Regional Transit Plan
North-South Corridor Study

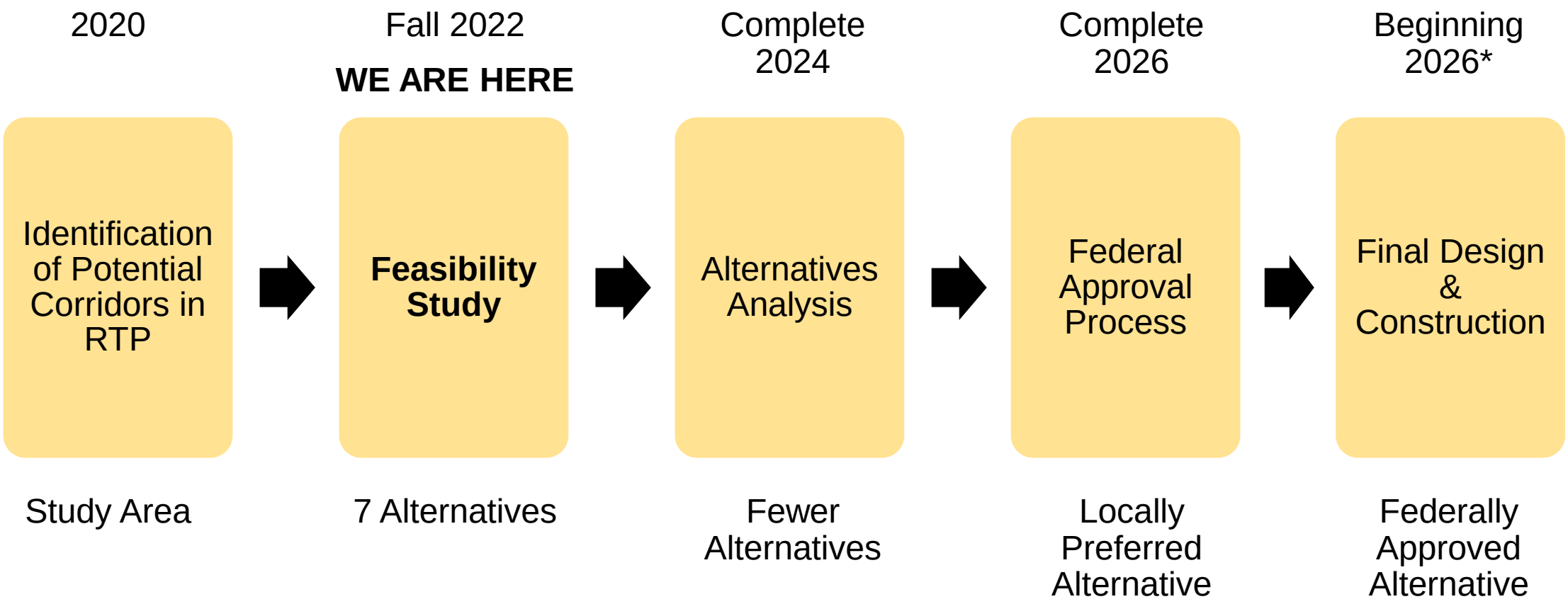
Review of Alternatives

September 2022

Connecting Our Future
A Regional Transit Plan for Central Maryland

Why are we here?

We are in the beginning of a multi-step process for a major transit investment.



*Local Funding Plan Needed

Public Feedback

We **need your feedback.**

- Add ideas, comments, and questions to the chat.
- Public feedback will **supplement** the measures of effectiveness.

Connecting Our Future
A Regional Transit Plan for Central Maryland

Purpose of Today's Meeting

- Share information with members of the public about the overall study and where we are in the process
- Provide an opportunity to ask MDOT MTA and the technical team questions
- Gather input on specific decision points

Ways to provide **comments**:

- Chat
- Email
- Phone
- Website
- Street teams

We appreciate everyone taking the time to join us today and help shape the project as it advances. This is just the beginning of a long process.

Today's Agenda

- Regional Transit Plan Background
- What We've Heard so Far
- Introducing the Alternatives
- Alternatives Performance
- Next Steps

Regional Transit Plan Background

Central Maryland Regional Transit Plan

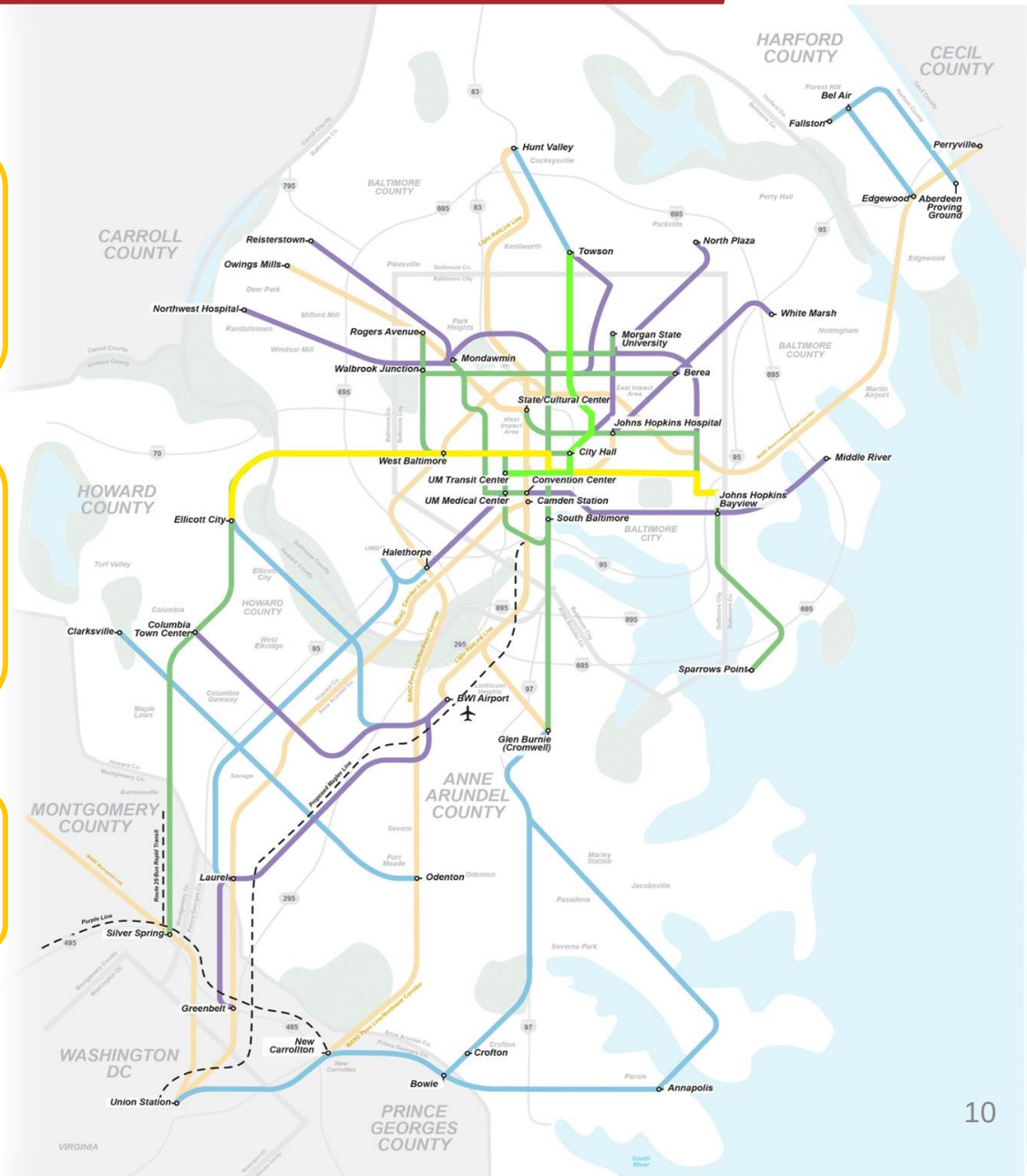
- Completed October 2020. Will be updated every five years.
- Provides 25-year plan for improving public transportation in Central Maryland.
- Addresses traditional transit (bus, rail) as well as new mobility options and technology (automated vehicles, shared mobility).
- 11-member commission guided the plan development.
- Complies with requirements of 2018 Maryland Metro/Transit Funding Act.

Regional Transit Plan & Identified Corridors

Connect residents across multiple counties to the most important regional destinations: jobs, schools, health services

Existing all-day demand for service 7 days a week (at peak, service every 15 minutes or better / off-peak, 20+ minutes)

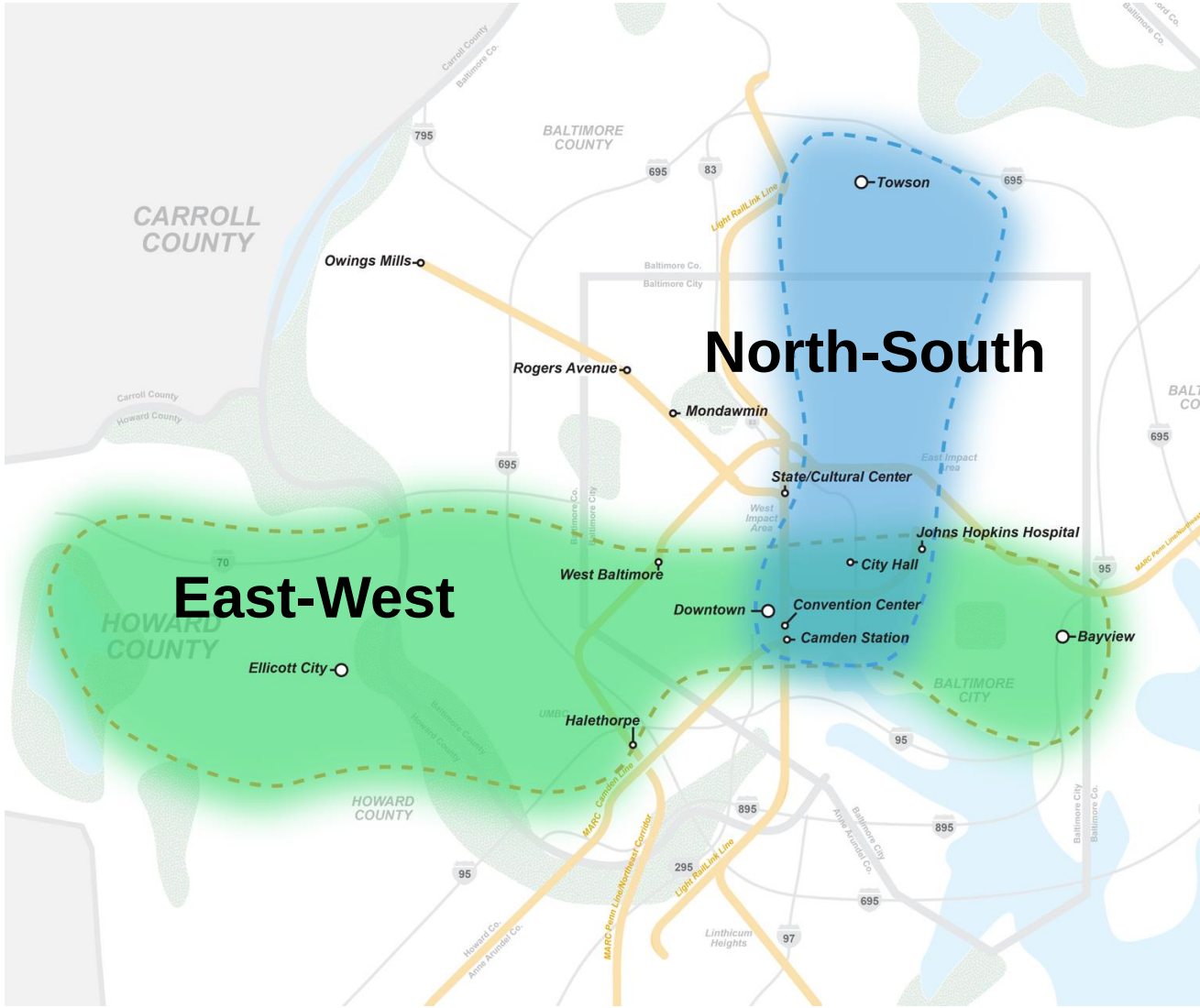
Require infrastructure improvements and investments



Regional Transit Plan Corridors Background

Transit Corridor Studies

- Begin with no pre-determined routes or modes in mind;
- Build upon previous plans; and
- Incorporate new complete streets legislation, new development projects, and equity policies



Engagement Activities Conducted

Spring 2021	Summer 2021	Fall 2021	Fall 2022
			WE ARE HERE
Elected Official and Stakeholder Conversations	Public Survey Community Stakeholder Meetings	Transit Caucus Presentation Jurisdiction Roundtables Online Video	Public Meetings Street Teams Website Feedback Community Presentations
Kickoff Conversations	Touchpoint #1	Touchpoint #2	Touchpoint #3

Project Goals

1. Increase **mobility and access** to jobs, services, and other opportunities in the region

2. Create **strategic connections** to multi-modal transportation options locally and regionally

3. Center **equity** as a core consideration

4. Support the region's **economic competitiveness** and strategic growth

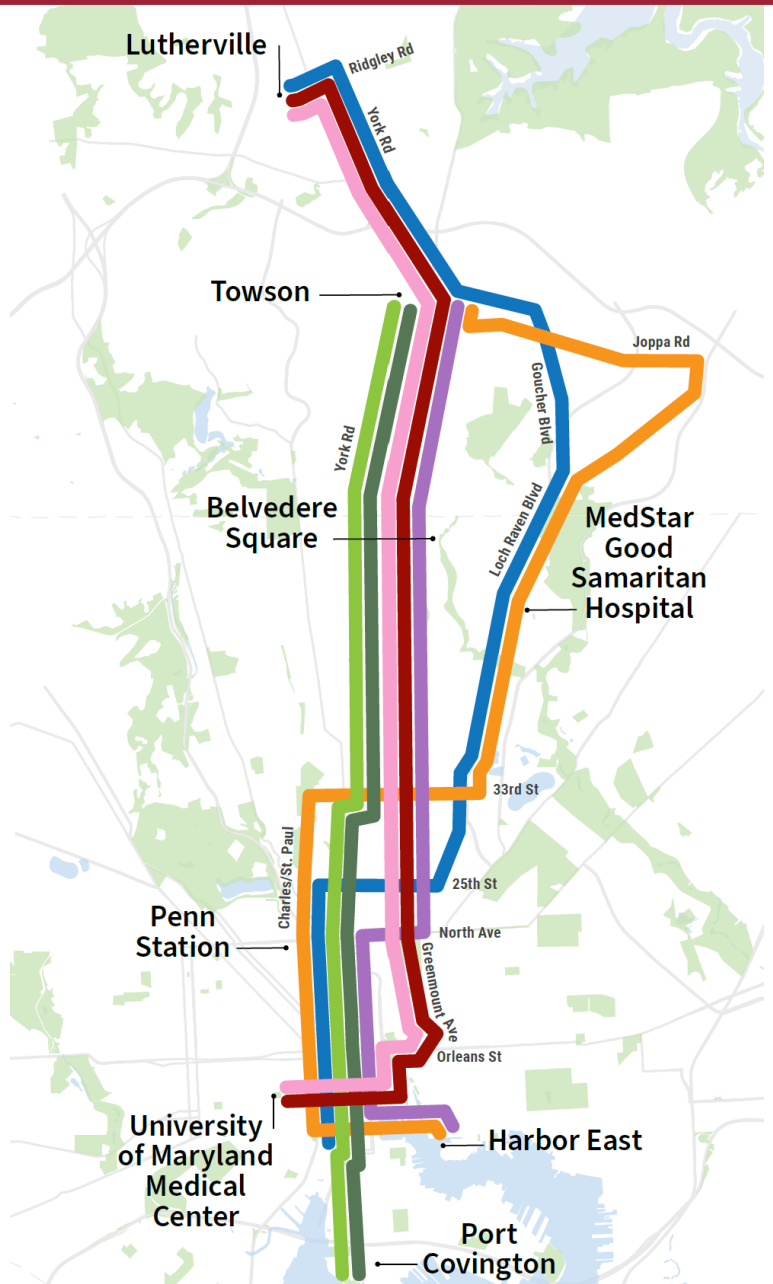
5. Support the region's **sustainability** goals

Study Purpose and Testing

Seven alternatives were developed based on a **market analysis** and the project **goals and objectives.** Alternatives were developed to **test** different **modes and station spacing, treatments, and areas served.**

- Bus Rapid Transit (BRT), Light Rail Transit (LRT), Heavy Rail Transit (HRT)
- Dedicated Guideways, Bridges, Tunnels
- Alignment Choices:
  - Lutherville vs. Towson
  - York Road / Greenmount Avenue vs. Loch Raven Boulevard
  - Fairmount Avenue / Goucher Boulevard vs. Joppa Road
  - Charles Street / Saint Paul Street vs. Greenmount Avenue
  - University of Maryland Medical Center vs. Inner Harbor
  - Harbor East vs. Port Covington

North-South Corridor Preliminary Alternatives



1

Alt. 1: Light Rail Transit from Lutherville to University of Maryland Medical Center (UMMC) via York/Greenmount

2

Alt. 2: Bus Rapid Transit from Lutherville to University of Maryland Medical Center (UMMC) via York/Greenmount

3

Alt. 3: Bus Rapid Transit from Towson to Harbor East, via York/ Greenmount

4

Alt. 4: Heavy Rail Transit (Subway) from Towson to Port Covington, via York/ Greenmount

5

Alt. 5: Bus Rapid Transit from Towson to Port Covington, via York/ Greenmount

6

Alt. 6: Light Rail Transit from Lutherville to Otterbein, via Goucher, Loch Raven

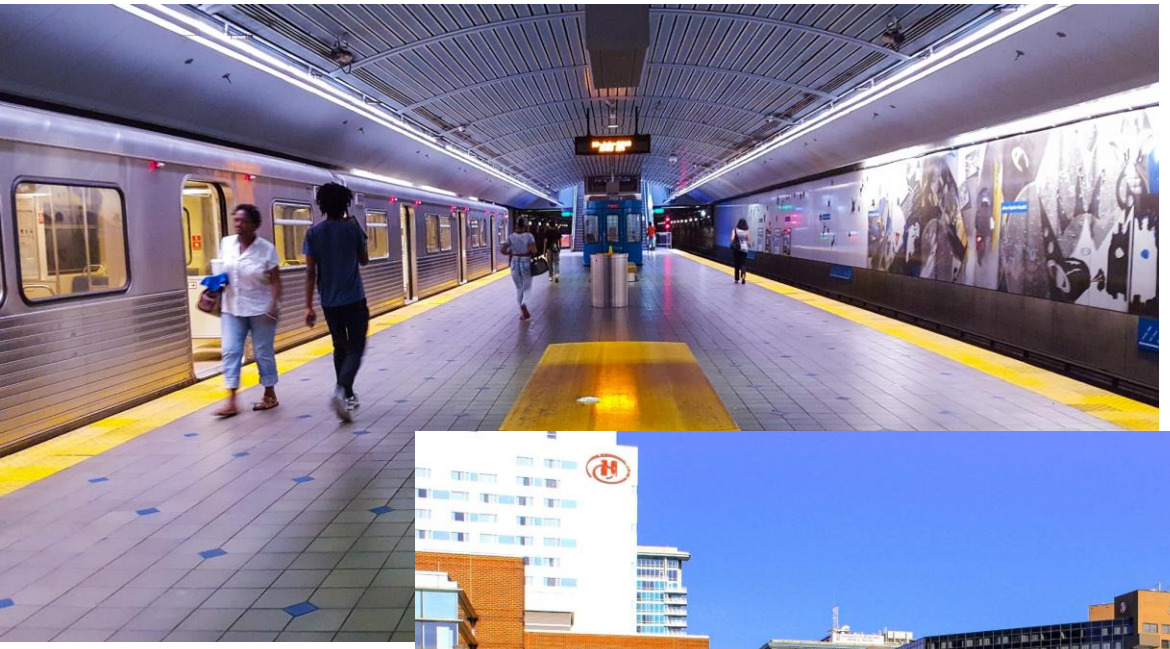
7

Alt. 7: Bus Rapid Transit from Towson to Harbor East, via Joppa, Loch Raven

North-South Corridor Study Modes

Service Type	Definition	Reliability	Stop Spacing	Average Passenger Capacity (per vehicle)
Heavy Rail Transit (HRT) 	• Completely separated from traffic • High construction costs	High 	1-2 miles 	70 – 190 
Light Rail Transit (LRT) 	• Mostly separated from traffic • Medium to high construction costs	High 	0.5 – 1 mile 	60 – 175 
Bus Rapid Transit (BRT) 	• Mostly separated from traffic in dedicated lanes • Low to medium construction costs	Medium to High 	0.25 – 1 mile 	40 – 110 

North-South Corridor Study Modes



Measures of Effectiveness

Goal	Theme	Measures
1	**Reliability**	% Dedicated Guideway
		Fixed or Flexible Guideway
	Travel Time Savings	Key Destination Travel Time Savings
	Access	Households within ½ mile of a station, per mile
		Student population within ½ mile of a station, per mile
		Future jobs within ½ mile of a station, per mile
2	**Connections**	Connections to rail stations, frequent bus service & LOTS
		Additional future jobs accessible by transit within 45 minutes

Goal	Theme	Measures
3	**Equity**	All transit critical populations (low-income, minority, zero-car households, limited English proficiency, over 65, people with disabilities) within ½ mile of a station, per mile
4	**Cost**	Capital cost
	Development Opportunity	Transit-Oriented Development and Opportunity Zones within 1/2 mile of station
	Implementation	Estimated Implementation Time
		Bridge and Tunnel Complexity
5	**Ridership**	Projected daily boardings in 2045, per mile
	Sustainability	Zero-car households within ½ mile of a station, per mile

Summary of Analysis Takeaways

- The North-South Corridor is an investment to **provide more frequent, reliable premium transit service** as opposed to creating new service to fill a gap
- Most alternatives show **significant travel time savings** compared to the existing travel time
- All alternatives **increase access to future jobs** for corridor residents by up to 38,000 more jobs
- York Road alternatives attract **more riders** than Loch Raven Boulevard alternatives, but have the **most physically constrained roadway width**
- The five alternatives that serve **Penn Station** provide an important connection to the region's bus and rail transit network

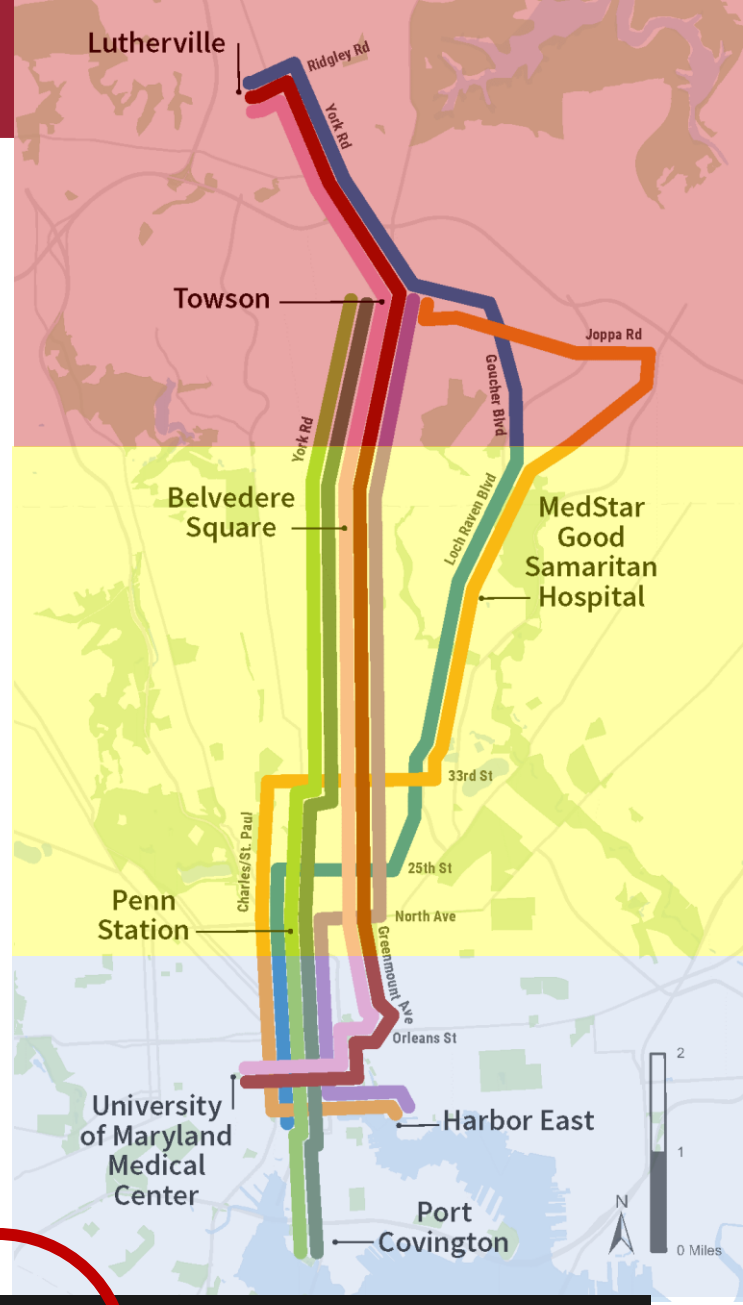
Breakout Rooms

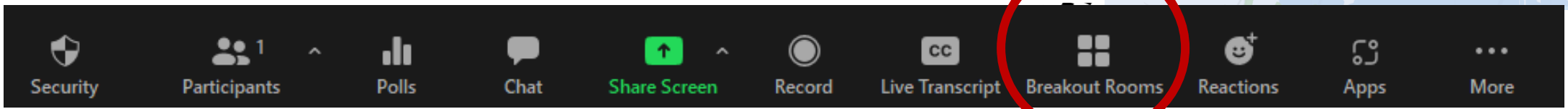
- We'll now explain each alternative in detail by geographic area in three breakout rooms **North, Central,** & **South**
- Click Join using the the **Breakout Rooms** tool – you can switch between rooms or stay in one room. You can also stay in the main room.
- The moderators can help move you to the room of your choice and you can visit multiple rooms

North
Lutherville to City/County Boundary

Central
City/County Boundary to Mt. Royal Ave

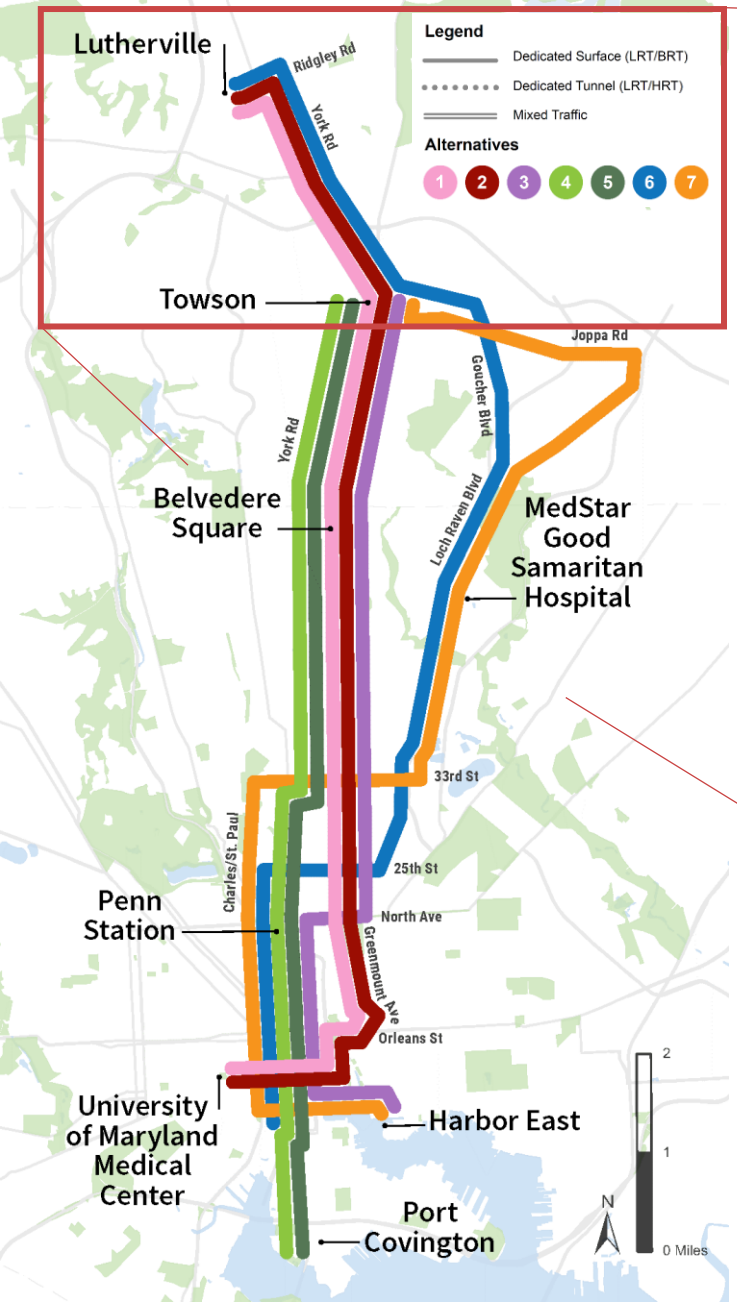
South
Mt. Royal Ave to Port Covington





Geographic Segment Results – Lutherville

North Breakout



Key Takeaways

- Connecting to Lutherville light rail station adds approximately 4,000 riders for Alternatives 1, 2, and 6

Alternative Descriptions

1 – Mixed traffic surface light rail transit on Ridgley Road then dedicated surface light rail transit to Fairmount Avenue then tunnel begins

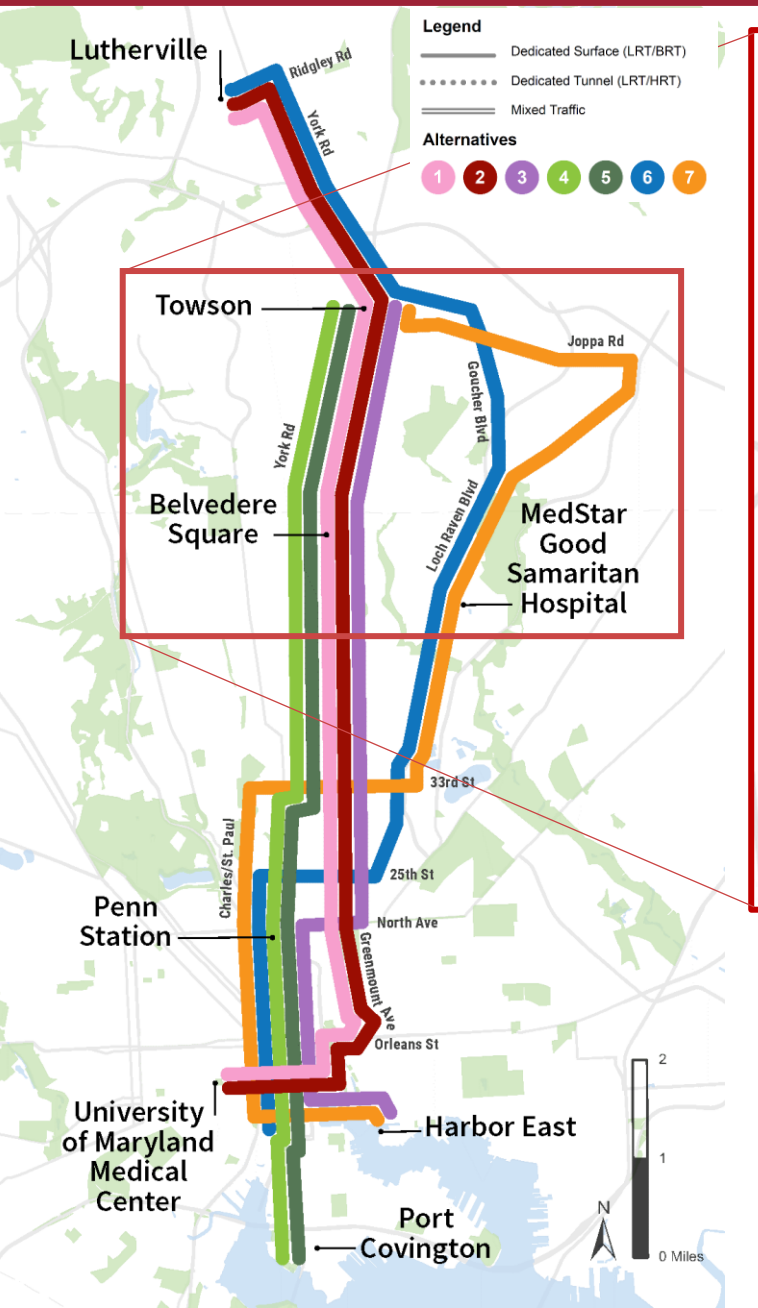
2 – Mixed traffic surface bus rapid transit on Ridgley Road then dedicated surface bus rapid transit

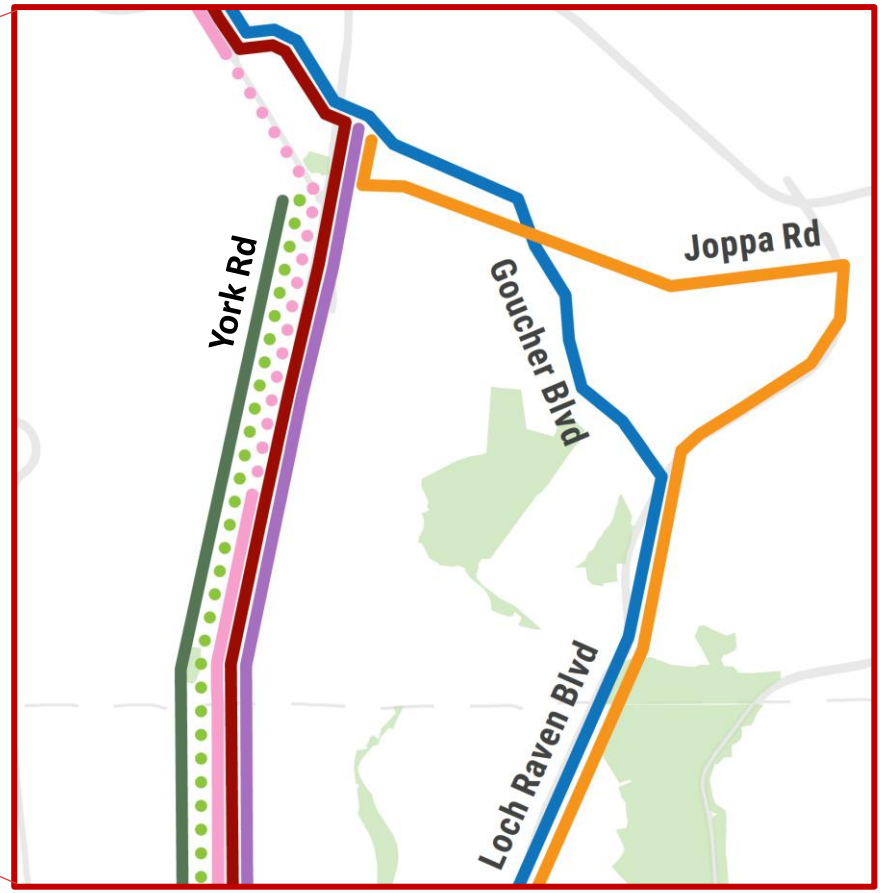
6 – Mixed traffic surface light rail transit on Ridgley Road then dedicated surface light rail transit

Alternatives 3, 4, 5 & 7 do not travel to Lutherville

Geographic Segment Results – Greater Towson

North Breakout





Key Takeaways

- Greater density on York Road provides higher overall ridership
- Loch Raven provides more access to minority populations
- York Road has limited space for transit improvements
- Goucher can accommodate rail vehicle turning movements
- Tunneling provides the greatest travel time savings
- Tunneling results in more cost, environmental complexity, & implementation time

Alternative Descriptions

1 – Dedicated surface light rail transit on York Road to Stevenson Lane then tunnel light rail through Towson and south on York Road

2, 3, 5 – Dedicated surface bus rapid transit along York Road

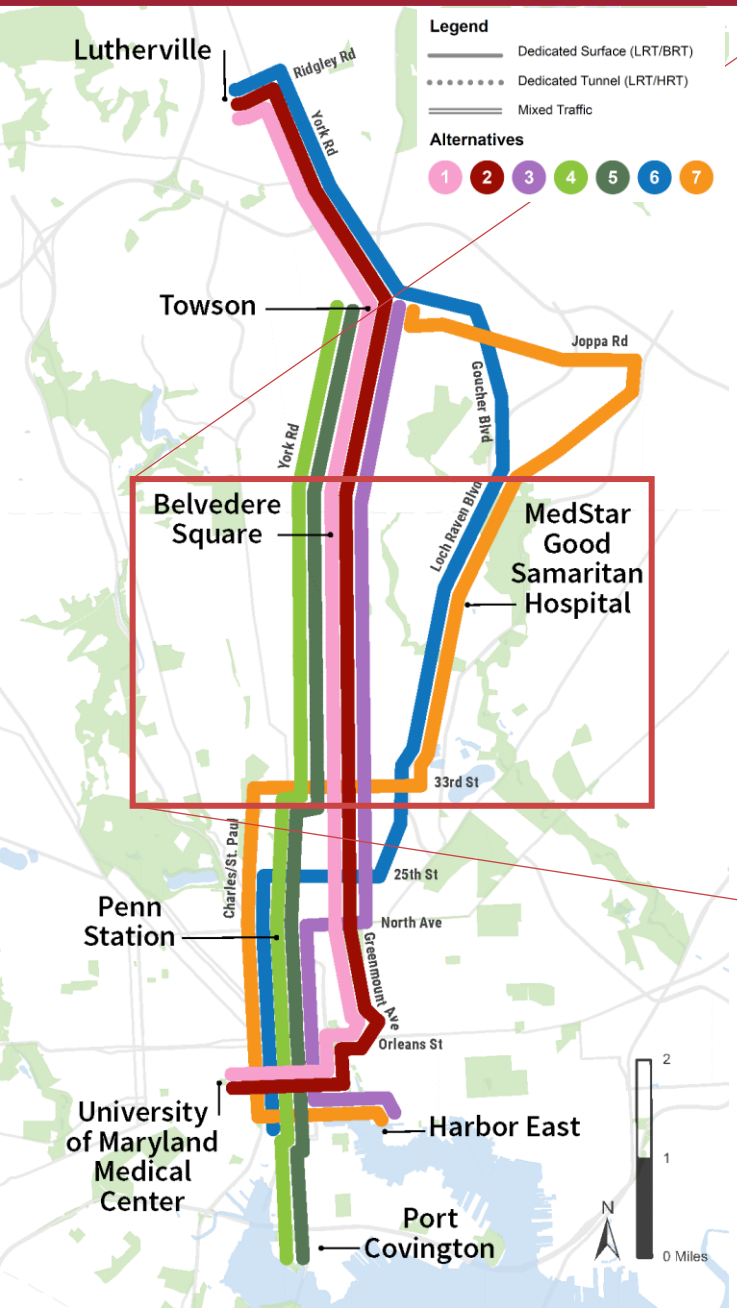
4 – Tunnel heavy rail transit under York Road

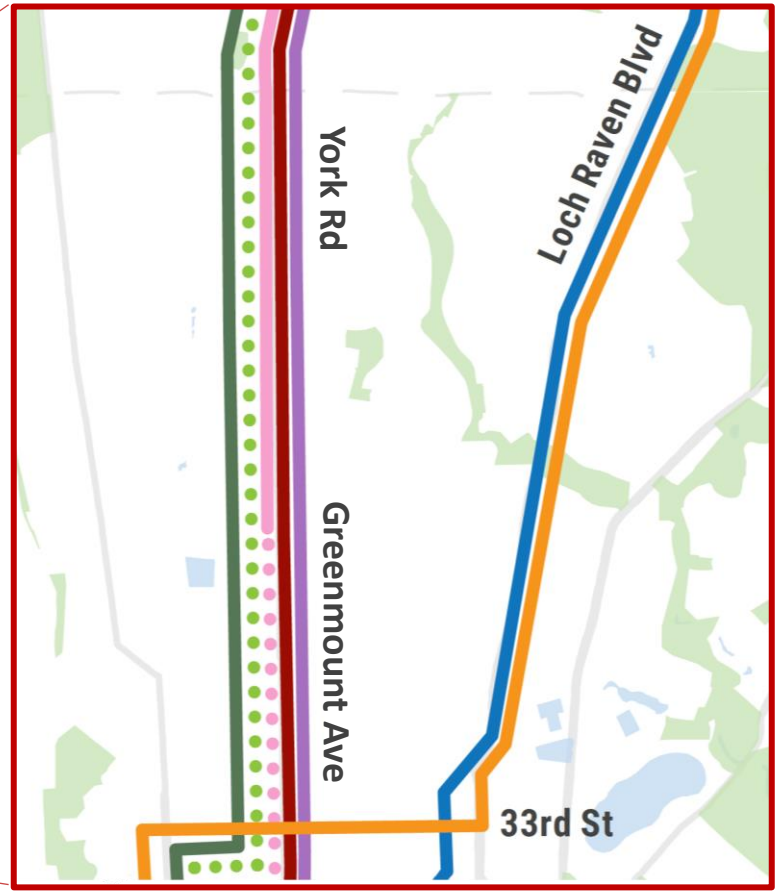
6 – Dedicated surface light rail transit along Goucher and Loch Raven Boulevard

7 – Dedicated surface bus rapid transit along Joppa Road to Loch Raven Boulevard

Geographic Segment Results – North Baltimore City

Central Breakout





Key Takeaways

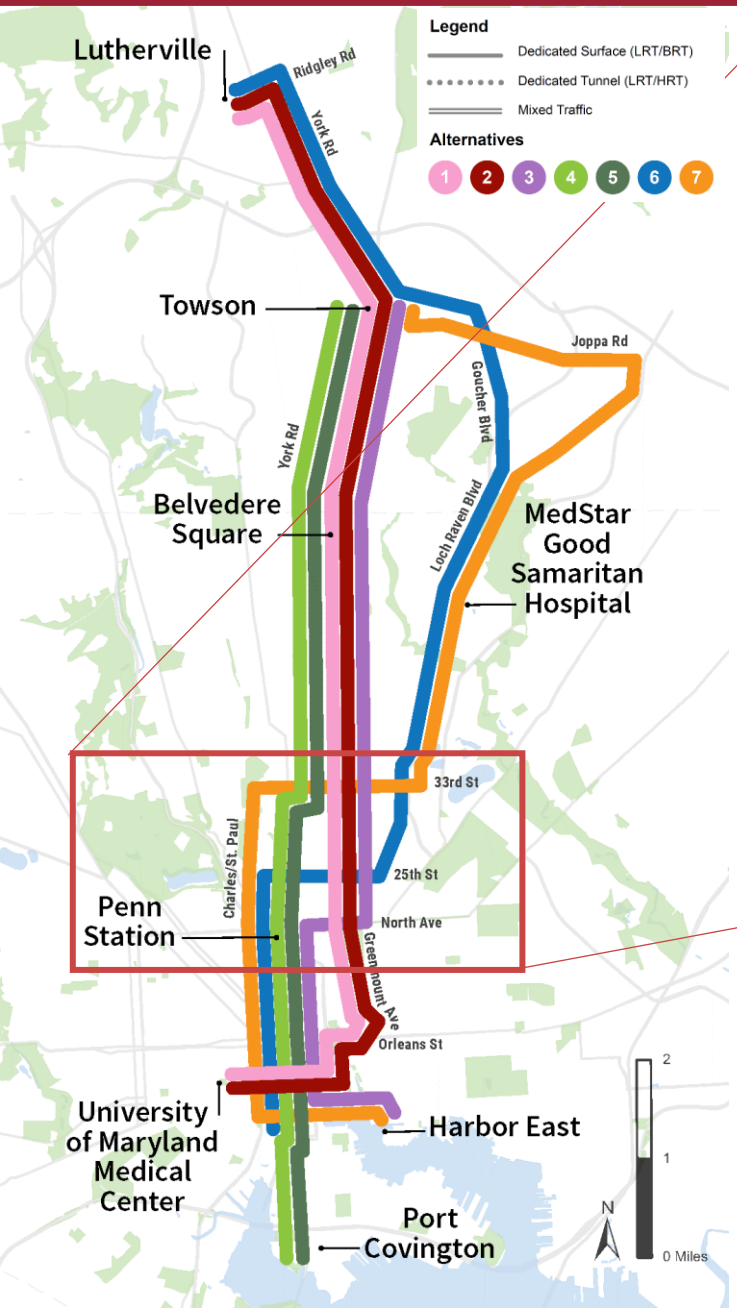
- York Road has higher density and serves more low-income population resulting in higher ridership
- Loch Raven provides more access to minority populations
- York Road has limited space for transit improvements
- Tunneling provides the greatest travel time savings
- Tunneling results in more cost, environmental complexity, & implementation time

Alternative Descriptions

1 – Dedicated surface and tunnel light rail transit along / under York Road / Greenmount Avenue
2 & 3 – Dedicated surface bus rapid transit along York Road / Greenmount Avenue
4 – Tunnel heavy rail transit under York Road / Greenmount Avenue
5 – Dedicated surface bus rapid along York Road / Greenmount Avenue
6 – Dedicated surface light rail transit along Loch Raven Boulevard
7 – Dedicated surface bus rapid transit along Loch Raven Boulevard

Geographic Segment Results – Charles Village/Waverly

Central Breakout



Key Takeaways

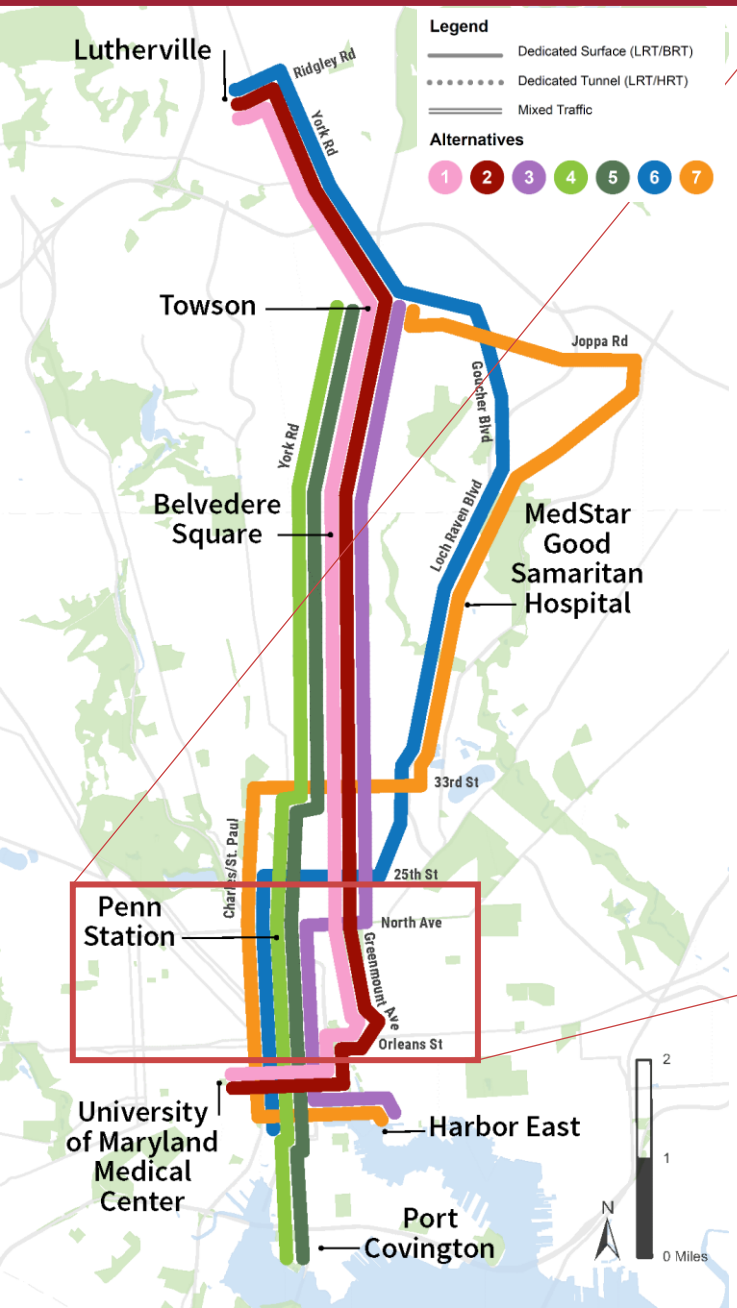
- Penn Station is a regional transit hub for bus and rail (light rail, MARC and Amtrak) making this connection important for expanding regional job access
- Alternative 6 crosses under a CSX bridge requiring additional analysis
- Tunneling provides the greatest travel time savings
- Tunneling results in more cost, environmental complexity, & implementation time

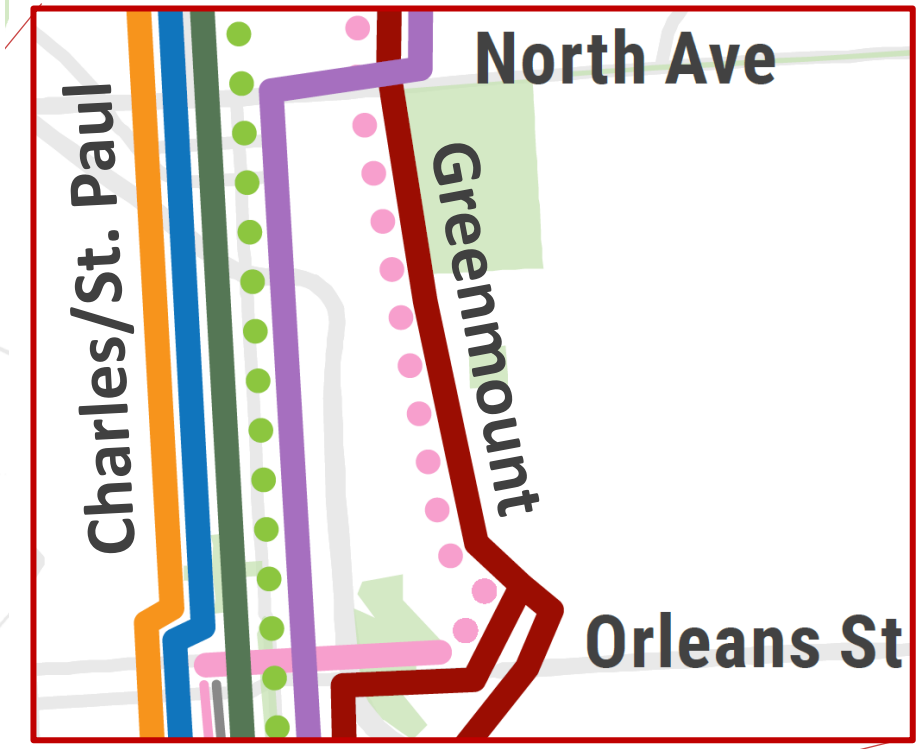
Alternative Descriptions

1 – Tunnel light rail transit along Greenmount Avenue
2 – Dedicated surface bus rapid transit along Greenmount Avenue
3 – Dedicated surface bus rapid transit along Greenmount Avenue connects to Penn Station via North Avenue
4 – Tunnel heavy rail transit under Charles / Saint Paul Street
5 – Dedicated surface bus rapid transit Charles / Saint Paul Street
6 – Dedicated surface light rail transit along Loch Raven to Charles / Saint Paul via 25th Street
7 – Dedicated surface bus rapid transit along 33rd Street and Charles / Saint Paul Street

Geographic Segment Results – Mt. Vernon or Old Town

South Breakout





Key Takeaways

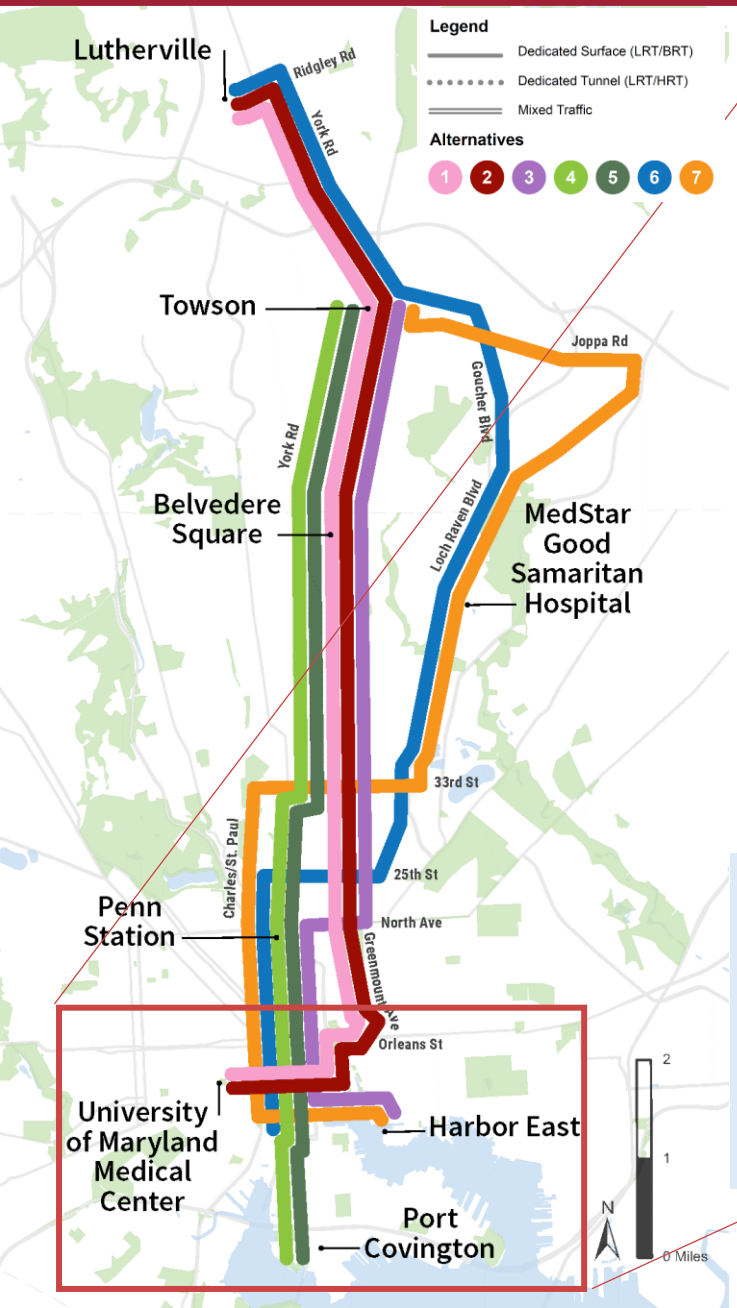
- Charles/Saint Paul provides higher ridership and a greater access to jobs
- Greenmount Avenue provides more opportunities to support revitalization and low-income /minority populations
- Alternative 1 utilizes Orleans Street bridge (Route 40) requiring additional analysis
- Tunneling provides the greatest travel time savings
- Tunneling results in more cost, environmental complexity, & implementation time

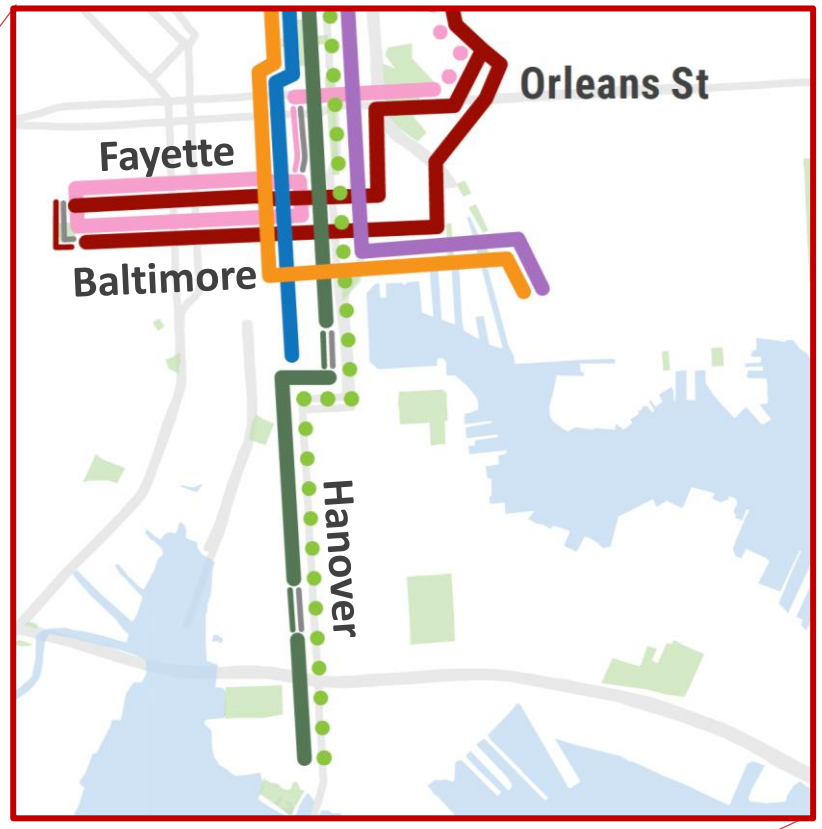
Alternative Descriptions

1 – Tunnel light rail transit under Greenmount Avenue then dedicated surface at Orleans Street
2 – Dedicated surface bus rapid transit along Greenmount Avenue
3 – Dedicated surface bus rapid transit along Charles / Saint Paul Streets
4 – Tunnel heavy rail transit under Charles / Saint Paul Streets
5 – Dedicated surface bus rapid transit along Charles / Saint Paul Streets
6 – Dedicated surface light rail transit Charles / Saint Paul Streets
7 – Dedicated surface bus rapid transit Charles / Saint Paul Streets

Geographic Segment Results – Downtown Destinations

South Breakout





Key Takeaways

- All alternatives generate strong ridership in downtown area
- All alternatives connect to Metro at Charles Center
- Tunneling provides the greatest travel time savings
- Tunneling results in more cost, environmental complexity, & implementation time

Alternative Descriptions for this Segment

1 – Dedicated surface light rail transit
2 – Dedicated surface bus rapid transit
3 & 7 – Dedicated surface bus rapid transit
4 – Tunnel heavy rail transit
5 – Dedicated surface bus rapid transit
6 – Dedicated surface light rail transit

Measures of Effectiveness Results Summary

Goal	Theme	Alternative	1	2	3	4	5	6	7
		Mode	**LRT**	**BRT**	**BRT**	**HRT**	**BRT**	**LRT**	**BRT**
		Endpoints	**Lutherville - UMMC**		**Towson - Harbor East**	**Towson - Port Covington**		**Lutherville - Otterbein**	**Towson - Harbor East**
		Length (miles)	11.6	11.5	9.2	10.5	10.4	12.5	12.6
		Number of Stations	21	33	28	9	30	25	32
		Average Station Spacing (miles)	0.6	0.3	0.3	1.2	0.3	0.5	0.4
		Measure of Effectiveness							
1. Increase mobility and access to jobs, services, and other opportunities in the region	Reliability	Percent of dedicated or separated guideway	GOOD	BETTER	BETTER	BEST	BETTER	BETTER	BEST
		Fixed or Flexible Guideway	FIXED	FLEXIBLE	FLEXIBLE	FIXED	FLEXIBLE	FIXED	FLEXIBLE
	Travel Time Savings	Transit travel time savings between Towson and Downtown Baltimore (minutes)	BEST	BETTER	BETTER	BEST	BETTER	GOOD	GOOD
	Access (per mile)	Households within 1/2 mile of a station, per mile	BETTER	BETTER	BEST	GOOD	BEST	BETTER	BETTER
		Student population within 1/2 mile of a station, per mile	BETTER	BETTER	BEST	GOOD	BEST	GOOD	BETTER
		Future jobs within 1/2 mile of a station, per mile	BETTER	BEST	BEST	GOOD	BETTER	BETTER	BETTER
2. Create strategic connection to multi-modal transportation options locally and regionally	Connections	Connections to rail stations, frequent bus routes and locally operated transit systems	BETTER	BEST	BETTER	GOOD	GOOD	BETTER	GOOD
		Additional future jobs accessible by transit within 45 minutes	BEST	BETTER	BETTER	GOOD	GOOD	GOOD	BETTER

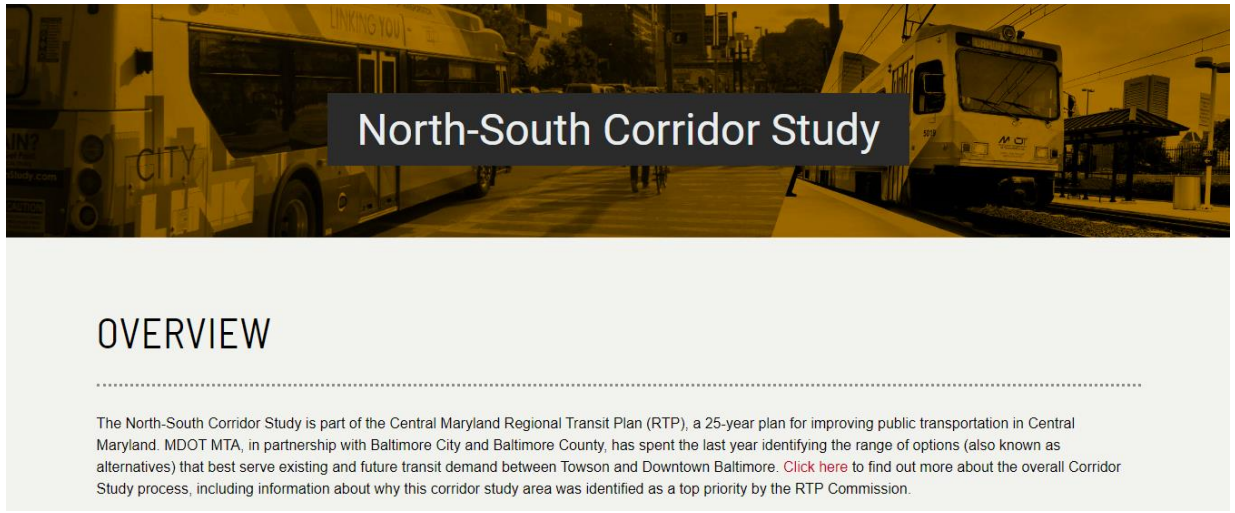
Measures of Effectiveness Results Summary

Goal	Theme	Alternative	1	2	3	4	5	6	7
		Mode	**LRT**	**BRT**	**BRT**	**HRT**	**BRT**	**LRT**	**BRT**
		Endpoints	**Lutherville – UMMC**		**Towson – Harbor East**	**Towson - Port Covington**		**Lutherville - Otterbein**	**Towson - Harbor East**
		Length (miles)	11.6	11.5	9.2	10.5	10.4	12.5	12.6
		Number of Stations	21	33	28	9	30	25	32
		Average Station Spacing (miles)	0.6	0.3	0.3	1.2	0.3	0.5	0.4
		Measure of Effectiveness							
3. Center equity as a core consideration	Equity	All transit-critical populations within 1/2 mile of a station, per mile[1]	BETTER	BETTER	BEST	GOOD	BETTER	BETTER	BETTER
4. Support the region's economic competitiveness and strategic growth	Cost	Capital cost	$$$	$	$	$$$	$	$$	$
	Development Opportunity	Transit-Oriented Development and Opportunity Zones within 1/2 mile of station	BETTER	GOOD	GOOD	GOOD	BEST	BETTER	BETTER
	Implementation	Implementation time	MIDDLE	SHORTEST	SHORTEST	LONGEST	SHORTEST	MIDDLE	SHORTEST
		Bridge and Tunnel Complexity	MEDIUM	N/A	N/A	HIGH	N/A	MEDIUM	N/A
5. Support the region's sustainability goals.	Ridership	Projected daily boardings in 2045, per mile	BETTER	BETTER	BEST	GOOD	BEST	BETTER	BETTER
	Sustainability	Zero-car households within ½ mile of a station, per mile	BETTER	BETTER	BETTER	GOOD	BETTER	BETTER	BEST

1. Sum of low-income, minority, limited English proficiency, and 65+ populations, people with disabilities, and zero-car households within 1/2 mile of a station, per mile. People/households may be counted more than once if they're part of multiple transit-critical groups.

Next Steps – Public Outreach

- 60-day public comment period open through November 7, 2022.
- Street teams are conducting on-the-ground outreach along the corridor. Check website for dates/times and locations.
- Provide comments on the website. www.rtpcorridors.com/northsouth



Call the Project Team
443-475-0687

Email the Project Team
rtp@mta.maryland.gov

INVITE US TO YOUR COMMUNITY MEETINGS!

Connecting Our Future
A Regional Transit Plan for Central Maryland

Public Feedback

- THANK YOU!

- Today's feedback will be compiled with other outreach submissions.

- Public feedback will **supplement** the measures of effectiveness.
  - What's the most important goal?
  - How to consider tradeoffs?
  - What did we miss?

- Let's continue the conversation.

Next Steps - Study

Fall/Winter 2022

Identify Alternatives for Further Study

MDOT and local jurisdictions will use public feedback to compare options and develop alternatives for further study in the next phase of this project.

2023 – 2024

Alternatives Analysis

The alternatives in the next study will receive additional engineering and environmental analysis and public input to narrow down to a single option.

2024 – 2026

Federal Approval & Apply for Funding

MDOT and its partners will develop a local funding plan and apply for funding to support design and construction once a preferred option has been confirmed.