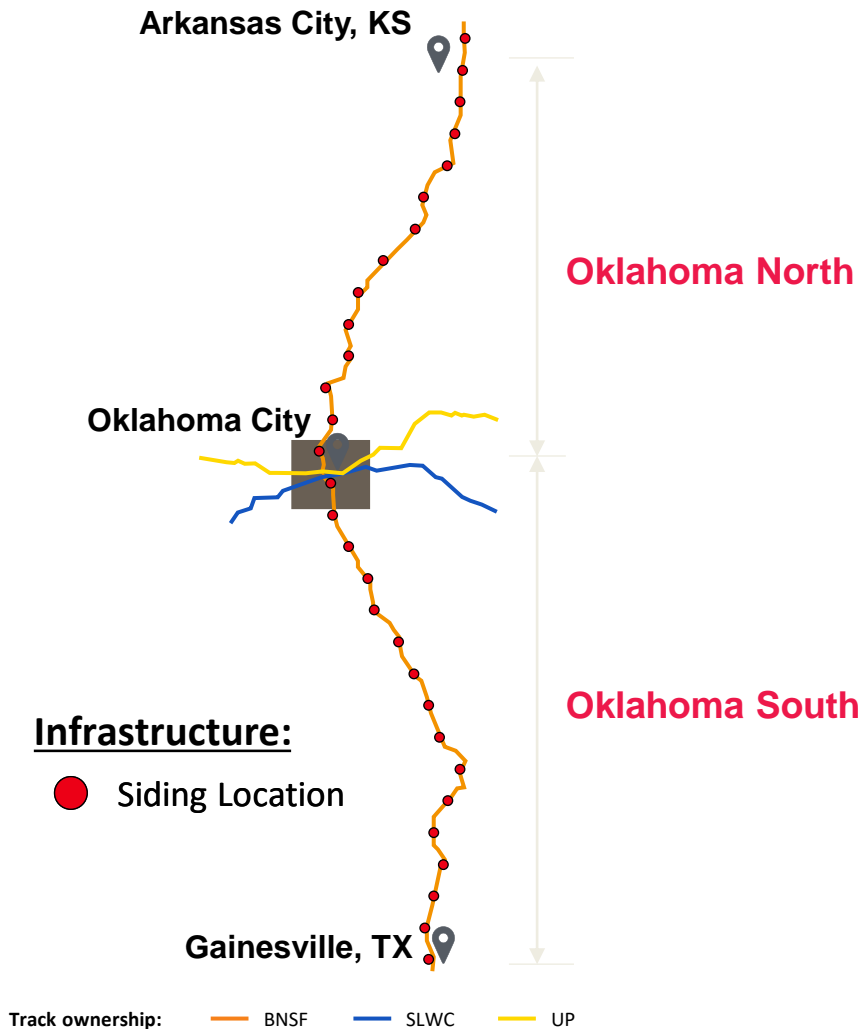


**FREIGHT
SERVICE
COORDINATION**

Central Oklahoma Freight Service Coordination Project Plan

			Status
1	Build standard train	» Identify average Ton, Length, HPT, Locos, train types - by direction	✓
2	Signal System	» Calculate minimum headway and determine headways, including capacity consumption of the on/off ramp movements and the short-line railroads	✓
3	Bottleneck throughput	» Determine traffic throughput at bottleneck(s) & infrastructure limitations	✓
4	Slot allocation	» Identify existing capacity, including train counts, travel times, speeds, frequency	✓
5	Passenger slot availability	» Determine number of slots available for passenger service, times of day and locations	Work in Progress
6	Infrastructure needs	» Identify segments which need infrastructure improvements to meet operational plans, i.e., additional track.	Work in Progress

Freight Service Coordination



Key Findings

Entire Subdivision (Kansas – Texas) is considered during Freight Service Coordination analysis

Two bottlenecks are found in the subdivision, to the North and South of the Edmond – Norman Corridor

Freight capacity outside the Edmond-Norman Corridor may be the controlling bottleneck for passenger rail operations

Freight Service Coordination

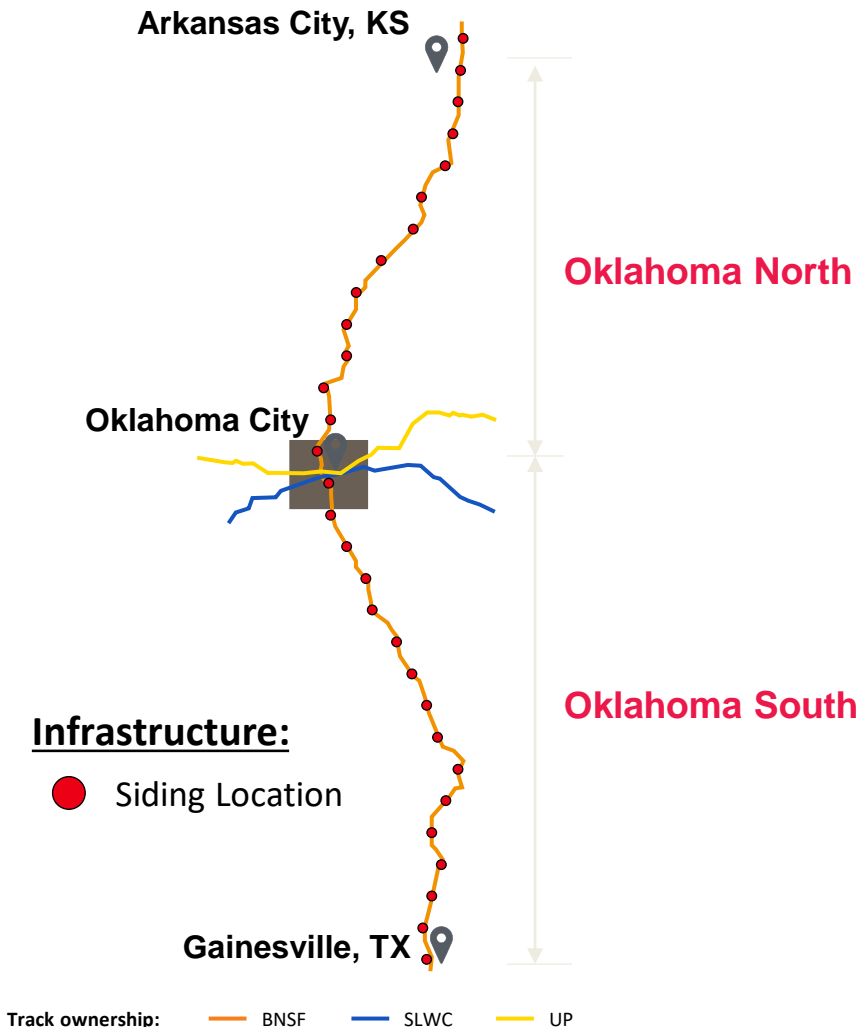


Next Steps

Continued discussions with BNSF

Overlaying proposed passenger rail operations with Freight Service Coordination analysis will reveal conflict points

Conflicts will be addressed by new infrastructure and/or alterations to passenger rail operations





NEXT STEPS

Recap

Discussed Today

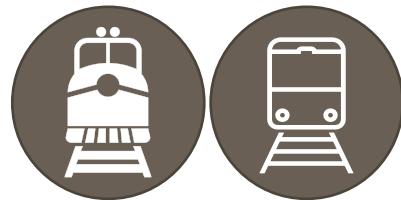


Initial operations and maintenance costing analysis results



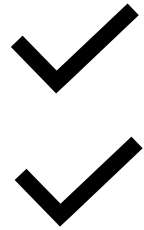
Initial Results of Freight Service Coordination Analysis

Coming Up Next



Continued Results of Freight Service Coordination and Passenger Service Plan

2022 Work Plan



February



TECHNICAL WORKING GROUP MEETING: N-S CORRIDOR



BOARD: ALTERNATIVES ANALYSIS UPDATE

March



COORDINATION WITH TINKER AFB



BOARD: ALTERNATIVES ANALYSIS UPDATE: EAST CORRIDOR

April



BOARD: ALTERNATIVES ANALYSIS UPDATE





THANK YOU!