



Regional Working Group Meeting 2

WELCOME & SAFETY BRIEFING

FRA OPENING REMARKS

INTRODUCTIONS

AGENDA AND MEETING OBJECTIVES

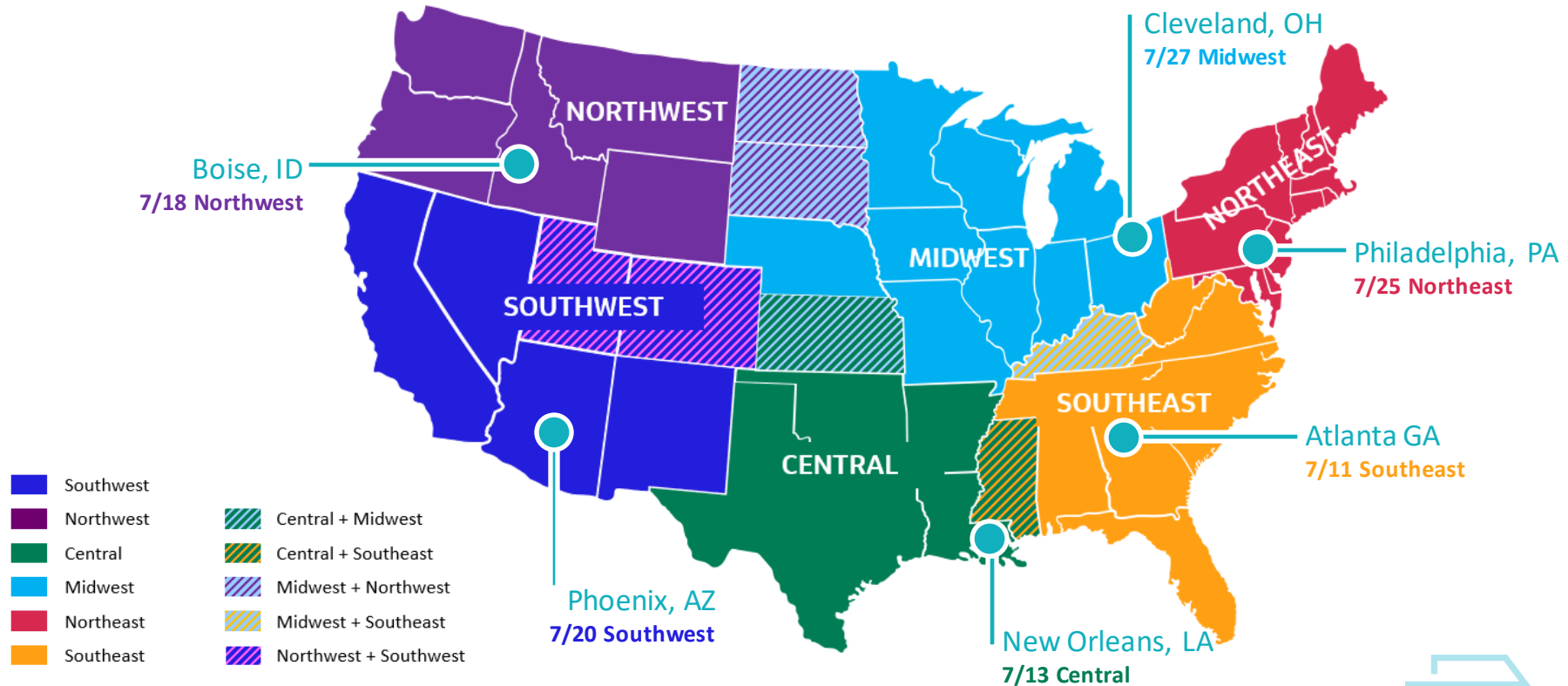
Agenda

- Welcome and Introductions
- Study Overview and What We've Heard
- Baseline Network Overview
- Enhanced Network Development
- Discuss Enhanced Network
- Comparison of Enhanced and Baseline Networks
- Route Definition and Feedback
- Stakeholder Insights for Ongoing Feedback Opportunities
- Closing and Next Steps

Meeting Objectives

- Brief stakeholders on the study progress
- Inform stakeholders on the methodology for developing the Enhanced Network
- Receive input from stakeholders on:
 - The Baseline and Enhanced Networks
 - Potential new long-distance routes using the Enhanced Network
 - The role of FRA or other organizations in gathering feedback

Long-Distance Service Study Regions: Stakeholder Group Meetings



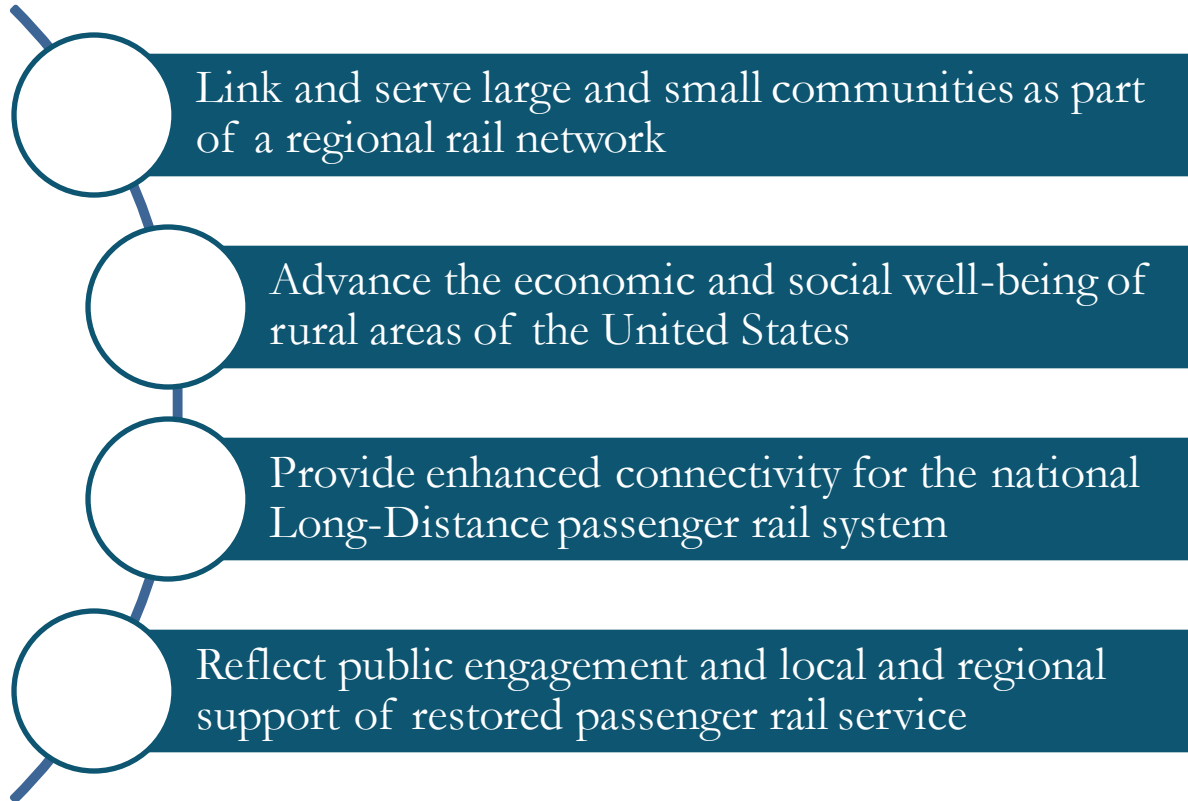
STUDY OVERVIEW

About the FRA Long-Distance Service Study

The Infrastructure Investment and Jobs Act (IIJA) of 2021 requires the FRA to conduct a study to evaluate the restoration of daily intercity rail passenger service along —

- any Amtrak Long-Distance routes that were discontinued; and
- any Amtrak Long-Distance routes that occur on a nondaily basis.
- FRA may also evaluate potential new Amtrak Long-Distance routes, including with specific attention provided to routes in service as of April 1971 but not continued by Amtrak.

Legislative Considerations for Long-Distance Service Expansion



FRA Long-Distance Service Study – Report to Congress

Preferred options for restoring or enhancing Long-Distance service

Prioritized inventory of capital projects to restore or enhance service

Federal and non-Federal funding sources

Estimated costs and public benefits of restoring or enhancing intercity rail passenger transportation in the region impacted for each relevant Amtrak route

FRA Long-Distance Service Study – FRA’s Preliminary Vision

Common long-term vision for Long-Distance passenger rail service, and capital projects needed to implement that vision, based on existing conditions, future travel demand, and the role of Long-Distance services in the linking communities across the country.

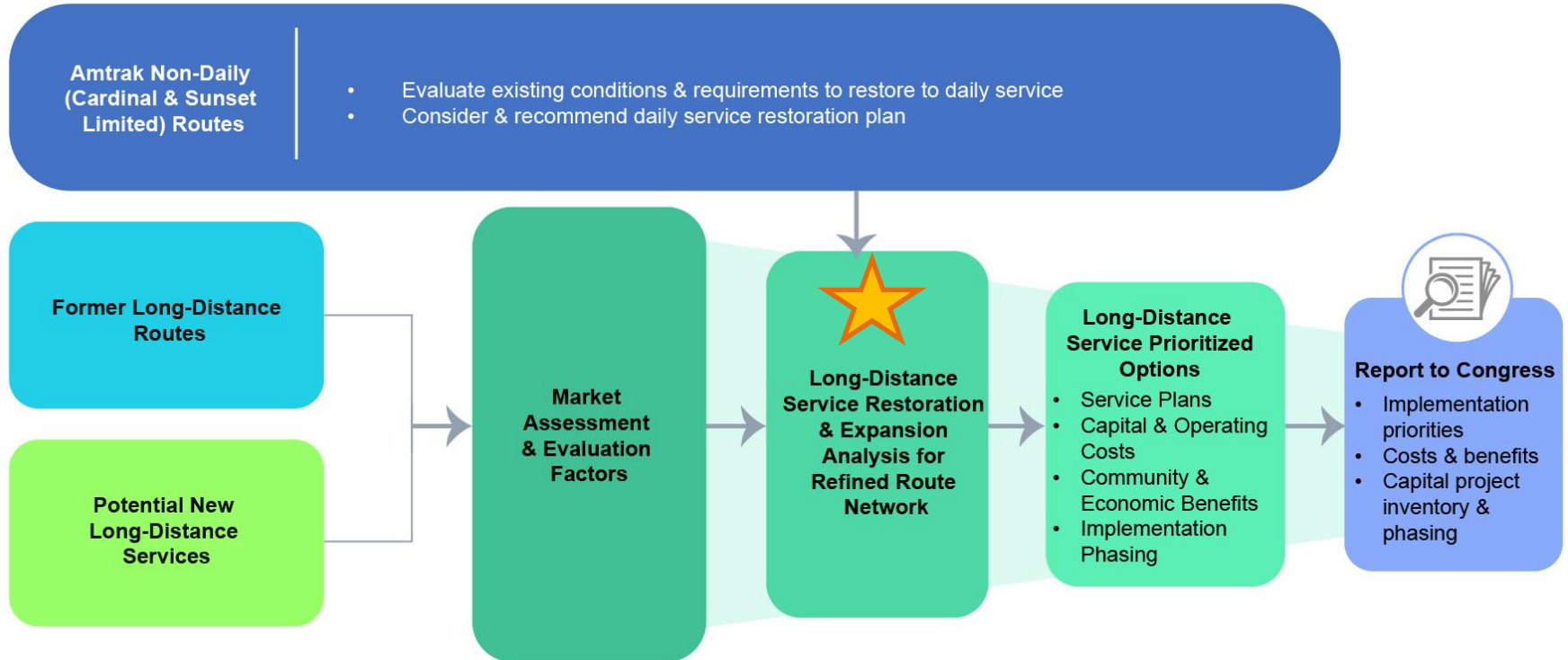
Potential institutional arrangements, financial requirements, and planning and development activities needed to implement the vision.

Strategies for Amtrak and other key stakeholders for implementation and coordination in development of Long-Distance routes, including potential opportunities and efficiencies in Amtrak’s management and implementation of Long-Distance services.

Overview of Long-Distance Service Study Scope

- Plan and execute agency, stakeholder and public engagement
- Review previous Long-Distance services
- Assess current Long-Distance services and travel market
- Develop study methods and tools
- Develop restoration and expansion concepts
- Identify preferred options and prioritization
- Develop costs, benefits, and financing information
- Identify final recommendations and implementation strategies
- Issue final report

Long-Distance Service Study Approach



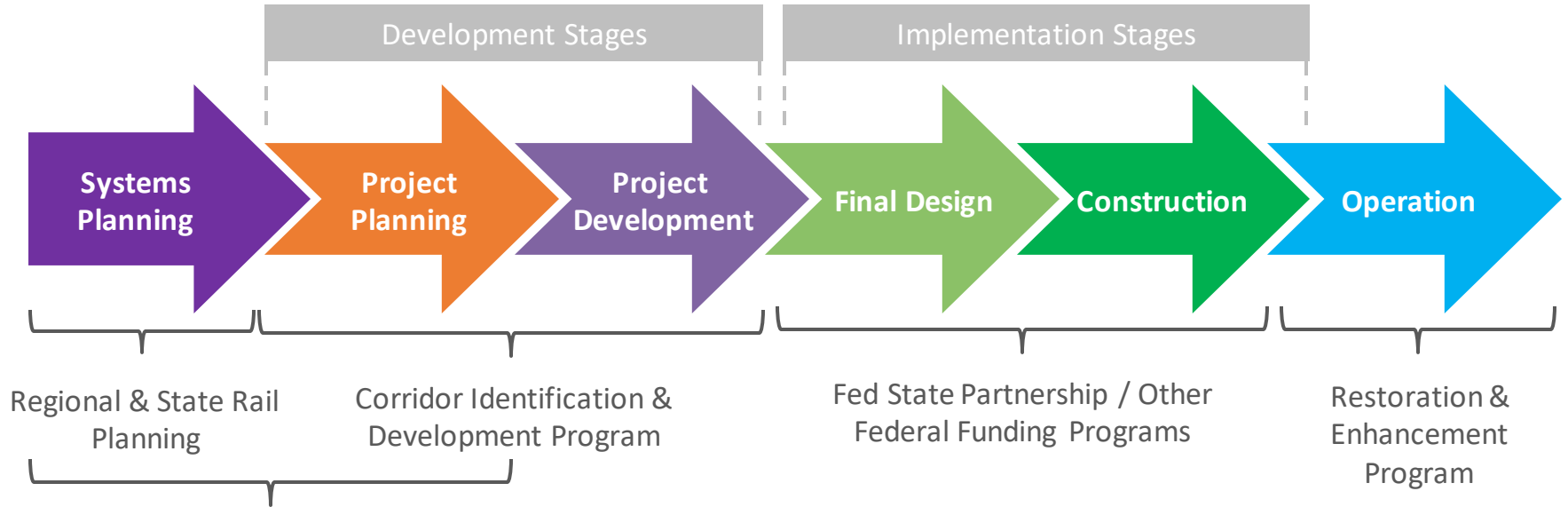
Long-Distance Service Study Expectations

<u>What this Study IS</u>	<u>What this Study IS NOT</u>
Focused on Long-Distance Network	A “National Rail Plan”
Assessment of routes over 750 miles	Assessment of State-Supported routes
Focused on Amtrak as service provider	Identifying other service providers
Service frequencies to meet Long-Distance markets	High frequency service
Utilization of existing rail corridors	Identifying new “greenfield” alignments
Conventional rail/technology	High-speed or other emerging technologies

Long-Distance Service Study Technical Outputs

- **Develop robust market demand and operations and maintenance (O&M) costs that emphasize the benefits and costs of both the existing and an expanded long-distance network**
 - Includes developing demand, revenue, and O&M cost estimates for specific routes under consideration
- **Identification of passenger-service specific projects**
 - Examples: stations, rolling stock, track upgrades
 - Projects will be included as part of "prioritized inventory" mandated by the legislation
 - Decision to focus on identifying these types of projects was based on feedback from host railroads during initial LDSS outreach
- **Conceptual-level identification of capacity improvements**
 - LDSS is the first step in a process to help Congress understand potential for additional Long-Distance service
 - LDSS will acknowledge need for additional study and identification of capacity needs for success of any additional services
 - Provide "sketch level" capacity improvements, but not advanced enough for inclusion in prioritized inventory

Long-Distance Service Study in the FRA Project Lifecycle Stages

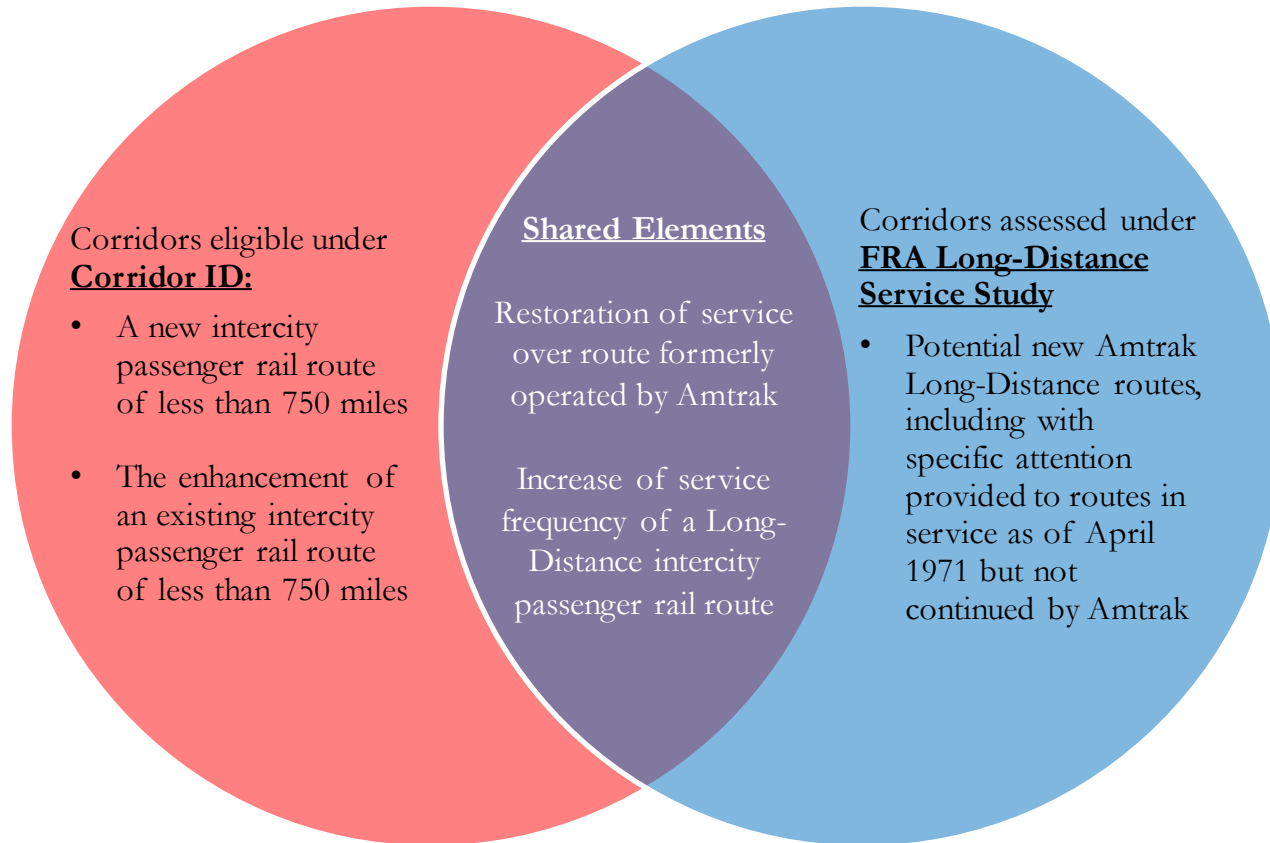


FRA Long-Distance Service Study

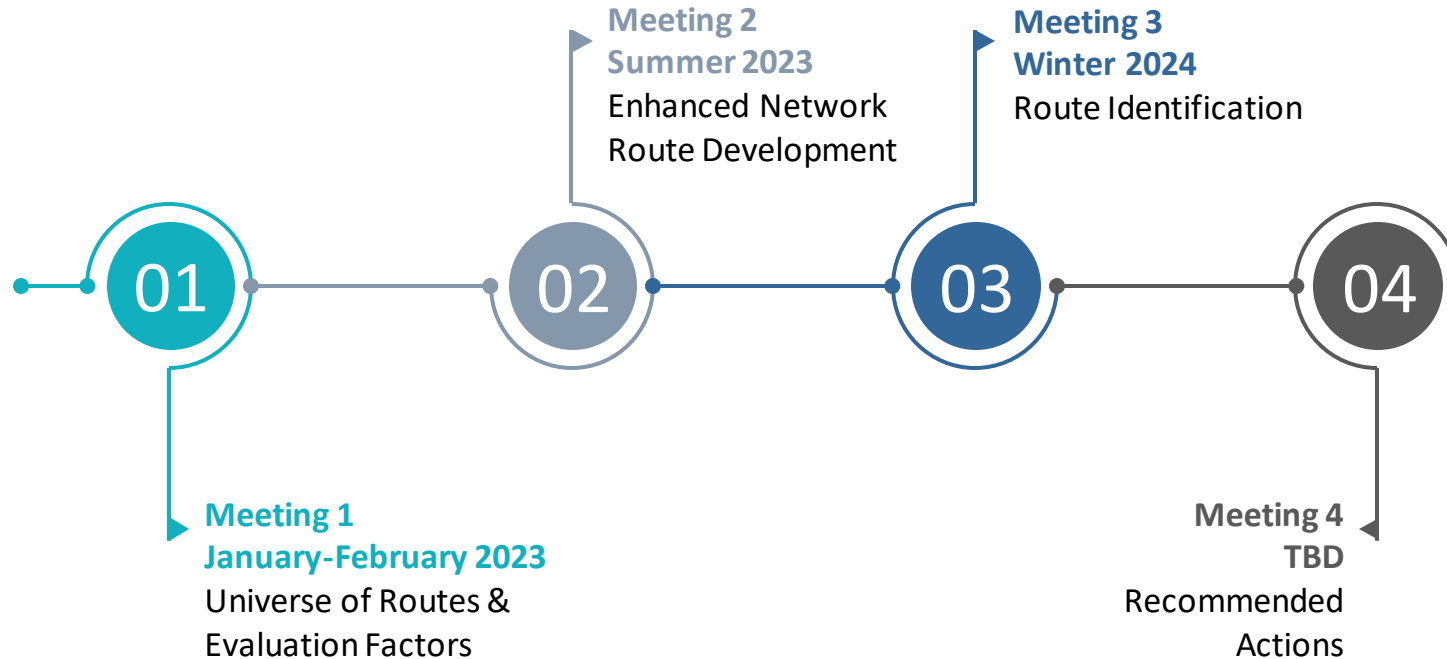
Corridor Identification and Development Program Overview

- The IIJA established the **Corridor ID Program** to facilitate the development of intercity passenger rail corridors and create a foundational framework for identifying and developing new or improved intercity passenger rail services
- Requires FRA to:
 1. Solicit proposals for implementing new or improving existing intercity passenger rail service
 2. Select proposals for development under the Program
 3. For each selected proposal, partner with the entity that submitted the proposal to prepare or update an existing Service Development Plan (SDP), which must include a corridor project inventory
 4. Establish a prioritized pipeline of projects that may be implemented with funding provided under FRA's (and potentially other federal) capital investment financial assistance programs
- Eligibility includes both short-distance (less than 750 miles) services, along with **increasing the frequency of long-distance service, and restoring service over any route formerly operated by Amtrak**

Long-Distance Service Study & Corridor ID Nexus



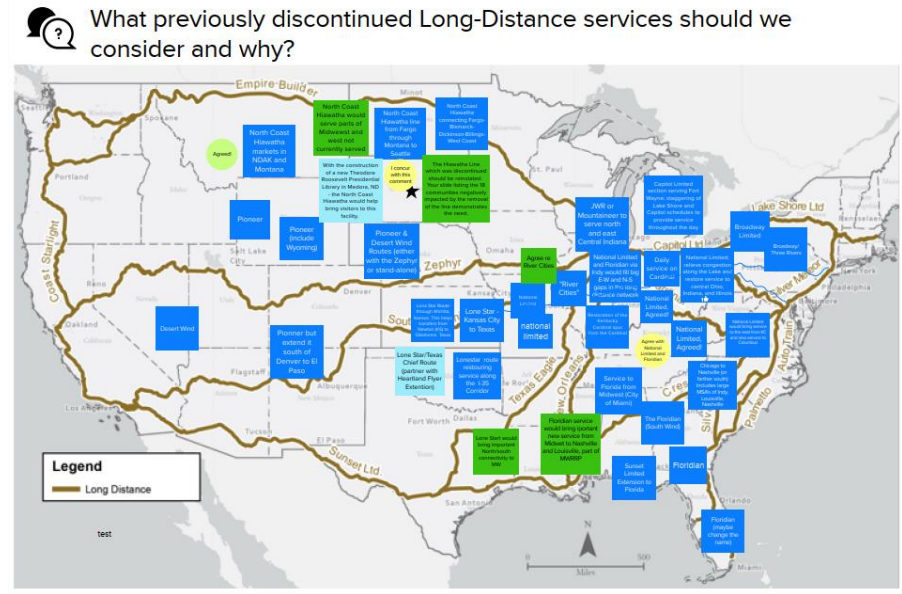
Long-Distance Service Study Engagement Schedule



WHAT WE HEARD

Route and Frequency Feedback Received at Meeting Series 1

- During interactive sessions at the first regional working group meetings, attendees were asked a series of questions, including:
 - What previously discontinued long-distance services should we consider and why?
 - In thinking about existing long-distance routes – what new frequencies and service changes should we consider?
 - What new routes or communities do you want to extend long-distance service to and why?



Evaluation Factor Feedback Received at Meeting Series 1

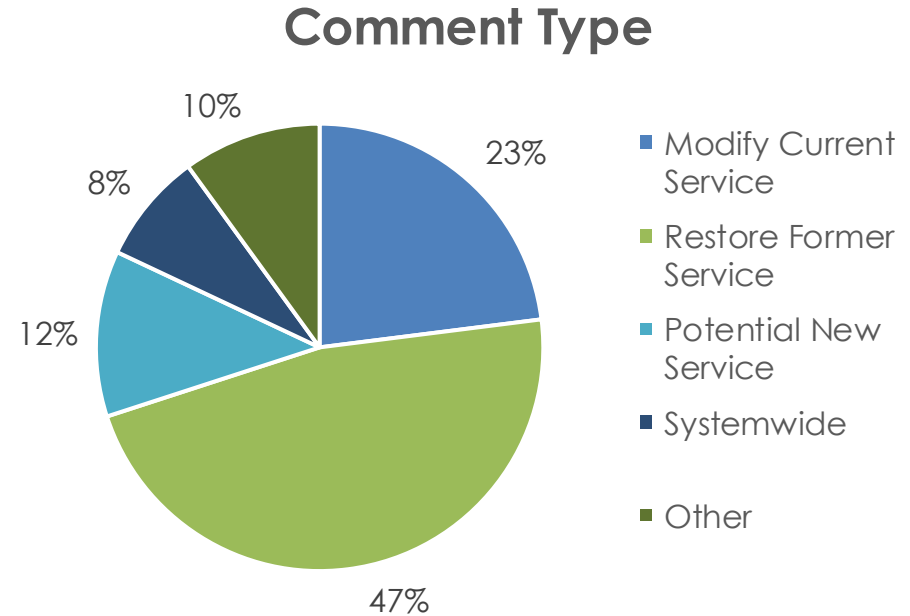
- Each region was asked about the types of evaluation factors that should be used to guide refinement and selection of previously discontinued routes.

Feedback included:

- Number of connections a route would provide to enhance the national long-distance and intercity networks
- Number of connections to large and small communities
- Number of areas with higher-than-average disadvantaged populations
- Number of city pairs with highest ridership potential
- Schedule frequency and convenience
- Connections to airports and multimodal opportunities
- Number of connections to key destinations
- Economic benefits to communities along a route

Feedback from the Website

- Received approximately 1,000 comments as of March 17
 - The project team reviewed and categorized all comments received
 - Generally, feedback indicated support for the study and a desire for increased long-distance service



BASELINE NETWORK OVERVIEW

Definitions for the Network

Existing Network

The intercity passenger rail network consists of the current long-distance services, state-supported services, and NEC services.

Baseline Network

The passenger rail network that consists of current long-distance services, state-supported services, NEC services, and projects that meet the criteria to be included in the baseline ("Baseline Projects").

Discontinued Network

Those long-distance routes in service as of April 1971 but were not continued by Amtrak and those long-distance routes that were previously operated by Amtrak but have since been discontinued.

Enhanced Network

The expanded and interconnected passenger rail network for rail service restoration and expansion. The Enhanced Network is comprised of the Baseline Network, portions of the Discontinued Network, plus new segments where long-distance passenger rail service has not previously operated.

Existing Network



Data provided by Amtrak, 2022

Baseline Network

Existing Long-
Distance Services

Existing State-
Supported Services

Existing Northeast
Corridor Services

Baseline Projects
(defined on next slide)

Does Not Include
Corridor ID

Baseline Projects

Related rail projects that meet the following criteria:

FRA-approved
environmental
review and
decision

Operating and
capital
investment
commitment
agreement(s)
with host
railroad(s)

Full capital
funding for the
operating
segment,
including
equipment

Operating
funding for
initial service
implementation

Or

Project sponsor
has a legal
obligation with
FRA to initiate
service

Baseline Projects

- **Brightline:** Orlando, FL – Miami, FL via West Palm Beach, FL
- **California High-Speed Rail Early Operating Segment:** Merced, CA – Bakersfield, CA
- **Gulf Coast Passenger Rail:** New Orleans, LA – Mobile, AL
- **Twin Cities – Milwaukee – Chicago (TCMC) Regional Rail:** Minneapolis/St. Paul, MN – Chicago, IL

Baseline Network



Legend

Baseline Network

Amtrak Routes

- Long-Distance
- Northeast Corridor
- State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities-Milwaukee-Chicago
- CAHSR MOS

Existing Route and Station Data provided by Amtrak 2022; Baseline Projects Data provided by FRA 2023

Discontinued Routes – History of Evaluations and Cuts

- Examination of Long-Distance routes occurred during the formation of Amtrak in 1970
 - The passenger rail network was evaluated by US DOT and a system recommended to be continued by Amtrak
 - Criteria considered included: national transportation need (available alternative modes), demand, cost competitiveness, population of endpoint cities, profitability, and required capital investment
- The Amtrak Improvement Act of 1978 required US DOT to evaluate Amtrak's network based on financial performance, resulting in removal of several routes
 - Two primary metrics for evaluating route performance were ridership density (passenger-mile/train mile) and loss per passenger-mile
- In 1996, Amtrak's Intercity Strategic Business Unit (ISBU) performed another review of its Long-Distance network, resulting in the removal of additional routes
 - Criteria considered included financial performance, costs saved by elimination, route interconnectivity, and long-term growth and profit opportunities

Discontinued Long-Distance Routes

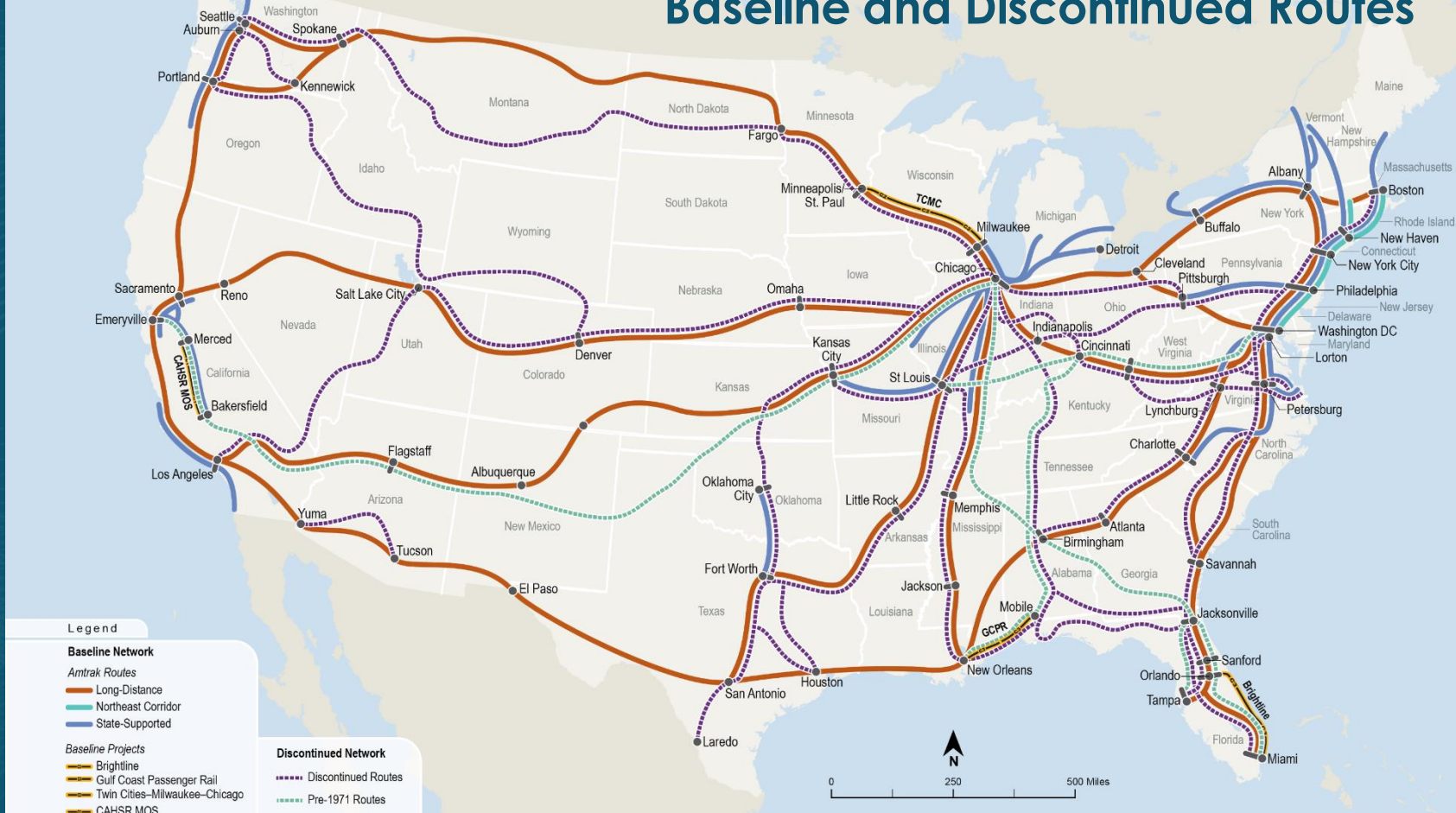
Pre-1971 Routes

Route	Endpoints	Disc.
City of Miami	Chicago, IL and Miami/St. Petersburg, FL	1971
George Washington	St. Louis, MO and Washington, D.C.	1971
Pan American	New Orleans, LA and Cincinnati, IN	1971
San Francisco Chief	Richmond, CA and Chicago, IL	1971

Former Amtrak Routes

Route	Endpoints	Disc.
James Whitcomb Riley	Chicago, IL and Washington/Newport News	1977
Mountaineer	Chicago, IL and Norfolk, VA	1977
Champion	St. Petersburg, FL and New York, NY	1979
Floridian	Chicago, IL and St. Petersburg/Miami, FL	1979
Hilltopper	Catlettsburg, KY and Boston, MA	1979
Lone Star	Dallas/Houston, TX and Chicago, IL	1979
National Limited	Kansas City, MO and New York/Washington	1979
North Coast Hiawatha	Seattle, WA and Chicago, IL	1979
Inter-American	Laredo/Houston, TX and Chicago, IL	1981
River Cities	New Orleans, LA and Kansas City, MO	1993
Gulf Breeze	Mobile, AL, and New York, NY	1995
Texas Eagle - Houston	Houston, TX and Chicago, IL	1995
Sunset Limited - West	Los Angeles, CA and New Orleans, LA	1996
Desert Wind	Los Angeles, CA and Chicago, IL	1997
Pioneer	Seattle, WA and Chicago, IL	1997
Silver Palm/Palmetto	Miami, FL and New York, NY	2004
Sunset Limited - East	New Orleans, LA and Miami, FL	1996
	New Orleans, LA and Orlando, FL	2005
Broadway Limited/Three Rivers	Chicago, IL and New York, NY	2005

Baseline and Discontinued Routes



Legend

Baseline Network

Amtrak Routes

- Long-Distance
- Northeast Corridor
- State-Supported

Baseline Projects

- Brightline
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- Twin Cities-Milwaukee-Chicago
- CAHSR MOS

Discontinued Network





- Discontinued Routes
- Pre-1971 Routes

Existing Route and Station Data as well as Discontinued Route Data provided by Amtrak 2022; Baseline Projects Data provided by FRA 2023





Discontinued Network

Legend

Baseline Network

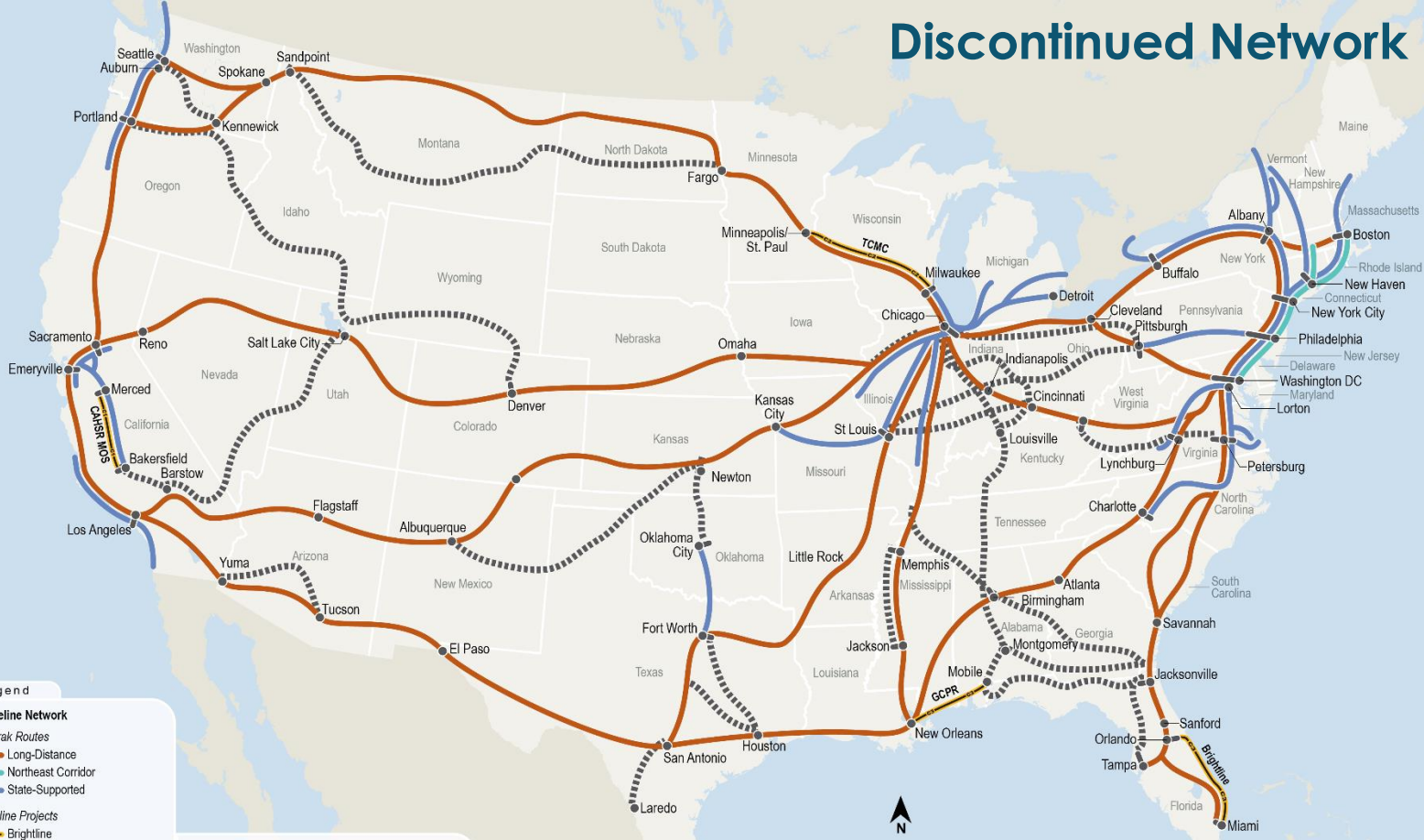
-  Amtrak Routes
-  Long-Distance
-  Northeast Corridor
-  State-Supported

Baseline Projects

-  Brightline
-  Gulf Coast Passenger Rail
-  Twin Cities-Milwaukee-Chicago
-  CAHSR MOS

Discontinued Network

-  Discontinued Segment of the Discontinued Route



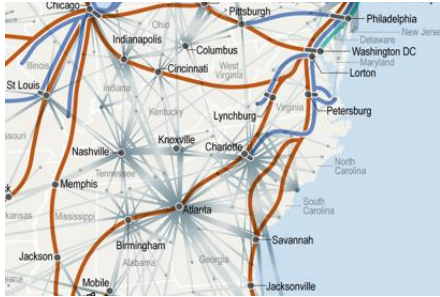
Existing Route and Station Data as well as Discontinued Route Data provided by Amtrak 2022; Baseline Projects Data provided by FRA 2023

ENHANCED NETWORK DEVELOPMENT

Legislative Considerations Guiding Enhanced Network Development

1 Large and Small Communities

Identify metropolitan area travel flows not served by the existing passenger rail network



Link and serve large and small communities as part of a regional rail network

2 Focus on Rural

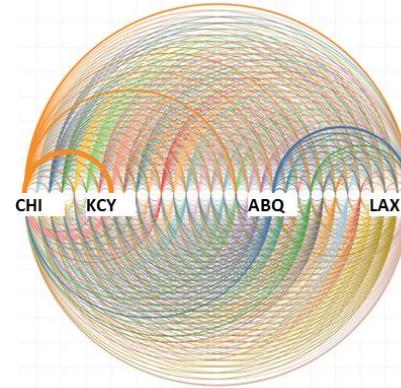
Identify rural and disadvantaged communities not served by existing passenger rail network



Advance the economic and social well-being of rural areas of the United States

3 Enhance Connectivity

Identify gaps in the passenger rail network, and reflect regional plans for passenger rail service



Provide enhanced connectivity for the national long-distance passenger rail system

4 Reflect Public Engagement

Check that Enhanced Network reflects stakeholder and public inputs



Reflect public engagement and local and regional support for restored passenger rail service

Enhanced Network Development Methodology



Identifying the segments that make up the Enhanced Network:

- **Focusing on the process for identifying segments, not routes, that could make up an Enhanced Network**
- Segments were aligned to the North American Rail Network (NARN)
- Main line track, branch line track, and disused track were eligible
 - Feasible for potential passenger rail operations
 - Avoids new "greenfield" alignments

Enhanced Network Development Methodology



Developing an Enhanced Network

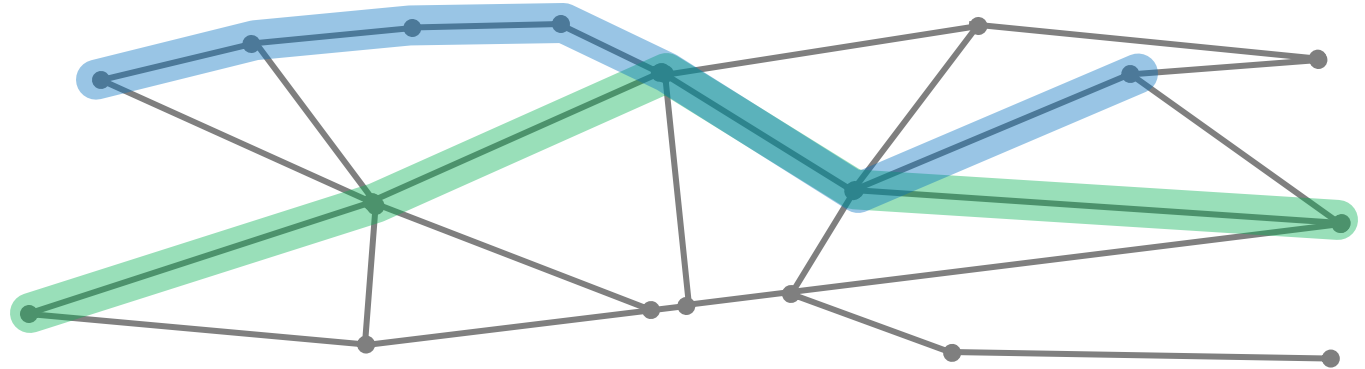
- Step 1: Metropolitan Area Travel Flows
- Step 2: Rural Accessibility
- Step 3: Geographic Coverage/Network Connectivity
- Step 4: Stakeholder Input
- Additional Considerations: Discontinued Network

Restoration and Expansion Concepts: Enhanced Network

<u>What Enhanced Network IS</u>	<u>What Enhanced Network IS NOT</u>
Conceptual segments for future route development consideration	Proposed network of rail routes, station locations
Consistent with legislative considerations	Rail operations and service characteristics (e.g., train consists, speeds, frequency)
Aligned to the North American Rail Network	On new “greenfield” alignments
Within the contiguous states	Extended into Canada or Mexico

Definitions of Segments and Routes

Focus today is on identifying segments that could make up an Enhanced Network



Segment

- Represents any portion of the NARN identified as part of the Existing, Baseline, or Enhanced Network
- Can be any length

Route

- Made up of segments
- Start and end in major markets
- Represents an existing or potential new long-distance route
- A long-distance route is over 750 miles in length

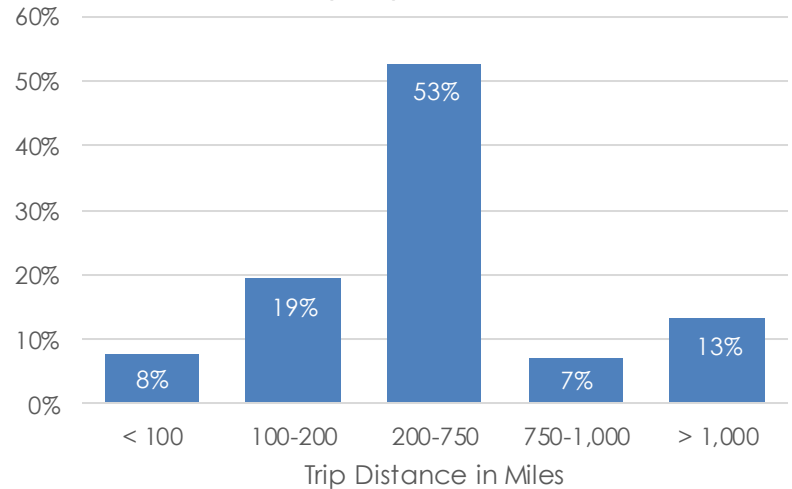
STEP 1 – METROPOLITAN AREA TRAVEL FLOWS

Step 1: Metropolitan Area Travel Flows

- Considers travel demand between Metropolitan Areas
- Based on Federal Highway Administration (FHWA) NextGen 2020 data:
 - Metropolitan area pairs with 500,000 annual trips or more on all modes
 - Trip length of 100 miles to 1,000 miles in length
 - Metropolitan area pairs not served directly by rail in the Existing Network

Among long-distance riders,
79 percent of trips are 100 to 1,000
miles in length

Long-Distance Ridership Grouped
by Trip Distance



Does not include Auto Train

Source: Amtrak. FY 2019. Amtrak rail ridership data.

Step 1 of 4: Metropolitan Area Travel Flows

Baseline Network



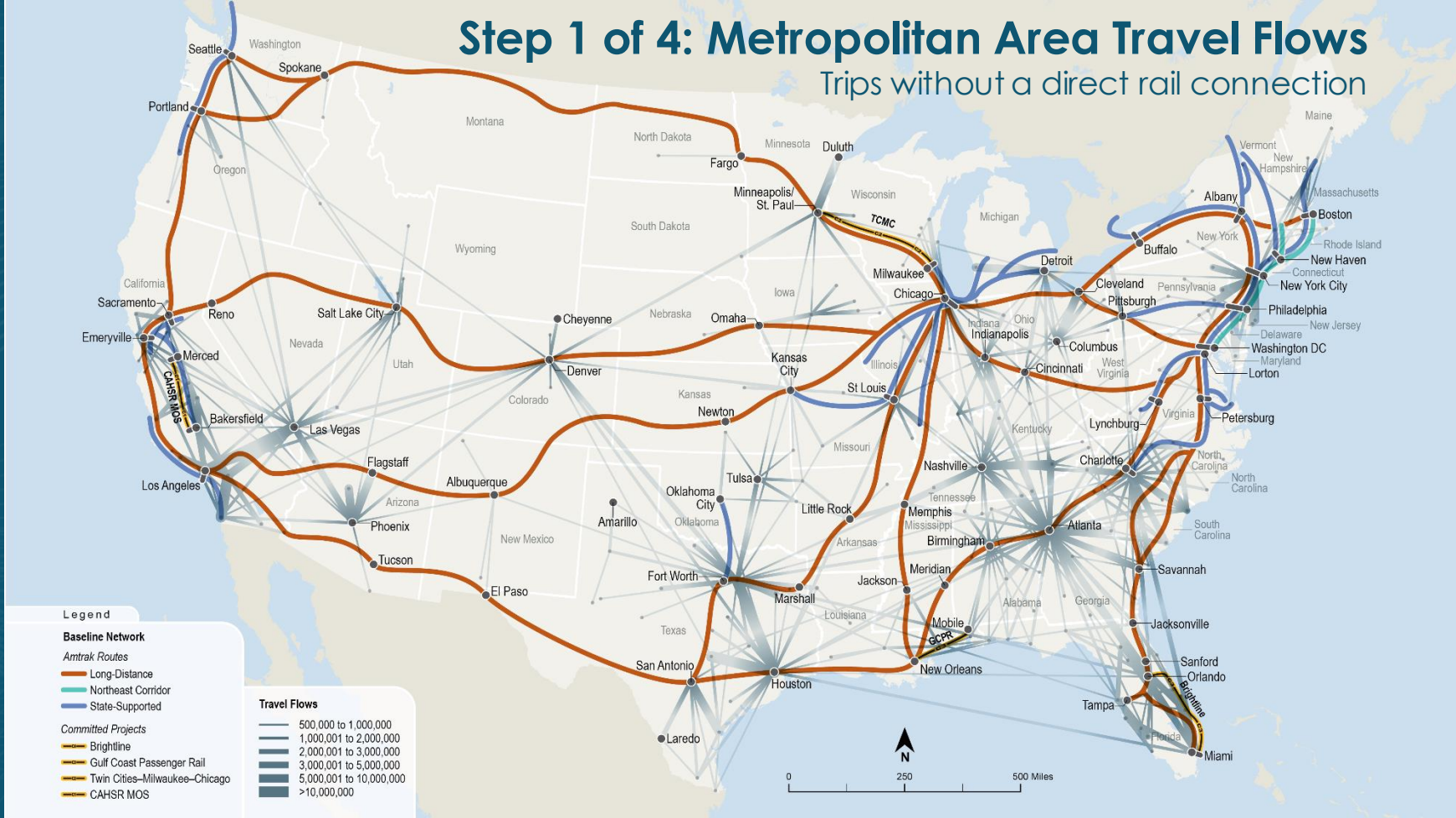
Legend

- Baseline Network**
- Amtrak Routes**
- Long-Distance
- Northeast Corridor
- State-Supported
- Baseline Projects**
- Brightline
- Gulf Coast Passenger Rail
- Twin Cities-Milwaukee-Chicago
- CAHSR MOS

Existing Route and Station Data provided by Amtrak 2022; Baseline Projects Data provided by FRA 2023

Step 1 of 4: Metropolitan Area Travel Flows

Trips without a direct rail connection



Step 1 of 4: Metropolitan Area Travel Flows

Developing a Conceptual Enhanced Network



Legend

Baseline Network

- Amtrak Routes*
- Long-Distance
- Northeast Corridor
- State-Supported
- Committed Projects**
- Brightline
- Gulf Coast Passenger Rail
- Twin Cities–Milwaukee–Chicago
- CAHSR MOS

Travel Flows

- 500,000 to 1,000,000
- 1,000,001 to 2,000,000
- 2,000,001 to 3,000,000
- 3,000,001 to 5,000,000
- 5,000,001 to 10,000,000
- >10,000,000

Enhanced Network

- Segments
- Segment Options

Segments are conceptual building blocks for consideration in developing potential new long-distance routes

Segment Options

- Segments connecting similar end points but different intermediate markets
- Will be further evaluated to recommend one segment option to move forward in future route analysis tasks
- Atlanta – Savannah, GA
 - North alignment connecting Savannah, GA via Augusta, GA
 - Middle alignment connecting Savannah, GA via Macon, GA
 - South alignment connecting south of Savannah, GA via Macon, GA
- Birmingham – Mobile, AL
 - Alignment connecting Birmingham – Mobile via the shortest path, or
 - Alignment connecting Birmingham – Mobile via Montgomery, AL

Step 1 of 4: Metropolitan Area Travel Flows

Developing a Conceptual Enhanced Network



Legend

Baseline Network

- Amtrak Routes
- Long-Distance
- Northeast Corridor
- State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities–Milwaukee–Chicago
- CAHSR MOS

Enhanced Network

- Segments
- - - Segment Options

Segments are conceptual building blocks for consideration in developing potential new long-distance routes

STEP 2: RURAL ACCESSIBILITY

Step 2: Rural Accessibility

Considers those rural and disadvantaged communities not served by the existing passenger rail network

Rural Counties

- Counties outside Core-Based Statistical Areas (CBSAs) - CBSAs include Metropolitan Statistical Areas and Micropolitan Statistical Areas

Tribal Lands

- American Indian and Alaska Native Land
- American Indian Tribal Subdivisions
- Bureau of Indian Affairs Regional Boundaries
- Oklahoma Tribal Statistical Areas

USDOT Justice 40 Disadvantaged Communities

- Low-income
- Transportation disadvantaged
- Health disadvantaged

Step 2 of 4: Rural Accessibility

Baseline Network



Legend

Baseline Network

Amtrak Routes

— Long-Distance

— Northeast Corridor

— State-Supported

Baseline Projects

— Brightline

— Gulf Coast Passenger Rail

— Twin Cities–Milwaukee–Chicago

— CAHSR MOS



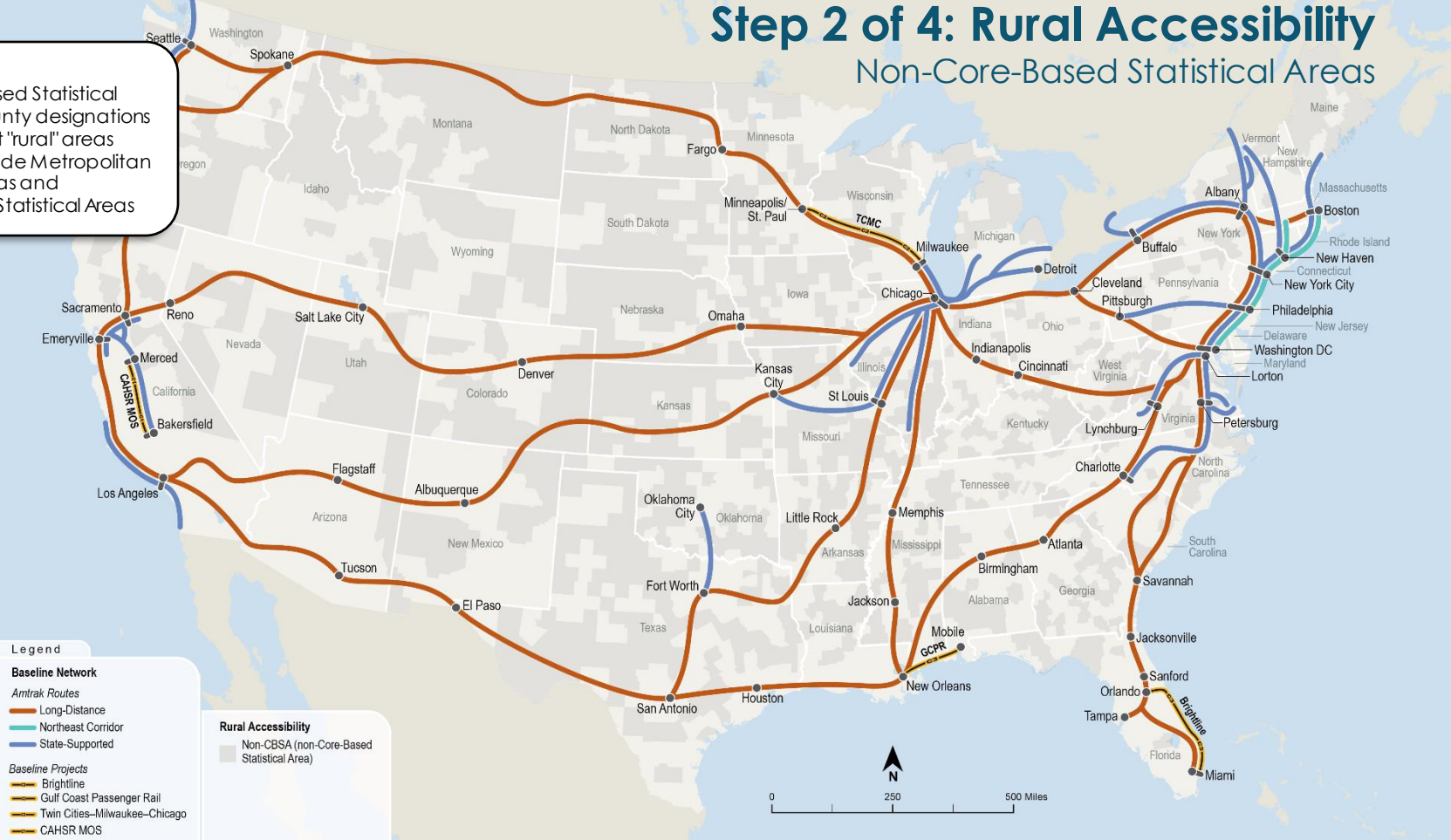
Existing Route and Station Data provided by Amtrak 2022; Baseline Projects Data provided by FRA 2023

Step 2 of 4: Rural Accessibility

Non-Core-Based Statistical Areas

Rural counties:

- Non-Core-Based Statistical Areas are county designations that represent "rural" areas
- Counties outside Metropolitan Statistical Areas and Micropolitan Statistical Areas



Step 2 of 4: Rural Accessibility

Non-Core-Based Statistical Areas



Legend

Baseline Network

- Long-Distance
- Northeast Corridor
- State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities–Milwaukee–Chicago
- CAHSR MOS

Rural Accessibility

- Non-CBSA (non-Core-Based Statistical Area)



Step 2 of 4: Rural Accessibility

Tribal Lands

Tribal lands:

- Consists of those tribal census tracts and tribal block groups defined by the Census Bureau.

Tribal lands include:

- American Indian Land
- American Indian Tribal Subdivisions
- Bureau of Indian Affairs Regional Boundaries
- Oklahoma Tribal Statistical Areas

Legend

Baseline Network

- Amtrak Routes
 - Long-Distance
 - Northeast Corridor
 - State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities–Milwaukee–Chicago
- CAHSR MOS

Rural Accessibility

- Non-CBSA (non-Core-Based Statistical Area)
- Tribal Lands



Amtrak 2022; FRA 2023; U.S. Census Bureau: 2021 Housing Patterns and Core-Based Statistical Areas; 2020 American Indian Area Boundaries, 2020 Decennial Census

Step 2 of 4: Rural Accessibility

Tribal Lands



Legend

Baseline Network

- Amtrak Routes
 - Long-Distance
 - Northeast Corridor
 - State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities–Milwaukee–Chicago
- CAHSR MOS

Rural Accessibility

- Non-CBSA (non-Core-Based Statistical Area)
- Tribal Lands

Amtrak 2022; FRA 2023; U.S. Census Bureau: 2021 Housing Patterns and Core-Based Statistical Areas; 2020 American Indian Area Boundaries, 2020 Decennial Census

Step 2 of 4: Rural Accessibility

Justice 40 Disadvantaged

USDOT Justice 40 Disadvantaged areas:

- Low-income
- Health or transportation access disadvantaged communities



Legend

Baseline Network

- Amtrak Routes
 - Long-Distance
 - Northeast Corridor
 - State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities-Milwaukee-Chicago
- CAHSR MOS

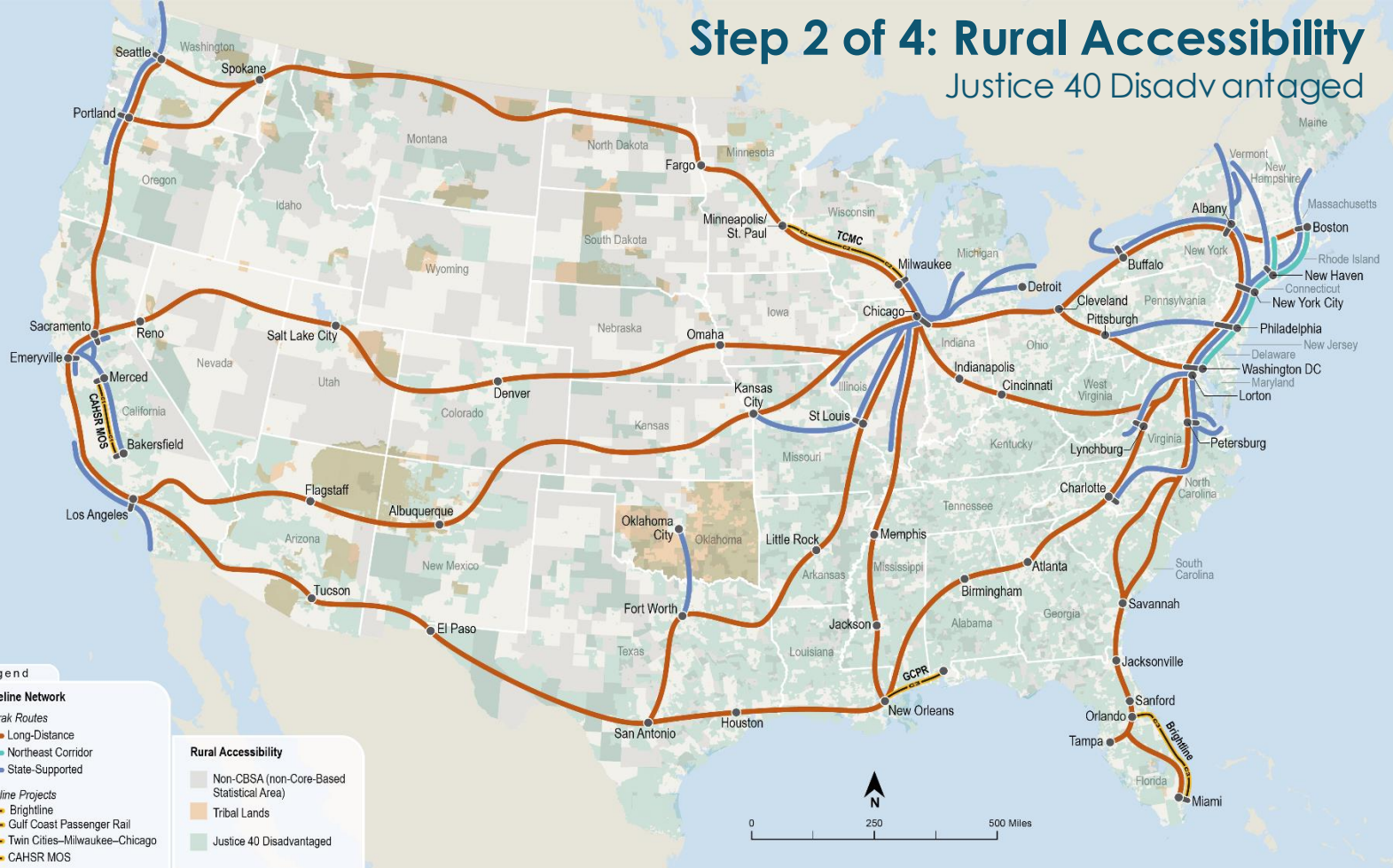
Rural Accessibility

- Non-CBSA (non-Core-Based Statistical Area)
- Tribal Lands
- Justice 40 Disadvantaged



Step 2 of 4: Rural Accessibility

Justice 40 Disadvantaged



Legend

Baseline Network

- Amtrak Routes
 - Long-Distance
 - Northeast Corridor
 - State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities-Milwaukee-Chicago
- CAHSR MOS

Rural Accessibility

- Non-CBSA (non-Core-Based Statistical Area)
- Tribal Lands
- Justice 40 Disadvantaged

Amtrak 2022; FRA 2023; U.S. Census Bureau: 2021 Housing Patterns and Core-Based Statistical Areas; 2020 American Indian Area Boundaries, 2020 Decennial Census; Census Tracts defined as Transportation Disadvantaged or Health Disadvantaged based on the U.S. DOT Justice 40 Initiative: 2019 ACS Data (2015-2019 5-year estimates, 2010 Census Tract Shapefiles).

Step 2 of 4: Rural Accessibility

Developing a Conceptual Enhanced Network



Segments are conceptual building blocks for consideration in developing potential new long-distance routes

Step 2 of 4: Rural Accessibility

Developing a Conceptual Enhanced Network



Legend

Baseline Network

- Amtrak Routes
 - Long-Distance
 - Northeast Corridor
 - State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities-Milwaukee-Chicago
- CAHSR MOS

Rural Accessibility

- Non-CBSA (non-Core-Based Statistical Area)
- Tribal Lands
- Justice 40 Disadvantaged

Enhanced Network

- Newly Added Segments
- Segments
- Segment Options

Segments are conceptual building blocks for consideration in developing potential new long-distance routes



Segment Options

- Segments connecting similar end points but different intermediate markets
- Will be further evaluated to determine one segment option to move forward in future route analysis tasks
- Cheyenne, WY – Billings, MT
 - East alignment connecting east of Billings, MT via Gillette, WY
 - West alignment connecting west of Billings, MT via Casper, WY
- Helena & Butte, MT
 - Connection via Butte, MT as per the discontinued North Coast Hiawatha on disused track, or
 - Connection via Helena, MT on main line track

Step 2 of 4: Rural Accessibility

Developing a Conceptual Enhanced Network



Segments are conceptual building blocks for consideration in developing potential new long-distance routes

Legend

Baseline Network

- Amtrak Routes
- Long-Distance
- Northeast Corridor
- State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities–Milwaukee–Chicago
- CAHSR MOS

Enhanced Network

- Segments
- Segment Options

Existing Route and Station Data provided by Amtrak 2022; Baseline Projects Data provided by FRA 2023

STEP 3 – GEOGRAPHIC COVERAGE/NETWORK CONNECTIVITY

Step 3: Geographic Coverage/Network Connectivity

Considers gaps in the passenger rail network and network connectivity:

- Type of passenger rail service by state:
 - No service
 - State-supported service
 - Long-distance service
 - NEC Service
- Enhance network connectivity for long-distance passenger rail from Regional Rail Plans:
 - Southwest Multi-State Study
 - Southeast Regional Rail Plan
 - Midwest Regional Rail Plan
 - NEC FUTURE
- Regional Rail Plans may recommend corridors for high-frequency, regional, or network independent service
- The Long-Distance Service Study considered all recommendations from the regional rail plans
- Recommendations for regional or network independent service may be most relevant to long-distance service

Step 3 of 4: Geographic Coverage

Baseline Network



Legend

Baseline Network

Amtrak Routes

Orange line: Long-Distance

Blue line: Northeast Corridor

Blue line: State-Supported

Baseline Projects

Yellow line: Brightline

Yellow line: Gulf Coast Passenger Rail

Yellow line: Twin Cities-Milwaukee-Chicago

Yellow line: CAHSR MOS

Existing Route and Station Data provided by Amtrak 2022; Baseline Projects Data provided by FRA 2023

Step 3 of 4: Geographic Coverage

Rail Service by State



Legend

Baseline Network

Amtrak Routes

— Long-Distance

— Northeast Corridor

— State-Supported

Baseline Projects

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— Twin Cities–Milwaukee–Chicago

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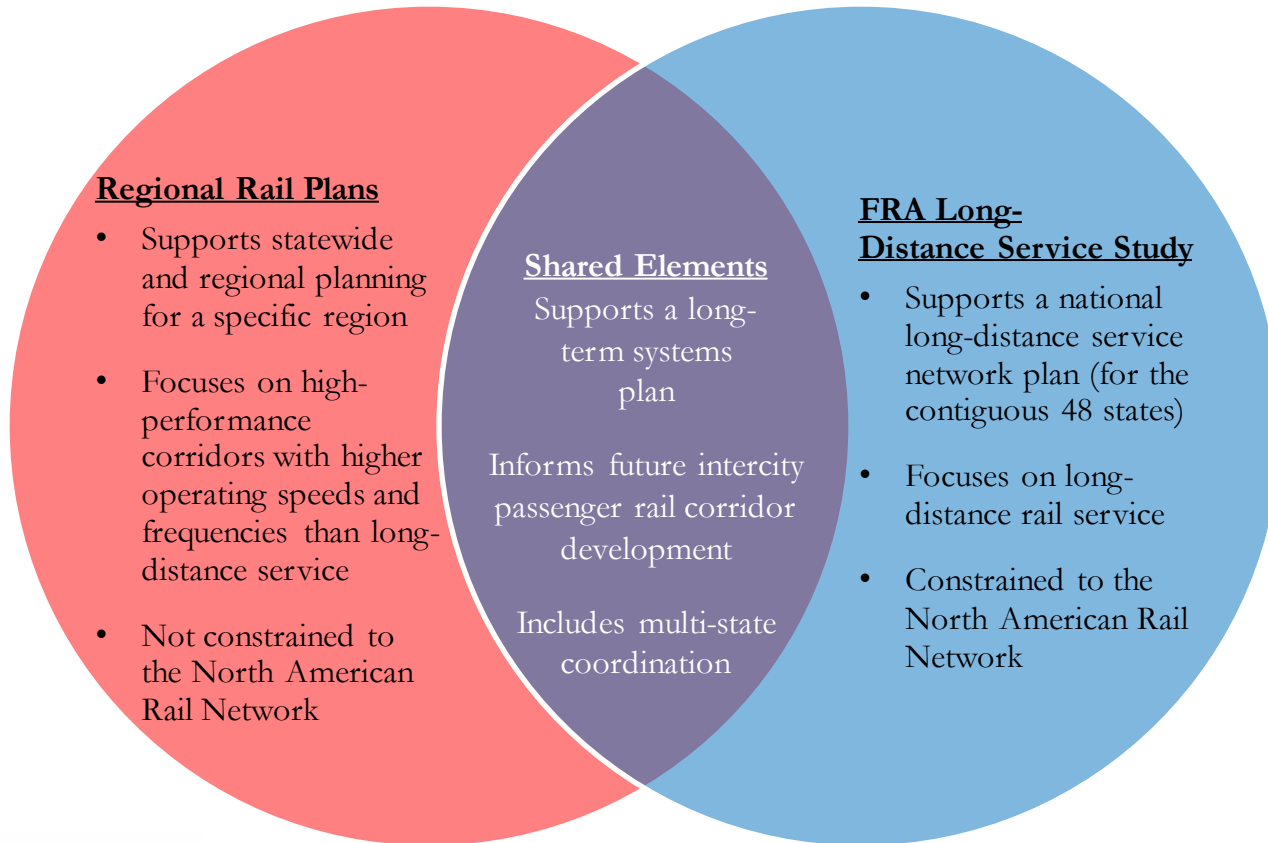
Geographic Coverage

■ No Rail Service



Existing Route and Station Data provided by Amtrak 2022; Baseline Projects Data provided by FRA 2023

Long-Distance Service Study & Regional Rail Plans



Step 3 of 4: Geographic Coverage

Regional Rail Plans

Regional Rail Plans

- Southwest Multi-State Study
- Southeast Regional Rail Plan
- Midwest Regional Rail Plan
- NEC FUTURE



Legend

Baseline Network

Amtrak Routes

— Long-Distance

— Northeast Corridor

— State-Supported

Baseline Projects

— Brightline

— Gulf Coast Passenger Rail

— Twin Cities-Milwaukee-Chicago

— CAHSR MOS

Geographic Coverage

■ No Rail Service

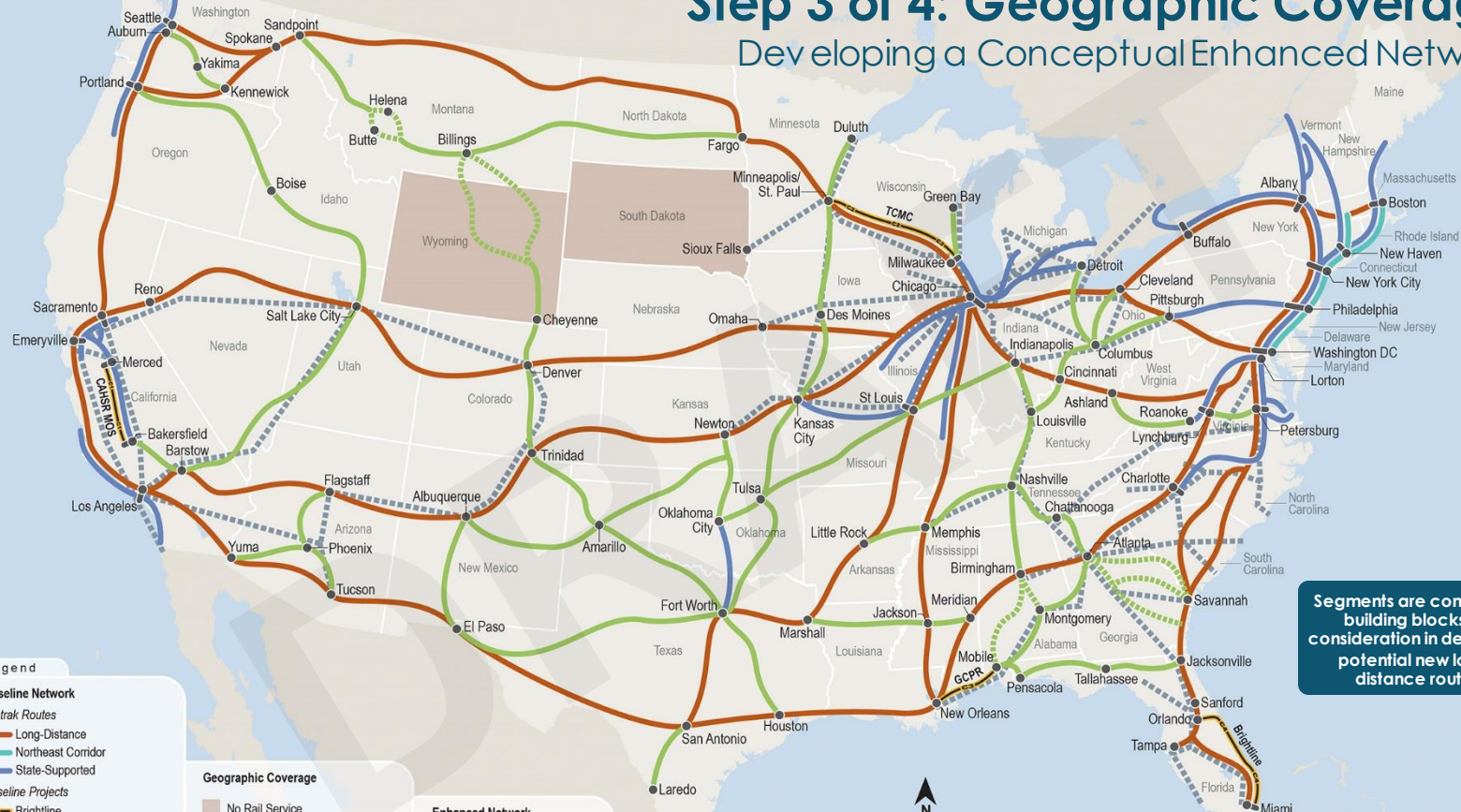
⋯ Other Regional Rail Plan Recommendations



Amtrak 2022; FRA 2023; Regional Plan Data provided by FRA 2023

Step 3 of 4: Geographic Coverage

Developing a Conceptual Enhanced Network



Legend

Baseline Network

Amtrak Routes

Long-Distance

Northeast Corridor

State-Supported

Baseline Projects

Brightline

Gulf Coast Passenger Rail

Twin Cities-Milwaukee-Chicago

CAHSR MOS

Geographic Coverage

No Rail Service

Other Regional Rail Plan Recommendations

Enhanced Network

Segments

Segment Options

Segments are conceptual building blocks for consideration in developing potential new long-distance routes

Step 3 of 4: Geographic Coverage

Developing a Conceptual Enhanced Network

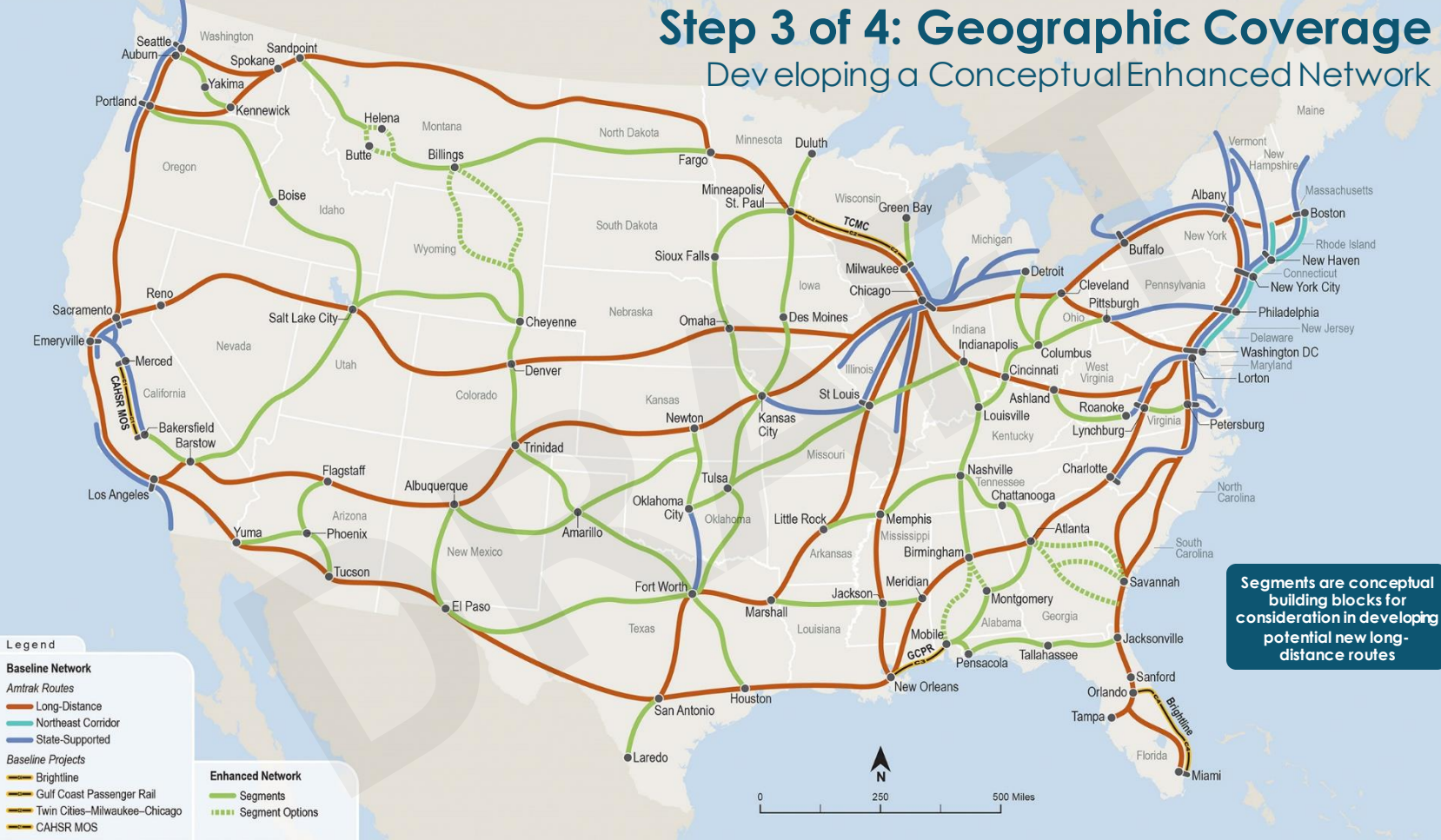


Segments are conceptual building blocks for consideration in developing potential new long-distance routes

Amtrak 2022; FRA 2023; Regional Plan Data provided by FRA 2023

Step 3 of 4: Geographic Coverage

Developing a Conceptual Enhanced Network



Segments are conceptual building blocks for consideration in developing potential new long-distance routes

Legend

Baseline Network

- Amtrak Routes
- Long-Distance
- Northeast Corridor
- State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities-Milwaukee-Chicago
- CAHSR MOS

Enhanced Network

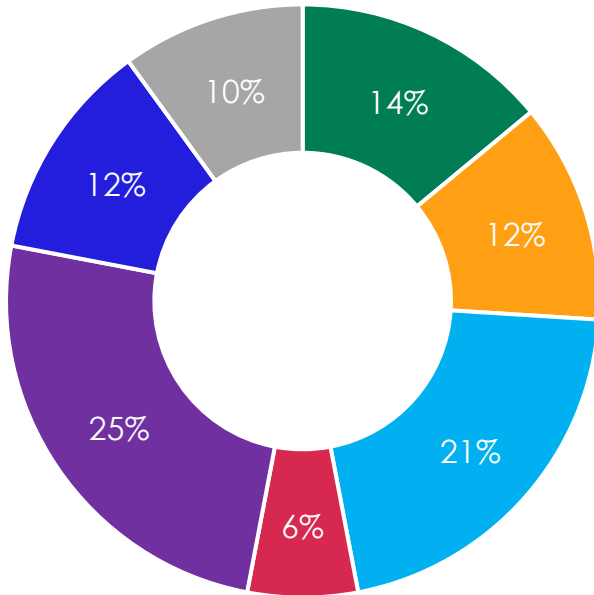
- Segments
- Segment Options

Existing Route and Station Data provided by Amtrak 2022; Baseline Projects Data provided by FRA 2023

STEP 4 – STAKEHOLDER INPUT

February-March Stakeholder Input on Places to Serve

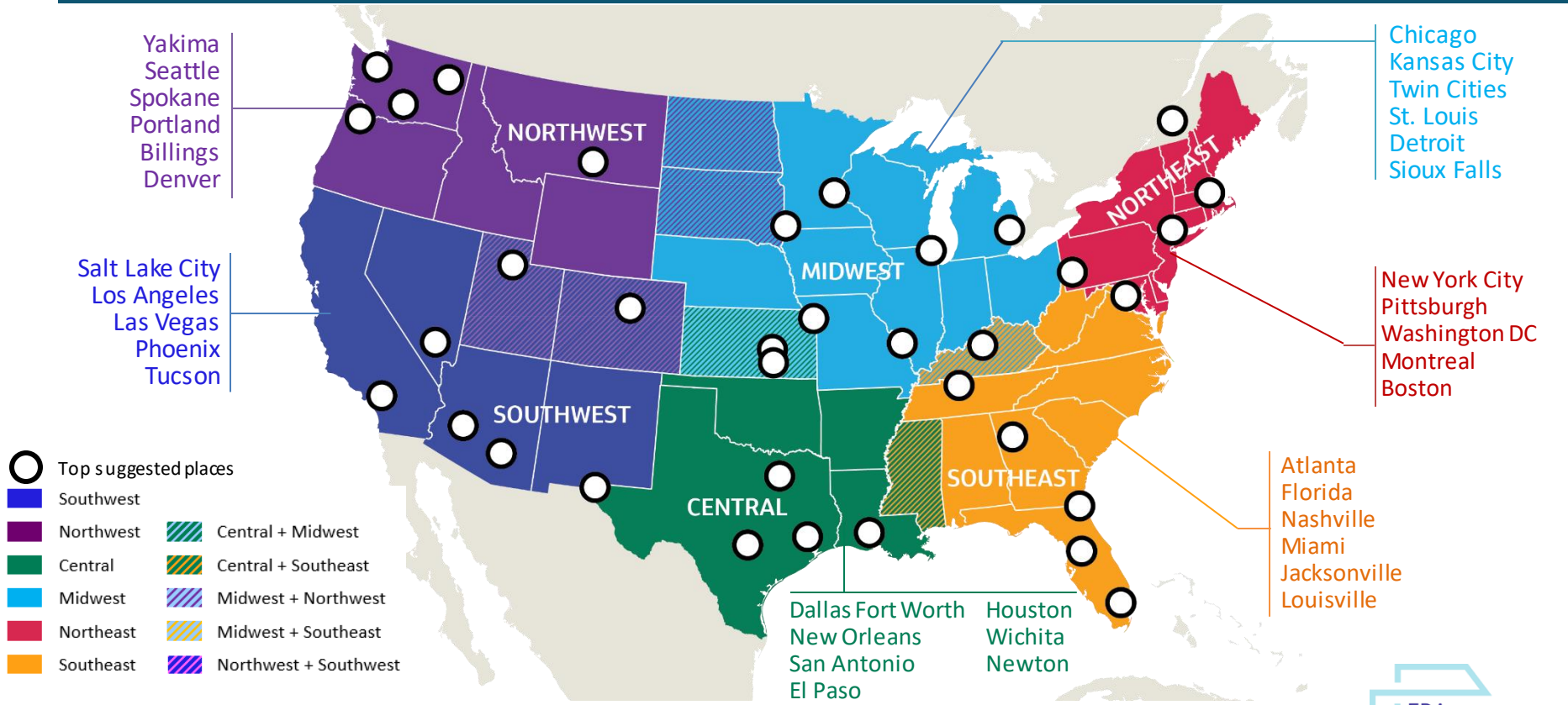
- Central
- Southeast
- Midwest
- Northeast
- Northwest
- Southwest
- Multi-region



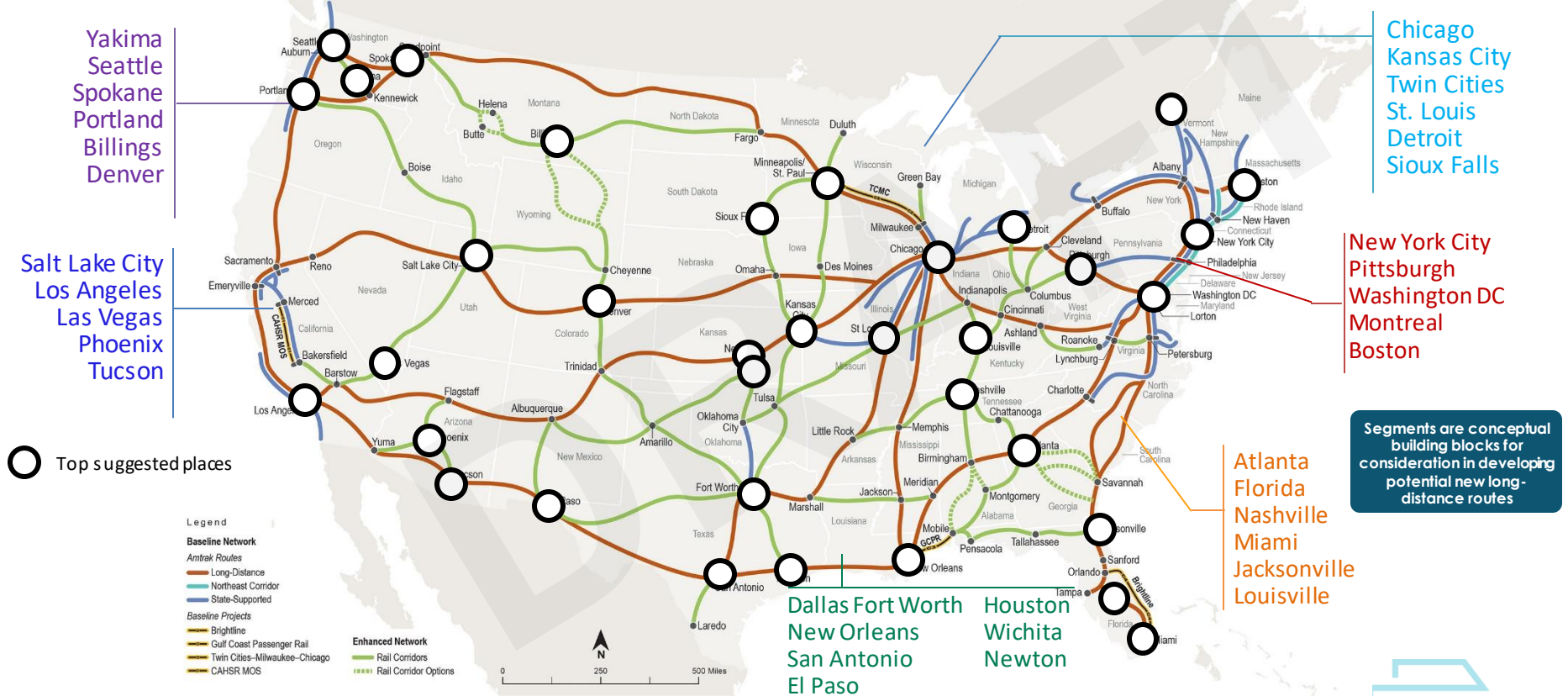
A total of 2,154 references to places were provided.



Top Places Suggested by Stakeholders

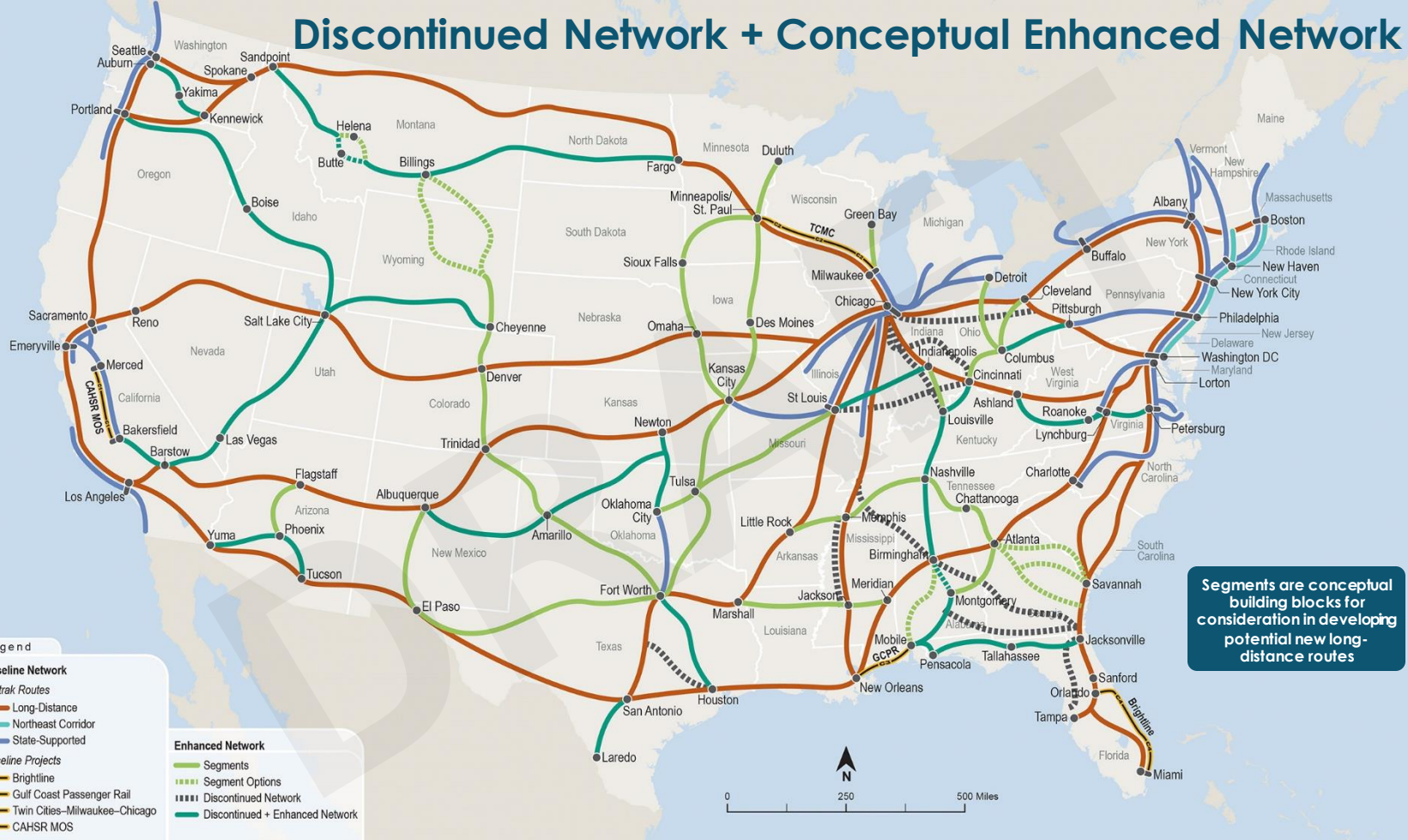


Top Places Suggested by Stakeholders



CONSIDERATION: DISCONTINUED NETWORK

Discontinued Network + Conceptual Enhanced Network



Segments are conceptual building blocks for consideration in developing potential new long-distance routes

ENHANCED NETWORK

Defining an Enhanced Network

The Enhanced Network includes all segments and segment options

The Enhanced Network represents a wide range of possibilities for further consideration in developing route and service options

Segments in the Enhanced Network are conceptual building blocks for consideration in developing potential new long-distance routes over 750 miles long

New segments in the Enhanced Network do not constitute a replacement of state-supported efforts, such as those eligible under Corridor ID

Potential new long-distance routes will serve some markets only at night due to the length of the route

Conceptual Enhanced Network

Conceptual segments for future route development consideration



Legend

Baseline Network

- Amtrak Routes
- Long-Distance
- Northeast Corridor
- State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities-Milwaukee-Chicago
- CAHSR MOS

Enhanced Network

- Segments
- Segment Options

Segments are conceptual building blocks for consideration in developing potential new long-distance routes

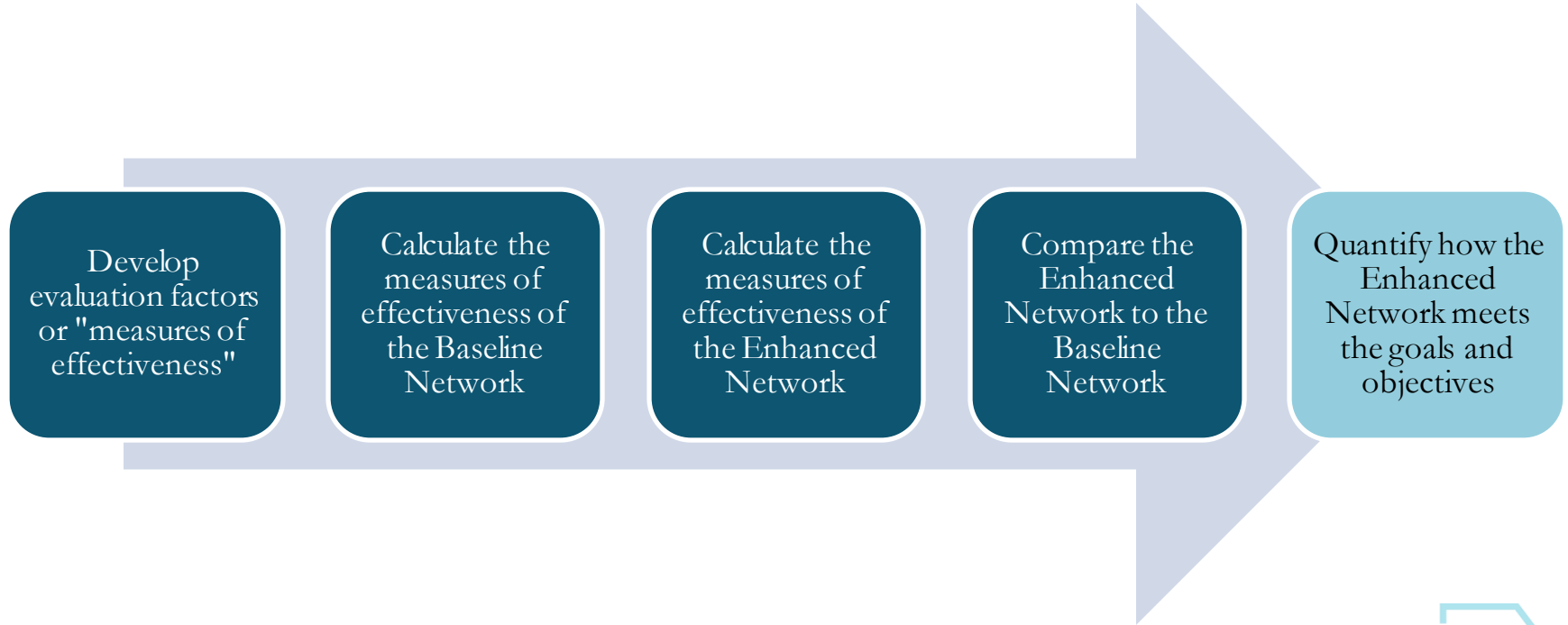


ENHANCED NETWORK DISCUSSION

COMPARISON OF ENHANCED AND BASELINE NETWORKS

Analyze the Enhanced Network

Compare the Enhanced Network to the Baseline Network



Evaluation Factor Ideas and Feedback

Regional Workshop participants identified factors that could be used to evaluate long-distance routes. These include:

Number of connections a route would provide to enhance the national long-distance and intercity networks

Number of connections to large and small communities

Number of areas with higher-than-average disadvantaged populations

Number of city pairs with highest ridership potential

Schedule frequency and convenience

Connections to airports and multimodal opportunities

Number of connections to key destinations

Economic benefits to communities along a route

Measures of Effectiveness

- Feedback on the evaluation factors from previous Regional Workshop participants informed the development of goals and objectives
- Goals and Objectives:
 - **Connectivity**
 - ✓ Increase Passenger Access to the National Passenger Rail Network
 - ✓ Improve passenger rail geographic coverage
 - **Large and Small Communities**
 - ✓ Increase long-distance passenger rail connections to small communities
 - **Economic and Social Well-Being of Rural Areas**
 - ✓ Enhance access for historically disadvantaged populations
 - ✓ Enhance access for tribal areas
 - ✓ Enhance rural access to services
- The Project Team developed measures of effectiveness for the goals and objectives to evaluate the Enhanced Network

Measures of Effectiveness

Population with access to passenger rail

- 100 most populated Metropolitan Statistical Areas (MSAs)
- Rural areas

Number of States with access to passenger rail

Number of Congressional districts with access to passenger rail

Rural population with access to passenger rail

- Transportation and health disadvantaged
- Below the poverty threshold
- Areas of persistent poverty

Population on tribal lands with access to passenger rail

- Below the poverty threshold

Number of services connected to passenger rail

- Public/private higher education institutions
- Medical centers
- National parks

Places Served by the Baseline Network or Enhanced Network

Baseline Network

- Catchment area around existing stations

New Segment consistent with the Discontinued Network

- Catchment area around discontinued stations

New Segment where long-distance passenger rail service has not operated

- Catchment area buffer around new segments

Catchment Area: To support network-level analysis, catchment areas are defined as a 30-mile radius where the station or new segment is in an MSA, or a 50-mile radius where the station or new segment is in a non-MSA area.

GOAL: CONNECTIVITY

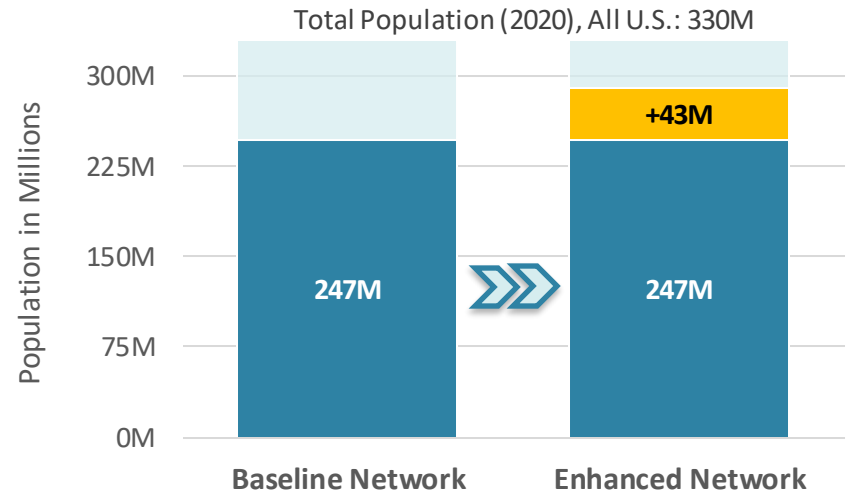
INCREASE PASSENGER ACCESS TO THE
NATIONAL PASSENGER RAIL NETWORK

IMPROVE PASSENGER RAIL GEOGRAPHIC
COVERAGE

Goal: Connectivity

Objective: Increase Passenger Access to the National Passenger Rail Network

- Scope: Total U.S. Population
- **43 million more people** could have access to passenger rail services
- a **17% increase**

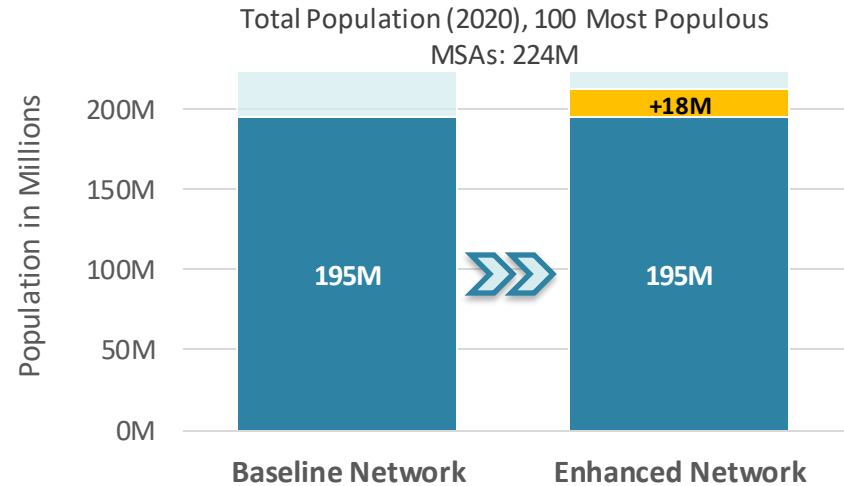


Population of census tracts served by the Baseline Network or Enhanced Network
Source: U.S. Census Bureau, 2020 Decennial Census (census tracts)

Goal: Connectivity

Objective: Increase Passenger Access to the National Passenger Rail Network

- Scope: Population of the 100 Most Populous MSAs
- **18 million more people** could have access to passenger rail services
- a **9% increase**



Population of census tracts served by the Baseline Network or Enhanced Network
Source: U.S. Census Bureau. 2020 Decennial Census (census tracts and MSAs)

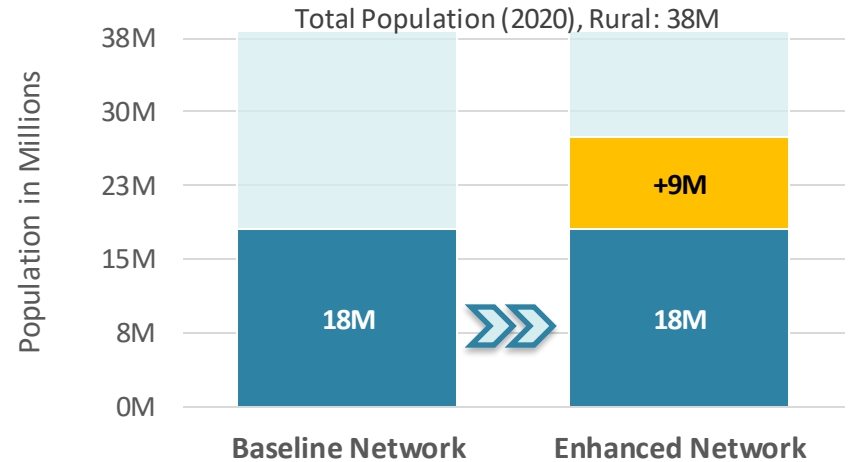
MSA: Metropolitan Statistical Areas – population greater than 50,000

Goal: Connectivity

Objective: Increase Passenger Access to the National Passenger Rail Network

- Scope: U.S Population Outside Urbanized Areas (i.e., Rural)
- **9 million more people** could have access to passenger rail services
- a **52% increase**

Rural: population outside of urbanized areas, located within neither Metropolitan Statistical Areas (MSAs) nor Micropolitan Statistical Areas (MMSAs)



Population of census tracts served by the Baseline Network or Enhanced Network
Source: U.S. Census Bureau. 2020 Decennial Census (census tracts and Urbanized Area boundaries)

Goal: Connectivity

Objective: Improve passenger rail geographic coverage

- **2 additional states**
→ 48 states, as well the District of Columbia, could have access to passenger rail services
- **81 additional congressional districts**
→ 332 congressional districts could have access to passenger rail services



46
States

+2
New States

= 48
will have access to passenger rail



251
Congressional Districts

+81
Additional Districts (32%)

= 332
will have access to passenger rail

Baseline Network  Enhanced Network

States boundaries and congressional districts containing a segment in the Enhanced or Baseline Network; values do not include District of Columbia counted separately
Source: U.S. Census Bureau. State and congressional district boundary shapefiles (2022)

GOAL: LARGE AND SMALL COMMUNITIES

INCREASE LONG-DISTANCE PASSENGER RAIL
CONNECTIONS TO SMALL COMMUNITIES

Goal: Large and Small Communities

- Objective: Increase long-distance passenger rail connections to small communities
- Additional stations in the Enhanced Network could increase the connections to small communities and increase the connectivity between long-distance and state-supported services
- **Stations will be identified as potential new long-distance routes using the Enhanced Network are developed later in the study**



GOAL: ECONOMIC AND SOCIAL WELL-BEING OF RURAL AREAS

ENHANCE ACCESS FOR HISTORICALLY DISADVANTAGED
POPULATIONS

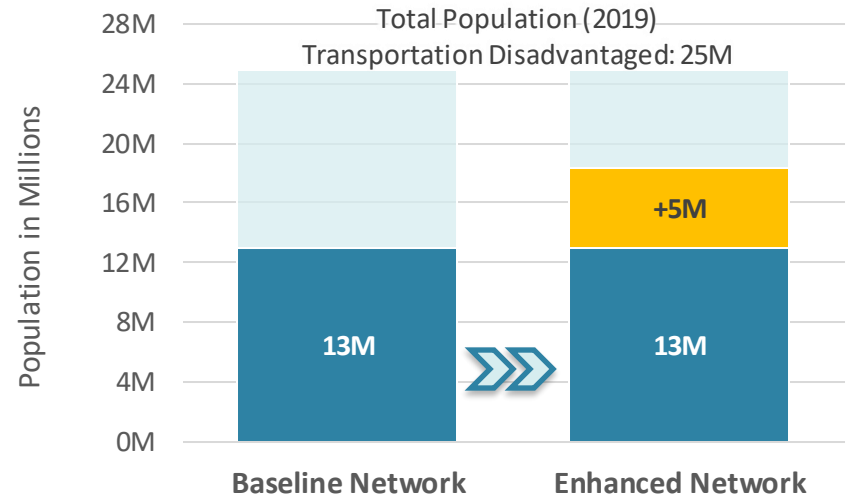
ENHANCE ACCESS FOR TRIBAL AREAS

ENHANCE RURAL ACCESS TO SERVICES

Goal: Economic and Social Well-Being of Rural Areas

Objective: Enhance access for historically disadvantaged populations

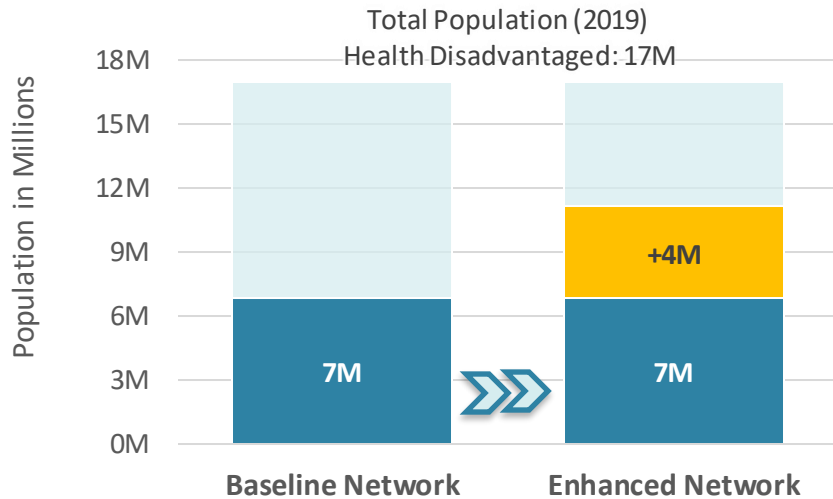
- Scope: Population in rural *Transportation Disadvantaged* Areas (Justice 40)
- **5 million more people** could have access to passenger rail services
- a **42% increase**



Population of census tracts outside urbanized areas served by the Baseline or Enhanced Network that are defined as Transportation Disadvantaged based on the U.S. DOT Justice 40 Initiative: ACS Data (2015-2019 5-year estimates, 2010 Census Tract Shapefiles).

Source: U.S. Census Bureau. 2020 Decennial Census, U.S. Census Bureau. 2020 Urbanized Areas boundaries, U.S. Census Bureau. ACS 2015-2019 5-year estimates (using 2010 census tract boundaries)

Goal: Economic and Social Well-Being of Rural Areas



Objective: Enhance access for historically disadvantaged populations

- Scope: Population in rural *Health Disadvantaged* Areas (Justice 40)
- **4 million more people** could have access to passenger rail services
- a **63% increase**

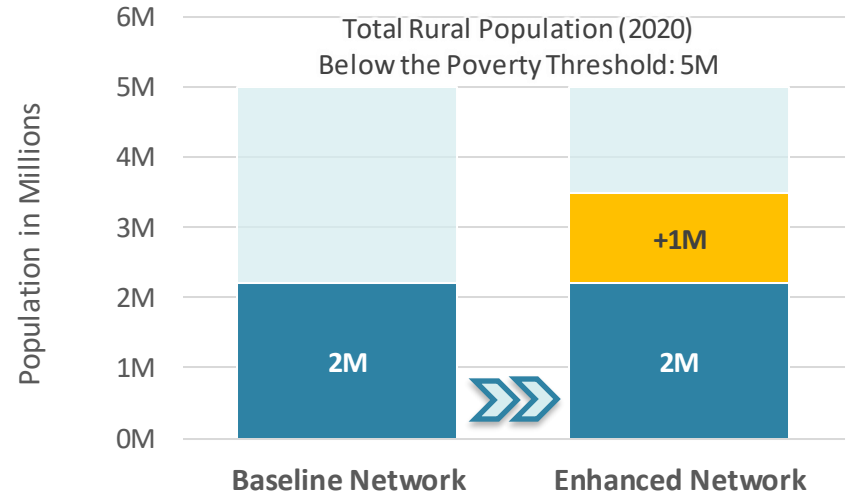
Population of census tracts outside urbanized areas served by the Baseline or Enhanced Network that are defined as Health Disadvantaged based on the U.S. DOT Justice 40 Initiative: ACS Data (2015-2019 5-year estimates, 2010 Census Tract Shapefiles).

Source: U.S. Census Bureau. 2020 Decennial Census, U.S. Census Bureau. 2020 Urbanized Areas boundaries, U.S. Census Bureau. ACS 2015-2019 5-year estimates (using 2010 census tract boundaries)

Goal: Economic and Social Well-Being of Rural Areas

Objective: Enhance access for historically disadvantaged populations

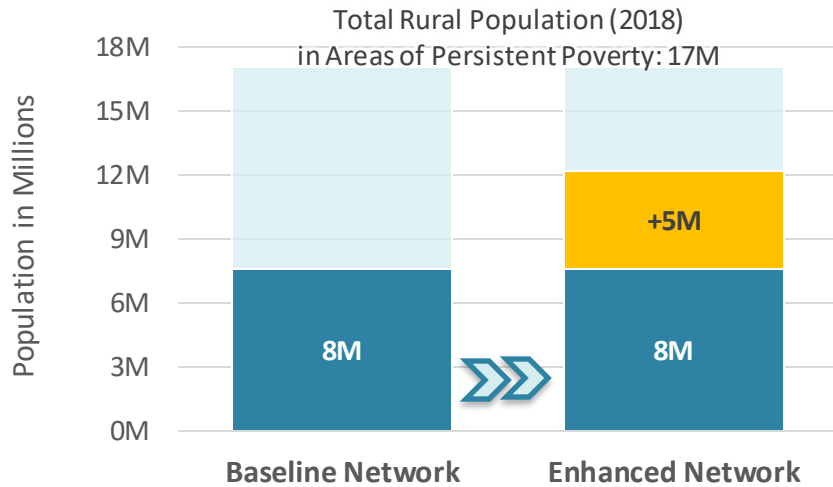
- Scope: Rural Population Living Below the Poverty Threshold (2020)
- **1 million more people** could have access to passenger rail services
- a **59% increase**



Population of census tracts living below the poverty threshold outside of urbanized areas served by the Baseline Network or Enhanced Network
Source: U.S. Census Bureau. 2020 Decennial Census, U.S. Census Bureau. 2020 Urbanized Areas boundaries, U.S. Census Bureau

Rural: population outside of urbanized areas

Goal: Economic and Social Well-Being of Rural Areas



Objective: Enhance access for historically disadvantaged populations

- Scope: Rural Population in Areas of Persistent Poverty (2018) – **these are areas with high rates over poverty sustained over time**
- **5 million more people** could have access to passenger rail services
- a **61% increase**

Population of census tracts in areas of persistent poverty and outside of urbanized areas served by the Baseline Network or Enhanced Network

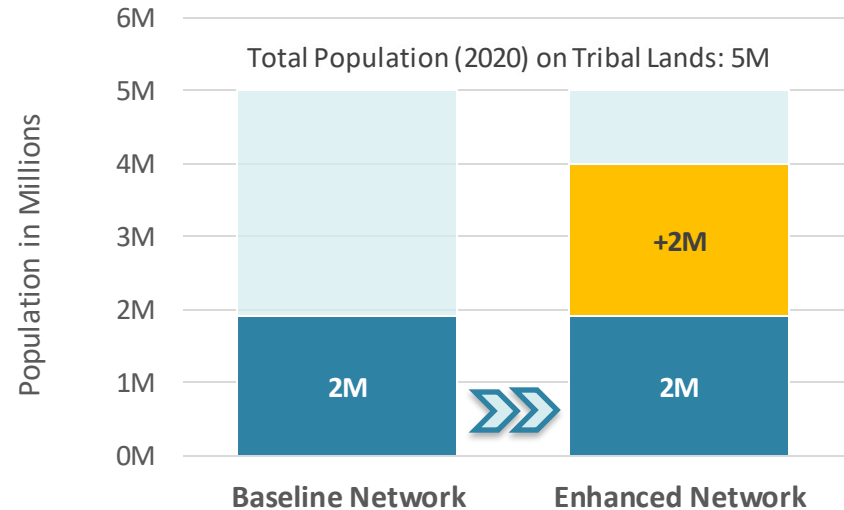
Source: U.S. Census Bureau. Census Tract with a poverty rate of at least 20 percent as measured by the 2014–2018 5-year data series available from the American Community Survey of the Bureau of the Census. 2020 Urbanized Areas boundaries were used to identify rural areas, U.S. Census Bureau (using 2010 census tract boundaries)

Rural: population outside of urbanized areas

Goal: Economic and Social Well-Being of Rural Areas

Objective: Enhance access for tribal areas

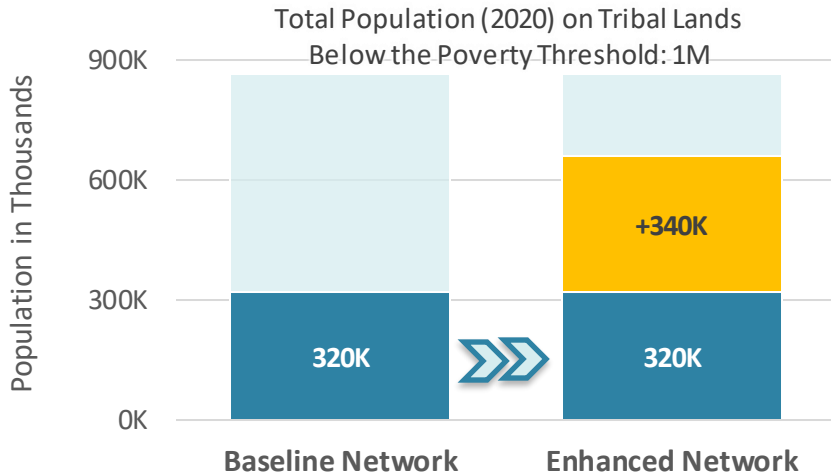
- Scope: Population on U.S. Tribal Lands
- **2 million more people** could have access to passenger rail services
- a **111% increase**



Population in census tracts covered by American Indian Tribal area boundaries served by the Baseline Network or Enhanced Network
Source: U.S. Census Bureau. 2020 Decennial Census (census tracts), U.S. Census Bureau. American Indian/Native Alaskan/Native Hawaiian Areas boundaries

Tribal lands include American Indian and Alaska Native Land, American Indian Tribal Subdivisions, Bureau of Indian Affairs Regional Boundaries, Oklahoma Tribal Statistical Areas

Goal: Economic and Social Well-Being of Rural Areas



Objective: Enhance access for tribal areas

- Scope: U.S. Population on Tribal Lands Living Below the Poverty Threshold
- **340 thousand more people** could have access to passenger rail services
- a **106% increase**

Population below the poverty threshold in census tracts covered by American Indian Tribal area boundaries served by the Baseline Network or Enhanced Network
Source: U.S. Census Bureau. 2020 Decennial Census (census tracts), U.S. Census Bureau. American Indian/Native Alaskan/Native Hawaiian Areas boundaries

Tribal lands include American Indian and Alaska Native Land, American Indian Tribal Subdivisions, Bureau of Indian Affairs Regional Boundaries, Oklahoma Tribal Statistical Areas

Goal: Economic and Social Well-Being of Rural Areas

Objective: Enhance rural access to services

- **600 additional institutions**
→ 3,300 public and private not-for-profit higher education institutions could have access to passenger rail services
- a **22% increase**
- **2 million more students**
→ a total enrollment of 16 million could have access to passenger rail services
- a **16% increase**



2,700

Public/Private
Higher
Education

+600

Additional
Institutions
(22%)

= 3,300

will have access
to passenger rail



14

million

Current
Enrollment

+2

million

More Students,
Higher
Education
(16%)

= 16

million

will have access
to passenger rail

Baseline Network



Enhanced Network

Count of public and private not-for-profit institutions and sum of total enrollment of institutions in census tracts served by the Baseline Network or Enhanced Network

Source: U.S. Census Bureau. 2020 census tract boundaries, U.S. Dept. of Homeland Security 2019 (Locations and Enrollment), Homeland Infrastructure Foundation-Level Data Geoplatform (HIFLD)

Goal: Economic and Social Well-Being of Rural Areas

Objective: Enhance rural access to services

- **73 more Medical Centers**
→ 576 medical centers could have access to passenger rail services
- a **15% increase**
- **11 more National Parks**
→ 73 National Parks, Recreation Areas, and Preserves could have access to passenger rail services
- an **18% increase**



503

Medical Centers

+73

Additional Medical Centers (15%)

= 580

will have access to passenger rail



62

National Parks, Recreation Areas, and Preserves

+11

Additional Parks (18%)

= 73

will have access to passenger rail

Baseline Network



Enhanced Network

Count of medical facilities (only Level I or II trauma centers, facilities with "Cancer" and/or "Veteran" in the name) census tracts served by the Baseline Network or Enhanced Network; Count of national parks (Parks, Recreation Areas, and Preserves) served by the Baseline Network or Enhanced Network (within 100-miles)

Source: U.S. Census Bureau. 2020 census tract boundaries, U.S. Dept. of Homeland Security 2023 (Locations), Homeland Infrastructure Foundation-Level Data Geoplatform (HIFLD), National Parks Service data created by Land Resources Division 2023

Medical Centers include VA Hospitals, Level I & II Trauma Centers, and Cancer Centers

LUNCH

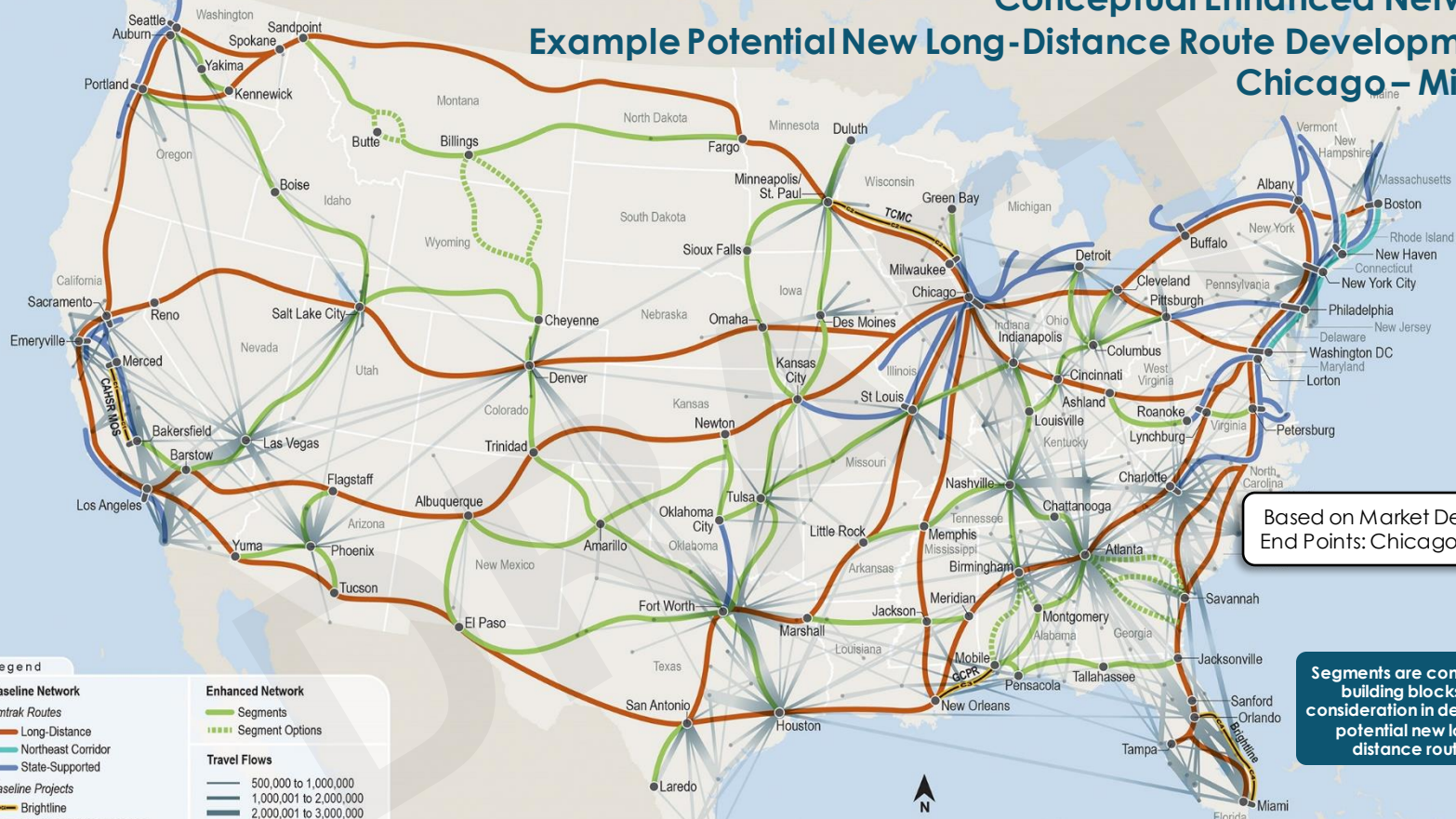
ROUTE DEVELOPMENT AND FEEDBACK ACTIVITY

Interactive Activity: Creating Potential New Long-Distance Routes

- **Activity:** Create a new long-distance route using the Enhanced Network
- **Instructions for developing potential new long-distance routes:**
 - Routes begin and end in major market
 - Routes string together multiple markets
 - Routes generally go in one direction (i.e., avoid loops)
 - Routes are more than 750 miles

Conceptual Enhanced Network

Example Potential New Long-Distance Route Development: Chicago – Miami



Based on Market Demand
End Points: Chicago-Miami

Segments are conceptual building blocks for consideration in developing potential new long-distance routes

Legend

Baseline Network

- Amtrak Routes
- Long-Distance
- Northeast Corridor
- State-Supported

Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
- Twin Cities–Milwaukee–Chicago
- CAHSR MOS

Enhanced Network

- Segments
- Segment Options

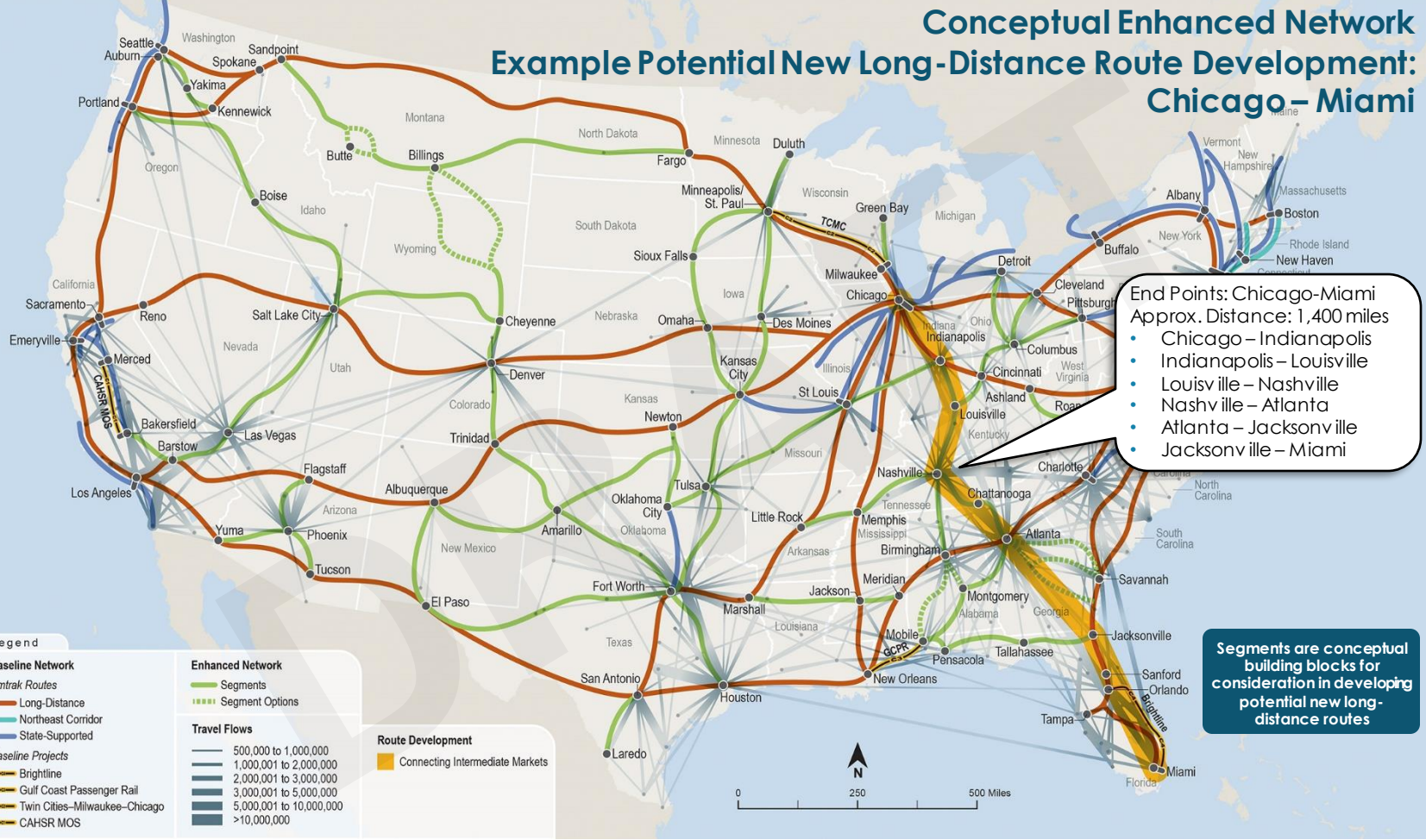
Travel Flows

- 500,000 to 1,000,000
- 1,000,001 to 2,000,000
- 2,000,001 to 3,000,000
- 3,000,001 to 5,000,000
- 5,000,001 to 10,000,000
- >10,000,000



Conceptual Enhanced Network

Example Potential New Long-Distance Route Development: Chicago – Miami



Segments are conceptual building blocks for consideration in developing potential new long-distance routes

Conceptual Enhanced Network

Example Potential New Long-Distance Route Development: Chicago – Miami



Legend

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- 500,000 to 1,000,000
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- 2,000,001 to 3,000,000
- 3,000,001 to 5,000,000
- 5,000,001 to 10,000,000
- >10,000,000

Route Development

- Connecting Intermediate Markets
- Connecting Long Markets



Conceptual Enhanced Network

Example Potential New Long-Distance Route Development: Chicago – Miami



Legend

Baseline Network

- Amtrak Routes
- Long-Distance
- Northeast Corridor
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Baseline Projects

- Brightline
- Gulf Coast Passenger Rail
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- Segment Options

Travel Flows

- 500,000 to 1,000,000
- 1,000,001 to 2,000,000
- 2,000,001 to 3,000,000
- 3,000,001 to 5,000,000
- 5,000,001 to 10,000,000
- >10,000,000

Route Development

- Connecting Intermediate Markets
- Connecting Long Markets
- New Route



STAKEHOLDER INSIGHTS FOR ONGOING FEEDBACK OPPORTUNITIES

Infrastructure Investment and Jobs Act Direction

Develop recommendations for methods by which Amtrak could work with local communities and organizations to develop activities and programs to continuously improve public use of intercity passenger rail service along each route

Future Feedback Opportunities

- In moving the study forward, how can FRA and Amtrak best coordinate with stakeholders about long-distance service?

Potential Area of Focus	Questions
Current Long-Distance Service	<ul style="list-style-type: none">• What types of stakeholder input are most essential?• What groups should be involved?
Future Long-Distance Service	<ul style="list-style-type: none">• What types of stakeholder input are most essential?• What groups should be involved?

Examples of Current Structured Stakeholder Involvement Opportunities

- State-Amtrak Intercity Passenger Rail Committee (SAIPRC)
 - Directed by Congress to facilitate collaboration among members and oversee implementation of a standard cost-sharing methodology for State-Supported Intercity Passenger Rail Services
 - Multi-agency body; members include 20 agencies in 17 states, Amtrak, and FRA
- Northeast Corridor (NEC) Commission
 - Authorized by Congress, charged with developing a formula to allocate NEC capital and operating costs, make recommendations to Congress, and facilitate collaborative planning
 - 18 members, including representatives of each of the eight NEC states, the District of Columbia, Amtrak, and the U.S. DOT

Future Feedback Opportunities

Are there other examples of organizational or coordinating groups that have worked well for efforts like these?

NEXT STEPS

Next Steps

- Based on feedback received from this meeting and the other regions:
 - Confirm enhanced network based on stakeholder feedback
 - Route development
- For future meetings:
 - Review costs, benefits and financing information
 - Review draft recommendations and implementation strategies
 - Review prioritized routes
- Post all meeting materials on the project website

Next Steps for Stakeholders

- Encourage your communities and constituencies to review the meeting materials on the website
 - All presentations and summaries will be posted online after the completion of the meeting series
- Submit any feedback on the topics and materials from this meeting via the project website **by August 21** for inclusion in our analysis and report
 - Due to the breadth of the study, it may not be possible to respond to all feedback, but all feedback will be reviewed by the team and captured in our report

Long-Distance Service Study Engagement Schedule



Stay Informed

FRA Long-Distance Service Study

Website: www.fralongdistancerailstudy.org

Email: contactus@fralongdistancerailstudy.org

