



Monitoring the safety of the City's transportation network and developing recommendations to improve safety for all people

Update for Land Use, Housing, and Transportation Committee

11/21/23

Contents

Presentation highlights

Resolutions approved

State legislation

Coming up



Briefing on Richmond Connects
Office of Equitable Transit and Mobility



DEPARTMENT OF
**PUBLIC
WORKS**

Complete

Adopted by Council May 2022



Policy Guide for Richmond Connects



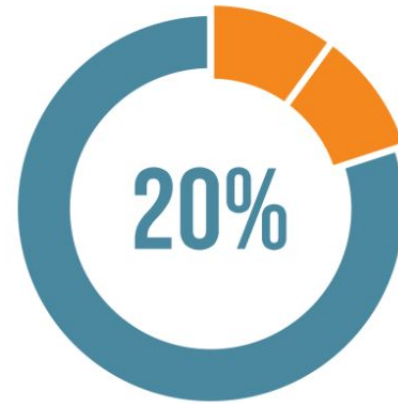
In Process

March 2022 - January 2024



Early Stages

February 2023 - Spring 2024



Multimodal Strategic Transportation Plan





Future: Implementation

Spring 2024 +

Lighter
Quicker
Cheaper

Temporary Traffic and Routing Solutions



Bus stops, Parking Lots, and Street Amenities

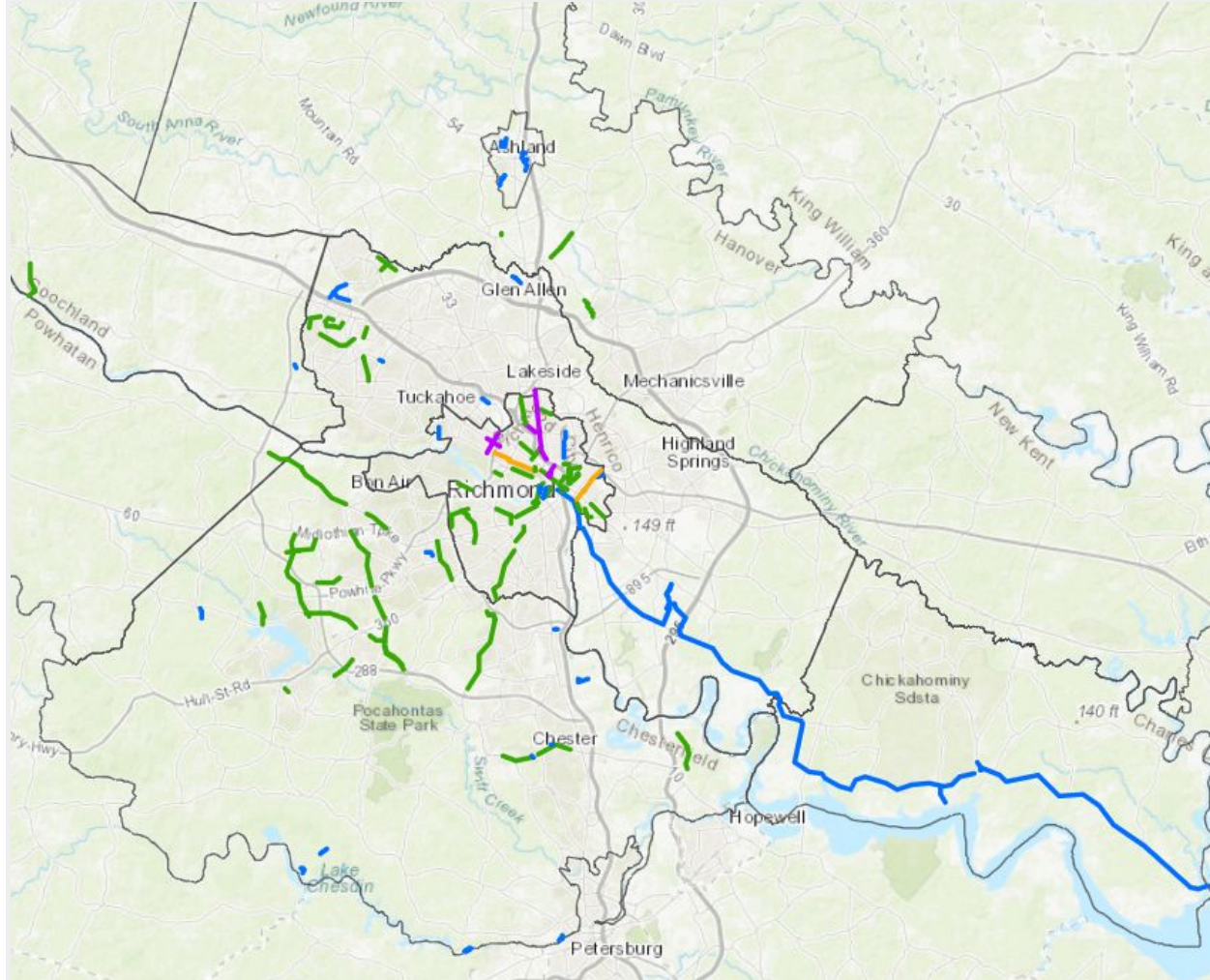


Public Art and Safety Culture Art



Bridging Bicycle Network Gap

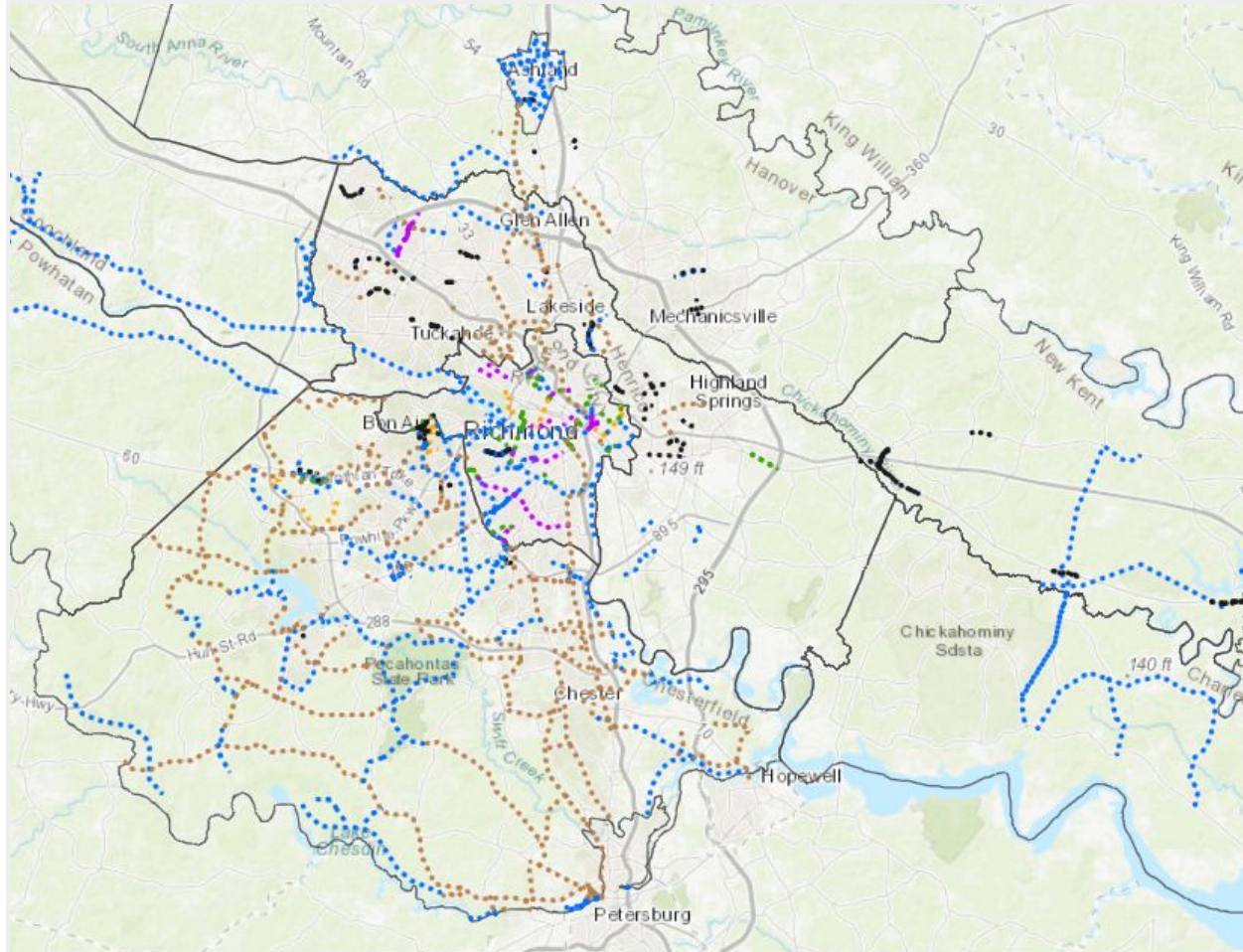
Existing miles 40



Bridging Bicycle Network Gap

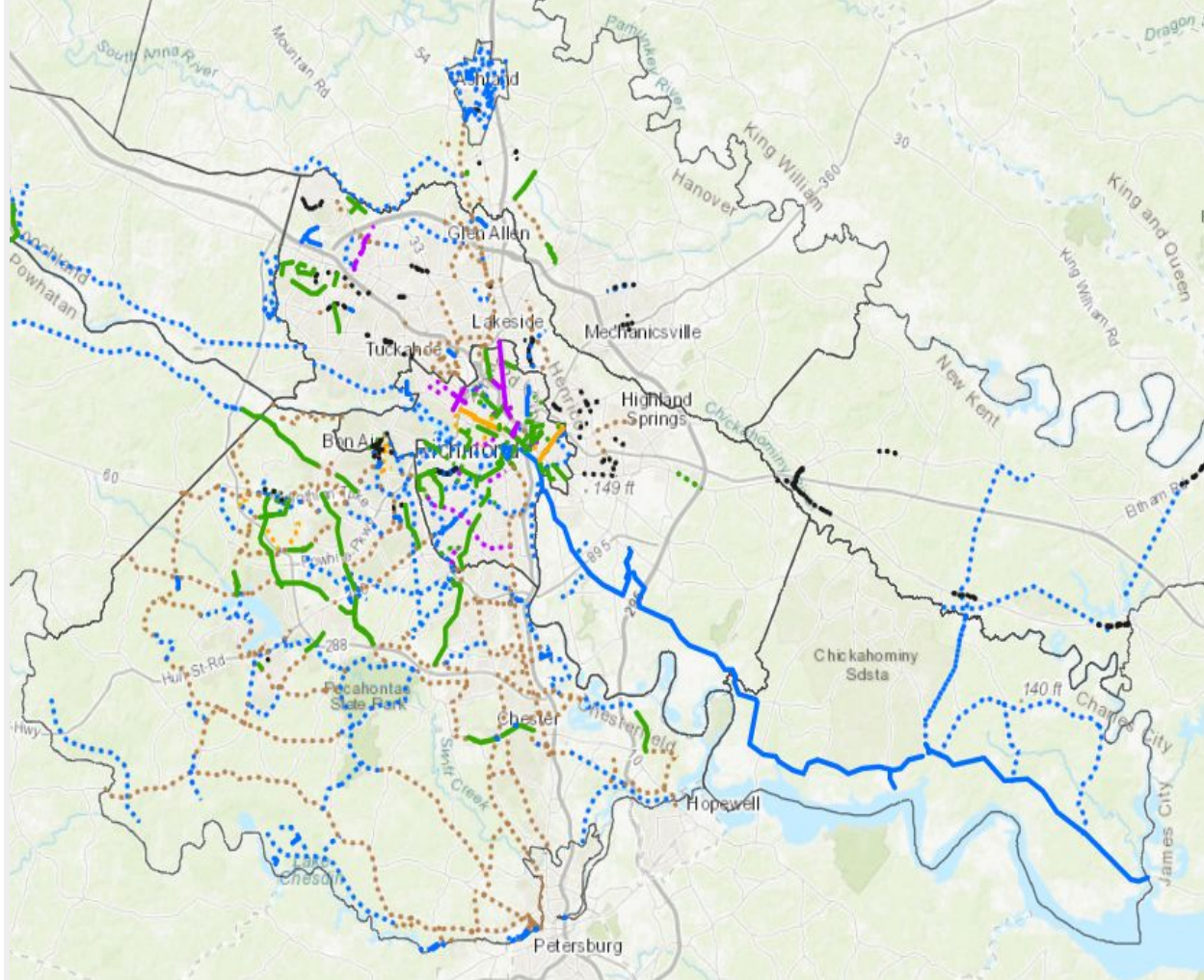
Existing miles 40

Proposed miles 83



Bridging Bicycle Network Gap

Existing miles	40
Proposed miles	83
Vision miles	122

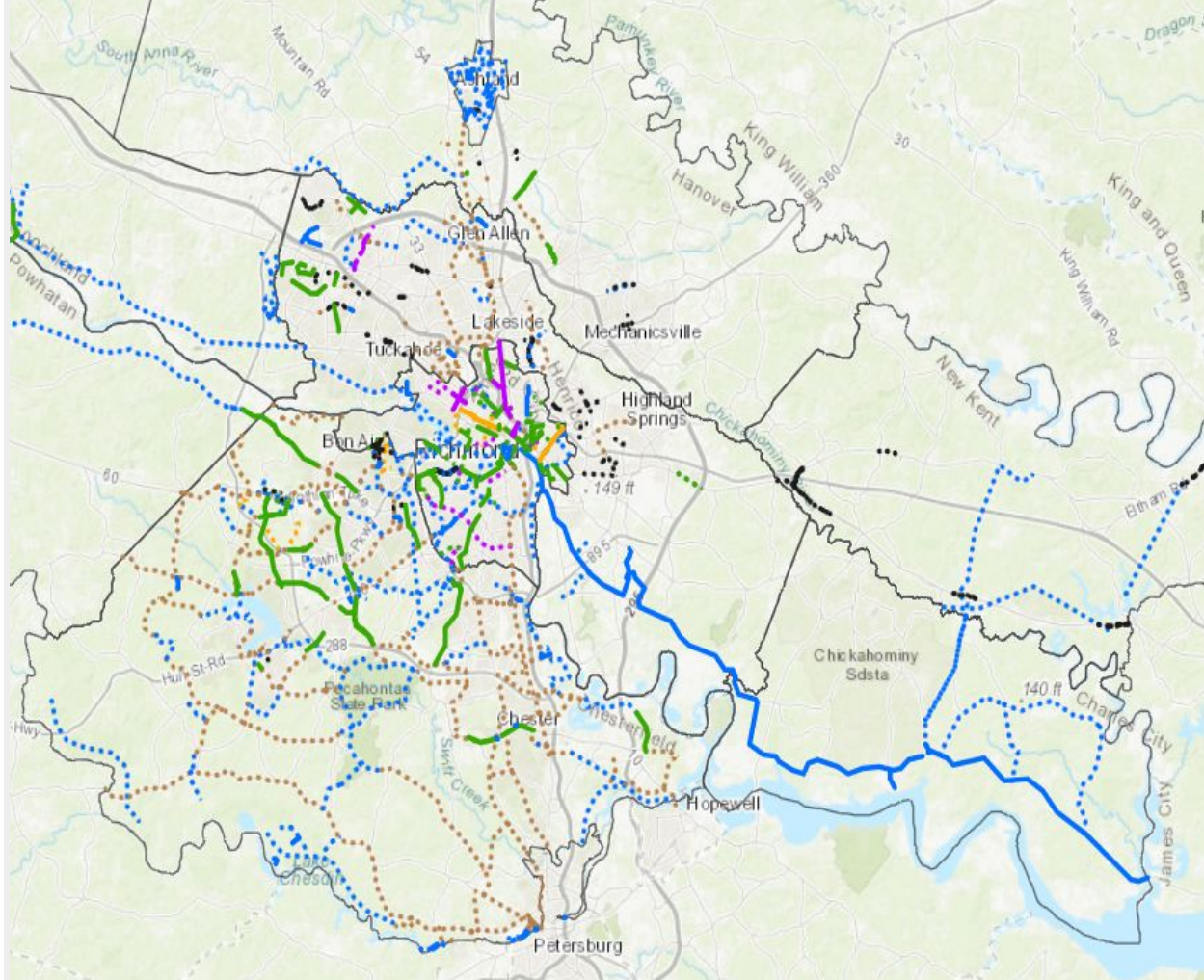


Bridging Bicycle Network Gap

Existing miles	40
Proposed miles	83
Vision miles	122



Where we are now
32% of network complete





2023

State of Transit



R **V** **A** Rapid Transit

[2023 State of Transit Report online here](#)

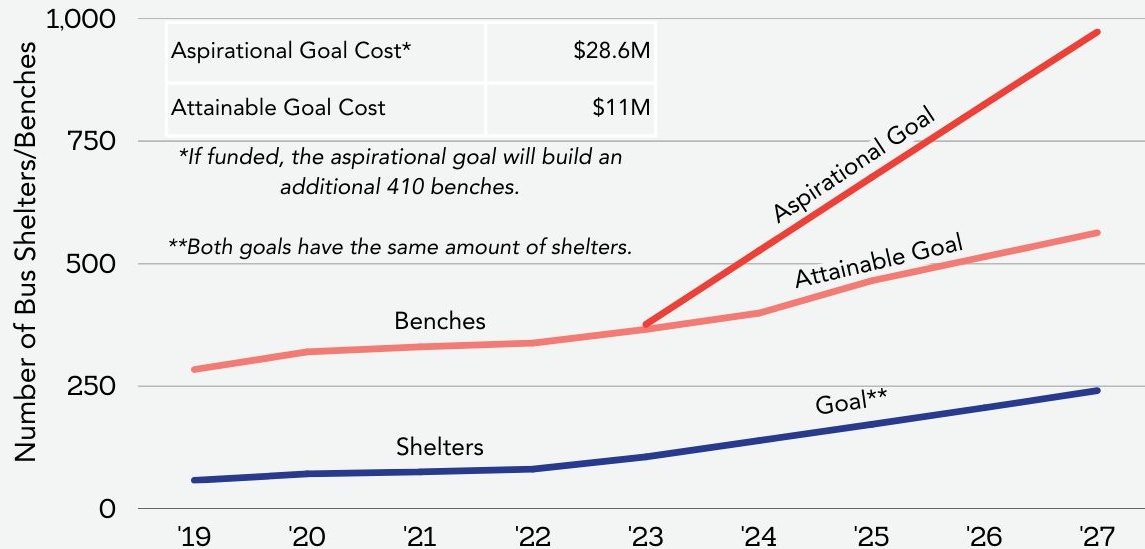
Essential Infrastructure Plan

GRTC's Path to More Benches & Shelters

The GRTC Essential Transit Infrastructure Plan aims to address and improve transit access and inequities by installing essential transit infrastructure, such as shelters and benches. **Currently, only 26% of bus stops out of 1,600+ have a bench or shelter.**

By 2027, GRTC aims to have 50-75% of bus stops with a shelter or seating. The plan aims to achieve transit equity in traditionally underinvested, marginalized communities, rating each stop by ridership and equity.

Chart of Essential Infrastructure Over Time



SHSC Resolutions 2023

Safer Fleet Vehicles

Following presentation from America Walks, supported upgrade the City's fleet vehicles with Intelligent Speed Assistance (ISA), allowing vehicles to use GPS to adhere to posted speed limits. Ensures fleet vehicles are operating at safe speeds to protect lives, and also reduces fuel consumption thereby supporting pollution reduction goals in the Richmond 300 Master Plan and providing savings to the City budget.

VCU Safety

Supported studies/reports that have indicated areas for infrastructure improvement to prevent crash related deaths, particularly our most vulnerable walking, taking transit, biking.

- [VCU as Safe Routes corridor and implement Strong Towns Crash Analysis recommendations](#)
- [Implement VCU Pedestrian Safety Study Oct 2023](#)

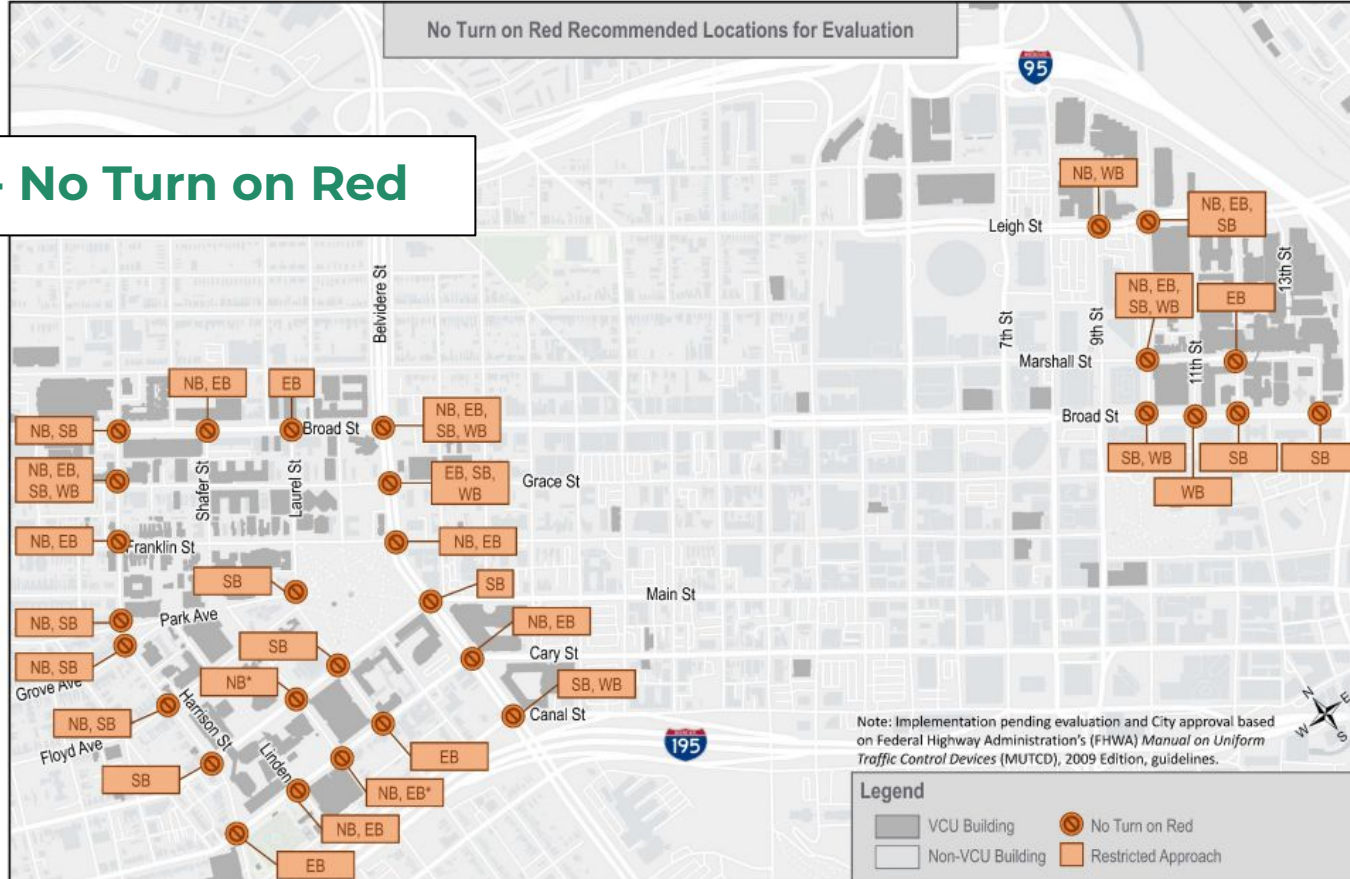
VCU Pedestrian Safety Study

5 Key Recommendations

- No Turn on Red
- Pedestrian crossing improvements
- Signal improvements
- Roadway improvements
- Maintenance and operations recommendations

Exhibit 1: No Turn on Red Recommended Locations for Evaluation

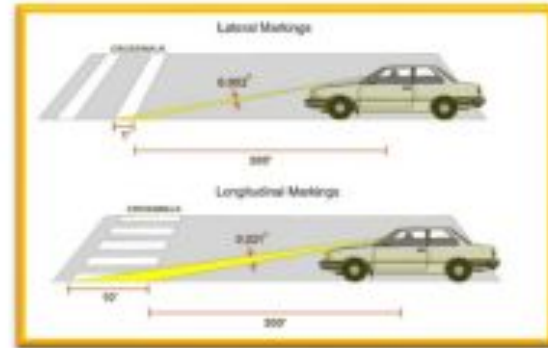
1 - No Turn on Red



2 - Pedestrian Crossing Improvements

LONGITUDINAL CROSSWALK MARKINGS

Longitudinal crosswalk markings are white longitudinal lines parallel to traffic flow. When longitudinal lines are used to mark a crosswalk, the lateral crosswalk lines may be omitted. Longitudinal crosswalk markings have higher visibility than lateral crosswalk, improving visibility of the crossing to motorists and pedestrians. Locations where crosswalk marking upgrades are recommended are depicted in **Exhibit 2**.



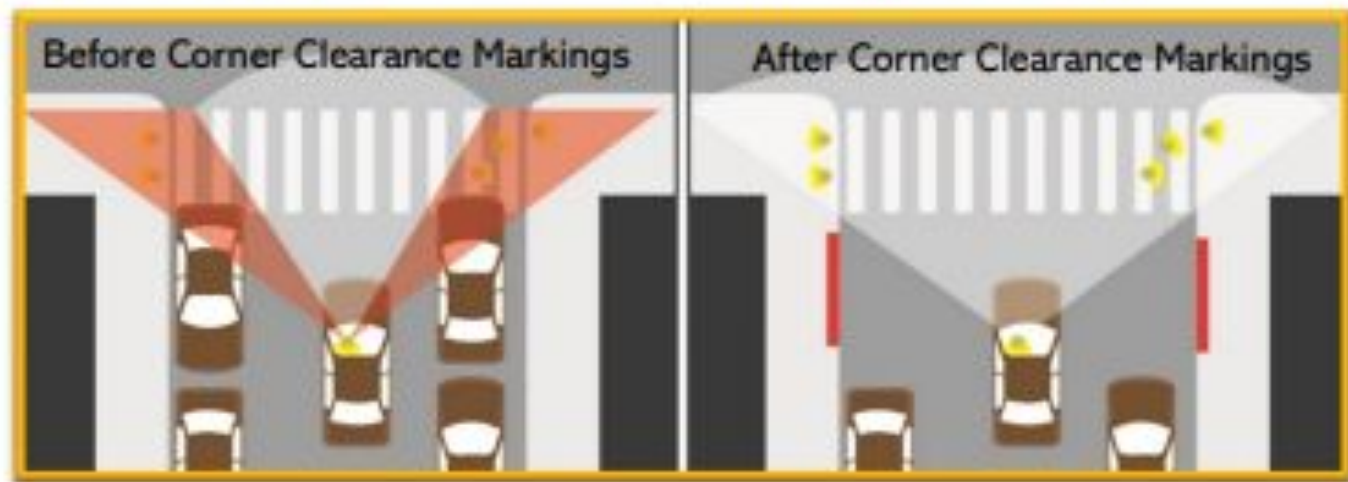
CURB EXTENSIONS

Curb extensions are used to tighten the physical geometry of an intersection, thereby forcing motorists to drive more deliberate paths through the intersection and reduce their speeds. Curb extensions also shorten the pedestrian crossing distance and time required to cross the street. It is recommended that curb extensions be installed on one or both sides of an intersection approach. Curb extensions can be built with paint, bollards, planters, or concrete. Locations where curb extensions are recommended are depicted in **Exhibit 2**.



CORNER CLEARANCE MARKINGS

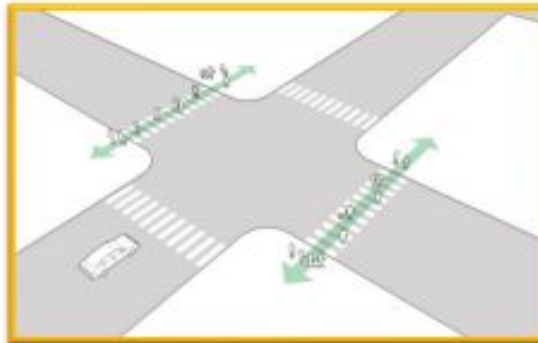
Corner clearance markings are physical markings and/or signed restrictions that eliminate on-street parking and loading spaces within 20 to 25 feet of a pedestrian crossing. Corner clearance markings, also known as daylighting, increase the visibility between pedestrians and vehicles thereby reducing potential conflicts and increasing safety. Locations depicted in **Exhibit 2** are recommended for evaluation for installing corner clearance markings.



3 - Signal Improvements

LEADING PEDESTRIAN INTERVALS

A Leading Pedestrian Interval (LPI) typically gives pedestrians a 3- to 7-second head start when entering an intersection before vehicles receive a green light in the same direction of travel. LPIs enhance the visibility of pedestrians within the crosswalk and reinforce that turning motorists must yield the right-of-way to pedestrians in the crosswalk. The City has numerous LPIs deployed at signalized intersections on VCU campuses, with plans to deploy additional LPIs throughout the City. It is recommended that LPIs be implemented at additional locations and incorporated into ongoing City of Richmond retiming efforts. Existing and recommended LPI locations are depicted in **Exhibit 3**.



RECTANGULAR RAPID FLASHING BEACON

Rectangular Rapid Flashing Beacons (RRFBs) are pedestrian-activated flashing LED lights, typically mounted on existing crosswalk signage, that signal to drivers that a pedestrian is about to enter a crosswalk. RRFBs are placed on both sides of a crosswalk below the pedestrian crossing sign and above the arrow indication pointing at the crosswalk. RRFBs enhance the visibility of crosswalks and encourage motorists to yield to pedestrians crossing the street. Recommended RRFB locations are depicted in **Exhibit 3**.



PEDESTRIAN HYBRID BEACONS

Pedestrian Hybrid Beacons (PHBs) are pedestrian-activated flashing LED lights that signal to drivers that a pedestrian is about to enter a crosswalk. Unlike RRFBs, PHBs are typically installed on multilane roadways and are mounted on mast arms above the crosswalk, much like a traffic signal. PHBs increase the safety of pedestrians crossing the street by providing them a signalized crossing that requires motorists to stop. A PHB is currently deployed on the Academic Medical Center Campus along Broad Street near 16th Street. Recommended PHB locations are depicted in **Exhibit 3**.



LEFT-TURN HARDENING

Left-turn hardening refers to the use of modular curbs, vertical delineators, and striping at intersections to reduce left-turning speeds and to prevent "corner cutting." Left-turn hardening emphasizes the separation between travel directions, guides vehicles into the receiving lane, and reduces turning speeds, reducing the conflict zone between turning vehicles and people biking and walking. Left-turn hardening is recommended at the southbound approach of the intersection of Marshall Street and 13th Street, see **Exhibit 3**.



4 - Roadway Improvements

SPEED TABLES

Speed tables are elongated speed humps with a flat top. Speed tables are typically long enough for an entire wheelbase of a passenger car to rest on top. Speed tables physically encourage drivers to slow down. The City of Richmond installed 13 new speed tables within the VCU Monroe Park Campus in May 2023. Locations depicted in **Exhibit 4** include existing speed tables and locations where speed tables are recommended for evaluation; locations for speed tables are subject to the review and approval of various City emergency service units.



RAISED INTERSECTIONS

Raised intersections are raised plateaus that extend through the length and width of an intersection. Inclines are provided on intersection approaches to ramp up onto the raised portion of the intersection. Pedestrian crosswalks are also elevated as part of this treatment. Raised intersections physically encourage motorists to reduce their speeds approaching the intersection and enhance the visibility the crosswalks. Raised intersections are currently deployed on the Monroe Park Campus at the intersections of Floyd Avenue at Linden Street and Grove Avenue at Linden Street. An additional raised intersection is recommended for evaluation at the intersection of Clay Street and 10th Street as part of future development (see **Exhibit 4**).



ROAD CLOSURE

Road closures are accomplished by installing a physical barrier that blocks a street to motor vehicle traffic. Road closures should allow for the free movement of all pedestrians and cyclists. Road closures are currently deployed on the VCU Monroe Park Campus along Linden Street between Floyd Avenue and Cary Street, along Shafer Street between Franklin Street and Park Avenue, and along Park Avenue between Linden Street and Cathedral Place. The cost of implementing road closures varies and is dependent on the complexity of streetscape elements and physical barriers installed. It is suggested that the roads marked in orange in **Exhibit 4** be evaluated for potential road closures. This will require additional study and engagement with impacted property owners and emergency services agencies. This study should evaluate the impact of the closure of the roads marked in orange to motor vehicle traffic, bicyclists, and pedestrians within and around the Monroe Park Campus.



SHSC Resolutions con't

Transportation Grant Applications

Supported City's applications for infrastructure projects through various funding sources (regional, state, and federal programs).

Cross-cutting:

- Flashing Yellow Arrow
- High Visibility Signal Backplates
- High Visibility Crosswalks
- Systemic Improvements at Stop Controlled Intersections
- Left Turn Hardening
- Pedestrian Hybrid Beacons
- Roadway Conversions
- Signal System Upgrades
- Safe Routes to School Program

Transit:

- N-S BRT phase I
- Downtown transit hub

Project specific:

- Patterson Ave protected bike lanes phase II
- Patterson/Libbie streetscape
- Scott's Addition Greenway
- US Rt 1 Pedestrian Hybrid Beacons
- Bliley Rd
- Maymont Area sidewalk phase III
- Cary St sidewalk improvement
- Forest Hill Avenue phase II
- Downtown protected bike lanes
- Richmond-Henrico Turnpike improvements
- Gillies Creek Greenway phase IV
- Government Road slope repair
- Jefferson Ave improvements
- Shockoe Valley Streets Improvement project
- Port of Virginia gateway interchange and streetscape
- Fall Line - Richmond Highway
- Fall Line - Commerce Rd phase II
- Hull Street phase I and II (Chippenham Pkwy to Hey Rd)
- Hull Street shared use path
- Carnation Street sidewalks phase II
- Hey Rd
- Whitehead Rd

Transportation Laws - updates/reminders

- Speed reduction below 25 mph and as low as 15 mph in residential and business corridors
 - Passed at General Assembly 2022 session
 - Approved SHSC recommendation to deliver Neighborhood Speed Reduction Program in light of new allowing legislation and frequent asks from public
 - No movement on lowering speeds at any level

Coming up

SHSC annual report

Vision Zero Action Plan scorecard

Spring & Fall Speed Management Symposium

2024 SHSC Meeting Dates

Commission meetings are held quarterly on the 3rd Wednesday from 2-4pm in the Richmond Main Library annex, with virtual option.

January 17

April 17

July 17

October 16



SAFE & HEALTHY STREETS

Commission of Richmond Virginia

Thank you

Louise Lockett Gordon
Safe and Healthy Streets Commission
Chair

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