

# Blue/Orange/Silver Corridor Capacity & Reliability Study

Progress Update

TPB Regional Public  
Transportation Subcommittee

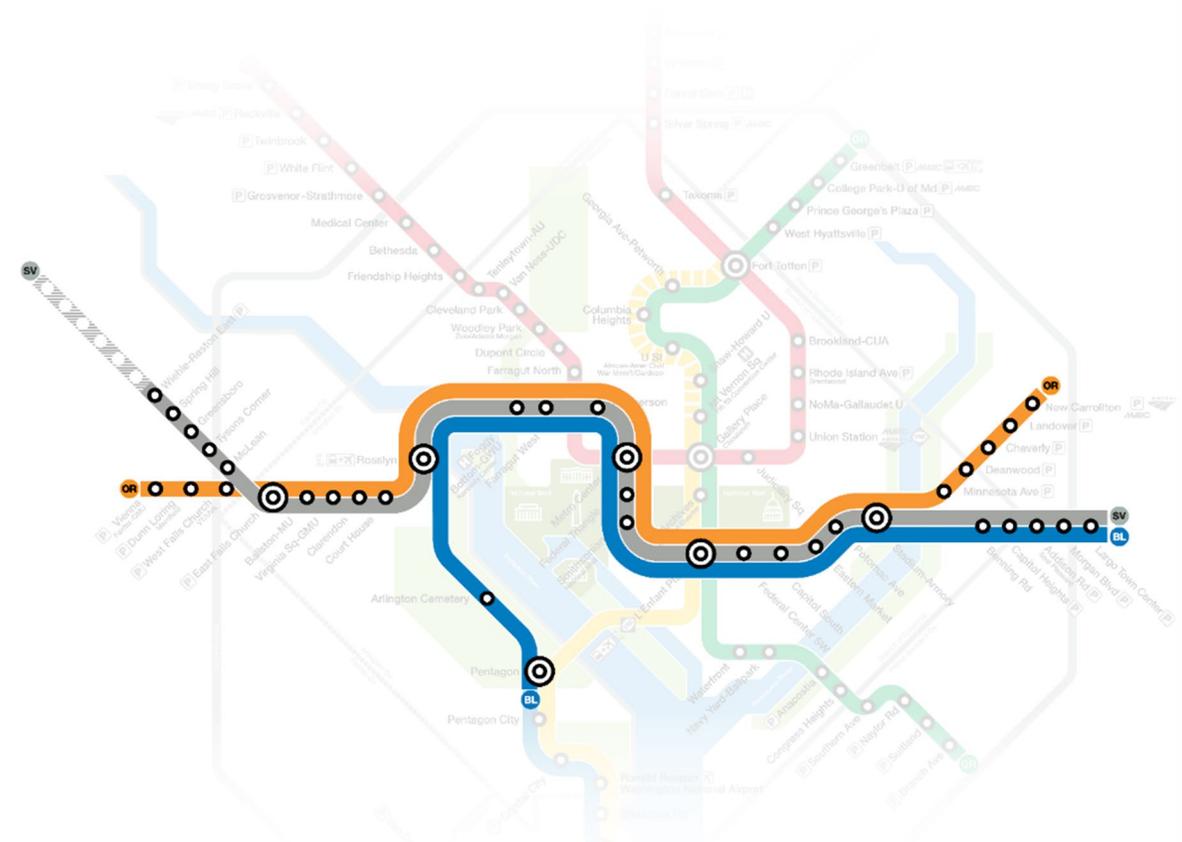
October 26, 2021

NOT FOR CIRCULATION



# Agenda

- Blue/Orange/Silver Corridor Capacity and Reliability Study (BOS Study) update
- Study purpose
- BOS corridor transit challenges
- Identifying range of alternatives
- Descriptions of current alternatives
- Next steps



BOS Study Area

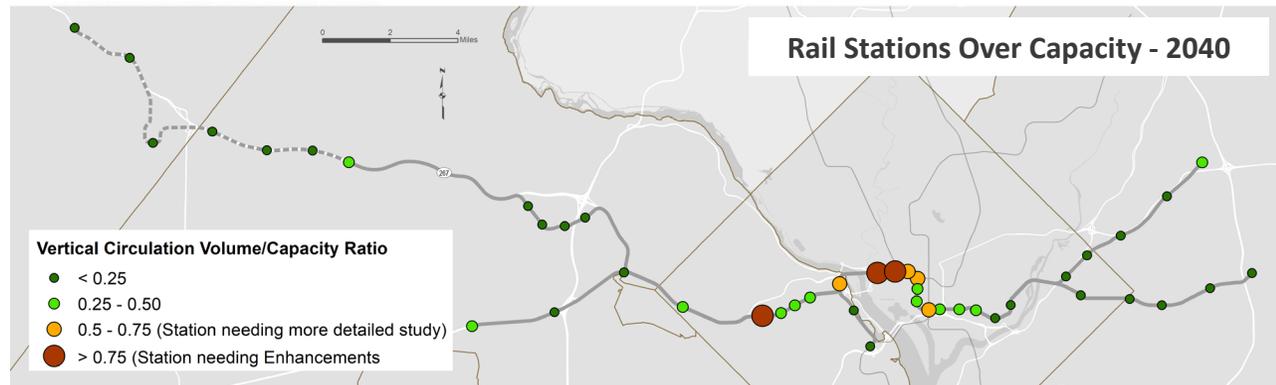
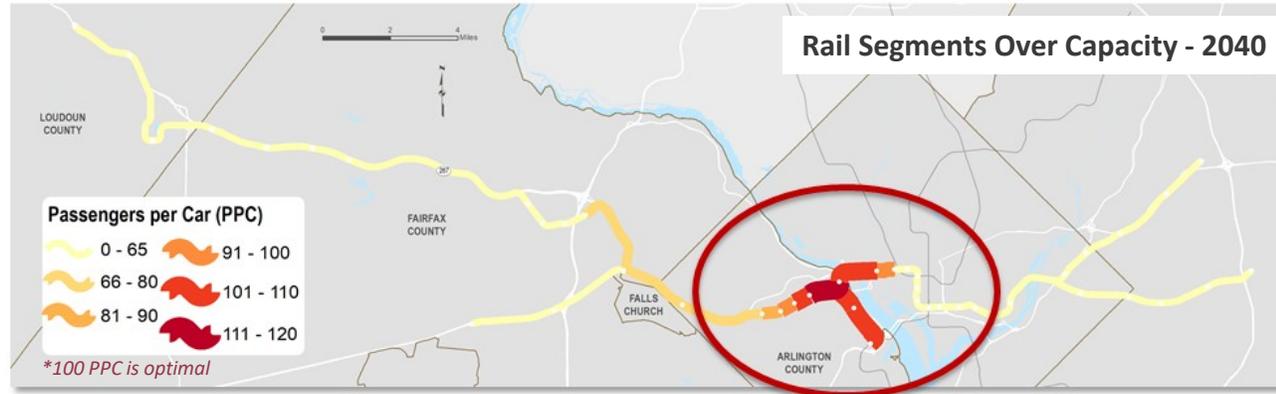
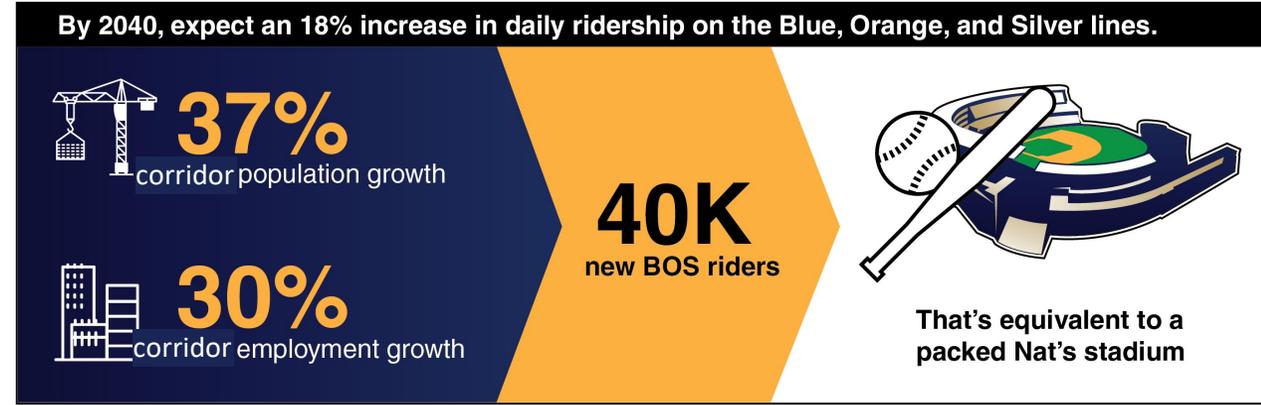
# Study purpose

- Launched early 2019 to identify best and most cost-effective solutions to address:
  - Ridership
  - Capacity
  - Service
  - Reliability needs
- Identifies range of options to address corridor-wide concerns
- Study now ready for additional public engagement and input



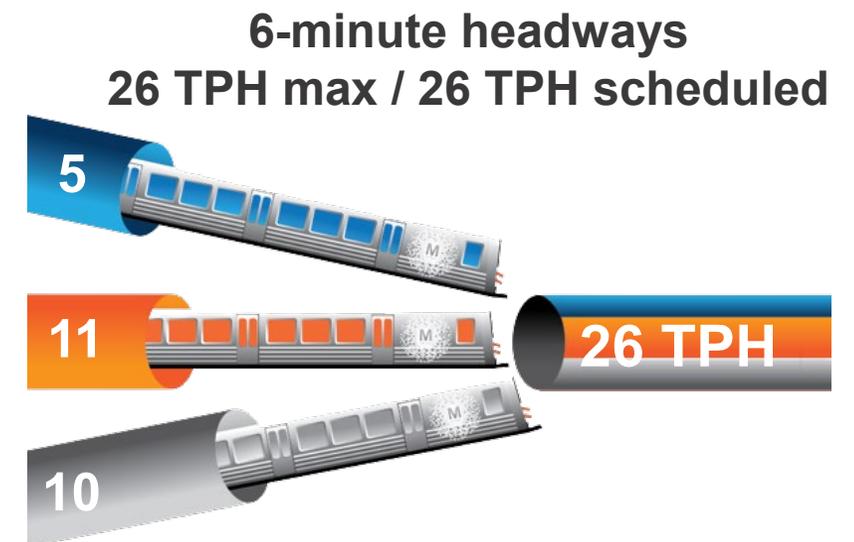
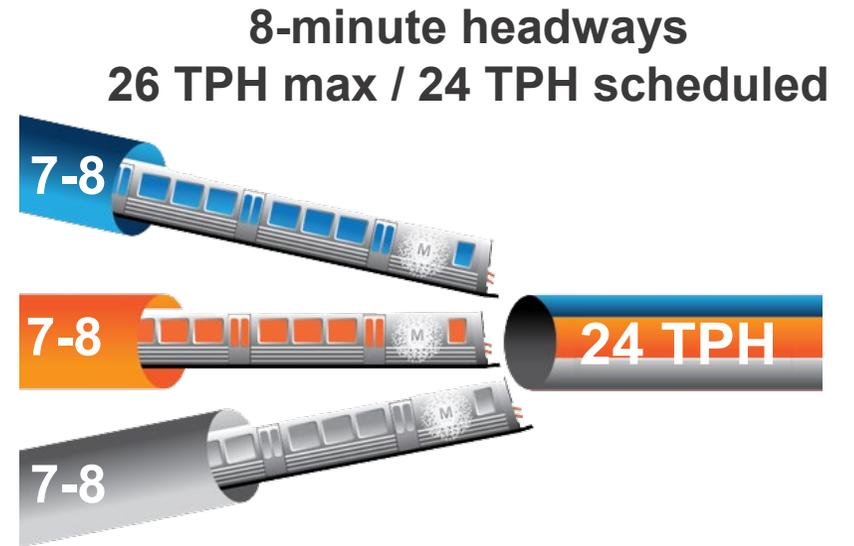
# Growth in jobs and households likely to increase crowding in trains and stations

- BOS lines experienced unsafe peak crowding for years before COVID
- Jurisdictions project substantial growth in the BOS corridor by 2040
- Models indicate that growth will increase the severity, duration, and locations of crowding



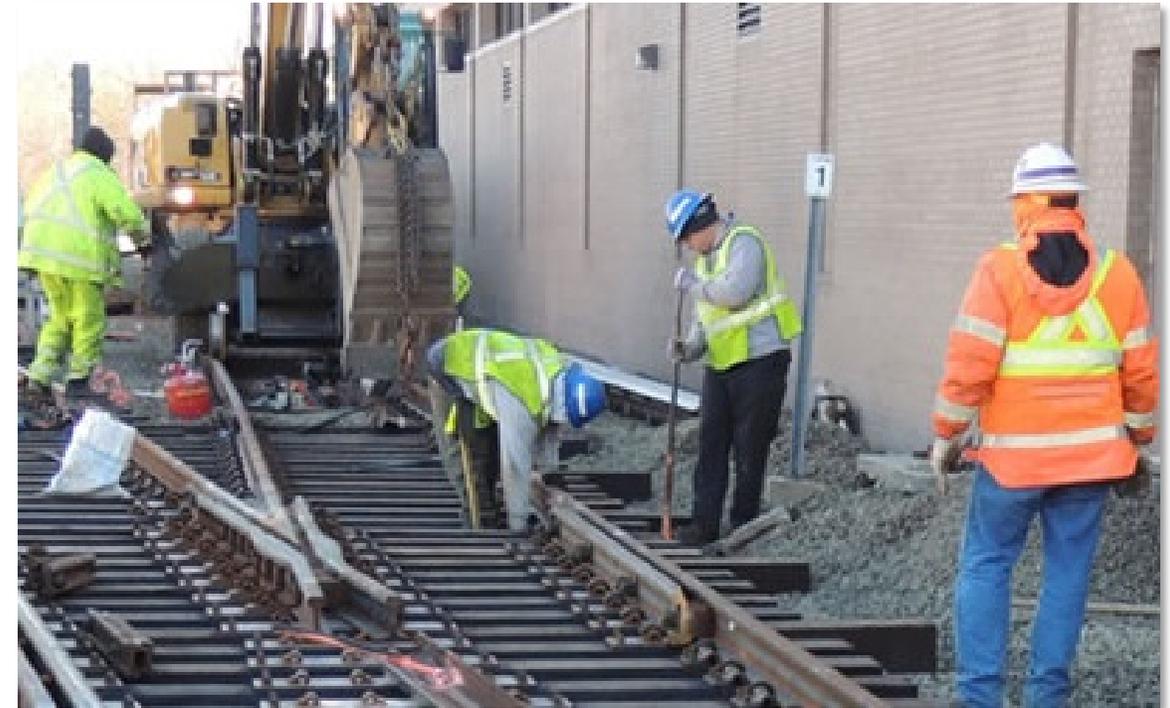
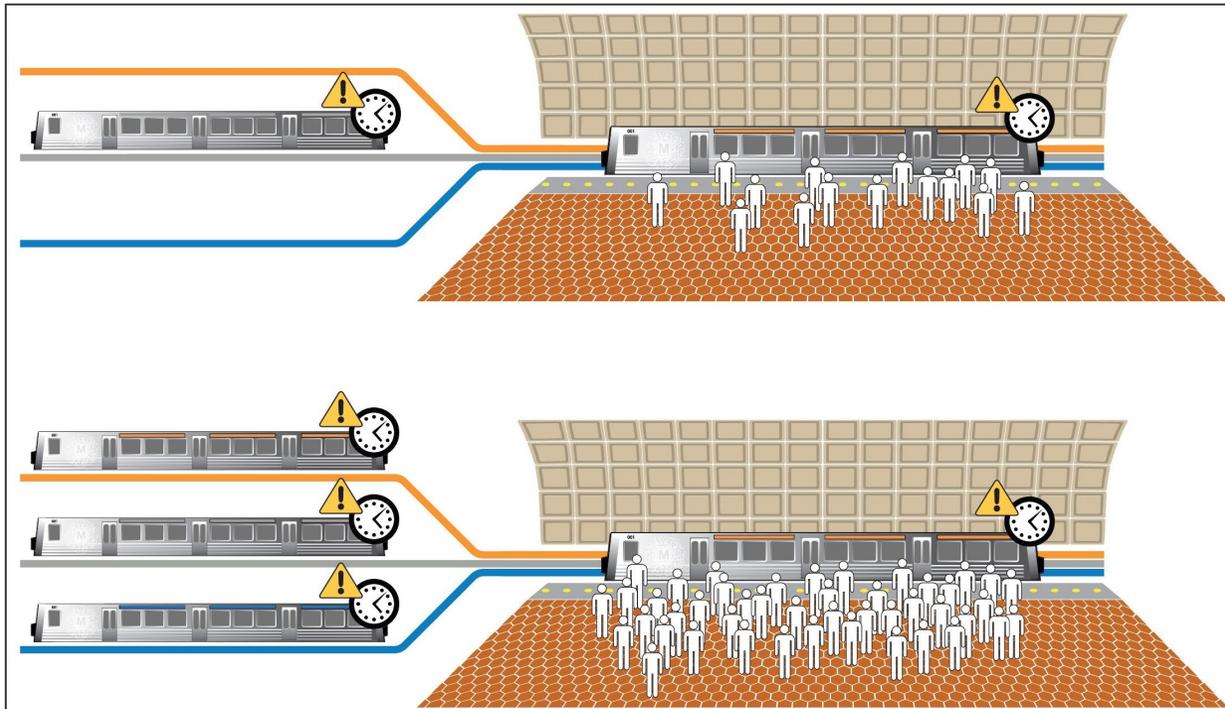
## But the existing system can't meet that demand

- Metro can run 26 trains per hour (TPH) per track
- Increasing frequencies from 8 to 6 minutes on two lines would require reducing service on the other
  - Example: Under the previous 6-minute schedule, the BL Line ran every 12 minutes (5 TPH)
- Metro cannot improve headways *and* meet ridership demand on all three lines
- 8-car trains will help but not solve the problem



Interlining\* creates (and compounds) the effects of delays and crowding

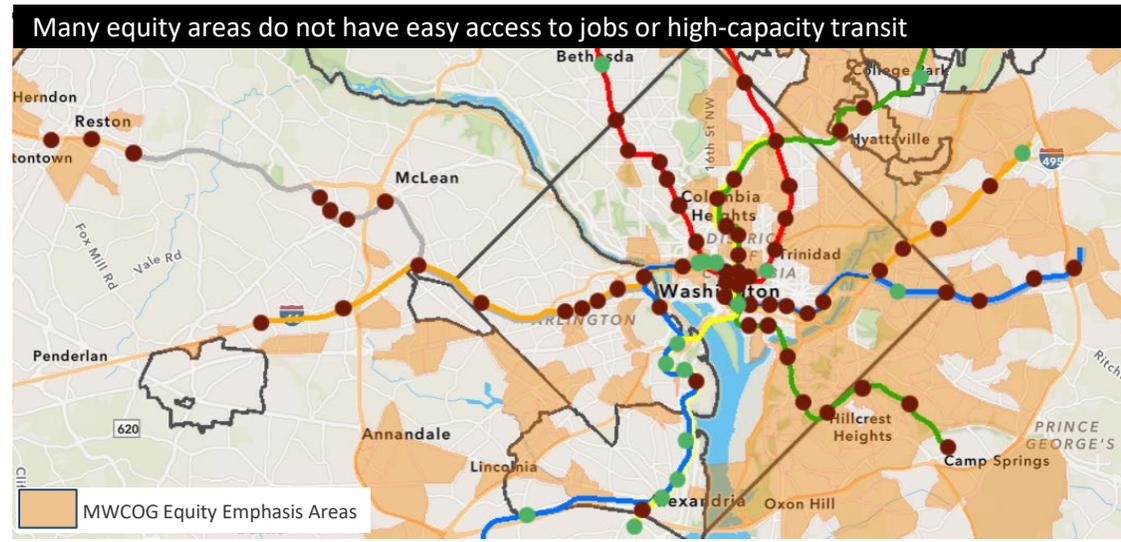
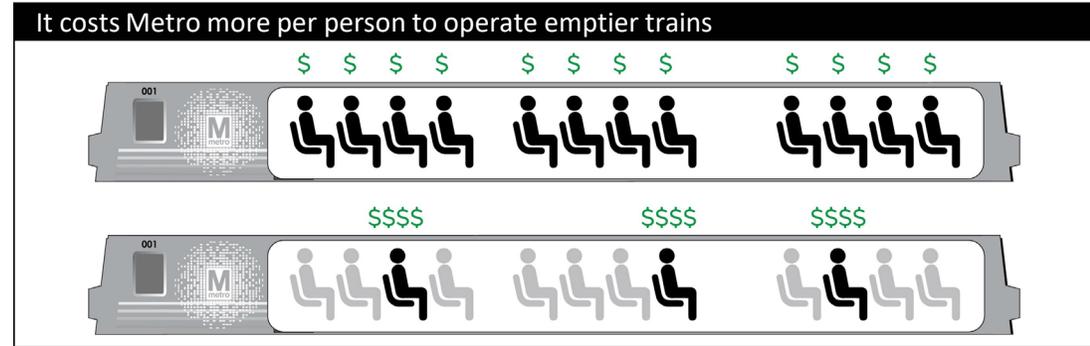
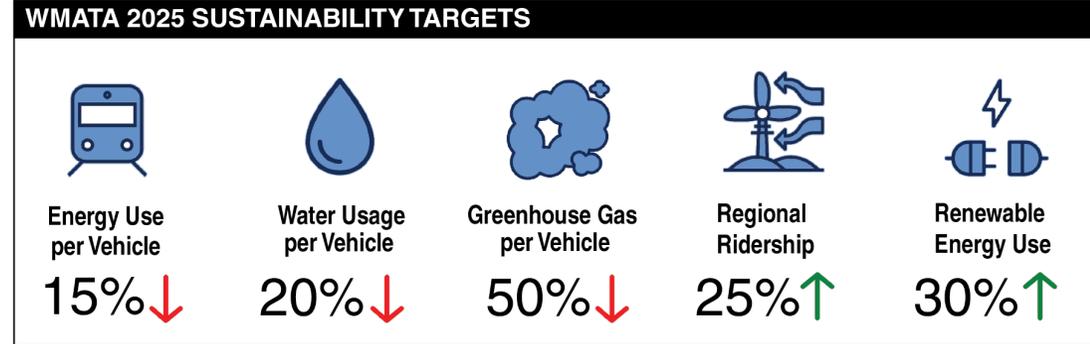
And Metro needs infrastructure to reduce the geographic extent and impacts of construction/disruption



*\*Interlining: Operating more than one rail line along the same set of tracks.*

Metro also needs to explore strategies for long-term environmental and economic sustainability, such as:

- Attaining Metro’s sustainability goals
- Increasing farebox recovery ratio
- Encouraging shift from cars to transit
- Supporting transit-oriented development
- Expanding access to high-capacity transit and economic opportunities, particularly in equity areas



# Solution needs to further four goals



**Goal 1:**  
Provide Sufficient Capacity to Serve Ridership Demand



**Goal 2:**  
Improve Reliability & On-Time Performance



**Goal 3:**  
Improve Operational Flexibility & Cost-Efficiency

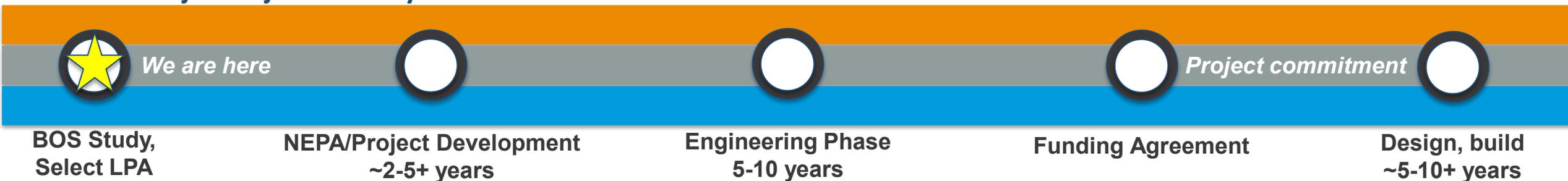


**Goal 4:**  
Support Sustainable Development & Expand Access to Opportunity

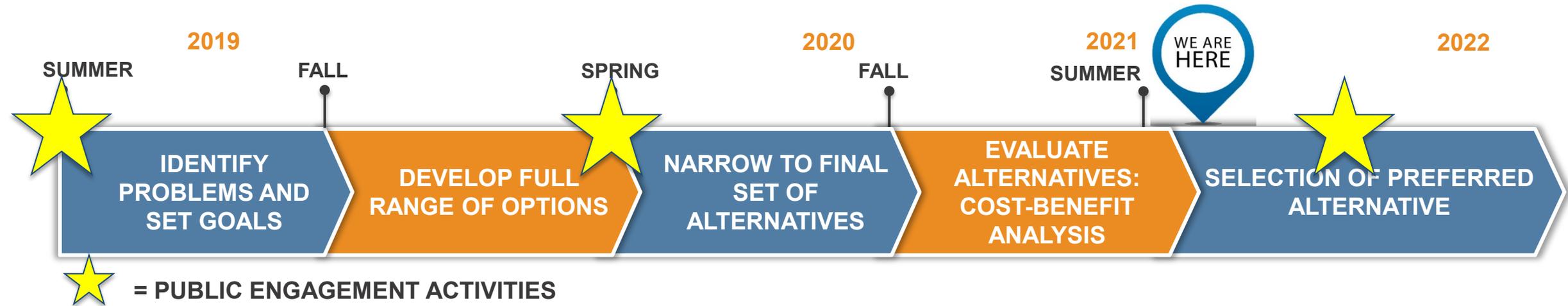
# Study aligns with federal project planning requirements

- Major capital projects can take 20+ years to deliver (e.g., Silver Line expansion)
- Following federal requirements to be eligible for Federal funding
- No commitment to build until funding agreement

## Illustrative Major Project Delivery Timeline



# Study process

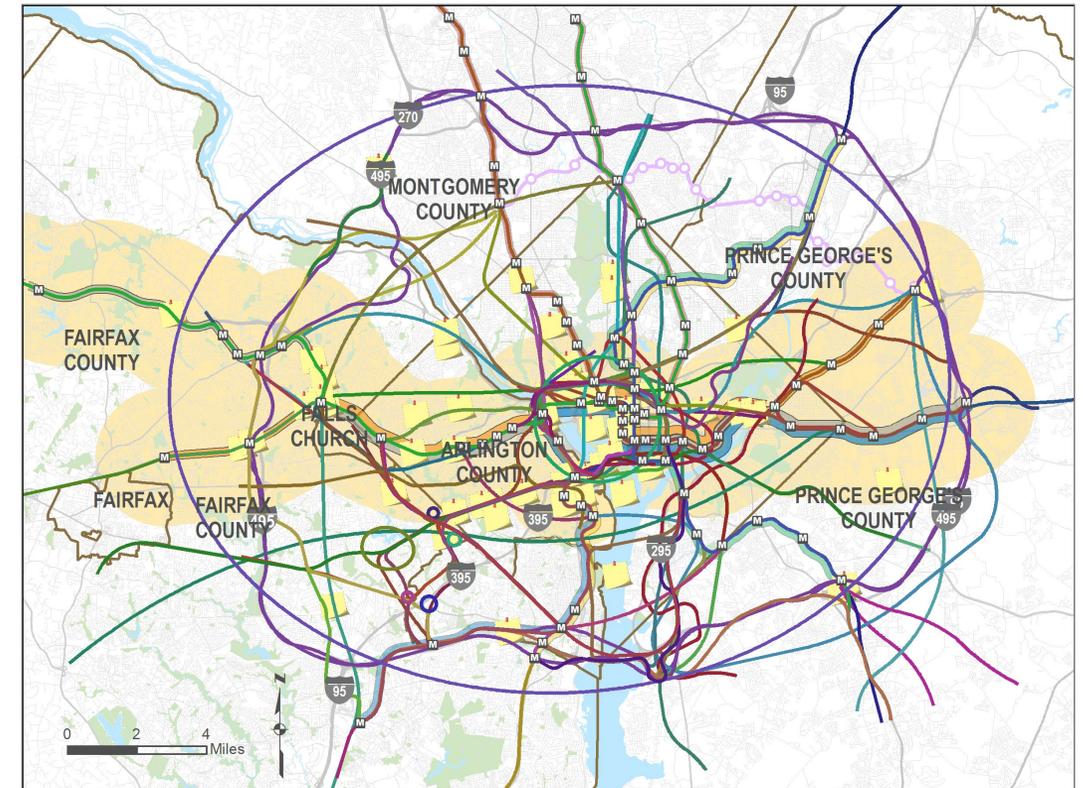


- Process based on Federal guidelines for NEPA alternatives analysis
- Continued engagement with customers, public, stakeholders, and elected officials

# Public & stakeholder input to date

- Six meetings each:
  - Metro leadership and technical advisory committees
  - Jurisdictional leadership and technical advisory committees
- Two meetings of corridor elected officials
- Workshops for community-based organizations
- 13 pop-up events at Metro stations
- 4 public open houses
- 2,000+ online surveys
- 275 project “concepts” submitted
- Project website and email

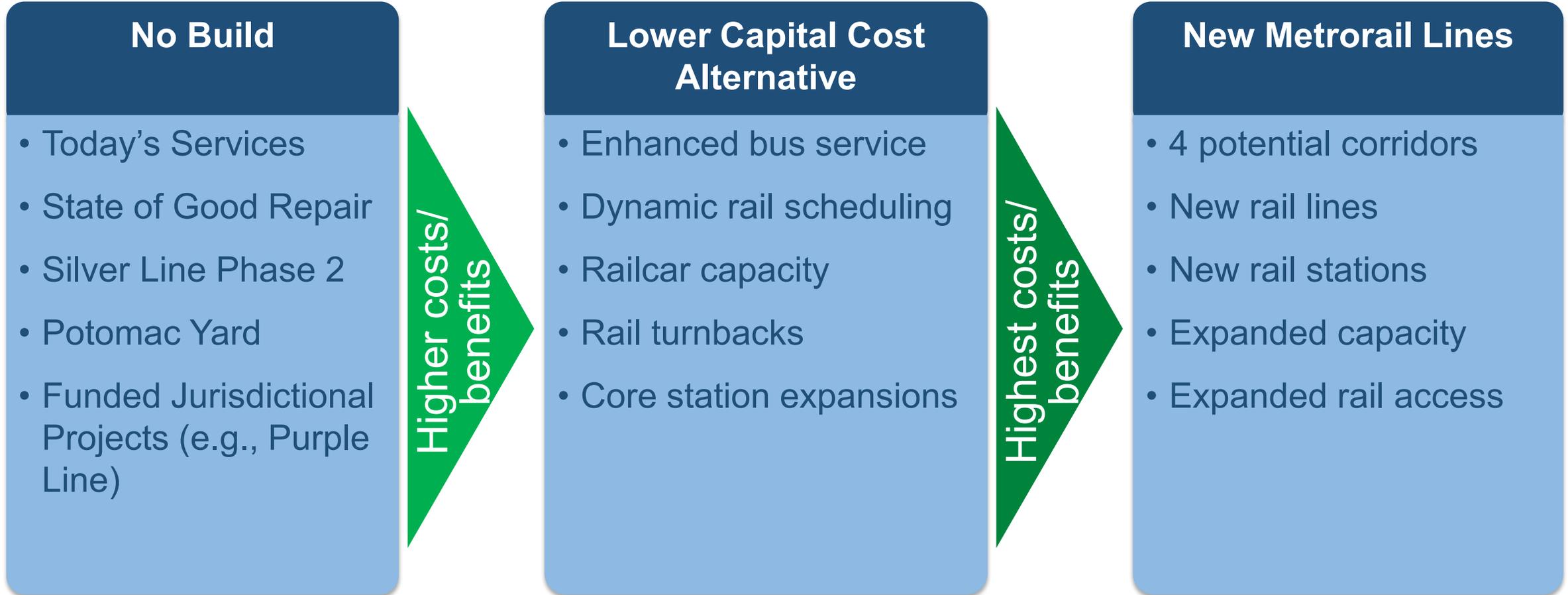
## Over 275 Ideas Submitted



# Identifying the Locally-Preferred Alternative

- **Six preliminary alternatives developed:**
  - Solution may be one of the six alternatives shown, or a combination of components from different alternatives
  - Recommendation to be made following public participation process and engagement with stakeholders and elected officials
  - **Presentation is not an LPA recommendation**

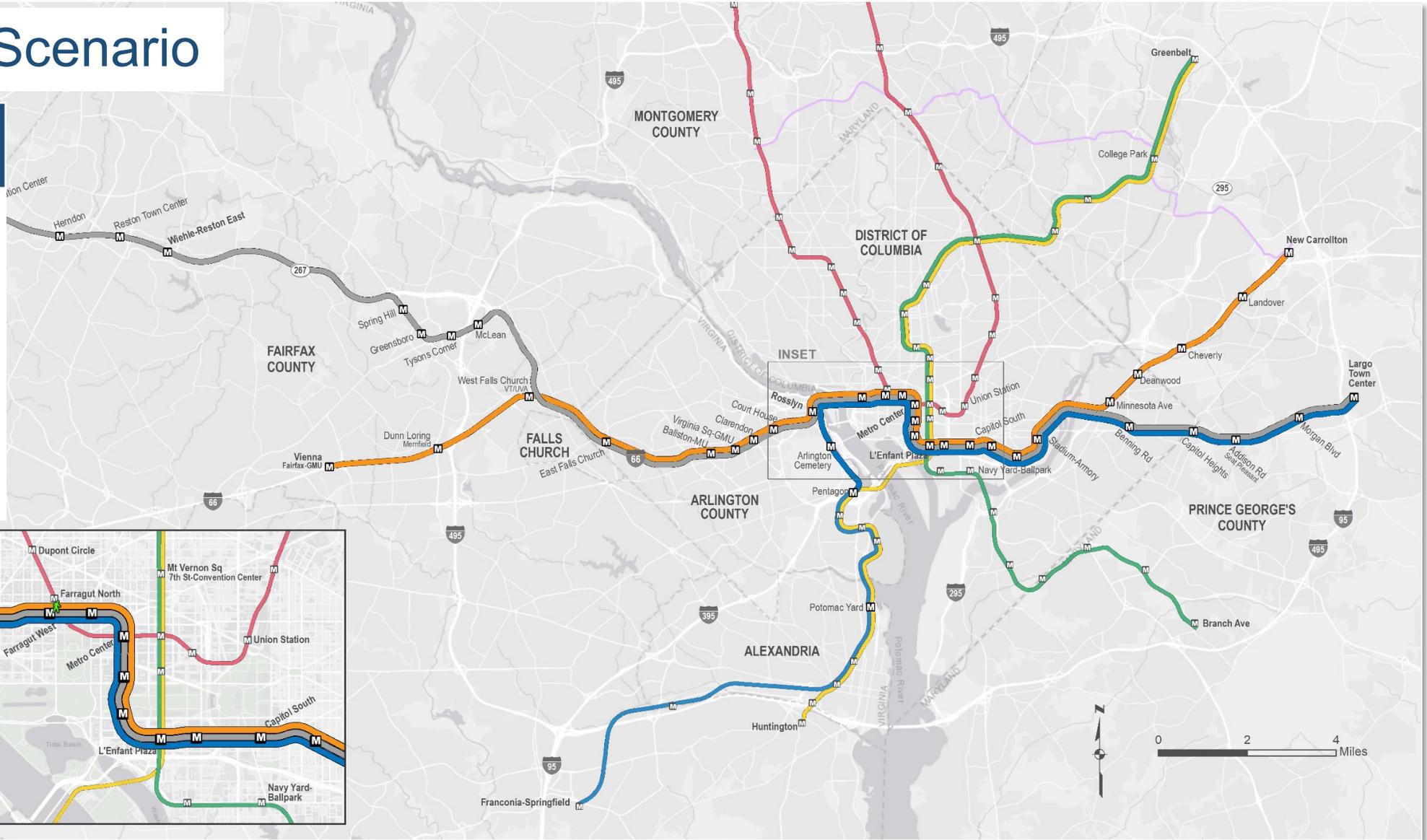
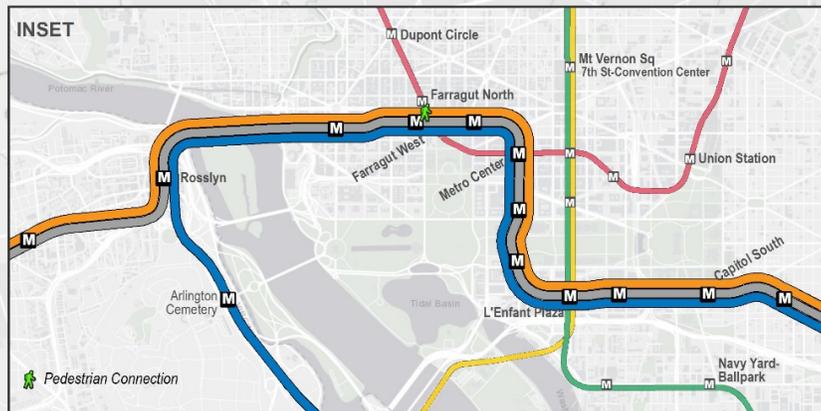
# Range of current alternatives



# No-Build Scenario

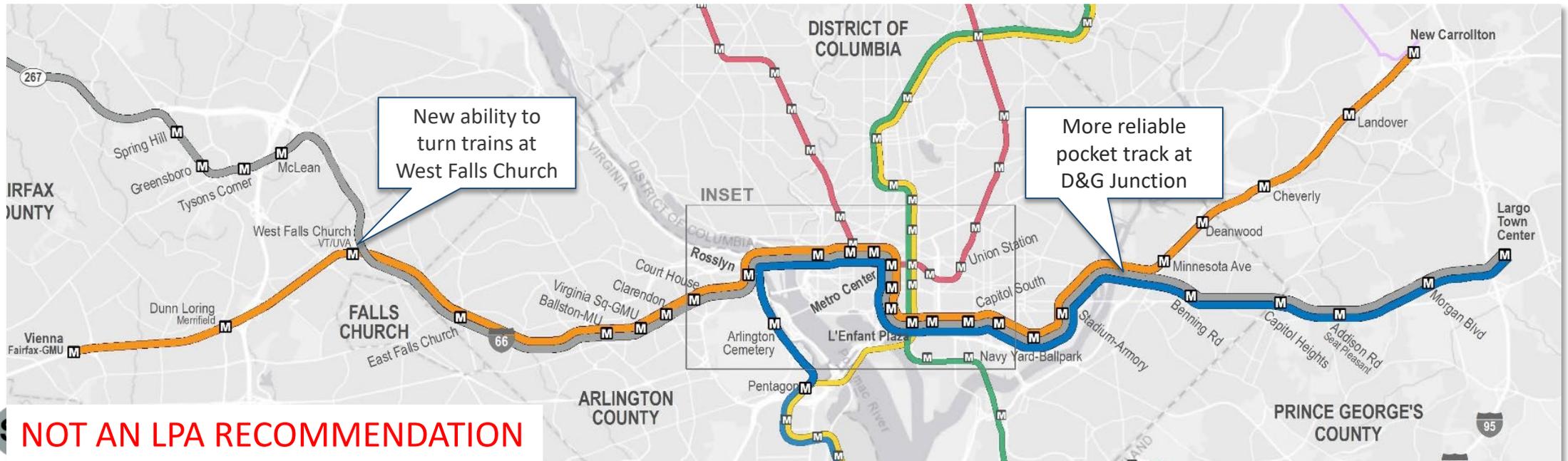
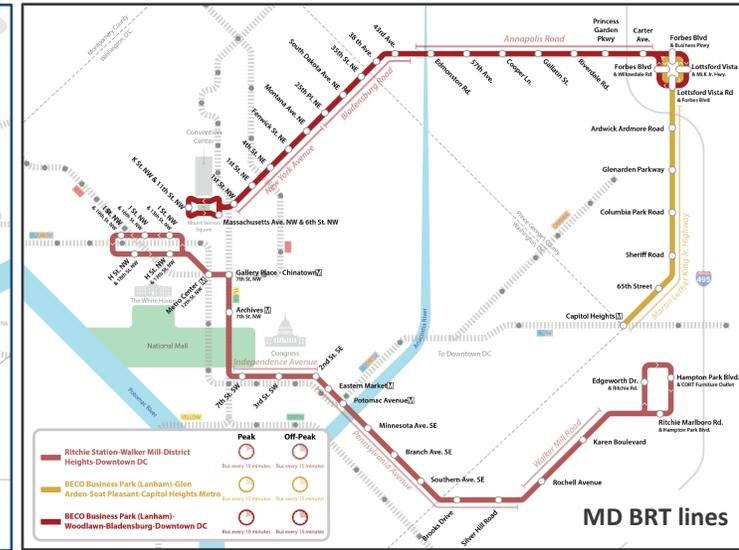
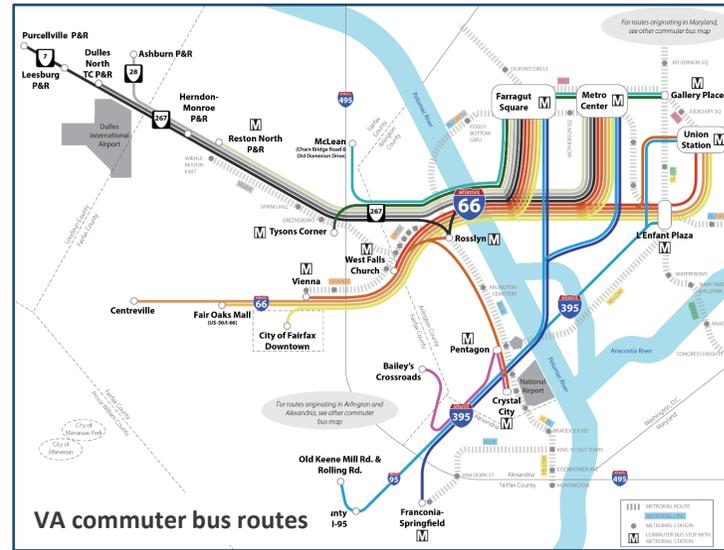
## Peak Service Plan 2040

- OR** 6 minutes
- BL** 12 minutes
- SV** 6 minutes
- GR** 6 minutes
- YL** 6 minutes
- RD** 3 minutes

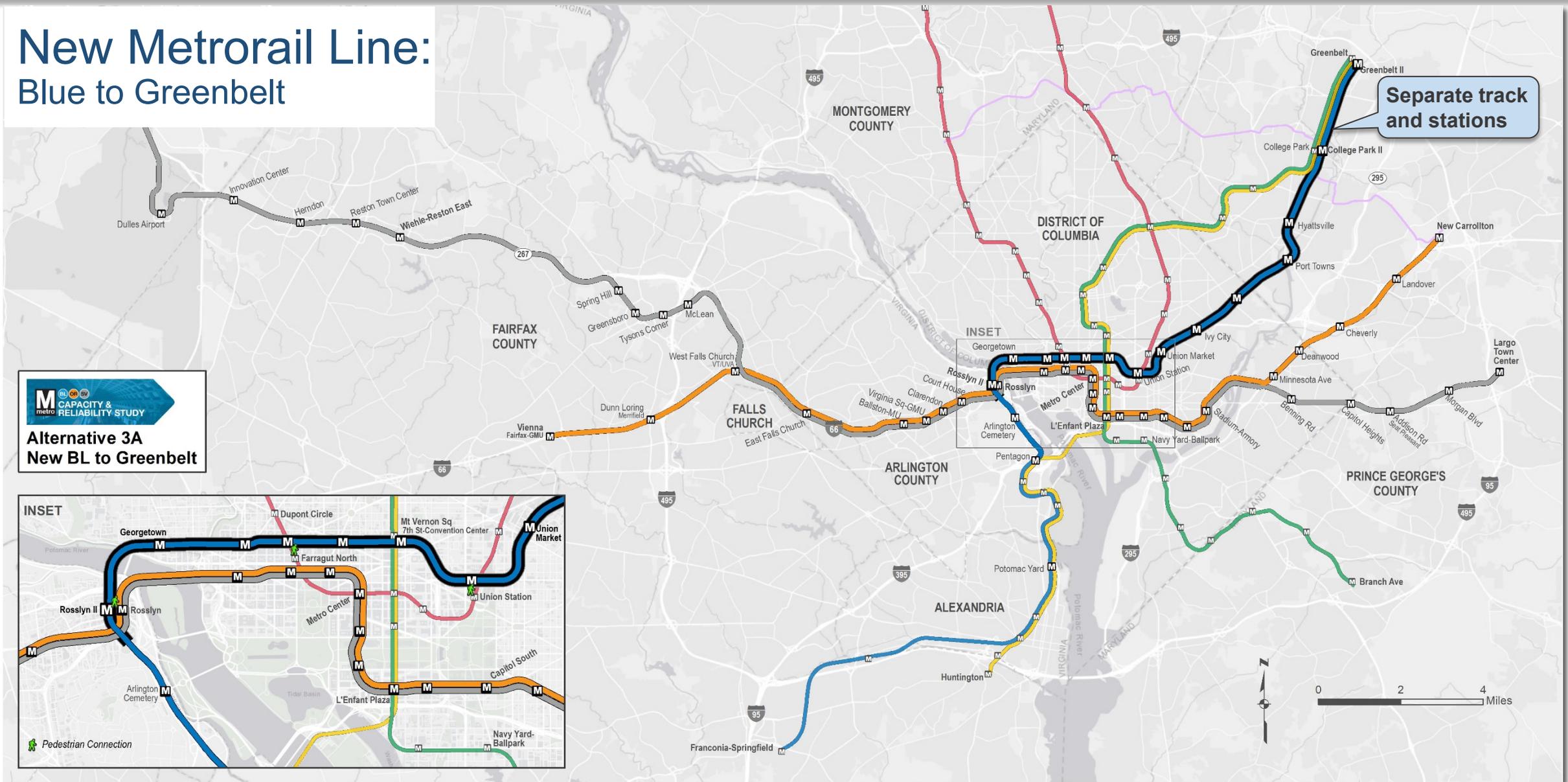


# Lower Capital Cost Alternative

- Enhanced bus service (6 BRT + 54 commuter routes)
- Dynamic rail scheduling
- Railcar capacity
- Rail turnbacks
- Core station capacity improvements



# New Metrorail Line: Blue to Greenbelt

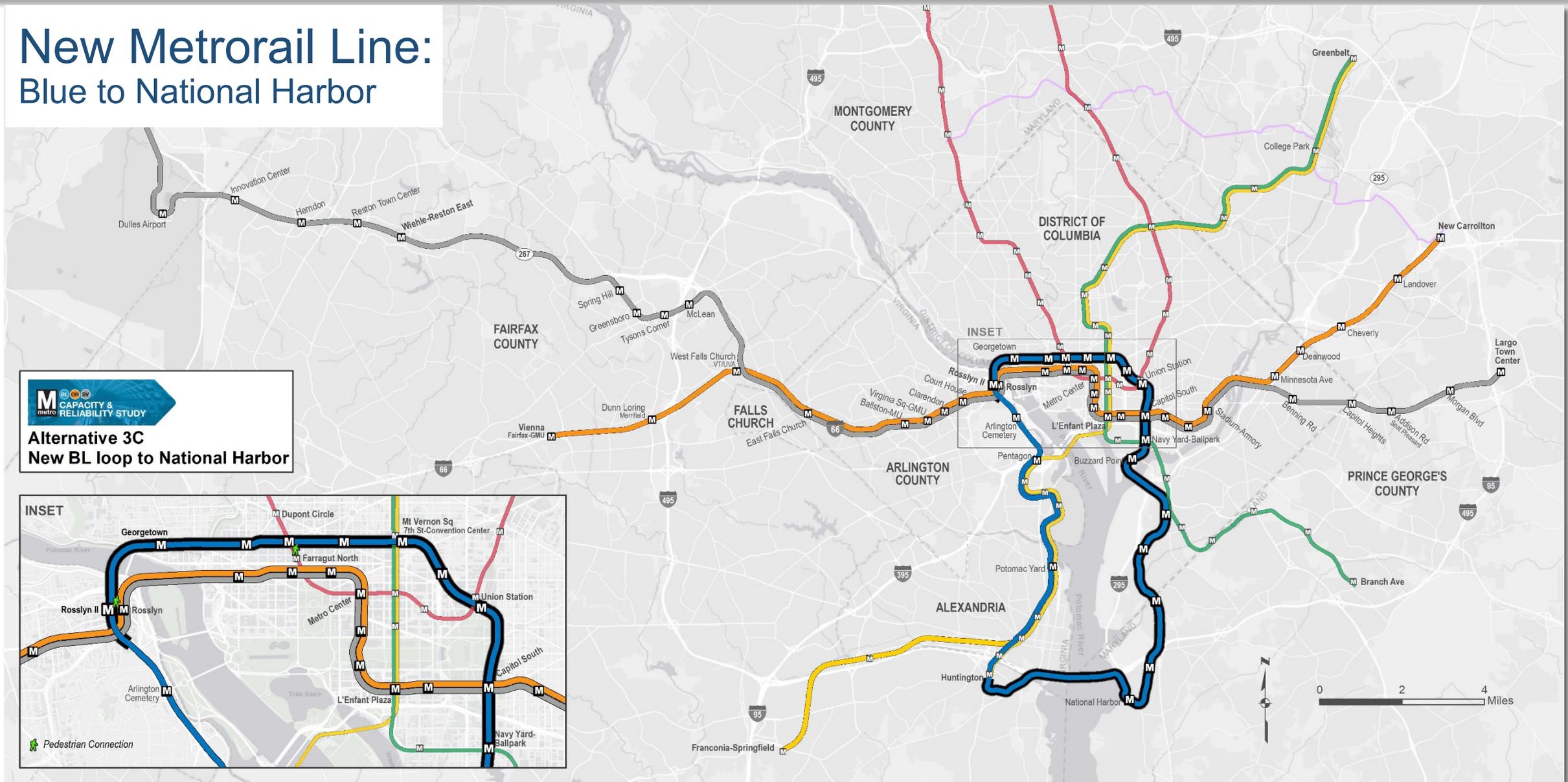


**M** CAPACITY & RELIABILITY STUDY  
**Alternative 3A**  
 New BL to Greenbelt

Separate track and stations

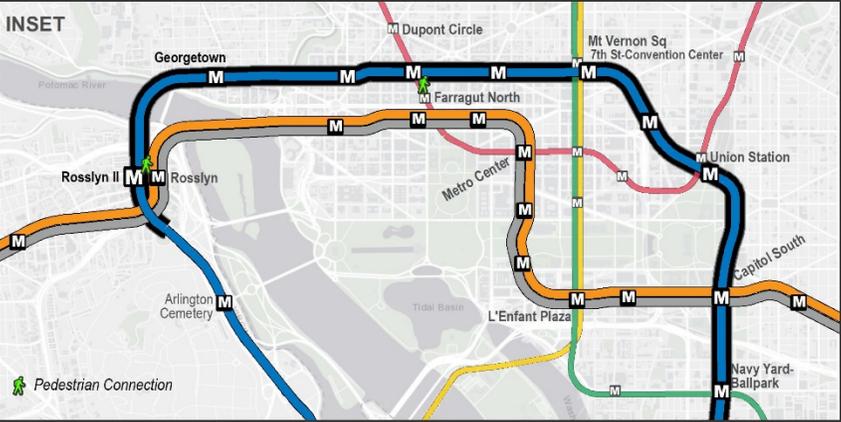


# New Metrorail Line: Blue to National Harbor

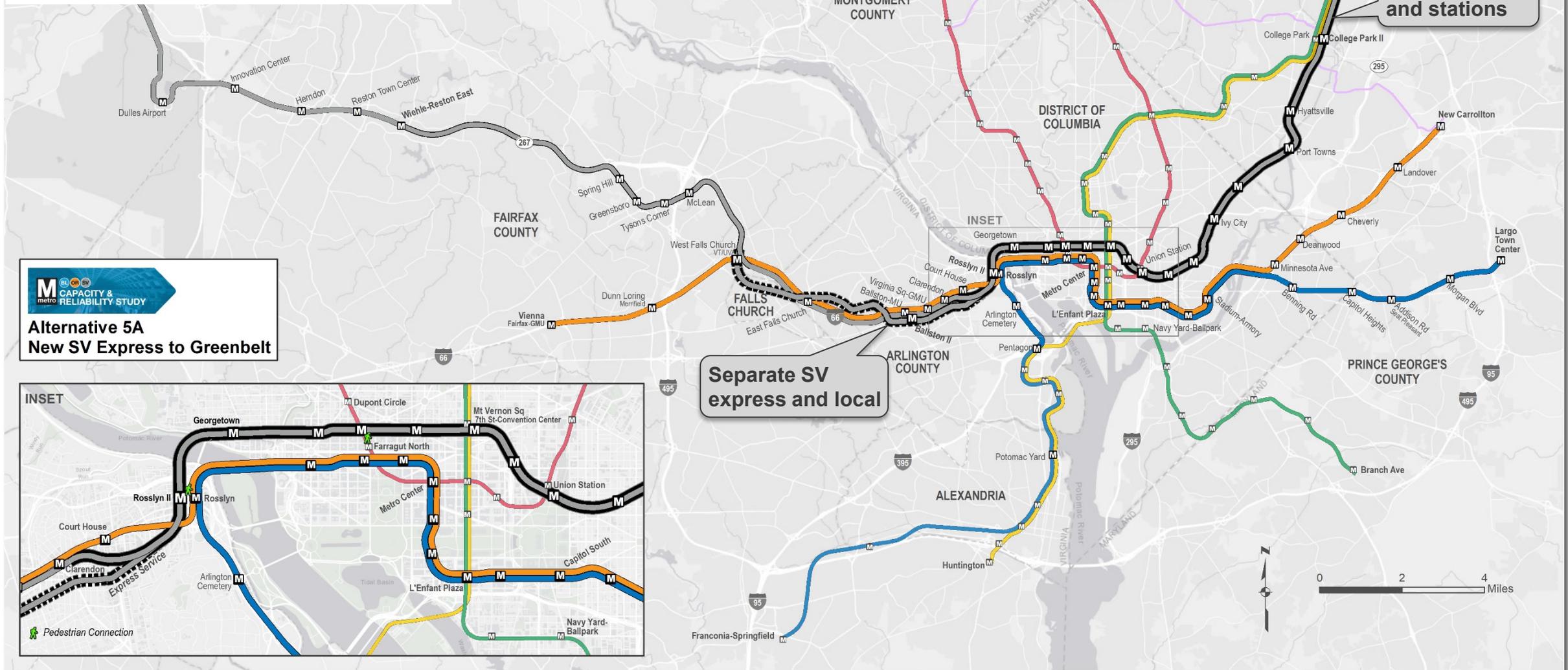


**M** metro  
CAPACITY & RELIABILITY STUDY

**Alternative 3C**  
New BL loop to National Harbor



# New Metrorail Line: Silver Express in VA



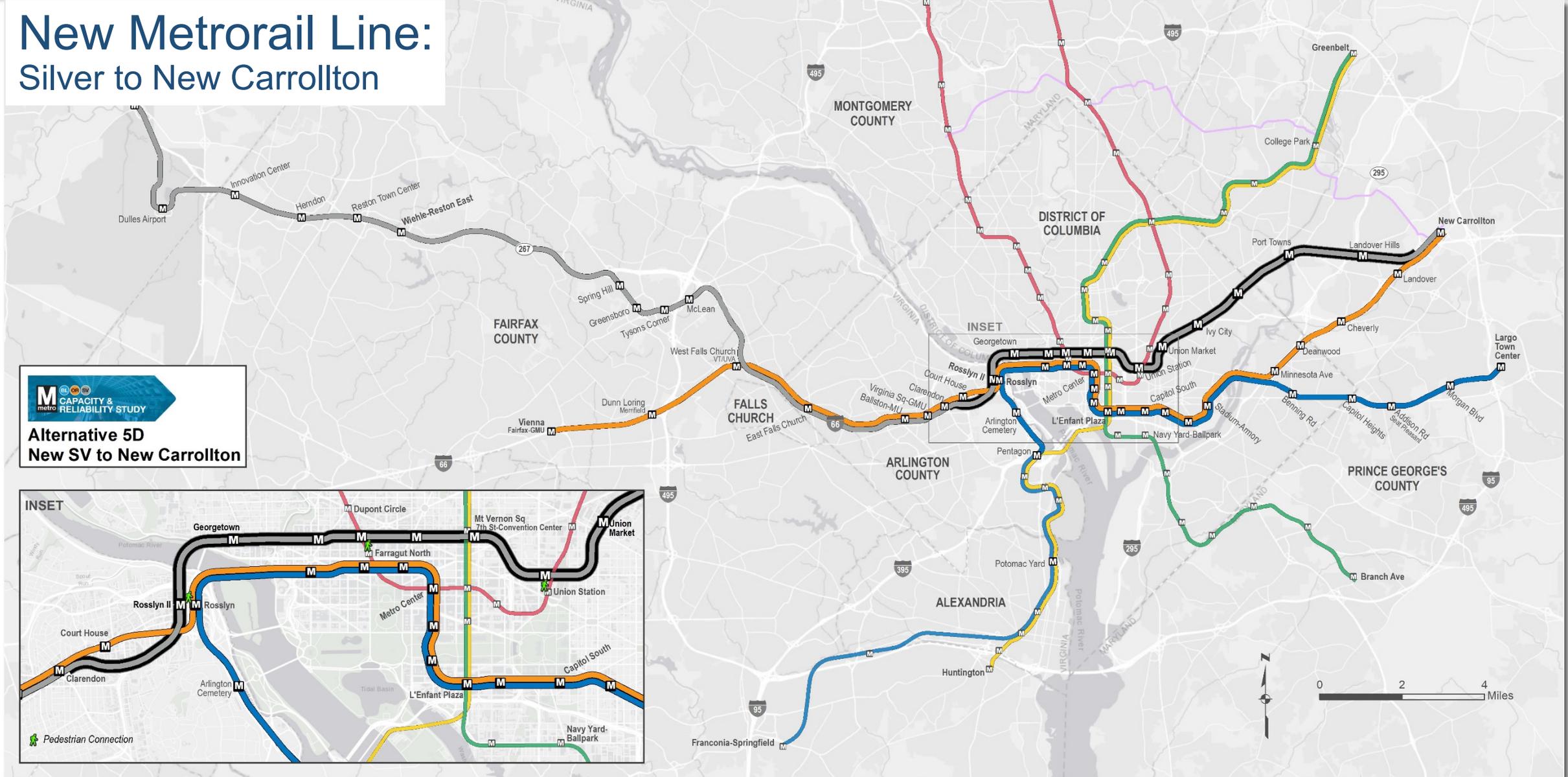
**M** CAPACITY & RELIABILITY STUDY

**Alternative 5A**  
New SV Express to Greenbelt

Separate SV  
express and local

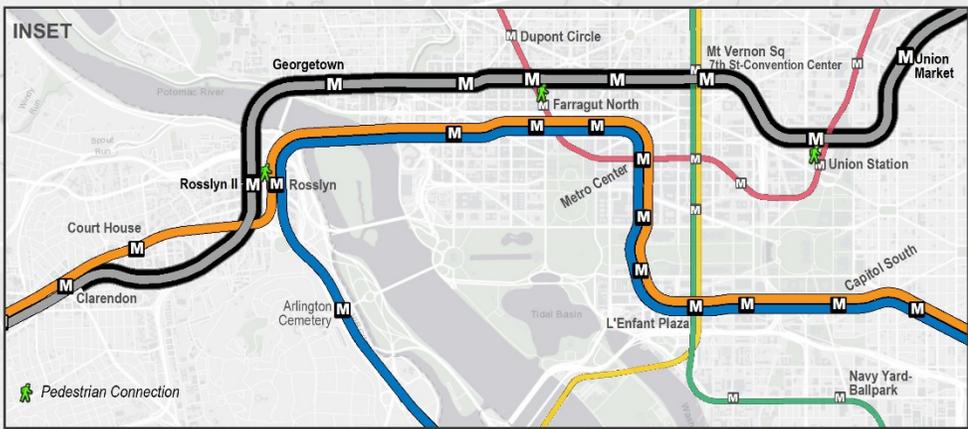
Separate track  
and stations

# New Metrorail Line: Silver to New Carrollton

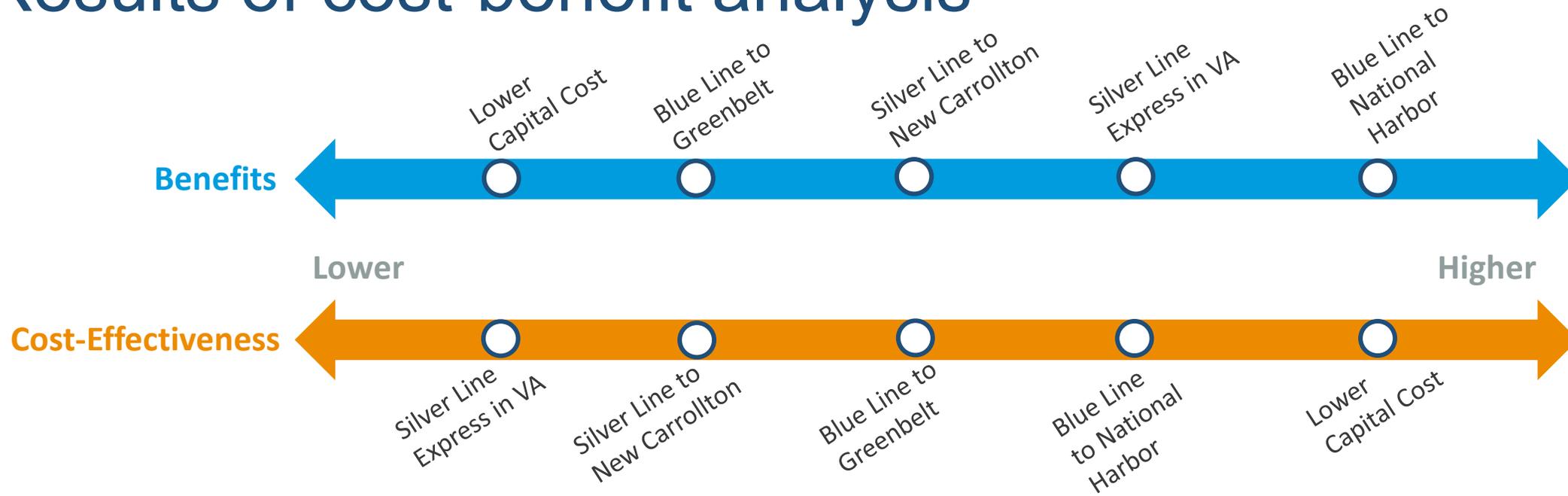


**M** **BL** **OR** **SV**  
CAPACITY & RELIABILITY STUDY

**Alternative 5D**  
New SV to New Carrollton

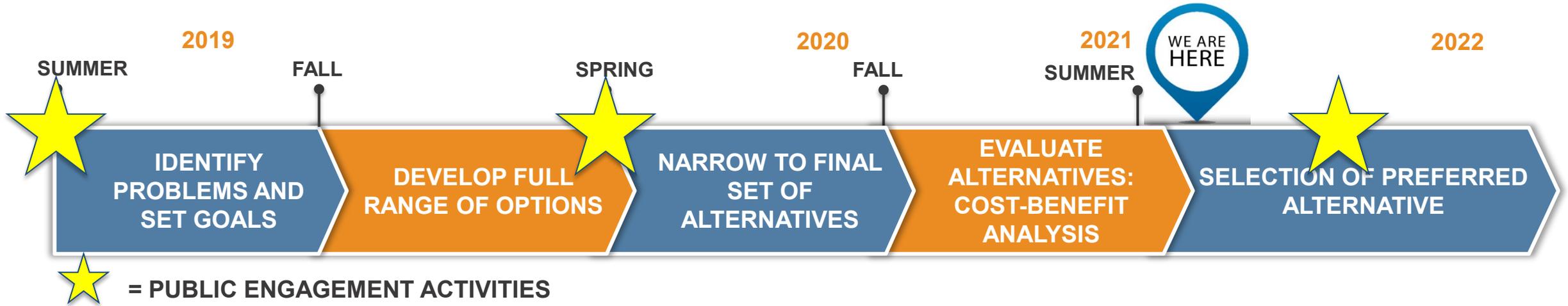


# Results of cost-benefit analysis



| Selected Metrics              |                   |                               |                    |                       |
|-------------------------------|-------------------|-------------------------------|--------------------|-----------------------|
| Alternative                   | New weekday trips | New annual fare revenue (\$M) | Capital cost (\$B) | Annual O&M cost (\$M) |
| Blue Line to Natl. Harbor     | 180K              | \$154.2                       | \$20-25            | \$175-200             |
| Silver Line Express in VA     | 139K              | \$119.4                       | \$20-25            | \$150-175             |
| Silver Line to New Carrollton | 94K               | \$80.4                        | \$15-20            | \$100-125             |
| Blue Line to Greenbelt        | 92K               | \$79.1                        | \$15-20            | \$100-125             |
| Lower Capital Cost            | 16K               | \$33.9                        | \$0-5              | \$75-100              |

# Next steps



- Briefings to elected officials and boards – Fall 2021
- Third round of public engagement – Fall 2021 (tentative)
- Board selection of LPA – 2022 (tentative)