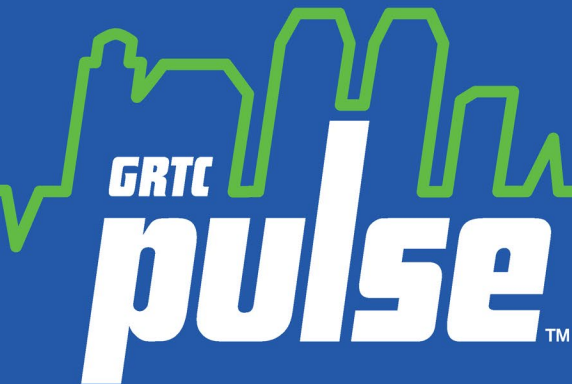


# GRTC Pulse

# North-South BRT

Round 2 Public Engagement  
March 2025



# Project Corridor



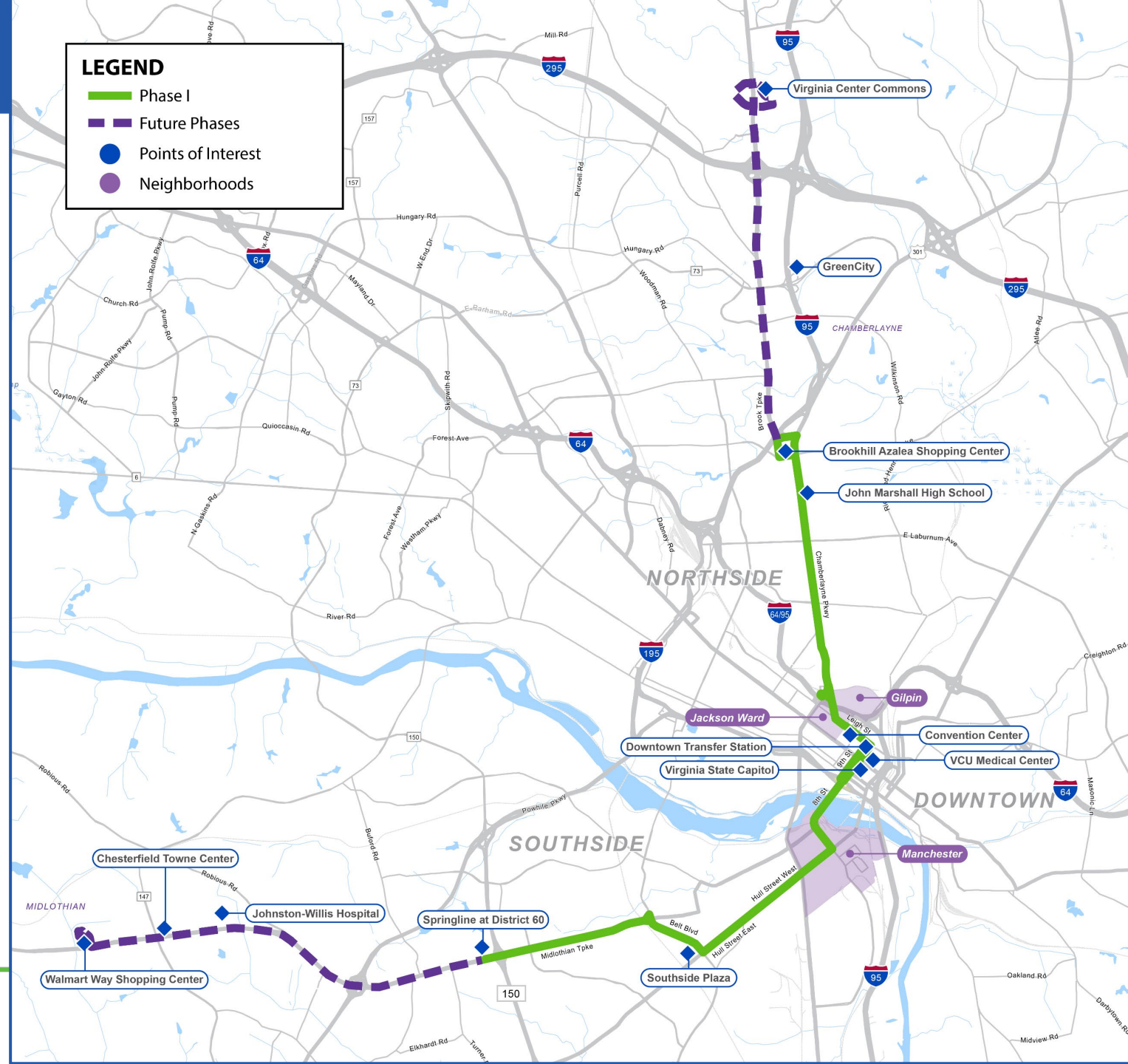
## Phase I

Brookhill Azalea Shopping Center to Stonebridge/Springline at District 60



## Future Phases

- Extension to Virginia Center Commons
- Extension to Midlothian



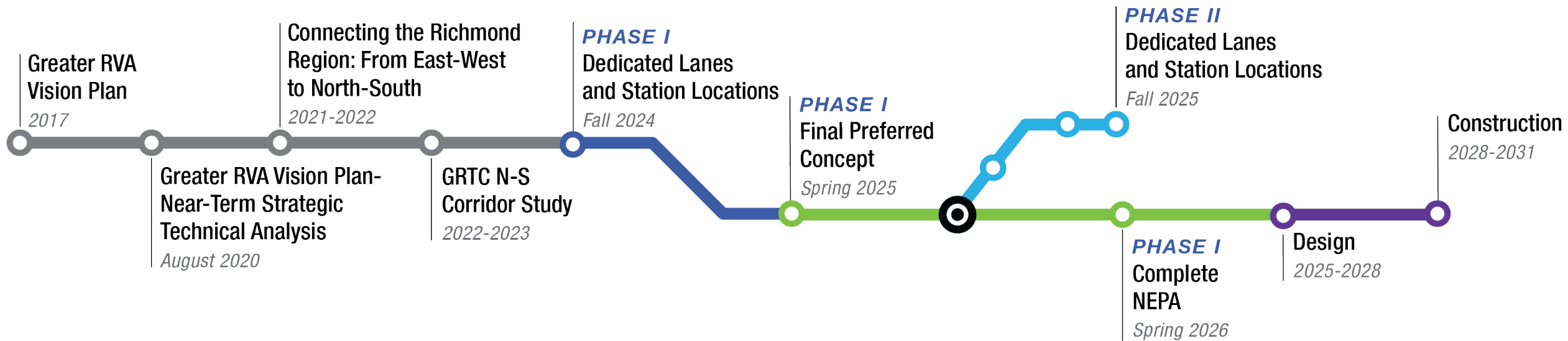
# Project Purpose

- Advance Phase I conceptual design
- Complete federal environmental review process
- Conduct planning for future phases





# Project Schedule



# Concept Development



# Guiding Design Principles

## Minimize

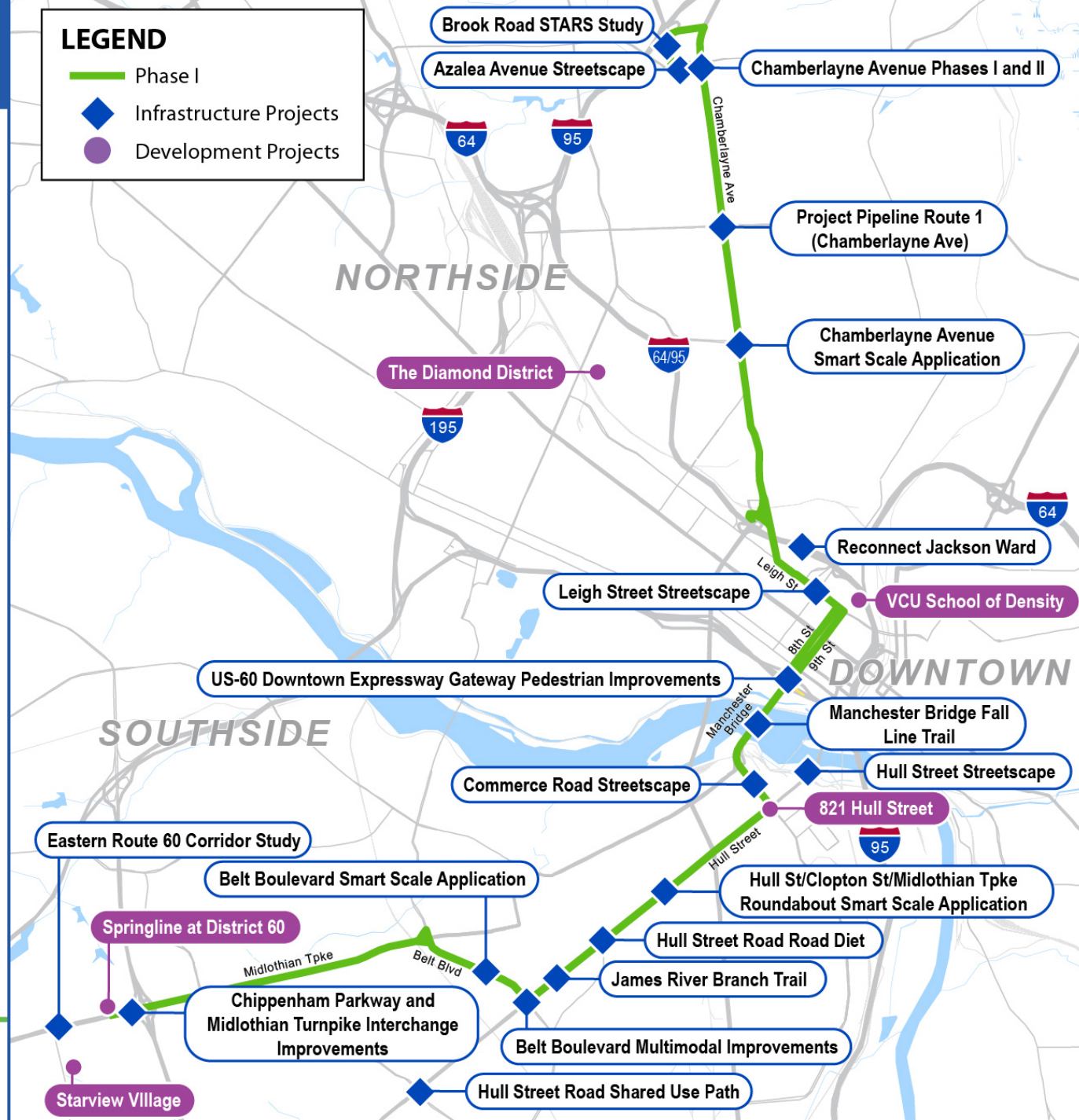
- Property Impacts
- Environmental Impacts
- Historic Resources
- Traffic Impacts
- Parking Impacts

## Maximize

- Ridership
- Equity
- Access to Key Destinations
- Multimodal Connections
- Operational Efficiency

# Project Coordination Map

- ◆ 19 Infrastructure Projects
- 5 Development Projects





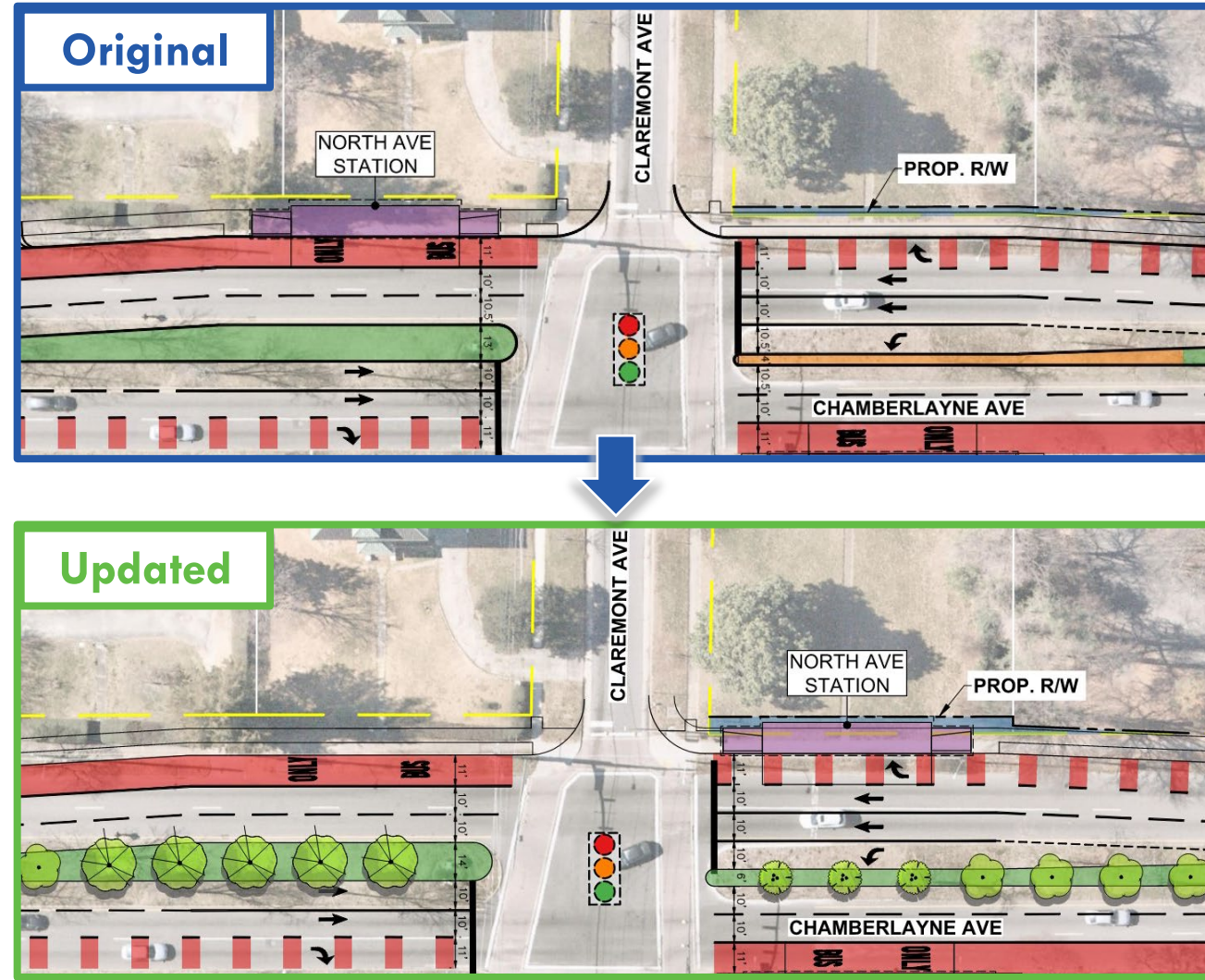
# Updated Concepts





# Updated Concepts

- Corridor Concepts
- Typical Sections
- Station Locations & Layouts
- Station Layouts
- Traffic
- Parking



# Icon Legend

On the following slides, updates to the conceptual design have been outlined in detail. These changes have impacts on a variety of factors within the corridor. The impacts related to each change are called out on each slide using the icons defined below.



**Bus Operations**



**Bicycle/Pedestrian**



**Parking**



**Traffic**



**Station Locations**

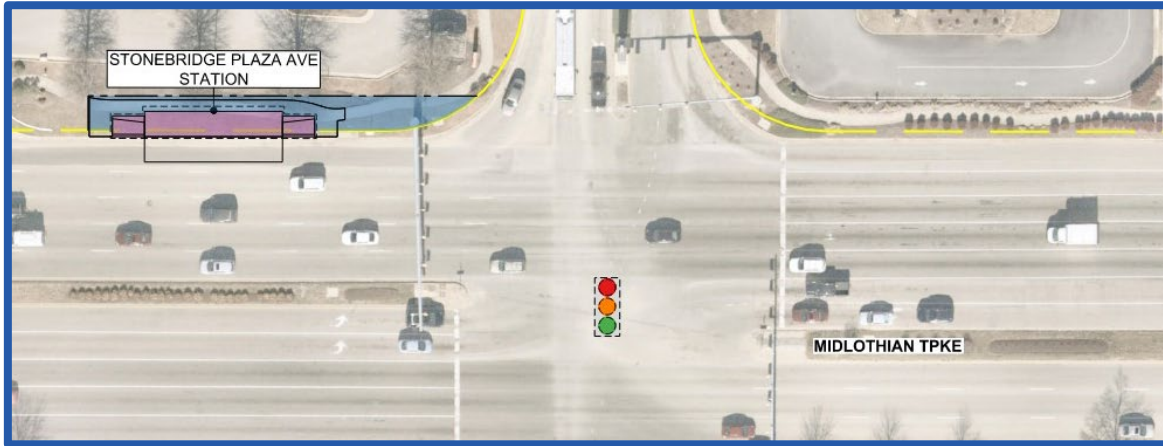


**Tree Canopy**

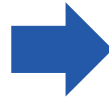
# Southern Terminus / Stonebridge Plaza Ave Station



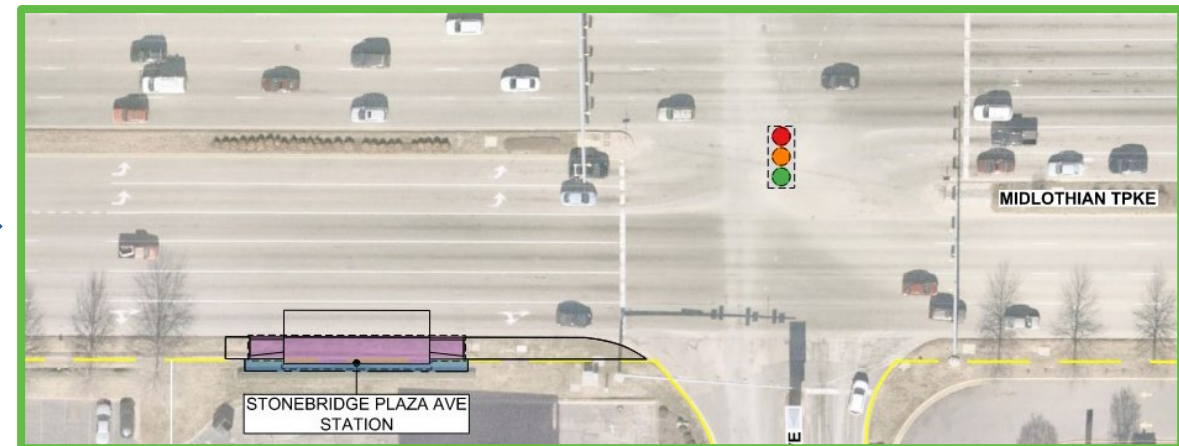
## Westbound Station:



- **Original Concept:** Two station location options were proposed for the BRT Southern Terminus, one on either side of Midlothian Turnpike at Stonebridge Plaza Avenue.
- **What We Heard:** 61% of survey respondents preferred the station heading west on Midlothian Turnpike.



## Eastbound Station:



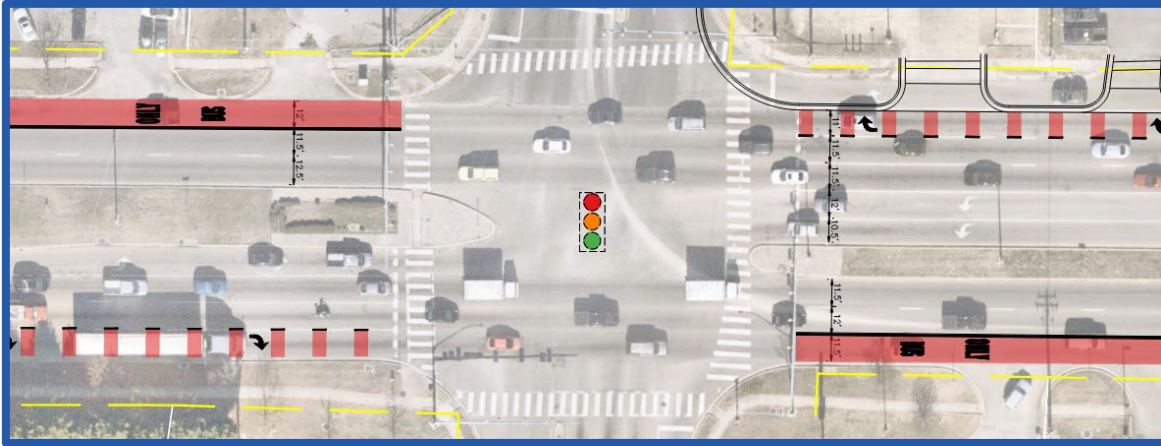
- **How We Responded:** The eastbound station will be advanced to the next stage of design development and environmental review.
- **Why This Matters:** The eastbound station is the preferred location of Chesterfield County. The station provides greater proximity to the existing mixed-use development at Stonebridge Shopping Center, including Kroger. Only one station will be built during Phase 1, while ultimately the second station will be built during future project phases.



# Midlothian Tpke Median Dedicated Bus Lanes and Stations

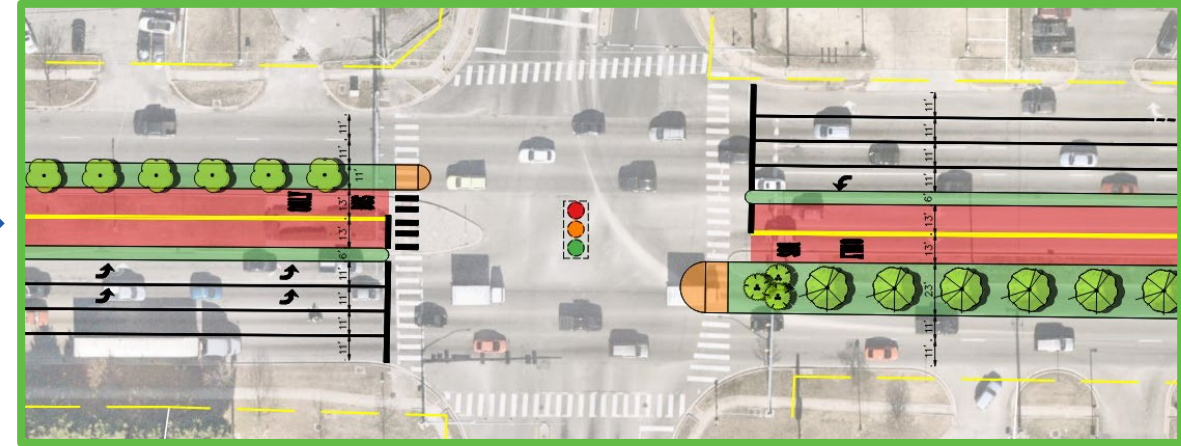


## Curbside Dedicated Bus Lanes and Stations:



- **Original Concept:** Two designs were proposed on Midlothian Turnpike: curbside bus lanes and stations & median bus lanes and stations.
- **What We Heard:** 53% of survey respondents preferred the curbside bus lanes and stations.

## Median Dedicated Bus Lanes and Stations:

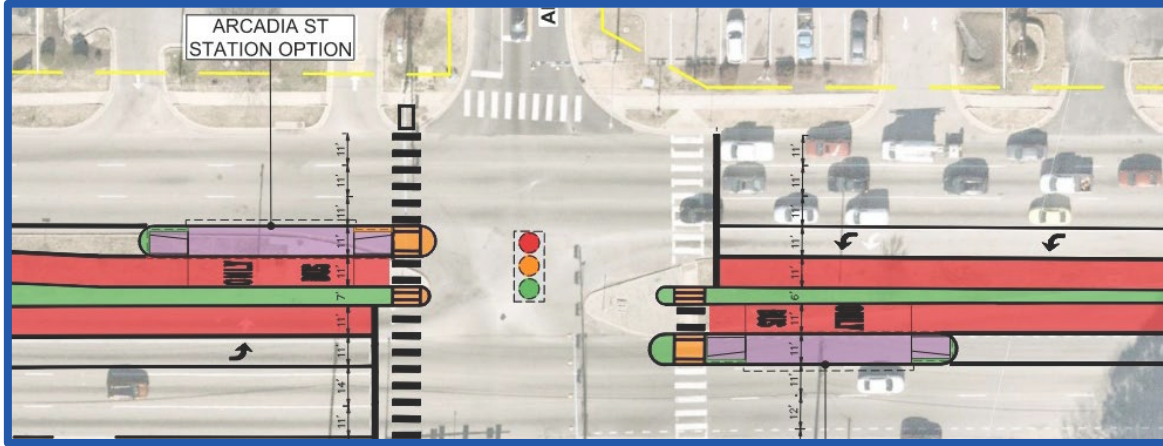


- **How We Responded:** The curbside bus lane option posed challenges. As such, median bus lanes and stations will be advanced to the next stage of design development and environmental review.
- **Why This Matters:** Median stations have fewer impacts on business driveways and property access. Midlothian Turnpike has an existing wide median, which provides sufficient space to accommodate bus lanes while minimizing property impacts.

# Midlothian Tpke (West) Stations

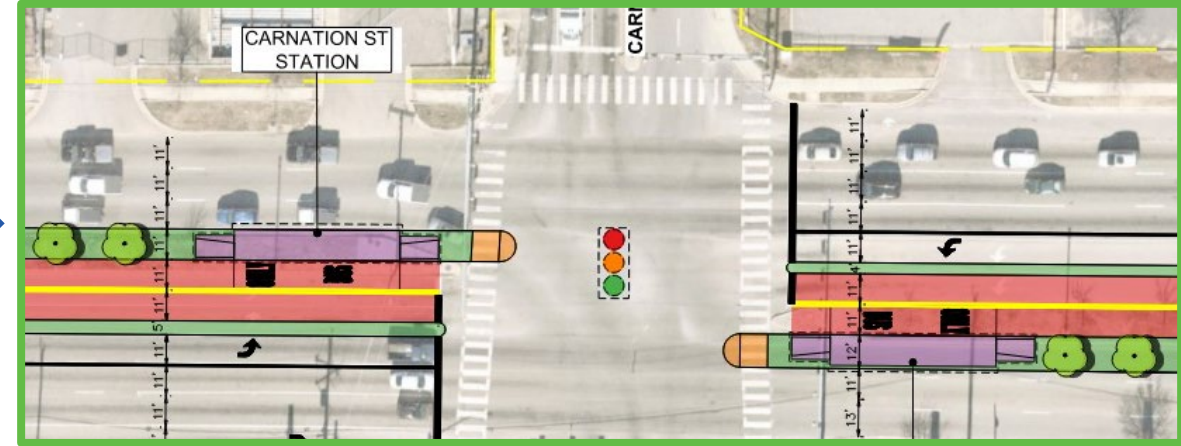


## Midlothian Tpke/Arcadia St Stations:



- **Original Concept:** Two station location options were proposed on Midlothian Turnpike: Arcadia Street and Carnation Street.
- **What We Heard:** 59% of respondents in the public survey preferred the stations at Arcadia Street.

## Midlothian Tpke/Carnation St Stations:



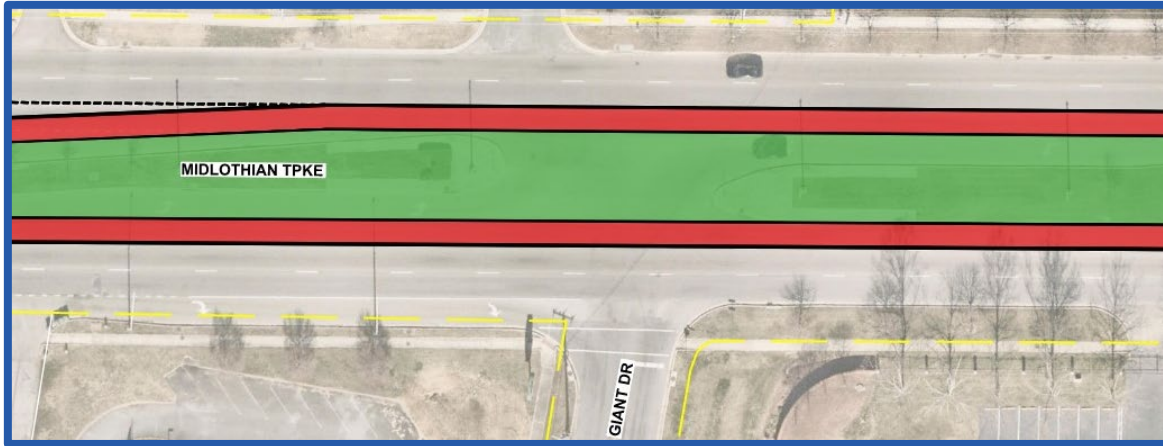
- **How We Responded:** The stations at Carnation Street will be advanced to the next stage of design development and environmental review.
- **Why This Matters:** The Carnation Street stations offer greater long-term BRT ridership potential because of transit-supportive land uses and City bike network infrastructure nearby. Additionally, these stations are located further away from the Chippenham Parkway interchange which is planned for future reconfiguration.



# Midlothian Tpke Traffic Signals

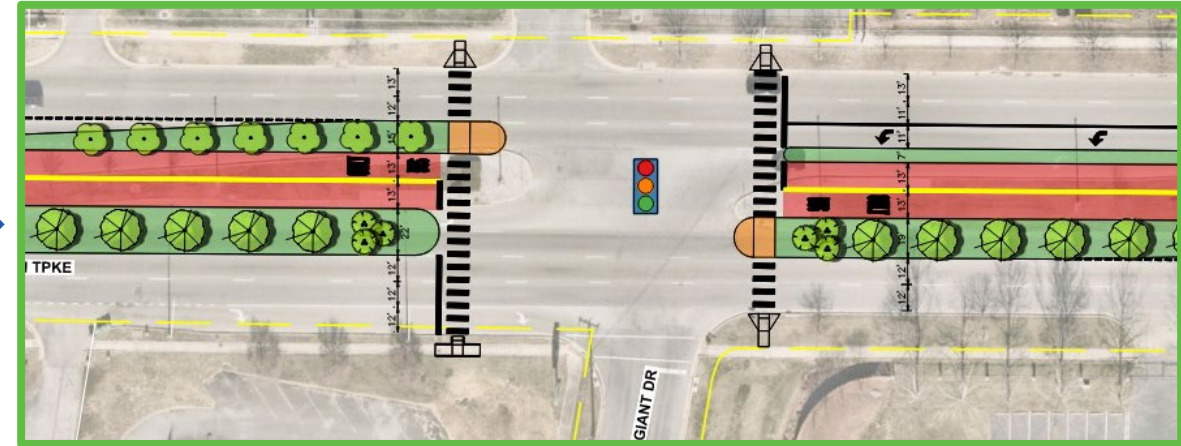


Midlothian Tpke/Giant Dr Before:



- **Original Concept:** One new traffic signal was proposed on Midlothian Turnpike at Old Warwick Road.
- **What We Discovered:** Additional traffic analysis indicated that greater left-turn access is needed at more intersections with median bus lanes, which require median closures.

Midlothian Tpke/Giant Dr After:



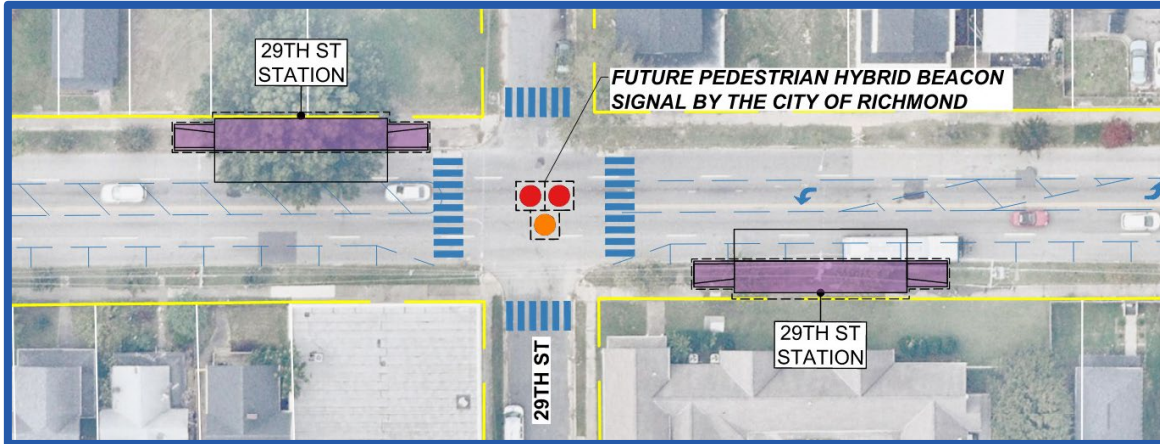
- **How We Responded:** We added two more new traffic signals on Midlothian Turnpike at Giant Drive and at Queen Anne Drive.
- **Why This Matters:** Additional traffic signals will provide safe and improved left-turn access to adjacent businesses and neighborhoods as well as new signalized pedestrian crossings.



# Hull St (West) Stations

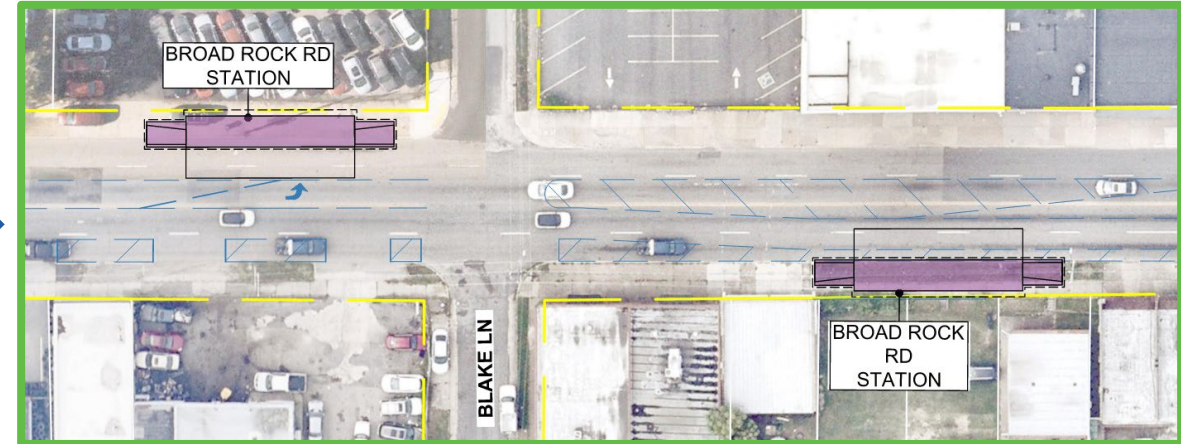


## Hull St/29th St Stations:



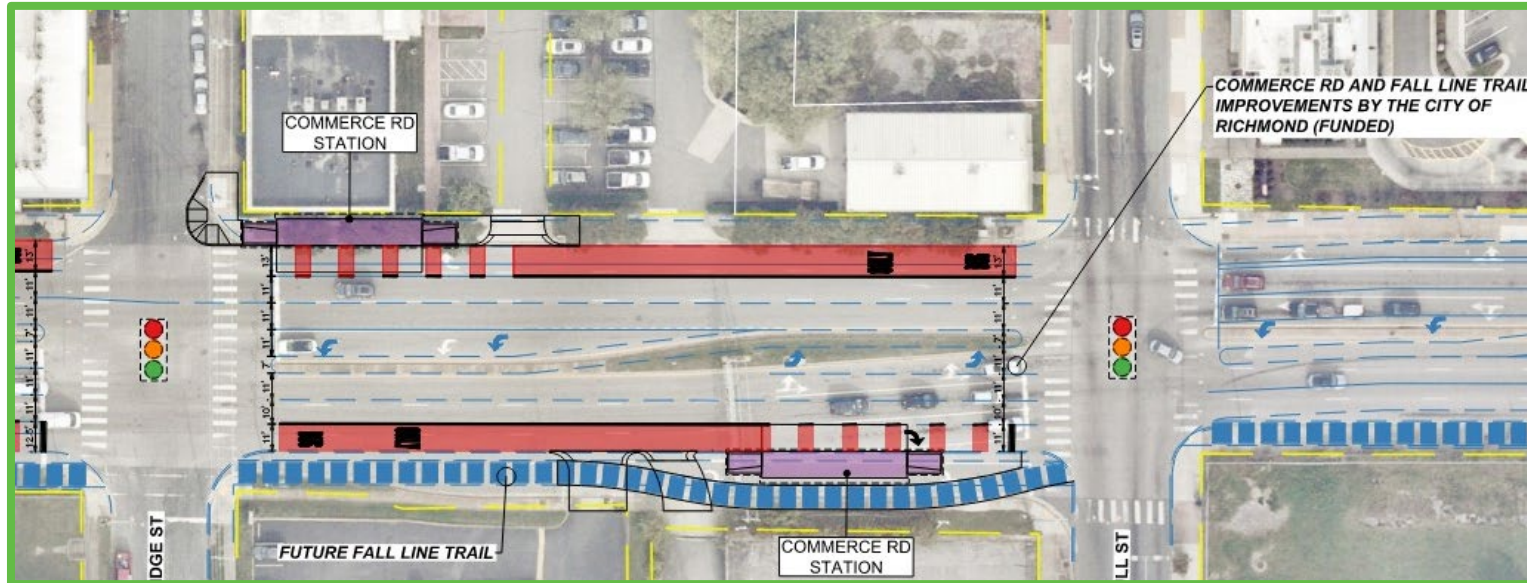
- **Original Concept:** Two stations location options were proposed on Hull Street near Swansboro West: Broad Rock Road and 29th Street.
- **What We Heard:** 60% of respondents in the public survey preferred the stations at Broad Rock Road.

## Hull St/Broad Rock Rd Stations:



- **How We Responded:** The stations at Broad Rock Road will be advanced to the next stage of design development and environmental review.
- **Why This Matters:** The Broad Rock Road stations enhance connectivity to GRTC local bus routes and provide improved access to the Swansboro West and Broad Rock neighborhoods, proximity to the VA Hospital, multimodal connectivity to the Jame River Branch Trail, and access to a variety of transit-supportive land uses.

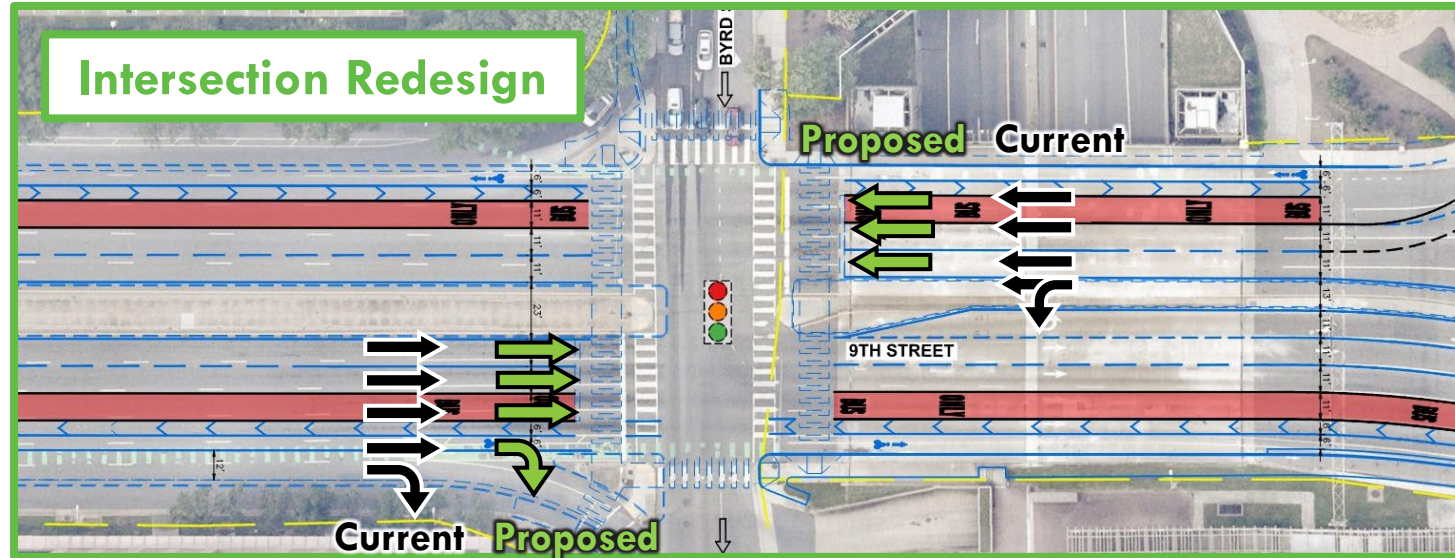
# Commerce Rd and Fall Line Trail



**Fall Line Trail:** The Commerce Road southbound station was designed to accommodate the Fall Line Trail running behind it. The Commerce Road stations and curbside bus lanes will not impact the width or routing of the Fall Line Trail, as there is enough available right-of-way to accommodate both projects.



# 9th St / Byrd St Traffic Operations

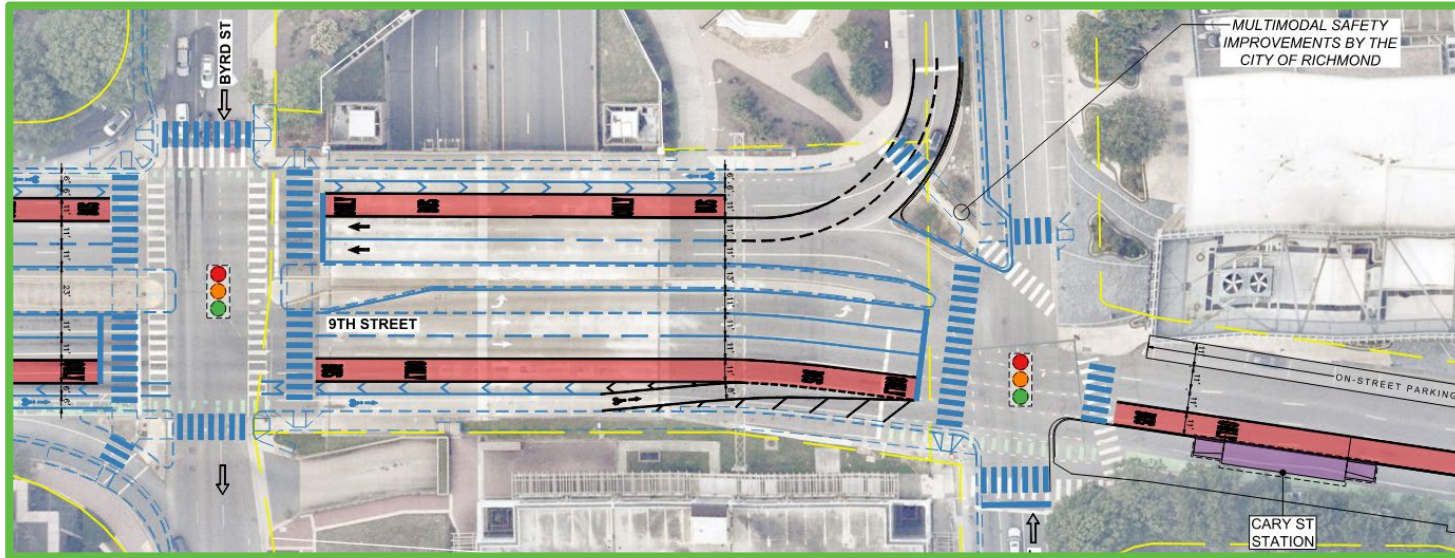


- **Original Concept:** Dedicated bus lanes were proposed along 9th Street.
- **What We Discovered:** Additional traffic analysis indicated that converting vehicle lanes a dedicated bus lanes may cause significant delays in the morning and afternoon peak periods.

- **How We Responded:** We removed the dedicated left-turn lane and traffic signal phase from 9th Street on to Byrd Street to reduce signal delays. Traffic headed to the Downtown Expressway is rerouted via Cary Street and 10th Street.
- **Why This Matters:** Traffic flow and safety will improve and delays will be reduced. Alternate routes to the Downtown Expressway have capacity to handle the 100 vehicles rerouted to the downtown gride in the PM rush hour.



# 9th St Bike Lane and Fall Line Trail

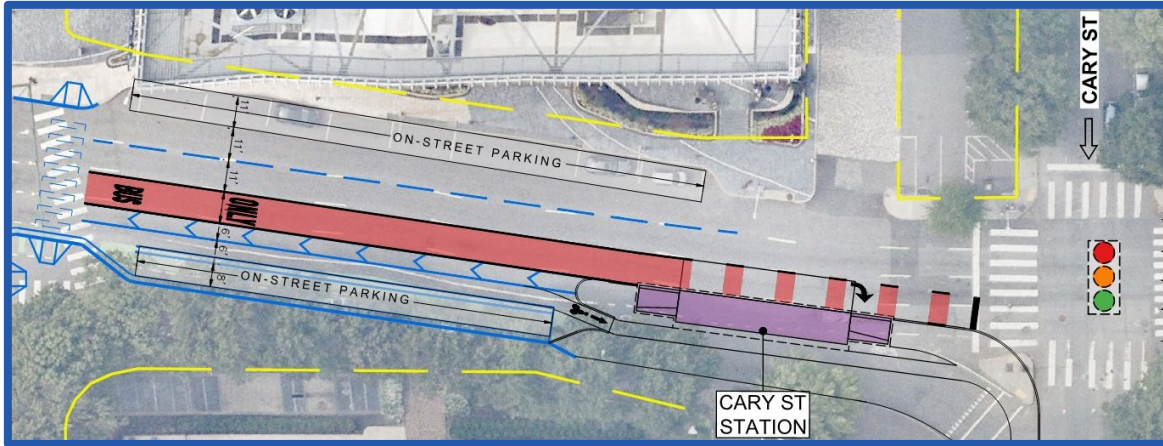


- **Bike Lane Impacts:** We reconfigured the northbound bike lane on 9th Street between Canal Street and Cary Street. In this block, the bus and bikes will share the curbside lane, similar to Broad Street in Downtown.
- **Fall Line Trail:** The City of Richmond is finalizing the Fall Line Trail alignment through Downtown. GRTC will continue to coordinate with the City as North-South BRT and the Fall Line Trail progress into preliminary design.

# Cary St Northbound Station

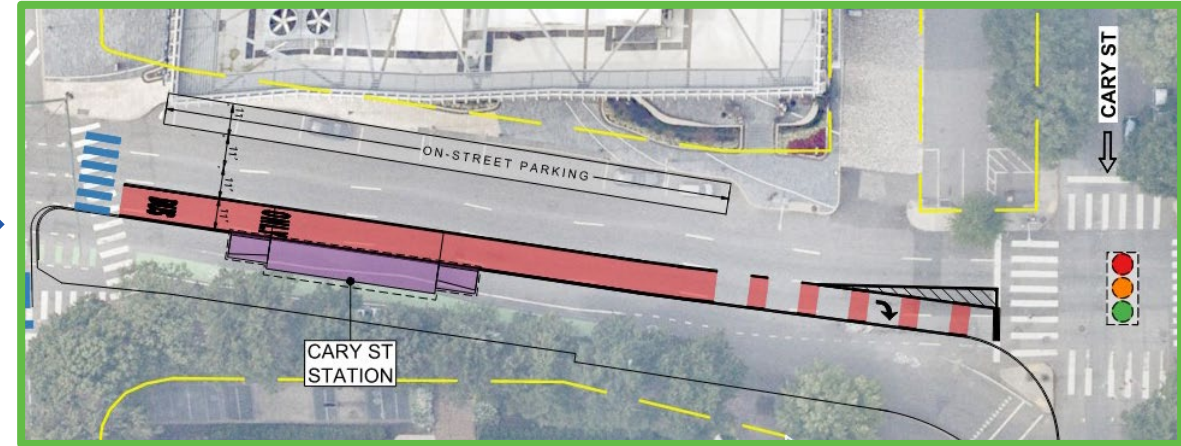


9th St/Cary St Before:



- **Original Concepts:** The Cary Street northbound station was originally proposed near the intersection of Cary Street and 9th Street.
- **What We Discovered:** Additional traffic analysis showed that heavy right-turn traffic may cause delays for buses entering the station as well as safety concerns for vehicles turning right.

9th St/Cary St After:



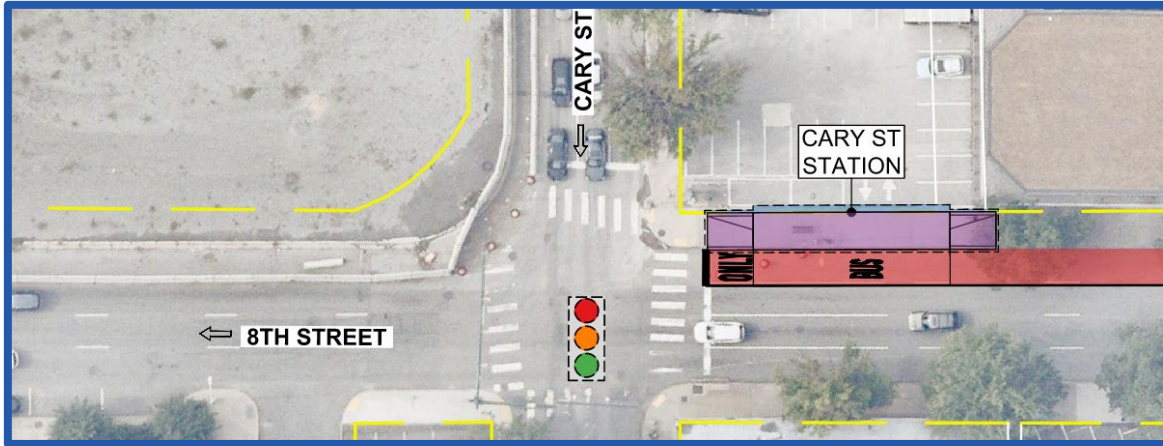
- **How We Responded:** We moved the northbound station on 9th Street further away from the traffic signal and right-turn lane at Cary Street.
- **Why It Matters:** The new northbound station placement will reduce conflicts by allowing right-turning vehicles to safely pass the bus and turn onto Cary Street. To accommodate the station, on-street parking will be removed, and the bicycle lane will end a block earlier at Canal Street.



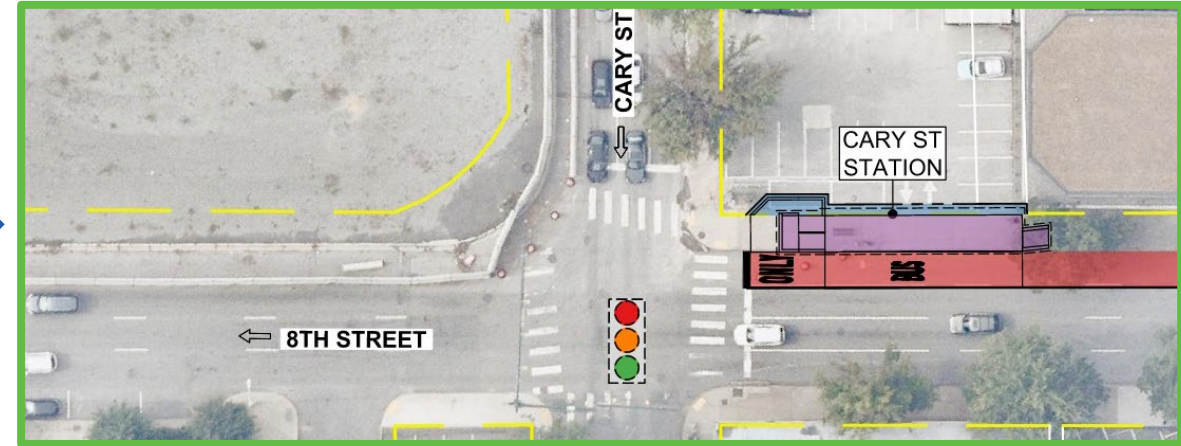
# Cary St Southbound Station



8th St/Cary St Before:



8th St/Cary St After:

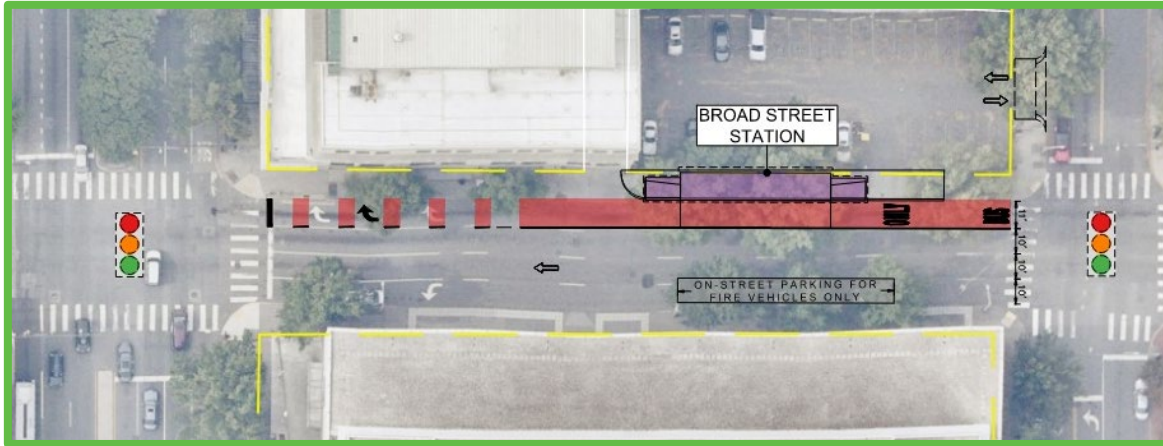


- **Original Concept:** The Cary Street southbound station was proposed on the near side of the Cary Street/8th Street intersection.
- **What We Discovered:** Site conditions, including the steep hill along 8th Street, created station accessibility concerns.

- **How We Responded:** The footprint of the Cary Street southbound station area was expanded into the adjacent parking lot, allowing for the addition of stairs and modified station ramps.
- **Why This Matters:** These modifications are ADA-compliant and allow for use by people of all ages/abilities.

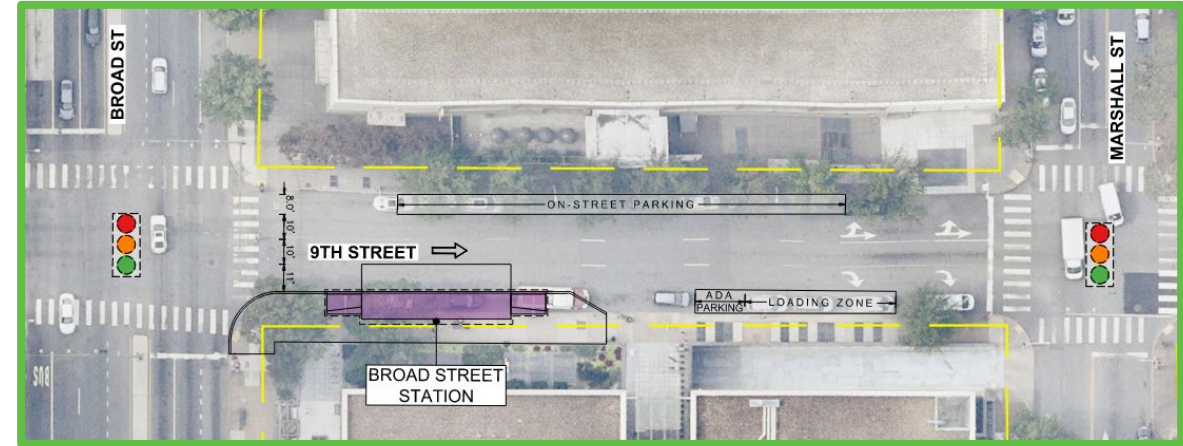


## 8th St/Broad St Station:



- **Original Concept:** Stations were not proposed at Broad Street because they are in close proximity to the Downtown Transfer Center stations. The Downtown Transfer Center stations were preferred since they connect riders to a greater number of GRTC routes.
- **What We Heard:** Significant public feedback was received requesting a direct connection to the GRTC Pulse East-West BRT stations on Broad Street.

## 9th St/Broad St Station:

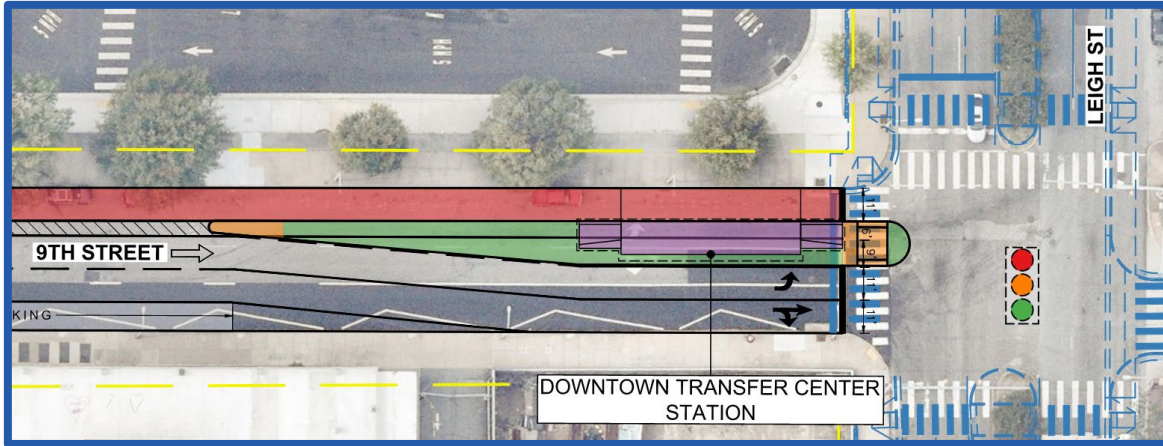


- **How We Responded:** We added new stations near Broad Street to be advanced to the next stage of design development and environmental review.
- **Why This Matters:** These additional stations will improve connectivity to the GRTC Pulse East-West BRT. The project team will evaluate the spacing between the Broad Street stations and the Downtown Transfer Center stations in a future project design phase.

# Leigh St/Clay St Northbound Station

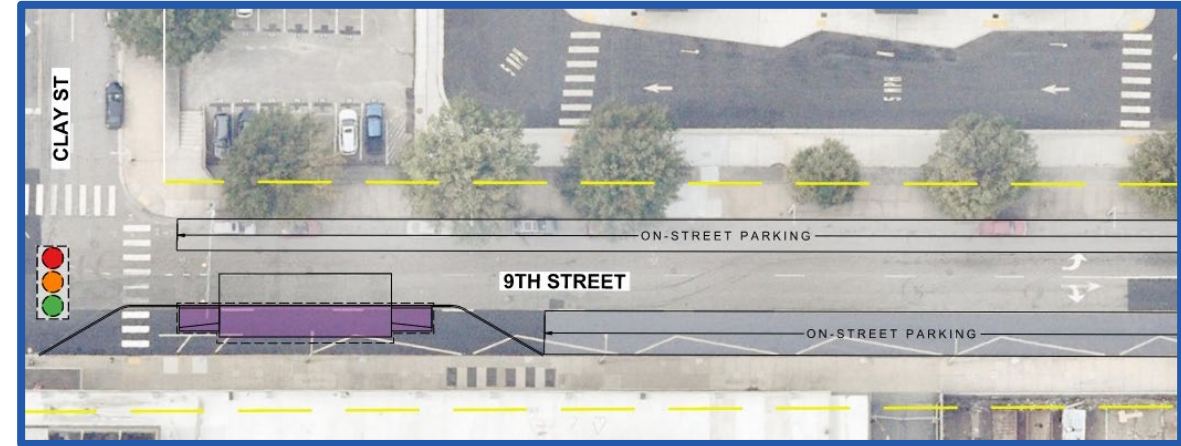


9th St/Leigh St Station:



- **Original Concepts:** Two station location options were proposed on 9th Street at the Downtown Transfer Center – Leigh Street and Clay Street.
- **What We Heard:** 64% of respondents in the public survey preferred the station at Leigh Street.

9th St/Clay St Station:



- **How We Responded:** Both stations will be advanced to the next stage of design development and environmental review.
- **Why This Matters:** This decision provides flexibility as the future location of the Downtown Transfer Center has not been determined.



# Leigh St Dedicated Bus Lanes and On-Street Parking



## Leigh St:

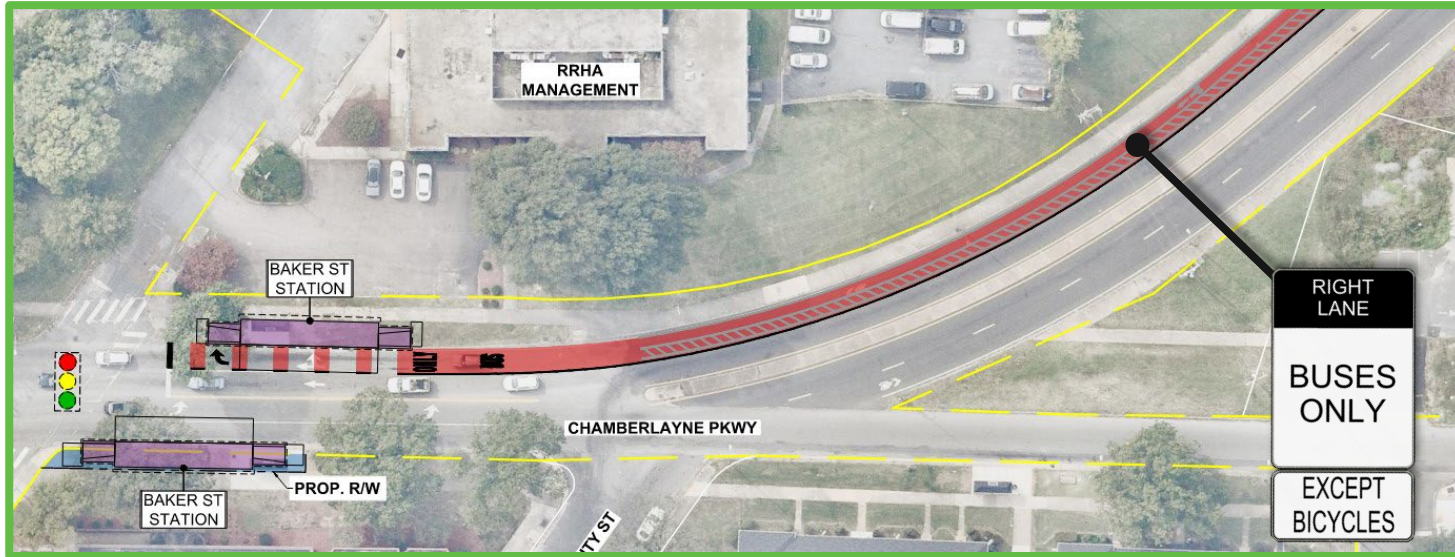


- **Original Concept:** On-street parking was converted to curbside bus lanes on Leigh Street from Chamberlayne Parkway to 3rd Street.
- **What We Discovered:** Residents, worshippers, and other community members rely on the on-street parking along Leigh Street in the evenings and on weekends.

- **How We Responded:** The curbside lane will be used as a bus lane on weekdays from 7:00 AM to 6:00 PM; parking is currently restricted during these times. On-street parking will continue to be allowed during evenings and weekends. To accommodate the BRT stations, parking will be prohibited at all times between St. James Street and 1st Street.
- **Why This Matters:** Maintaining the current on-street parking restrictions allows the BRT to operate efficiently in dedicated bus lanes during peak hours while providing on-street parking for the community in the evenings and on weekends.



# Chamberlayne Pkwy Bike Lane and Fall Line Trail

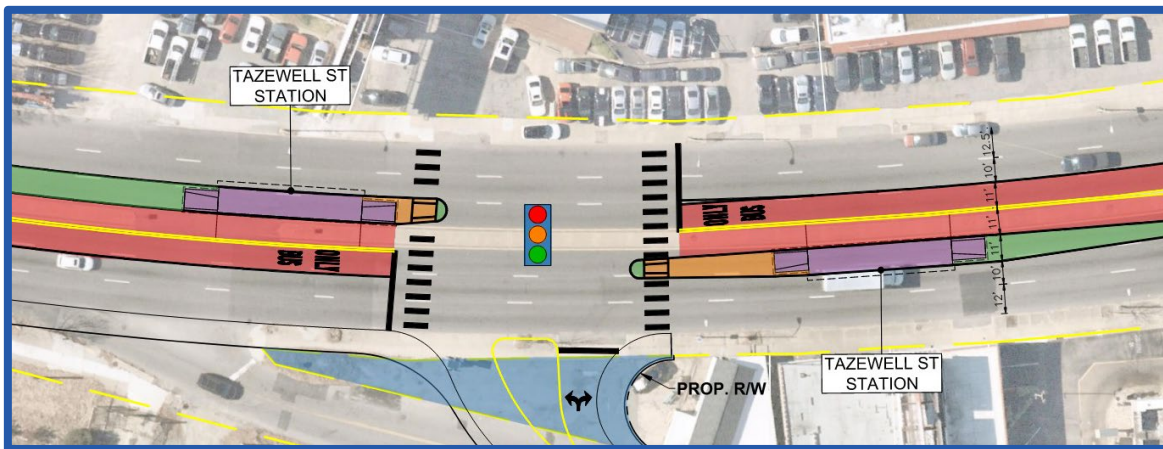


- **Bike Lane Changes:** The existing southbound bike lane on Chamberlayne Parkway will be reconfigured to share the curbside lane with the bus.
- **Fall Line Trail:** The City of Richmond is finalizing the Fall Line Trail alignment through this area. Additional property impacts and multimodal improvements may be necessary to accommodate the Fall Line Trail. GRTC will continue to coordinate with the City as North-South BRT and the Fall Line Trail progress into preliminary design.

# Chamberlayne Ave (South) Dedicated Bus Lanes

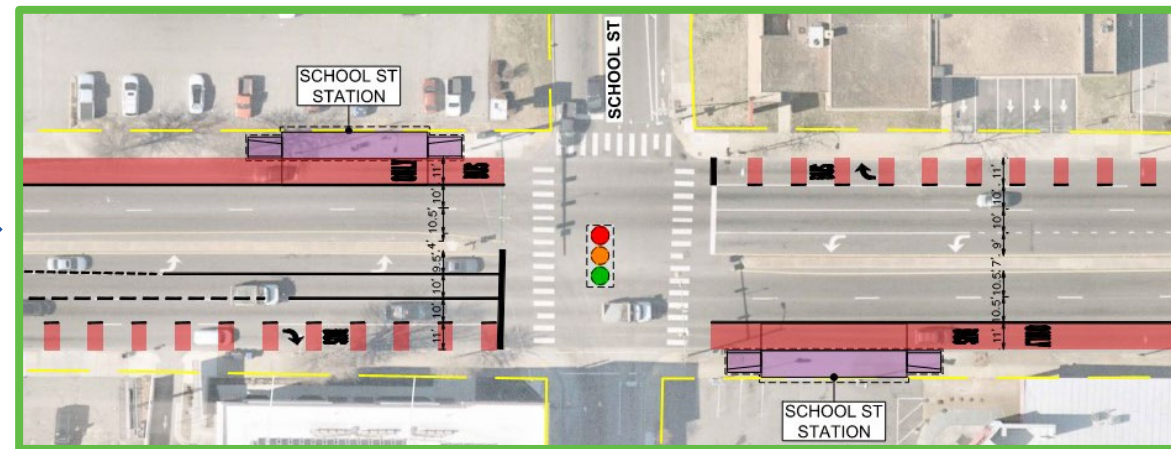


## Median Bus Lanes and Tazewell St Stations:



- **Original Concept:** Two designs were proposed: curbside bus lanes with stations at School Street and median bus lanes with stations at Tazewell Street.
- **What We Heard:** 64% of survey respondents preferred the curbside bus lanes with stations at School Street. Public feedback did not favor the bus alternating between curbside and median lanes.

## Curbside Bus Lanes and School St Stations:



- **How We Responded:** The curbside bus lanes and stations at School Street will be advanced to the next stage of design development and environmental review.
- **Why This Matters:** The School Street location serves more transit-supportive land uses, existing pedestrian and bicycle infrastructure, and better connectivity to Virginia Union University (VUU). Additionally, curbside bus lanes provide continuity with the curbside bus lanes to the north on Chamberlayne Avenue.

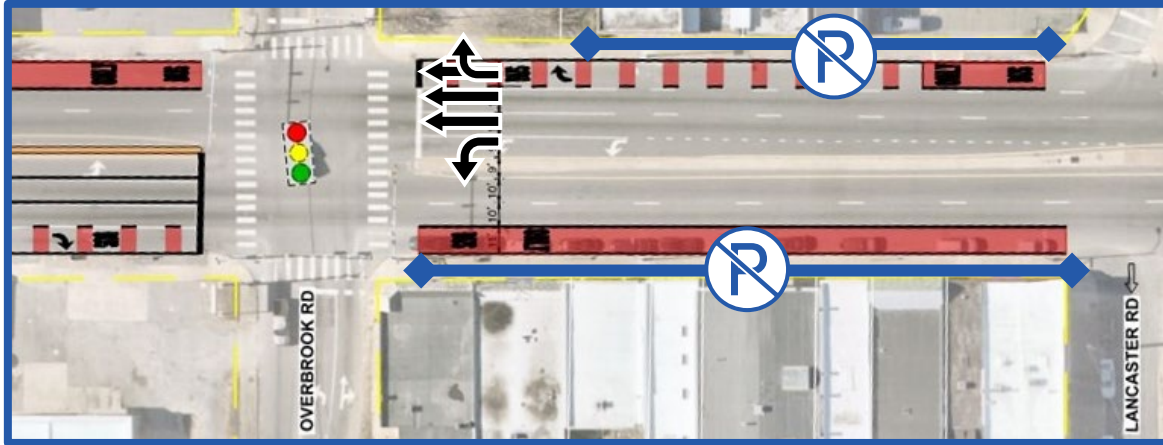




# Chamberlayne Ave On-Street Parking

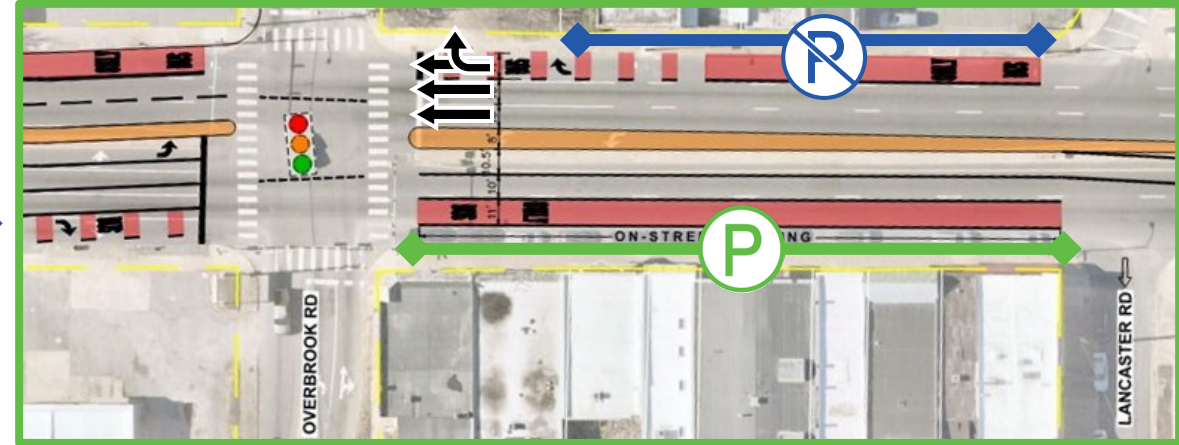


Chamberlayne Ave Parking Before:



- **Original Concept:** On-street parking was converted to curbside bus lanes on Chamberlayne Avenue between Overbrook Road and Lancaster Road.
- **What We Discovered:** The on-street parking on the east side of Chamberlayne Avenue is heavily used to access the businesses on the block.

Chamberlayne Ave Parking After:



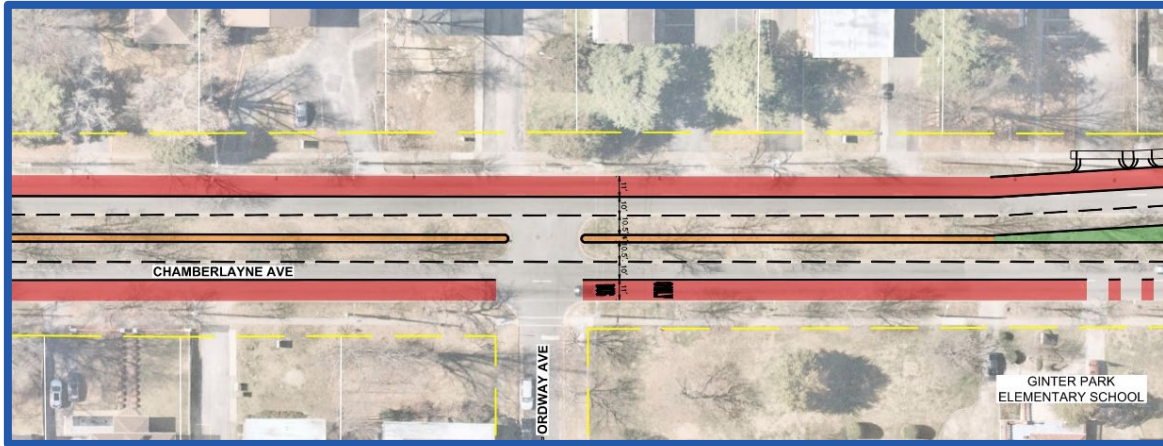
- **How We Responded:** We preserved on-street parking on the east side of Chamberlayne Avenue between Overbrook Road and Lancaster Road by removing the southbound left-turn lane. Southbound left turns onto Overbrook Road use Lombardy Street to access Overbrook Road.
- **Why This Matters:** Maintaining high-occupancy on-street parking will eliminate parking impacts in the surrounding area while allowing the BRT to operate in dedicated lanes for faster and more reliable service.



# Chamberlayne Ave Median Configuration

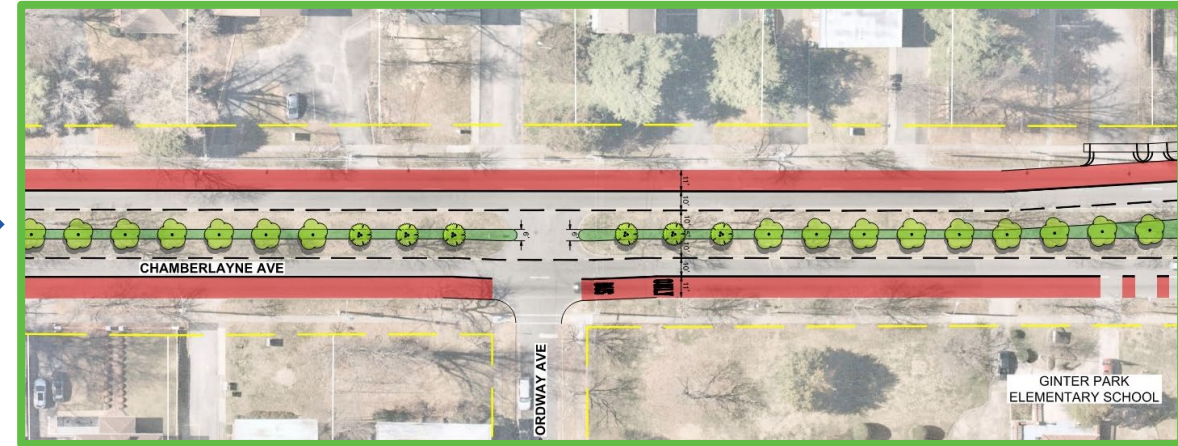


## Chamberlayne Ave Bus Lanes Before:



- **Original Concept:** Curbside bus lanes and two general purpose travel lanes were proposed in each direction on Chamberlayne Avenue.
- **What We Heard:** Concerns about pedestrian crossings, corridor safety, and loss of tree canopy.

## Chamberlayne Ave Bus Lanes After:

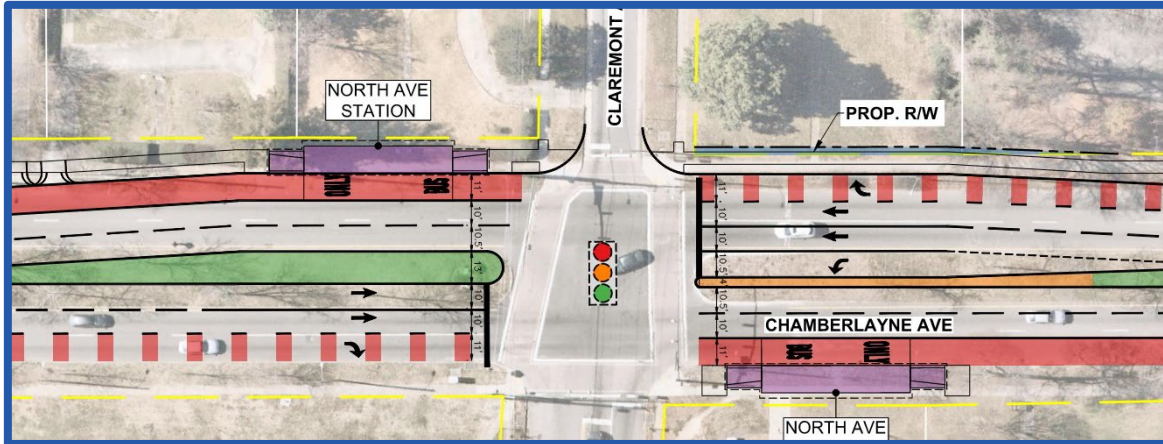


- **How We Responded:** We narrowed the travel lanes and provided at least 6-foot-wide medians at intersection crossings. The widened median will maintain some trees and allow healthy trees to be replanted after construction.
- **Why This Matters:** The wider medians and narrower lanes make the corridor safer for vehicles, transit, and pedestrians while allowing trees to be replanted.

# North Ave Stations

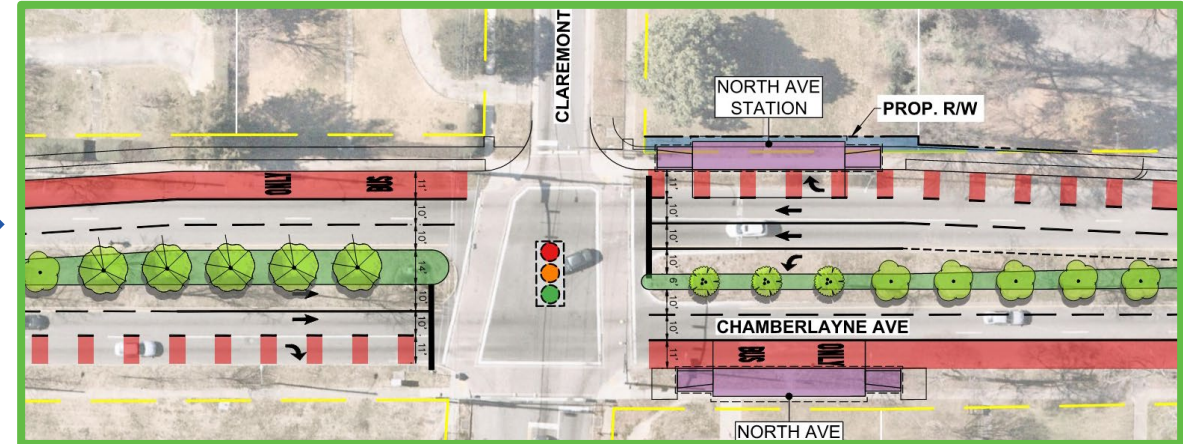


## Chamberlayne Ave/North Ave Before:



- **Original Concept:** The southbound station at North Avenue/Claremont Avenue was originally proposed on the far side of the intersection.
- **What We Heard:** The proposed station would block property access to the adjacent residential parcel.

## Chamberlayne Ave/North Ave After:



- **How We Responded:** We moved the southbound station to the near side of the intersection, before the traffic signal at North Avenue/Claremont Avenue.
- **Why This Matters:** The new southbound station location minimizes adverse impacts on adjacent properties.



# Chamberlayne Ave Trees



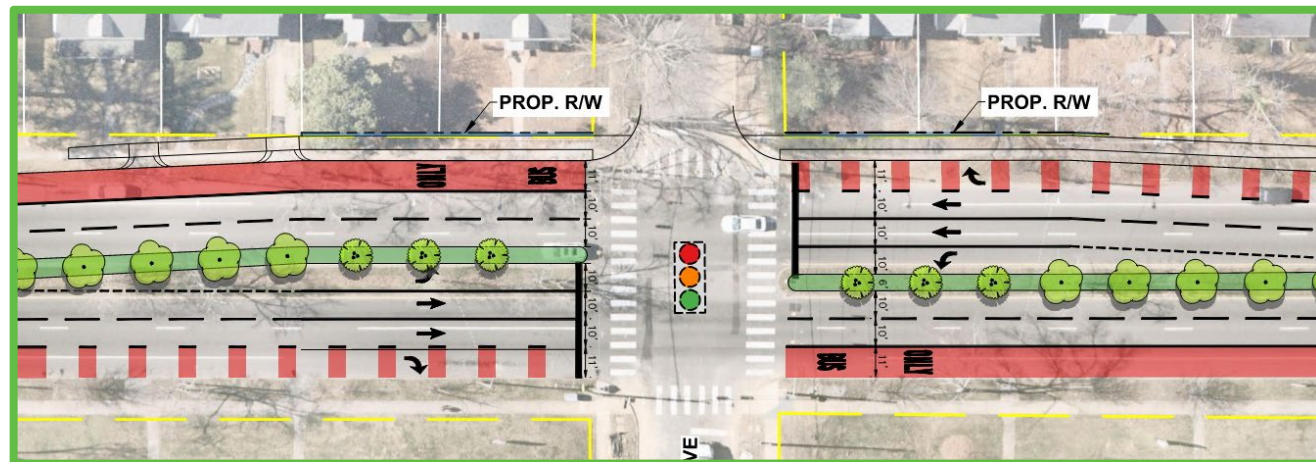
**Black Gum**



**Red Oak**



**Hackberry**



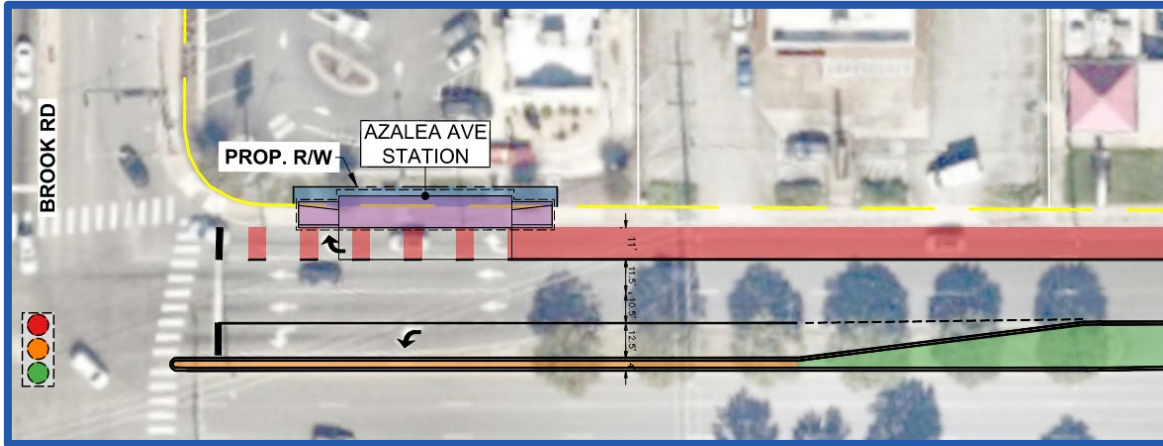
- **Original Concept:** The median was narrowed to accommodate curbside dedicated bus lanes without impacting adjacent residential and commercial properties.
- **What We Heard:** Community concerns about loss of approximately 250 existing trees in the median.
- **How We Responded:** We widened the median and will replant over 400 new trees on Chamberlayne Avenue and other locations on Northside in accordance with the City's Urban Forestry Division tree replacement guidelines.
- **Why This Matters:** Replanting trees in the median helps address gaps in the existing tree canopy and reduces heat island effect on Northside. By working with the City's Urban Forestry Division, we will ensure native tree species are selected that are well-suited for the median environment.



# Northern Terminus / Brook Rd Station

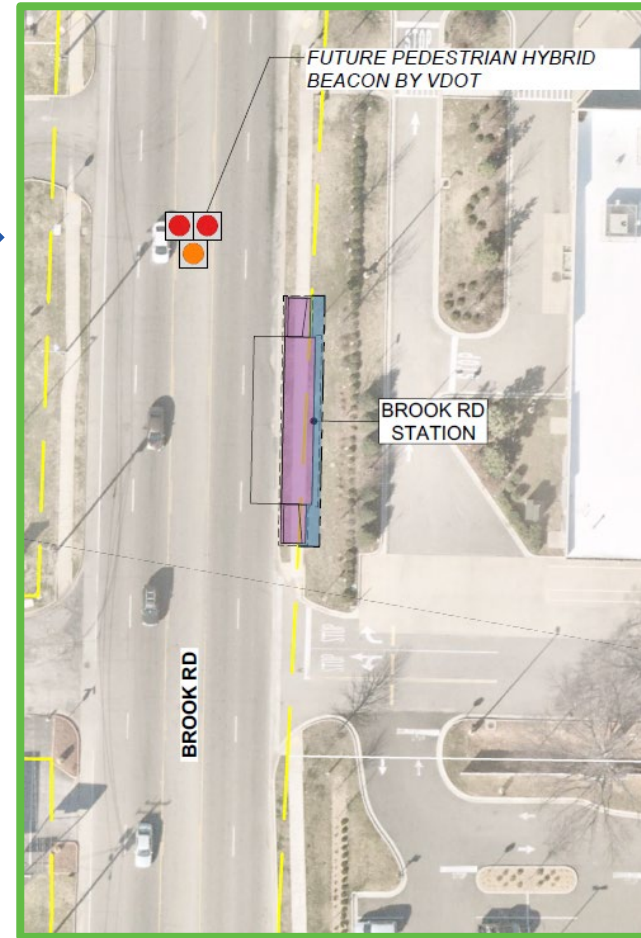


## Azalea Ave End-of-Line Station Before:



- **Original Concept:** The westbound station on Azalea Avenue was originally proposed near the intersection of Brook Road.
- **What We Discovered:** Additional traffic analysis indicated that heavy right-turn traffic may cause delays for buses accessing the station as well as safety concerns for vehicles turning right.

## Brook Rd End-of-Line Station After:



- **How We Responded:** We moved the westbound station on Azalea Avenue to Brook Road.
- **Why This Matters:** The new BRT Northern Terminus station placement will eliminate right-turn conflicts at the Brook Road intersection. The new station is closer to shopping areas and a proposed pedestrian crossing.