February 3, 2025

RIPTA Metro Connector

Technical Working Group (TWG) Meeting #3

Zachary Agush, RIPTA with Support from
ASG Planning and Nelson\Nygaard

Today's Agenda

1. Welcome and Meeting Purpose
2. Update from Last Meeting
3. A Universe of Ideas
4. Screening against Project Purpose
5. Tier 1 Concepts
6. 2025 Look Ahead

Welcome and Meeting Purpose

Purpose of Today's Meeting:

Today is the third of six anticipated Technical Working Group meetings.

We will review the findings from our screening step with you, and present our Tier 1 concepts (and some early findings). We seek your assistance getting ready for our next round of Public Outreach.

Reminder of our Charge

- The TWG serves as an advisory group to the Project Management Team (PMT).
- This is the 3rd of six meetings envisioned to occur over the 18-month project, at key project milestones.

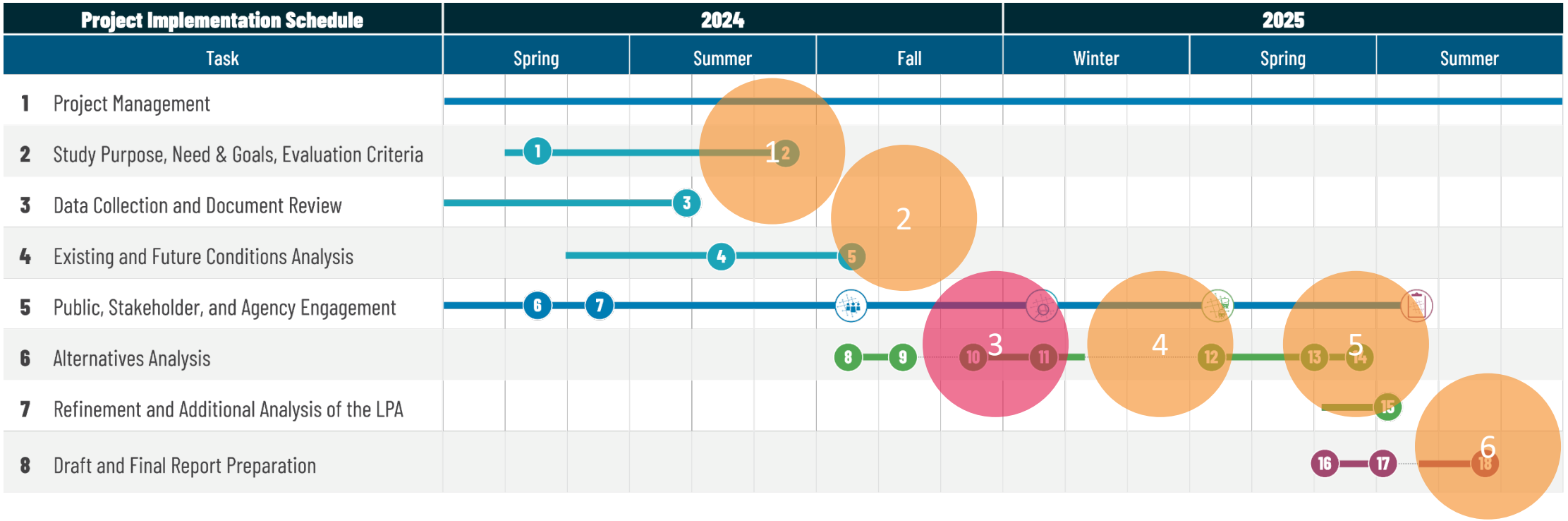
Key TWG Roles

- Serve as a sounding board for technical decisions.
- Raise local concerns, issues and/or opportunities.
- Make sure we provide good answers and help craft solutions.
- Help us engage a broad and representative sector of the community.
- Serve as a conduit to decision makers in your community or at your agency.
- **Think Regionally!**

Reminder of TWG Participation

Entity	Representatives
Key Agency Partners	RIPTA, RIDOT, FTA
Municipal Partners	Cumberland, Central Falls, Pawtucket, Providence, Cranston, Warwick
Other State and Quasi-Agency Partners	Statewide Planning, Commerce, Health, Housing, Environmental Management
Community Groups	RI Transit Riders, Convention Center Bureau, PVD Streets Coalition, West Bay CAP, PCF Development

Reminder of When we Meet



Key Milestones and Deliverables

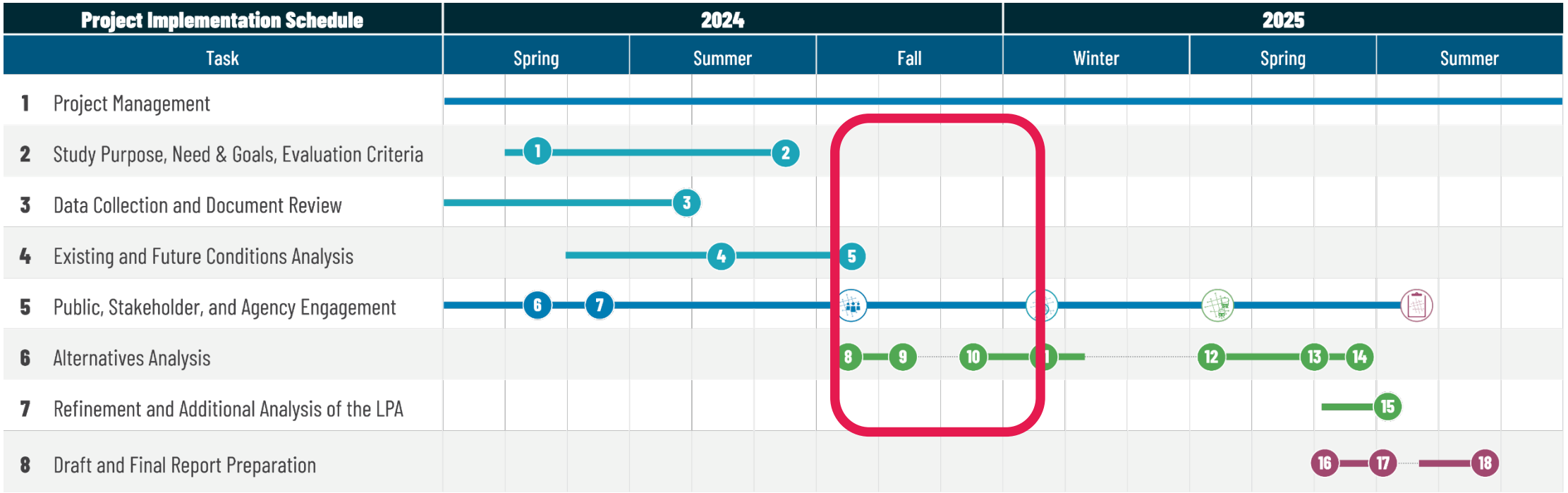
1. Draft Purpose and Needs Statement
2. Draft Evaluation Framework
3. Draft Plan and Policy Review
4. Draft State of the System Report
5. Final State of the System Report
6. Stakeholder Interviews
7. Walking Tour

- First Round of Outreach - Early Scoping
- Second Round of Outreach - Shortlisting Alternatives
- Third Round of Outreach - Towards Set of LPAs
- Fourth Round of Outreach - Towards Implementation

8. Universe of Concepts
9. Screen Against Purpose & Needs
10. Develop Long List of Ideas
11. Tier 1 Evaluation
12. Develop Shortlist of Alternatives
13. Tier 2 Evaluation
14. Draft LPA
15. Refined LPA
16. Implementation Plan
17. Draft Final Report
18. Final Report

Update from Last Meeting

Since We Last Met, We…



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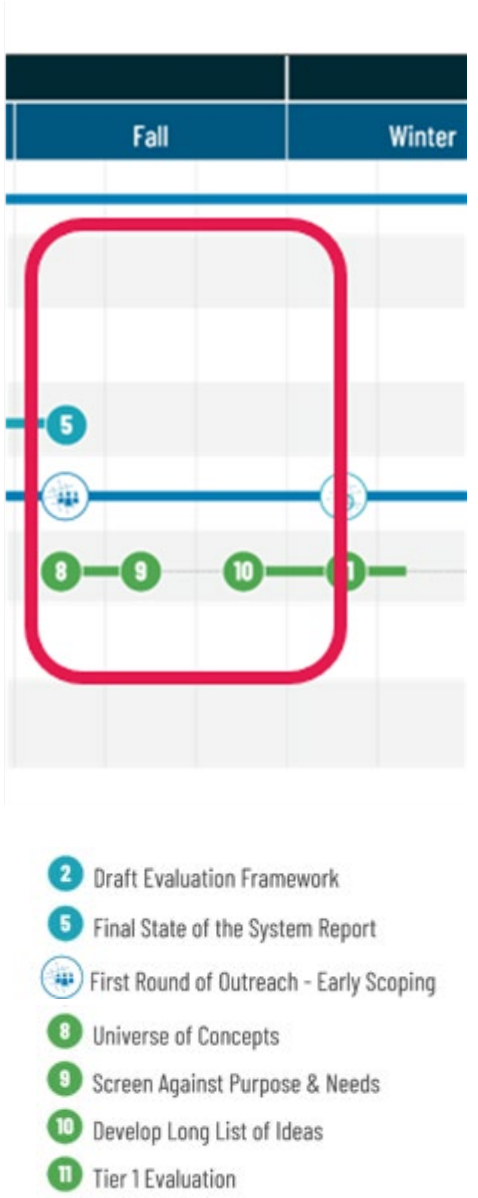
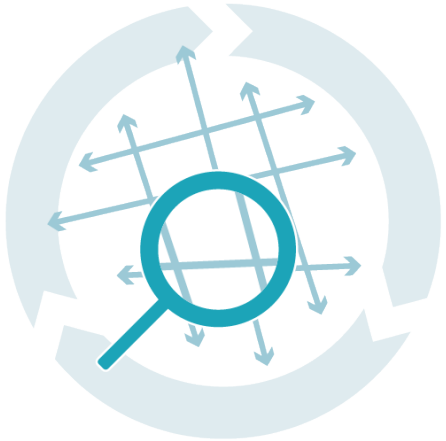
18. Final Report

Since We Last Met, We…

- Finalized our Existing Conditions report and prepared for our Future No-Build assumptions
- Hosted an Agency Scoping meeting with a variety of environmental resource agencies
- Prepared our Equity Framework to guide both public outreach and technical analysis
- Created our Evaluation Framework (how we will make decisions)
- Completed a Universe of ideas (lots of lines on a map)
- Screened this Universe of ideas against our project purpose
- Defined a set of Tier 1 concepts by geographic section
- Began to evaluate these concepts using our evaluation framework
- Met with each municipality along the corridor to review the Tier 1 concepts



We are now in the middle of the AA



1. Understand

Months 1-6

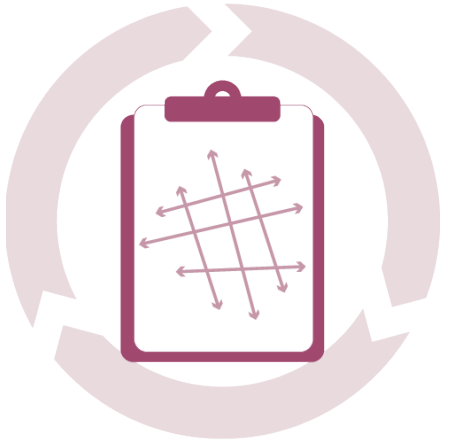
- Our study area
- Conditions today
- Purpose and need, evaluation framework
- Equitable stakeholder engagement

We are here!

2. Assess

Months 6-14

- Defining our alternatives
- Evaluate alternatives
- Select LPAs
- Refine LPAs
- Equitable stakeholder engagement



3. Document

Months 14-16

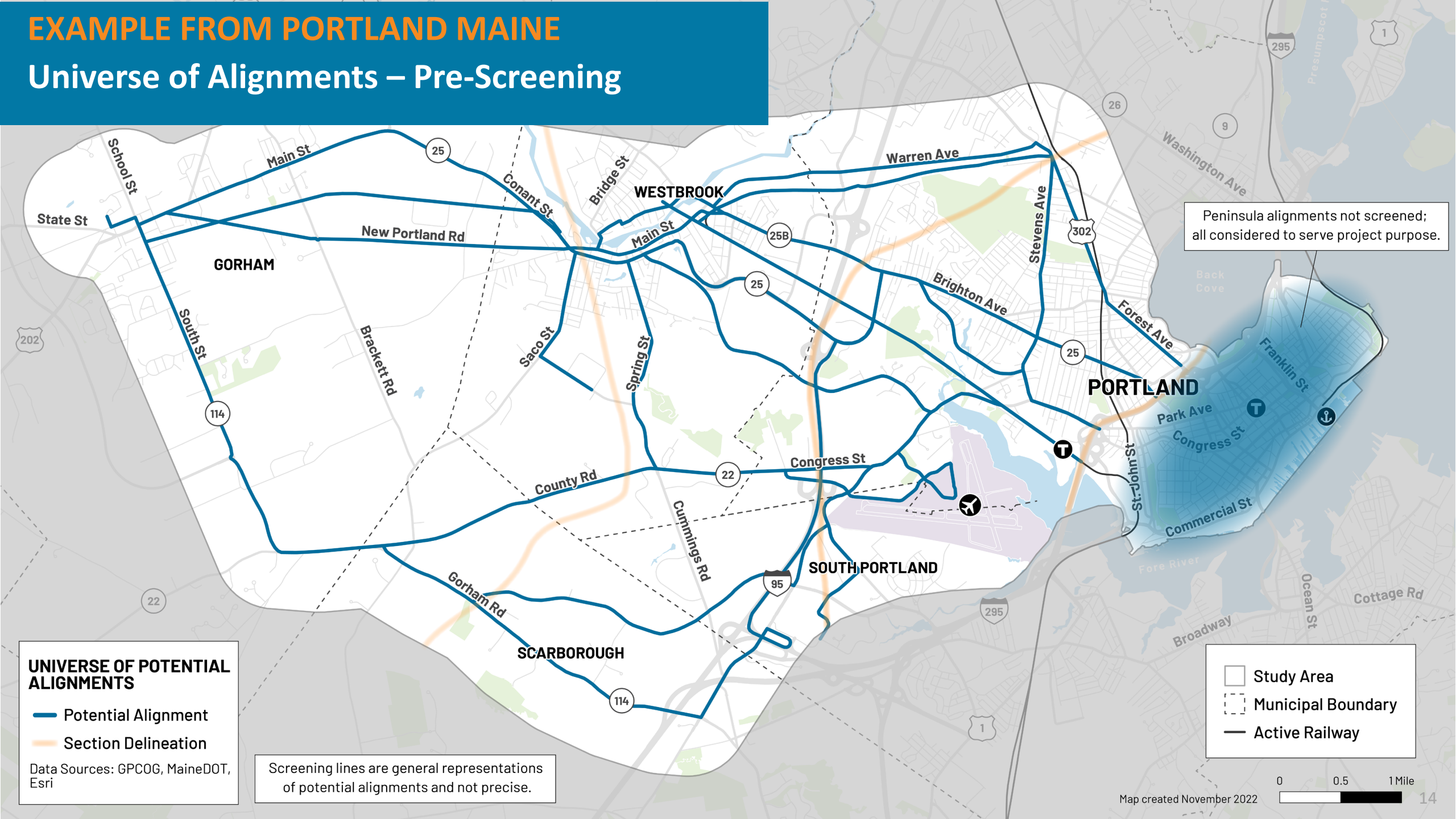
- Approve LPAs
- Prepare implementation plan
- Equitable stakeholder engagement

A Universe of Ideas

We have lines on the map!

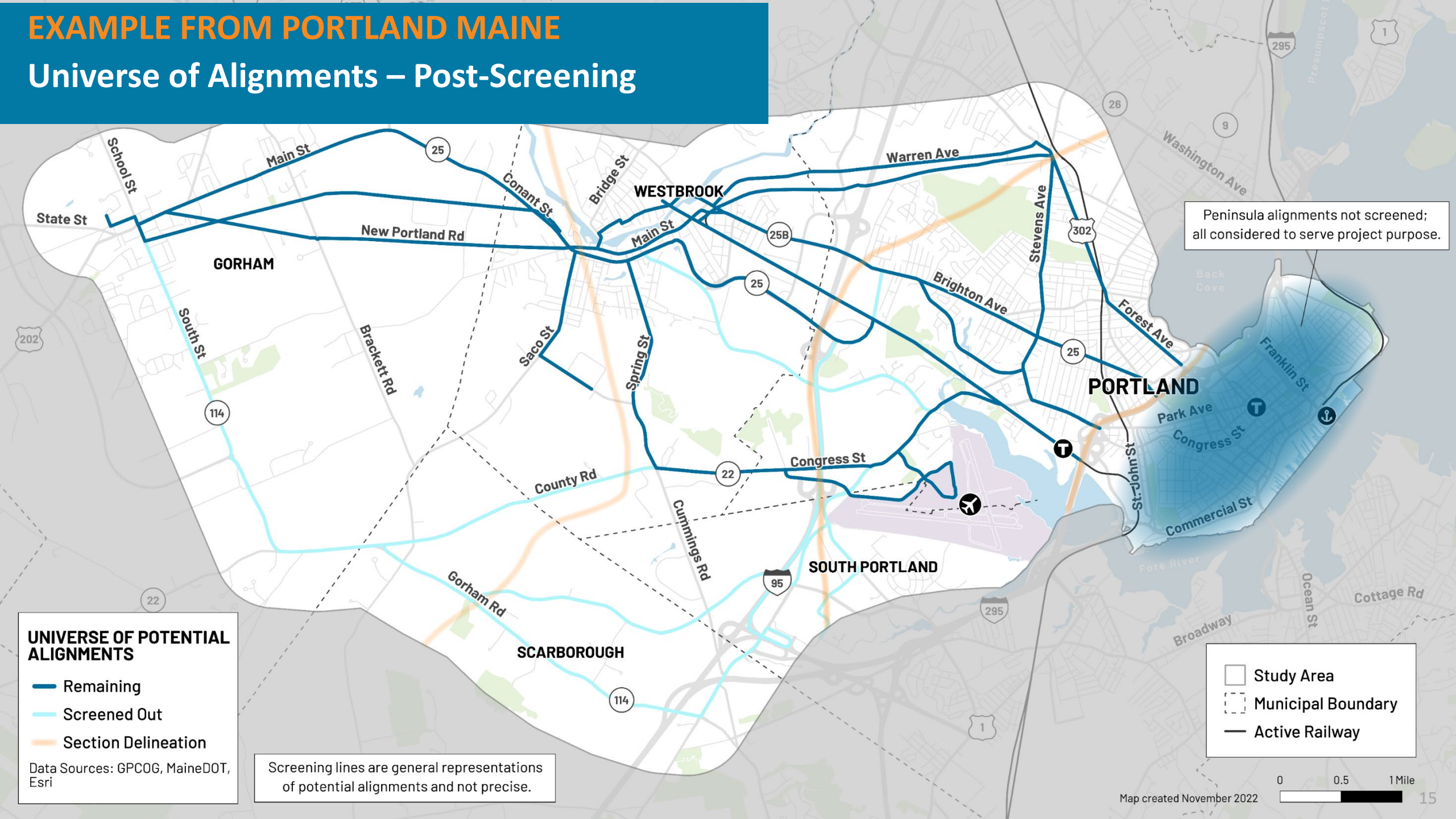
EXAMPLE FROM PORTLAND MAINE

Universe of Alignments – Pre-Screening

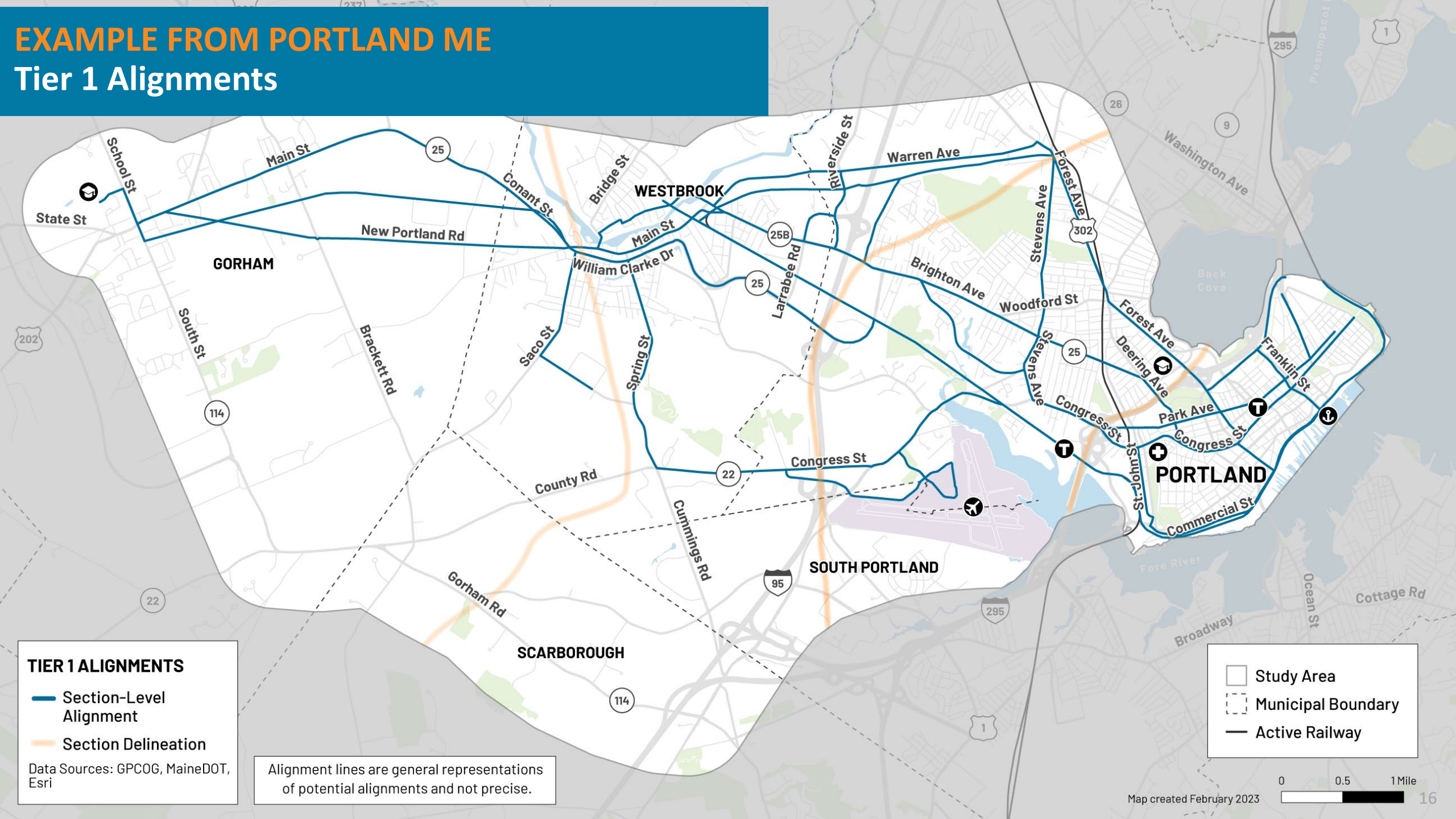


EXAMPLE FROM PORTLAND MAINE

Universe of Alignments – Post-Screening



EXAMPLE FROM PORTLAND ME
Tier 1 Alignments



EXAMPLE FROM PORTLAND ME

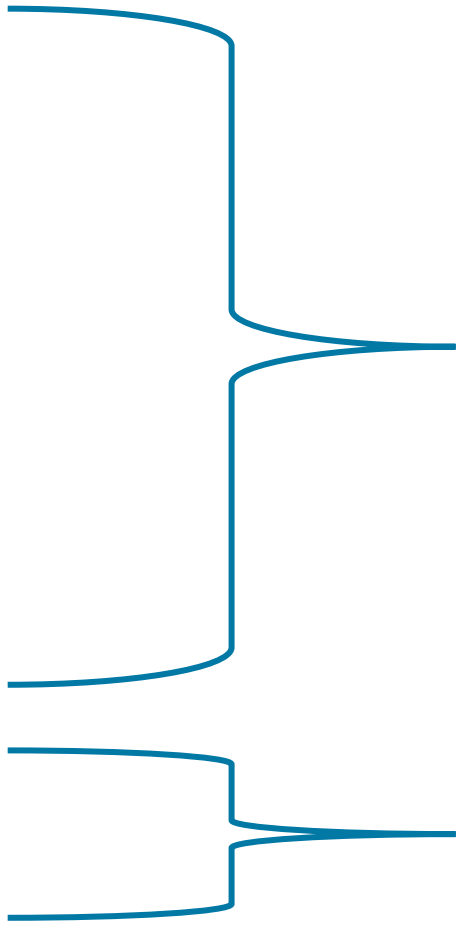
Tier 1 Evaluation Criteria

- More in depth criteria to differentiate corridors from one another in terms of suitability for rapid transit – particularly for those within the same section
- All parts of the project purpose are reflected once we reach Tier 1

Goal Area	Evaluation Criterion
1. Improve Mobility: Provide rapid transit service that is time-competitive with driving alone	1.1 Potential/plans for exclusive right-of-way or other transit priority (e.g., multiple lanes, rail RoW, queue-jump lanes)
	1.2 Percentage of signalized intersections that are TSP capable
2. Grow Transit Ridership: Encourage mode shift away from single-occupancy vehicles and decrease auto dependency and greenhouse gas emissions by providing rapid transit service where it is likely to have the highest ridership	2.1 Average composite transit demand within 1/4 mile (using methods in market analysis; based on pop. density, socio-economic characteristics, emp. density, and industry type), weighted by geography area
	2.2 Percent of acres within 1/4 mile that can support 30-min. or better all-day service
3. Support Sustainable Growth: Provide opportunities for transit-oriented development in areas aligned with local community plans, future development, and jurisdictional support, and serve these areas with more sustainable transportation options.	3.1 Average future composite transit demand (2045)
	3.2 Percent of future acres within 1/4 mile that can support 30-min. or better all-day service (2045)
	3.3 Corridor has jurisdictional support for upzoning, TOD, transit priority, and/or rapid transit service generally
	3.4 Percent of acres within 1/4 mile that have transit-supportive zoning
4. Enhance Connectivity: Provide rapid transit that connects to a high-quality pedestrian network and other local and regional transit services	4.1 Intersection density per acre within 1/4 mile
	4.2 Connects to existing transportation hub (PTC, PULSE, Casco Bay Ferry Terminal, Jetport)
5. Focus on Equity: Provide rapid transit where and when transit-critical populations are traveling	5.1 Transit index factor (weighted likelihood for residents to take transit based on race/ethnicity, vehicle ownership, and income)
	5.2 Off-peak commuter density within 1/4 mile
6. Provide New Opportunities: Serve regional employment, education, shopping, social services, and other activities to enhance access to opportunities for regional residents. Support reverse commutes to employment, residential, and recreation opportunities in Westbrook and Gorham.	6.1 Employment density within 1/4 mile
	6.2 Density of jobs with customers, clients, patients, and students within 1/4 mile (centers of activity)
7. Focus on Practical and Implementable Solutions: Achieve local consensus on an option that balances costs and benefits, aligns with local goals, and can be reasonably implemented.	7.1 Is not likely to have extraordinarily complex infrastructure requirements
	7.2 Is not likely to face major political barriers (e.g., major land acquisitions, complex right-of-way use negotiations)
	7.3 Does not impact sensitive environmental features

GPCOG Tier 1 Evaluation Scoring

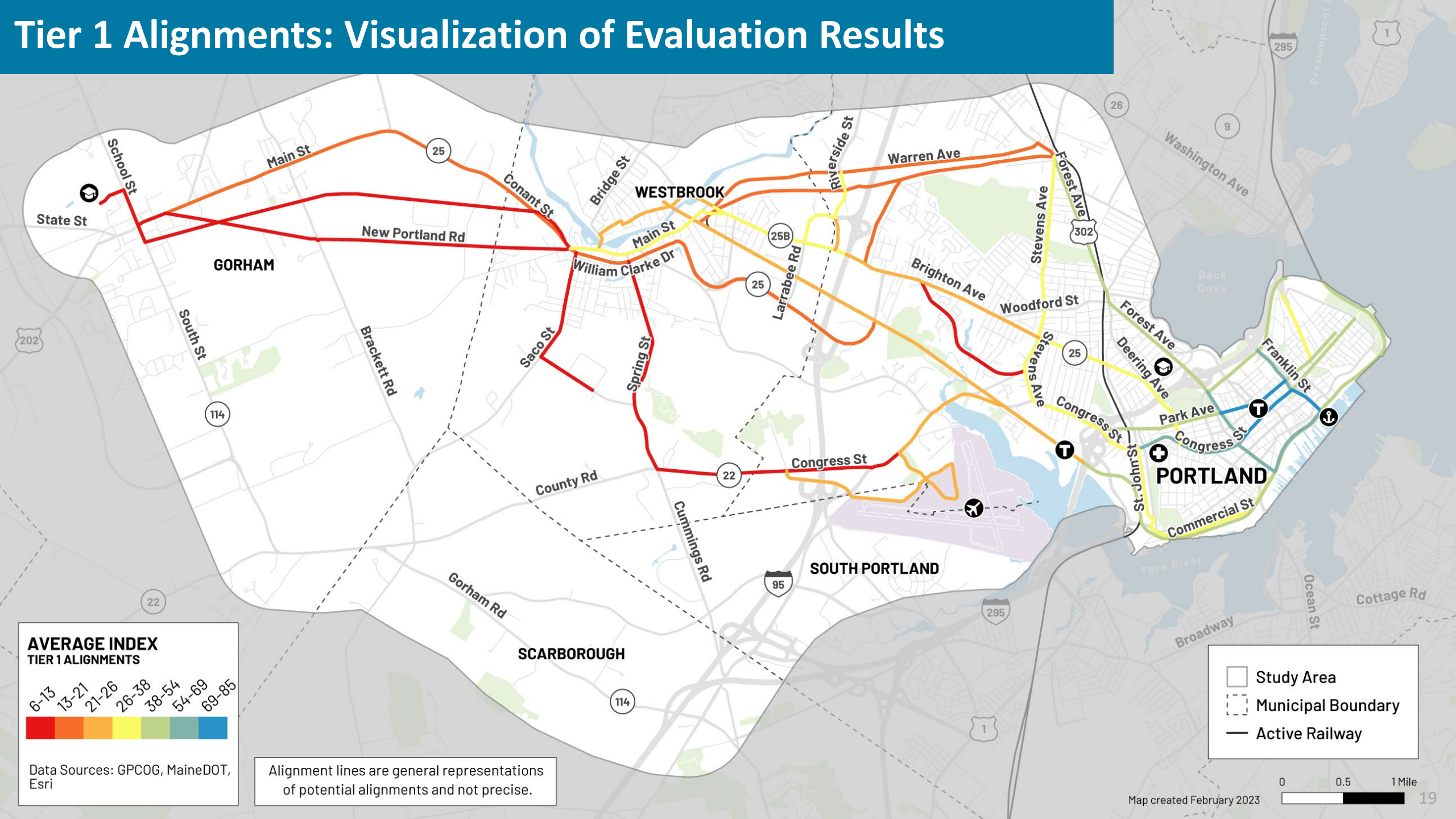
1. Improve Mobility
2. Grow Transit Ridership
3. Support Sustainable Growth
4. Enhance Connectivity
5. Focus on Equity
6. Provide New Opportunities
7. Focus on Practical and Implementable Solutions



Scored 0 - 100

‘Red Flag’ Criteria

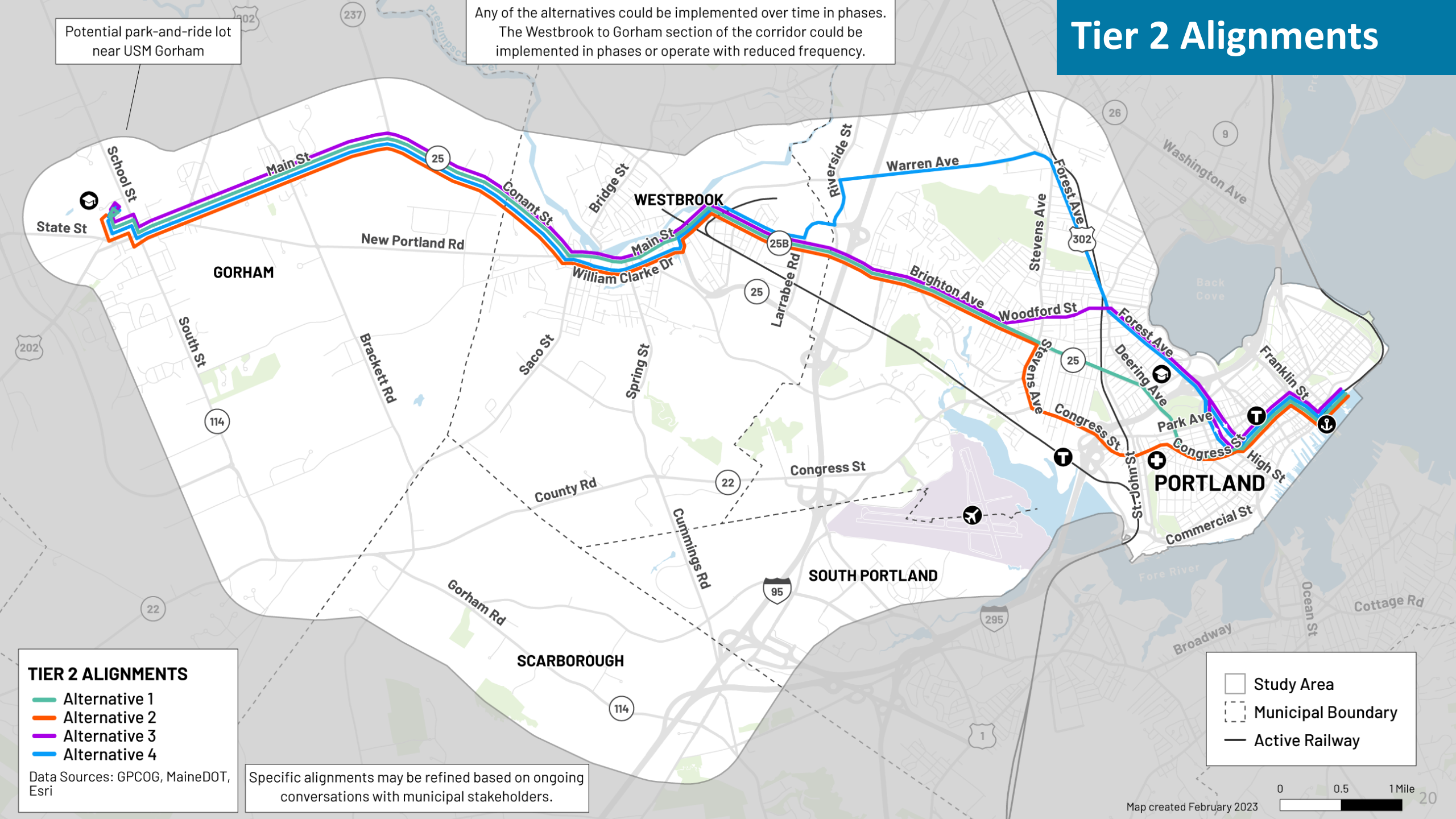
Tier 1 Alignments: Visualization of Evaluation Results



Tier 2 Alignments

Potential park-and-ride lot near USM Gorham

Any of the alternatives could be implemented over time in phases. The Westbrook to Gorham section of the corridor could be implemented in phases or operate with reduced frequency.



TIER 2 ALIGNMENTS

- Alternative 1
- Alternative 2
- Alternative 3
- Alternative 4

Data Sources: GPCOG, MaineDOT, Esri

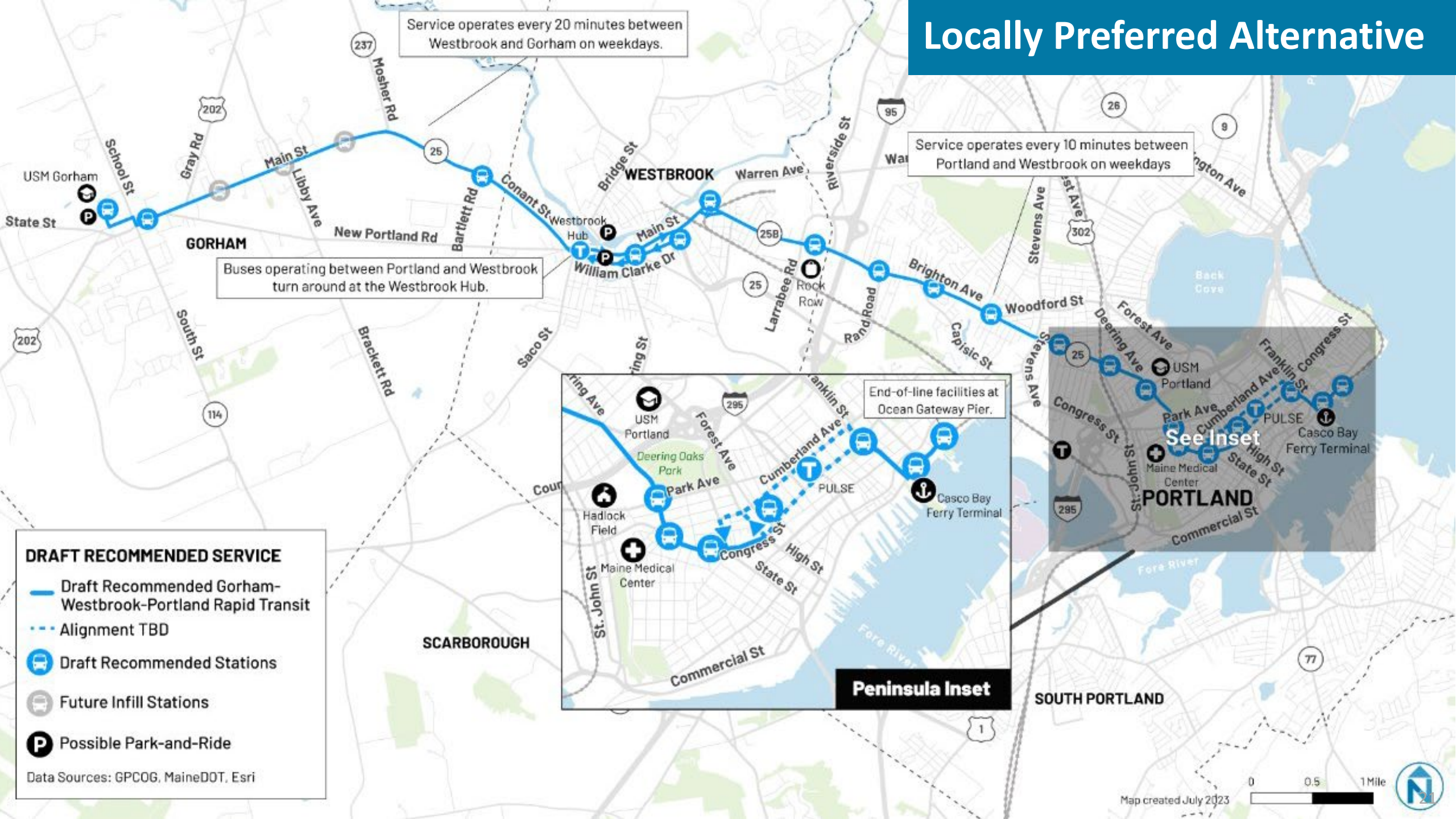
Specific alignments may be refined based on ongoing conversations with municipal stakeholders.

- Study Area
- Municipal Boundary
- Active Railway

0 0.5 1 Mile

Map created February 2023

Locally Preferred Alternative



Here in Rhode Island…
Assumptions on Included Corridors

- We are looking for reasonable ways to connect activity centers in these two north/south corridors.
- We define reasonable as streets or rail corridors which
  - are sufficiently wide to carry high-capacity transit,
  - do not traverse unreasonable* vertical grades
  - do not travel along purely low-density residential streets
- Any line drawn by a member of the public in a public setting is included in the universe, regardless of whether it meets the reasonable-ness criteria above
- The northern terminus is not set - it could be
  - Stop and Shop in Cumberland
  - Ann & Hope facility in Cumberland
  - Just north of the Blackstone River in Cumberland

*unreasonable must be maybe double the max vertical from the Basis of Design

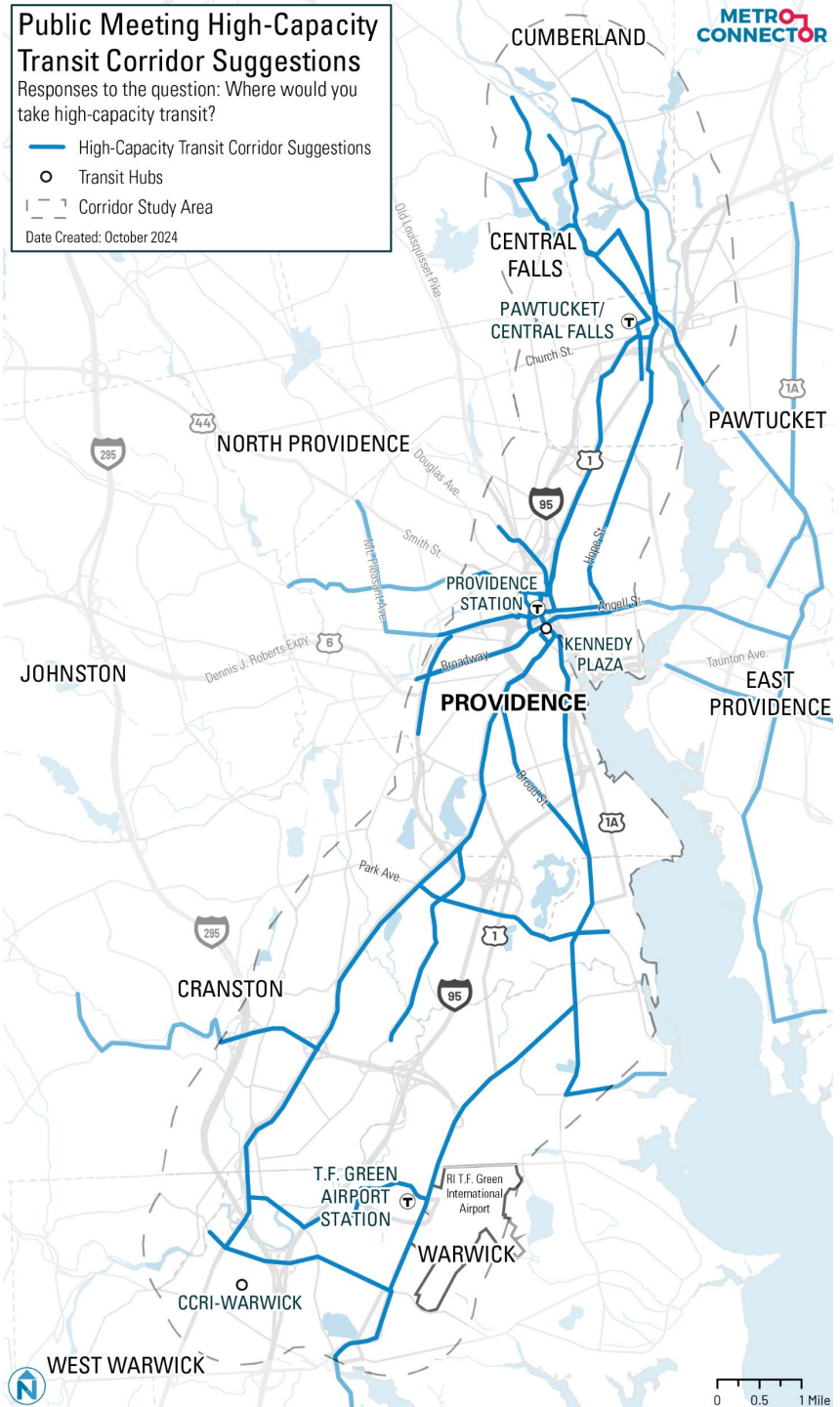
Here in Rhode Island…
Assumptions on Included Corridors (cont'd)

- The southern terminus is set - we assume it is
  - CCRI Warwick for the Pawtucket/CF corridor AND
  - TF Green for the Providence to TF Green corridor
- We assume all options will serve
  - Pawtucket/CF Transit Center
  - Providence Station (Amtrak/Commuter Rail)
  - Another transit center in downtown Providence (Kennedy Plaza, another location? This is a question for the group)
- We define "downtown Providence" as being bounded by the canal of the Providence River and I-95
- We assume all potential alignments within "downtown Providence" will pass the screen
- Enough public conversation around HCT being placed on the NE Corridor has occurred that this line is included in the Universe

Here in Rhode Island…

We started with public input

- During outreach in September, members of the public were asked: “Where would you take high-capacity transit?”
- These lines will be part of the universe of corridors that will be passed through the first screening

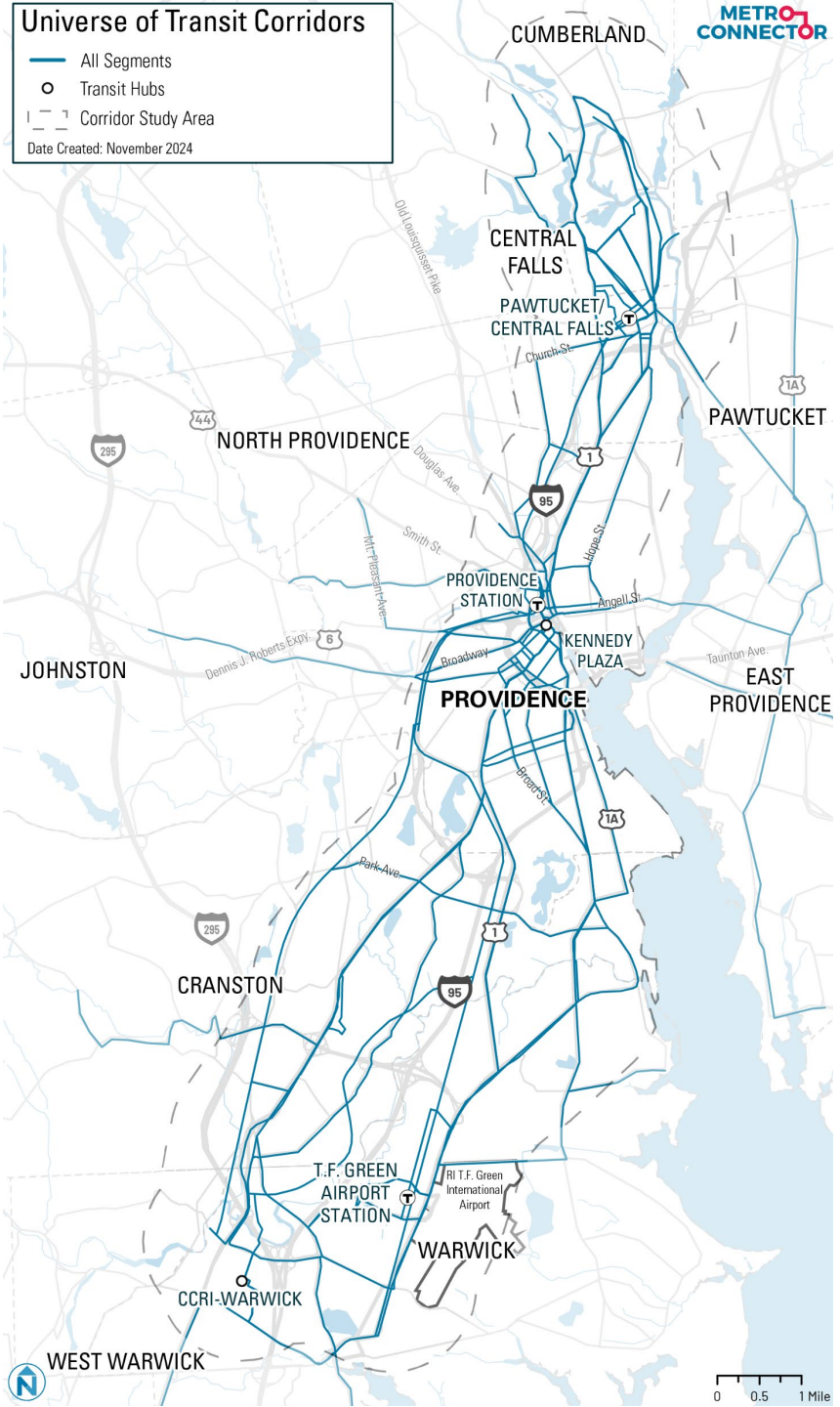


Here in Rhode Island…

And we added to that

- During outreach in September, members of the public were asked: “Where would you take high-capacity transit?”
- These lines will be part of the universe of corridors that will be passed through the first screening
- We added ideas from you the Technical Working Group
- We added ideas from RIPTA and the consultant team

What resulted was a (very) comprehensive Universe of ideas for rapid transit to serve the metropolitan region



Screening Against Project Purpose

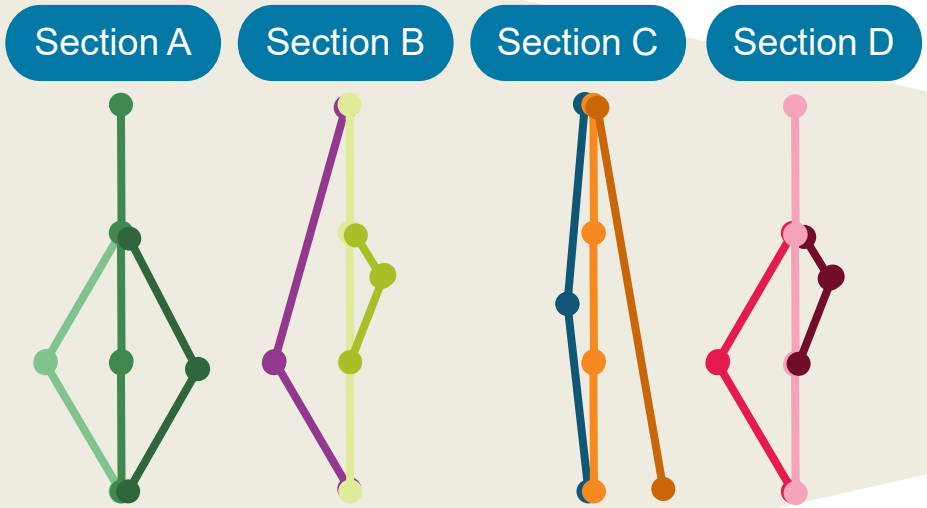
The Alternatives Analyses let us start assessing this universe of ideas for which corridors rapid transit might serve and the strength and weaknesses of different alignments.

The 3 steps of our evaluation

Step A: Screening

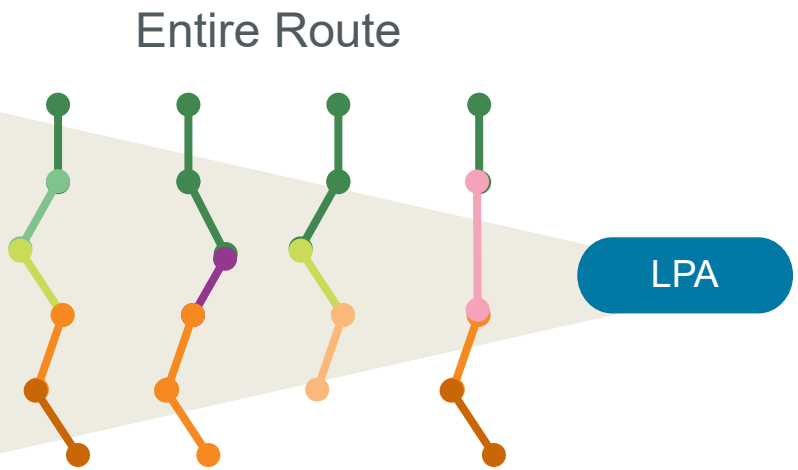
Review a wide range of ideas and remove those that don't meet the project purpose

Step B: Tier 1 Evaluation



Test different alignments in each section

Step C: Tier 2 Evaluation



Test best alignments as complete route

Note: Alignments shown above are illustrative only, and not intended to represent any specific alignments.

What Is Screening?

- Asks a set of simple YES or NO questions aligned with Project Purpose.
- The questions are framed so that they do not require significant data collection or analysis to answer.
- Screening criteria are based on existing or readily available data and may reflect regulatory or policy imperatives.
- If the answer is NO to any of the questions the concept is considered infeasible and is removed from further consideration.
- If the answer is YES to all the questions the concept is forwarded onto the Tier 1 Evaluation.

Project purpose

A key recommendation of *Transit Forward RI* 2040, this Metro Connector Study will consider options for providing a fast, frequent, reliable, and safe alternative to automobile travel that connects regional activity centers, neighborhoods, business districts, and transportation centers in metropolitan Providence while achieving other State goals related to climate, sustainable housing growth, public health, and economic development in an equitable manner.

The project's Purpose and Need statement can be found on the project website here

Screening Questions

1. Does the concept start and end in one of the study area municipalities: Cumberland, Central Falls, Pawtucket, Providence, Cranston, or Warwick?
2. Does the concept connect **key** existing and/or planned activity centers in the study area municipalities ***or*** does the concept serve areas with land-use **density to support** rapid transit now or in the future?
3. Could the concept be **permitted** from an environmental perspective?
4. Would the concept be within a corridor with **transit-supportive** zoning, or where zoning could change to be transit-supportive?
5. Does the concept connect contiguously with other segments that answered 'yes' to questions 2 – 4 to create viable corridors for rapid transit service?

METRO CONNECTOR

Step A: Screening Process

1. Does the concept start and end in the project study area?

- **No** → Does not move forward for further analysis
- **Yes** → Must answer 'yes' to questions 2 - 4

Must answer 'yes' to questions 2 - 4

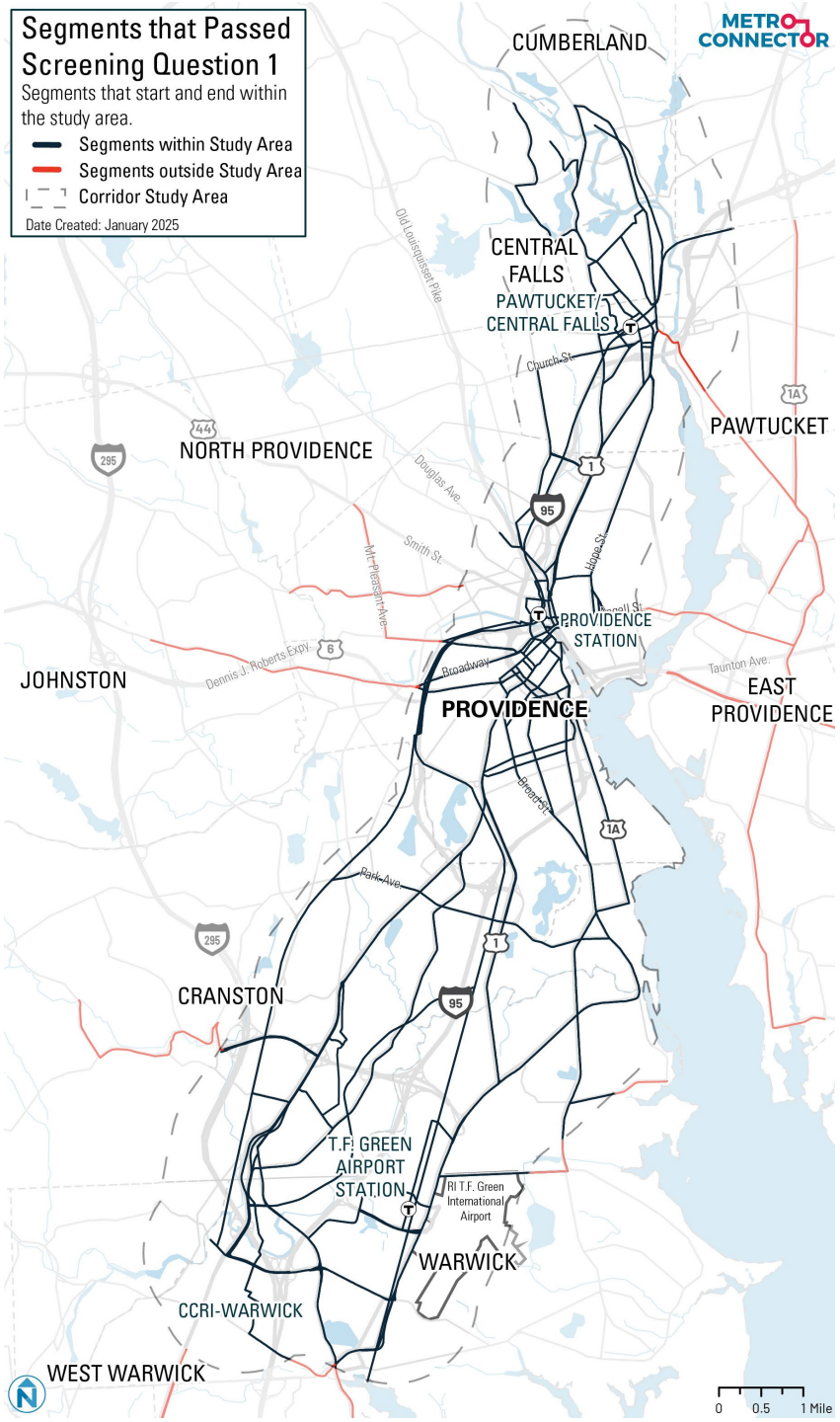
2. Does the concept connect **key** existing and/or planned activity centers in the study area municipalities ***or*** does the concept serve areas with land-use **density to support** rapid transit now or in the future?
   - Existing or future land use that can support at least 30-minute all day transit service (as defined in existing and future conditions)
   - Key existing/planned activity centers include (within ½ mile):
     - Major shopping locations in Cumberland, Pawtucket/Central Falls Station, Providence Station, downtown Providence (including the Jewelry District), CCRI Warwick, TF Green Airport
3. Could the concept be **permitted** from an environmental perspective?
4. Would the concept be within a corridor with **transit-supportive** zoning, or where zoning could change to be transit-supportive?
   - Includes medium low density residential, medium high density residential, high density residential, airport, institutional, commercial, mixed-use (any)

5. Does the concept connect contiguously with other segments that answered 'yes' to questions 2 – 4 to create viable corridors for rapid transit service?
   - **No: screened out**
   - **Yes: carried forward to Tier 1 evaluation**

Question 1

Does the concept start and end in the project study area?

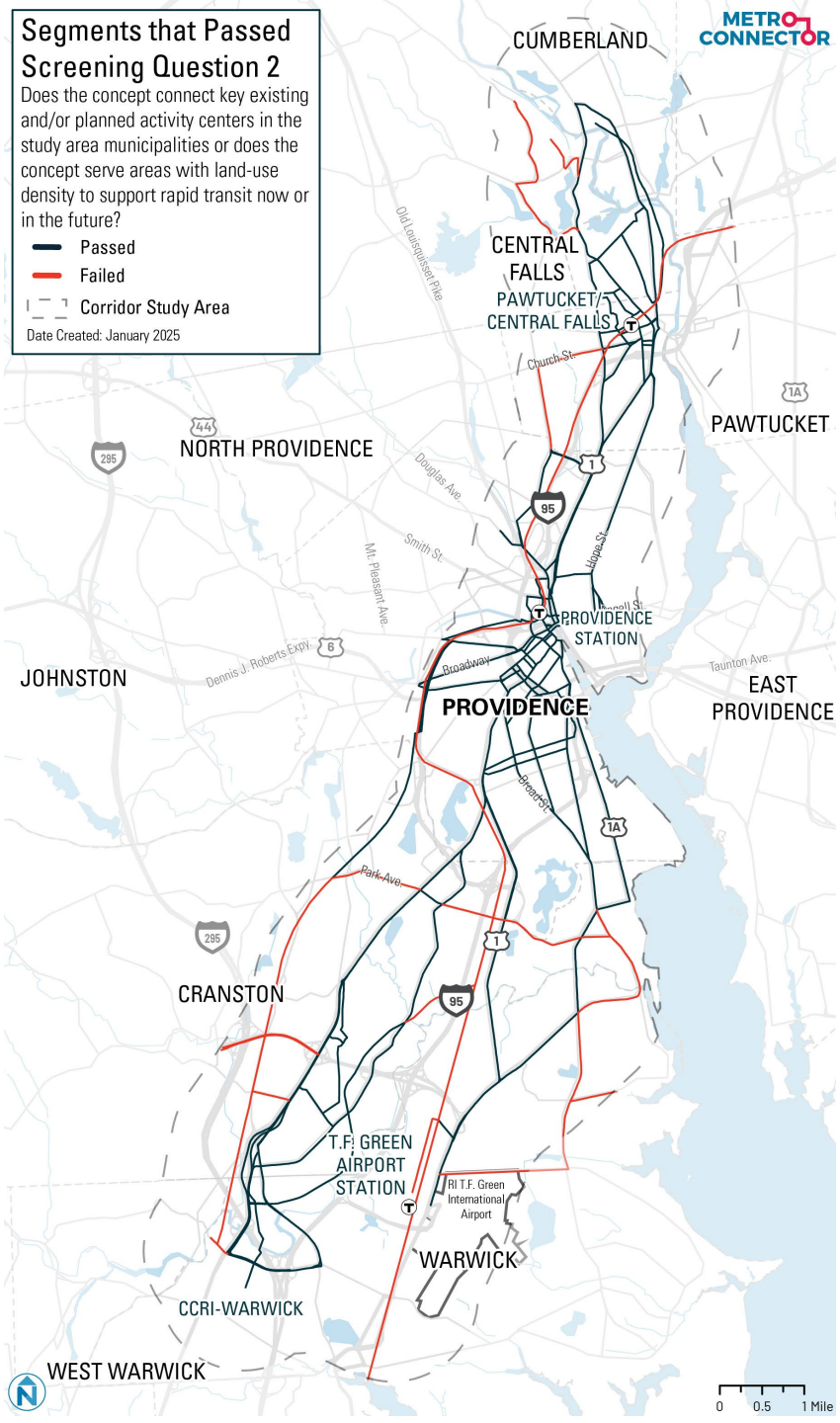
- Universe included lines drawn by the public that did not serve the study area
- Want to make it clear to the public that some of these corridors are candidates for high-quality transit service, just not this particular project
- **34 of 246 concepts failed this question – 212 remaining went through full screening process**



Question 2

Does the concept connect **key** existing and/or planned activity centers in the study area municipalities ***or*** does the concept serve areas with land-use **density to support** rapid transit now or in the future?

- Existing or future land use that can support at least 30-minute all day transit service (as defined in existing and future conditions)
- Key existing/planned activity centers include (within ½ mile):
- Major shopping locations in Cumberland, Pawtucket/Central Falls Station, Providence Station, downtown Providence (including the Jewelry District), Garden City Center, CCRI Warwick, TF Green Airport
- **23 of 212 concepts failed this question**

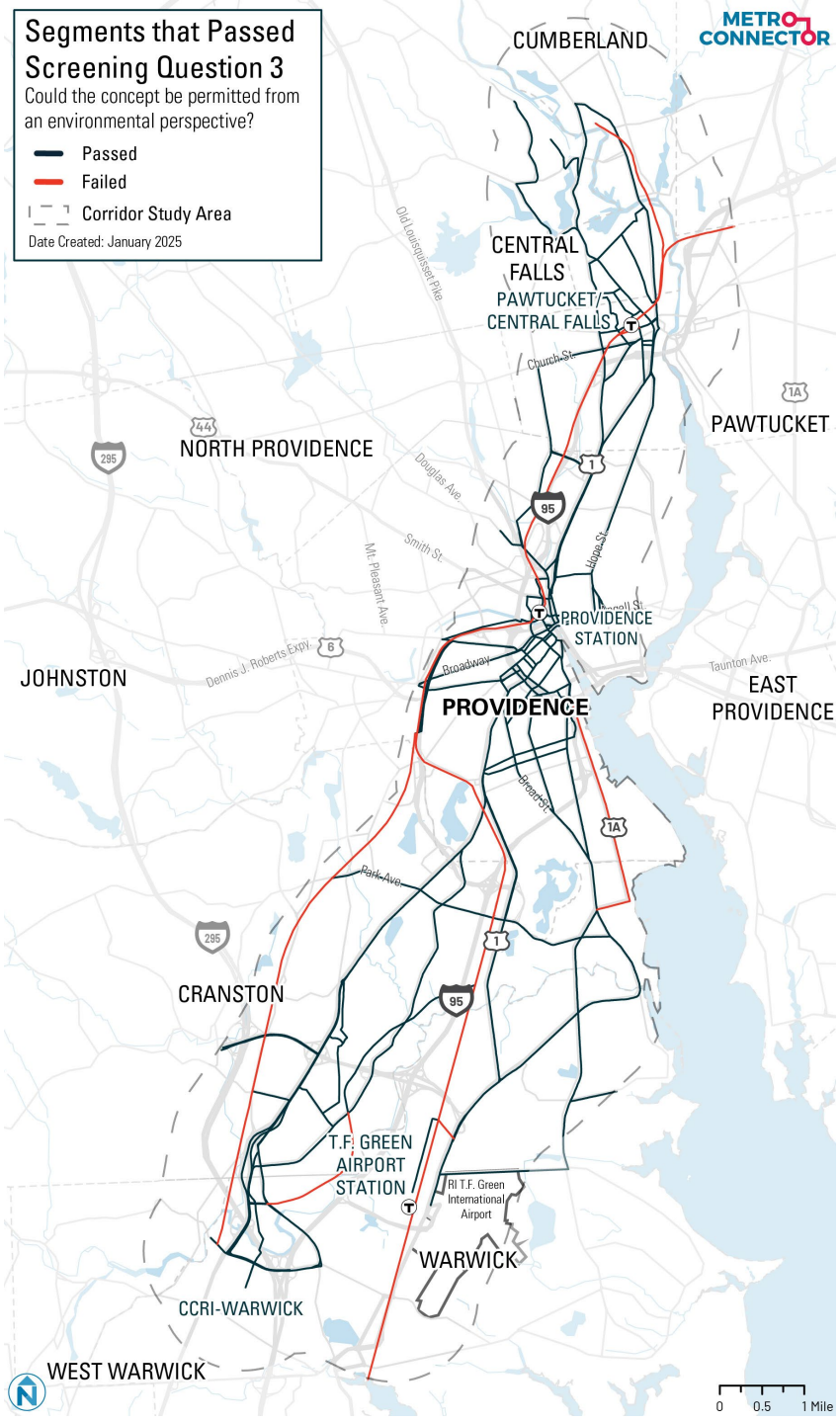


Question 3

Could the concept be **permitted** from an environmental perspective?

- Most of the concepts that failed this screen are rail rights-of-way with various uses and ownership
- Some failed due to flooding threats

- **10 of 212 concepts failed this question**



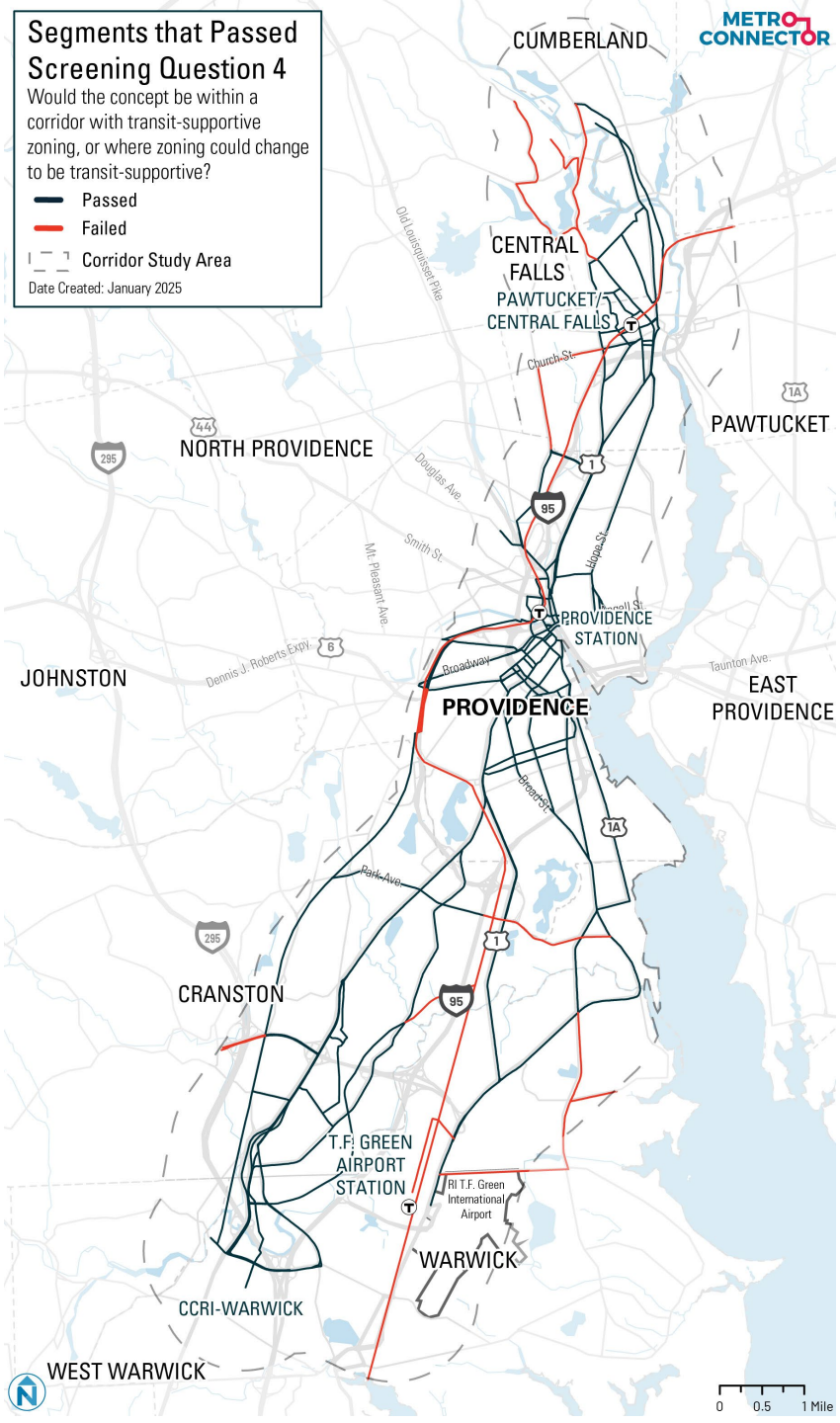
Question 4

Would the concept be within a corridor with transit-supportive zoning, or where zoning could change to be transit-supportive?

- Includes medium low density residential, medium high density residential, high density residential, airport, institutional, commercial, mixed-use (any)

- Most of the concepts that failed this screen are rail rights-of-way with various uses and ownership
- Some failed due to flooding threats

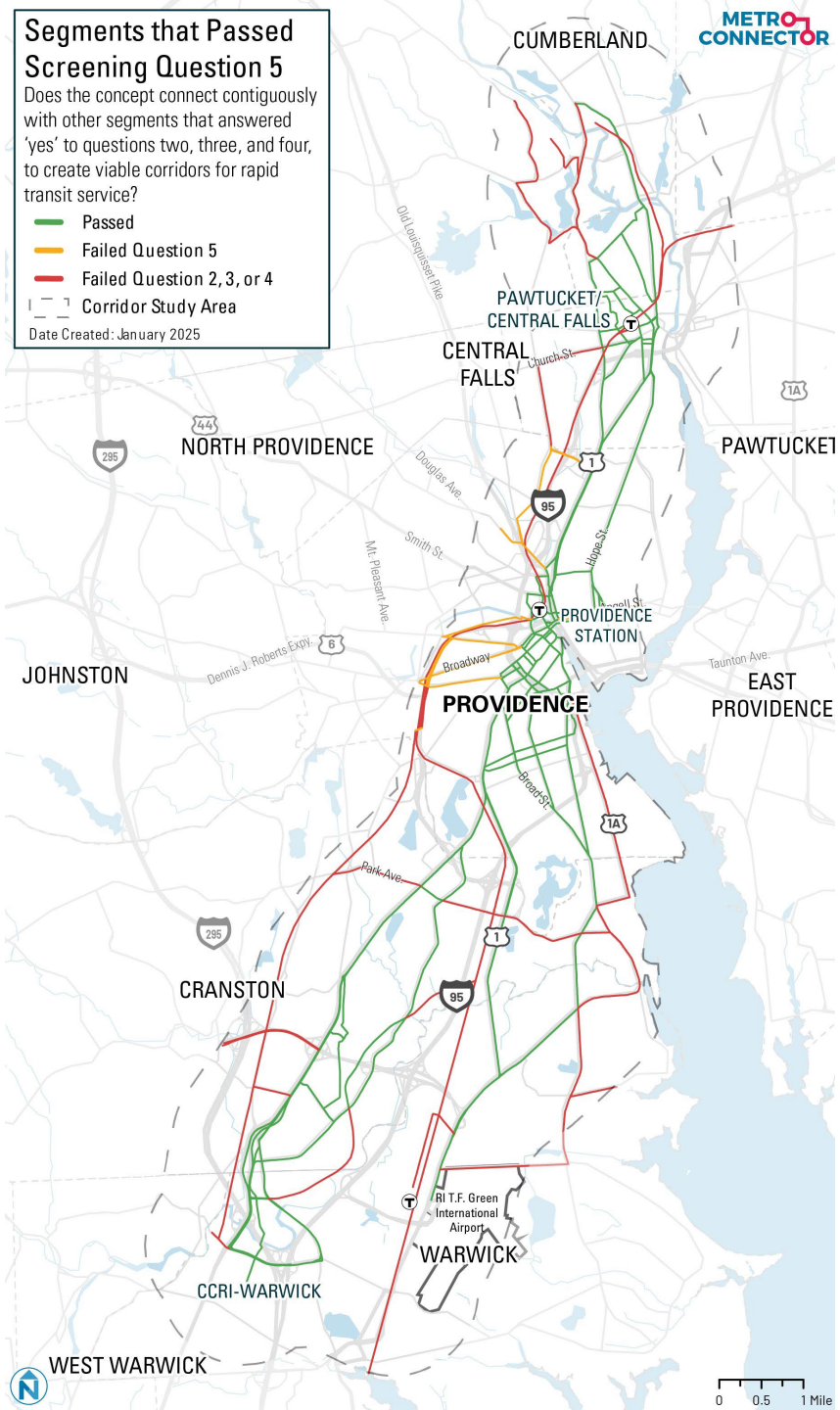
- **20 of 212 concepts failed this question**



Question 5

Does the concept connect contiguously with other segments that answered ‘yes’ to questions 2 – 4 to create viable corridors for rapid transit service?

- 35 of 212 concepts failed question 2, 3, and/or 4
- 19 of the remaining concepts failed question 5
- **158 concepts remained after the full screening**



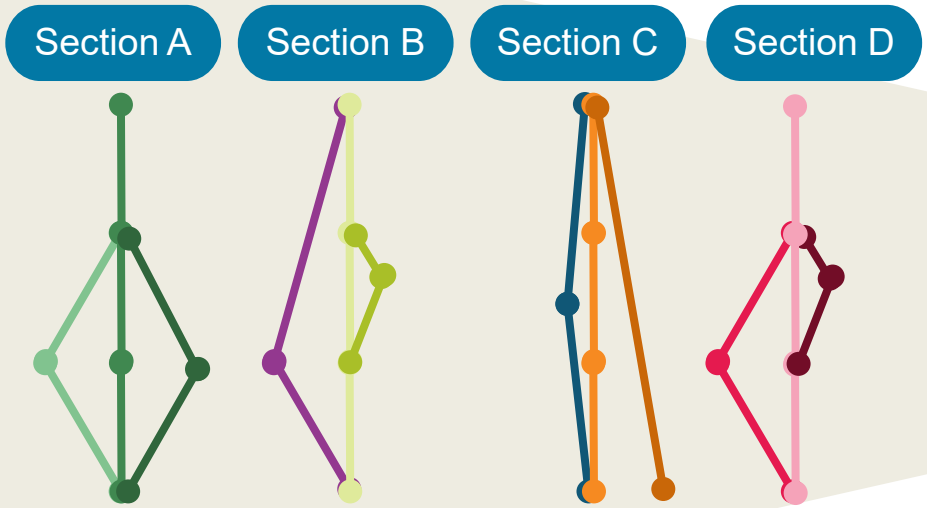
The Tier 1 Concepts

The 3 steps of our evaluation

Step A: Screening

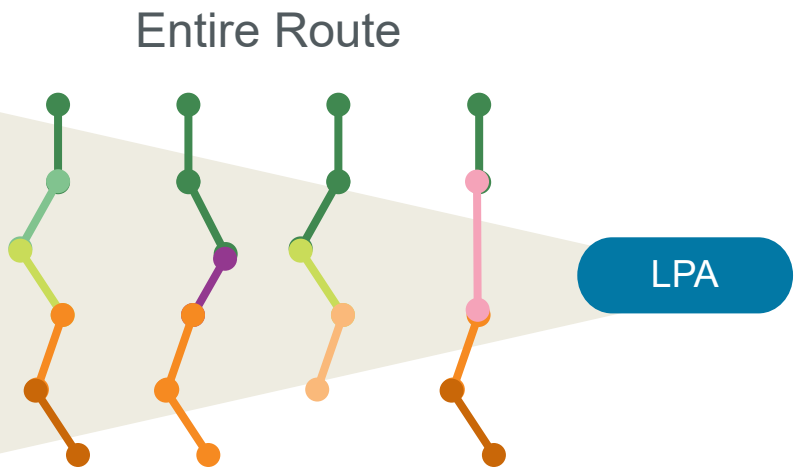
Review a wide range of ideas and remove those that don't meet the project purpose

Step B: Tier 1 Evaluation



Test different alignments in each section

Step C: Tier 2 Evaluation



Test best alignments as complete route

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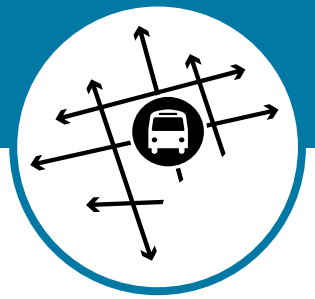
Our goal areas

These are the major themes that are guiding our work

Grow Transit Ridership



Enhance Connectivity

Advance Equity

Support Sustainable Growth

Focus on Practical and Feasible Solutions

METRO CONNECTOR

Tier 1 Evaluation

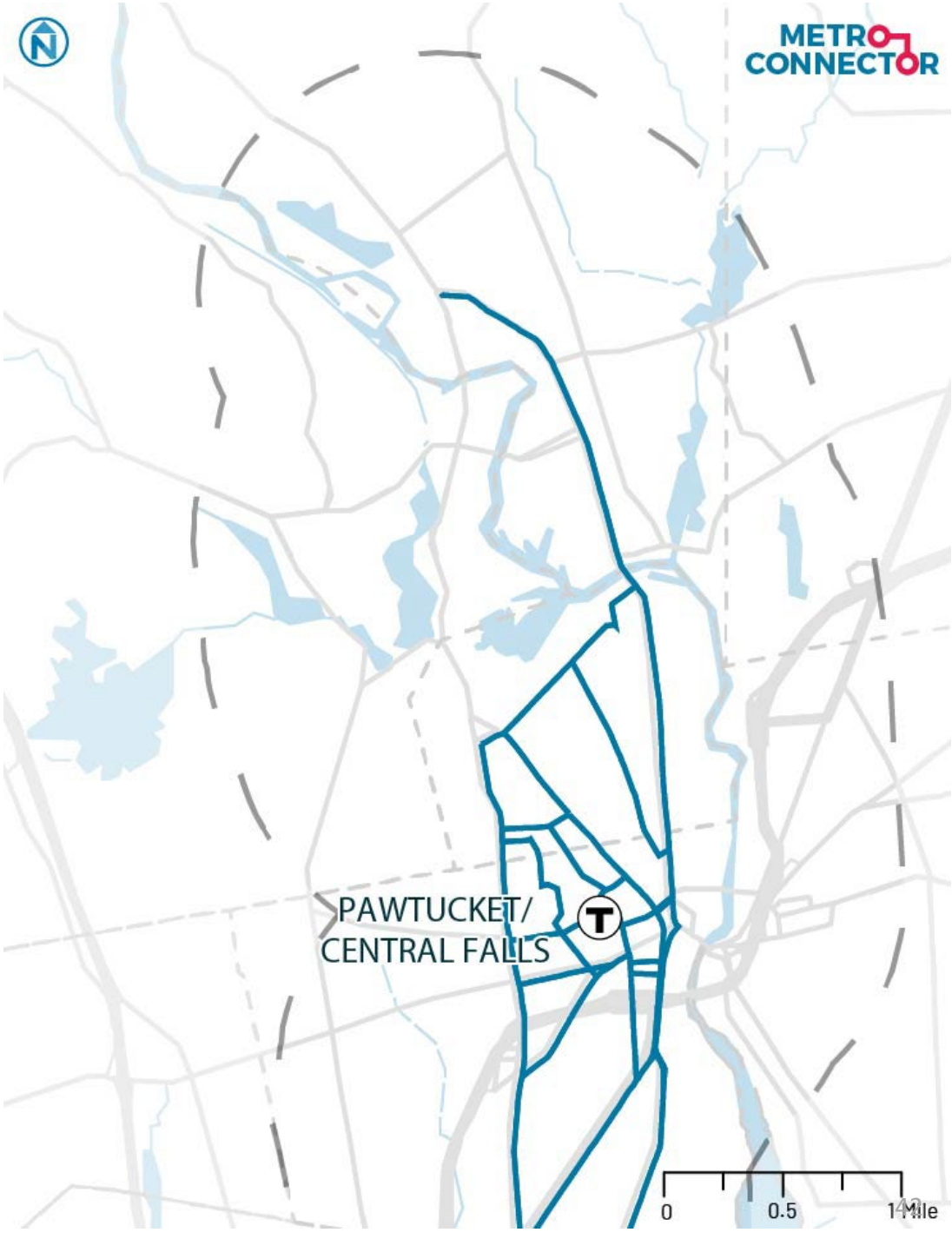
- This matrix shows the evaluation framework we are using for Tier 1
- The entire evaluation is aligned with our five goal areas, which were vetted with the community last fall
- Data for these criteria were (largely) collected for our existing conditions work
- This means that – even though we have a lot of Tier 1 concepts – evaluating their effectiveness is a relatively straightforward task

Step B: Tier 1 Evaluation (Section-Level Alignments)

Goal Area	Evaluation Criterion
1. Grow Transit Ridership: Connect areas that have high demand for transit by providing fast, frequent, and reliable service that is competitive with driving.	1.1 Average composite transit demand within 1/4 mile (using methods in market analysis; based on pop. density, socio-economic characteristics, emp. density, and industry type), weighted by geography area
	1.2 Percent of acres within 1/4 mile that can support 15-min. or better all-day service (30 or more)
2. Enhance Connectivity: Improve multi-modal connections between regional transportation centers and support Complete Streets that provide for safe pedestrian and bicycle access.	2.1 Potential/plans for exclusive right-of-way or other transit priority (e.g., multiple lanes, rail RoW, queue-jump lanes)
	2.2 Intersection density within 1/4 mile (Intersections/acre)
3. Focus on Equity: Provide rapid transit where and when transit-critical populations are traveling, that allows these residents to stay in their neighborhoods.	3.1 Transit index factor (weighted likelihood for residents to take transit based on race/ethnicity, vehicle ownership, native or foreign born, and income)
	3.2 Non-traditional commuter density within 1/4 mile (LEHD)
	3.3 Density of job held by women within 1/4 mile (LEHD)
	3.4 Density of equity trip origins and destinations within 1/4 mile (zero vehicle, low-income, and/or people of color) (Replica)
4. Support Sustainable Growth: Support smart and compact transit-oriented development (TOD) in designated growth districts and frequent transit corridors. Reduce GHG emissions by encouraging mode shift to transit, walking, and biking.	4.1 Area within 1/4 mile has been identified for TOD
	4.2 Average future (2035) composite transit demand within 1/4 mile (using methods in market analysis; based on pop. density, socio-economic characteristics, emp. density, and industry type), weighted by geography area
	4.2 Percent of acres in the future (2035) within 1/4 mile that can support 15-min. or better all-day service (30 or more)
5. Support our Economy/Provide New Opportunities: Improve access to regional employment, workforce education, medical and social services, shopping, and other activities to open up new opportunities for regional residents.	5.1 Employment density within 1/4 mile (RISP)
	5.2 Density of jobs with customers, clients, patients, and students within 1/4 mile (centers of activity)(LEHD)
6. Focus on Practical and Implementable Solutions: Achieve local consensus on an option that balances costs and benefits, aligns with local goals, and can be reasonably implemented.	6.1 Number of major infrastructure investments needed for service to operate in terms of type (structure, acquisition of land, change in road capacity) and extent (in length) of investment
	6.2 Number of policy and regulatory changes needed for service to operate in terms of type (zone change, road class change, etc.) and decision body.
	6.3 Sensitive environmental features impacted (if any) in terms of amount and type of impact, and ability for impact to be fully mitigated

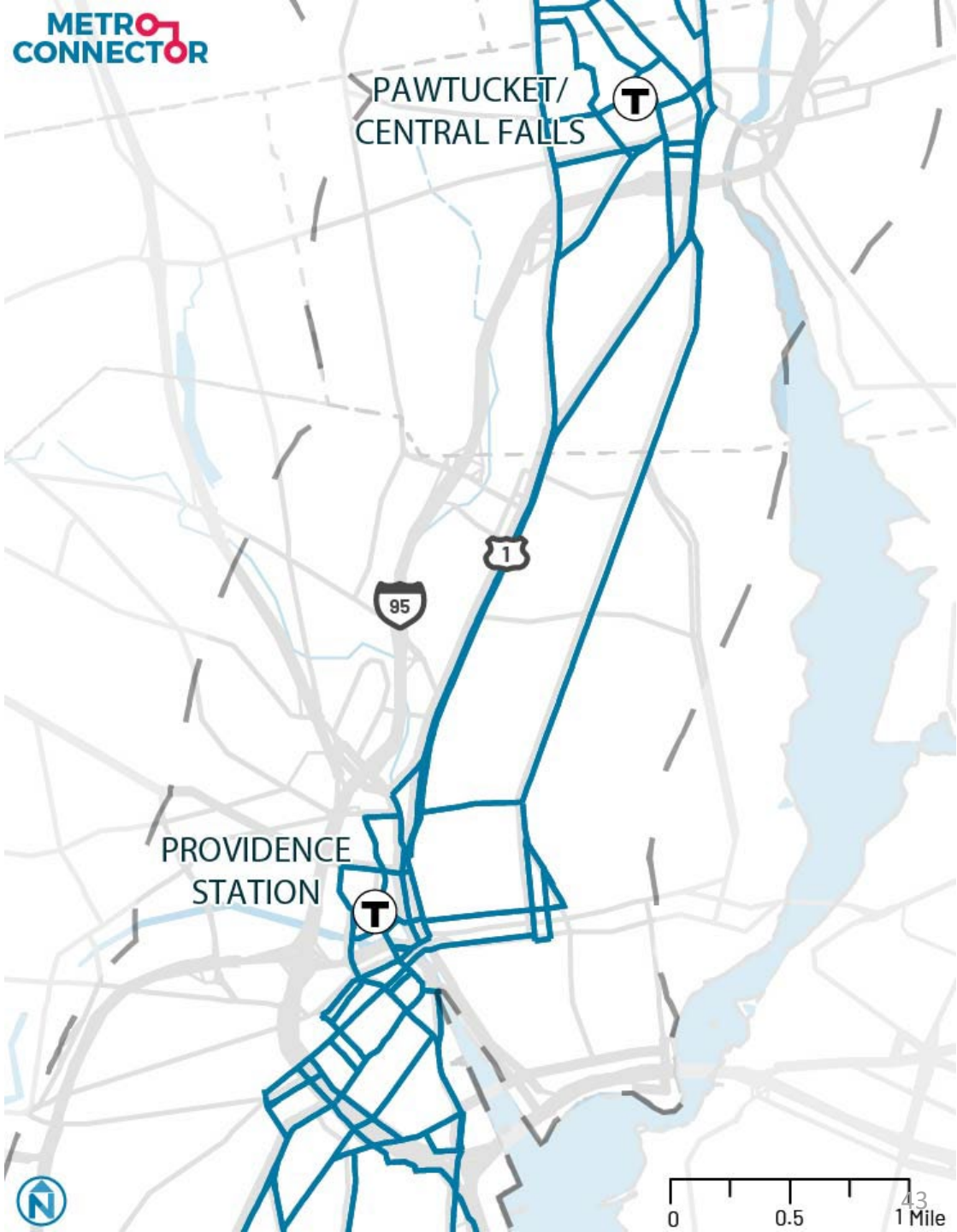
Section 1: Northern Terminus to Pawtucket/Central Falls Transit Center

- The main corridors we explore in Central Falls are Broad Street, Dexter Street, Washington Street, and Lonsdale Avenue
- All these corridors have supportive land uses
- Availability of roadway right-of-way is a challenge in Central Falls, and potential for transit priority could be a differentiator
- Market demand for transit drops off north of the Blackstone River



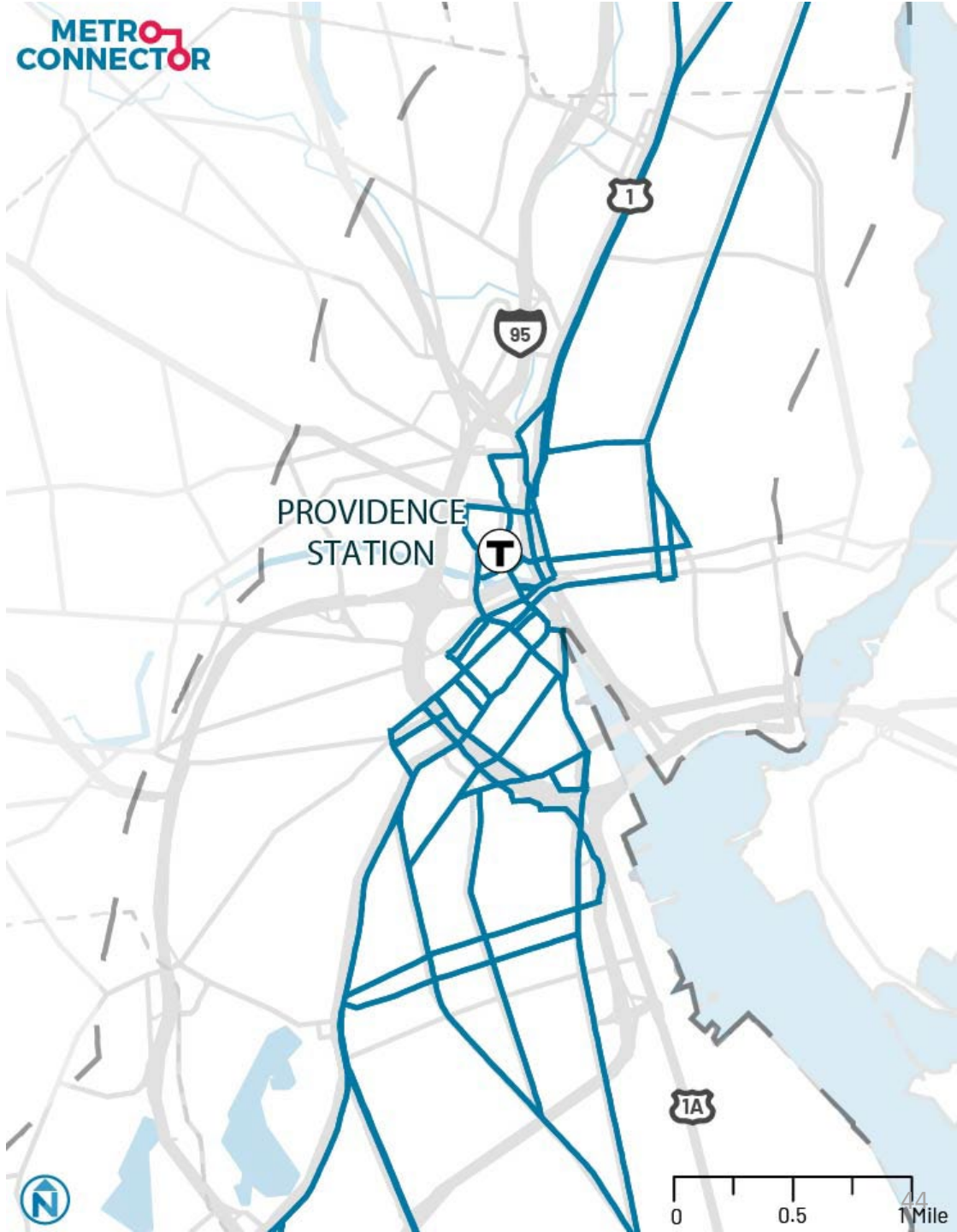
Section 2: Pawtucket/Central Falls Transit Center to Downtown Providence

- There are a lot of different ways to get to North Main Street and Hope Avenue, but once you are there these are the two main corridors connecting Pawtucket and Providence
- Right-of-way and adjacent land use is a differentiator here too, as is the ability to connect with downtown Providence



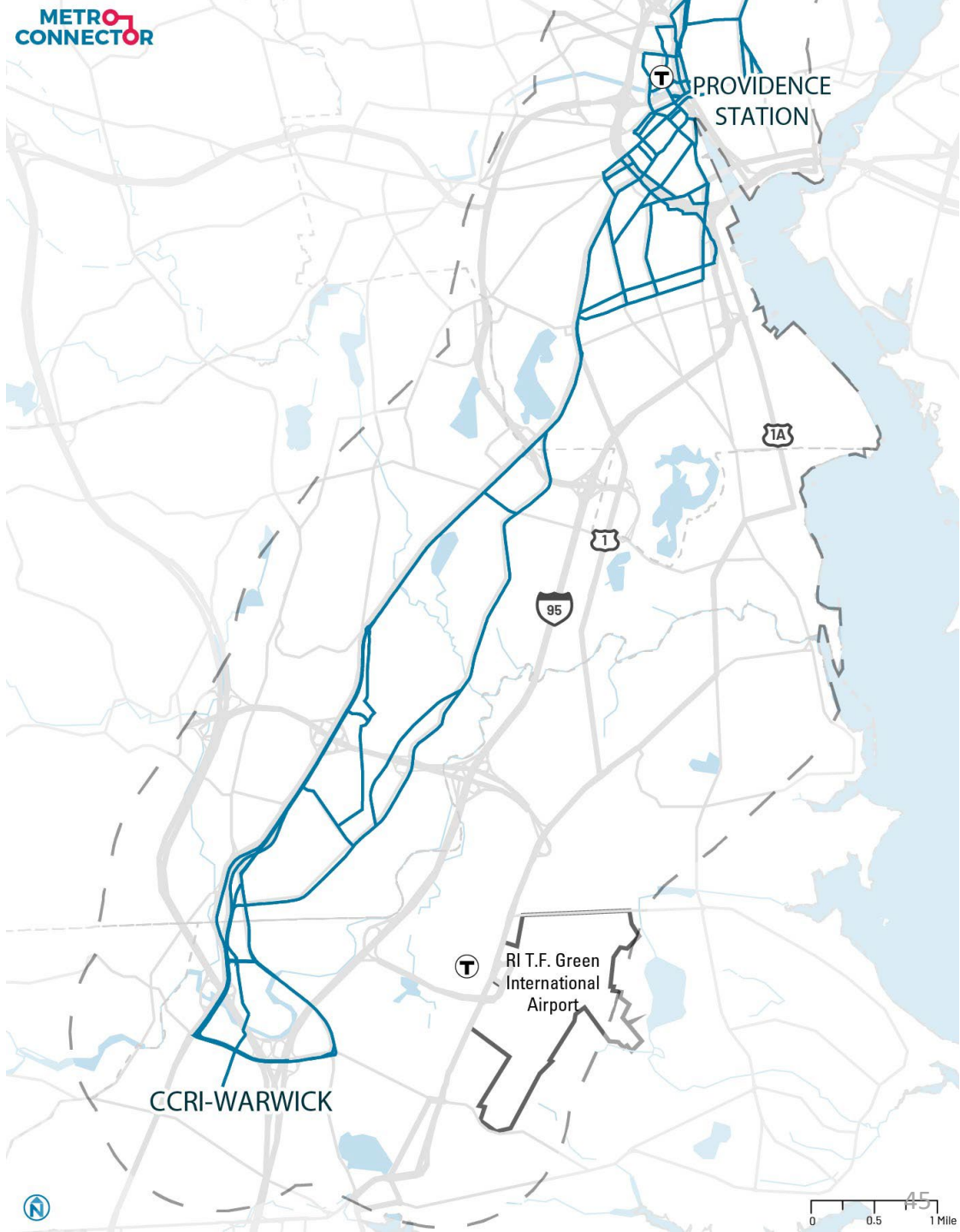
Section 3: Downtown Providence

- There are many streets in downtown Providence that could support rapid transit
- Key is the ability to serve the Providence Amtrak/ commuter rail station, Kennedy Plaza, and a potential new transit hub in downtown
- Ability to serve major employers, housing developments, and aligning with bridge connections over I-95 will also differentiate potential alignments



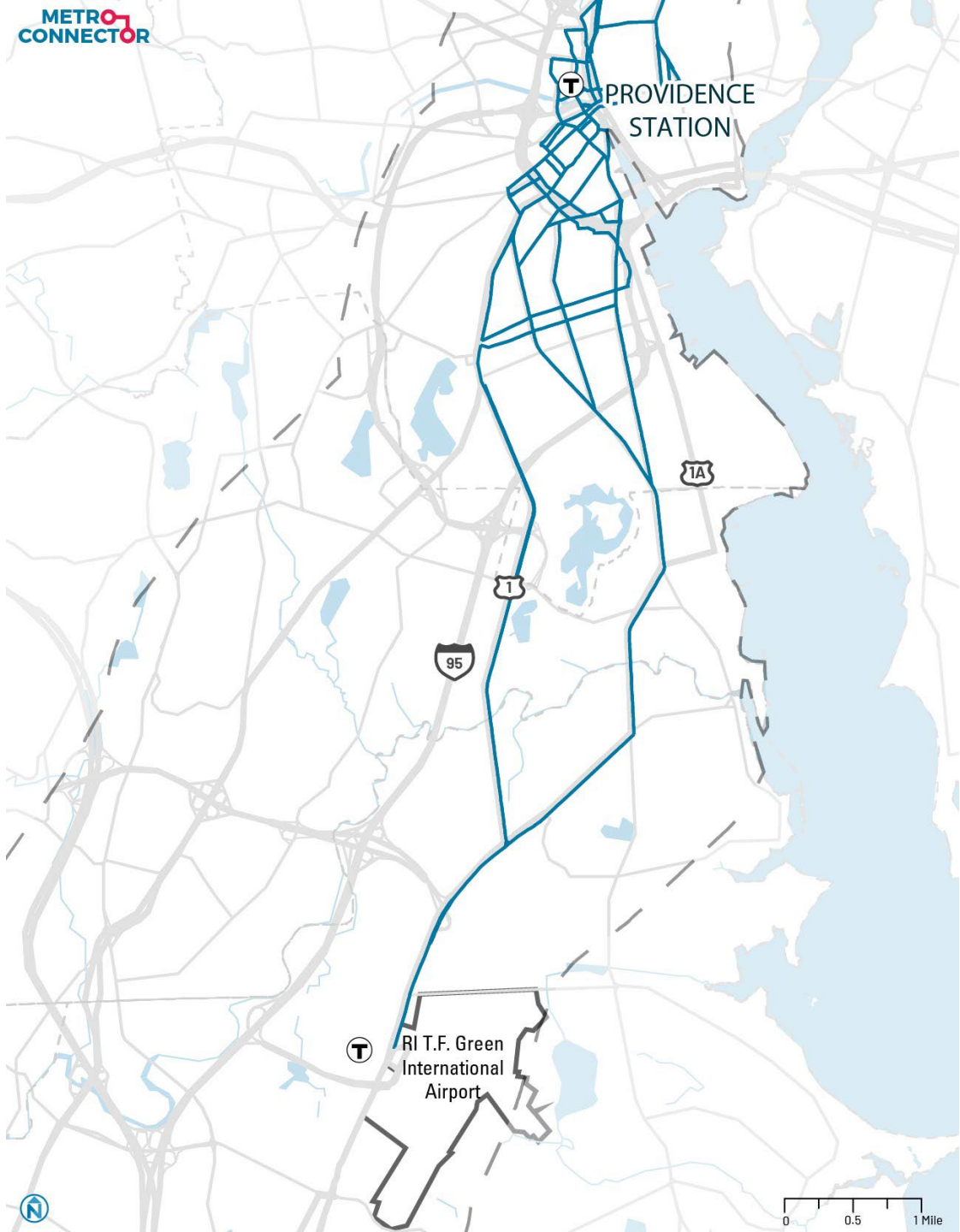
Section 4: Downtown Providence to CCRI Warwick

- This long section connects downtown Providence and CCRI Warwick
- Though there are lots of potential tie-ins at either end there are only two main corridors between the two
  - Reservoir Avenue
  - Pontiac Avenue
- There is a potential variation off of Elmwood Avenue using the Pontiac Secondary rail spur to better serve Pastore Center and Garden City



Section 5: Downtown Providence to T.F. Green Airport

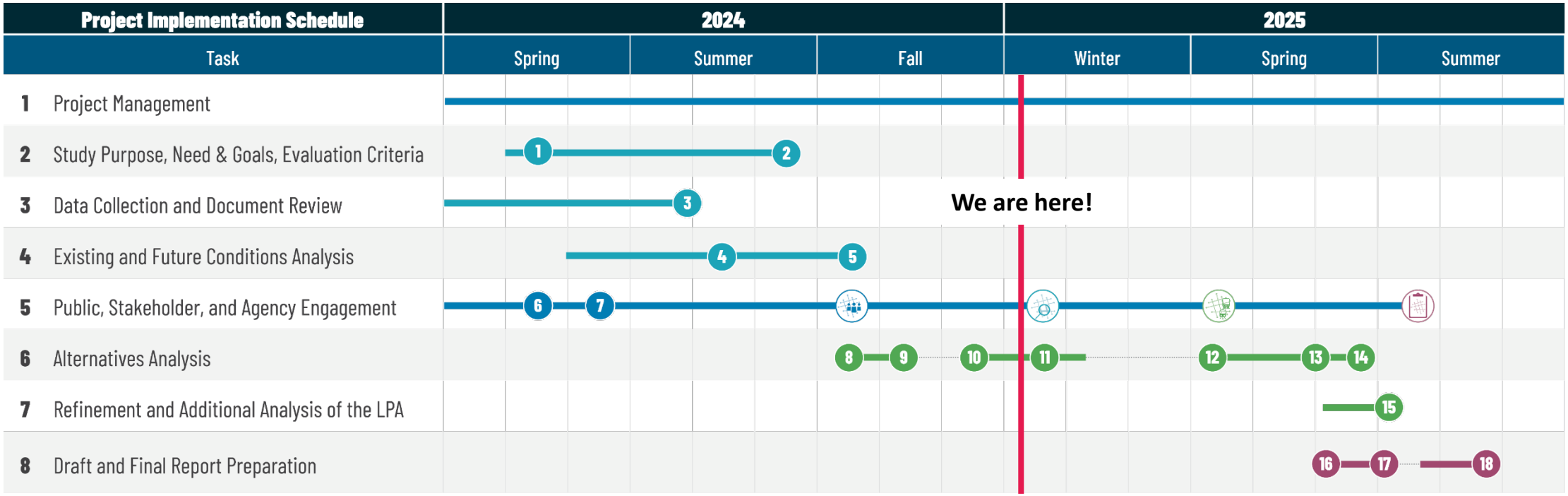
- Warwick Avenue and Elmwood Avenue are the two corridors we are exploring south of Providence, and yet south of Elmwood Avenue Post Road is the only corridor that passed our screen
- Circulation to and within the airport will continue to be an item for discussion as we enter Tier 2
- There was no reasonable rapid transit alignment that would connect the airport with CCRI Warwick



A Look Ahead for 2025

METRO CONNECTOR

RIPTA Metro Connector project timeline



Key Milestones and Deliverables

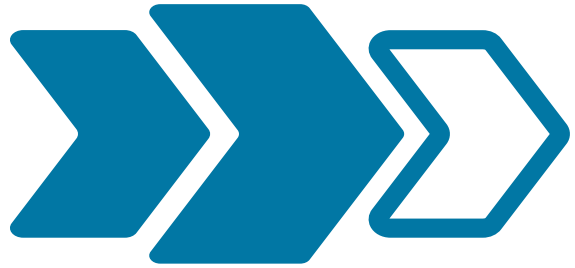
1. Draft Purpose and Needs Statement
2. Draft Evaluation Framework
3. Draft Plan and Policy Review
4. Draft State of the System Report
5. Final State of the System Report
6. Stakeholder Interviews
7. Walking Tour

First Round of Outreach - Early Scoping
Second Round of Outreach - Shortlisting Alternatives
Third Round of Outreach - Towards Set of LPAs
Fourth Round of Outreach - Towards Implementation

8. Universe of Concepts
9. Screen Against Purpose & Needs
10. Develop Long List of Ideas
11. Tier 1 Evaluation
12. Develop Shortlist of Alternatives
13. Tier 2 Evaluation
14. Draft LPA
15. Refined LPA
16. Implementation Plan
17. Draft Final Report
18. Final Report

Next Steps

- **Complete our Tier 1 analysis** by the end of this month
- **Hold our Phase 2 outreach** in March
- Narrow alignment concepts **and combine into Tier 2 alternatives** in April
- **Conduct the Tier 2 analyses** this spring
- **Next Working Group meeting** anticipated in April to review the proposed Tier 2 alternatives



Round #2 Public Engagement

- We anticipate outreach occurring in March, but we want to wait until we have **clear and vetted findings** to schedule activities
- The objective of Round 2 is to review the findings of our Tier 1 analysis, before we narrow to a shortlist of end-to-end alternatives
- Upcoming outreach will feature
  - Pop-up events at targeted sites along the corridor (such as the airport, other major employment sites, and major activity generators)
  - A virtual public meeting
  - Focus group meetings intended to reach audiences we didn't hear from in the first round of engagement

Where we are ultimately headed

- Our work is intended to result in a Locally Preferred Alternative (LPA) which will detail out
  - Preferred mode
  - Preferred alignment
  - Stop locations
  - Order-of-magnitude capital and operating cost estimates
  - Ridership estimates
- The “locally” and “preferred” terms drive our schedule
- A set of successful recommendations will be ones that are supported by all the municipalities along the corridor, as well as RIDOT and other key stakeholders

METRO CONNECTOR

Thank you!