



RED  LINE

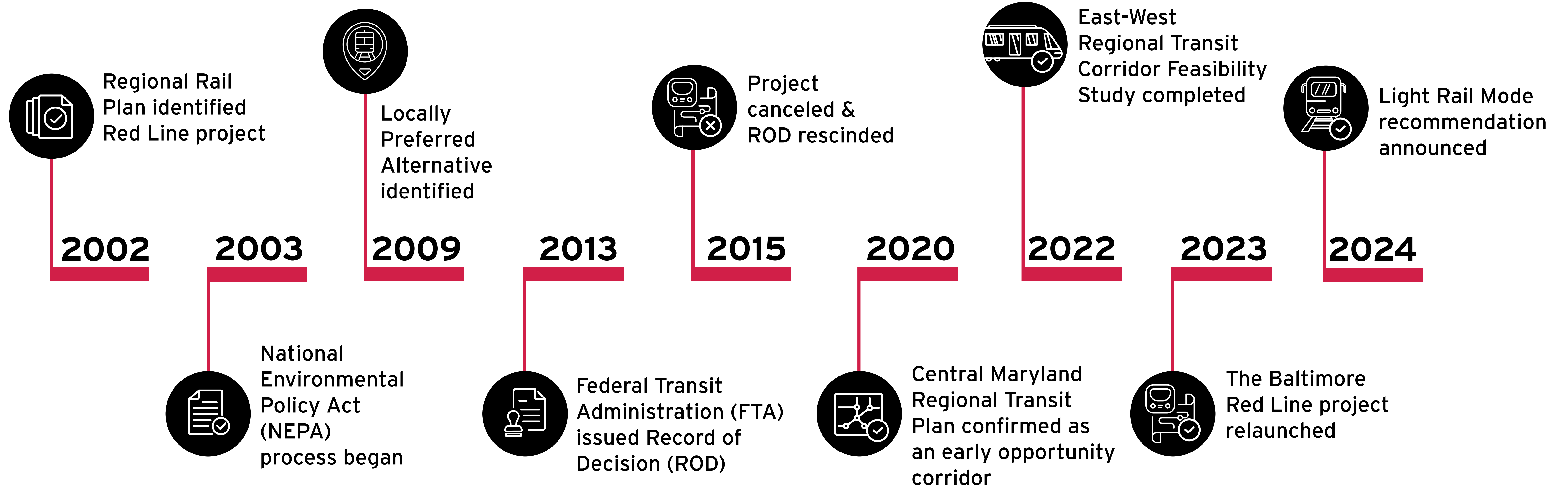
WELCOME!

The Baltimore Red Line Open House

Please sign in and then view the boards. Project team members are available for discussion and to answer your questions.

The Baltimore Red Line

Project Background



Community Engagement: Where We've Been

CONNECTED WITH
5,500+
PEOPLE



9
Open Houses



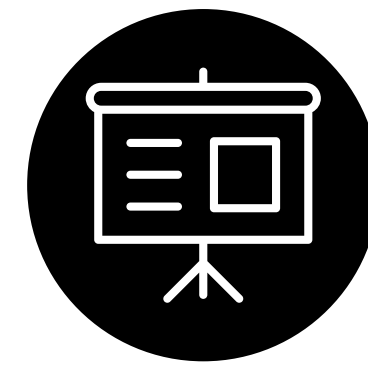
56
Pop-Ups & Community Events



200+
Houses reached through Door-to-Door Canvassing



3,700
Surveys



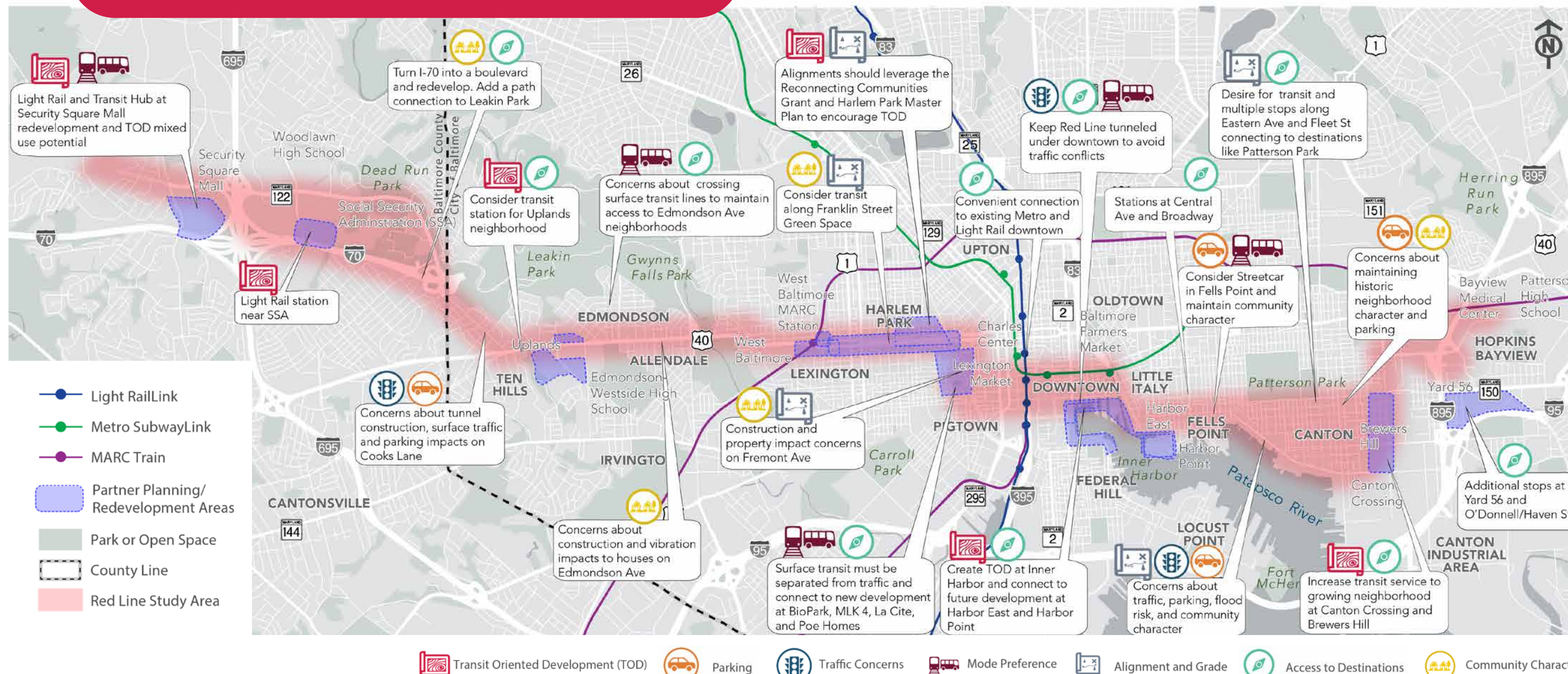
34
Community Association Meetings



JUNE 2024 COMMUNITY ADVISORY TEAM LAUNCH



Comments by Geographic Location



Community Engagement: Where We're Going

Updating the Community Compact

In 2008, the Community Compact was created as a living document to guide how the Red Line will best support communities. In 2025, MTA will work with stakeholders and communities to update the Community Compact by:



1 Evaluating progress made on prior commitments.



2 Involving Baltimore City and County agencies, stakeholders, and elected officials.



3 Revisiting and revising strategies to strengthen communities, support economic empowerment, foster a healthy and attractive environment, and plan for the most effective means to mitigate construction impacts.

Reaching Corridor Communities

We know that Engagement is not a one-size-fits-all approach. We have developed a diversity of ways to reach corridor communities:



POP-UP EVENTS meet people where they are in their daily travels at transit stops/stations and neighborhood activity centers.



COMMUNITY EVENTS, FAIRS, AND FESTIVALS such as farmers' markets or concerts.



COMMUNITY ASSOCIATION/ORGANIZATION MEETINGS to share information and answer community-specific questions. *Invite us to your community meeting!*



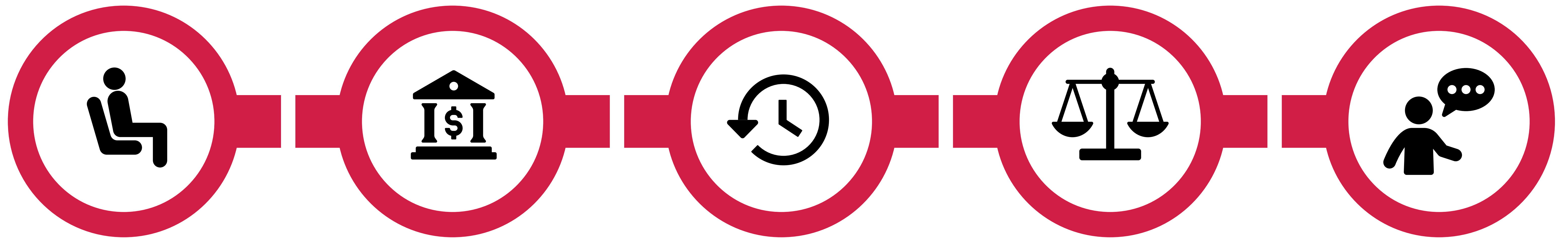
REACH SPANISH LIMITED ENGLISH PROFICIENCY (LEP) POPULATION with Spanish-speaking team members, multi-lingual website options, and translated project materials (e.g., flyers and boards).



THE BALTIMORE RED LINE WEBSITE, E-NEWSLETTER, AND SOCIAL MEDIA provide up-to-date, on-demand information as well as a repository of background resources.

Light Rail Transit Recommended for the Baltimore Red Line

The mode recommendation was based on nine measures of effectiveness and community input. Key differentiators included:



RIDERSHIP & CAPACITY

Up to twice the projected daily ridership on Light Rail Transit (LRT) as compared to Bus Rapid Transit (BRT)

ANNUALIZED CAPITAL COST PER TRIP

While the capital cost is higher for LRT, higher capacity and ridership result in a lower capital cost per trip compared to BRT

TRAVEL TIME & RELIABILITY

End-to-end travel time slightly better than BRT

EQUITY

LRT is projected to serve twice as many trips from zero-car households compared to BRT

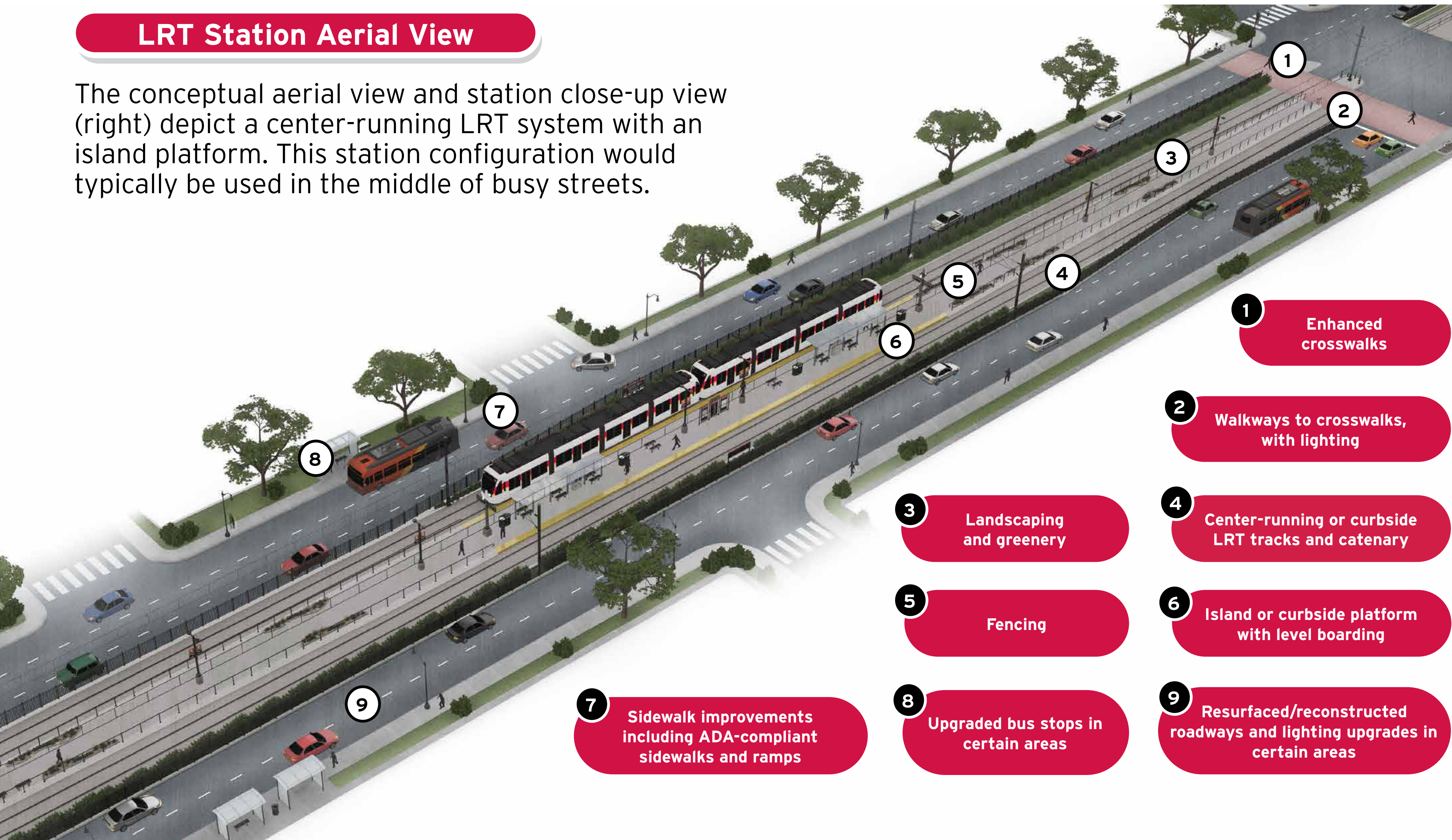
COMMUNITY INPUT

Public expressed a strong preference for LRT

What is Light Rail Transit (LRT)?

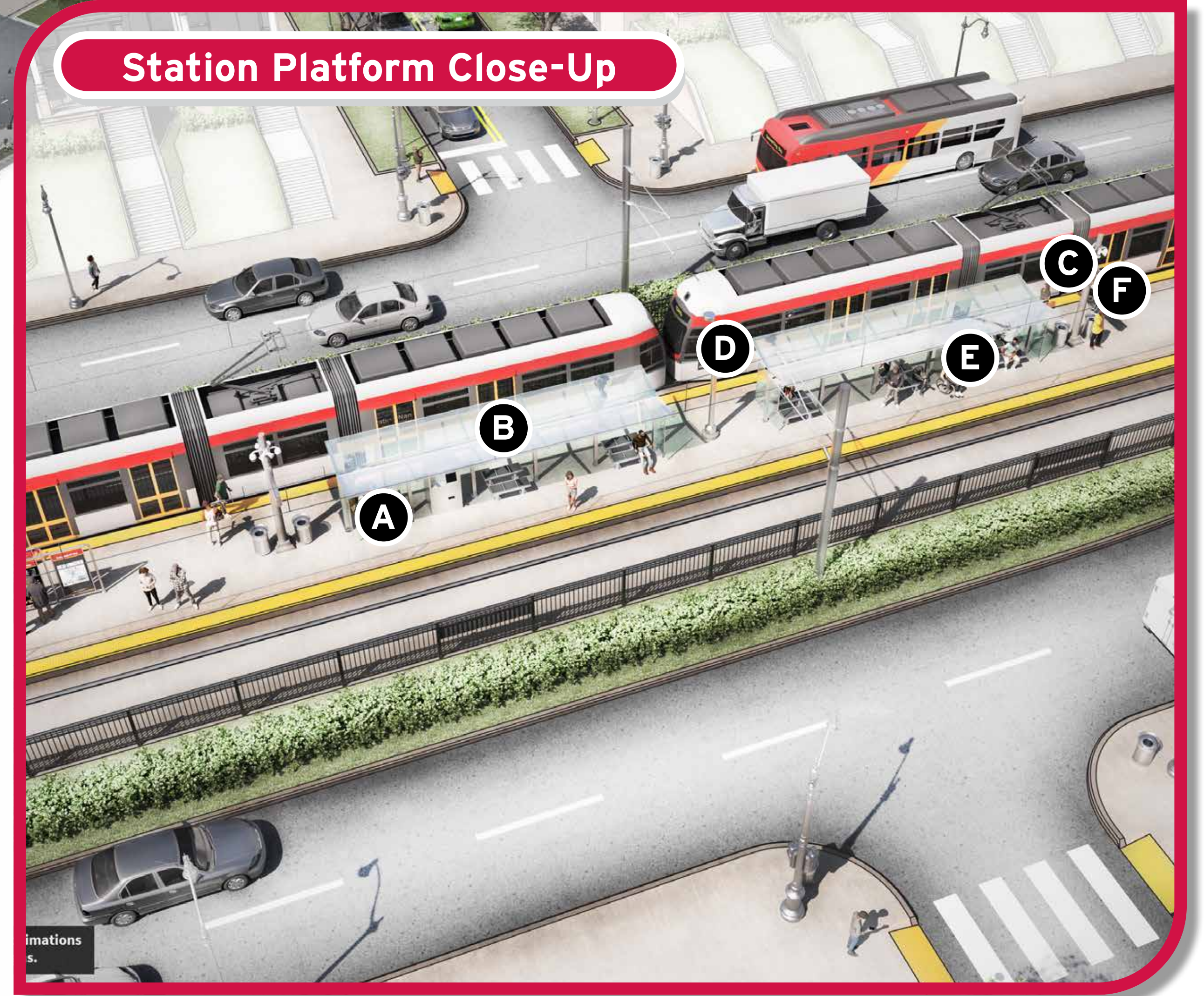
LRT Station Aerial View

The conceptual aerial view and station close-up view (right) depict a center-running LRT system with an island platform. This station configuration would typically be used in the middle of busy streets.



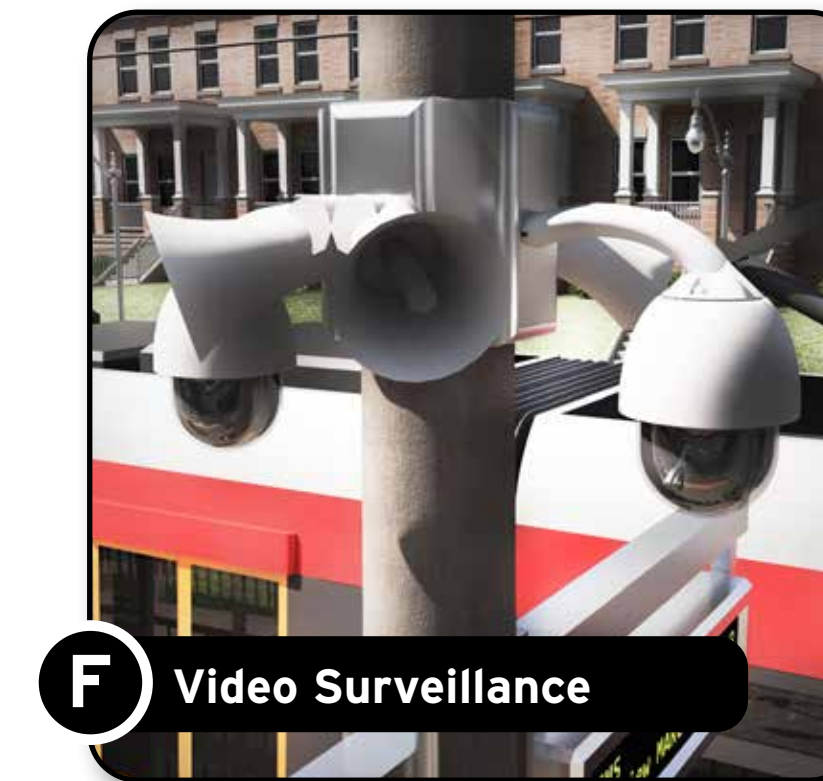
- 1 Enhanced crosswalks
- 2 Walkways to crosswalks, with lighting
- 3 Landscaping and greenery
- 4 Center-running or curbside LRT tracks and catenary
- 5 Fencing
- 6 Island or curbside platform with level boarding
- 7 Sidewalk improvements including ADA-compliant sidewalks and ramps
- 8 Upgraded bus stops in certain areas
- 9 Resurfaced/reconstructed roadways and lighting upgrades in certain areas

Station Platform Close-Up



Stations are conceptual and their exact configurations and roadway layouts will be determined by local context.

Station Amenities



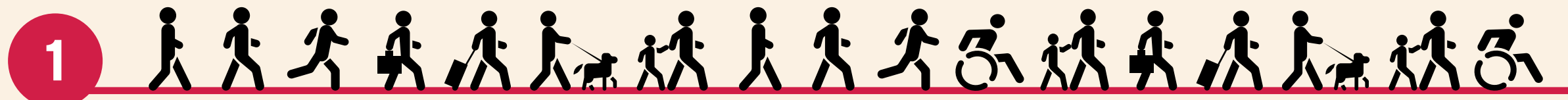
*Element not located on above platform diagram and may be located within station area or on station perimeter

Designing to Move People More Efficiently



Scan QR code to view animation

Baltimore's Modal Hierarchy



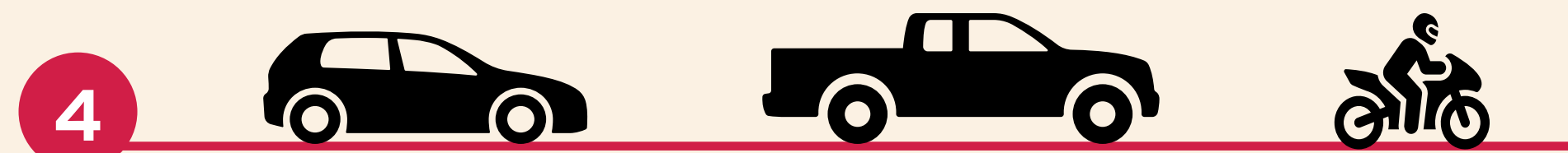
1 Walking



2 Cycling / Public Transit / Micromobility



3 Taxi / Commercial Transit / Shared Vehicles



4 Single Occupant Vehicles

Person Throughput

Transit streets are designed to move people. Whether in dense urban cores, on conventional arterials, or along neighborhood spines, transit is the most spatially efficient mode.

Per NACTO, the capacity of a single lane by mode at peak conditions with normal operations.

 Private Motor Vehicles
600-1,600/hr

 Mixed Traffic with Frequent Buses
1,000-2,800/hr

 Two-Way Protected Bikeway
7,500/hr

 Dedicated Transit Lanes
4,000-8,000/hr

 Sidewalk
9,000/hr

 On-street transitway, bus, or rail
10,000-25,000/hr



Complete Streets

- Street and transit design options for surface alternatives will follow the Baltimore City Complete Streets law and the MDOT statewide Complete Streets policy.
- Together, these local and State policies establish a modal hierarchy that prioritizes walking, biking, transit, and freight above automobiles.



Transit Signal Priority (TSP)

- TSP equipment on traffic signals and transit vehicles allows signals to add critical seconds to the end or beginning of a green phase to allow transit vehicles to travel with less delay.
- Upgrading signalization systems with TSP throughout the Red Line corridor will improve efficiency and reliability on surface streets.

Alternatives Under Consideration

Major differences are summarized below:

Alternative 1 LRT Tunnels

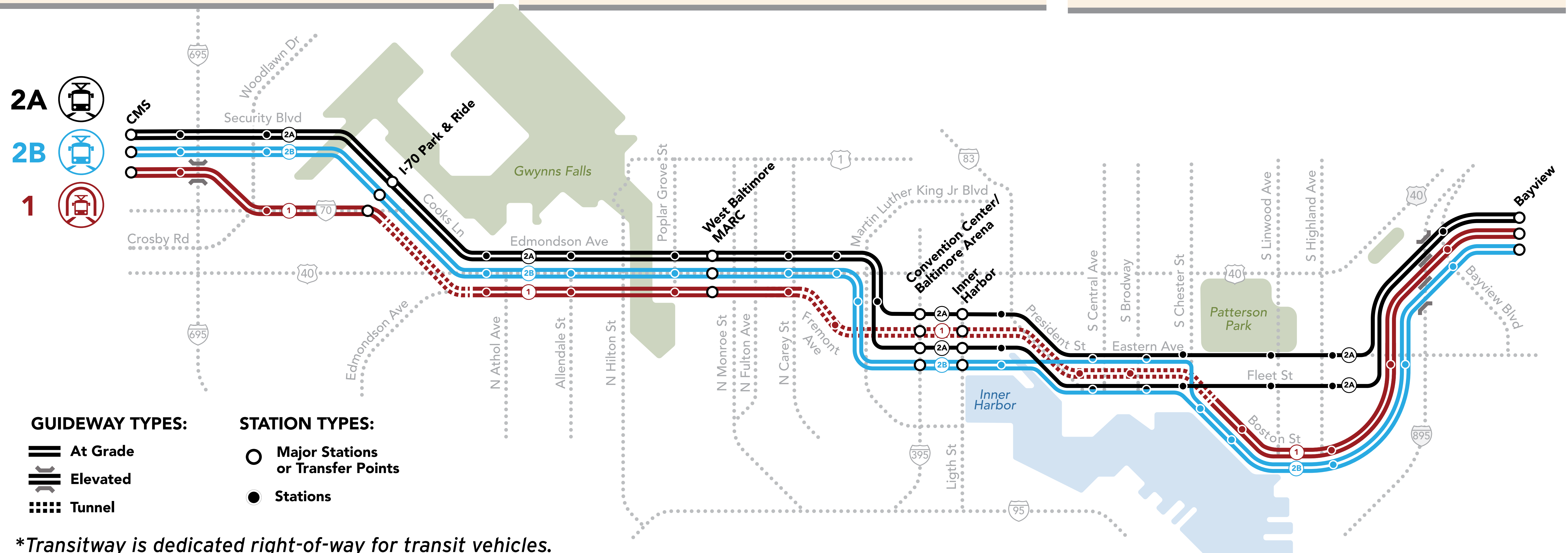
- Similar to 2012 Preferred Alignment, with modifications
- Transitway* along I-70
- Tunnel under Cooks Lane and Downtown
- Transitway along Boston Street

Alternative 2A LRT Surface North

- Transitway along Security Boulevard
- Mixed traffic operations along Cooks Lane
- Baltimore Street/ Lombard Street transit couplet
- Eastern Avenue/ Fleet Street transit couplet




Alternative 2B LRT Surface South



- Transitway along Security Boulevard
- Mixed traffic operations along Cooks Lane
- Transitway along Pratt Street
- Transitway along Boston Street







*Transitway is dedicated right-of-way for transit vehicles.

Western Route Considerations


- 1**   

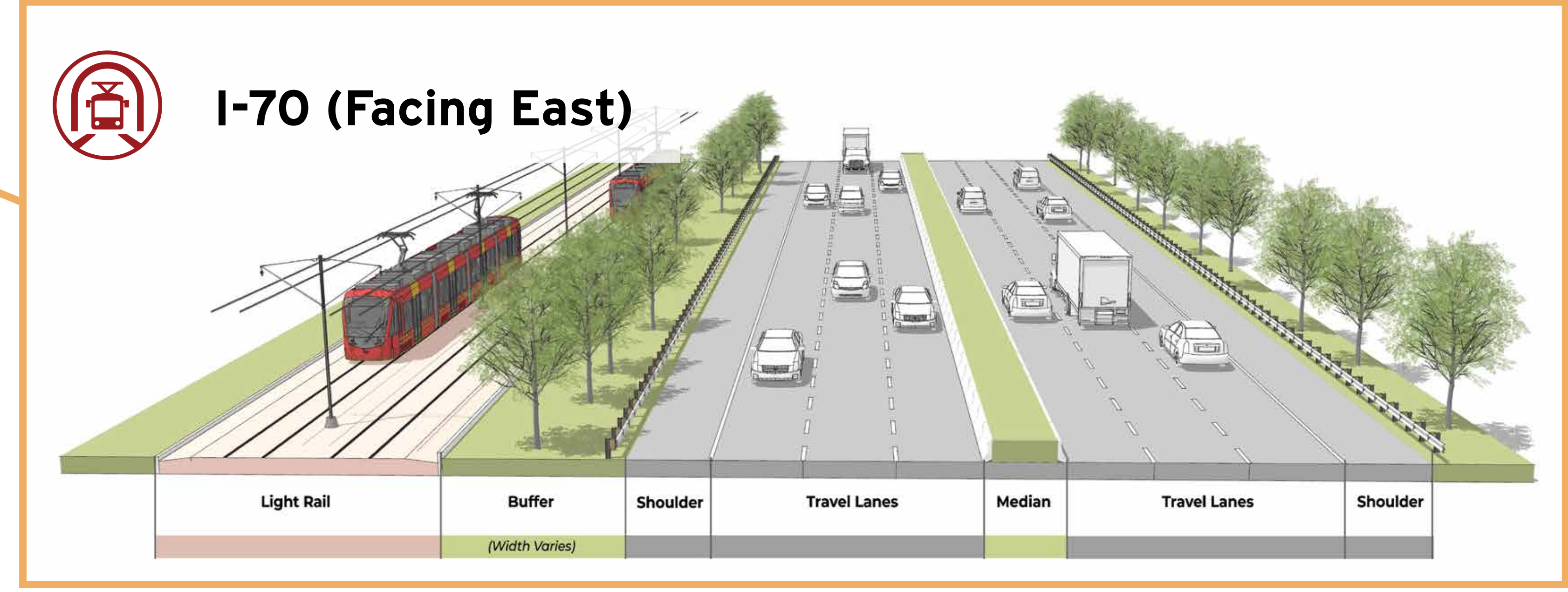
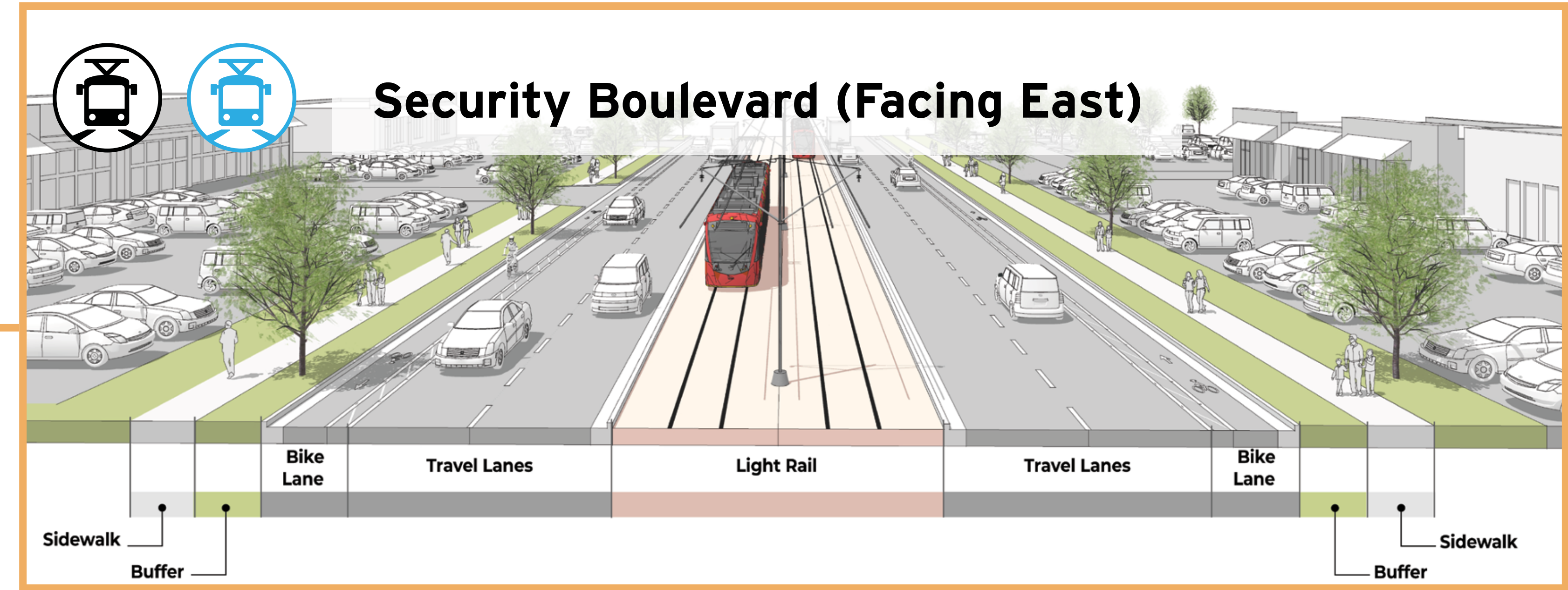
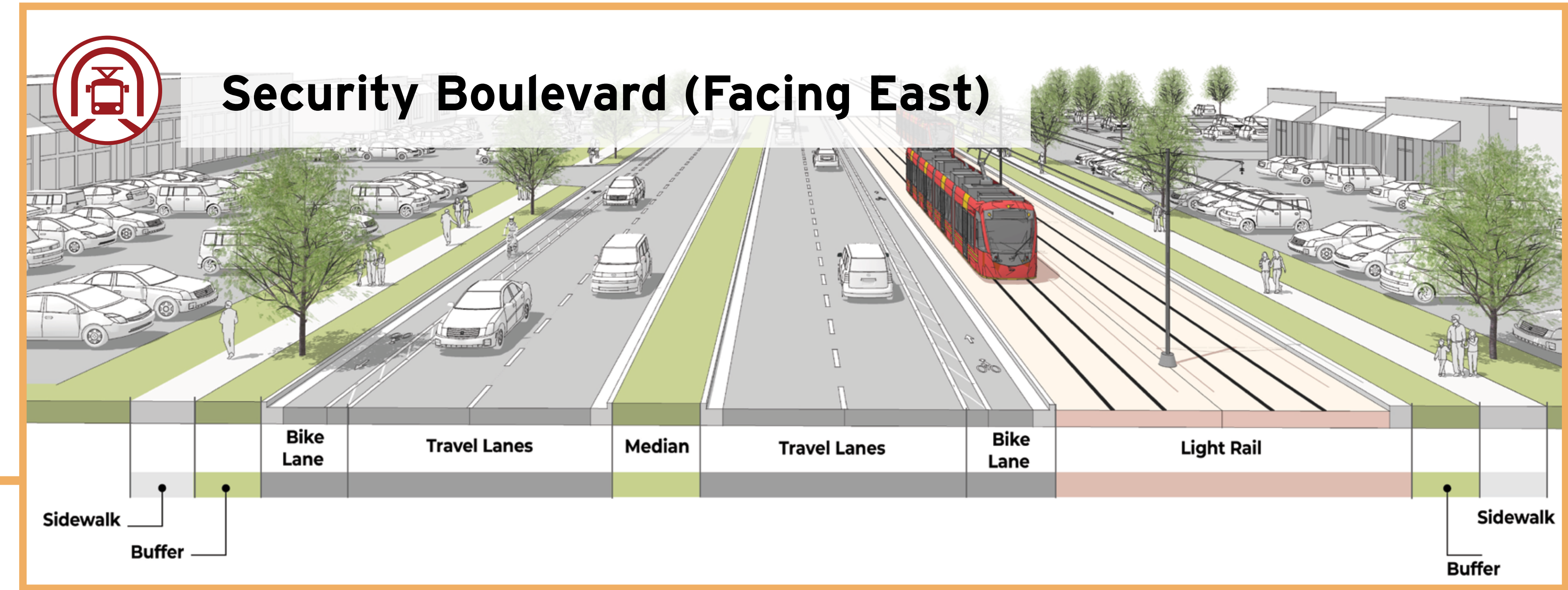
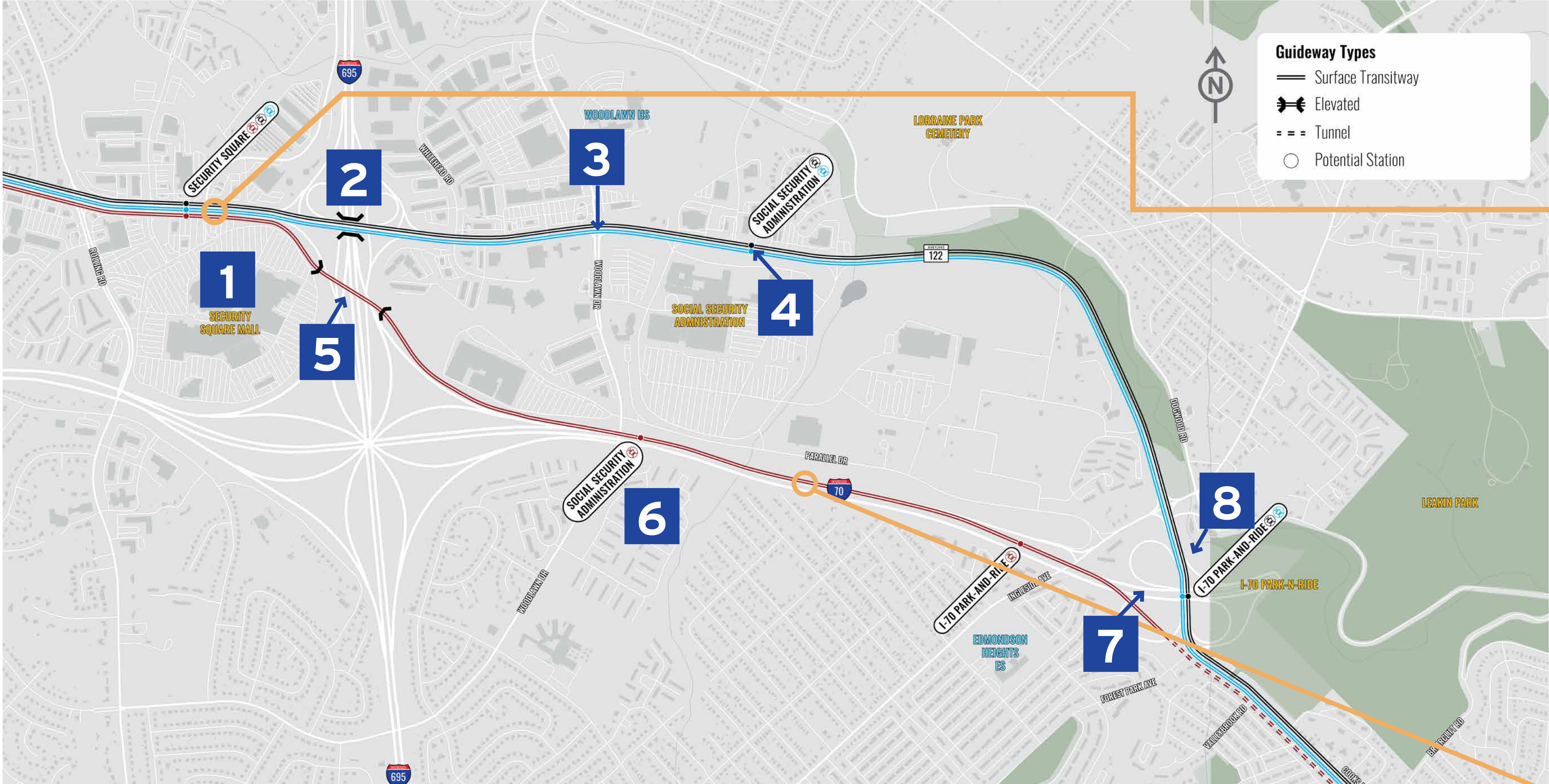
Support the redevelopment of Security Square Mall
- 2**  


Reconstruct I-695 / Security Boulevard interchange
- 3**  


Zoning supports higher development opportunities
- 4**  




Station provides access to additional destinations



 **Alternative 1** LRT Tunnels
  **Alternative 2A** LRT Surface North
  **Alternative 2B** LRT Surface South



- 5** 

Proposed bridge over I-695
- 6** 

Station is located along the back of development
- 7**   

Interchange reconstruction and reconfiguration of park-and-ride
- 8**  

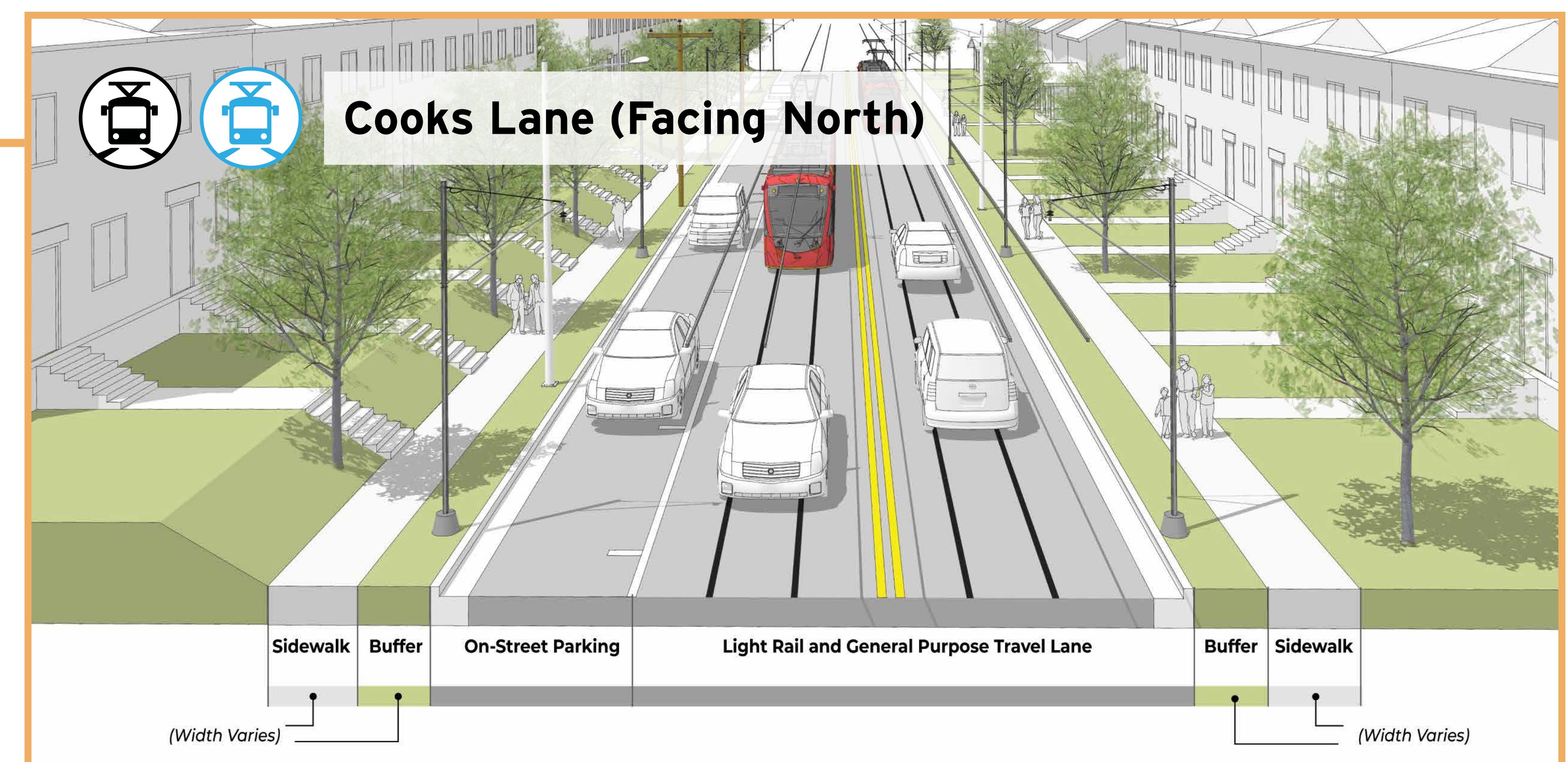
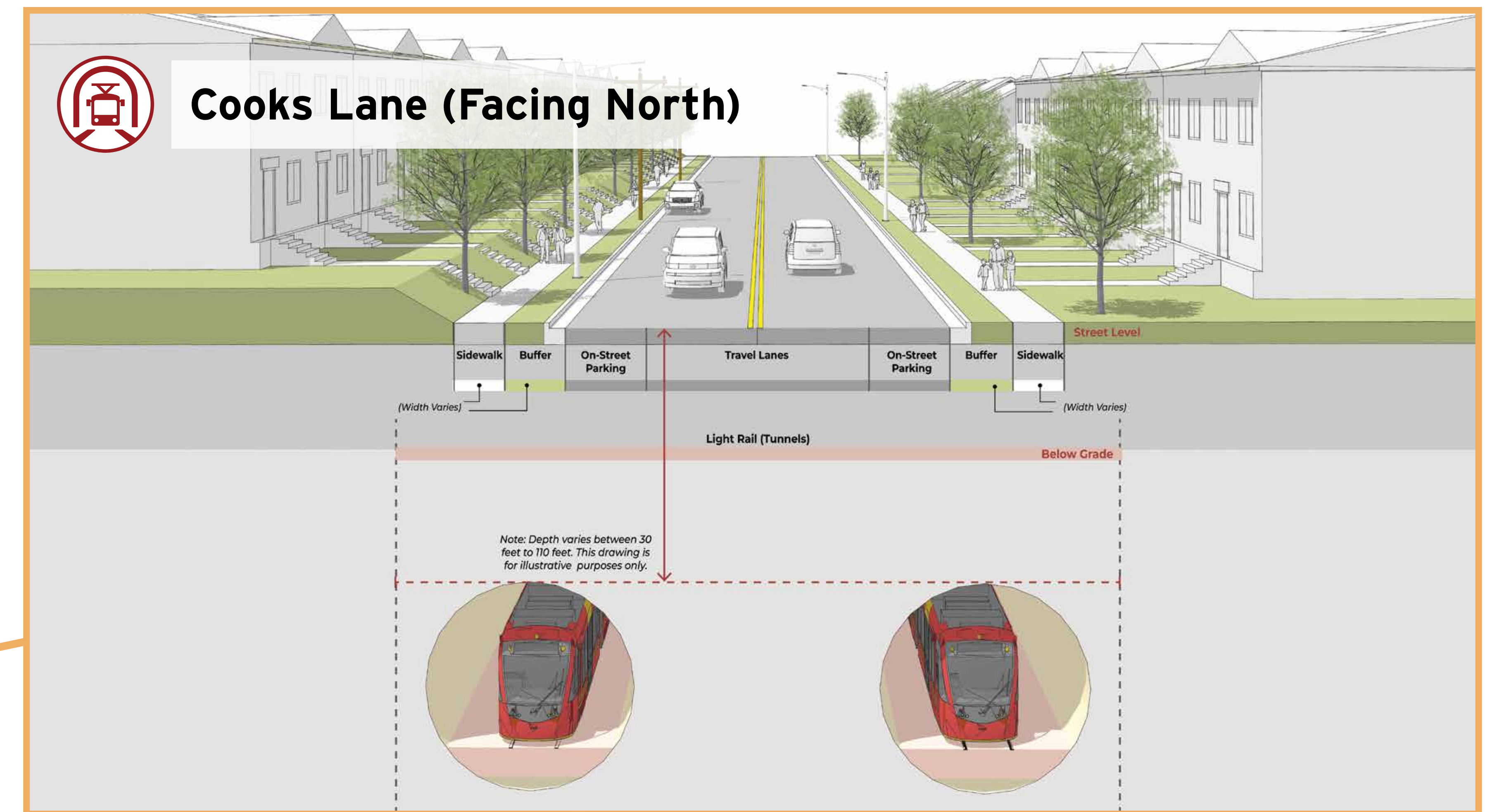
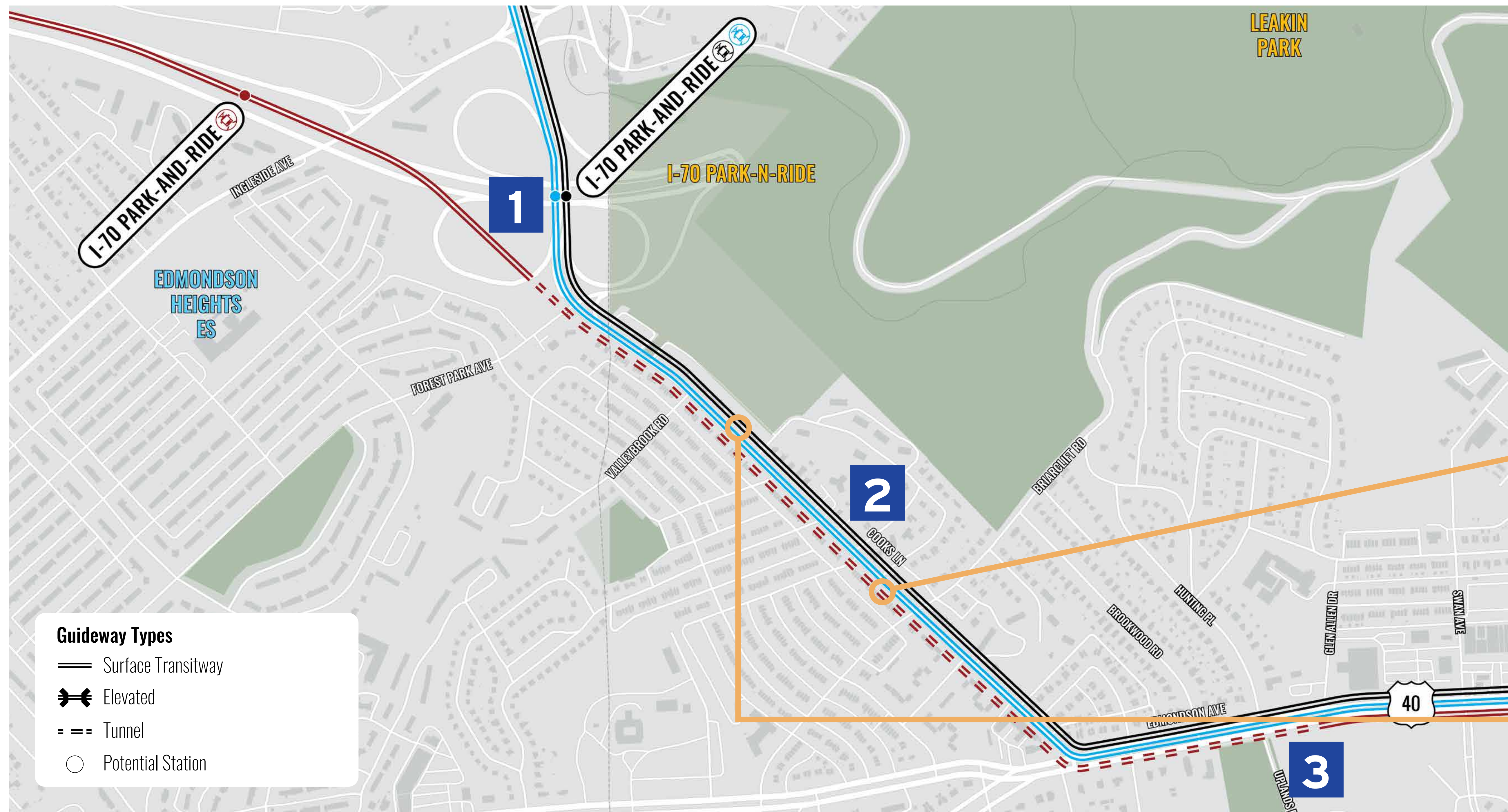
Pedestrian and bicycle access to trails


Tunnel Vs. Surface Considerations



-  **Alternative 1**
LRT Tunnels
-  **Alternative 2A**
LRT Surface North
-  **Alternative 2B**
LRT Surface South




Provide Feedback





- 1** 
- Northern tunnel portal located within the I-70 interchange
 - Twin-bore tunnel under Cooks Lane (one mile)

- 2**  
- Mixed traffic operations; LRT shares travel lane with vehicular traffic
 - Parking to remain on one side of the road

- 3** 
- Southern tunnel portal located along Edmondson Avenue




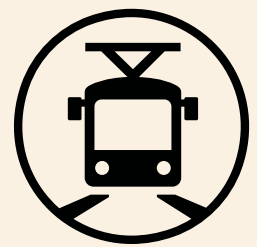

- Proposed surface alternatives remove parking on the east side of Cooks Lane.  
- Parking surveys (covering both weekdays and weekends, at different times of day) found a maximum of seven parked vehicles.
- Alternatives 2A and 2B would maintain parking on one side, with 125 spaces.



Proposed surface alternatives would upgrade existing infrastructure:

- + Roadway resurfacing
- + Bicycle and pedestrian facilities
- + Crosswalks
- + Streetlights
- + Traffic signals/signs
- + ADA accessibility



- Total cost for the Cooks Lane Tunnel is \$540M. 
- Total cost for the Cooks Lane surface segment of Alternatives 2A and 2B is \$120M.  

Capital costs have been escalated to the mid-point of construction.



Cooks Lane Tunnel saves 1.5 minutes in travel time. 

US 40 Alignment

Cooks Lane to West Baltimore MARC



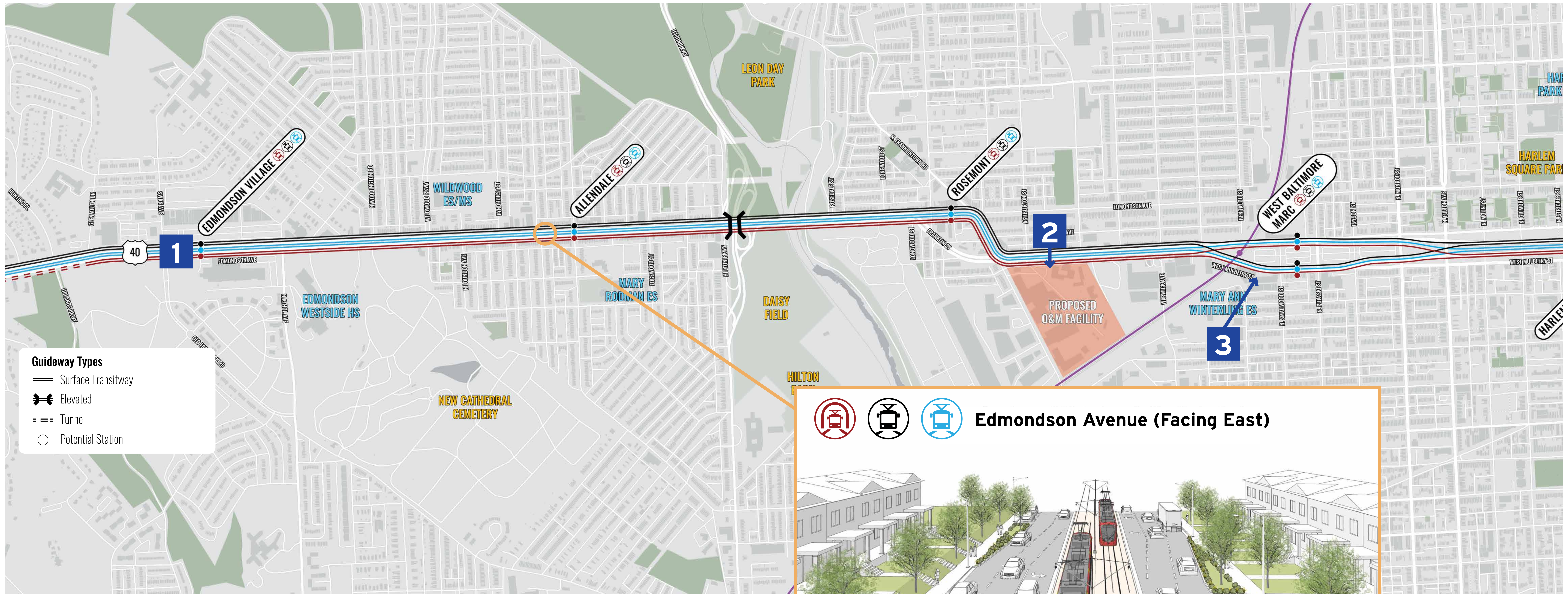
Alternative 1
LRT Tunnels



Alternative 2A
LRT Surface North



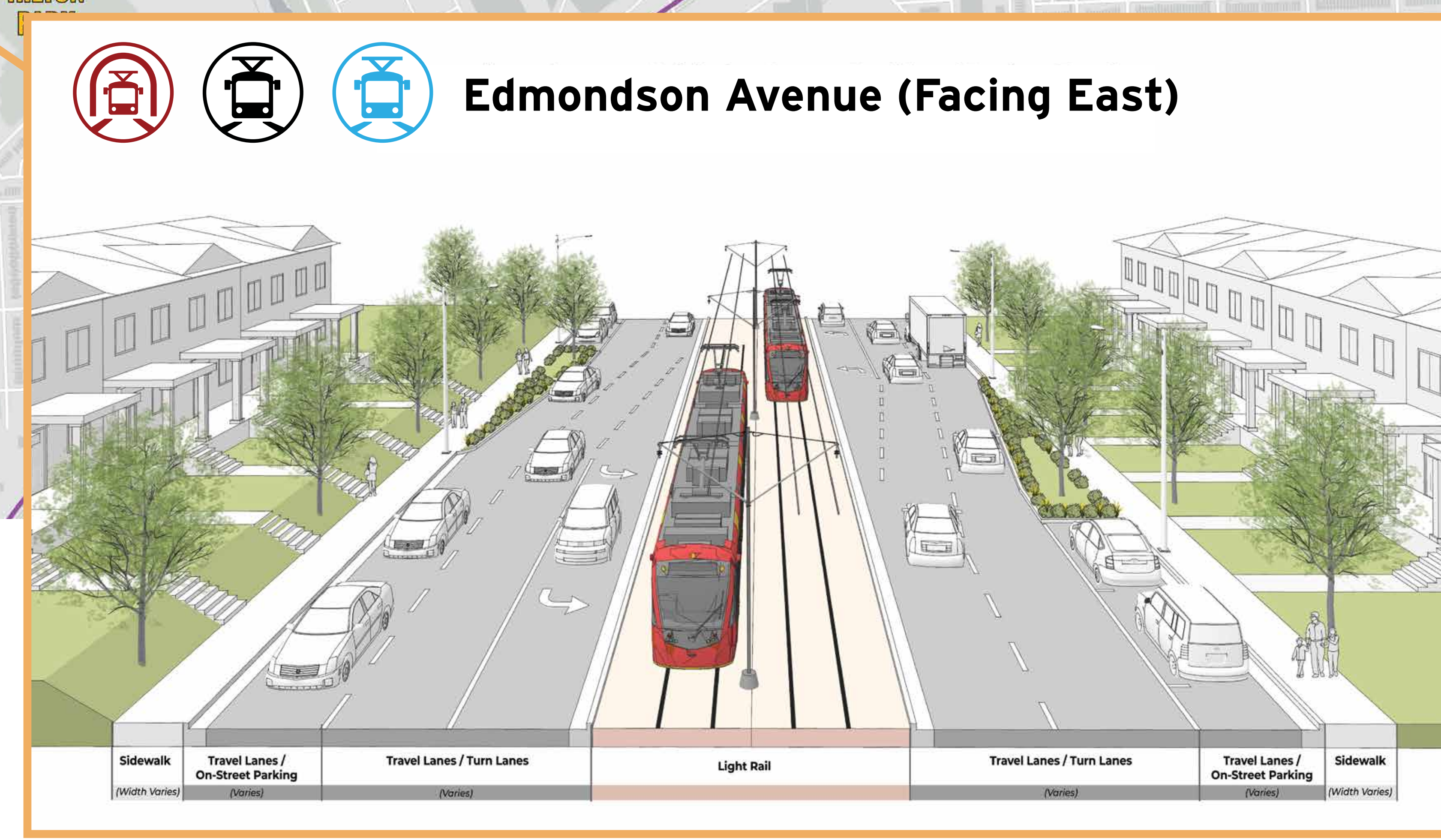
Alternative 2B
LRT Surface South



1
Median running LRT

2
Red Line O&M Facility

3
Connection to MARC



US 40 Options

US 40 from Cooks Lane to Fremont Ave

-  **Alternative 1**
LRT Tunnels
-  **Alternative 2A**
LRT Surface North
-  **Alternative 2B**
LRT Surface South
- - - Alignment Options Evaluated

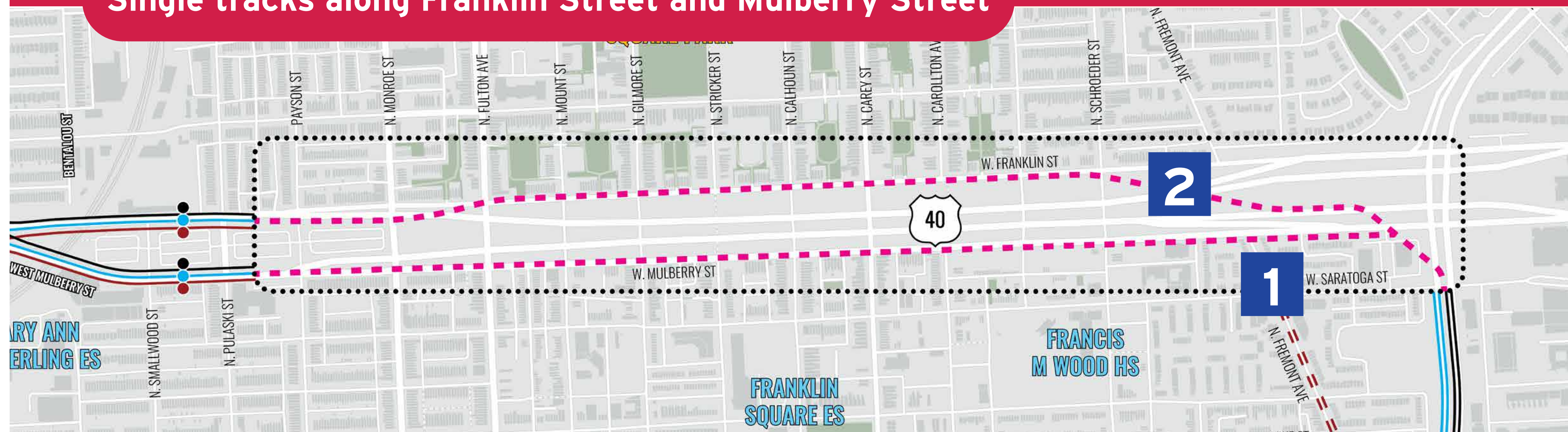


Provide Feedback



A range of conceptual alignments are being evaluated along the freeway section of US 40. The following summarizes the alignments and the challenges identified:

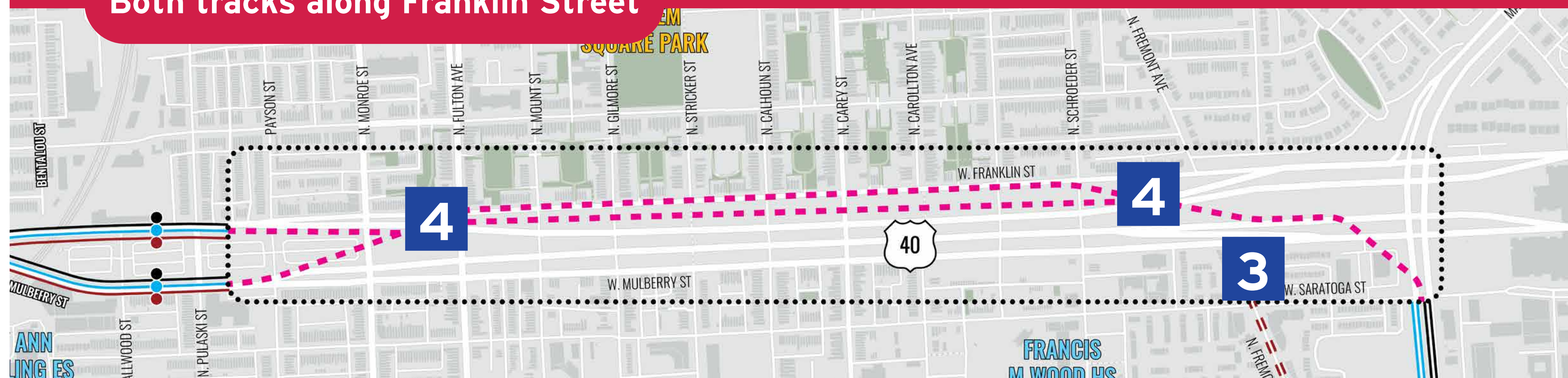
Single tracks along Franklin Street and Mulberry Street



Alignment Challenges

- 1** This option is only compatible with surface alternative alignments for Downtown
- 2** Requires structure over US 40
 - Ten at-grade crossings would increase overall travel times and reduce reliability between West Baltimore and Poppleton Stations
 - Gates, bells and flashing lights would be required along Franklin Street
 - Platform for each direction split on either side of the freeway would require considerable walking distance between stations in each direction

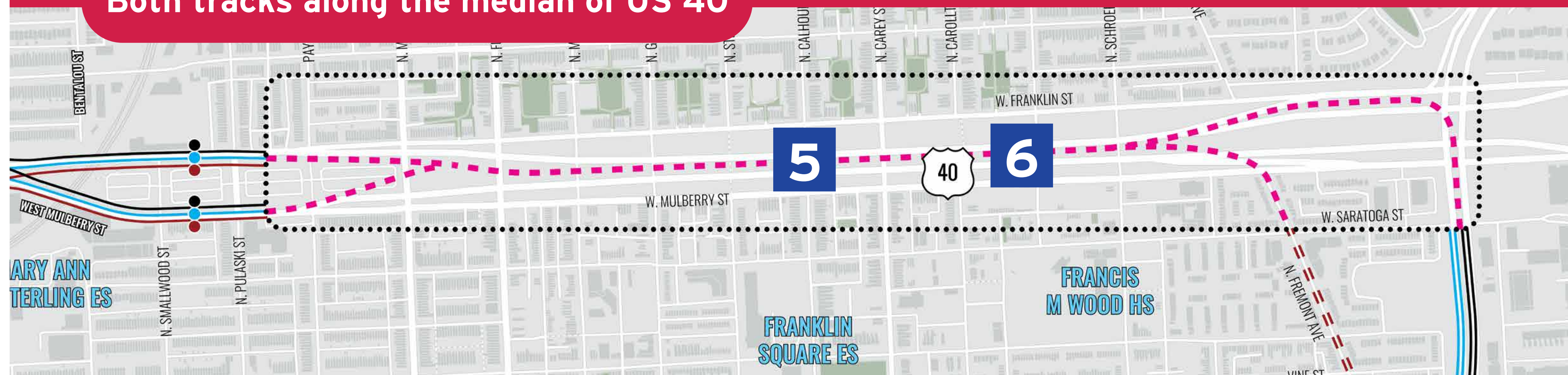
Both tracks along Franklin Street



Alignment Challenges

- 3** This option is only compatible with surface alternative alignments for Downtown
- 4** Requires structure over US 40
 - Ten at-grade crossings would increase overall travel times and reduce reliability between West Baltimore and Poppleton Stations
 - Gates, bells and flashing lights would be required along Franklin Street

Both tracks along the median of US 40



Alignment Challenges

- 5** Requires stair towers and elevators for stations
- 6** Reduces one existing travel lane along US 40 (eastbound)

Route & Tunnel Vs. Surface Considerations



1



- Northern tunnel portal located in the median of US 40
- Twin-bore tunnel under Fremont Avenue, Lombard Street, Fleet Street, and Boston Street for approximately 3.2 miles

2



- Bidirectional transitway along MLK Jr. Boulevard
- Bidirectional transitway along Pratt Street
- Consistent with development opportunities along the Inner Harbor
- Repurposes existing bus-only lane and one travel lane

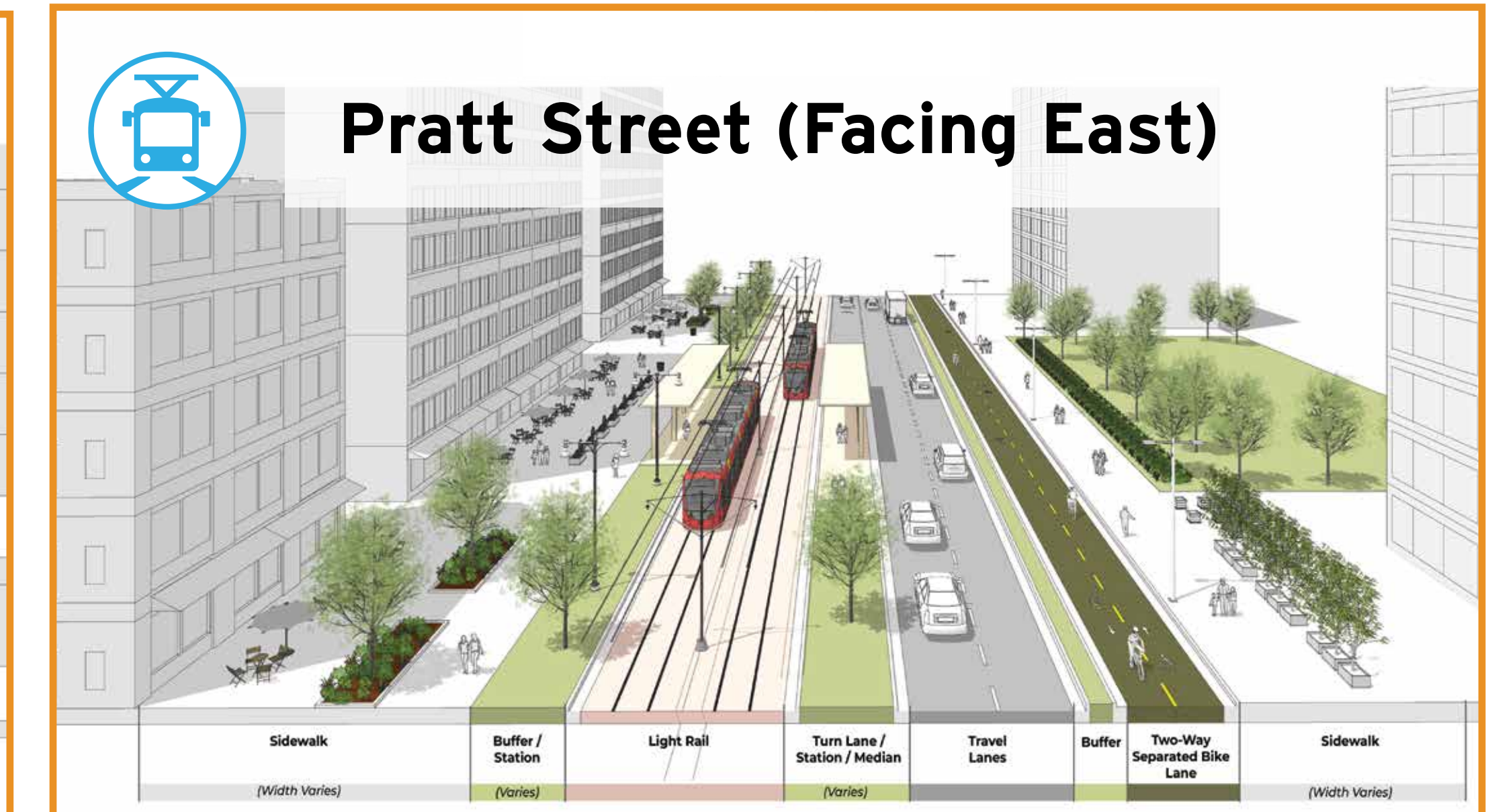
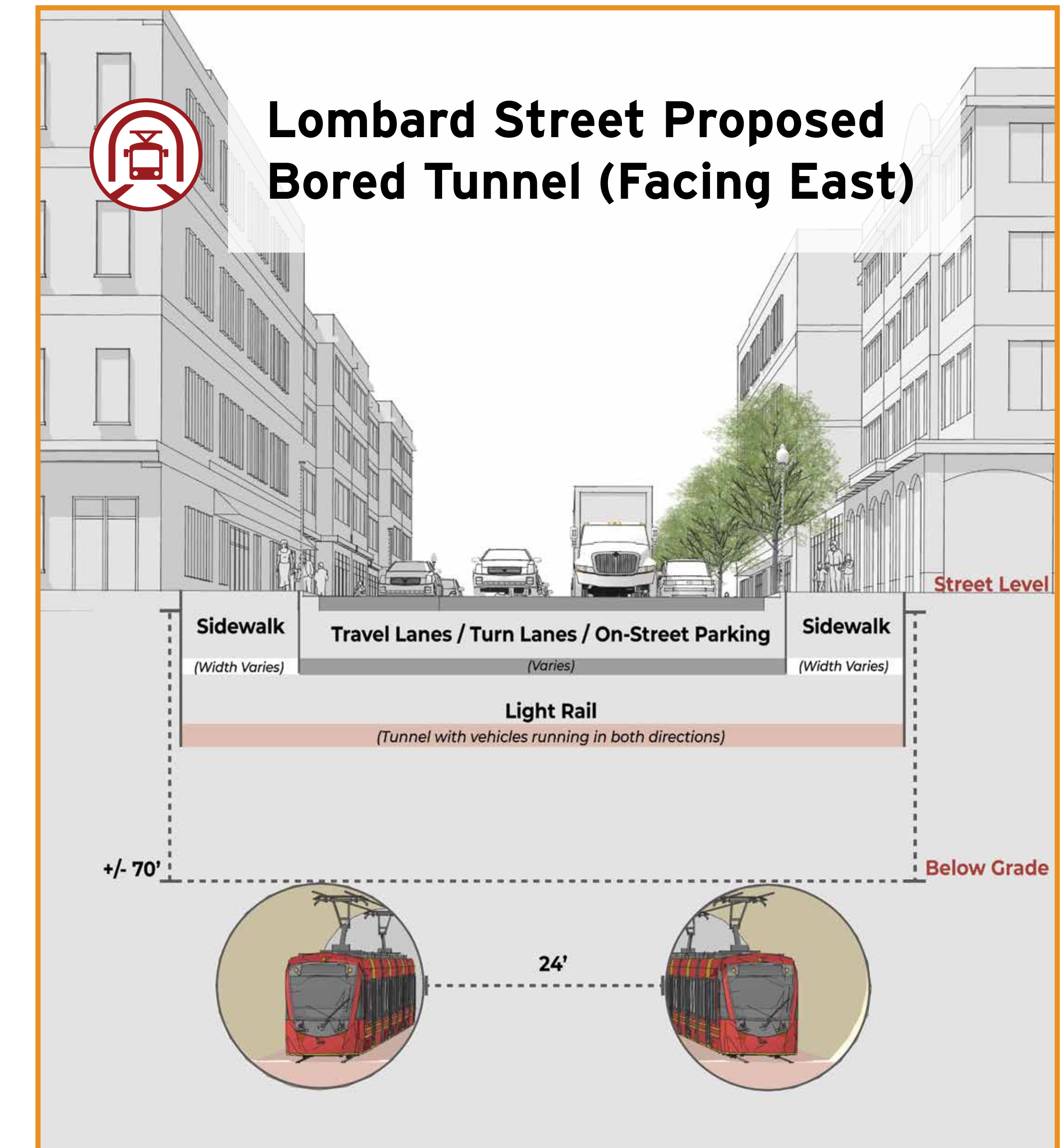
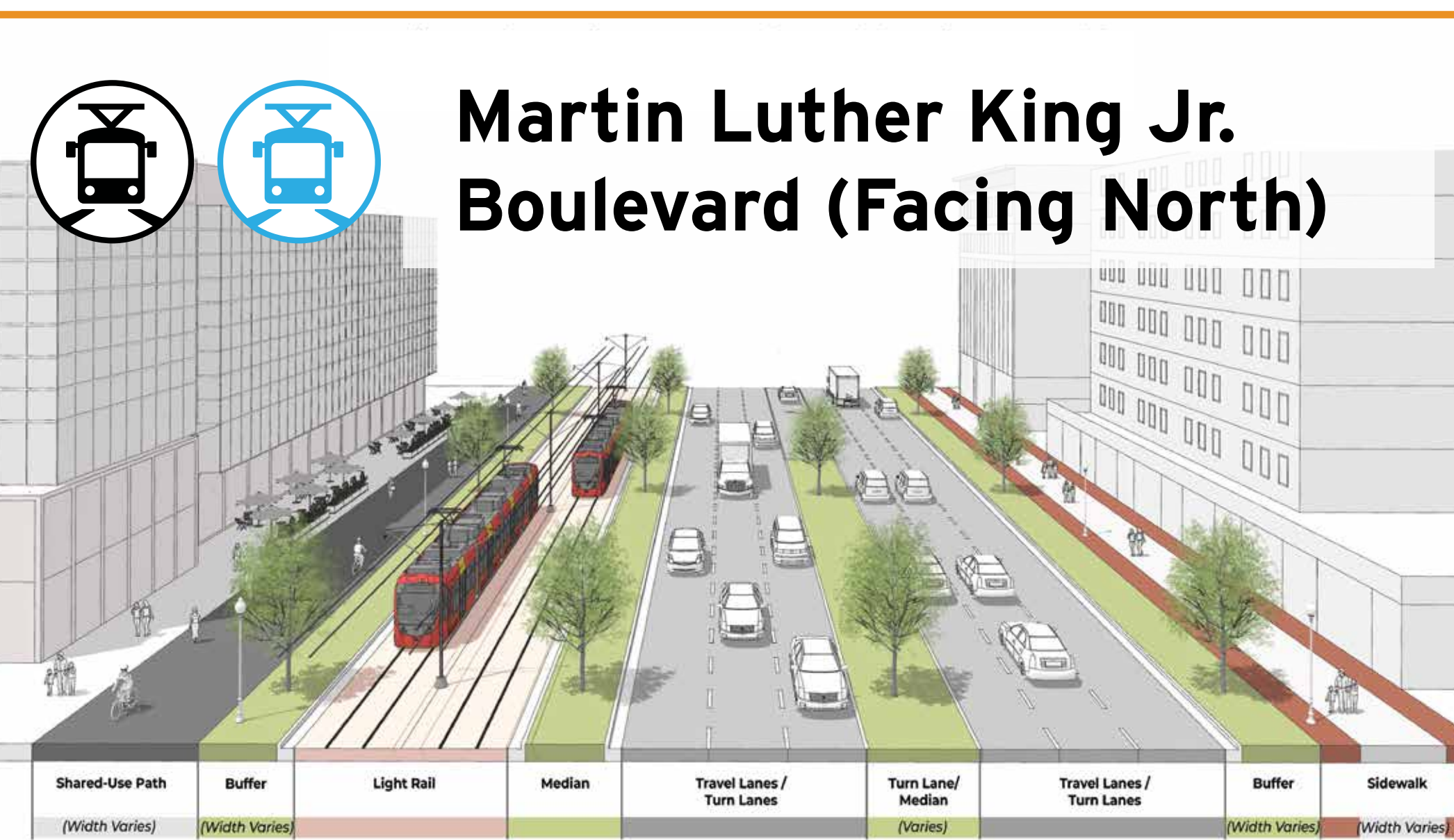
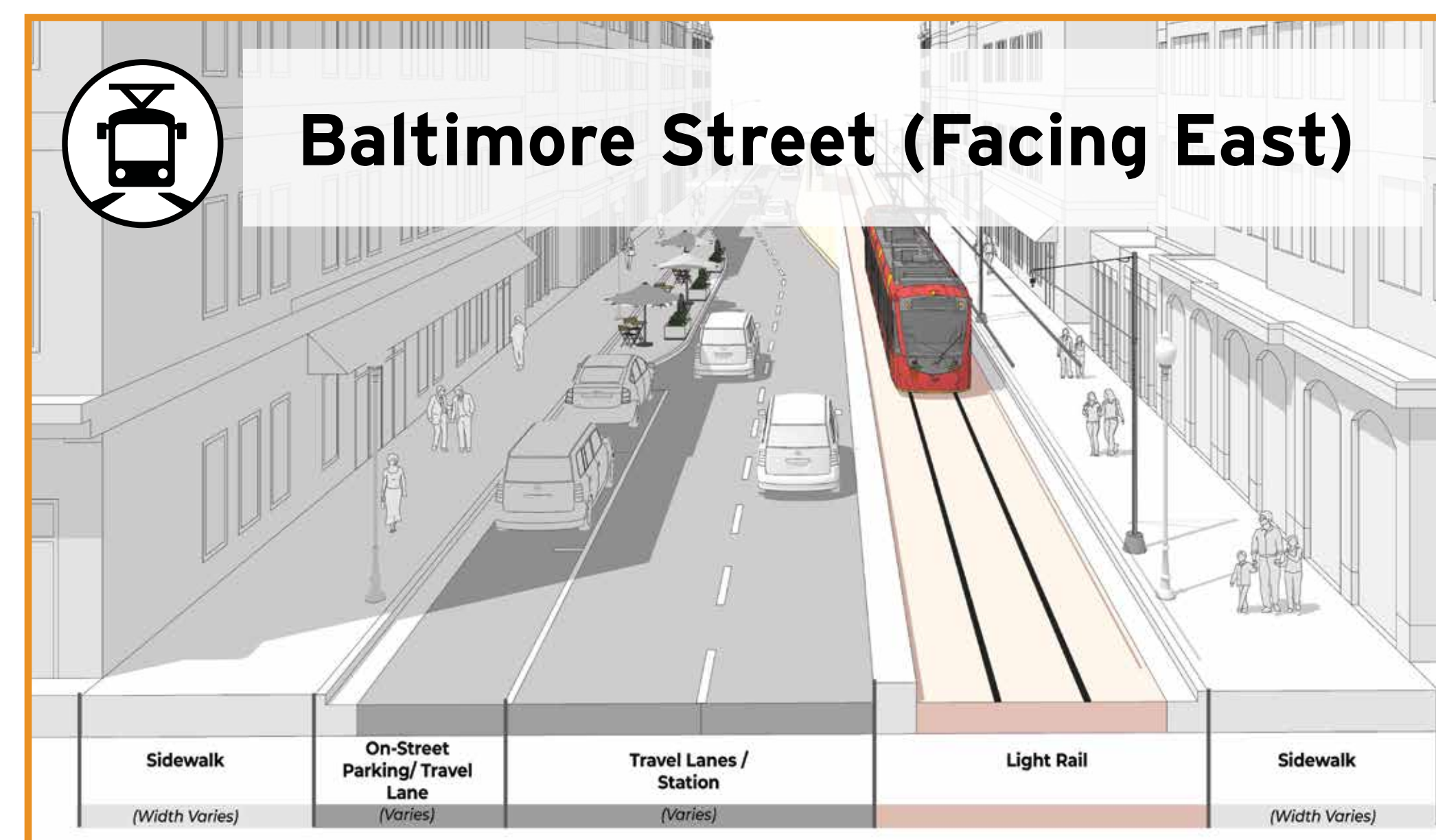
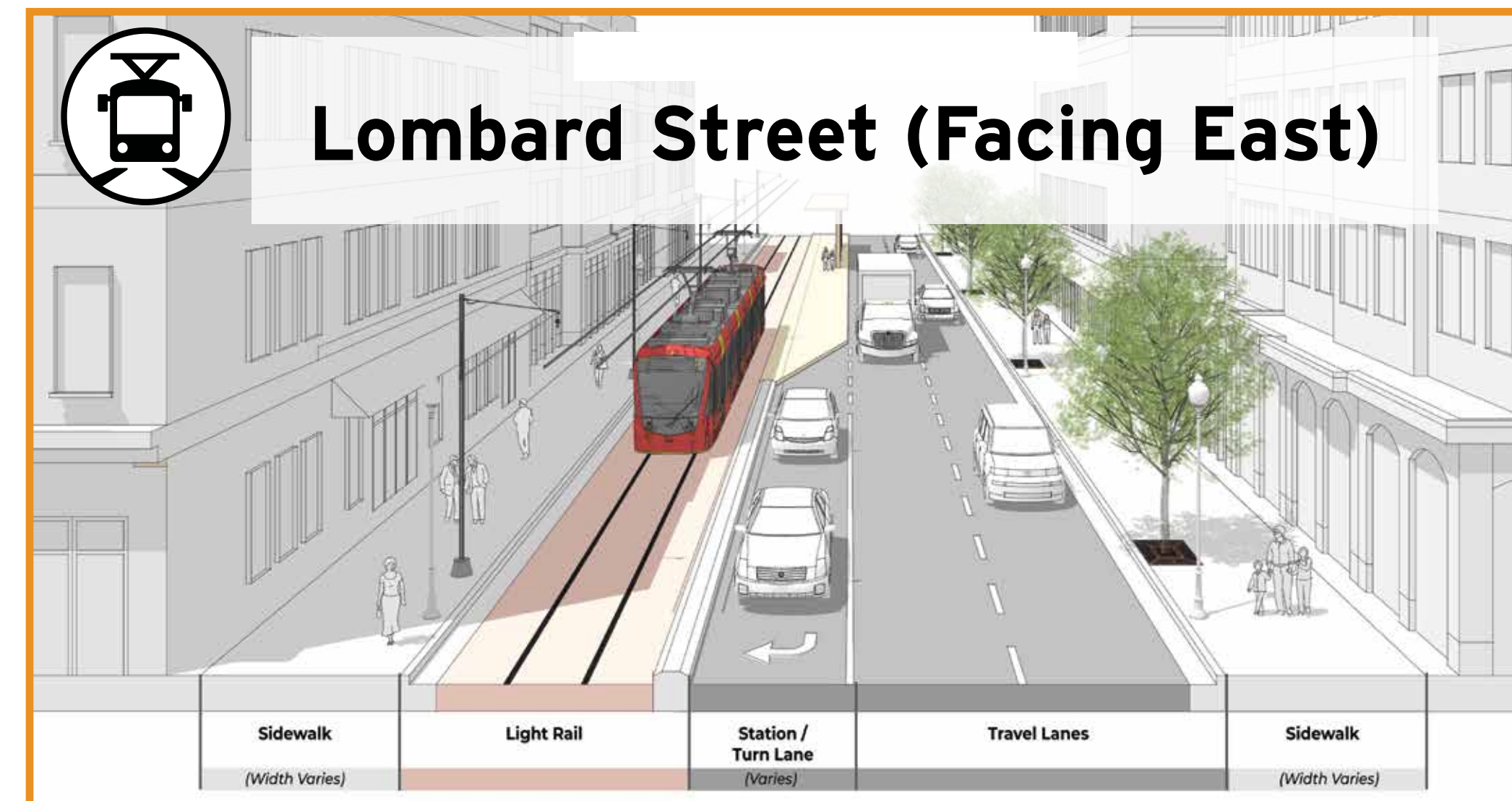
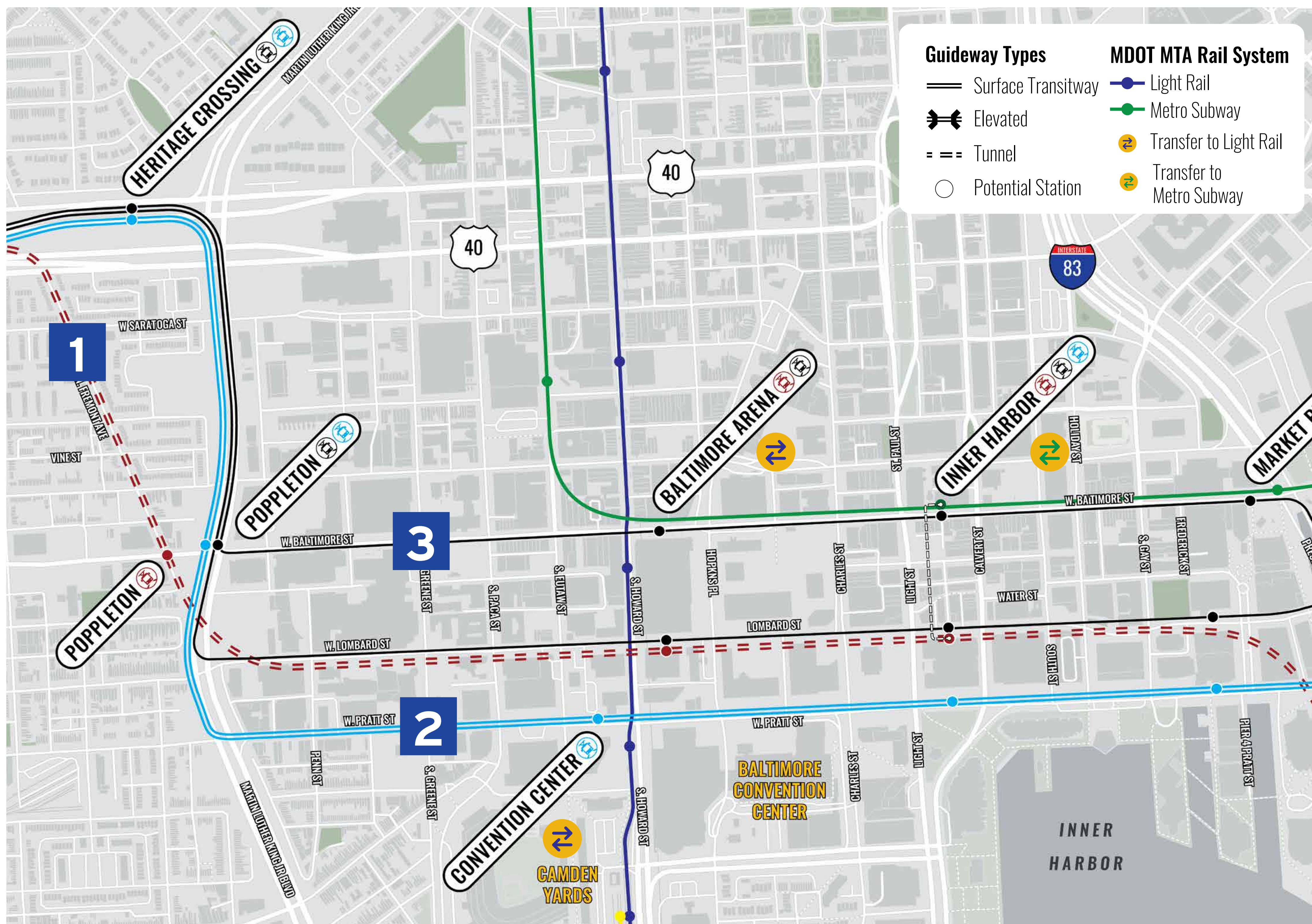
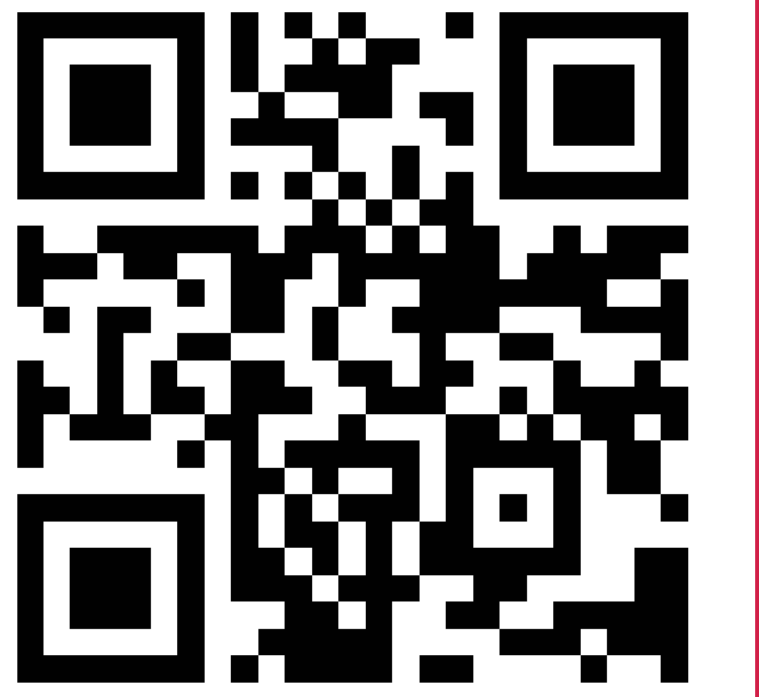
3



- Bidirectional transitway along MLK Jr. Boulevard
- Transit couplet along Baltimore St and Lombard Street
- Repurposes existing bus-only lane or one travel lane



Provide Feedback



Route & Tunnel Vs. Surface Considerations

Downtown



Alternative 1
LRT Tunnels



Alternative 2A
LRT Surface North



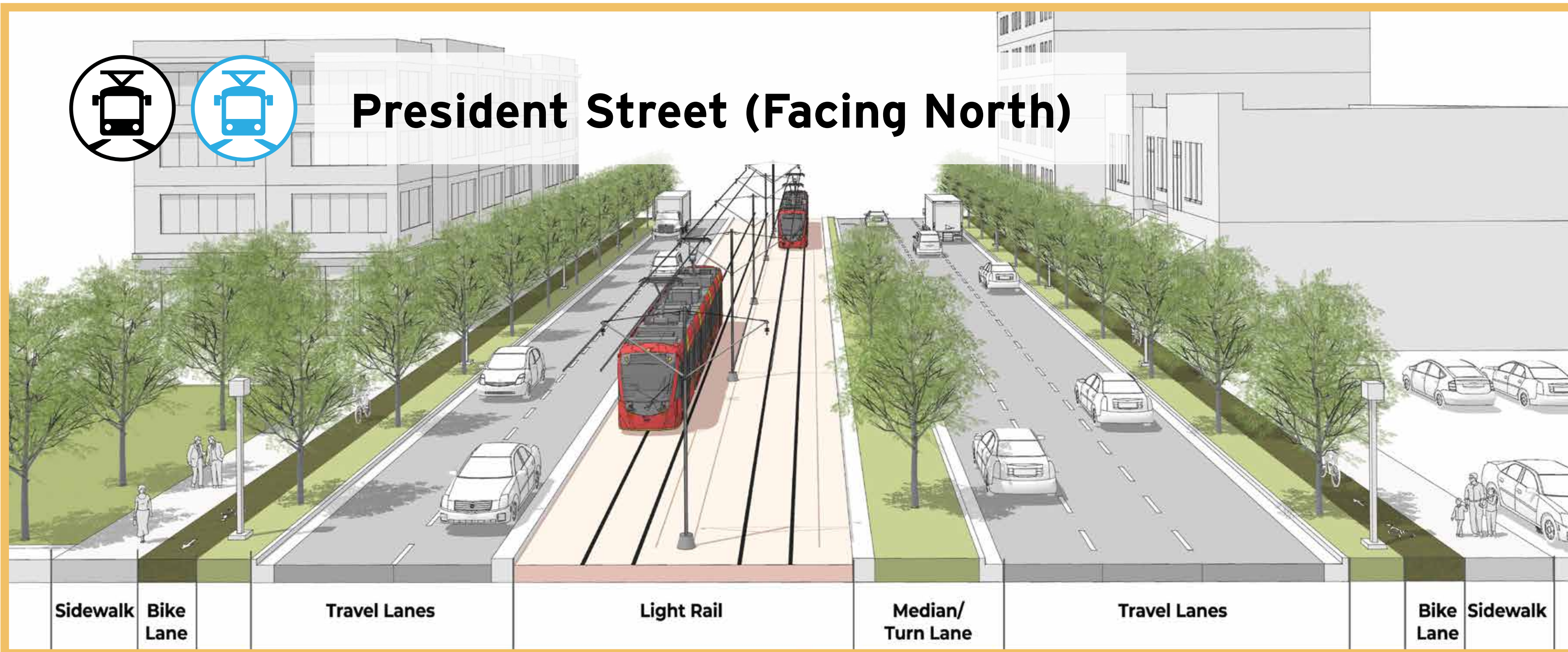
Alternative 2B
LRT Surface South



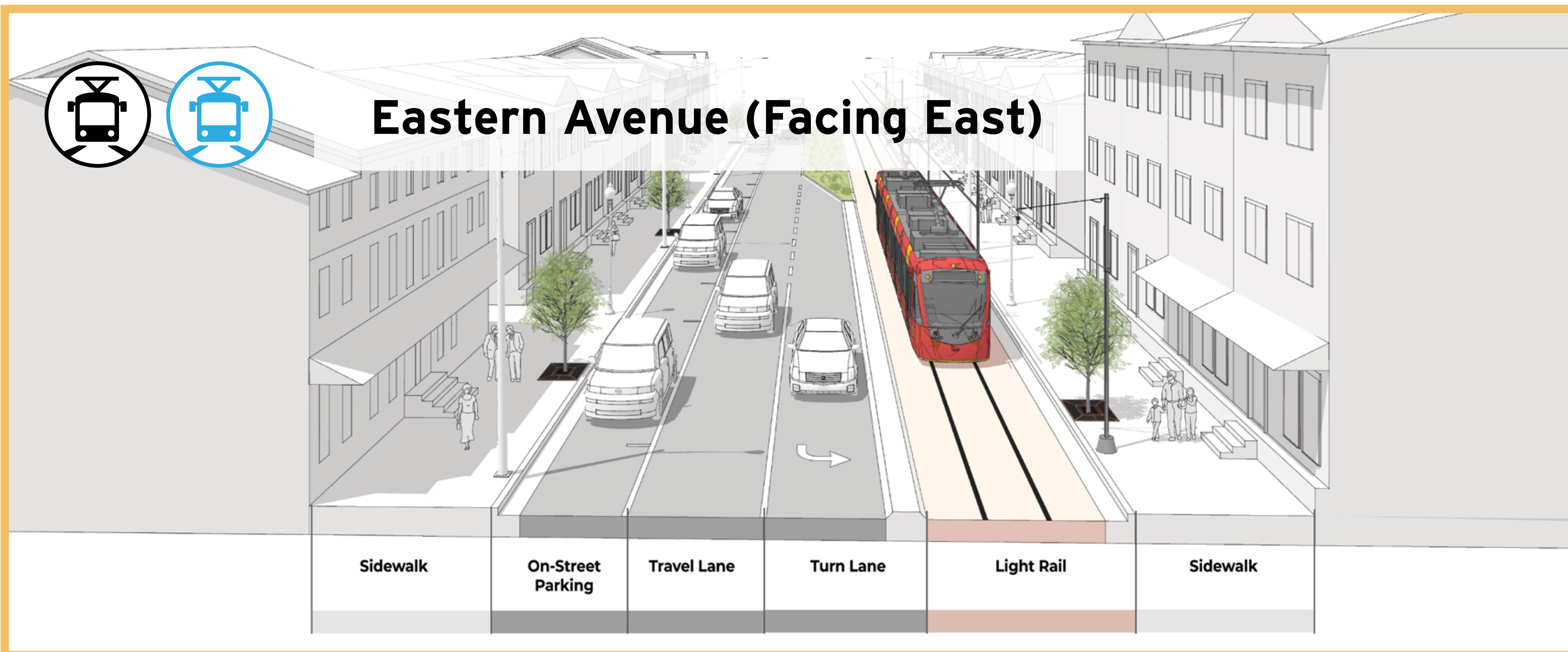
Provide Feedback



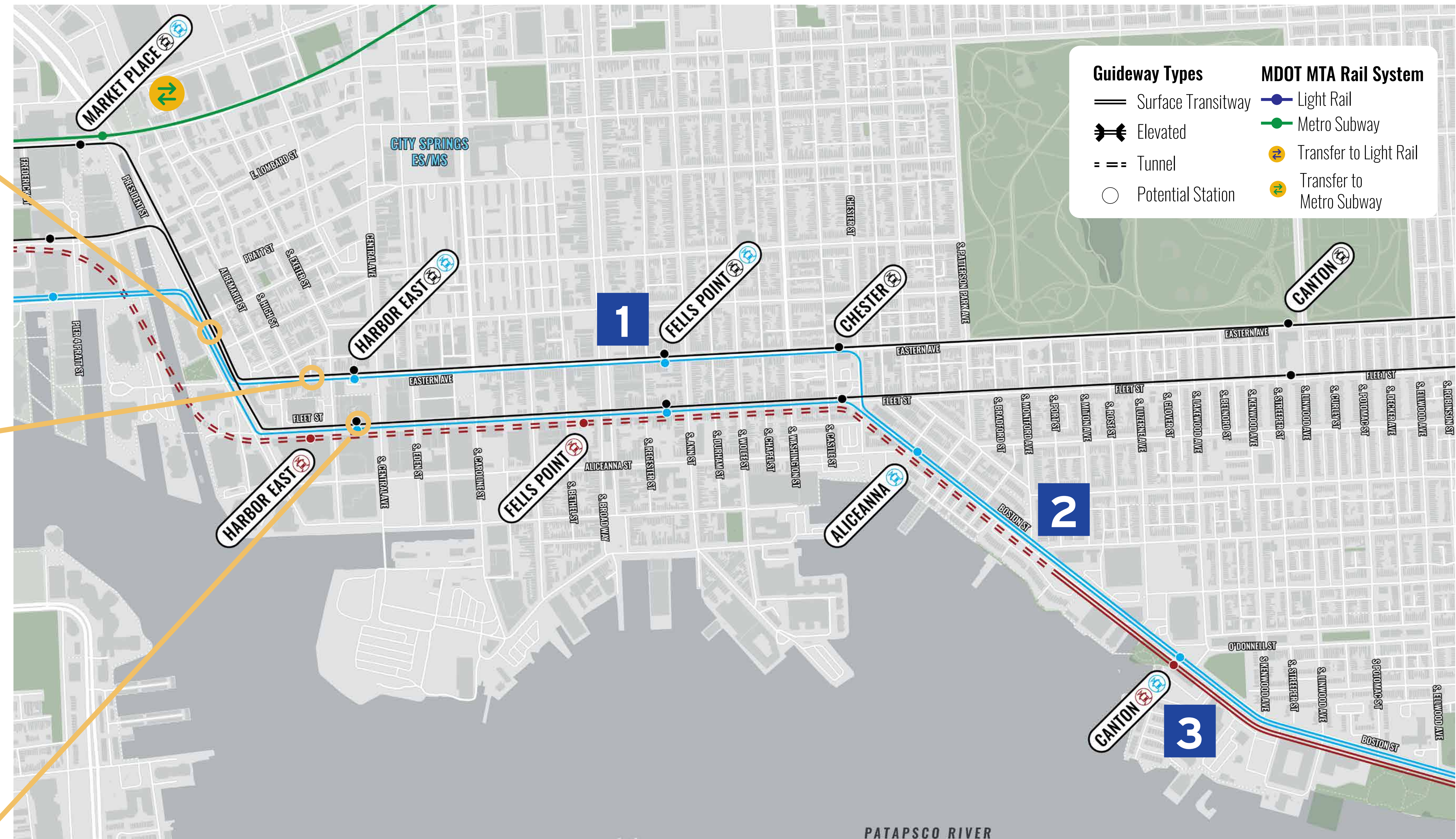
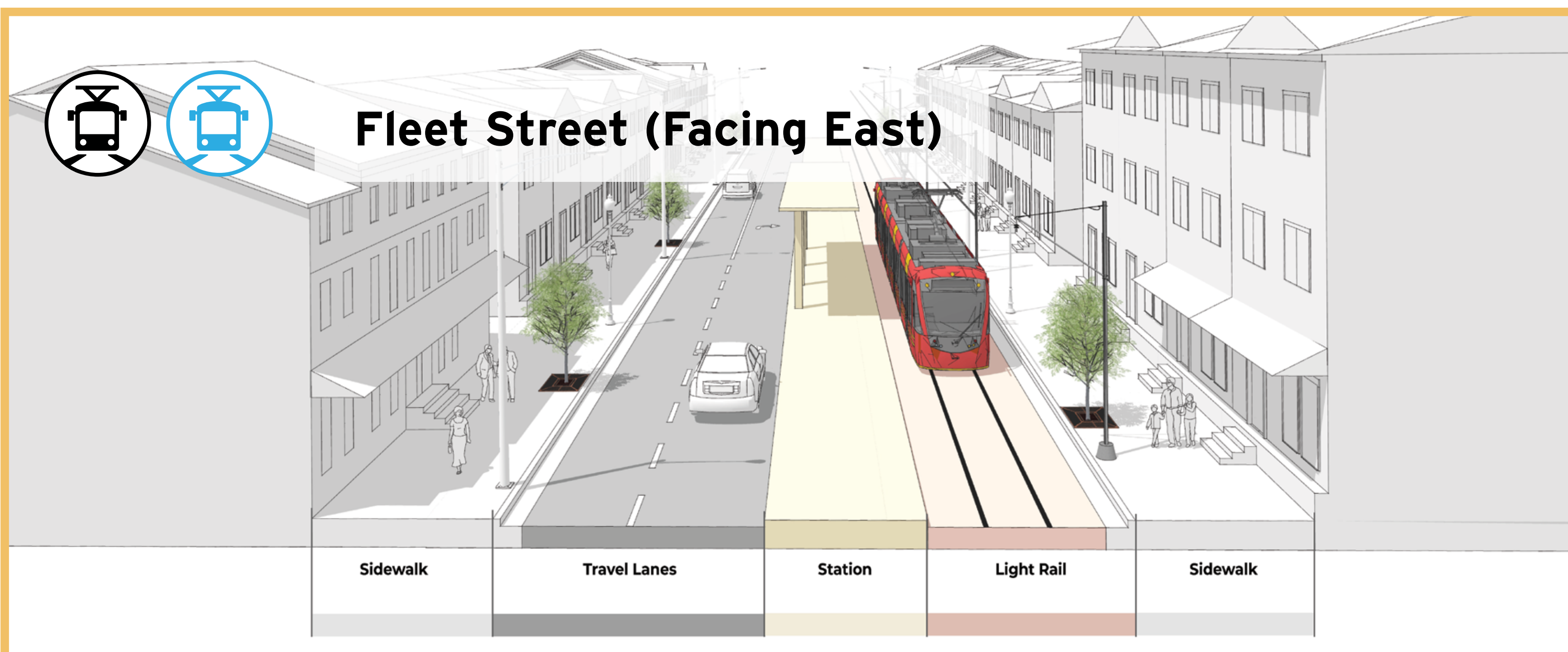
President Street (Facing North)



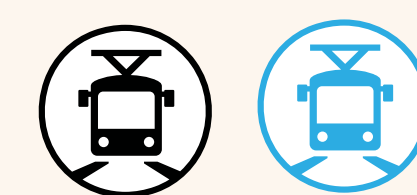
Eastern Avenue (Facing East)



Fleet Street (Facing East)



1



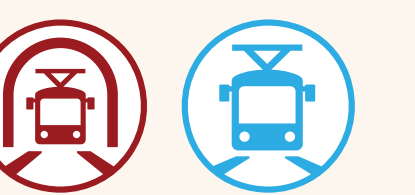
- Transit couplet along Eastern Ave and Fleet St
- Converts roads to one-way, repurposes a travel lane, and maintains parking on one side of the road outside station areas

2



- Twin-bore tunnel under Fremont Ave, Lombard St, Fleet St, and Boston St for approximately 3.2 miles
- Southern tunnel portal located in the median of Boston St

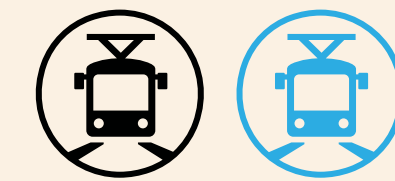
3



- Median running LRT on Boston St



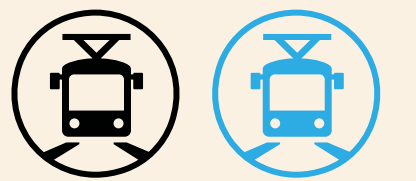
Surface alternatives would upgrade adjacent existing surface transportation infrastructure, including:



- Roadway resurfacing
- Bicycle and pedestrian facilities
- Crosswalks
- Streetlights
- Traffic signals/signs
- ADA accessibility
- Drainage and utilities



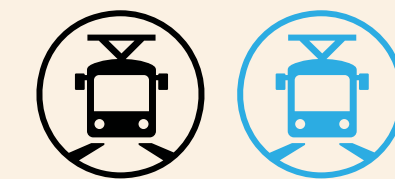
Surface alternatives would alter traffic patterns along Fleet Street and Eastern Avenue. These changes would occur within the limits of the specific Alternative:



- Fleet Street would be converted to an eastbound-only street
- Eastern Avenue would be converted to a westbound-only street



Surface alternatives would repurpose existing dedicated bus lanes along the alignment, including:



- Alt 2A: Baltimore and Lombard Streets
- Alt 2B: Pratt Street

Existing bus network would be modified to better feed into the Red Line and reduce duplicate service.



Surface alternatives would have higher parking impacts



Potential parking impacts between President Street and Haven Street:

- Alt 1: 120-130
- Alt 2A: 620-690*
- Alt 2B: 380-410*

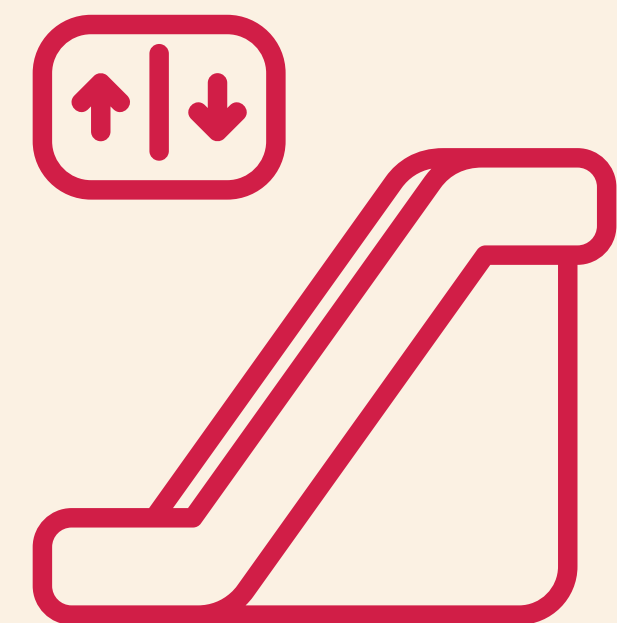
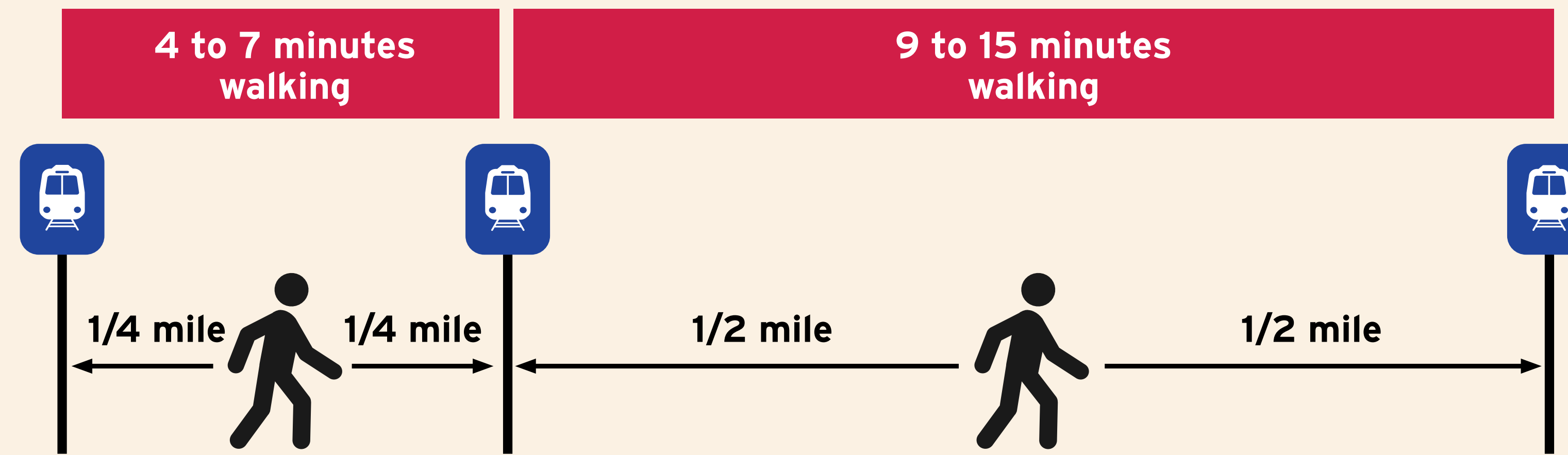
*Impacts include 40-50 residential permit spaces to be relocated where feasible

Parking spaces would be maintained on one side of Eastern Avenue and Fleet Street, except near proposed stations. The Project is analyzing the potential implementation of two parking garages to mitigate parking impacts.

Total travel time differs between alternatives

Three factors determine overall travel time from your origin to your destination:

1 Accessing the station:
The time it takes to walk to the station substantially impacts travel time. Surface alternatives provide 3 additional stations within the limits of the proposed downtown tunnel, resulting in shorter station spacing and shorter walk time.



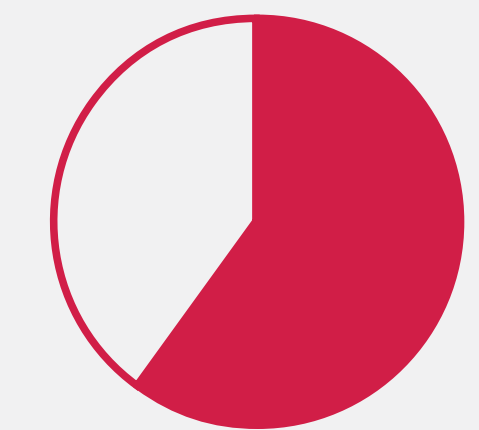
2 Reaching the platform:
Surface stations are more visible and easier to access compared to underground stations that require escalators and elevators, such as Alternative 1, which would add 2.5-3 minutes (or 5-6 minutes if both the origin and destination stations are underground).



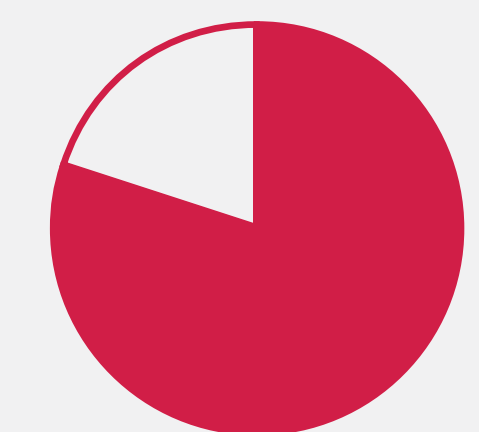
3 Riding the Red Line:
Alternative 1 is about 7 minutes faster than other options between West Baltimore MARC Station and Fells Point Station.

In Transit Travel Time (min.)

	ALT. 1	ALT. 2A	ALT. 2B
West Baltimore MARC to Fells Point	10-11 min.	17-18 min.	17-18 min.
Charles Center to Bayview	13-14 min.	18-19 min.	18-20 min.



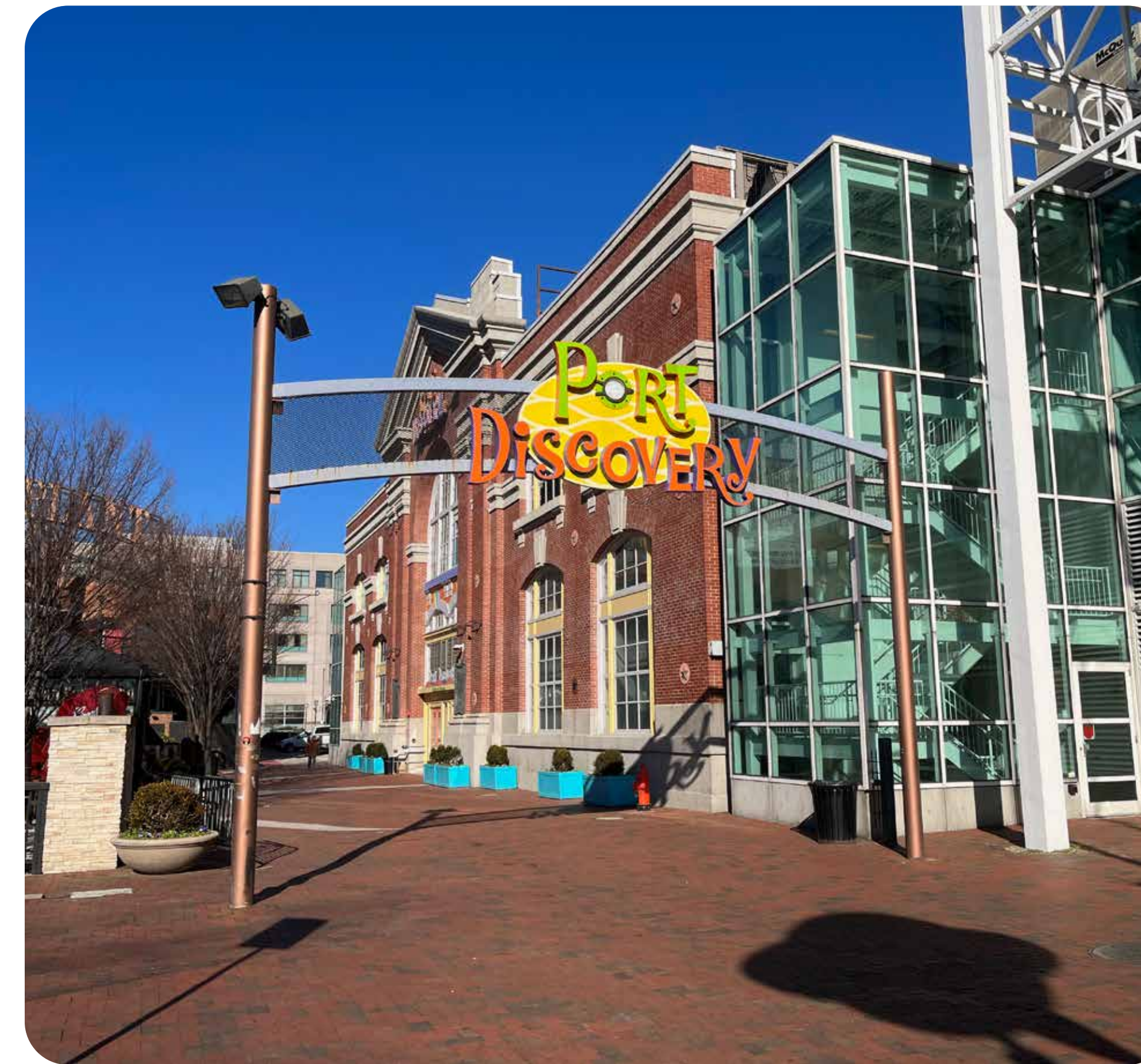
More than 60%
of Red Line corridor trips are
less than 2 miles.



More than 80%
of Red Line corridor trips are
less than 4 miles.



Alternative 2B connects with the existing Central Light Rail. This could allow the MTA to share vehicles and maintenance facilities between lines.



Surface alternatives provide 3 additional stations within the limits of the proposed downtown tunnel. These improve access to major residential, entertainment and educational destinations such as Heritage Crossing, Lexington Market, National Aquarium, Power Plant Live!, Pier Six Pavilion, and Port Discovery Children's Museum.

- Heritage Crossing
- Market Place
- Chester/Aliceanna



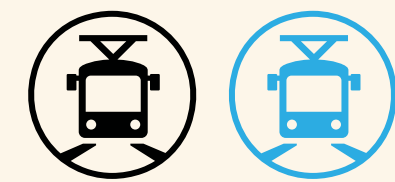
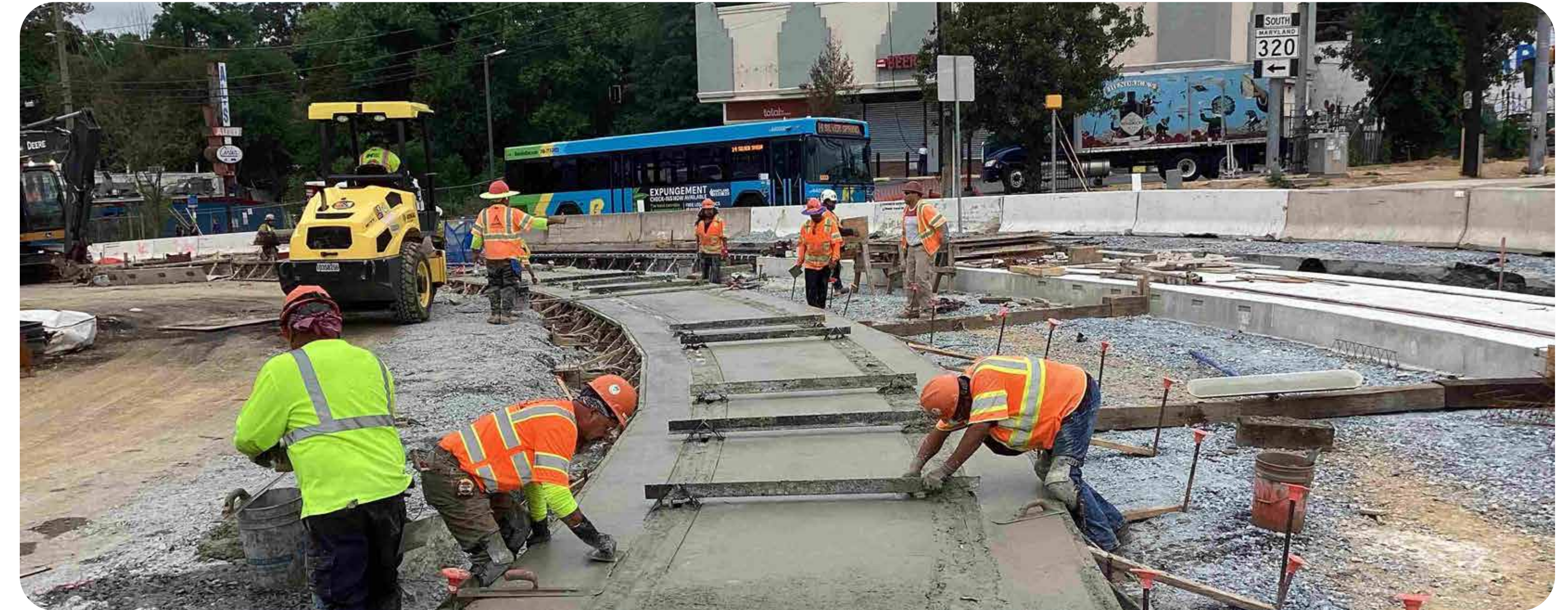
LRT service on couplet streets reduces operational flexibility in case of incidents. LRT vehicles will be unable to change tracks to maintain service, increasing the need for bus bridges.

Length of LRT running on couplet streets:

- 🚊 Alternative 2A: 3.4 miles
- 🚊 Alternative 2B: 0.9 miles



Surface alternatives are more resilient to extreme weather and climate change. Location of tunnel headhouses, ventilation shafts, and portals make the tunnel more vulnerable to flooding during major storm events.



Alternatives 2A and 2B surface construction would involve construction along existing roadways and new right-of-way:

- LRT track assembly and concrete work would be completed one segment at a time but in many locations simultaneously.
- Appropriate maintenance of traffic measures would be implemented when construction is taking place along existing roadways.
- Surface LRT construction would be comparable to more traditional roadway construction, just with a longer construction timeline due to more specialized construction methods.
- Additional construction may include:
 - + Transit stations and parking
 - + Stormwater management and utility relocations
 - + Grade crossings for intersecting streets and driveways
 - + Overhead wire system (known as catenary) installation
 - + Traction power sub-stations and other support systems





Downtown tunnel construction (Alternative 1) would involve surface alternative construction activities, as well as some elements that add complexity, risk, cost, and time to the project.

- Construction of tunnel portals to launch and retrieve the Tunnel Boring Machine (TBM) in the median of US 40 and on Boston Street, respectively. The launch portal and staging area would require approximately two acres, as well as careful management of noise and dust during construction.
- Once launched, a custom TBM would begin excavating from west to east, running 24 hours a day, 5-7 days a week.
- Excavated material would be transported to the western portal area to be hauled to another site. Engineering controls would be used to deal appropriately with any contaminated soils.
- Underground stations and vent shafts will require top-down construction with large excavations in public streets, major utility relocations, and temporary diversions of traffic.

Southeast Baltimore Considerations



Provide Feedback



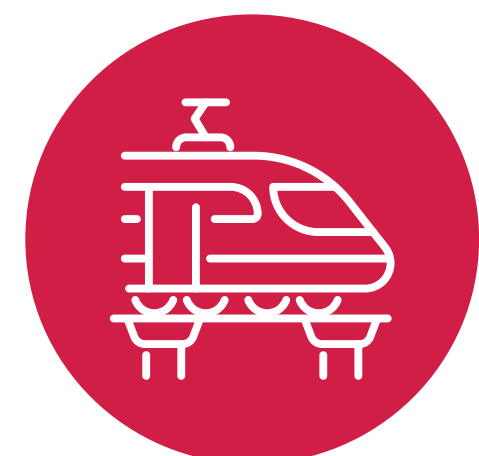
A range of conceptual alignments are being evaluated on the east end of the corridor to respond to developments over the past 10 years. There are significant challenges through this area that complicate a direct connection for the Red Line from southeast Baltimore to Johns Hopkins Bayview Campus.



Area has experienced significant growth in residential and commercial development directly on the path of the previous Red Line alignment



Development growth continues within vacant parcels that further reduce alignment options without greater impacts


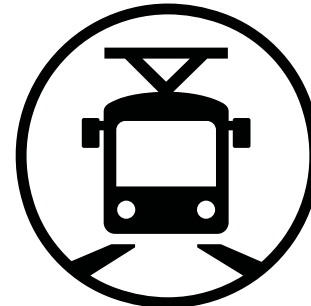



Three active railroad operations including Norfolk Southern, CSX and Canton Railroad are constraints that require grade separation



Two interstates (I-895 and I-95) are barriers that require grade separation

Measures of Effectiveness Table


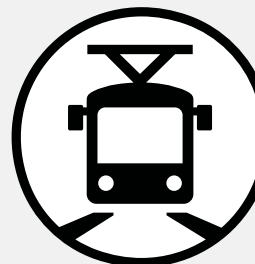

		 Alternative 1 LRT-Tunnels	 Alternative 2A LRT-Surface North	 Alternative 2B LRT-Surface South
Average Daily Total Projected Trips		33,000 - 35,500	29,500 - 31,500	28,500 - 30,000
Average daily projected trips from zero-car households		12,000-13,500	11,500-12,500	11,000-12,000
New Transit Trips		7,500 - 9,000	6,000 - 7,000	7,000 - 8,000
Access* to Population with Disability / Minority Population / Low Income		13,500 / 10,900 / 16,200	15,000 / 12,900 / 18,600	14,200 / 11,700 / 17,500
Access* to Jobs / Students / Households		124,200 / 12,600 / 44,800	128,300 / 13,500 / 50,000	124,900 / 13,100 / 47,000
In Vehicle Travel Time (min)	Security Square Mall to Bayview (End to End)	44-47 mins	55-58 mins	56-59 mins
	Security Square Mall → Charles Center	25-26	32-33	33-34
	Edmondson Village → Charles Center	16-17	19-20	20-21
	W. Baltimore MARC Station → Fells Point	10-11	17-18	17-18
	Charles Center → Bayview	13-14	18-19	18-19
Connections** to Rail Stations		4	6	5
Connectivity to Howard St LRT		No	No	Yes
Capital Cost (Escalated \$, Billions)		\$8.2 - \$9.0 B	\$4.8 - \$5.3 B	\$4.7 - \$5.1 B
Annualized Capital Cost (\$/Trip)		\$21 - \$24	\$16 - \$18	\$16 - \$18
Operations and Maintenance Costs (2024 \$, Millions)		\$58 M	\$53 M	\$54 M

* within 1/2 mile of stations

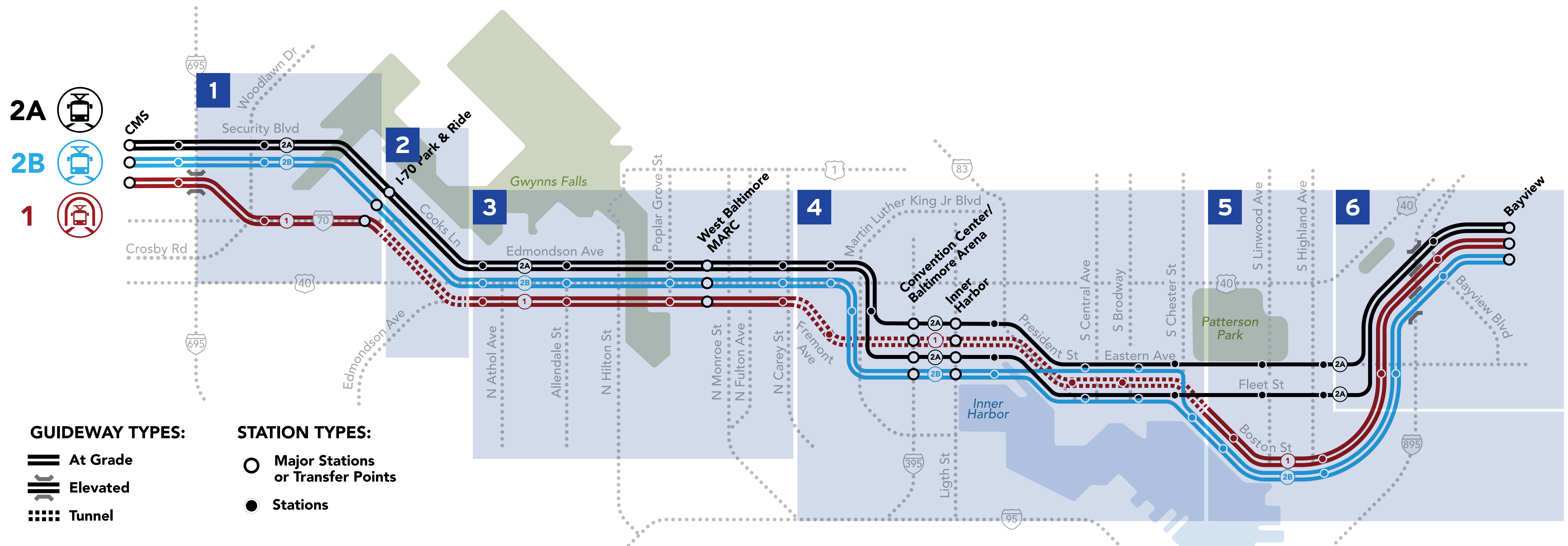
** within 1/4 mile of stations

What's Next: Selecting an Alternative

Light Rail Transit has been selected as the recommended mode for the Baltimore Red Line, but other project alternative decisions must still be made. The map below identifies study area locations where engineering and alignment options are being evaluated.

 **Alternative 1**
LRT Tunnels
  **Alternative 2A**
LRT Surface North
  **Alternative 2B**
LRT Surface South

- 1**
Route?
I-70 vs. Security Blvd
- 2**
Tunnel Vs. Surface?
Cooks Lane
- 3**
Route?
Options along US 40
- 4**
Tunnel vs. Surface?
Travel through downtown at street level or below
Route?
Baltimore St/Lombard St vs. Eastern Ave/Fleet St
- 5**
Route?
Options through Southeast Baltimore
- 6**
Route?
Options to connect to Bayview



The National Environmental Policy Act (NEPA) Process

- Congress passed NEPA in 1969 to require the federal government to consider the potential impacts of its actions on the human environment.
- MTA is working in partnership with FTA to prepare a Supplemental Environmental Impact Statement (SEIS).
- Several Executive Orders require federal agencies to identify and address potential disproportionate and adverse effects of their actions on disadvantaged, minority, and low-income communities.
- The SEIS will build upon the previous NEPA analyses and review any changes in the affected environment and project impacts, as well as operational changes, regulations, and mitigation measures.
- The SEIS will also include coordination activities and input from Federal, State, and local agencies; and public involvement.

Initiate the NEPA Process

- Develop Purpose and Need
- Hold agency scoping meetings
- Begin developing alternatives

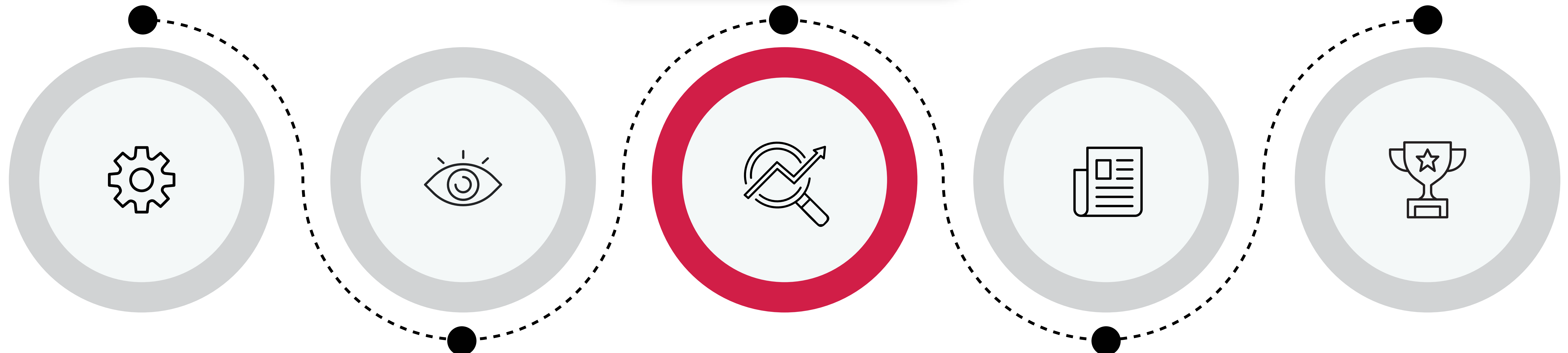
WE ARE HERE

Analyze Alternatives

- Use the Purpose and Need to screen alternatives
- Analyze environmental impacts of alternatives

Publish Final Environmental Document/Make Decision

- Prepare Final EIS (FEIS) addressing comments
- Publish federal decision



Collect Data

- Analyze existing conditions
- Identify studies needed to obtain more information
- Begin preparing SEIS

Publish Environmental Document

- Identify the Preferred Alternative
- Release SEIS for public comment
 - Hold public hearings
 - Review comments

The Baltimore Red Line Purpose & Need

- Following the relaunch of the Baltimore Red Line in 2023 and subsequent review of the Purpose and Need, it was determined that the Project Purpose and Need described in the previous 2008 Alternatives Analysis/Draft EIS and 2012 Final EIS remains consistent.
- The current Purpose and Need, based on the same mobility and community development needs previously studied, also updates and reflects the current conditions, policies, and approaches; and public involvement.



Project Purpose | Provide high-frequency, high-capacity transit service in the corridor in a manner that improves transit efficiency; increases access to transit near work and activity centers; enhances connections among existing transit routes; provides transportation choices for east-west commuters; and supports economic development and community revitalization.



Project Need | The needs that continue to exist in the Project study corridor are:

- Efficient transit travel times and enhanced reliability to meet current and future transit demands.
- Convenient transit access to existing and future employment and activity centers.
- High-capacity transit options to meet current and future transit demands.
- Connections to and from existing transit routes (including Central Light Rail, Metro, MARC, and bus network).



Project Goals | Supporting the Purpose and Need, the MTA has also identified two Project goals:

- Support community revitalization and economic development opportunities.
- Support regional goals of improving air quality and promoting environmental stewardship, equity, sustainability, and resiliency.

Other Projects in the Corridor

1 Security Mall Redevelopment

Aimed at transforming this underutilized mall into a vibrant community hub with retail, dining and recreational spaces

Baltimore County

2 Frederick Douglass Tunnel Replacement

Construction of new tunnel alignment as an alternative to the aging Baltimore and Potomac Tunnel

Amtrak

3 West Baltimore MARC TOD Study

Focused on transit-oriented development around the West Baltimore MARC Station

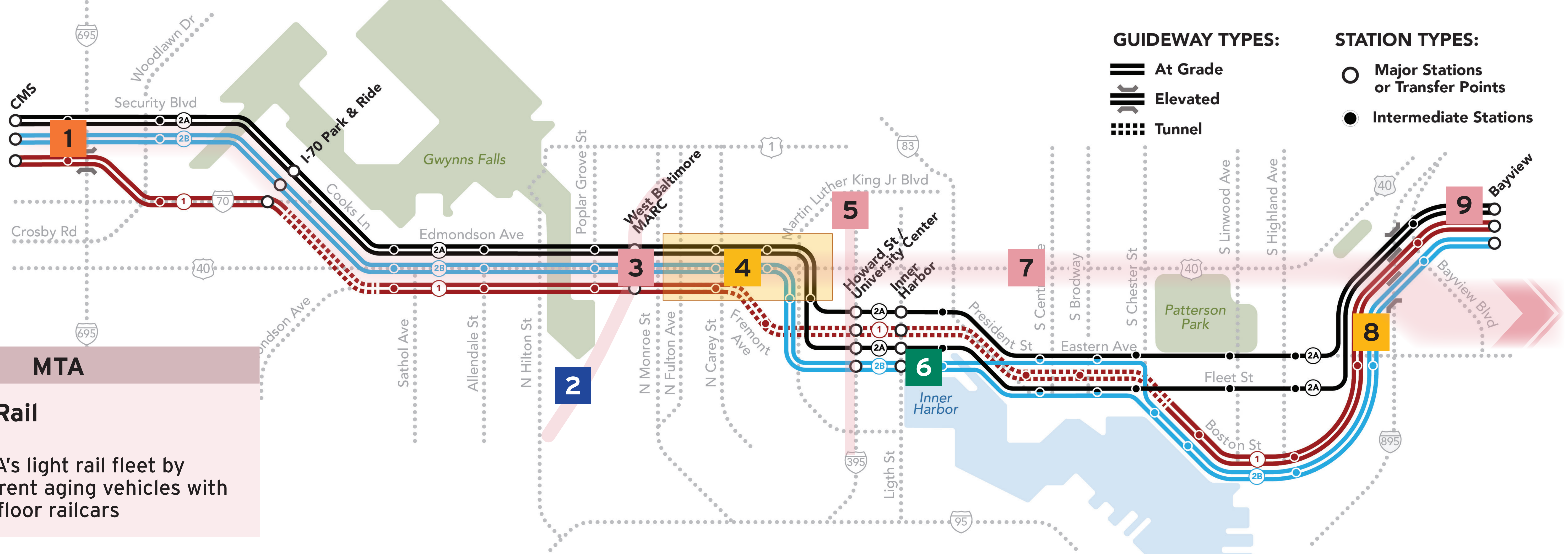
MTA

4 West Baltimore United




Aimed at advancing long-overdue improvements and connecting communities separated by the "Highway to Nowhere"

Baltimore City



- 2A 
- 2B 
- 1 



GUIDEWAY TYPES:

-  At Grade
-  Elevated
-  Tunnel

STATION TYPES:

-  Major Stations or Transfer Points
-  Intermediate Stations

5 Light Rail

Updating MTA's light rail fleet by replacing current aging vehicles with modern, low-floor railcars

MTA

6 Downtown Rise & Inner Harbor Redevelopment

Proposed redevelopment to transform the Inner Harbor with new residential, commercial and public spaces

Proposed redevelopment to transform the Inner Harbor with new residential, commercial and public spaces

MTA

7 East-West RAISE

Aimed at enhancing transit, pedestrian, and bicycle infrastructure along a 20-mile corridor in Baltimore

Baltimore City

8 Baltimore Greenway Trail

A 35-mile trail network linking diverse neighborhoods, cultural amenities, and outdoor resources

MTA

9 Eastern Baltimore County Access Study

Study assessing options to connect the Red Line's eastern terminus to points east

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