SOUTHERN MARYLAND RAPID TRANSIT

Welcome

Southern Maryland Rapid Transit (SMRT) Planning and Environment Linkages (PEL) Study

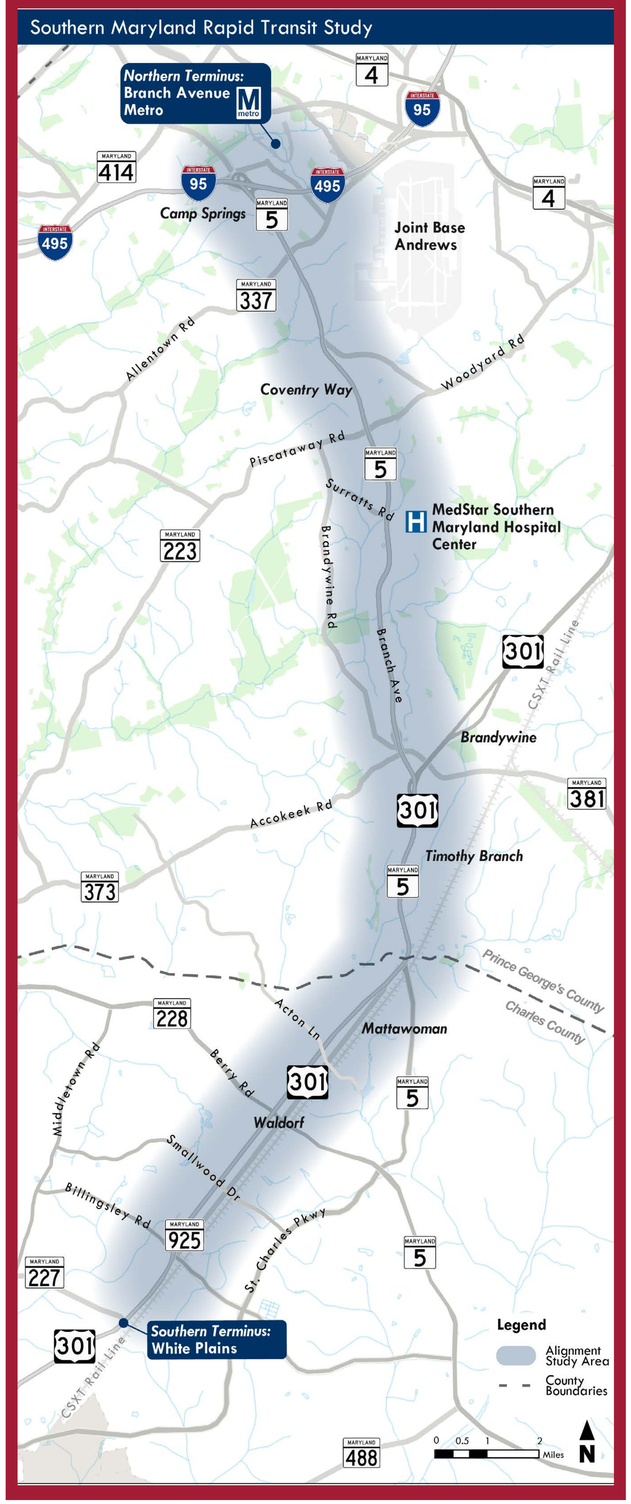
Public Meeting

SOUTHERN MARYLAND RAPID TRANSIT

SMRT Study

- A partnership between the Maryland Transit Administration (MTA), Charles County and Prince George's County
- Will evaluate rapid transit improvements along the study corridor
  - Approximately 19 miles along the MD 5 (Branch Avenue)/ US 301 (Crain Highway) corridor
  - Located between the Branch Avenue Metrorail Station in Prince George's County and the Waldorf-White Plains area in Charles County

STUDY AREA



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Timeline of the SMRT Study

2010

Southern Maryland Corridor Preservation Study

2016

Core Vision Plan and Draft Environmental Inventory

2017

Previous "2017" Report Completed

2023

HB 410 passed into law authorizing this PEL* Study and subsequent NEPA** initiation

2024

PEL Study Initiated

2026

PEL Report

2028

NEPA Complete

Planning and Environment Linkages

**National Environmental Policy Act*

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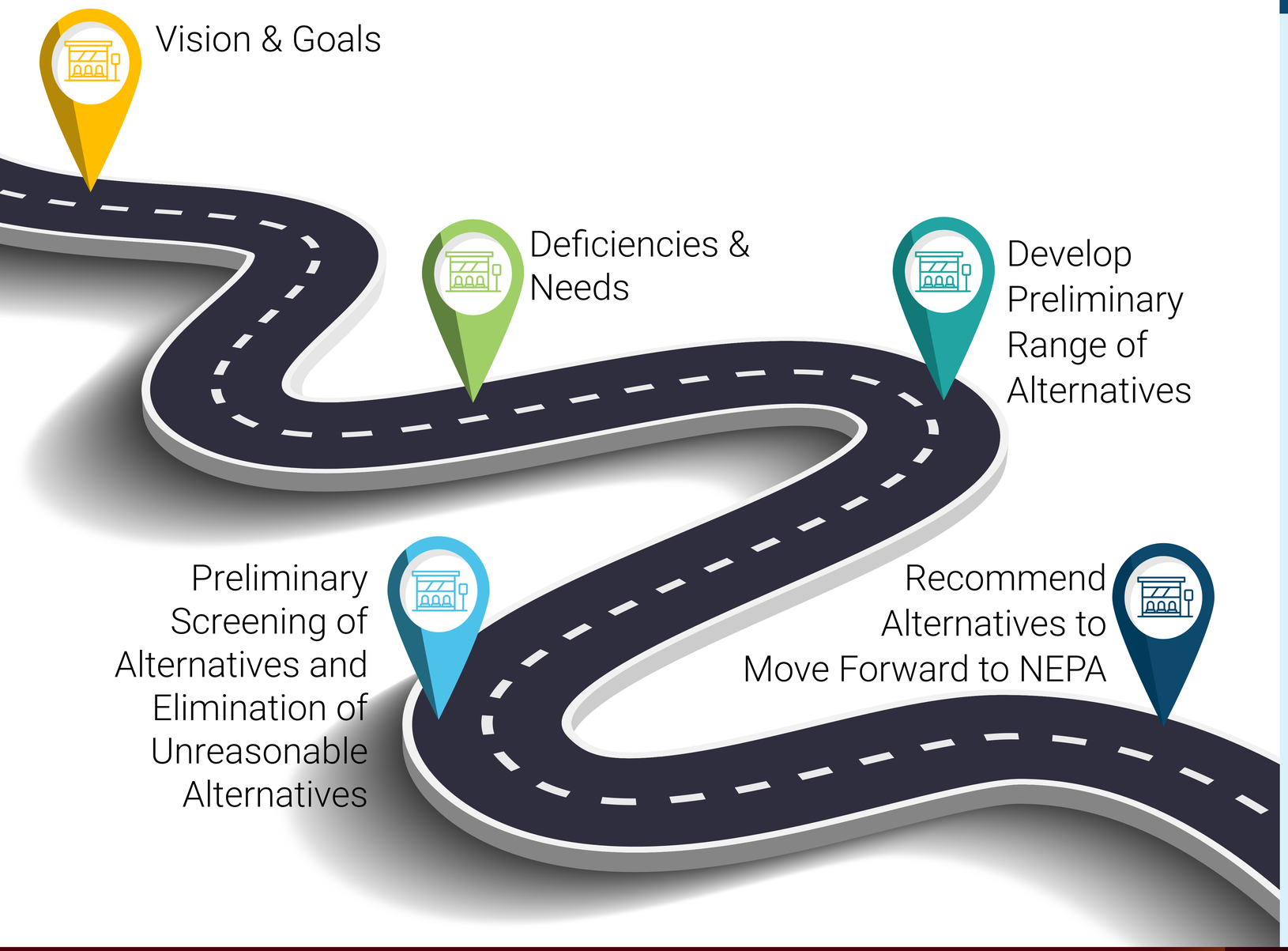
Planning and Environment Linkages (PEL)

What is the PEL process?

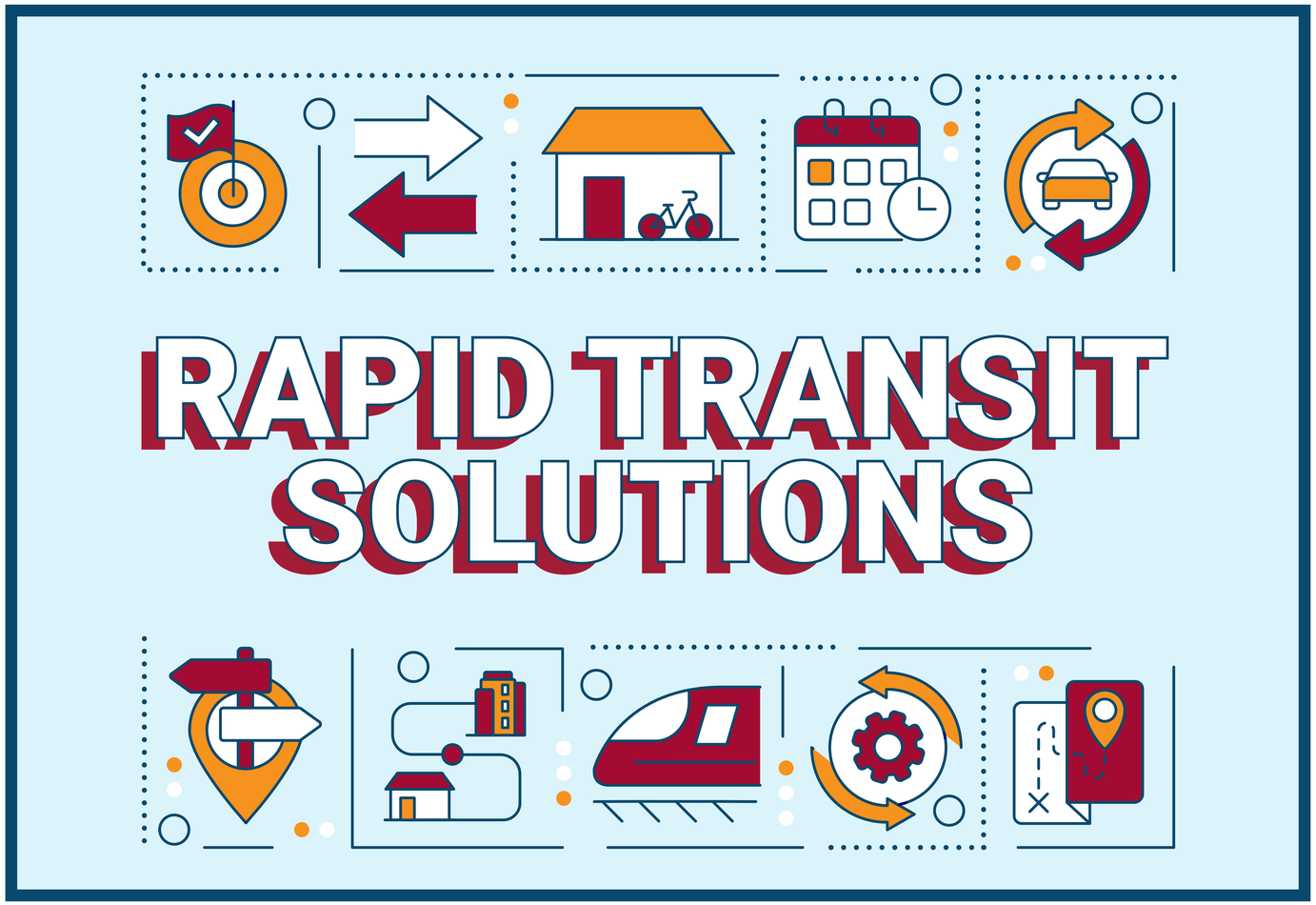


Why use PEL?

- Accelerated Project Delivery
- Early Public & Stakeholder Involvement
- Elimination of Duplicate Work
- Better Communication

Purpose and Need: Purpose

- Provide a safe, accessible, and efficient high-capacity fixed-route rapid transit service during peak and off-peak hours in the project corridor
- Enhance mobility and help alleviate a number of transportation challenges that exist in the corridor



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Purpose and Need: Need Elements

Lack of travel options, traffic congestion, and high crash rates result in **UNRELIABLE TRAVEL** for commuters throughout the corridor

Existing roadway experiences high traffic volumes **BEYOND ITS CAPACITY**

Existing transit options **DO NOT PROVIDE ADEQUATE TRANSIT SERVICE** to connect commuters to and from jobs

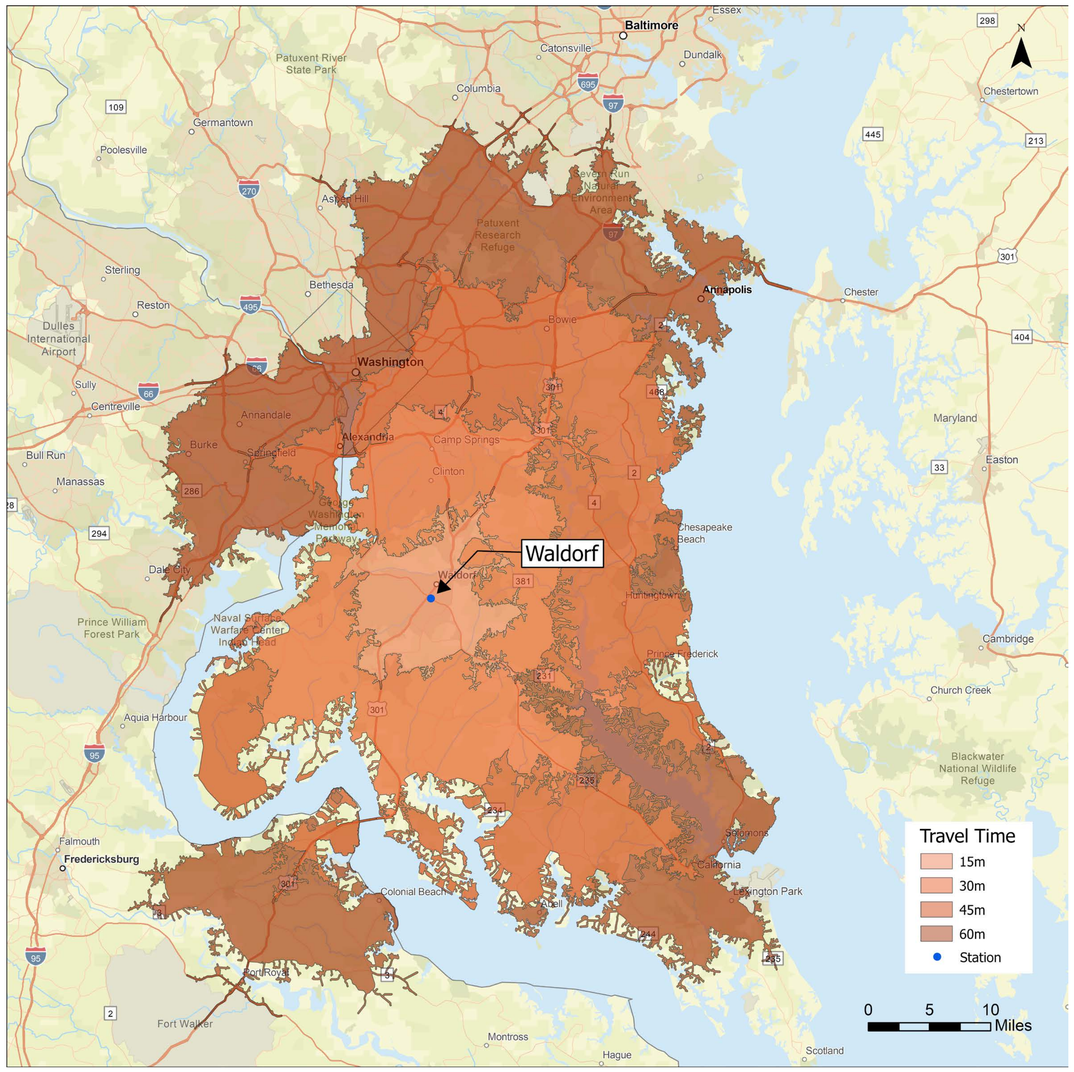
Various master plan documents have identified MD 5 and US 301 as a corridor along which **TRANSIT IMPROVEMENTS ARE NEEDED**

The highest average daily traffic volume of any arterial road in Maryland occurs in the SMRT Corridor.

Purpose and Need: Accessibility

- Travel sheds by personal auto and transit (shown below) indicate number of jobs accessible by the existing transit system is significantly less than by car

Personal Auto



Transit

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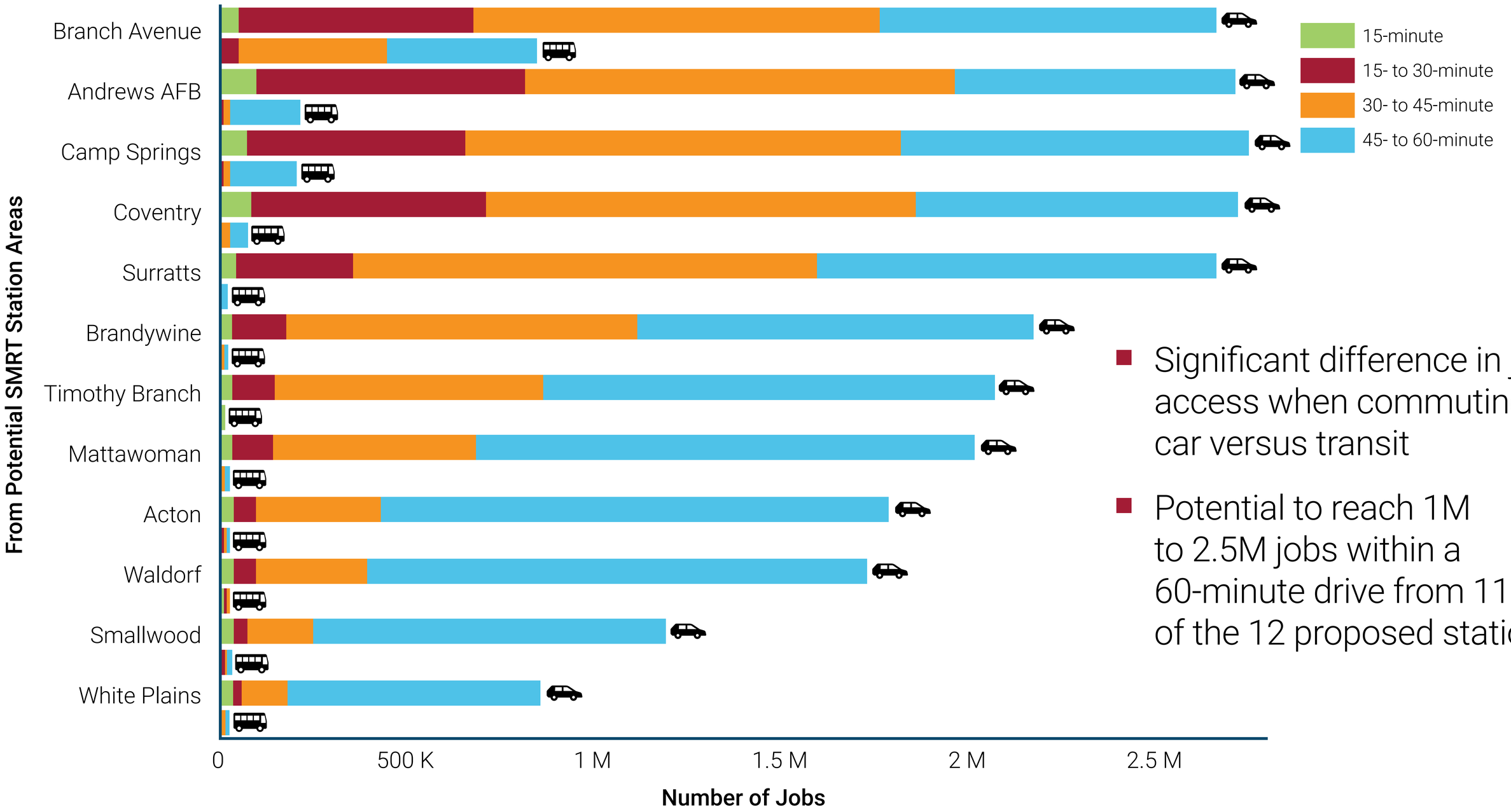
Purpose and Need: Accessibility

- Jobs accessible today by car or transit within 15, 30, 45, and 60 minutes (7 am start time)



- Significant difference in job access when commuting by car versus transit
- Potential to reach 1M to 2.5M jobs within a 60-minute drive from 11 out of the 12 proposed stations

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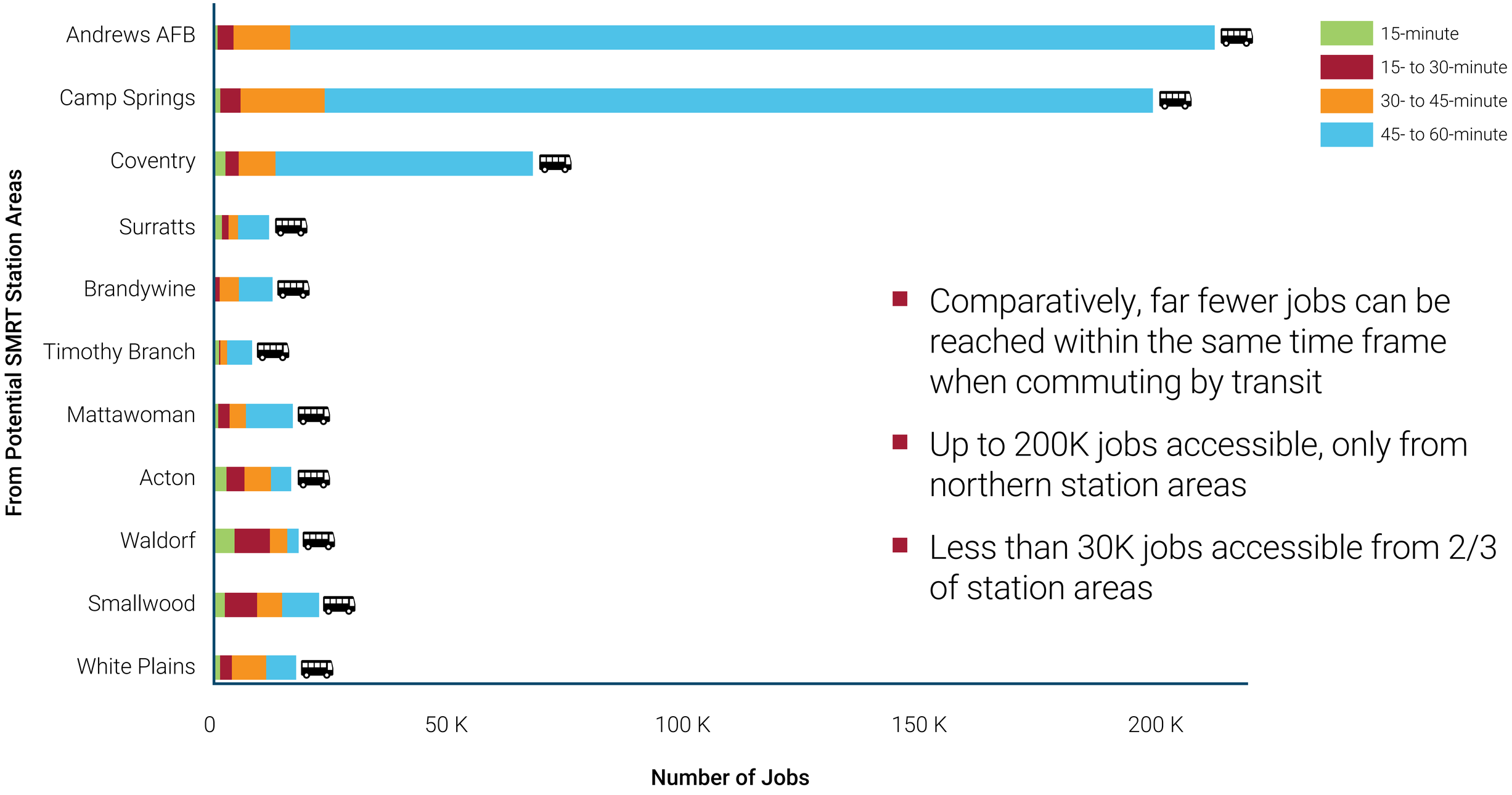
Transit Only Commutes

- Jobs accessible today by 15, 30, 45, and 60 minutes (7 am start time)



- Comparatively, far fewer jobs can be reached within the same time frame when commuting by transit
- Up to 200K jobs accessible, only from northern station areas
- Less than 30K jobs accessible from 2/3 of station areas

Preliminary Range of Alternatives: Mode Options

- Rail options
  - Light Rail Transit (LRT)
  - Hybrid Rail (YR)
    - *Both on Separated Guideway*
- Bus options
  - Bus Rapid Transit (BRT) in separated guideway
  - BRT within or immediately adjacent to existing MD 5 or US 301 right-of-way

LRT – San Diego, CA

BRT – Eugene, OR

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Bus Rapid Transit (BRT)

- Bus Rapid Transit (BRT) is a high-quality bus system that aims to provide faster, more reliable, and more convenient transportation than traditional bus service. BRT systems often include:
  - Elements of light rail, such as stations, dedicated bus lanes, and priority at intersections
  - Utilizes rubber tire vehicles along existing corridors, providing wide range of options for implementation
  - BRT can be constructed in a dedicated right-of-way; but BRT can also be applied within or immediately adjacent to existing corridors, enhancing roadway function with a mix of dedicated bus lanes, managed lanes, transit signal priority, and queue jump treatments that can provide improved operating capabilities at a significantly reduced cost and implementation time frame

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Light Rail Transit (LRT)/Hybrid Rail (YR)

- Light rail transit (LRT) uses electric-powered cars or short trains on fixed rails to provide quick, cost-effective transportation in metropolitan areas. LRT systems are designed to link major trip generators, regional centers, and county cores, and are intended to fill the gap between local buses and heavy rail.
- Hybrid Rail (YR) operates primarily on the National system of railroads, but not with the characteristics of commuter rail. This service typically operates light rail-type vehicles as diesel or other non-overhead wire electric multiple-unit trains.

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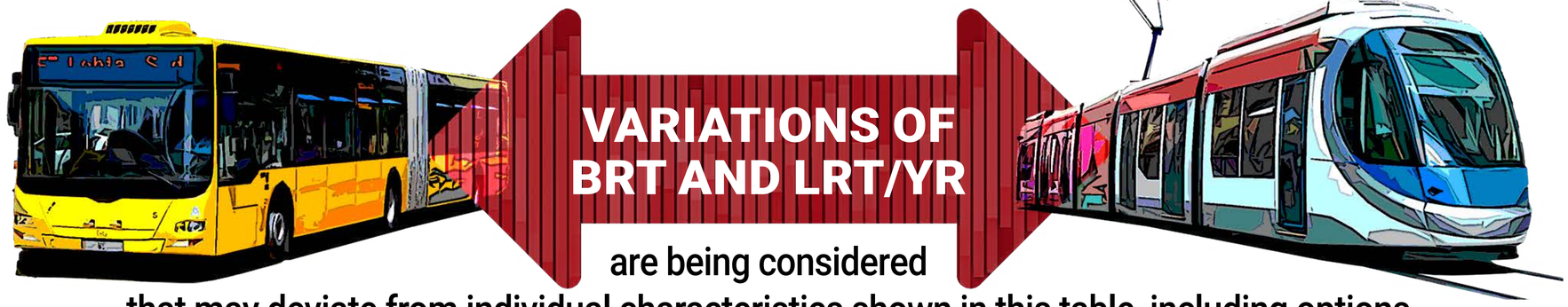
BRT vs. LRT/YR Modes



are being considered
that may deviate from individual characteristics shown in this table, including options on dedicated guideway and options within existing right-of-way.

Specifications	BRT	LRT/YR
Vehicle Capacity	125 passengers	140 passengers (single rail car) 280 passengers (two rail cars)
Daily Ridership	Can range from 15,000 - 80,000 trips per day	
	Up to 20,000 passengers per day (with service plans similar to the 2017 study)	Up to 40,000 passengers per day (with service plans similar to the 2017 study)
Station Spacing	1/2 mile to 2 miles	
Transit Supportive Density	Activity density (sum of jobs and people per acre) of at least 25	
Capital Costs[1]	$10 - $30M per mile	$100 - $300M per mile
O&M Costs[2]	LRT/YR roughly twice as expensive as BRT	
Construction Timeline	5-8 years	7-9 years
Top Operating Speeds	55 to 65 mph	60 to 70 mph

[1]Capital Cost ranges are approximate, based on currently funded BRT projects throughout the US, most of which are in existing ROW. Separated guideway BRT project costs could exceed this range and may approach the lower range of LRT/YR costs ranges.
[2]Operations and Maintenance Costs are based on typical BRT and LRT ridership levels. If ridership levels exceed BRT vehicle capacity, BRT O&M costs may be higher than for LRT/YR due to the necessity of additional vehicles and service levels to meet peak demands.

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Preliminary Range of Alternatives

Mainline Alternatives:

- Alternative 1: No Build
- Alternative 2: BRT in ROW
  - 2A BRT in ROW Dedicated Bus Lane
  - 2B BRT in ROW Managed Lane
  - 2C BRT in ROW Bus on Shoulder
- Alternative 3: BRT on Separated Guideway
- Alternative 4: LRT
- Alternative 5: Hybrid Rail (YR)

Waldorf Options (w/Alternative 2):

- W1 - BRT Outside Auxiliary Lane
- W2 - BRT in Median
- W3 - BRT on Old Washington Road

Beltway Crossing Options:

- B1 - Allentown Road Option (Previously Option 8A)
- B2 - Auth Road Option (Previously Option 3)
- B3 - Auth Way Option
- B4 - Woods Way Option (Previously Option 5)
- B5 - Henderson Way Option (Previously Option 9)

Other Breakout Option Areas:

- H-MSMHC - MedStar Southern Maryland Hospital Center Access Option
- SC - Brandywine Crossing Shopping Center Access Option
- MB – Mattawoman Beantown Road Crossing Option

Preliminary Range of Alternatives

Dedicated Guideway

Alternatives Progression		Spring 2025 *We are here*	Spring 2026
Alternatives & Options Recommended from 2017 Study	Alternatives & Options Considered in the Current PEL Study	Preliminary Range of Alternatives Renamed for Detailed PEL Study	Alternatives & Options to be Carried into NEPA
Light Rail, Hybrid Rail and Bus Rapid Transit Alternatives and Options on Dedicated Guideway			
Mainline Alternatives:			
Alternative 4 (East side of MD 5) →		(Alternative 3 BRT/4 LRT)	
Alternative 5 (West side of MD 5) →			
Beltway Options:			
Beltway Options Along Existing Roadways (Auth Road & Woods Way) →		(B2-Auth Road Option) (B3-Auth Way Option) (B4-Woods Way Option)	
Beltway Options in MD 5 Median →			
Beltway Options on New Alignment →		(B1-Allentown Road Option) (B5-Henderson Way Option)	
Hospital Options →		(H-MSMHC Access Option)	
Joint Base Andrews Avoidance Options →			
Brandywine Crossing Shopping Center Option →		(SC-Brandywine Crossing Shopping Center Access Option)	
Mattawoman Beantown Option →		(MB-Mattawoman Beantown Road Crossing Option)	
Hybrid Rail (YR) →		(Alternative 5)	

Existing ROW

Alternatives Progression	Spring 2025 *We are here*	Spring 2026
Alternatives & Options Considered in the Current PEL Study	Preliminary Range of Alternatives Renamed for Detailed PEL Study	Alternatives & Options to be Carried into NEPA
Exist. ROW BRT Options: Within or immediately adjacent to the Existing MD 5 and US 301 Roadway		
Prince George's County: Mixed-traffic →	(Alternative 2)	
Prince George's County: Dedicated Bus Lane (DBL) →	(Alternative 2A)	
Prince George's County: Managed Lane →	(Alternative 2B)	
Prince George's County: Bus on Shoulder (BOS) →	(Alternative 2C)	
Charles County: Along Outside Auxiliary Lane →	(Alternative 2 - W1)	
Charles County: In Median →	(Alternative 2 - W2)	
Charles County: Old Washington Road →	(Alternative 2 - W3)	

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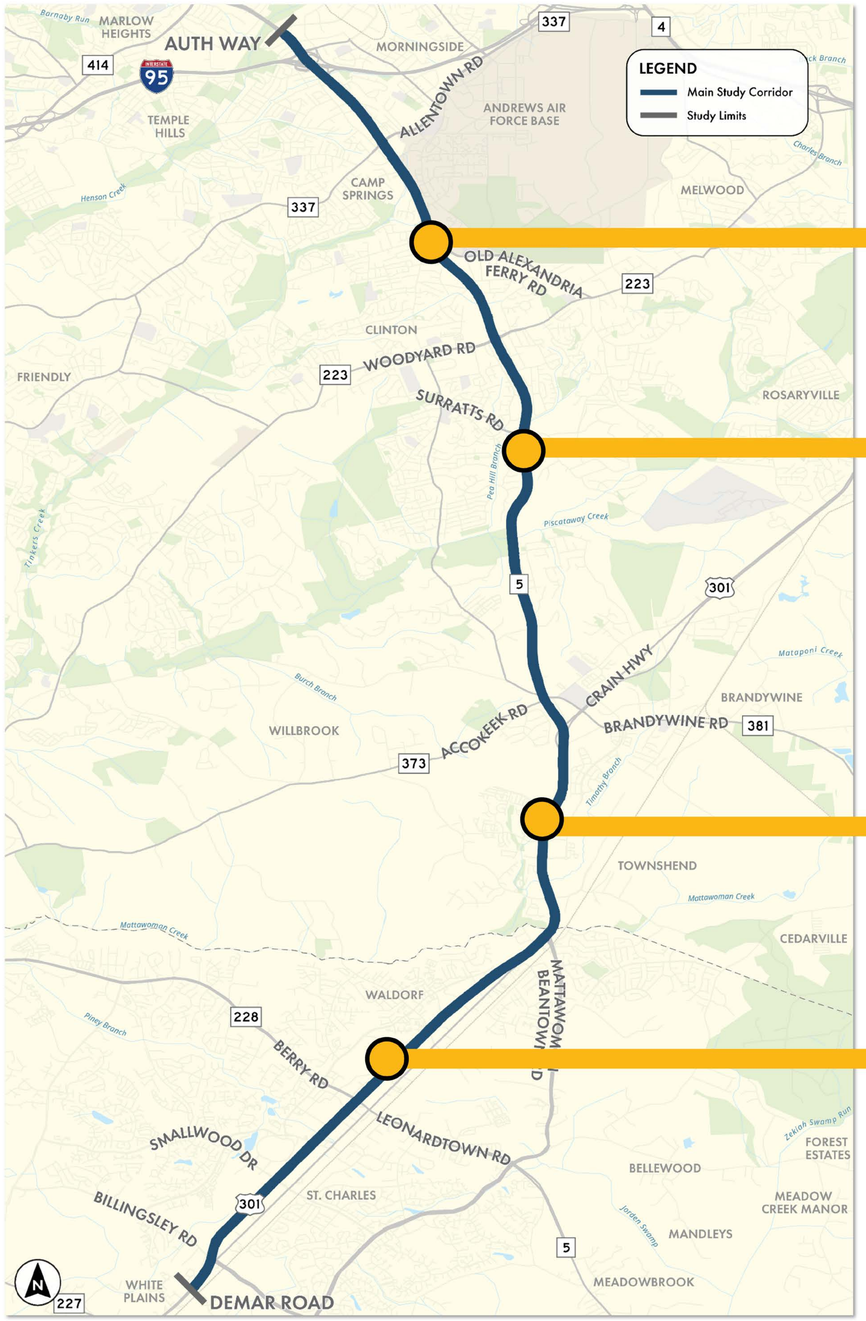
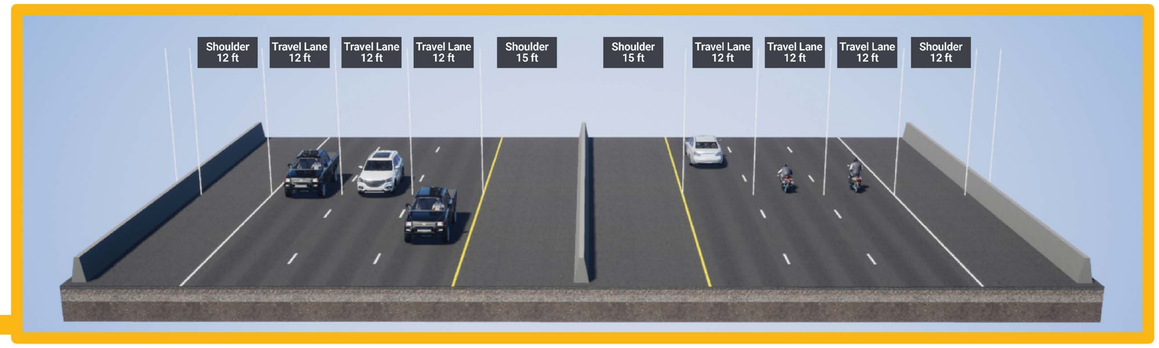
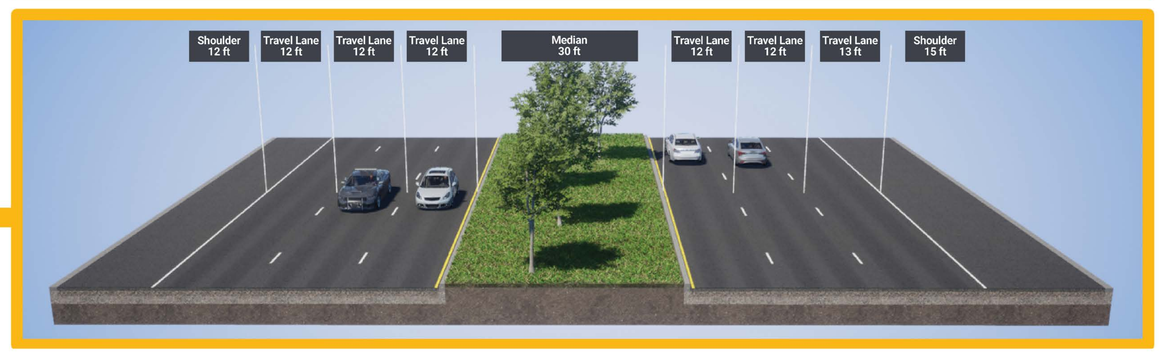
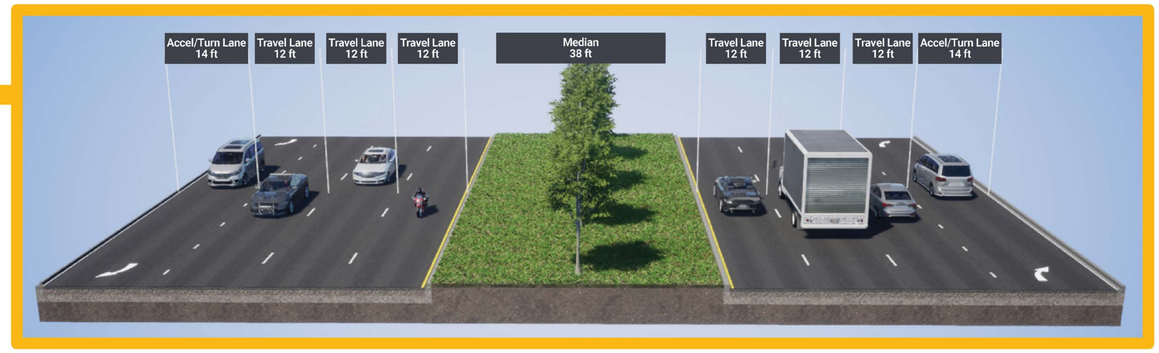
Existing Conditions









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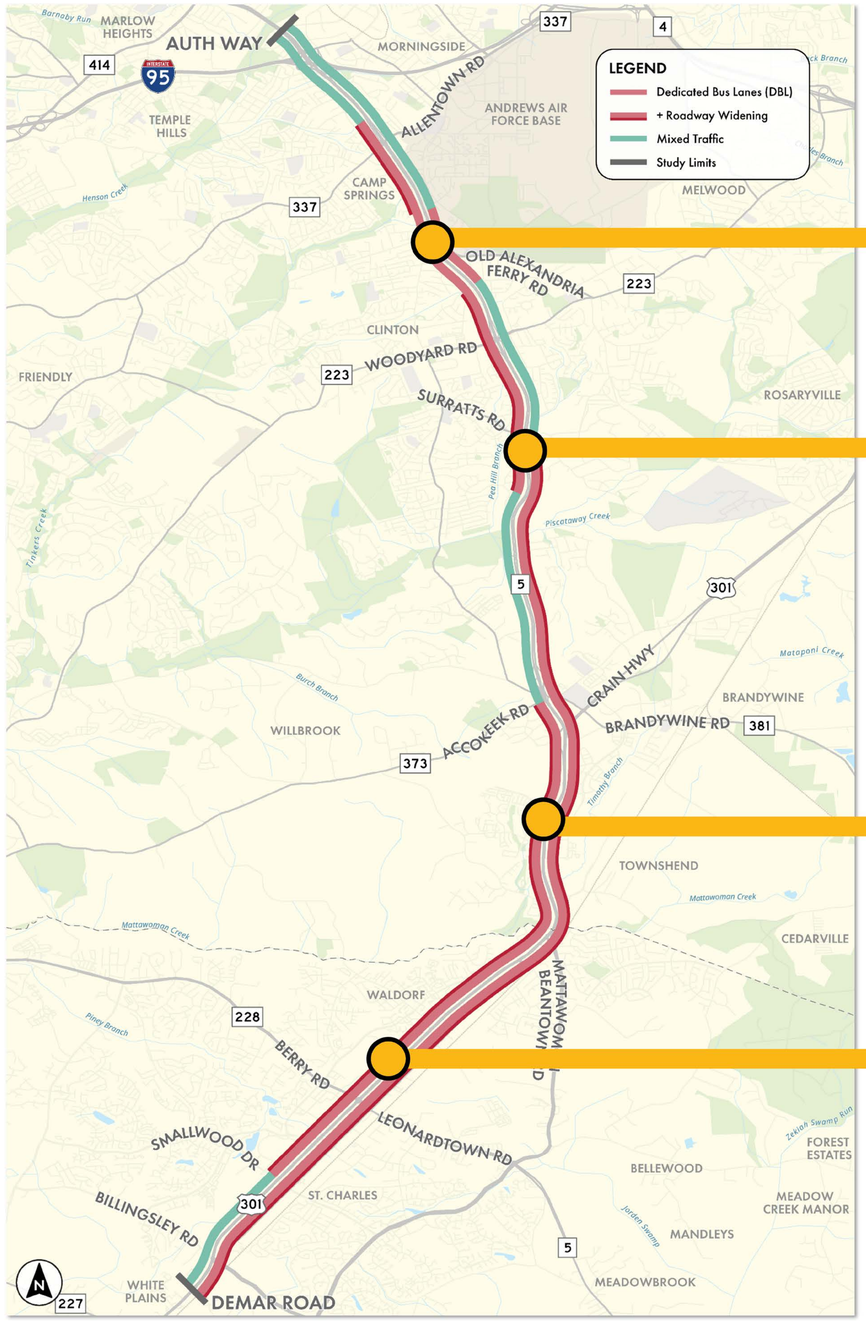
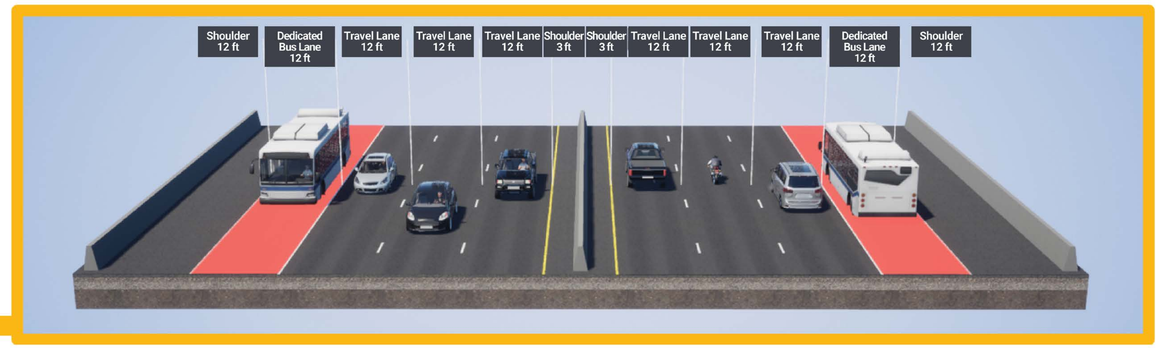
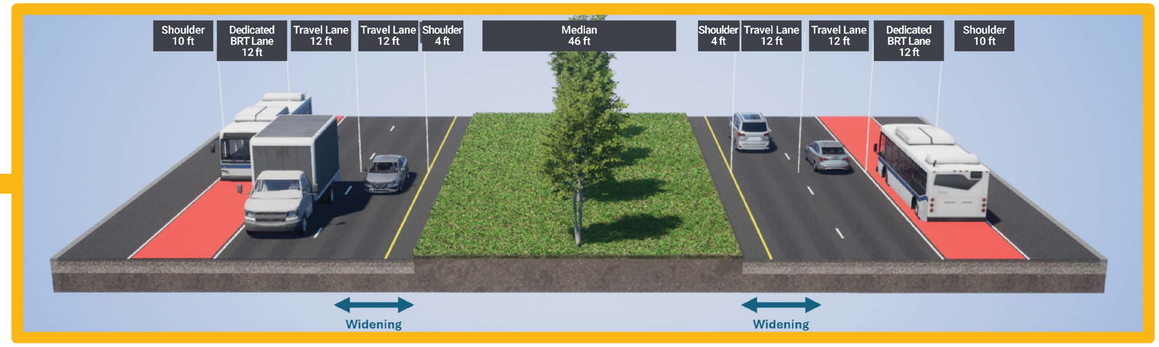
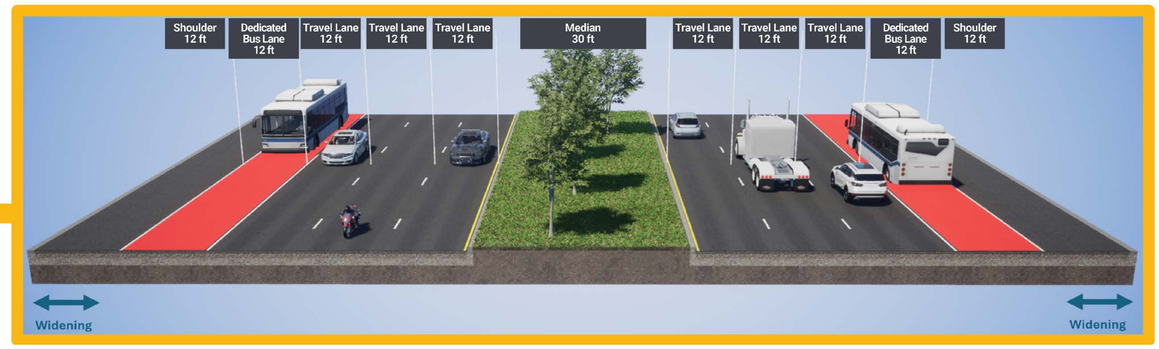
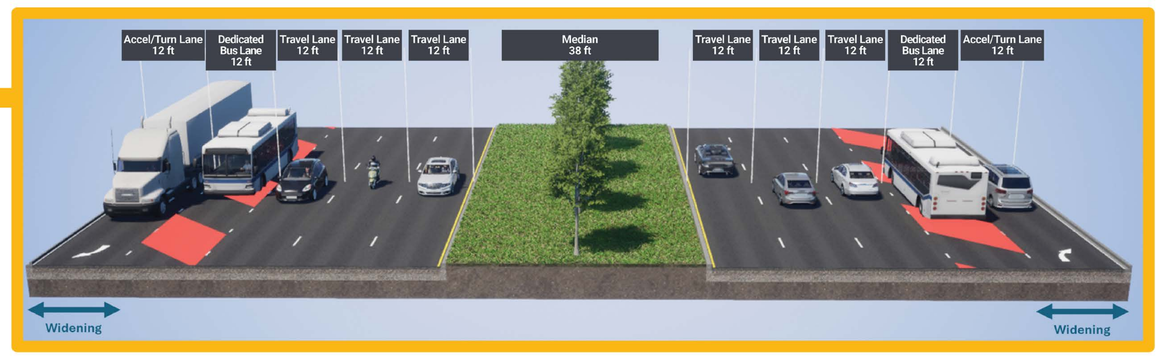
Partial Dedicated Bus Lane – Alternative 2A











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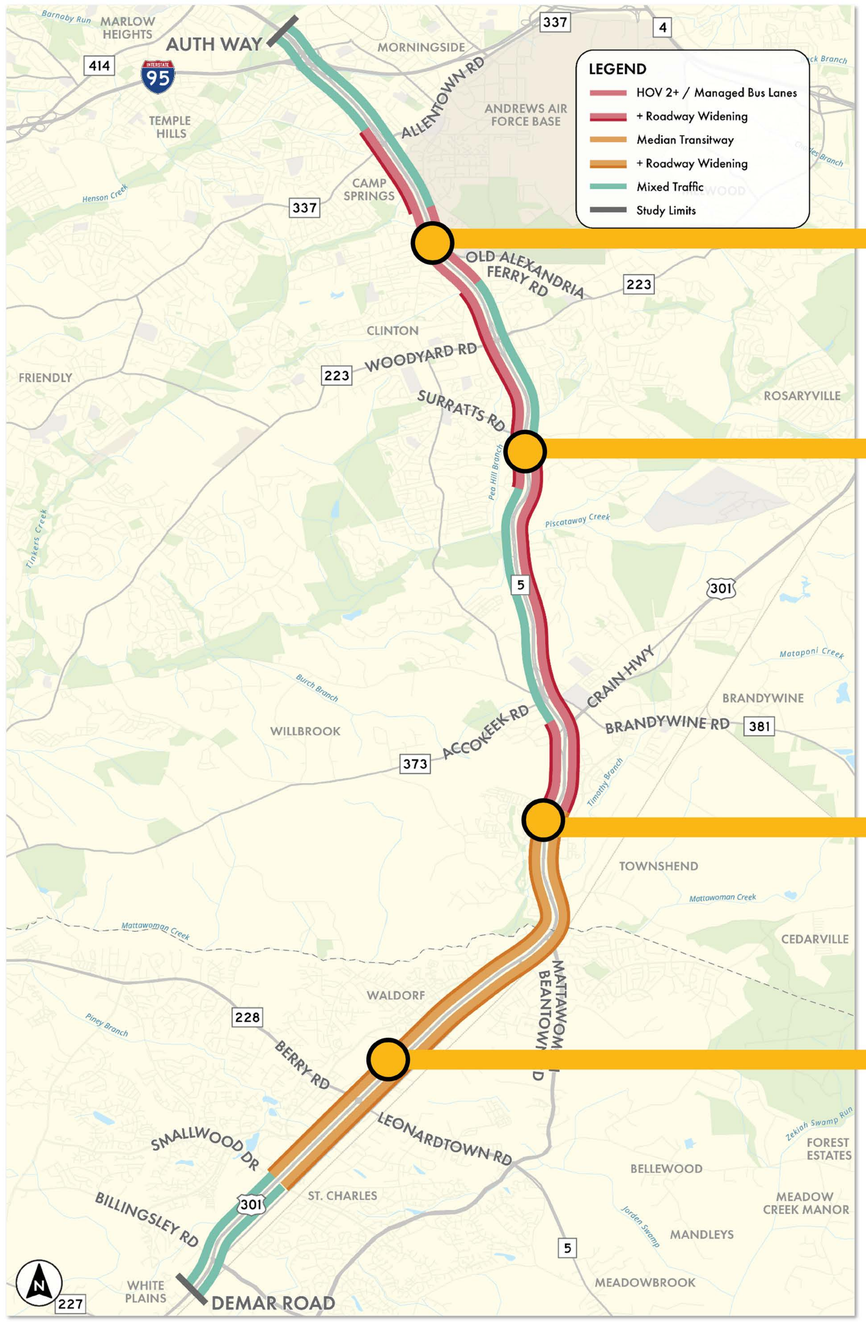
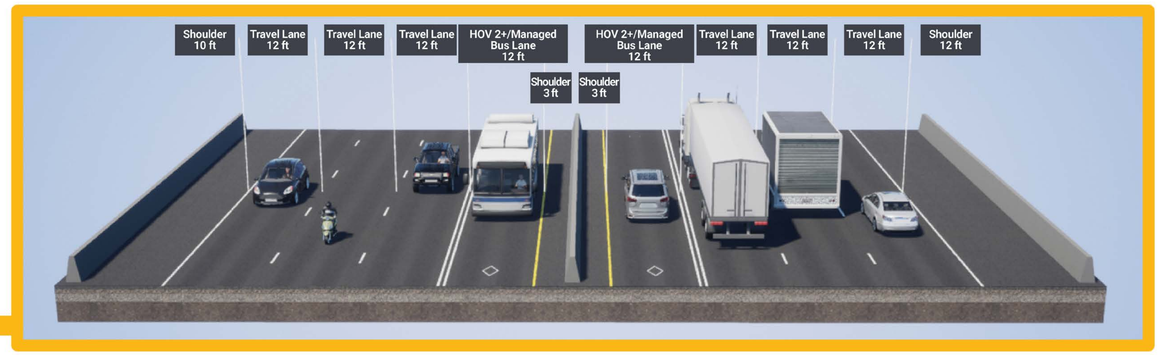
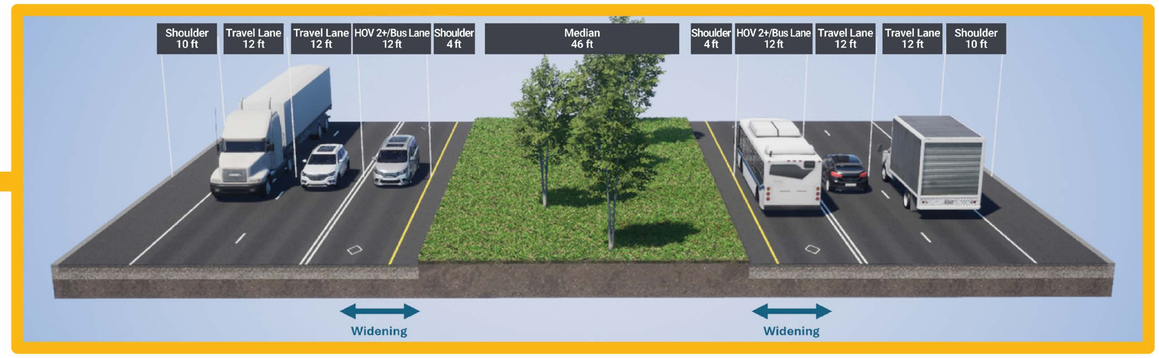
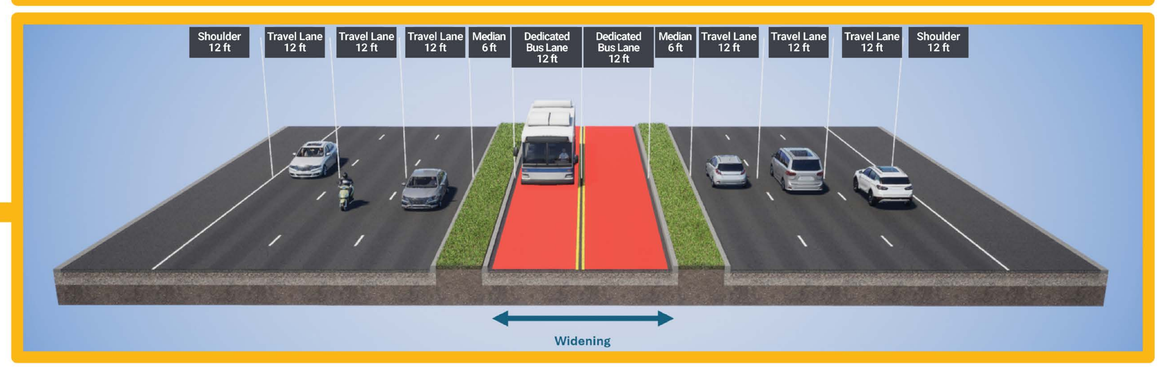
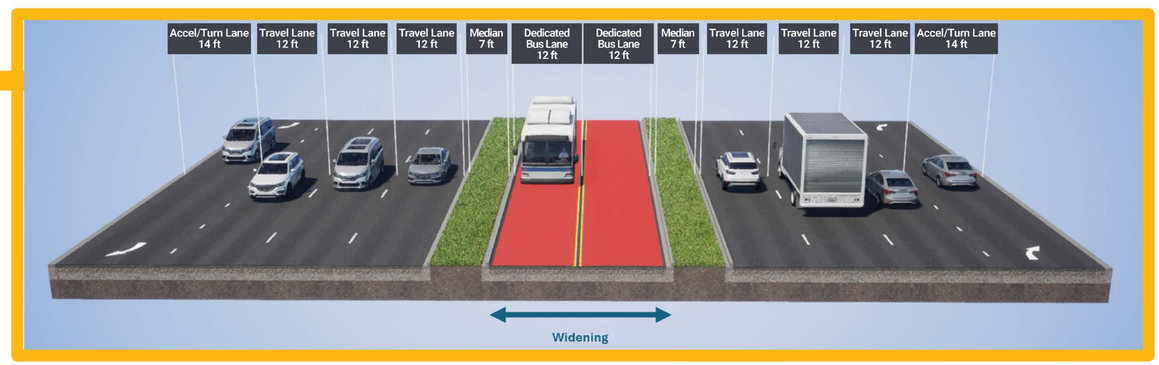
Partial HOV 2+/BRT Managed Lane – Alternative 2B











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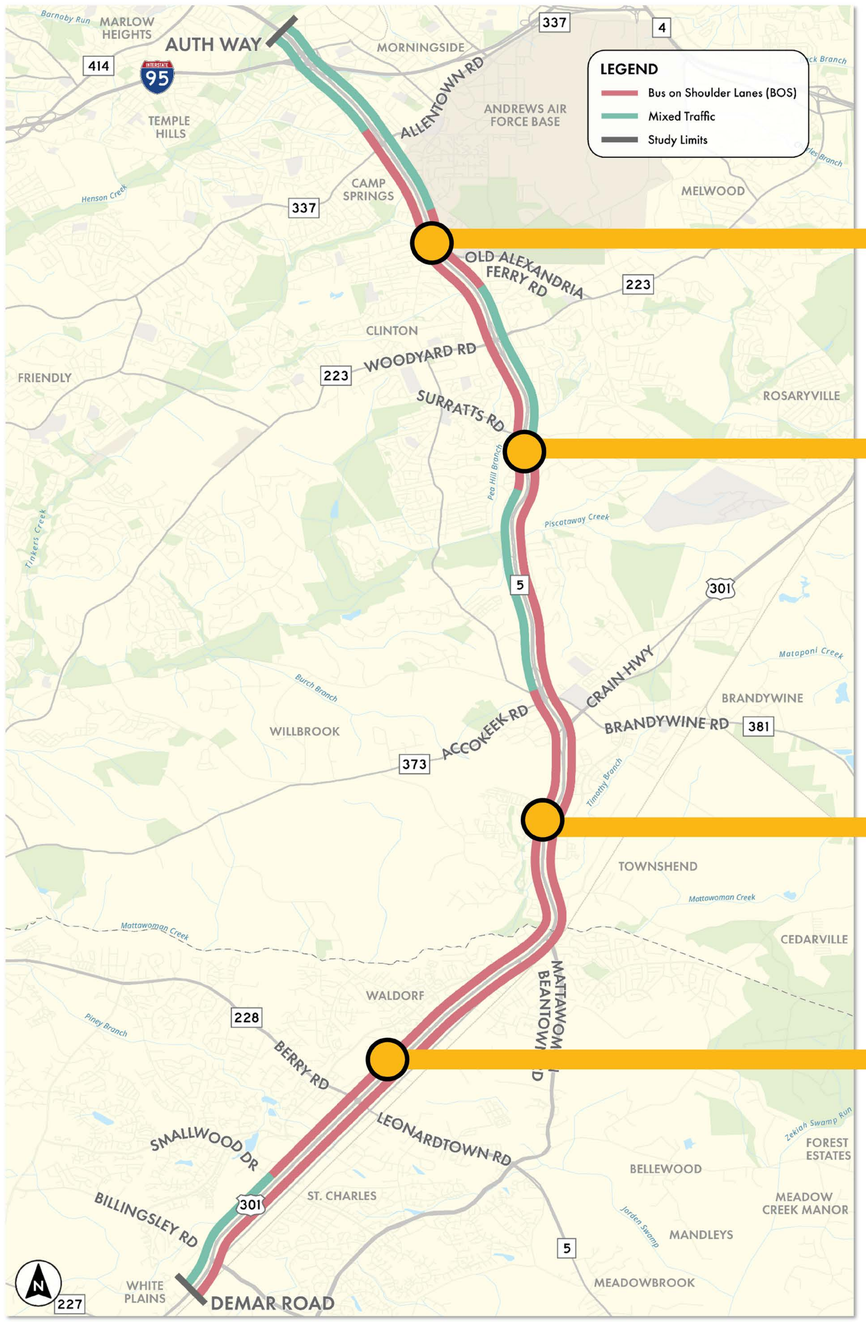
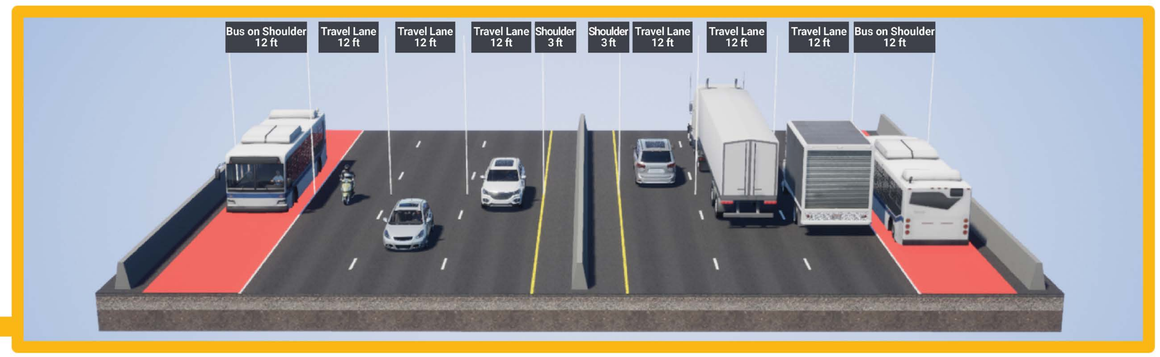
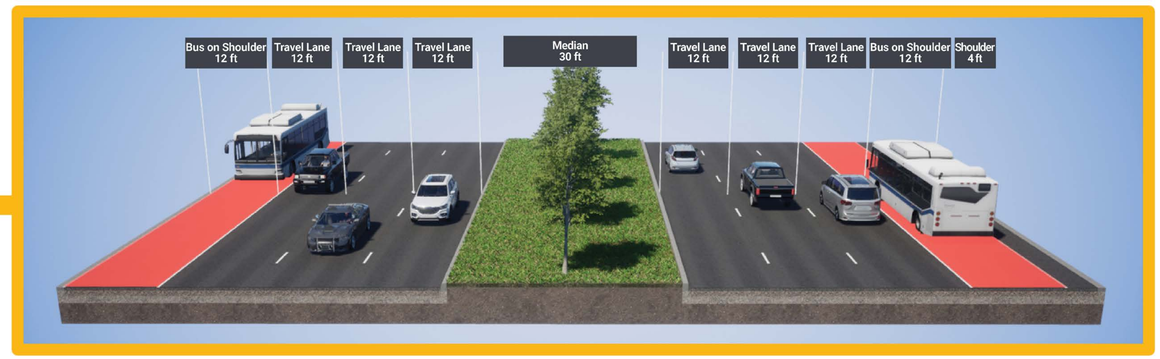
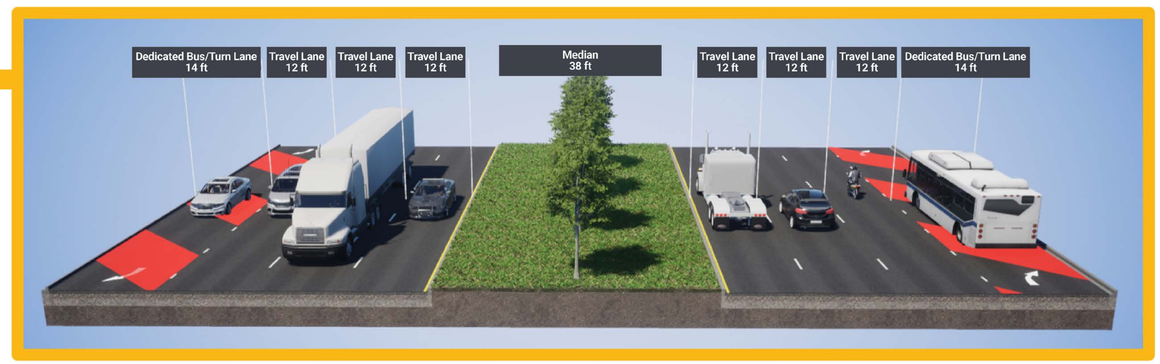
Partial Bus on Shoulder – Alternative 2C









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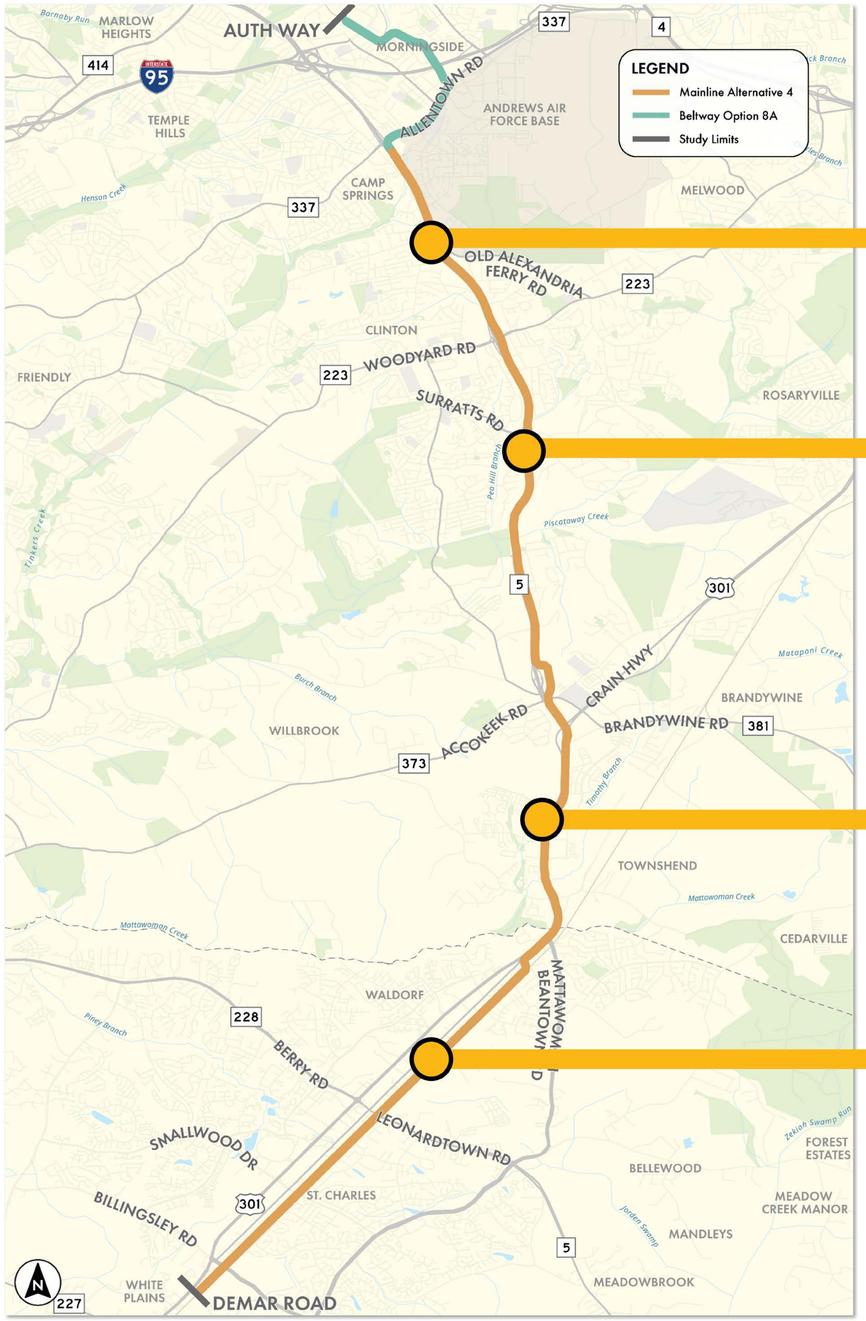
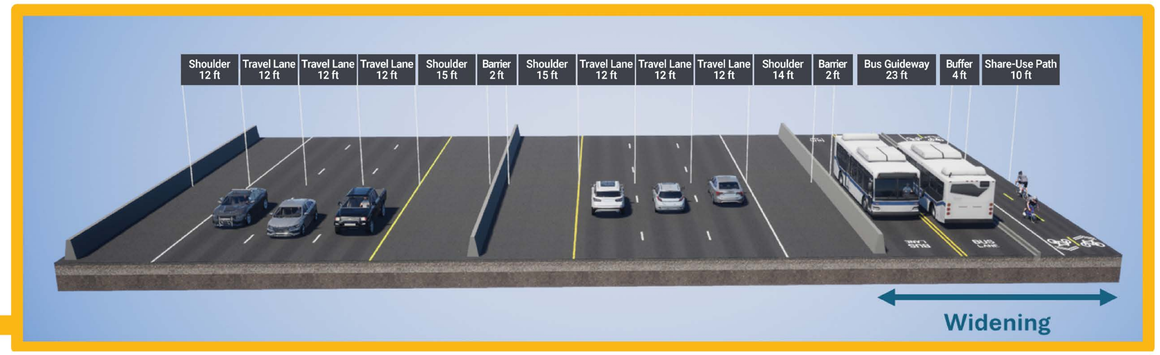
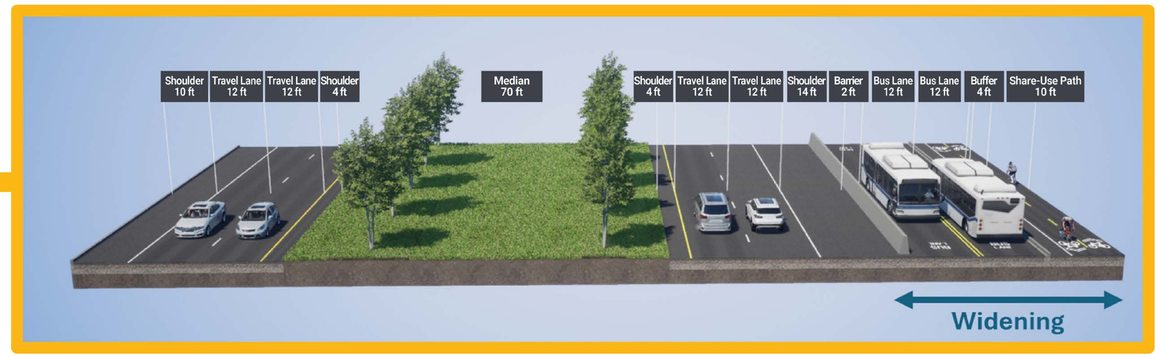
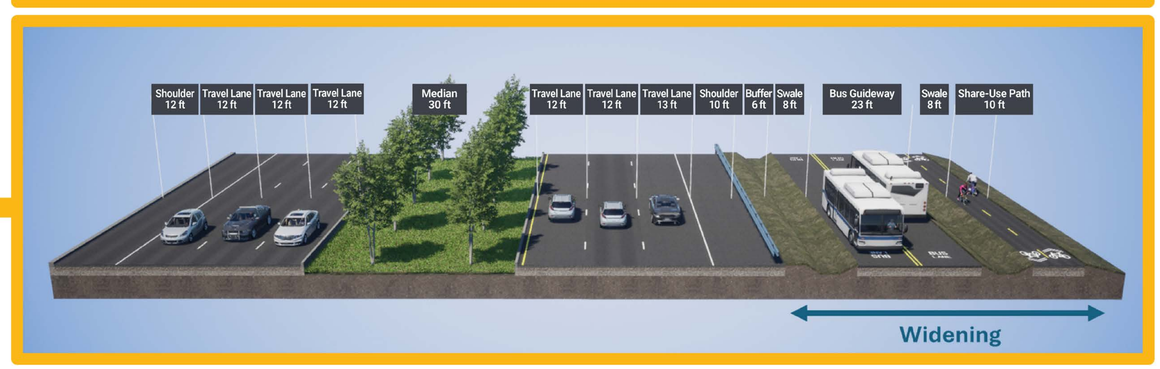
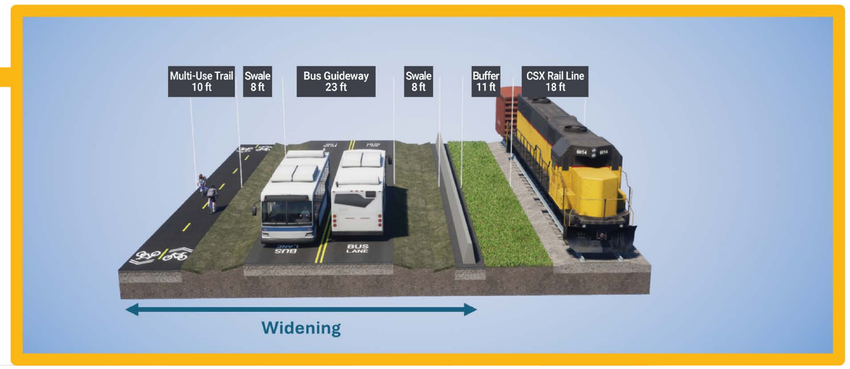
BRT Separate Guideway – Alternative 3











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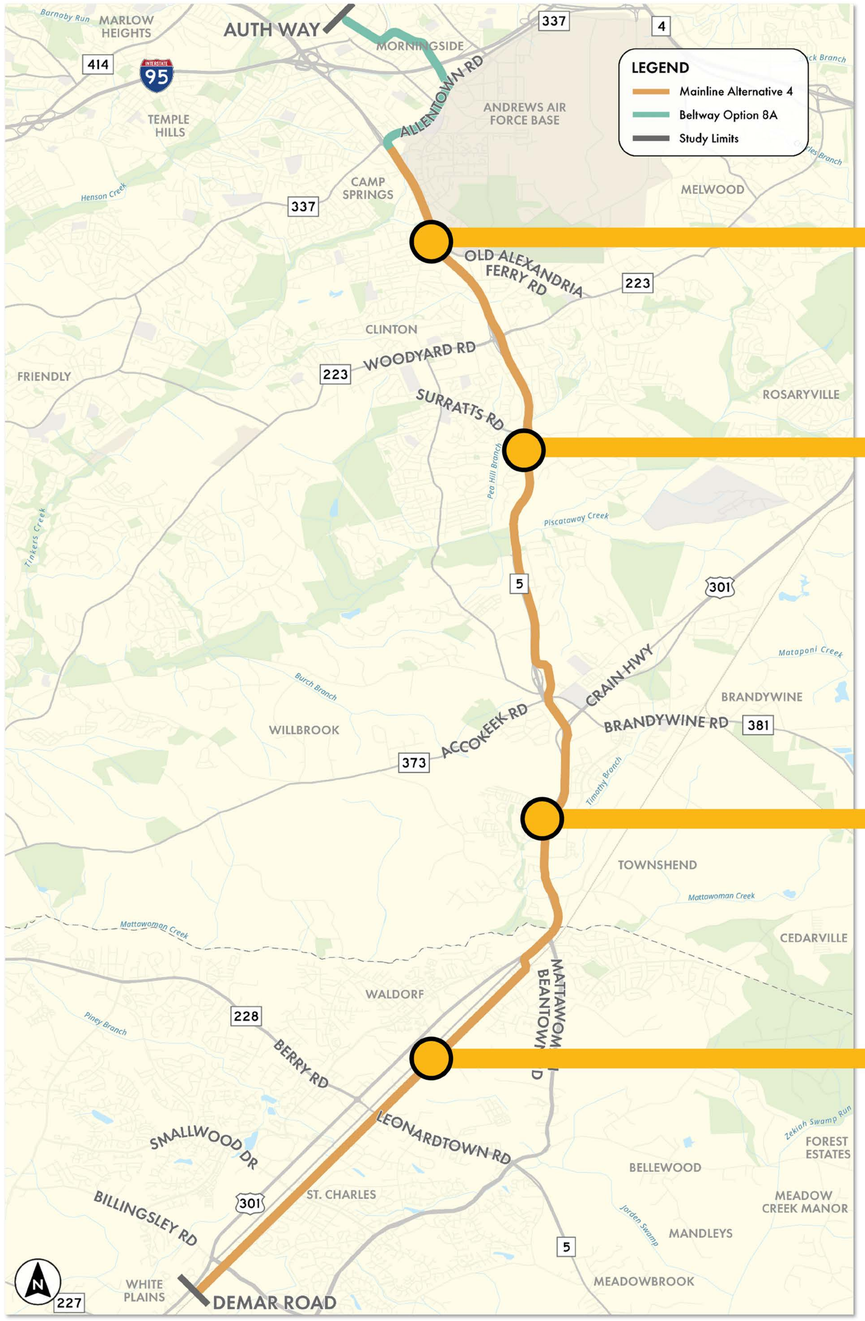
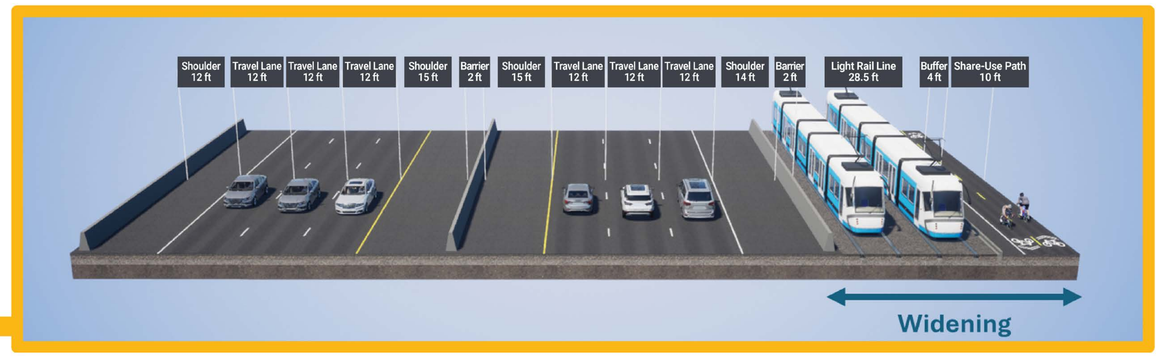
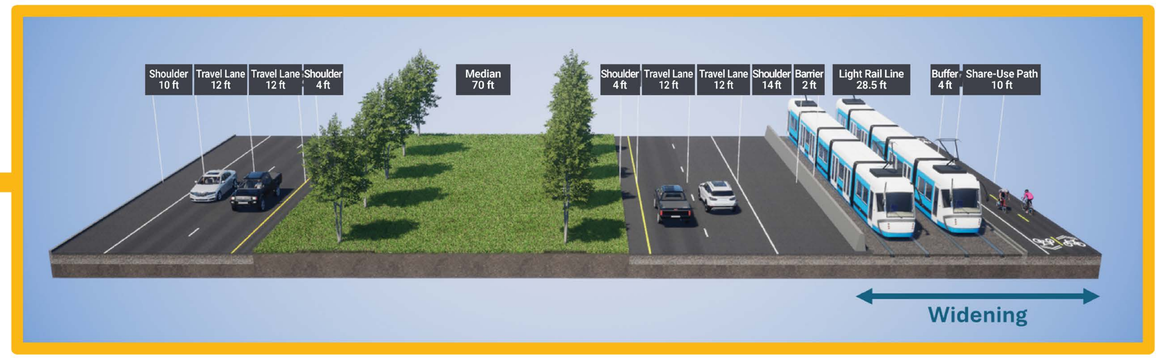
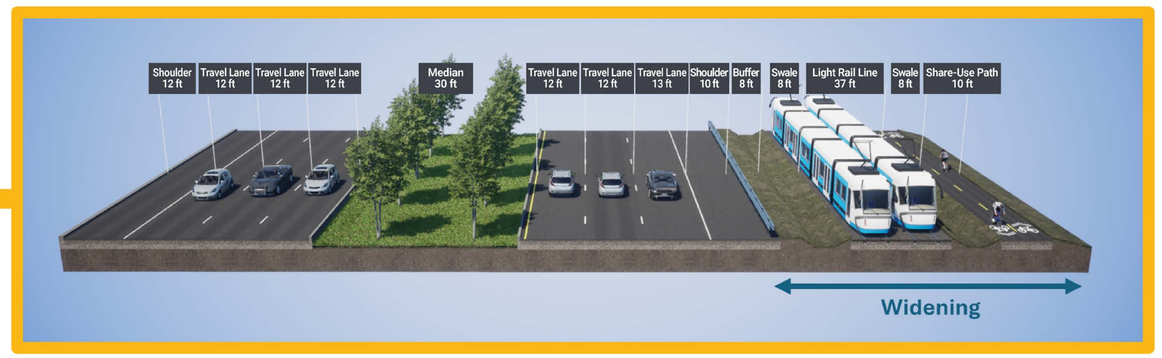
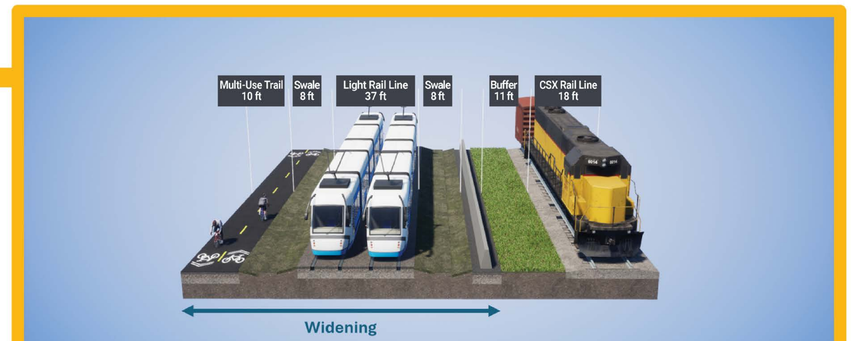
LRT Separate Guideway – Alternative 4











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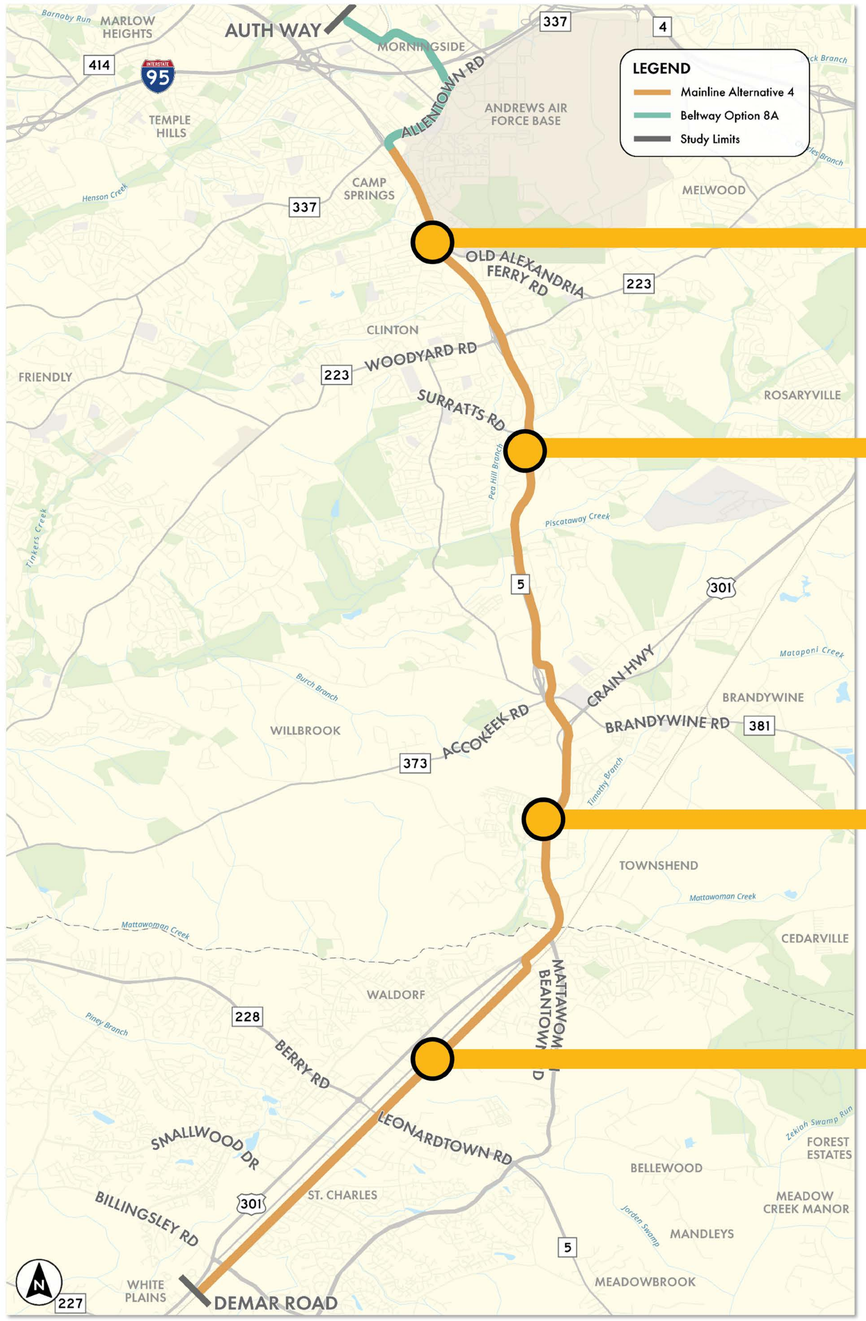
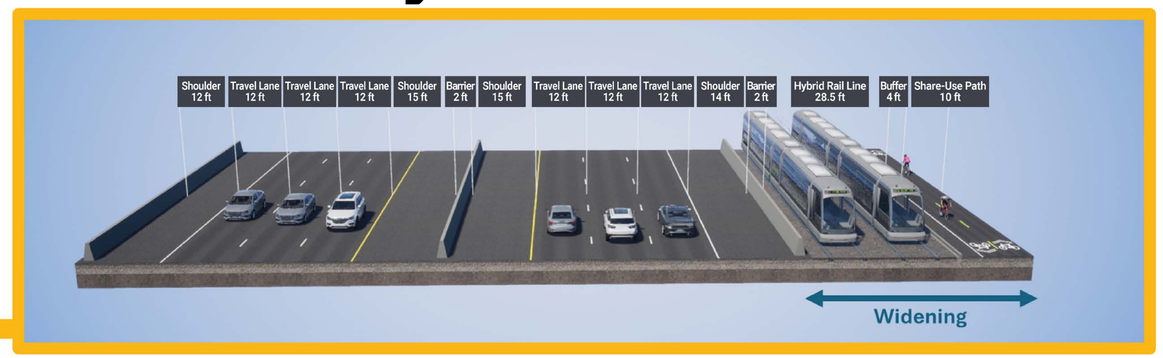
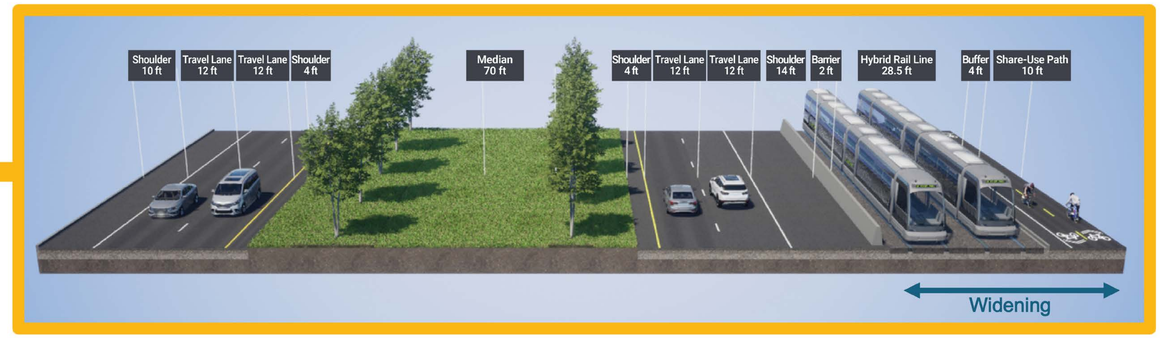
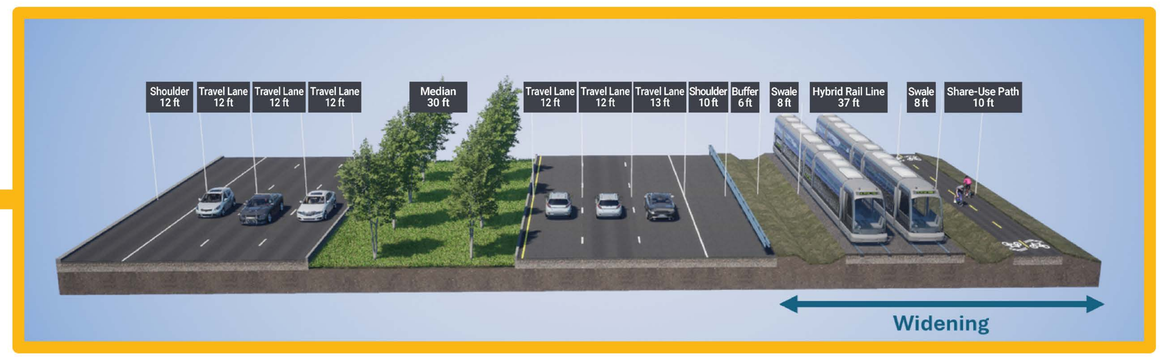
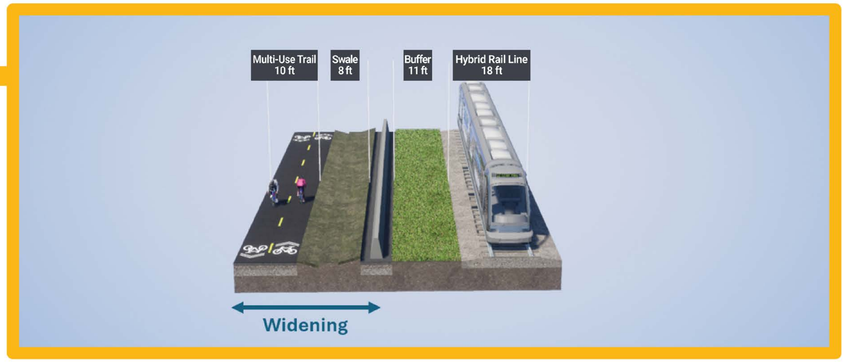
Hybrid Rail (YR) Separate Guideway – Alternative 5











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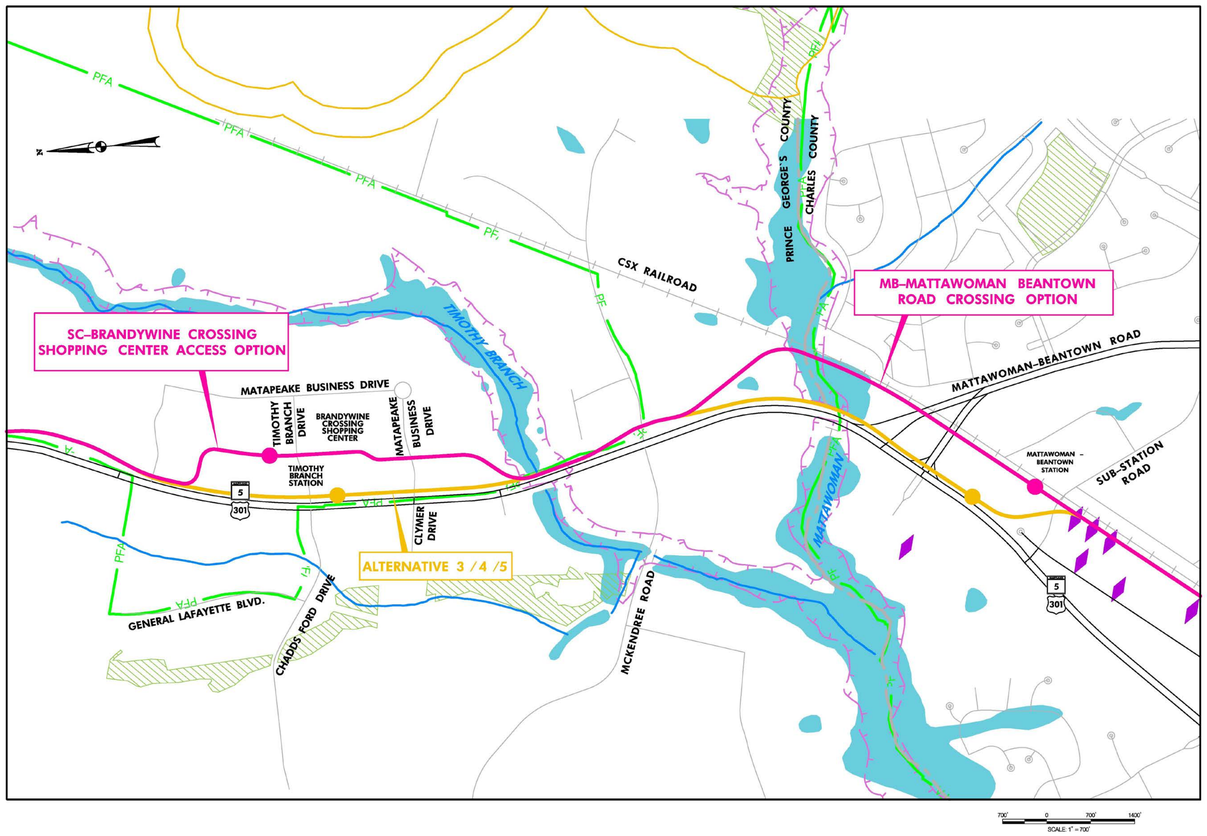
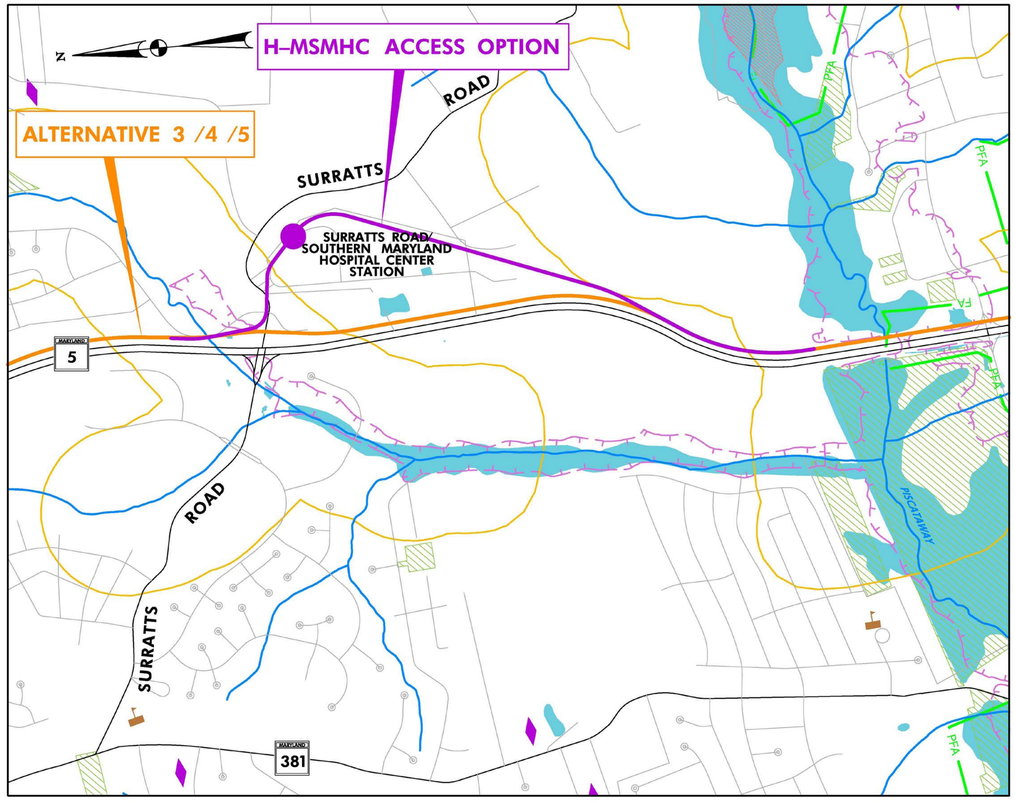
Breakout Areas

Brandwine Crossing/ Mattawoman-Beantown



Medstar Southern Maryland Hospital



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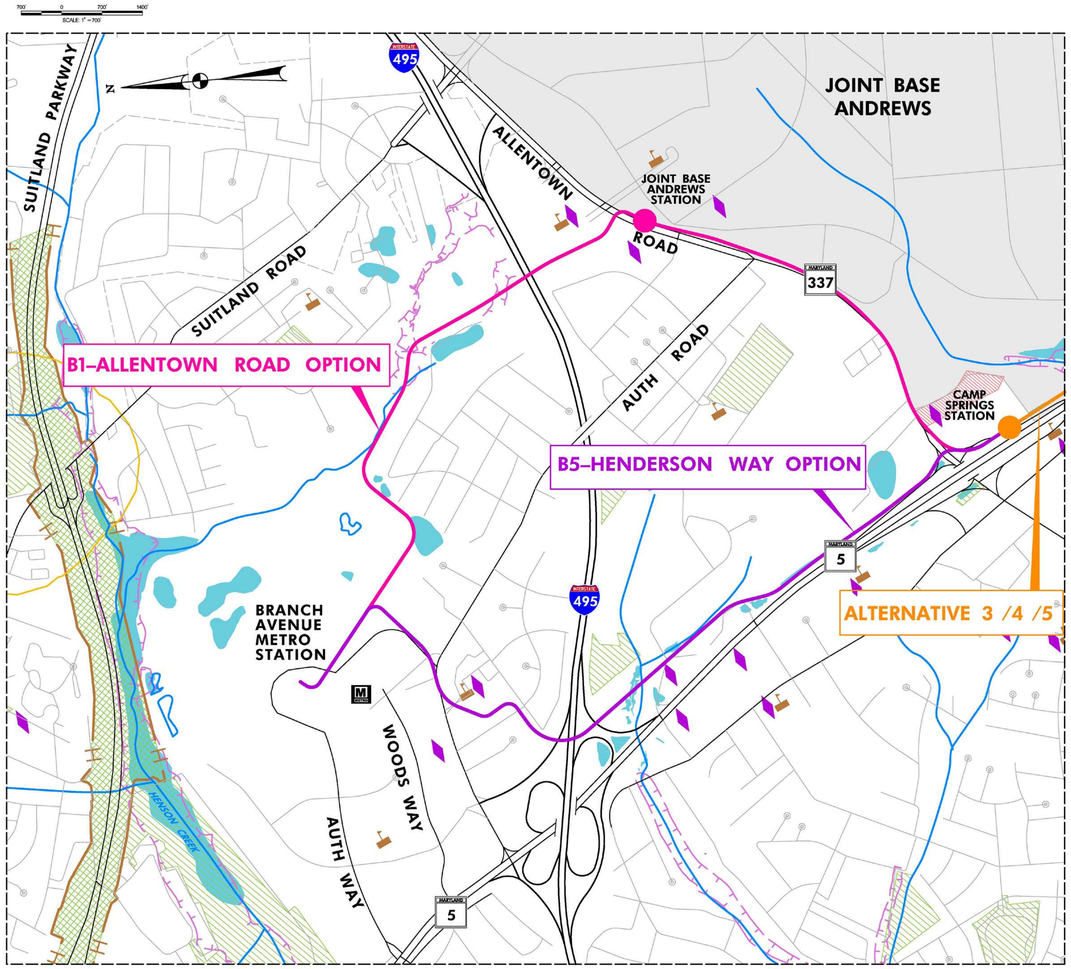
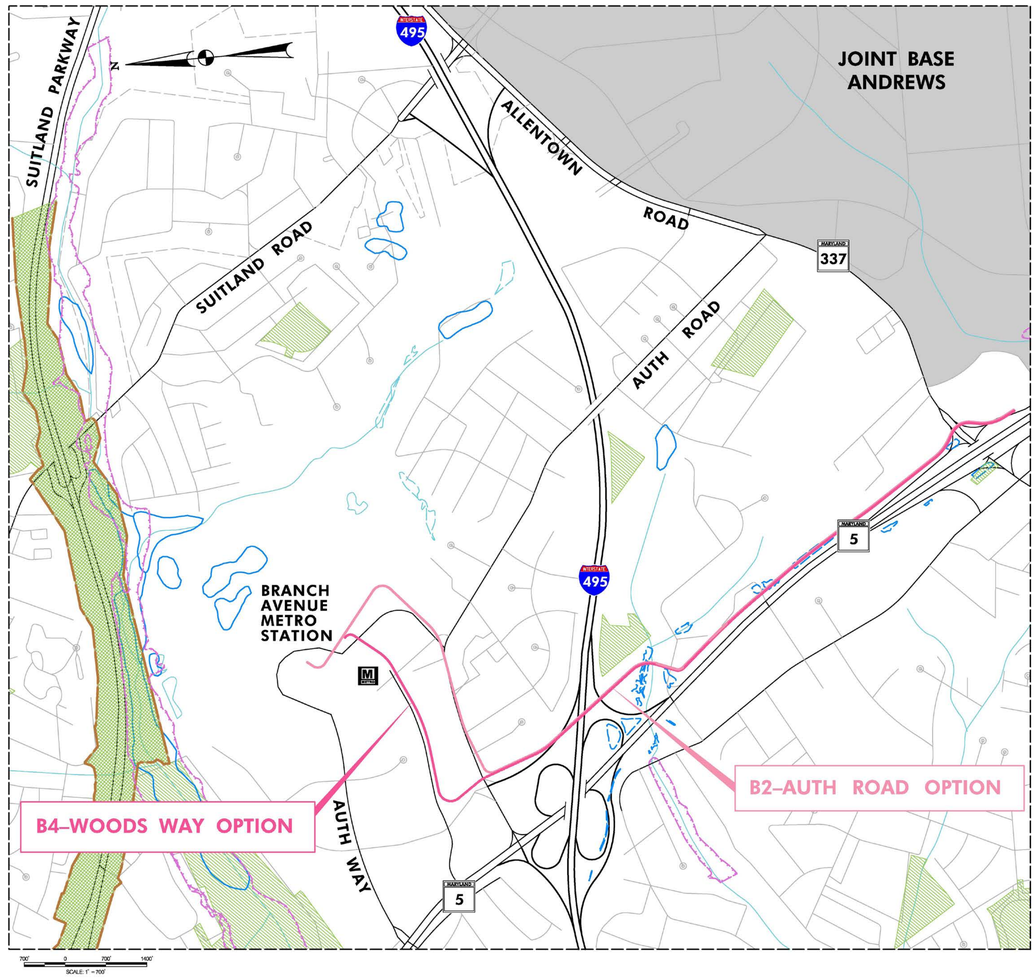
Beltway Crossing Options:





SOUTHERN MARYLAND RAPID TRANSIT

Station Typology

Multimodal Mixed-Use

Design Priorities

- Enable the density, mix of uses, walkability and quality public spaces to make the station a focal point for the local community
- Secondary focus on facilitating ease of transfers between SMRT and other transit

Access Features

- High-quality pedestrian amenities
- Garage parking serving transit and mixed-use development
- Bus bays located adjacent to SMRT platform, potentially within garages
- Safe bike routes & protected bike parking
- Linear kiss & ride on street or in garage

Land Use

- Near-term opportunity for TOD supported by local regulations
- Commercial/Retail closest to station

Neighborhood

Design Priorities

- Smaller station footprint
- Mesh with the surrounding community
- Thematic design elements to create sense of place

Access Features

- High-quality, ADA-friendly pedestrian amenities featuring excellent lighting
- Limited number of on-street bus bays
- Safe bike access routes and protected bike parking facilities adjacent to platform

Land Use

- Existing patterns predominate in the near-term
- Stations designed to support future TOD opportunities

Collector/Connector

Design Priorities

- Focus on ease of transfer between modes

Access Features

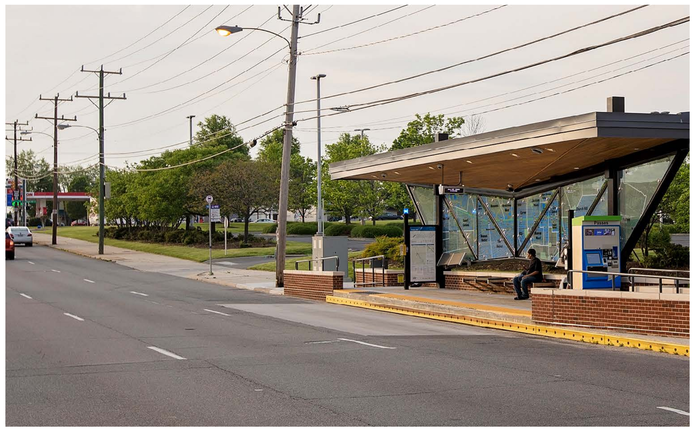
- High-quality pedestrian amenities featuring gathering spaces, excellent lighting
- Kiss & ride, park & ride with direct access to station
- Bus bays facilitating transfers to SMRT & between routes
- Safe bike access routes and protected bike parking facilities
- Adherence to access facilities hierarchy

Land Use

- Existing patterns predominate in the near-term
- Stations designed to support future TOD opportunities

SOUTHERN MARYLAND RAPID TRANSIT

Station Infrastructure – Bus Modes



GRTC Pulse – Richmond, VA

Dedicated Lanes

- Curbside running
- Presence of shoulder lane to the outside of bus lane
- Can stop in the lane or have pullouts
- More room for larger station/stop facilities

Rapid Ride – Seattle, WA

Bus on Shoulder

- Curbside running
- No lane to the outside of bus lane
- Can stop in the lane or have pullouts
- Less room for larger station/stop facilities

Cleveland HealthLine – Cleveland, OH

HOV 2+ Managed Lanes

- Median running
- May need widening for stations
- Would need more substantial station architecture for sense of safety
- Right or left boarding

VelociRFTA – Aspen, CO

Separated Busway/ Guideway

- Deviation from the highway corridor to locate a station next to a high-priority location, such as:
  - High-priority service location
  - Large park & ride
  - Major transit transfer point
- More room for larger station/stop facilities, but fewer traffic safety/ comfort issues

SOUTHERN MARYLAND RAPID TRANSIT

Station Infrastructure – Light Rail / Hybrid Rail

MAX – Portland, OR

Urban Curbside

- Similar to traditional bus stop
- Can be dedicated transitway or adjacent to vehicular travel lanes
- Street furniture can be supplemented for waiting passengers
- "Station" integrated into the sidewalk

VTA – San Jose, CA

Highway

- Median running
- May need widening for stations
- Requires pedestrian overpass or underpass
- Limits potential conflicts with vehicles

MetroTransit – Twin Cities, MN

Urban Median

- May require widening if sufficient median is not in place
- Can be installed as part of road diet
- Higher potential for conflicts with vehicles
- Stations can provide pedestrian refuge islands

Tide – Norfolk, VA

Adjacent to Roadway

- Located adjacent to larger roadway, generally an arterial
- Can facilitate easy connection to park-and-ride lots
- Limited sense of place/ integration to community without development

Transit-Oriented Development (TOD)

- Defined in Maryland as dense, mixed-use development located within a 1/2 mile of transit stations
- TOD generates ridership and helps gain a return on the public transit investment
- TOD can help:
  - Provide much-needed housing
  - Ease congestion and tailpipe emissions
  - Save residents money by helping them limit their car use
  - Create nodes of activity – places where you can live, work, dine, and hang out
- What do we need for TOD to work?
  - Rezoning – allowing more dense development near SMRT stations
  - Funding – TOD needs public investment to support needed infrastructure and development
  - Engagement – working with communities to envision transit-accessible, livable places

Takoma Station – Takoma Park, MD

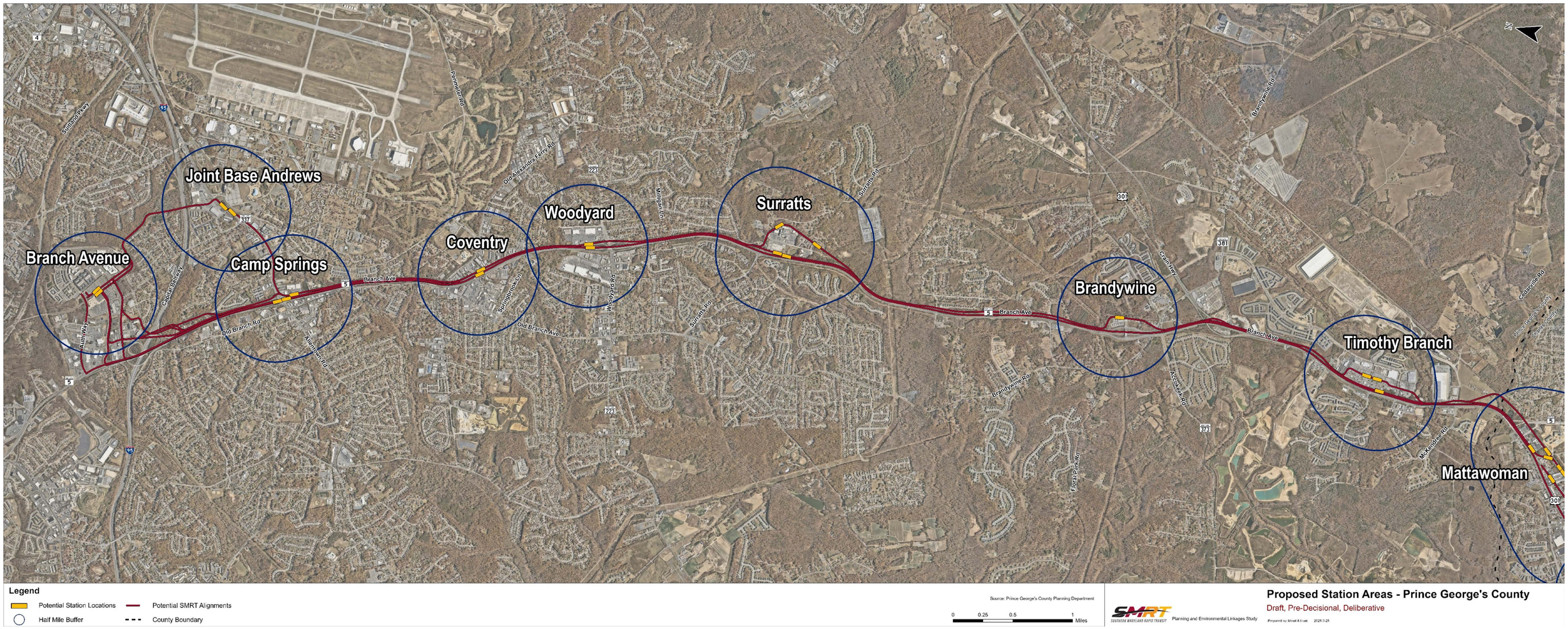
Link Light Rail – Seattle, WA

SOUTHERN MARYLAND RAPID TRANSIT

Station Locations – Prince George's County

Place a sticker on the station(s) that you'd use and match the sticker color with how you'd get to the station:

- Red – Get to the station by car
- Blue – Get to the station by walking
- Yellow – Get to the station by bicycle
- Green – Get to the station by transit



SOUTHERN MARYLAND RAPID TRANSIT

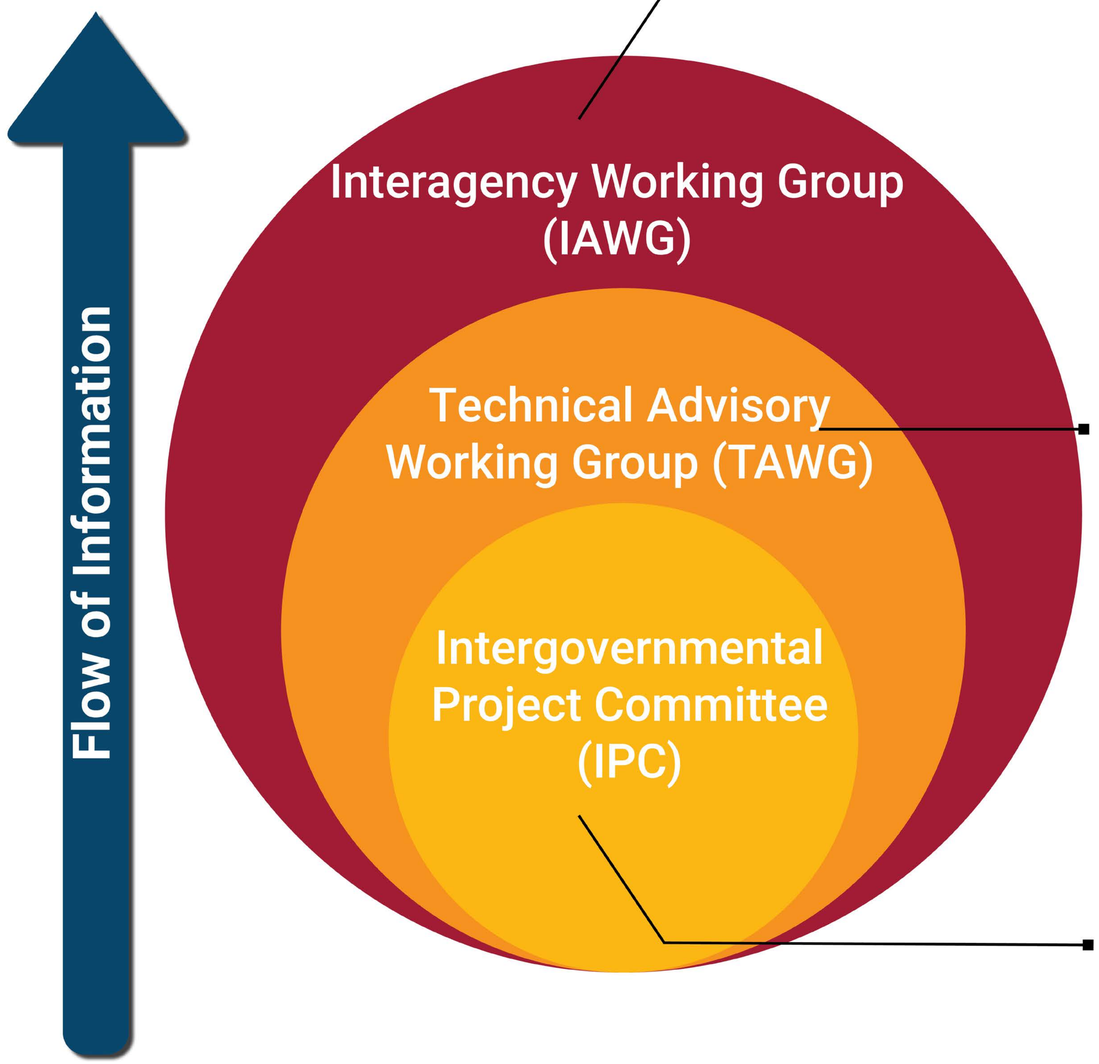
Station Locations – Charles County

Place a sticker on the station(s) that you'd use and match the sticker color with how you'd get to the station:

- Red – Get to the station by car
- Blue – Get to the station by walking
- Yellow – Get to the station by bicycle
- Green – Get to the station by transit

SOUTHERN MARYLAND RAPID TRANSIT

Agency & Major Stakeholder Coordination



Interagency Working Group (IAWG)

- Provides review and comment specific to an agency
- Discusses regulated resources
- Discusses impacts, avoidance and minimization
- Provides input on study milestones, schedule, and progress
- Works towards a clear path for future approvals and permits
- *Members*
  - Lead Agencies (FTA & MTA), Cooperating and Participating Agencies

Technical Advisory Working Group (TAWG)

- Provides technical review
- Provides recommendations for development and evaluation of proposed improvements
- *Members*
  - WMATA
  - IPC Members
  - MWCOG
  - MDP
  - Joint Base Andrews (JBA)
  - Tri-County Council for Southern Maryland (TCCSMD)
  - MedStar Southern Maryland Hospital Center

Intergovernmental Project Committee (IPC)

- Guides implementation of the Framework Agreement
- Provides PEL study oversight
- Provides issue resolution support
- Decision-making ability
- *Members*
  - MDOT TSO
  - MTA
  - SHA
  - Prince George's County
  - Charles County

Visit SMRTmaryland.com to view the SMRT draft Agency Coordination Plan

SOUTHERN MARYLAND RAPID TRANSIT

Environmental Inventory

Natural Environmental Resources

Potential effects on natural resources including streams, wetlands, water quality, floodplains, threatened and endangered species, and wildlife habitat.

Community Impact Analysis

Potential impacts to land use, communities, and community facilities, including parks and recreation facilities.

Statewide Air Quality Initiatives

Ensure transportation alternatives are consistent with Maryland climate change regulations.

Noise

Potential future noise impacts from transportation alternatives; identify possible measures to mitigate noise impacts, when warranted.

Cultural Resources and Historic Preservation

Potential effects on historic properties and archaeological sites.

Air Quality

Potential air quality impacts on local and regional populations; ensure transportation alternatives are consistent with air quality regulations per the Clean Air Act.

Additional Foreseeable Effects

Potential future impacts to resources such as farmland, residential and business properties, and from other development and local plans.

Hazardous Materials

Potential impacts from known and potential hazardous materials, hazardous waste and contamination.

SOUTHERN MARYLAND RAPID TRANSIT

Summary of Environmental Impacts for Potential SMRT Corridor Transit Alternatives

	ENGINEERING		COMMUNITY/CULTURAL									NATURAL ENVIRONMENT						
SMRT Transit Alternatives	Length of Alignment (Miles)[2]	New or Widened Bridge Structures	Residential Properties	Business/ Commercial Properties	Churches	Schools	Cemeteries	County Parks	Healthcare Facilities	Community Services and Facilities	Historic Properties	Hazardous Material Sites	New Stream Crossings	Existing Stream Crossings	Wetlands	100-Year FEMA Floodplain	Forest	Air Quality
Alternative 1 – NO BUILD	0																	
Alternative 2 – Bus Rapid Transit (BRT) in Existing Right-of-Way (ROW)																		
Alternative 2A – BRT in ROW Dedicated Bus Lane	19																	
Alternative 2B - BRT in ROW Managed Lane	19																	
Alternative 2C - BRT in ROW Bus on Shoulder	19																	
Alternative 3 or 4 – BRT or Light Rail Transit (LRT) in Separated Guideway[1]																		
Alternative 3/4 – LRT or BRT in Separated Guideway with Beltway Option B1 & B5 (On New Alignment Options)	19																	
Alternative 3/4 – LRT or BRT in Separated Guideway with Beltway Option B2, B3 & B4 (Along Ex. Road Options)	19																	
Alternative 5 – Hybrid Rail (YR) in Separated Guideway[1]																		
Alternative 5 – YR in Separated Guideway with Beltway Option B1 & B5 (On New Alignment Options)	19																	
Alternative 5 – YR in Separated Guideway with Beltway Option B2, B3 & B4 (Along Ex. Road Options)	19																	

Notes:
[1]Alternatives 3 (BRT), 4 (LRT) and 5 (YR) on separated guideway share the same basic alignment and would have similar impacts
[2]Length of Alignment as measured from Branch Avenue Metrorail Station to the proposed White Plains Station

Legend for Comparison of Alternatives: LOWER IMPACT | MID-LEVEL IMPACT | HIGHER IMPACT

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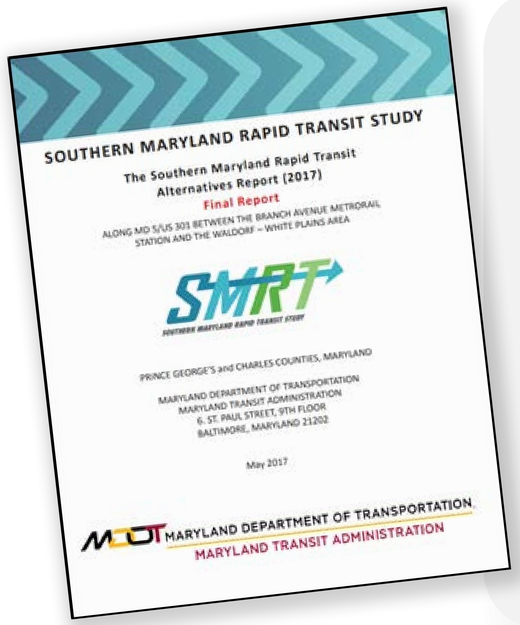
Environmental Inventory

- Each discipline will build on the information from the 2017 Report by identifying existing conditions and by evaluating potential effects of the alternatives



Methodology

- Establish protocols for technical analysis

Data Gathering

- Desktop GIS data
- Fieldwork

Technical Report

- Existing conditions
- Potential impacts

SOUTHERN MARYLAND RAPID TRANSIT

Next Steps

- Detailed inventories of existing environmental features potentially impacted
- Engineering studies on preliminary range of alternatives
- Development of cost estimates and evaluation of impacts for each of the transit alternatives and options
- Ridership forecasts for each of the transit alternatives and options and development of a transit operations plan
- Screening of alternatives to determine which ones to carry forward for further evaluation as part of the NEPA study
- Development of a final PEL Report

The planning products produced during this PEL Study may be adopted or incorporated by reference during NEPA in accordance with 23 USC 168: Integration of planning and environmental review.

SOUTHERN MARYLAND RAPID TRANSIT

Study Schedule

WE ARE HERE

01

Summer/Fall 2024

PEL Technical Work & Alternatives Development

02

Winter 2024 - Summer 2025

Environmental Review, Conceptual Design & Public Open Houses

03

Winter/Spring 2026

Draft / Final PEL Report, Public Comment

04

Spring 2026 - 2028

NEPA Analysis & Preliminary Engineering

SOUTHERN MARYLAND RAPID TRANSIT

Get Connected

- Your comments and suggestions are very important to us
- Please provide your ideas, opinions and questions; sign up for project updates and/or request a presentation to your community or organization

Fill out a comment card today

Go to the project website
smrtmaryland.com

Send an email to **SMRT@mdot.maryland.gov**

Call us at 410-767-9099