FLASH
BUS RAPID TRANSIT IN MONTGOMERY COUNTY

North Bethesda BRT Planning Study Update

Citizens Advisory Committee

MCDOT
Montgomery County
Department of Transportation

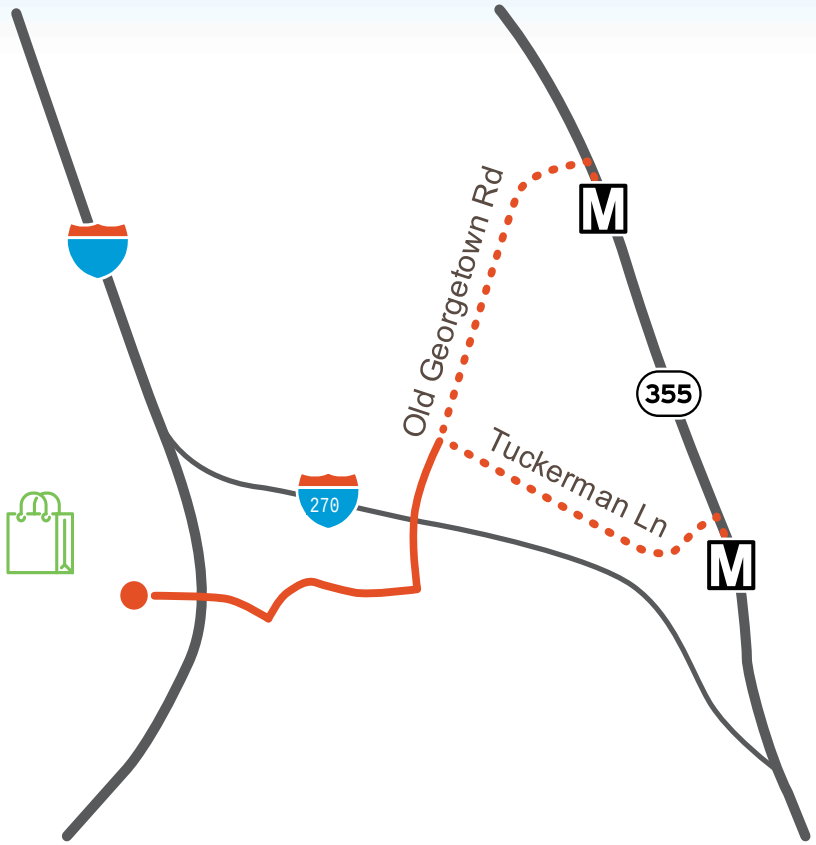
Agenda

- Previously Completed Tasks
- Build Alternatives Development Update
  - Proposed Framework for Alternatives
  - Bike and Pedestrian Infrastructure
  - Western Terminus Considerations
  - Build Alternatives
- Next Steps

Previously Completed Tasks

Study Background

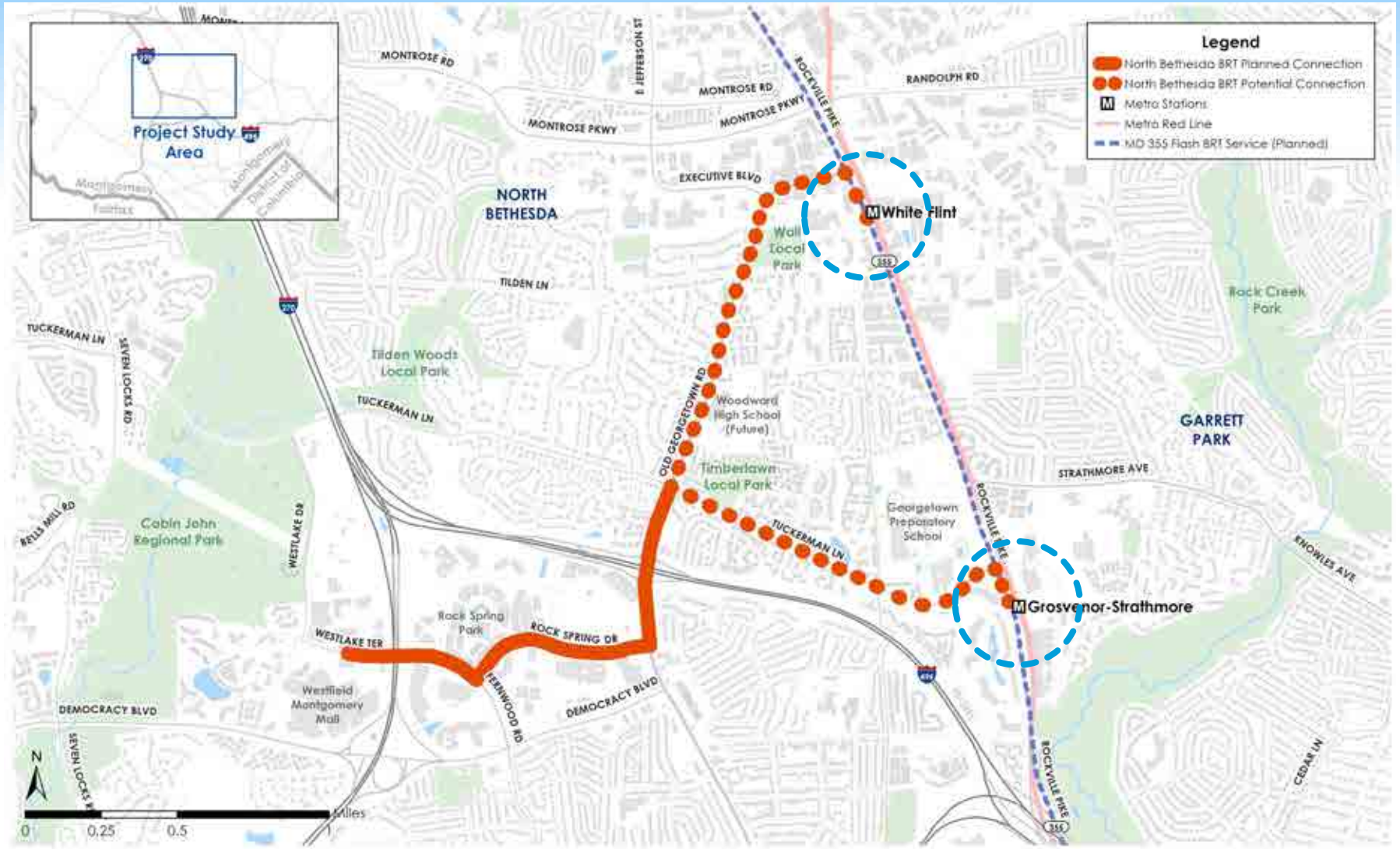
- Previously Identified in:
  - 1992 North Bethesda/Garrett Park Master Plan
  - 2013 Countywide Transit Corridors Functional Master Plan
  - Montgomery County Department of Transportation's Service Planning and Integration Report
- Study Outcomes:
  - Select an eastern terminus
  - Finalize Project Definition
    - *Project cross section*
    - *Identify stop locations*
    - *Evaluate western terminus extensions*
  - Prepare for next phases: design & environmental



Establishing Corridor Foundations

- Related Studies & Projects
- Demographics
- Activity Density
- Multimodal Travel Conditions
- Land Use & Development
- Street Network
- Multimodal Connectivity
- Transportation Safety
- Transit Service

Termini Screening



- The purpose of the termini screening was to select an eastern terminus:
  - **White Flint** (now North Bethesda) Metrorail Station
  - **Grosvenor-Strathmore** Metrorail Station

Termini Screening Results

Goals and Objectives		White Flint/ N. Bethesda	Grosvenor	Rationale
Quality Service	*Provide a fast, reliable, efficient, and connected transit service*	←		White Flint Alternative serves more existing local bus trips and overall regional trips
Mobility Choices	*Improve access to jobs, activity centers, and community facilities*	←		White Flint alternative serves more existing jobs and community facilities with more travel choices; Stronger potential to improve pedestrian and bicycle network
Sustainable Solutions	*Minimize environmental impacts and utilize cost-effective design*		→	Grosvenor alternative requires a less significant investment in infrastructure and potential right-of-way impacts
Community Equity	*Provide improved and accessible transit service for underserved populations*	←		More disadvantaged populations live along the White Flint alternative
Economic Growth	*Promote economic development with appealing and functional transit*	←		White Flint better aligns with supporting planned development
Public Safety	*Improve safety of our streets and the livability and wellness of our communities*		●	Both alternatives contributes to increasing public safety and livability of the corridor

Which Alternative Best Achieves the Goal?

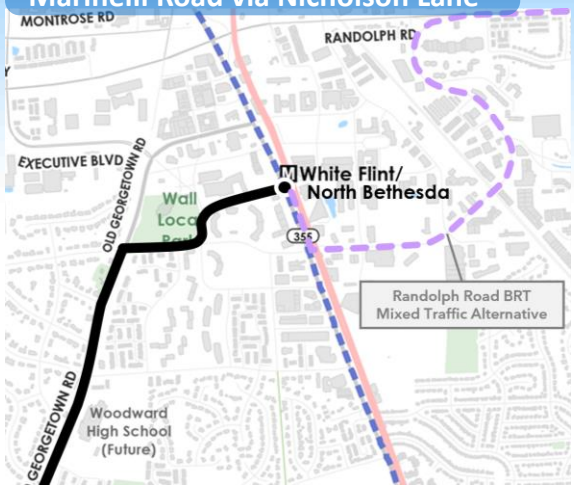
No Notable Advantage ●

Some Advantage ↔

Significant Advantage ⟷

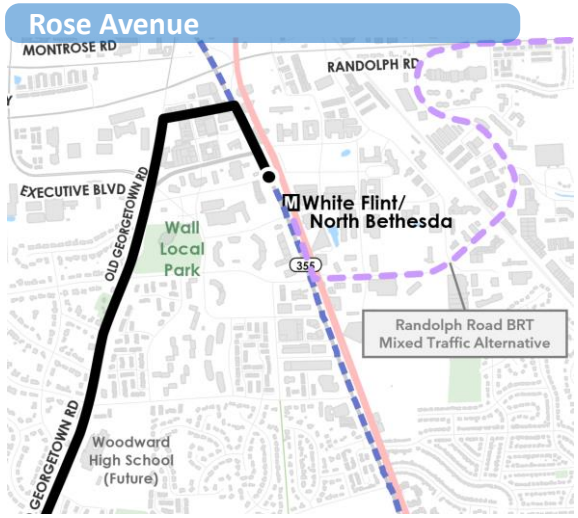
Route Screening

Marinelli Road via Nicholson Lane

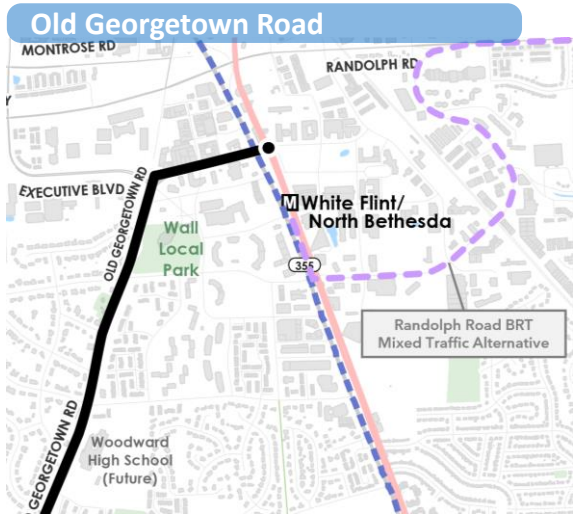


Nicholson Lane

Rose Avenue



Old Georgetown Road

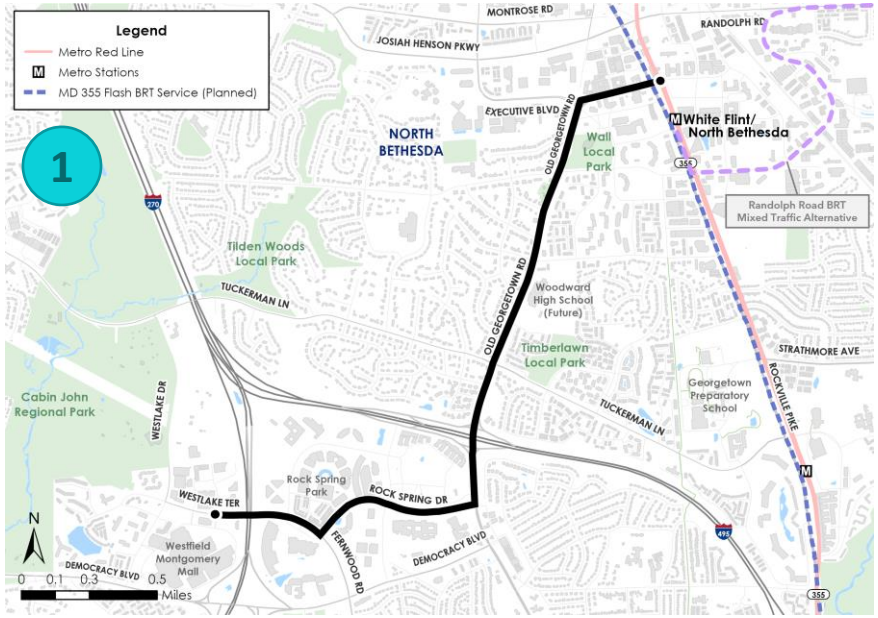


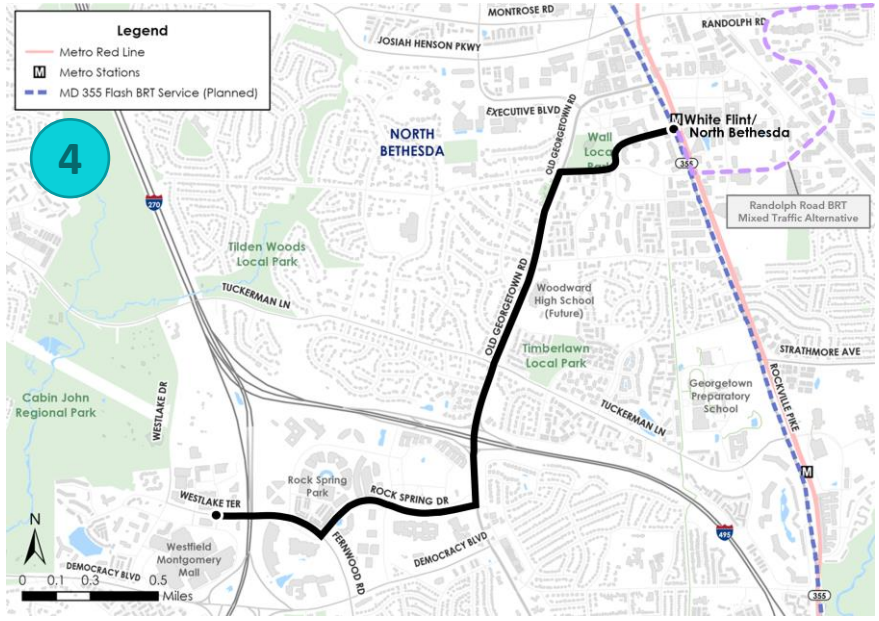
- Factors Considered:
  - Cross-section constraints
  - Consistency with existing bus service
  - Alignment with the White Flint Sector Plan
  - Potential for integration with Flash BRT
  - Ease of circulation around Metrorail
  - Access to community facilities

Route Screening Summary

Screening Route	Factors						
	Cross-Section	Consistency with Existing Service	Alignment with Development Patterns at the 2045 Build Year	Integration with Other Planned Flash BRT		Ease of Circulation Around Metrorail	Access to Community Facilities
				MD 355	Randolph Road		
★ **1** (to Old Georgetown Rd.)	+	o	+	o	o	+	+
2 (to Rose Ave.)	--	o	--	+	+	o	+
3 (to Nicholson Ln.)	+	o	--	+	o	--	+
★ **4** (to Marinelli Rd.)	o	+	+	o	o	+	o

- **Results:** The route screening recommended route 1 (to Old Georgetown Road) and route 2 (to Marinelli Road) be used in the development of build alternatives





Next Steps

We Are Here

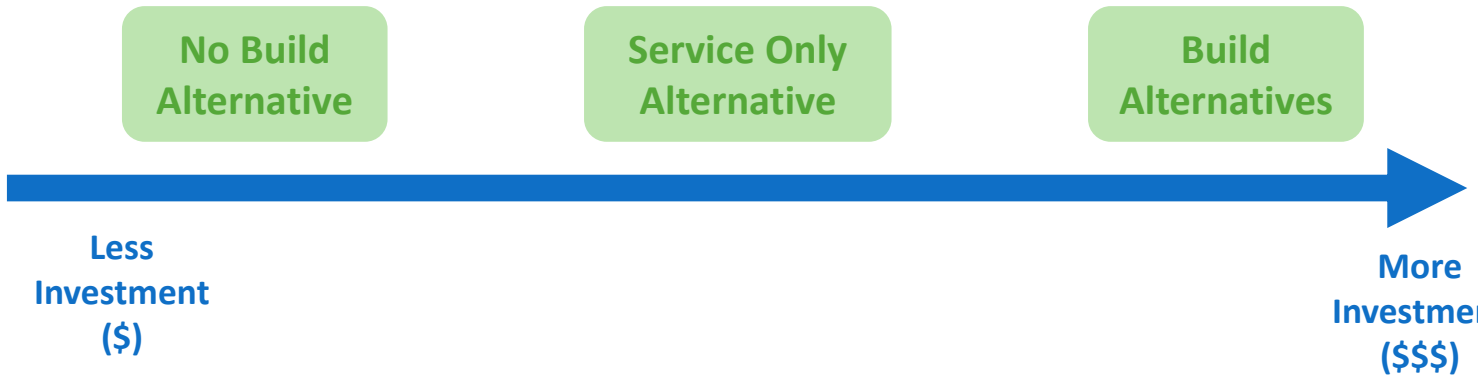
Winter 2022	Spring 2022	Summer 2022	Fall 2022	Winter 2023	Spring 2023
Project Kick-off	Corridor Foundations	Termini Screening	Build Alternatives Development	Build Alternatives Analysis	Select Preferred Alternative

Build Alternatives Development

Alternatives Analysis Overview

Alternatives for North Bethesda being evaluated	Components that ***vary*** between Alternatives and will be analyzed	Components that are ***constant*** between Alternatives
• No build alternative • Service only alternative (TSM) • Build alternatives	• Lane Configuration • Station Locations • Bike & Pedestrian Infrastructure • Intersections with Traffic Signal Priority (TSP) • Runningway (i.e., dedicated lanes vs. mixed traffic)	• Service inputs (BRT and local service modifications) • No-Build projects and pipeline developments

Level of Investment for Alternatives



Lane Configuration	Lane Configuration Detail	Build Alternative Selection Considerations	Alternative for Analysis
Optimize Transit in Mixed Traffic	TSM with TSP	*Configuration to use as baseline and when infrastructure changes to the roadway are not feasible*	**TSM / Build Alt. 1 / 2**
Optimize Transit in Mixed Traffic	TSM with TSP & Queue Jumps	*Configuration allows BRT operation when bus goes in or out of dedicated lanes to mixed traffic*	**Build Alt. 1 / 2**
Dedicate Transit Lanes	2 Repurposed Dedicated Transit Lanes in Curb Lanes for Flash & Local Use	*Configuration supports optimal BRT conditions and limits impact to right of way with potential traffic impacts to general purpose travel lanes*	**Build Alt. 2**
Dedicate Transit Lanes	2 Repurposed Dedicated Transit Lanes in Median Lanes	*Configuration supports optimal BRT conditions and limits right-of-way impacts*	**Build Alt. 1**
Dedicate Transit Lanes	2 Added Transit Lanes – Median Running	*Configuration supports optimal BRT conditions and limits traffic impacts with required right-of-way impacts*	**Build Alt. 1**
Dedicate Transit Lanes	Single Added Transit Lane - Center Peak / Curb Off Peak	*Configuration is less desirable for a preliminary build alternative. Lack of peak directional travel along the corridor adds to the complex operations, infrastructure needs, and potential safety concerns of single reversible transit lanes (see rationale in flow chart)*	None
Dedicate Transit Lanes	Single Added Transit Lane - Peak Direction		None
Dedicate Transit Lanes	Single Added Transit Lane -Bidirectional		None

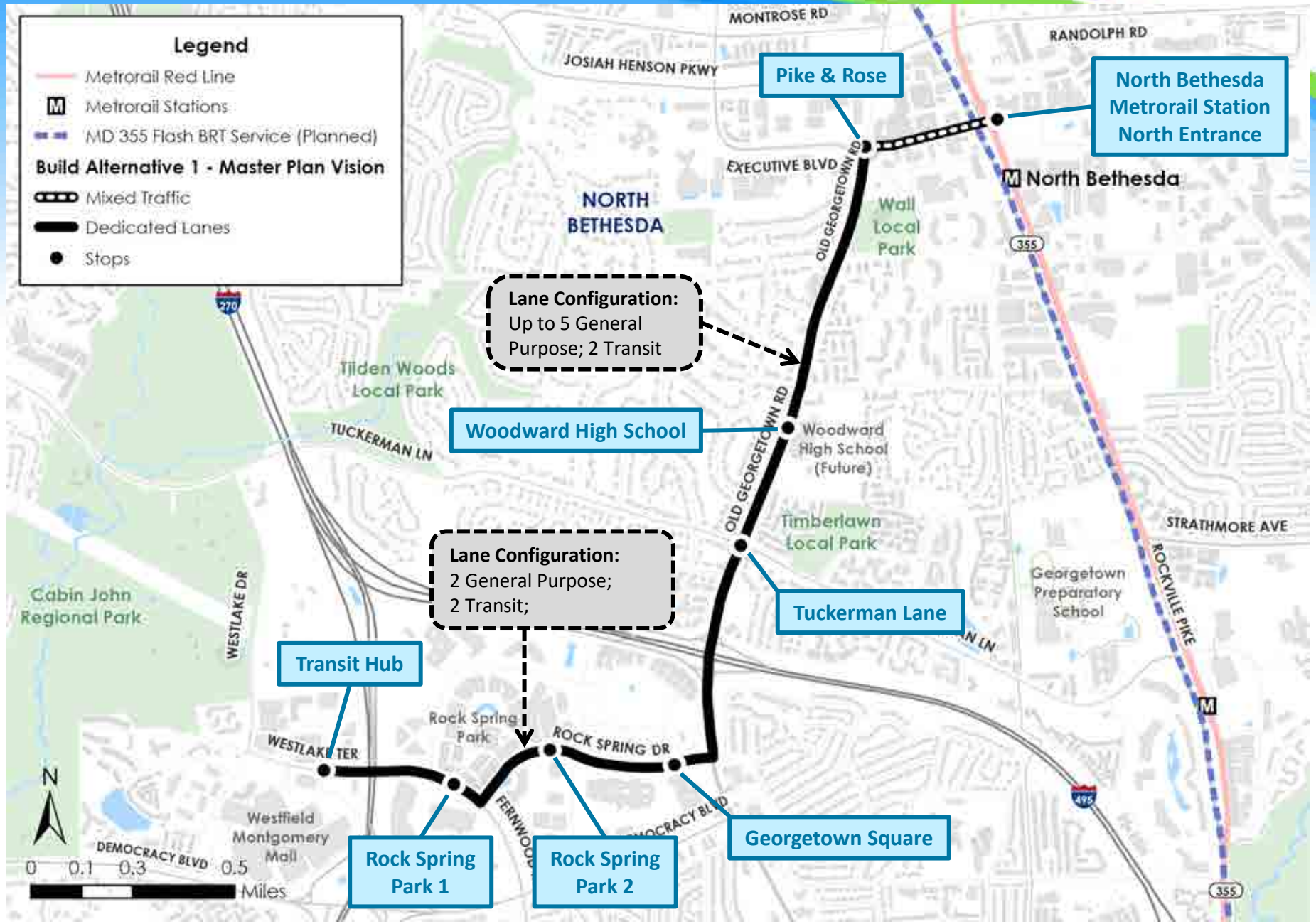
** Note: A single dedicated transit lane assumption was included in the Montgomery County Master Plan of Highways and this lane configuration may be reconsidered in development of the preferred alternative if right-of-way and traffic impacts make preliminary build alternatives undesirable.*

Framework for Alternatives

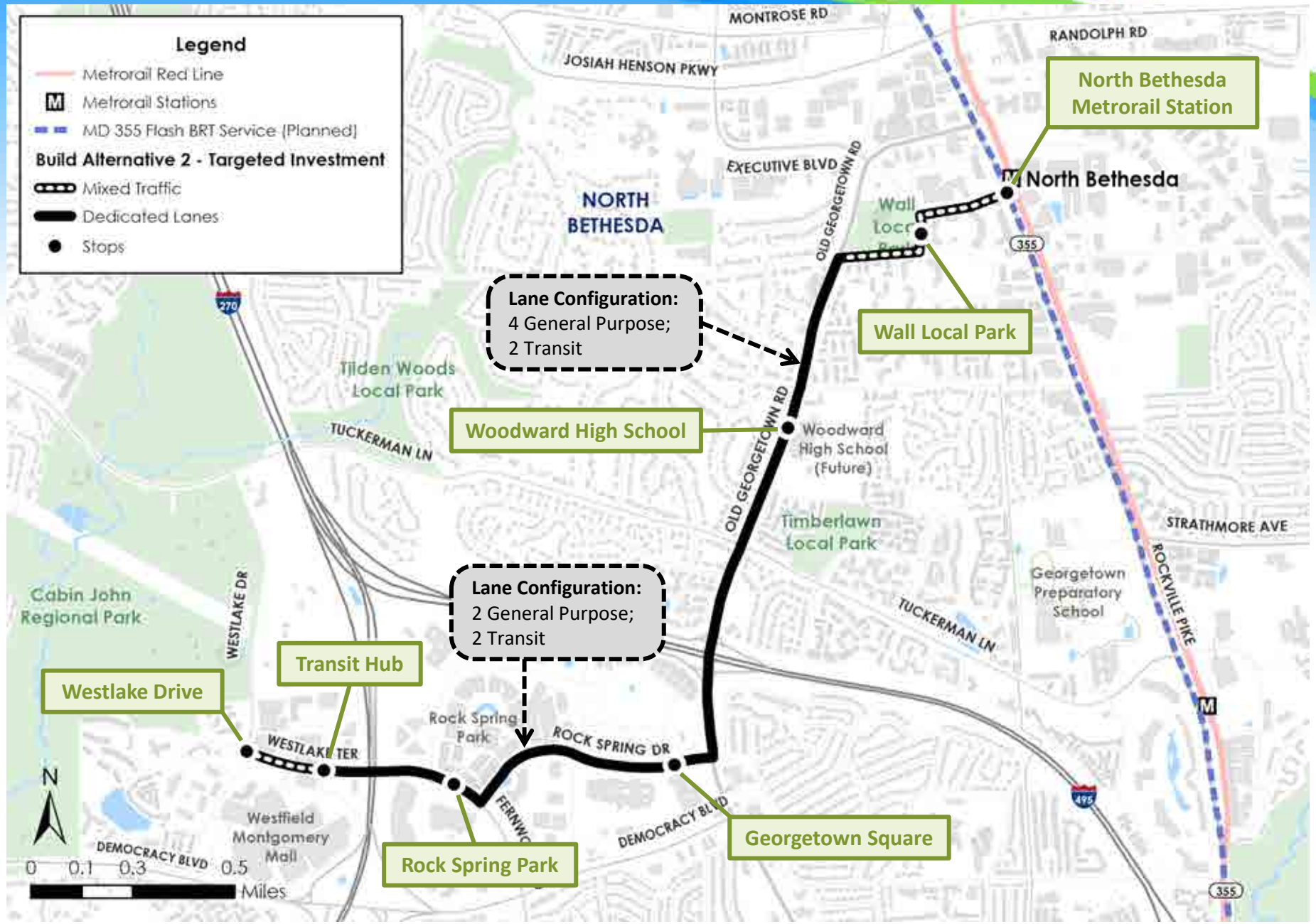
- No Build Alternative
  - *Includes all infrastructure and developments that will be built out regardless of it the North Bethesda BRT is implemented*
- TSM Alternative
  - *Includes increased service levels and potential TSP/queue jumps but no infrastructure improvements*
- Build Alternative 1 – **Maximum Build-Out**
  - *Anticipated Outcomes:*
    - Alignment with 2013 Transit Corridors Master Plan and additional multimodal and land use plan visions
    - Increased right-of-way impacts but less operational impact
- Build Alternative 2 – **Targeted Investment**
  - *Anticipated Outcomes:*
    - Strategic alignment with sector plan area growth
    - Increased operational impacts but less right-of-way impact

Framework for Alternatives

	Alt. 1: **Maximum Build-Out**	Alt. 2: **Targeted Investment**
Lane Configuration	• **Full** Build-Out of Dedicated Lanes (per Master Plan)	• **Targeted Repurposed** Dedicated Lanes (within existing cross section)
Stations	• 2013 **Master Plan** Stations	• **Fewer** Stations to prioritize travel time • Potential Route Extension (Service Only) to the West
Runningway	• Curb/Median Running	• Curb/Median Running at Targeted Locations • **More Mixed-Flow**
Intersection Treatments	• TSP Intersections	• TSP Intersections • **Queue Jumps**
Advantages	• Less operational impacts • Aligns with master plan visions • Pedestrian/bicycle improvements	• Less right-of-way impacts • Faster implementation and lower cost • Pedestrian/bicycle improvements
Timeframe	• Long-term	• Short-term
Service Considerations	• Peak focused versus all-day service • Connection/interlining with 355, Randolph Road, and Tyson Connector • Local service restructuring	



Build Alt. 1: Maximum Build-Out



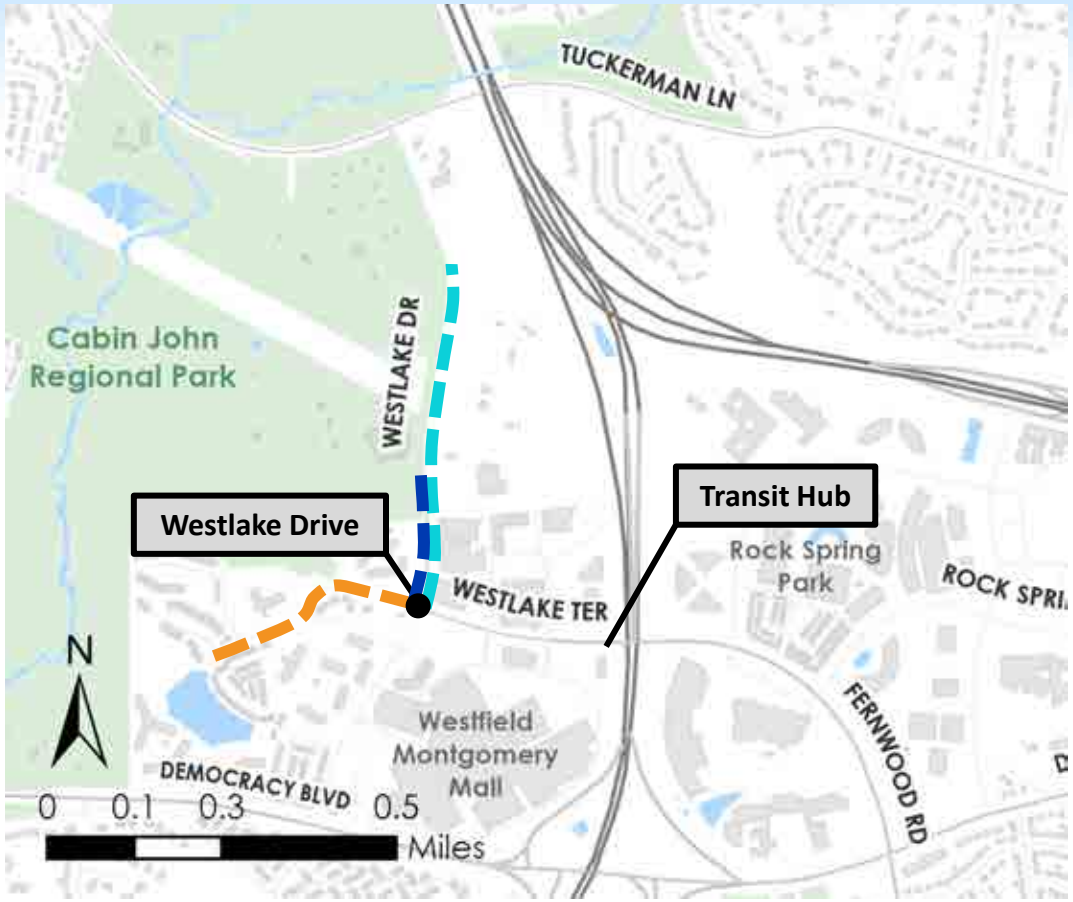
Build Alt. 2: Targeted Investment

Bike & Pedestrian Infrastructure

No Build Bike/Ped Infrastructure

- No build bike/ped infrastructure will be built regardless of whether NBT is implemented.
- SHA Old Georgetown Road bike lane project is being considered as part of the no-build

Western Terminus Extension



- The public expressed interest in service to *Cabin John Regional Park* and *residences on Westlake Terrace*
- Approximate walking distances to/from the intersection of Westlake Drive and Westlake Terrace:

~0.3 miles

~0.15 miles

~0.5 miles

Next Steps

- **February/ March 2022:**
  - Met with the TAG to present the results of the build alternatives analysis
- **Next 2-3 Months:**
  - Conduct the build alternatives analysis (traffic analysis, ridership, accessibility, etc)
  - Complete STOPS model ridership
- **Next 4-5 Months:**
  - Review build alternatives analysis with CAC/TAG/public
  - Select preferred alternative