

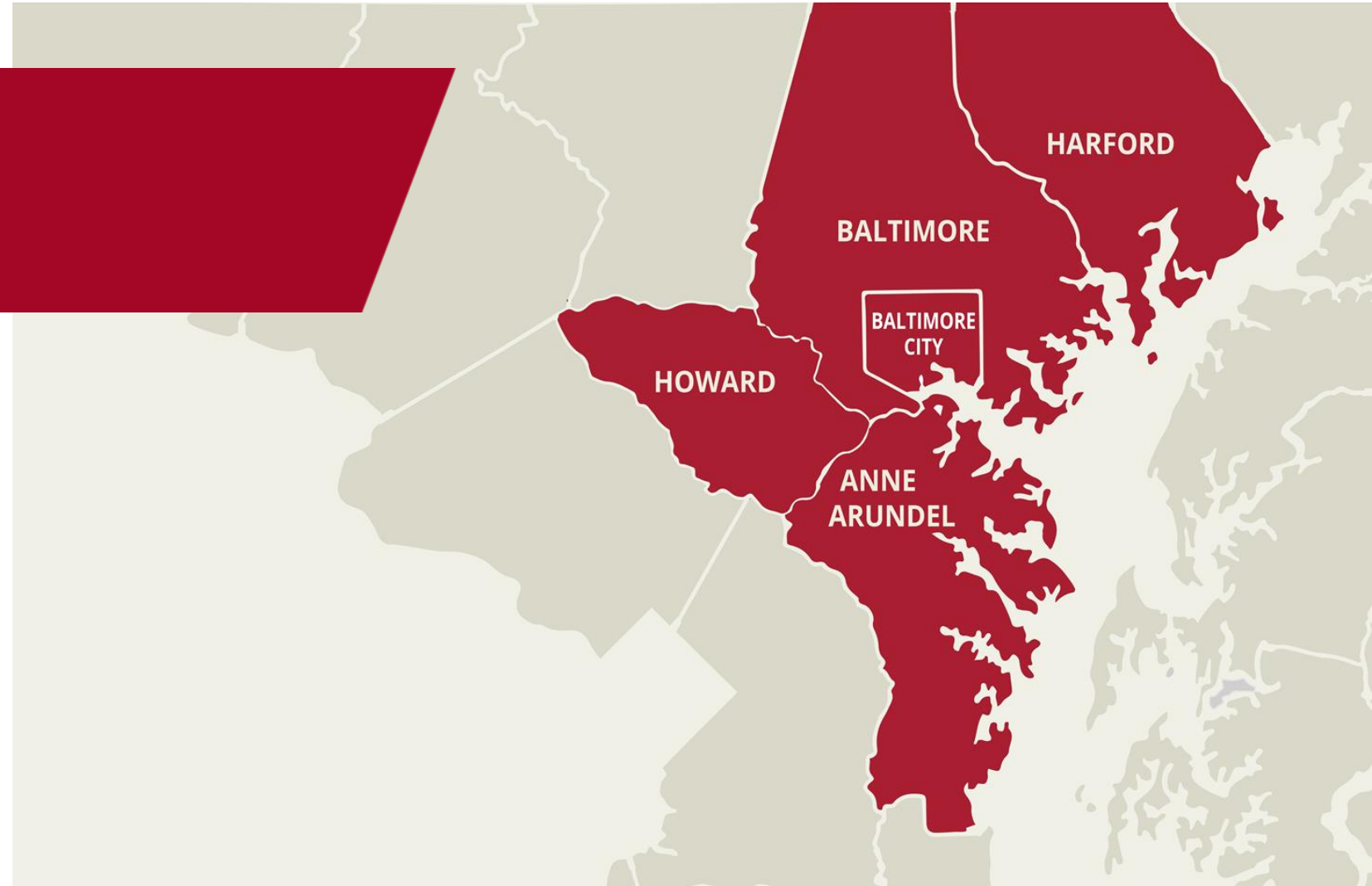


# Connecting Our Future

A Regional Transit Plan for Central Maryland

## COMMISSION MEETING # 6

December 13, 2019  
Benton Building  
Baltimore, MD





# WELCOME & OVERVIEW

Mike Kelly, Executive Director  
Baltimore Metropolitan Council





# OPENING REMARKS



# MEETING AGENDA

- October Meeting Minutes Review
- Introduction and Set Up
- Public Involvement Update
- Corridor Prioritization
- Network Improvements
- Strategic Actions
- Public Comment
- Next Steps





# OCTOBER MEETING MINUTES REVIEW

Kirby Fowler  
RTP Commission Chair

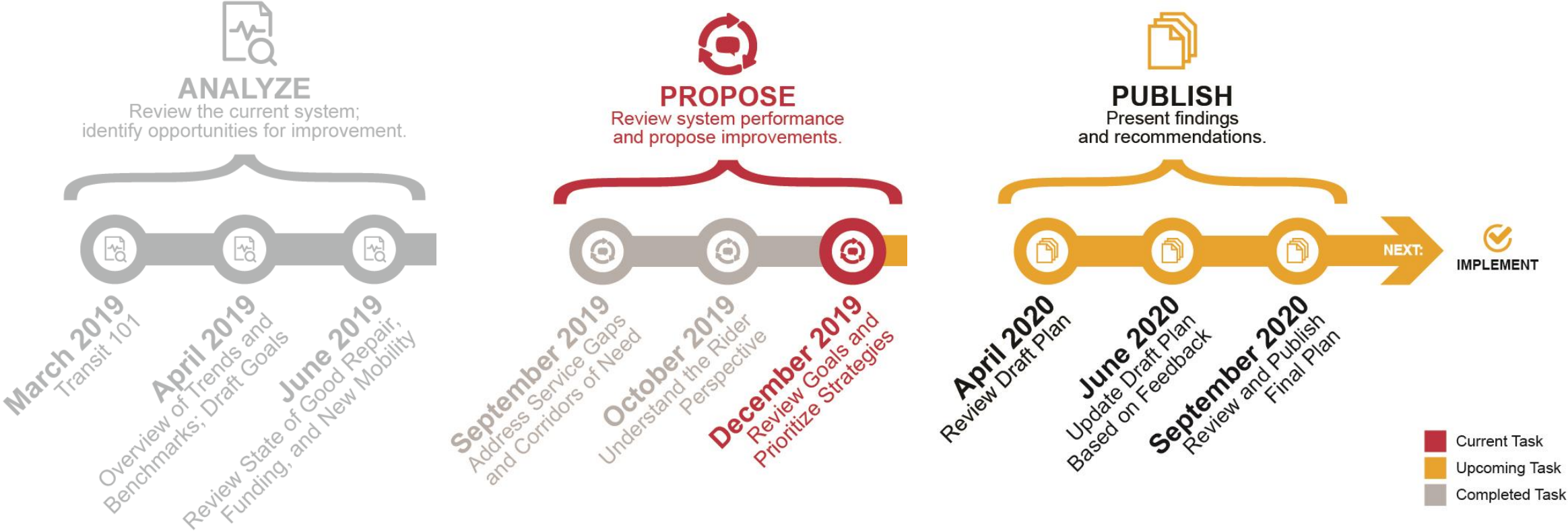




# INTRODUCTION & SET UP

Holly Arnold, Deputy Administrator  
Maryland Department of Transportation  
Maryland Transit Administration

# Plan Development



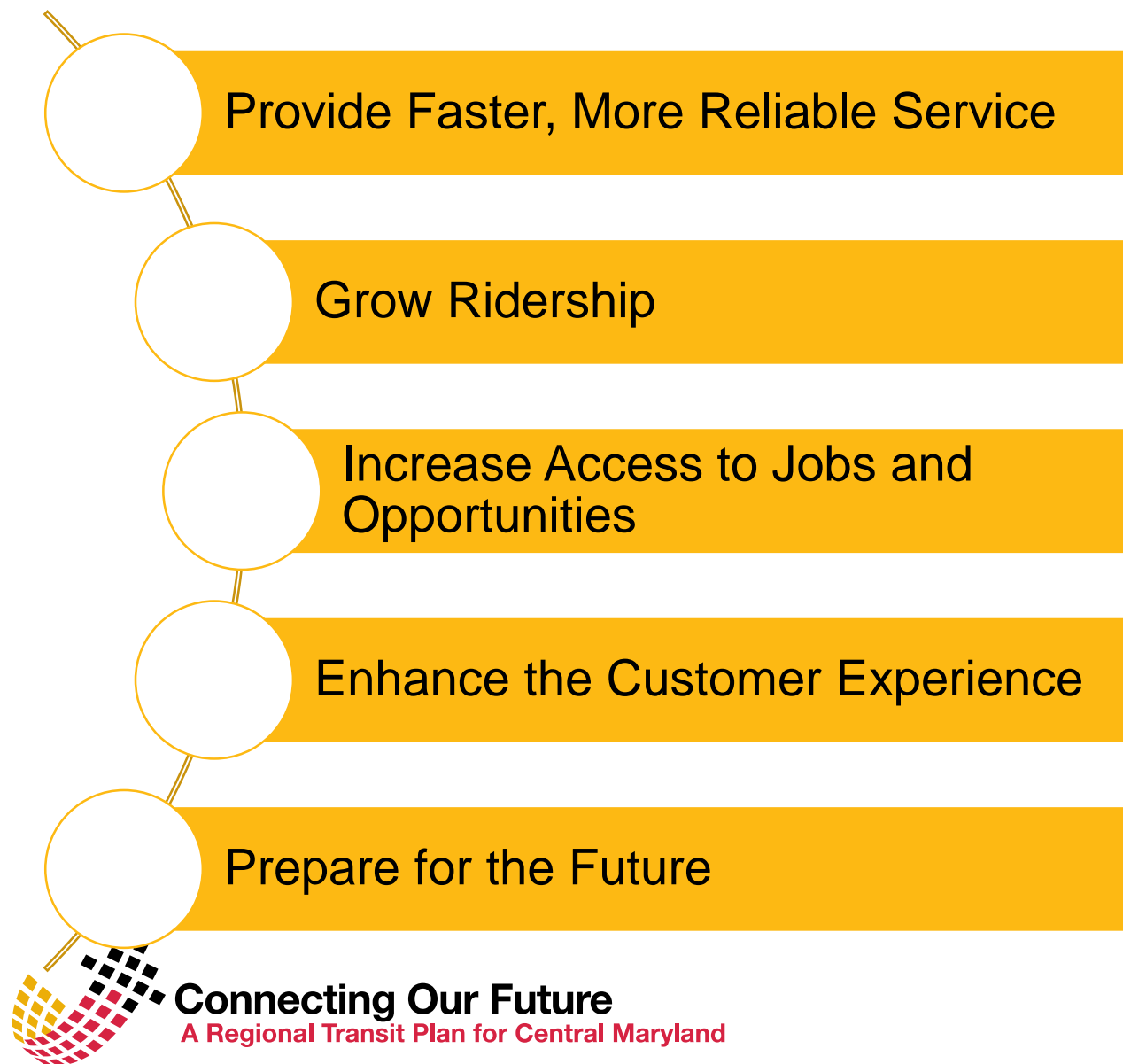
# Today's Focus

- Update on public involvement
- Discuss corridor prioritization and receive input on early, mid-term, and long-term priority groupings
- Discuss additional network improvements and strategic actions being proposed

*This meeting focuses on corridor prioritization and additional network improvements and strategic actions being proposed in the plan*



# RTP Plan Components



- No single component is more important than another.
- Components are inter-connected; success in one is contingent upon success across the others.



# PUBLIC INVOLVEMENT

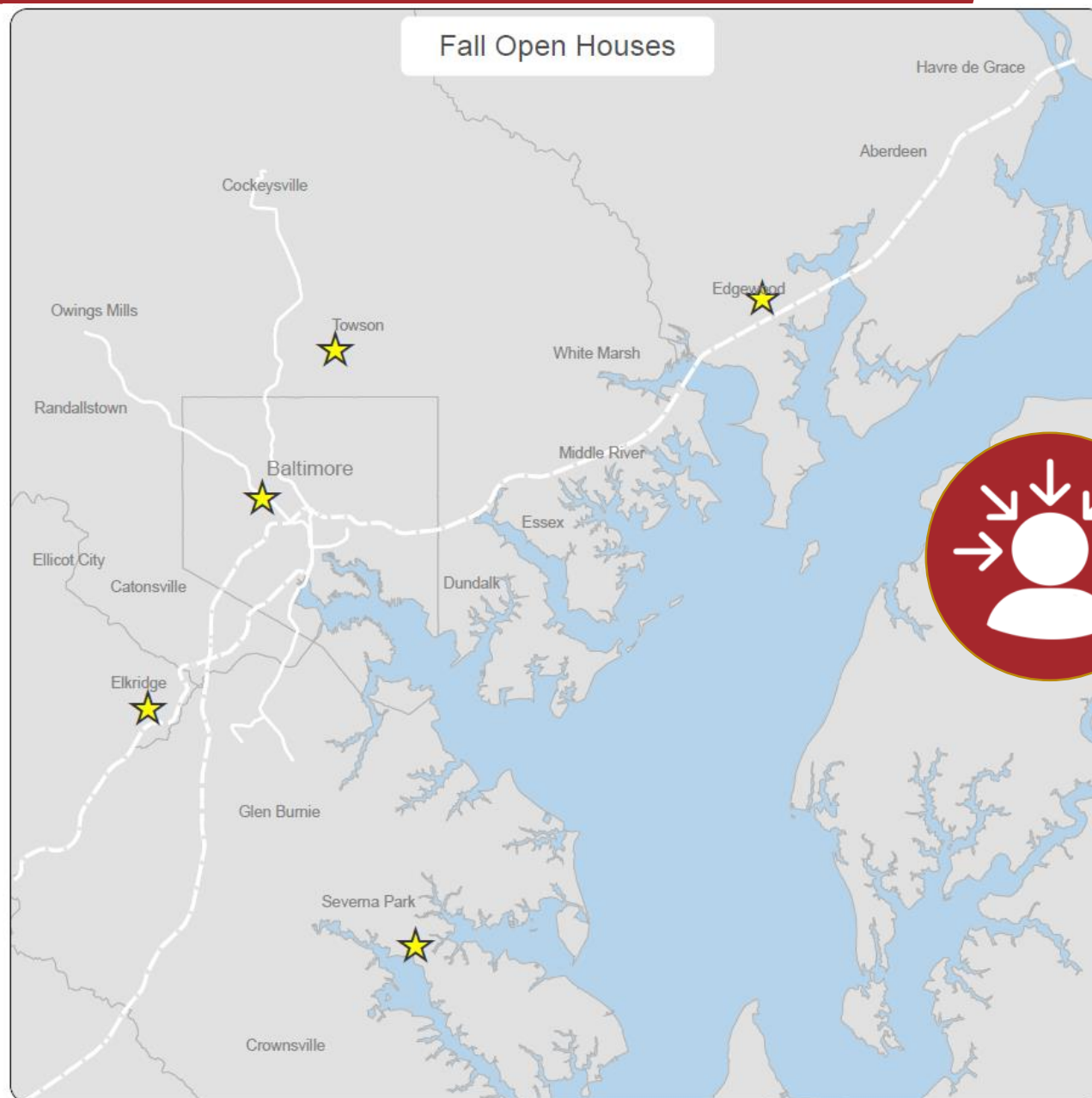
Teddy Krolik, Chief of Engagement  
Maryland Department of Transportation  
Maryland Transit Administration



# Fall Open Houses

## October Locations:

- **10/21 Howard County**  
Elkridge Library
- **10/22 Baltimore County**  
Towson Library
- **10/24 Baltimore City**  
Mondawmin Mall
- **10/28 Harford County**  
Edgewood Rec. & Community Center
- **10/29 Anne Arundel County**  
Severna Park Community Center



# Input from Open Houses

Public input echoed previous engagement themes:

- Improve local and regional connectivity
- Expand service, including service span and express options
- Improve paratransit services
- Concerns around safety and security
- General agreement about Regional Transit Corridors





# Looking Ahead: Public Input on the Draft Plan

- Draft Plan presented at April 2020 Commission Meeting
- Public outreach throughout the jurisdictions and online between April and June (two to three events per jurisdiction)
- Public input presented at June 2020 Commission Meeting





# CORRIDOR PRIORITIZATION

Sandy Brennan  
RTP Project Staff

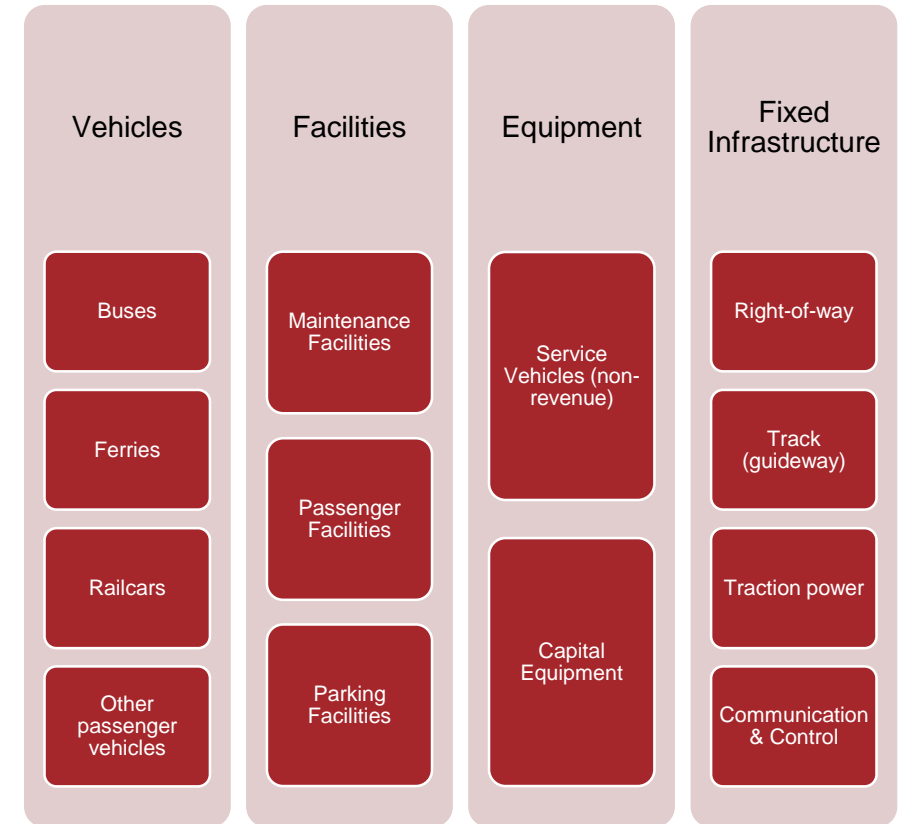


# Legislative Requirements

Legislation requires a plan that:

- Defines the goals to be achieved through the provision of public transit
- Identifies options for:
  - Improvements to existing transportation assets
  - Leveraging non-Administration transportation options available to public transportation
  - **Corridors for new public transportation assets**
- **Prioritizes corridors for planning of new public transportation assets**
- Ensures consistency with local land use and transportation plans

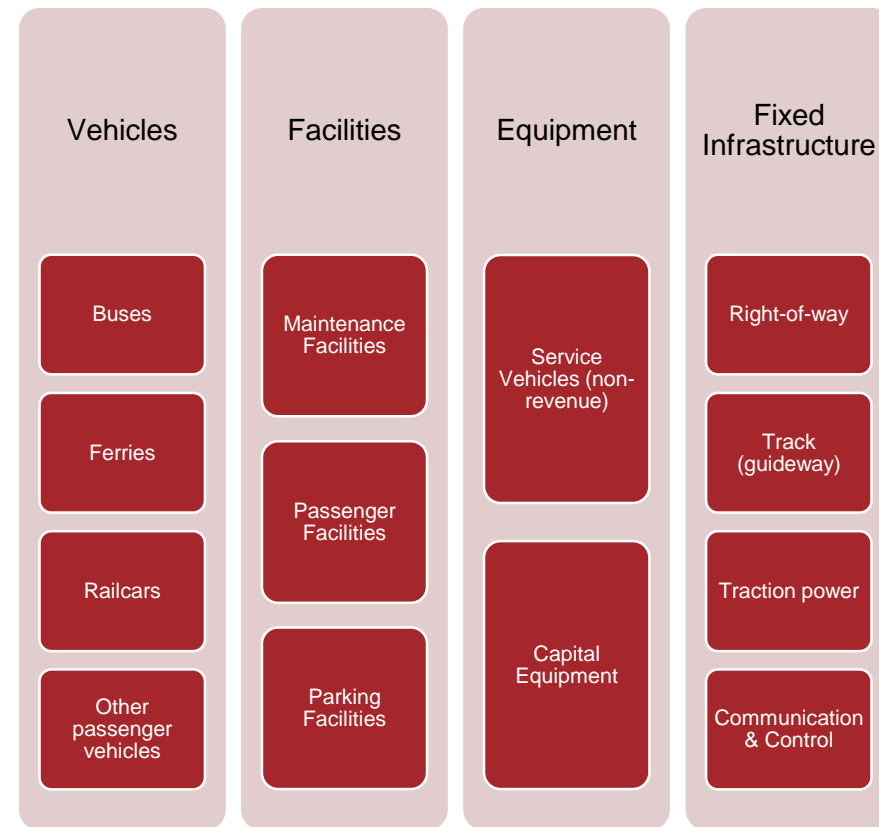
A Transit Asset is vehicles, facilities, equipment, fixed infrastructure.



# What is a corridor?

- Corridors represent key areas of focus for the next 25 years and together provide a comprehensive view of regional transit needs.
- These corridors have been identified as having a need for assets because they:
  - ✓ Demonstrate transit demand that justifies infrastructure, service, and/or technology improvements.
  - ✓ Have regional significance, often providing connectivity between jurisdictions.

A Transit Asset is vehicles, facilities, equipment, fixed infrastructure.

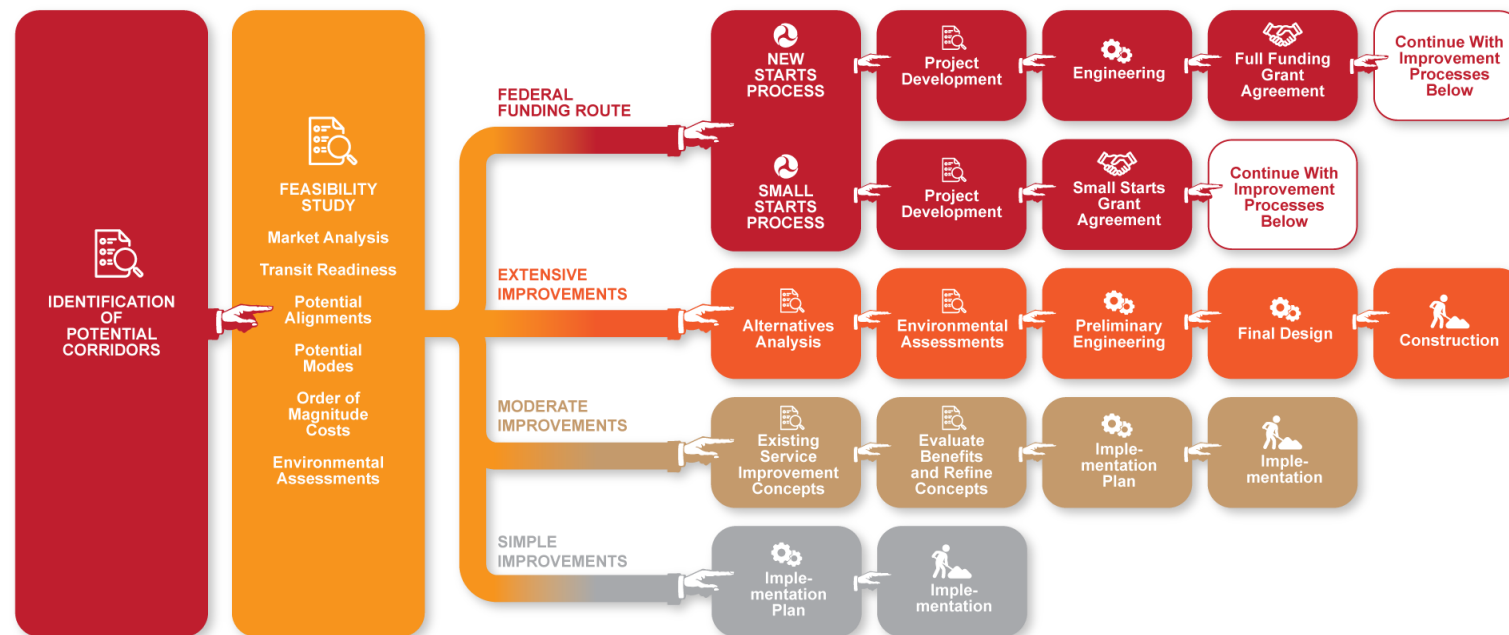




# What is a corridor?

Corridor identification and prioritization is the first step in the process. Corridors in this plan will **NOT**:

- Define specific routes, service patterns or alignments
- Develop specific levels of services
- Identify stations
- Identify mode

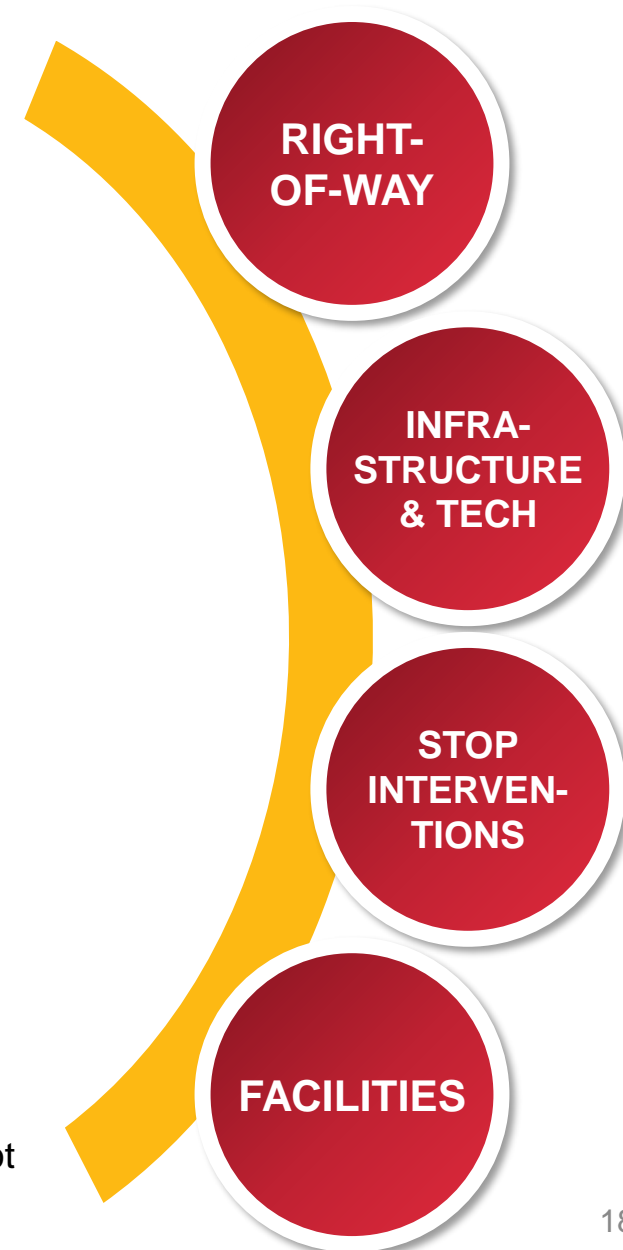


As the RTP is implemented across 25 years, feasibility studies, corridor stakeholders and the public will help identify the appropriate levels of service, mode and stations. Corridors should remain flexible based on results of the feasibility study and must empower the community to be the key decision-makers on corridor service and assets.

# Transit Priority Improvements for Corridors

Transit Priority Improvements can help improve transit travel speeds and reliability of service.

- ❖ Interventions identified for each corridor were based on existing conditions and local context.
- ❖ Further refinement would be investigated during the corridor feasibility study phase, and final interventions would be selected based on final mode and alignment selection, cost-benefit analysis, and local jurisdiction support.



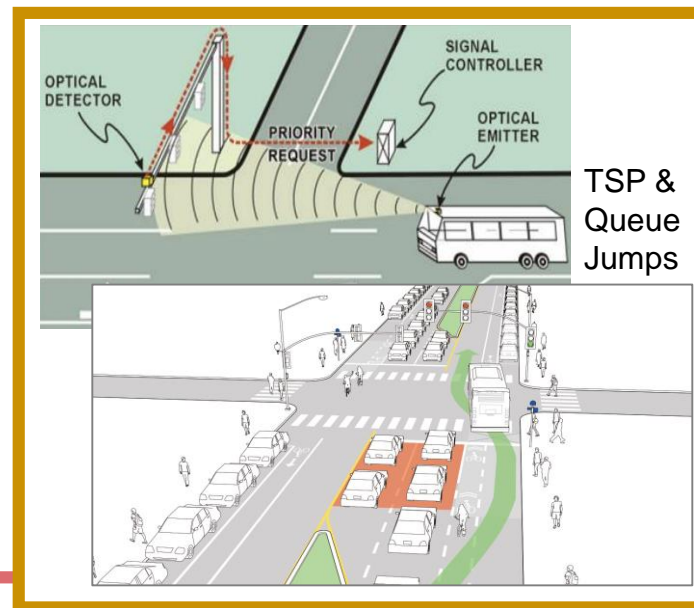


# Transit Priority Improvements for Corridors



Bus on Shoulder Lane Markings, NJDOT

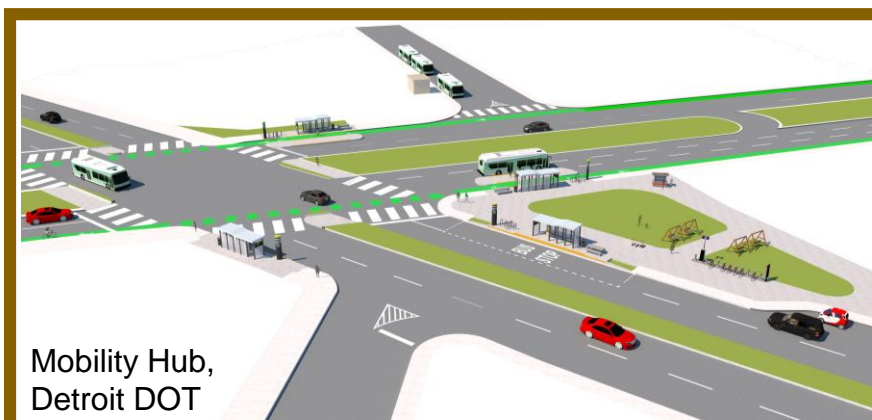
Separated Bus Lane, WMATA



TSP &  
Queue  
Jumps



Level Boarding, GRTC



Mobility Hub,  
Detroit DOT

RIGHT-  
OF-WAY

INFRA-  
STRUCTURE  
& TECH

STOP  
INTERVEN-  
TIONS

FACILITIES



## Potential Transit Priority Improvements by Corridor

The Transit Priority Improvements identified on this table are for illustrative purposes only and are not intended to be an exhaustive list. Transit Priority Improvements such as these can help improve transit travel speeds and reliability of service. Interventions identified in this table were based on existing conditions and local context. Further refinement of these Transit Priority Improvements would be investigated during the corridor feasibility study phase, and final interventions would be selected based on final mode and alignment selection, cost-benefit analysis, and local jurisdiction support.

Corridor Number	Corridor Name	Right-of-Way				Priority Infrastructure and Technology			Stop Interventions					Facilities	
		Dedicated Lanes or Right-of-Way	Peak Only Bus Lane	Bus on Shoulder	Driveway Access Management	Intersection Queue Jump	Transit Signal Priority	Ramp Queue Jump	Stop Optimization	Level Boarding	Curb Extension (Bus Bulb)	Off-board Fare Payment	All-door Boarding	Improved Transfer Center/ Terminal	New Transfer Center/ Terminal
1	Morgan State Univ. to South Baltimore	•				•	•		•	•	•	•	•		•
2	Glen Burnie to South Baltimore		•		•	•	•		•	•	•	•	•	•	•
3	Glen Burnie to Annapolis			•	•	•	•		•	•	•	•	•	•	•
4	Glen Burnie to Crofton			•	•	•	•	•		•		•	•	•	•
5	Convention Center to Middle River	•			•	•	•		•	•	•	•	•		•
6	Towson to UM Transit Center	•				•	•		•	•	•	•	•	•	•
7	Towson to Hunt Valley	•			•	•	•		•	•	•	•	•	•	•
8	Towson to South Baltimore	•				•	•		•	•	•	•	•		•
9	North Plaza to UM Transit Center	•			•	•	•		•	•	•	•	•	•	•
10	White Marsh to Johns Hopkins Hosp.	•		•	•	•	•		•	•	•	•	•	•	•
11	Fallston to Aberdeen Proving Ground		•	•		•	•					•			•
12	Mondawmin to South Baltimore	•				•	•		•	•	•	•	•	•	•
13	Rogers Avenue to City Hall	•				•	•		•	•	•	•	•	•	•
14	Mondawmin to Reisterstown	•	•		•	•	•		•	•	•	•	•	•	•
15	Mondawmin to Northwest Hospital	•	•		•	•	•		•	•	•	•	•	•	•
16	Ellicott City to Convention Center	•		•		•	•		•	•	•	•	•		•
17	West Baltimore to Hopkins Bayview	•				•	•		•	•	•	•	•	•	
18	Sparrows Point to Hopkins Bayview	•		•		•	•		•	•	•	•	•		•
19	State Center to Hopkins Bayview	•				•	•		•	•	•	•	•		•
20	Walbrook Junction to Berea	•				•	•		•	•	•	•	•		•
21	Laurel to Halethorpe	•	•	•	•	•	•		•	•		•	•		•
22	Mondawmin to Hopkins Bayview	•				•	•		•	•	•	•	•	•	•
23	Halethorpe to UM Transit Center	•				•	•		•	•	•	•	•	•	•
24	BWI Airport to Laurel		•	•		•	•	•		•		•	•		•
25	BWI Airport to Columbia Town Center		•	•		•	•	•		•		•	•	•	•
26	Odenton to Clarksville			•				•		•		•	•	•	•
27	Ellicott City to Silver Spring			•				•		•		•	•	•	•
28	Annapolis to Union Station			•				•		•		•	•	•	•
29	Bel Air to Edgewood		•			•	•		•	•		•	•		•
30	Ellicott City to BWI Airport			•				•		•		•	•	•	•



# Why are we prioritizing corridors?

- Categorizing each corridor by early-, mid-, or long-term opportunities, provides a roadmap for the region to identify assets and prepare corridors for investment
- Required by the legislation

## Components of Transit Readiness



1 **Destinations**  
along the Path  
of Travel



2 **Dense,**  
mixed  
land uses



3 **Connected**  
streets &  
paths



4 **Comfortable,**  
inviting  
environment



5 **Transit**  
**Priority** on  
the route's  
Street/  
Guideway



6 **Programs**  
and  
**Incentives**  
to promote  
transit

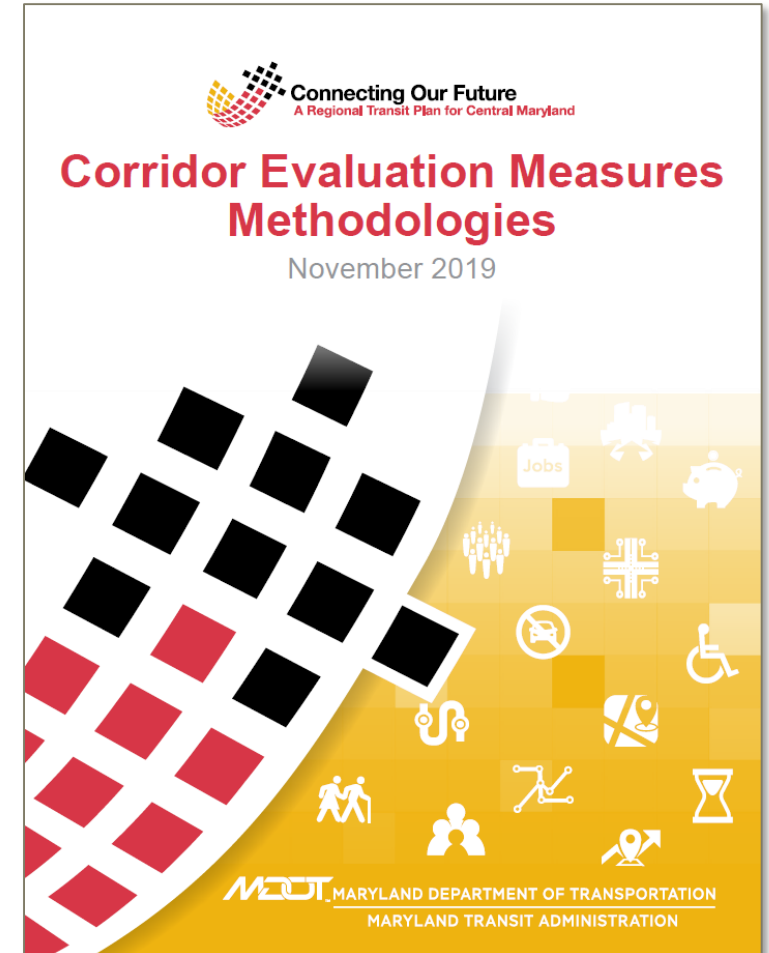
# Corridor Prioritization: Measures

In September, the commission identified 16 measures to help prioritize corridors.

For each measure, a quantitative methodology was developed to objectively determine how the corridor performed.



**Number of residents accessible to the corridor?**

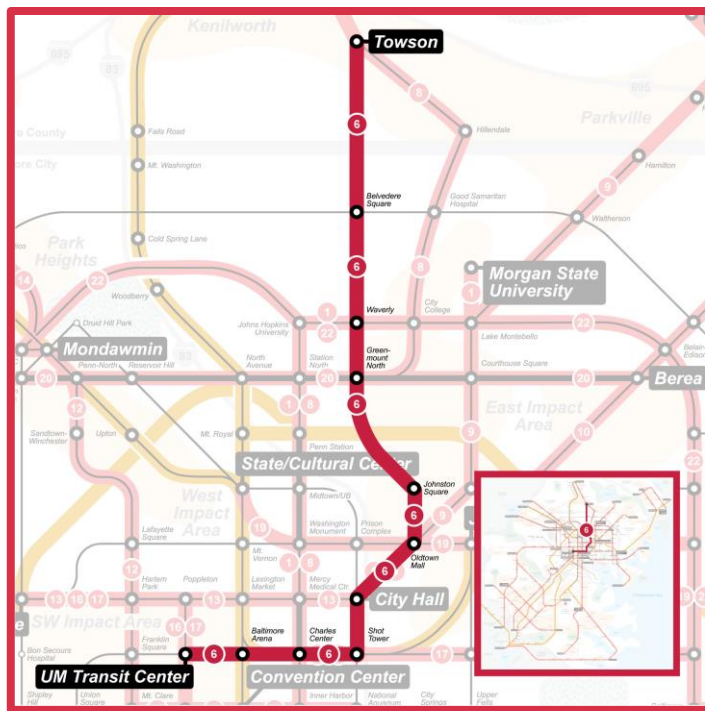




# Corridor Prioritization: Example

- Results were shared with Commissioners and other stakeholders in November
- Initial prioritization grouping was determined based on equal weighting of measures results
- Prioritization grouping was then modified based on feedback from stakeholders

## CORRIDOR 6



**Length:** 9 miles

**Jurisdictions served:** Baltimore County, Baltimore City

## Towson to UM Transit Center

*Subject to future feasibility analysis and local jurisdiction support*

EVALUATION MEASURE	RESULT
<b>Gap</b> Does this corridor address a current or future transit gap? (yes/no)	<b>YES</b>
<b>Existing Jobs</b> How many existing jobs are accessible to the corridor? (total jobs per mile within ½ mile of corridor)	<b>14,803 jobs/mi</b>
<b>Future Jobs</b> How many future jobs are accessible to the corridor? (total projected jobs (2045) per mile within ½ mile of corridor)	<b>25,852 jobs/mi</b>
<b>Supportive Land Use</b> Is land use transit supportive? (% of corridor with transit supportive land use)	<b>63%</b>
<b>Supportive Zoning</b> Is zoning transit supportive? (% of corridor with transit supportive zoning)	<b>84%</b>
<b>Growth Area</b> Is the corridor within a growth area? (% of corridor in State Incentive Program Area)	<b>66%</b>
<b>Existing Plans</b> Is the corridor in existing plans? (yes/no)	<b>YES</b>
<b>Transfer Potential</b> How many transit routes can you transfer to? (count of intersecting transit routes)	<b>55</b>
<b>Improve Service</b> Does the corridor improve existing service? (count of routes which could be improved)	<b>2</b>
<b>Population Access</b> Number of residents accessible to the corridor? (total population per mile within ½ mile of corridor)	<b>11,921 residents/mi</b>
<b>Minority Access</b> Percentage of minority population within the corridor? (% of population with access to corridor that is non-white or Hispanic)	<b>61%</b>
<b>Low-Income Access</b> Percentage of low-income population within the corridor? (% of households with access to the corridor with incomes less than twice the Federal poverty line)	<b>39%</b>
<b>Zero Car Access</b> Percentage of zero car ownership within the corridor? (% of households with access to corridor that have no cars)	<b>34%</b>
<b>Senior Access</b> Percentage of seniors within the corridor? (% of population with access to corridor that are seniors)	<b>10%</b>
<b>Disabled Access</b> Percentage of people with disabilities within the corridor? (% of population with access to corridor that has a disability)	<b>12%</b>
<b>Long Work Commutes</b> Does corridor serve workers with commutes long commutes? (% of workers with access to the corridor that have commutes longer than 45 minutes)	<b>20%</b>

# Corridor Prioritization: Results

Placed each corridor in one of three buckets:

## Early Opportunity

- ✓ Strong existing market demand
- ✓ Critical links in building the regional network
- ✓ Benefit the most people, jobs, and households in the region
- ❖ In the short term, jurisdictions and/or the local transit provider should:
  - Start corridor studies
  - Implement transit priority infrastructure
  - Enhance existing service

## Mid-Term Opportunity

- ✓ Strong to moderate existing market demand
- ✓ Need time to grow demand or prepare the corridor to support infrastructure investments
- ❖ In the short term, jurisdictions and/or the local transit provider should:
  - Enhance existing service
  - Implement incremental transit priority infrastructure
  - Review landuse and zoning ordinances to be more transit supportive
  - Increase pedestrian and bike access to the corridors

## Long-Term Opportunity

- ✓ Moderate existing market demand
- ✓ Need time to grow demand or prepare the corridor to support infrastructure investments
- ❖ In the short term, jurisdictions and/or the local transit provider should:
  - Establish or enhance existing transit services
  - Implement incremental transit priority infrastructure
  - Review landuse and zoning ordinances to be more transit supportive
  - Increase pedestrian and bike access to the corridors

# Corridor Prioritization: Results

## Early Opportunity

Corridor #	Corridor Name
1	Morgan State Univ. to South Baltimore
2	Glen Burnie to South Baltimore
6	Towson to UM Transit Center
12	Mondawmin to South Baltimore
13	Rogers Avenue to City Hall
16	Ellicott City to Convention Center
17	West Baltimore to Hopkins Bayview
18	Sparrows Point to Hopkins Bayview
19	State Center to Hopkins Bayview
20	Walbrook Junction to Berea
27	Ellicott City to Silver Spring

## Mid-Term Opportunity

Corridor #	Corridor Name
5	Convention Center to Middle River
8	Towson to South Baltimore
9	North Plaza to UM Transit Center
10	White Marsh to Johns Hopkins Hospital
14	Mondawmin to Reisterstown
15	Mondawmin to Northwest Hospital
22	Mondawmin to Hopkins Bayview
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24	BWI Airport to Laurel
25	BWI Airport to Columbia Town Center

## Long-Term Opportunity

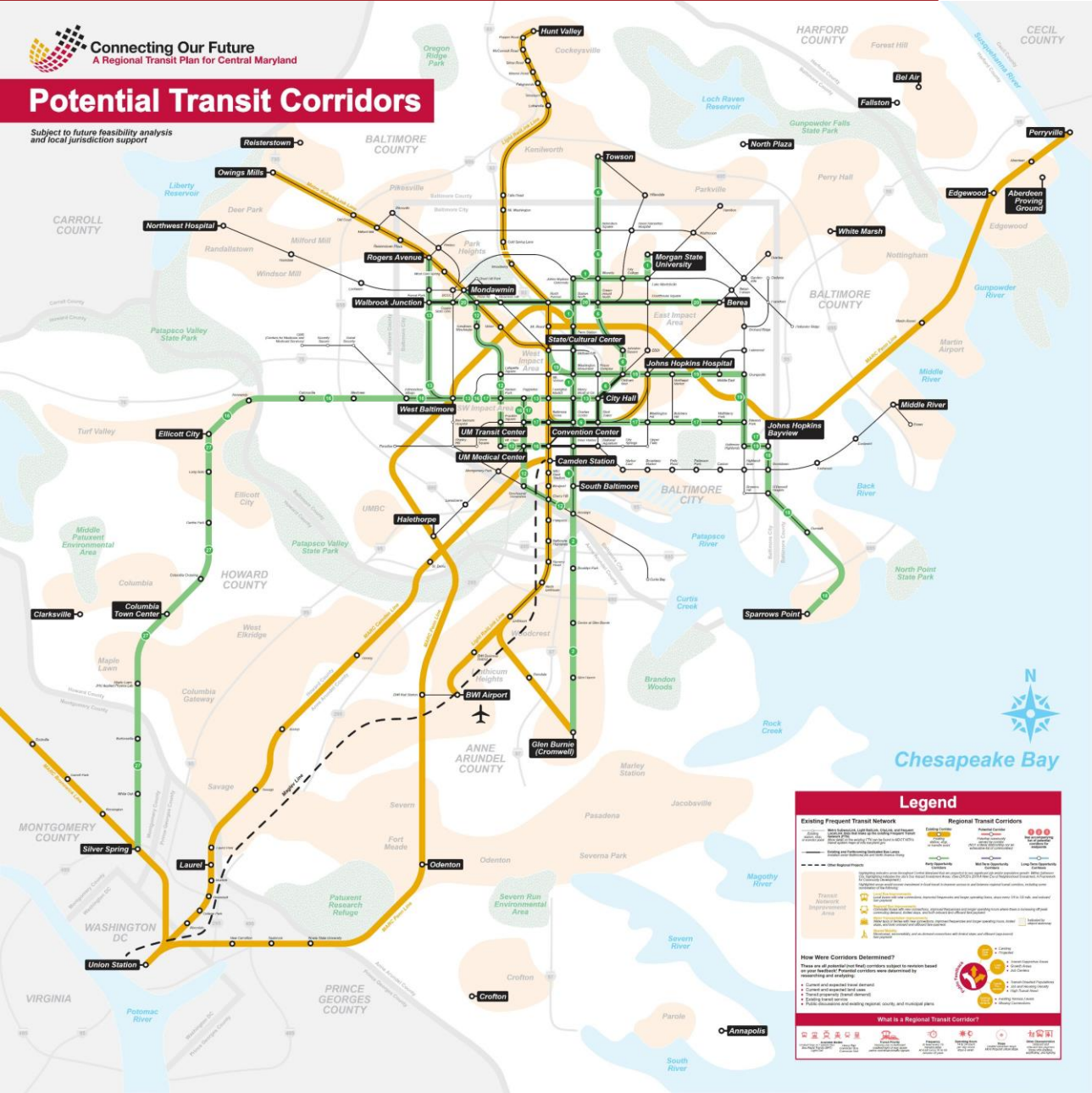
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# Corridor Prioritization: Results

## Early Opportunity

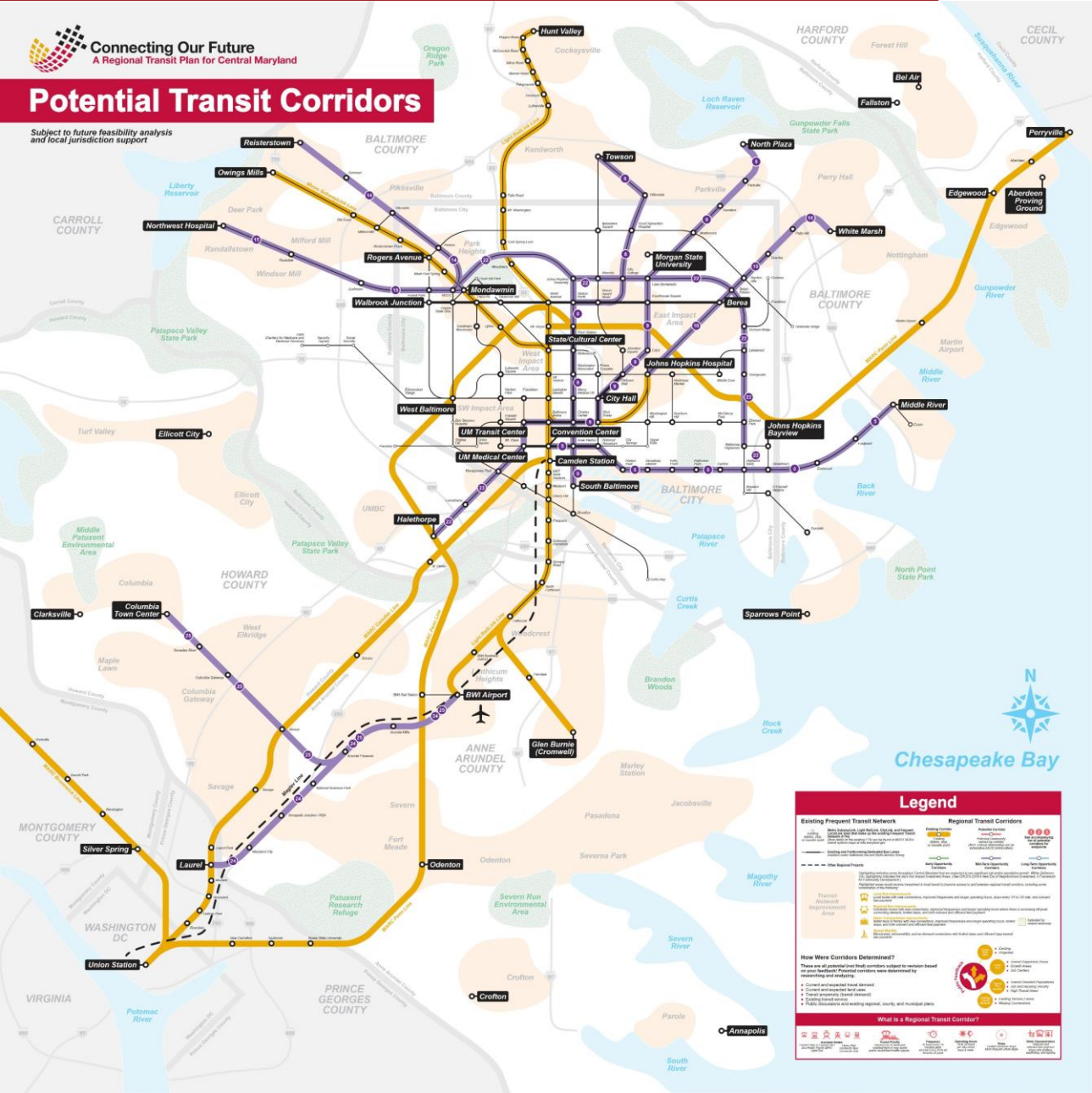
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# Corridor Prioritization: Results

## Mid-Term Opportunity

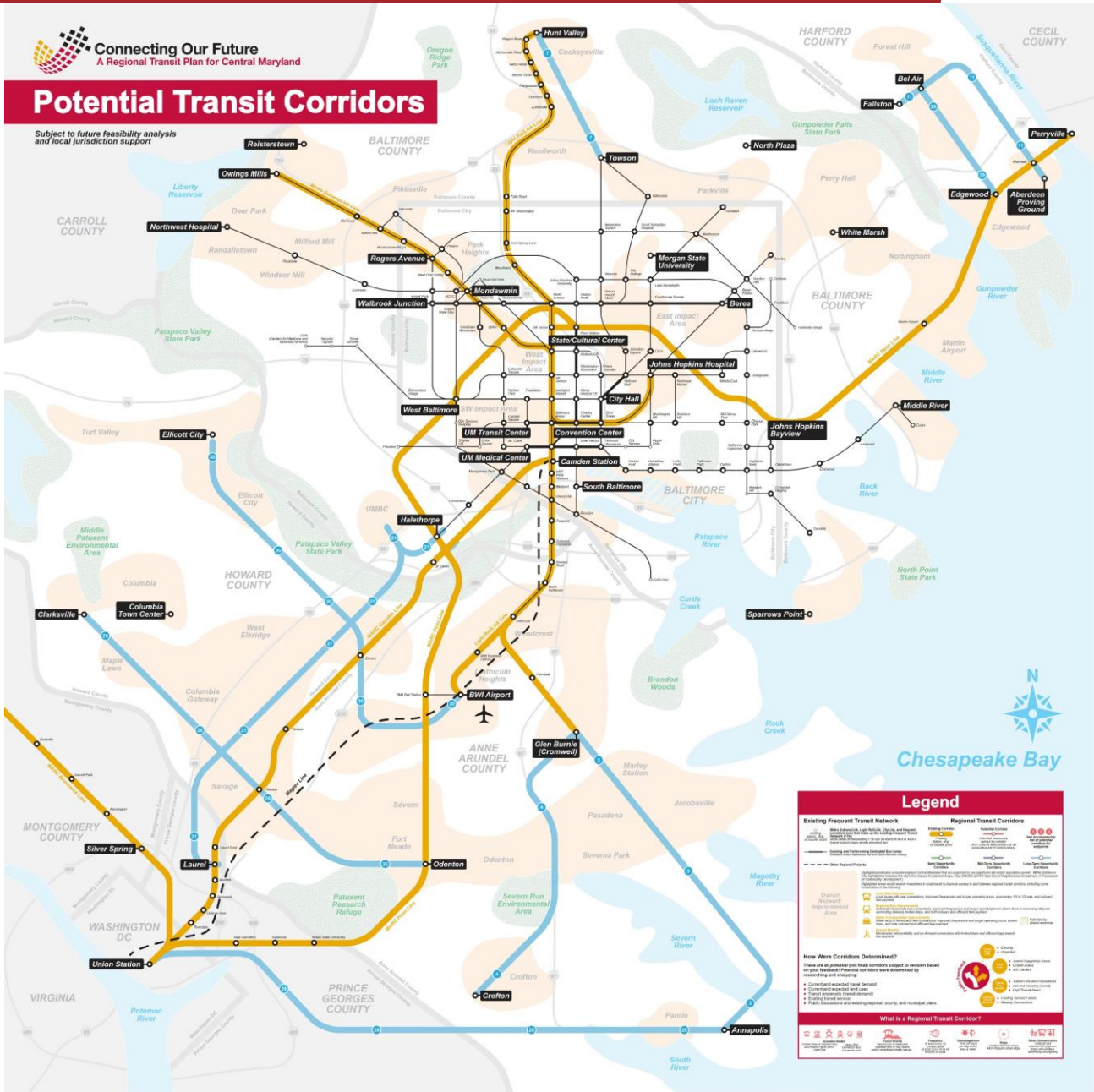
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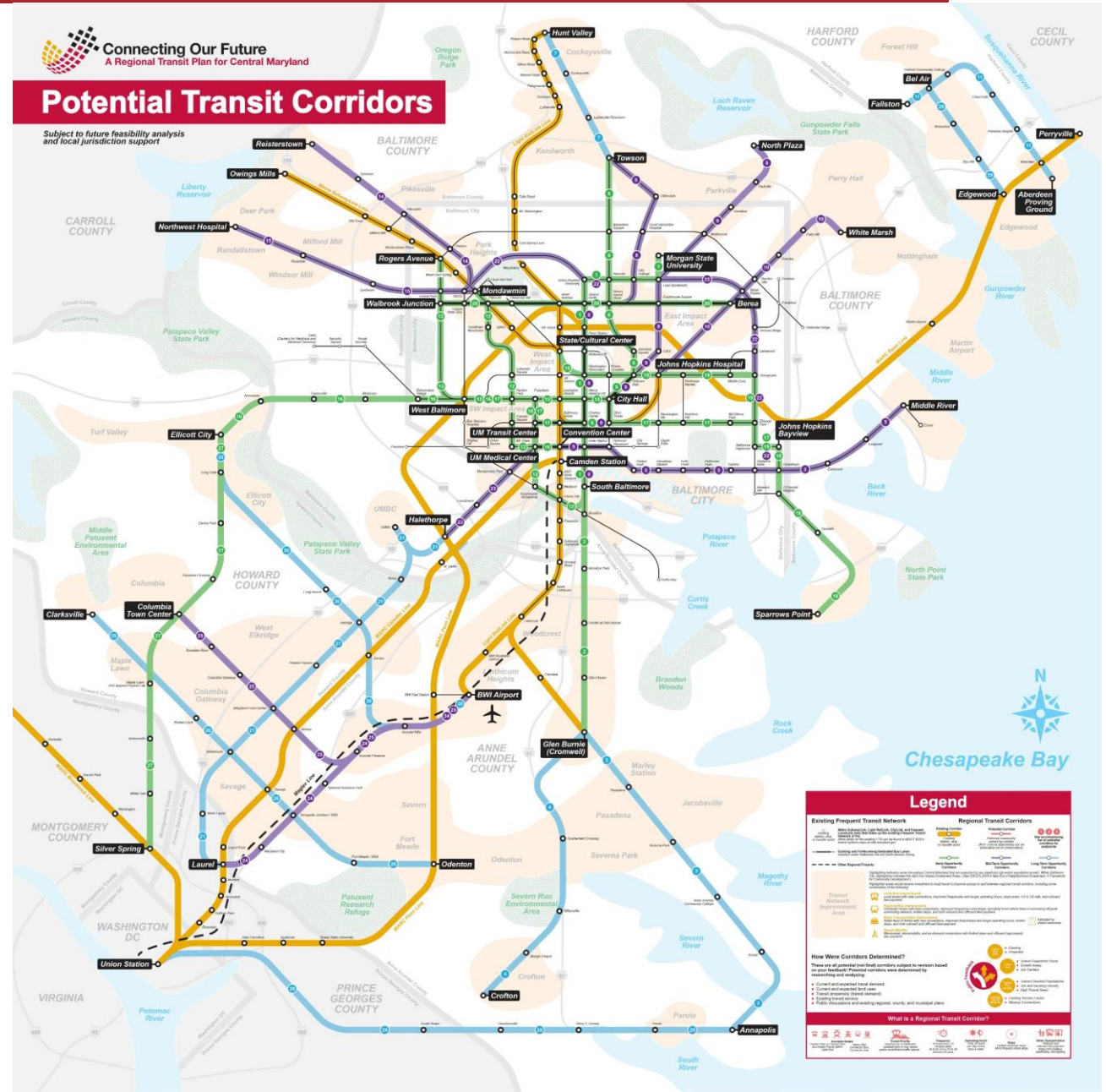




# Corridor Prioritization: Results & Discussion

Goal for today's discussion: Finalize prioritization groupings

1. *Are these the correct groupings between early, mid, and long?*
2. *Does this reflect the region's priorities?*



# Prepare and Implement Regional Transit Corridors

## Strategies to advance Regional Transit Corridors:

### Early Opportunity

- ❖ In the short term, jurisdictions and/or the local transit provider should:
  - Start corridor studies
  - Implement transit priority infrastructure
  - Enhance existing service

### Mid-Term Opportunity

- ❖ In the short term, jurisdictions and/or the local transit provider should:
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BREAK





# NETWORK IMPROVEMENTS

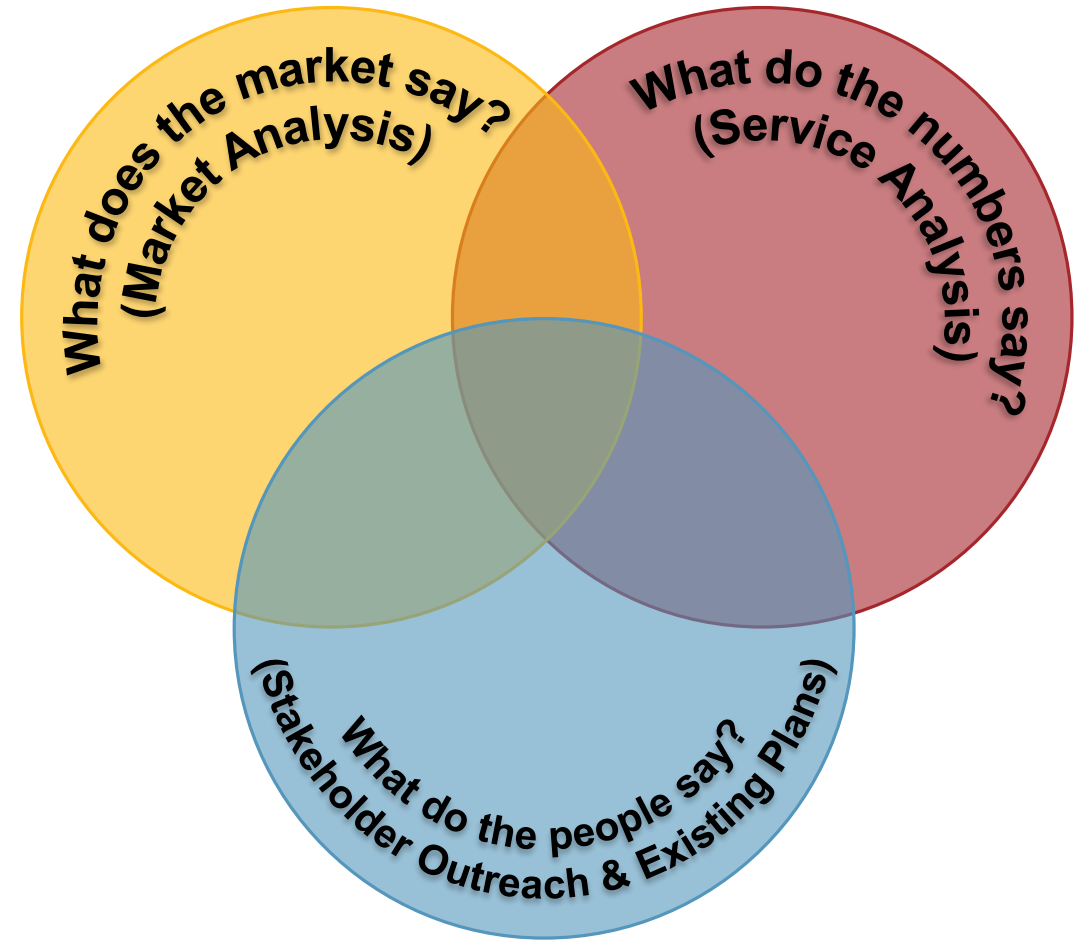
Sandy Brennan  
RTP Project Staff

# Other Network Improvements

Other transit service improvements were identified in specific areas of need.

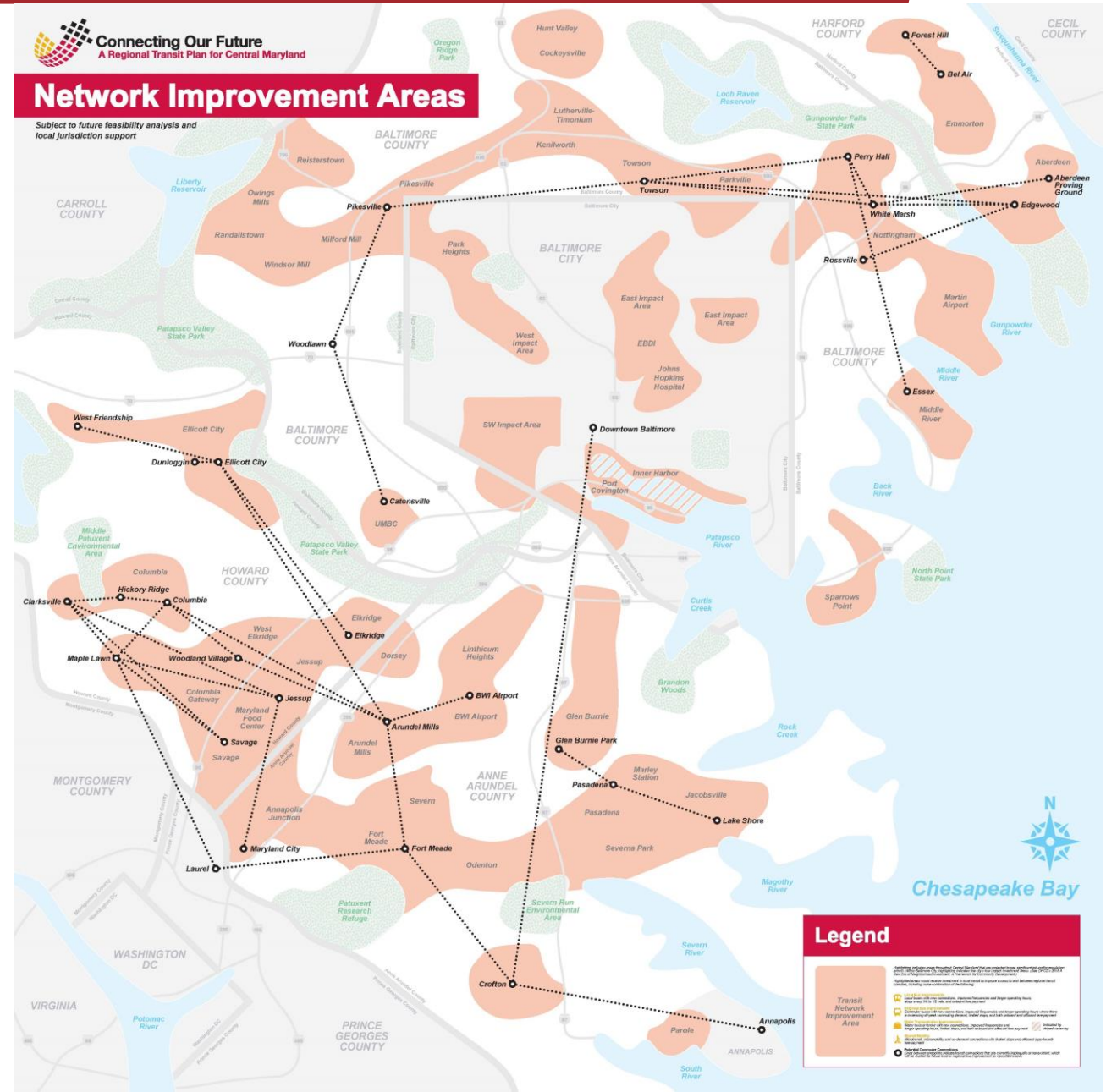
A similar evaluation process to the identification of corridors, with three areas of analysis:

- Existing transit network
- Transit market demand
- Existing and future travel flows



# Other Network Improvements

There are several areas in the region that have demonstrated need for additional transit improvements beyond corridors.





# Other Network Improvements

Need for **enhanced transit service** on existing transit routes where market demand warranted it. This included:

- Expanded hours of operation (span)
- Increases in frequency of service
- Expanded days of service, such as weekend service
- New local or commuter transit routes

## Anne Arundel

- ☐ Arundel Mills
- ☐ Crofton
- ☐ Fort Meade
- ☐ Glen Burnie
- ☐ Parole (Annapolis Mall)
- ☐ Pasadena
- ☐ Severn
- ☐ Woodcrest (Glen Burnie)

## Baltimore City

- ☐ Brooklyn
- ☐ Cherry Hill
- ☐ East Impact Area
- ☐ Park Heights Impact Area
- ☐ Southwest Impact Area
- ☐ West Impact Area
- ☐ Belair Road (Overlea, Putty Hill, Perry Hall)
- ☐ Harford Road (Hamilton, Parkville)

## Baltimore County

- ☐ Cockeysville
- ☐ Dundalk (Wise Avenue)
- ☐ MD 43 (Crossroads)
- ☐ Middle River
- ☐ Perry Hall
- ☐ Pikesville
- ☐ Randallstown
- ☐ Reisterstown/Glyndon
- ☐ Towson
- ☐ Tradepoint Atlantic
- ☐ White Marsh

# Other Network Improvements

Need for **enhanced transit service** on existing transit routes where market demand warranted it. This included:

- Expanded hours of operation (span)
- Increases in frequency of service
- Expanded days of service, such as weekend service
- New local or commuter transit routes

## Harford County

- ☐ Aberdeen & Aberdeen Proving Ground
- ☐ Bel Air
- ☐ Edgewood
- ☐ Havre de Grace

## Howard County

- ☐ Clarksville
- ☐ Columbia
- ☐ Columbia Gateway
- ☐ Elkridge
- ☐ Ellicott City
- ☐ Hickory Ridge
- ☐ Jessup
- ☐ Kings Contrivance
- ☐ Laurel
- ☐ Maple Lawn
- ☐ Maryland City
- ☐ Montgomery Woods
- ☐ North Laurel
- ☐ Route 1 Corridor
- ☐ Savage
- ☐ West Elkridge (Waterloo, Woodland Village)

# Other Network Improvements

Some areas identified required a more comprehensive evaluation of:

- Existing transit route alignments and levels of service
- New transit route needs
- Campus/community circulation
- Pedestrian/bike connectivity

These areas were recommended to have a **Small Area Transit Plan** study conducted.

Anne Arundel County



☐ Fort Meade

Baltimore County



☐ Towson

☐ Tradepoint Atlantic

Harford County



☐ Aberdeen & Aberdeen Proving Ground

Howard County



☐ Route 1 Corridor



# Other Network Improvements

Some areas in the region demonstrated a transit need but might not be able to support traditional fixed-route transit.

These areas were recommended to have **New Mobility or microtransit** models studied and piloted.

## Anne Arundel

- ☐ Fort Meade
- ☐ Glen Burnie
- ☐ Pasadena

## Harford County

- ☐ Aberdeen & Aberdeen Proving Ground
- ☐ Northwest Bel Air/Forest Hill

## Howard County

- ☐ Dunloggin (West Ellicott City)
- ☐ Hickory Ridge
- ☐ Turf Valley (West Friendship)



# STRATEGIC ACTIONS

David Miller  
RTP Project Staff

# Strategic Action Organization

- Derived from previous analysis, stakeholder input, public engagement, and Commission suggestions
- Grouped into five broad themes:
  - Provide faster, more reliable service
  - Grow transit ridership
  - Increase access to jobs and opportunities
  - Improve the customer experience
  - Prepare for the future



# Provide Faster, More Reliable Service

# Draft Strategic Actions: Provide Faster, More Reliable Service

## Improve Bus Speed and Reliability

- Consider implementation of “Yield to the Bus” legislation
- Consider legislation to permit “Don’t Block the Box” enforcement
- Ensure consistent enforcement of bus lane and bus stop infractions
- Reintroduce limited-stop service where appropriate
- Coordinate with local jurisdictions to minimize impact of construction projects on transit service
- When existing buses are retired, replace with low-floor vehicles
- Implement targeted investments, such as:
  - Dedicated bus lanes
  - Transit signal prioritization
  - Traffic signal replacement and retiming
  - Curb management
  - Level-boarding
  - All-door boarding
- Off-board fare collection

## **Improve Light RailLink Speed and Reliability**

- Improve travel time on Howard Street with transit signal priority (TSP)
- Realign tracks on Howard Street
- When existing rail vehicles are retired, replace with low-floor vehicles and retrofit stations for level-boarding



## **Improve MARC Speed and Reliability**

- Support Amtrak construction of a new Baltimore and Potomac (B&P) Tunnel on the MARC Penn Line
- Construct a fourth track between Odenton and Halethorpe on the MARC Penn Line
- Remove at-grade crossings on the Camden Line

# Grow Transit Ridership

## Grow Bus Ridership

- Continue to partner with employers and large-scale development to connect residents to job centers
- Maintain buses and facilities in a State of Good Repair
- Plan and construct regional hub/inter-modal transfer facilities
- Expand the Frequent Transit Network
- Improve Real Time Passenger Information
- Improve the interface between operators and customers
- Implement the identified network improvements for Bus
- Improve the perception of safety on bus vehicles and at stops



# Draft Strategic Actions: Grow Transit Ridership

## **Grow Light RailLink Ridership (Continues next slide)**

- Form a Task Force of MDOT MTA, state agencies, city and county agencies, business representatives, community representatives, and riders to focus on growing ridership on Light RailLink
- Improve Real Time Passenger Information
- Maintain Light RailLink vehicles and facilities in a State of Good Repair
- Improve pedestrian access at Patapsco Station
- Modernize facilities with new canopies, lighting, and Real Time Passenger Information signage
- Conduct ADA accessibility surveys and passenger amenity reviews for all stations
- Open the Light RailLink stop at Texas in the Cockeysville area

# Draft Strategic Actions: Grow Transit Ridership

## Grow Light RailLink Ridership (Continued)

- Minimize service disruptions through erosion control, flood mitigation, and tree trimming
- Connect Light RailLink to Metro SubwayLink at Lexington Market and State Center through signage/wayfinding, and other physical infrastructure investments
- Expand Light RailLink service hours and frequency, including Sunday service
- Pursue transit-oriented development opportunities around rail stations
  - BWI Business Park Light RailLink Station
  - Cromwell Light RailLink Station
  - Timonium Fairground Light RailLink Station
  - Westport Light RailLink Station

# Draft Strategic Actions: Grow Transit Ridership

## **Grow Metro SubwayLink Ridership (Continues next slide)**

- Form a Task Force of MDOT MTA, state agencies, city and county agencies, business representatives, community representatives and riders to focus on growing ridership on Metro SubwayLink
- Provide Real Time Passenger Information in Metro SubwayLink stations
- Provide underground cellular service
- Improve signage and wayfinding in and around stations
- Conduct ADA accessibility surveys and passenger amenity reviews for all stations
- Maintain vehicles and facilities in a State of Good Repair



## Grow Metro SubwayLink Ridership (Continued)

- Manage service disruptions to minimize impact to customers, including flood mitigation and resiliency plans for Metro SubwayLink
- Connect Metro SubwayLink to Light RailLink at Lexington Market and State Center through signage/wayfinding, and other physical infrastructure investments
- Pursue transit-oriented development opportunities around Metro SubwayLink stations:
  - Rogers Avenue Metro SubwayLink Station
  - Reisterstown Plaza Metro SubwayLink Station
  - State Center Metro SubwayLink Station

# Draft Strategic Actions: Grow Transit Ridership

## Grow Commuter Bus Ridership

- Develop a park-and-ride lot plan to grow the capacity and access to Commuter Bus service
- Implement the identified network improvements for Commuter Bus
- Fully implement Real Time Passenger Information
- Continue to partner with employers and large-scale development to connect residents to job centers
- Implement targeted investments, such as:
  - Dedicated bus lanes
  - Transit signal priority (TSP)
  - Curb management
  - Off-board fare collection
  - Real-time information on all vehicles

## **Grow MARC Ridership (Continues next slide)**

- Develop a park-and-ride lot plan to grow the capacity and access to MARC service
- Maintain vehicles and facilities in a State of Good Repair
- Identify bus infrastructure improvements at MARC stations
- Provide bike racks on all MARC Train cars
- Replace West Baltimore Station in coordination with Baltimore and Potomac (B&P) Tunnel realignment
- Work with host railroads to accommodate growing ridership
- Study extending MARC service to L'Enfant Plaza and Northern Virginia



# Draft Strategic Actions: Grow Transit Ridership

## Grow MARC Ridership (Continued)

- Establish a connection between the Penn and Camden Lines
- Close the gap in regional rail service between MARC Train and SEPTA service through Newark, Delaware
- Coordinate with Amtrak on trash removal campaign along right-of-way
- Pursue Transit Oriented Development opportunities around rail stations
  - Aberdeen MARC Station
  - BWI MARC Station
  - Dorsey MARC Station
  - Edgewood MARC Station
  - Laurel Park MARC Station
  - Martin State Airport MARC Station
  - Odenton MARC Station
  - Penn Station

# Increase Access to Jobs and Opportunities

## Implement Other Network Improvements

- In locations identified as Other Network Improvements, enhance transit service on existing transit routes and/or implement new local or commuter transit routes, including:
  - Expanded hours of operation (span)
  - Increases in frequency of service
  - Expanded days of service, such as weekend service
  - New local or commuter transit routes



## Implement Small Area Transit Plans

- Evaluate existing transit route alignments, levels of service, new transit route needs, campus/community circulation, and/or pedestrian/bike connectivity in the following areas:
  - Fort Meade
  - Towson
  - Tradepoint Atlantic
  - Aberdeen and Aberdeen Proving Ground
  - Route 1 Corridor in Howard County

## Improve Transfers and First/Last-Mile Connectivity

- Improve existing conditions to meet the needs of pedestrians and bicyclists including sidewalks, crosswalks, bike lanes and trails, and bike racks on all transit vehicles
- Integrate shared mobility options (e.g., microtransit, scootershare, bikeshare, carshare, and rideshare) to complement existing connections and access
- Improve wayfinding and signage
- Co-locate transit stations and stops to minimize walking to transfers
- Coordinate schedules between regional transit providers
- Implement coordinated transfer fare policies across transit providers

## **Promote Prosperity and Economic Opportunity(Continues next slide)**

- Improve coordination between land use decisions, transportation planning, housing availability, and employment opportunities
- Coordinate transportation investment decisions by partnering with the Departments of Commerce, Economic Development, Planning, and other organizations; referencing state, local, and community-driven growth and development plans
- Establish collaborative partnerships between transit providers and local planning offices to ensure that new development is transit-supportive
- Concentrate transit investments within local- and state-designated growth areas to encourage prosperity in and revitalization of existing communities

## **Promote Prosperity and Economic Opportunity(Continued)**

- Implement policies that support transit, such as incentivizing businesses that bring jobs accessible by transit and allowing higher-density infill development
- Revise roadway design guidelines and projects to ensure that transit, pedestrian, and cyclist treatments are implemented as appropriate (i.e. Complete Streets Strategies)
- Incorporate as appropriate into the region's transit programs and projects the six livability principles developed jointly by the U.S. Department of Transportation, U.S. Department of Housing and Urban Development, and U.S. Environmental Protection Agency



# Enhance the Customer Experience

## **Streamline Trip Planning and Fare Payment**

- Implement an integrated payment system for all transit providers
- Make Real Time Passenger Information available for all transit
- Establish fare structures that are easy to understand
- Expand fare payment options for all transit providers including paratransit
- Include information on first-last mile options in trip planning tools and on signage/wayfinding
- Integrate transit and new mobility trip planning, including Transportation Network Companies (TNCs), micromobility, ridematching, and demand response transit

# Draft Strategic Actions: Enhance the Customer Experience

## **Promote Safety and Security (Continues next slide)**

- Increase collaboration between transit agencies and law enforcement to provide additional police presence on transit vehicles and at facilities
- Identify locations near transit service that warrant improvements to lighting, sidewalks, ADA treatments, and crosswalks
- Complete installation of CCTV at all rail stations and transit hubs and on all transit vehicles
- Apply Crime Prevention Through Environmental Design (CPTED) principles into infrastructure design at stations and stops
- Eliminate assaults on transit vehicle operators
- Maintain MDOT MTA standing as the safest transit system out of the top 12 U.S. transit agencies

## **Promote Safety and Security (Continued)**

- Work as a region to respond and recover from emergencies (security threats and natural disasters) using transit
- Implement a Train Protection & Warning System for MARC
- Ensure that positive train control (PTC) is fully operational for MARC
- Eliminate at-grade pedestrian crossings on MARC service
- Replace Martin State Airport Station, eliminating at-grade passenger boardings



## **Consider Equity in Transit Planning and Service Provision**

- Ensure adequate transit service in areas identified as healthful food priority areas, areas with medical facilities, and areas with educational institutions
- Actively pursue partnerships with non-profit, philanthropic, and workforce development organizations to ensure access to transit for their constituents
- Promote environmental justice through programs and policies to ensure the benefits and burdens of transit projects are shared equitably

## Enhance the Station/Stop Environment

- Maintain cleanliness at stations and stops
- Add shelters, benches, lighting, bike racks, scooter/bikeshare parking, and passenger information at stations and stops
- Provide real-time passenger information (RTPI) at major transit hubs

# Draft Strategic Actions: Enhance the Customer Experience

## Improve the Paratransit Trip

- Maintain vehicles and facilities in a State of Good Repair
- Implement electronic fare collection
- Increase subscription trips
- Implement trip-by-trip eligibility
- Synchronize Paratransit span of service with local bus service
- Improve trip scheduling
- Improve coordination with non-emergency medical transportation providers
- Improve ADA access to local bus service
- Incorporate travel training practices
- Improve real-time passenger information (RTPI)

## **Improve Transit Accessibility (Continues next slide)**

- Make stops and stations ADA-accessible
- Work with Departments of Public Works and State Highway Administration (MDOT SHA) to increase coordination around stop and station access improvements
- Support operating policies that enable year-round, obstacle-free (e.g., snow, construction, scooters) access to transit facilities
- Replace all high-floor/lift-equipped fixed-route transit vehicles with low-floor designs



## Improve Transit Accessibility (Continued)

- Work with Departments of Aging to identify the growing transit needs of older adults
- Identify opportunities for funding and partnerships to meet the growing transit needs of older adults
- Coordinate with human services organizations, Centers for Independent Living (CILs), and organizations that work with persons with disabilities to expand access to transit
  - Educate and coordinate with social service providers on available transit options, including non-emergency medical transportation
  - Pilot potential New Mobility alternatives to provide cost-effective options

# Prepare for the Future

## **Integrate Environmental Sustainability Principles and Practices into Transit Planning and Service Provision (Continues next slide)**

- Implement sustainable and resilient design and construction practices to reduce the risk from weather, climate, and man-made hazards, as well as enable transit providers to recover service quickly following disruption and emergencies
- Maximize the use of green infrastructure (e.g. trees, bioswales, and pervious pavers) to meet stormwater requirements while reducing costs

## **Integrate Environmental Sustainability Principles and Practices into Transit Planning and Service Provision (Continued)**

- Implement waste diversion strategies for the public (e.g. providing recycling at bus stops and stations, education) and within maintenance facilities, focusing on increasing recycling rates, reducing overall waste and minimizing the need to procure, generate, store, and dispose of hazardous materials
- Reduce greenhouse gas emissions in accordance with state and local plans and initiatives regarding sustainability and climate change (e.g. Maryland's Greenhouse Gas Reduction Plans)
  - Transition to majority zero-emission vehicles by 2045
  - Ensure that facilities have been adapted for zero-emissions readiness

# Draft Strategic Actions: Prepare for the Future

## Enhance Fiscal Sustainability by Pursuing New Partnerships and Funding Sources (Continues next slide)

- Promote and formalize relationships to reduce redundant service between public transit providers and:
  - Colleges/schools
  - Business community
  - Philanthropic organizations
  - Military installations
  - Medical campuses
- Partner with employers to make transit more affordable and convenient to employees:
  - Expand the Commuter Choice Maryland program
  - Identify opportunities to partner in infrastructure improvements
  - Investigate opportunities to install real-time information displays in major employer buildings
  - Investigate further collaboration and coordination with private shuttles
  - Coordinate with military and federal institutions on transit access
- Encourage the use of Transportation Demand Management (TDM) programs
- Discourage employers from subsidizing parking



# Draft Strategic Actions: Prepare for the Future

## Enhance Fiscal Sustainability by Pursuing New Partnerships and Funding Sources (Continued)

- Expand education and outreach to employers, universities, and institutions on the benefits of Commuter Choice Maryland
- Rehabilitate and replace safety- and service-critical assets on time
- Incorporate asset lifecycle costs into programming, planning, and design decisions
- Develop regional policies to incorporate transit provision and service into development review and impact fees
- Explore jurisdictional funding opportunities
- Explore the Transportation and Climate Initiative program as a potential funding source
- Maximize federal transportation funds by encouraging matching contributions from entities that stand to benefit from transit projects and programs – private organizations and companies as well as local jurisdictions
- Identify and explore new cost-efficient and value capture practices including:
  - Private-public partnerships
  - Alternative delivery methods
  - Sponsorship opportunities
  - Transit Tax Increment Financing (TIF)



## **Prepare for Emerging and Future Technology**

- Plan for the effects of emerging technologies and increasing vehicle/infrastructure connectivity when moving projects through the project development process, including making project scopes more flexible
- Implement a connected and automated vehicle (CAV) pilot project
- Prepare all transit providers for mobility-as-a-service (MaaS)
- Assess curbside management practices and policies
- Identify and develop mobility hubs

# Draft Strategic Actions: Prepare for the Future

## **Prepare the Transit Workforce for the Future**

- Conduct a skills and software needs assessment for all transit providers
- Create training programs to equip the transit workforce with needed skills
- Create a workforce pipeline for transit vehicle operators and increase retention
- Partner with local colleges and educational institutions for internships and apprenticeships
- Deploy new technologies, tools, and software to help transit workers plan and deliver better quality, safe transit service
- Improve fleet planning, facilities planning, service planning, spatial analysis, and scheduling capabilities for Locally Operated Transit Systems (LOTS)
- Incorporate disability sensitivity training for front-line transit employees



# PUBLIC COMMENT



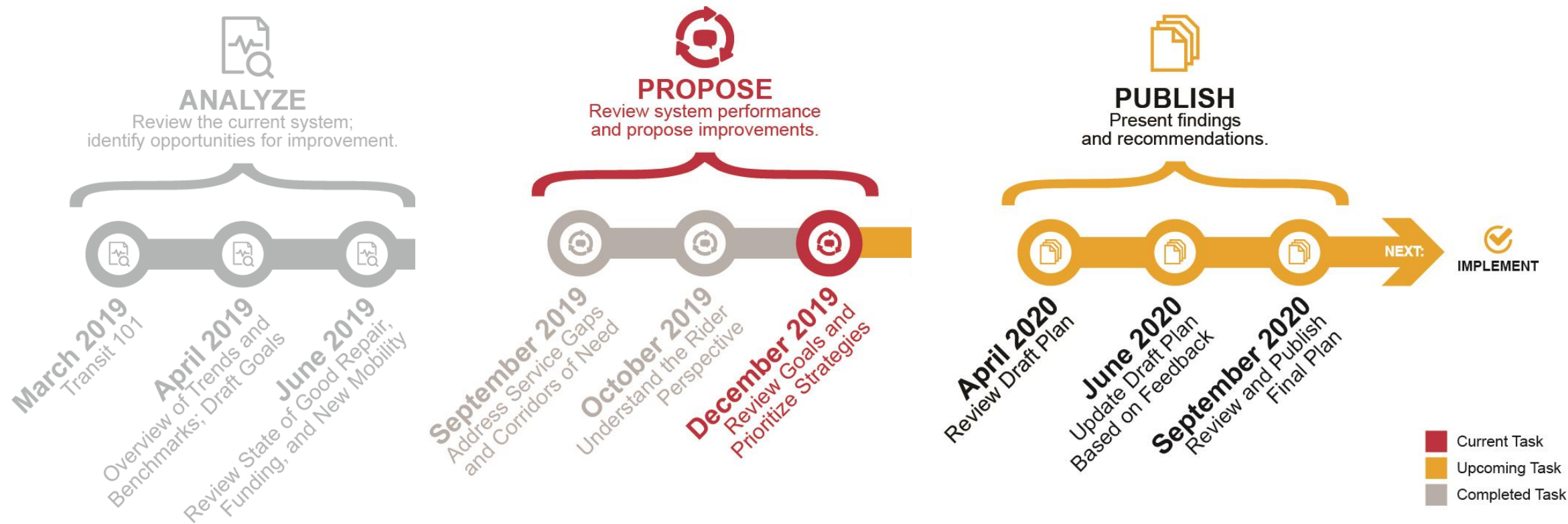


# NEXT STEPS

Holly Arnold, Deputy Administrator  
Maryland Department of Transportation  
Maryland Transit Administration



# Schedule Look-Ahead



# Next Commission Meeting

**April 30, 2020**

9 AM – 12 PM

Harford County Community College

401 Thomas Run Road

Bel Air, MD 21015

Chesapeake Center – South Dining  
Room

The Chesapeake Center is accessed via  
Entrance #2 off Thomas Run Road with parking  
in the C Lot





# CLOSE

Holly Arnold, Deputy Administrator  
Maryland Department of Transportation  
Maryland Transit Administration