FXBG

Fredericksburg Downtown Transportation Engineering Study

June 2, 2026

Outline

Project Overview

Traffic Analysis

Community Engagement

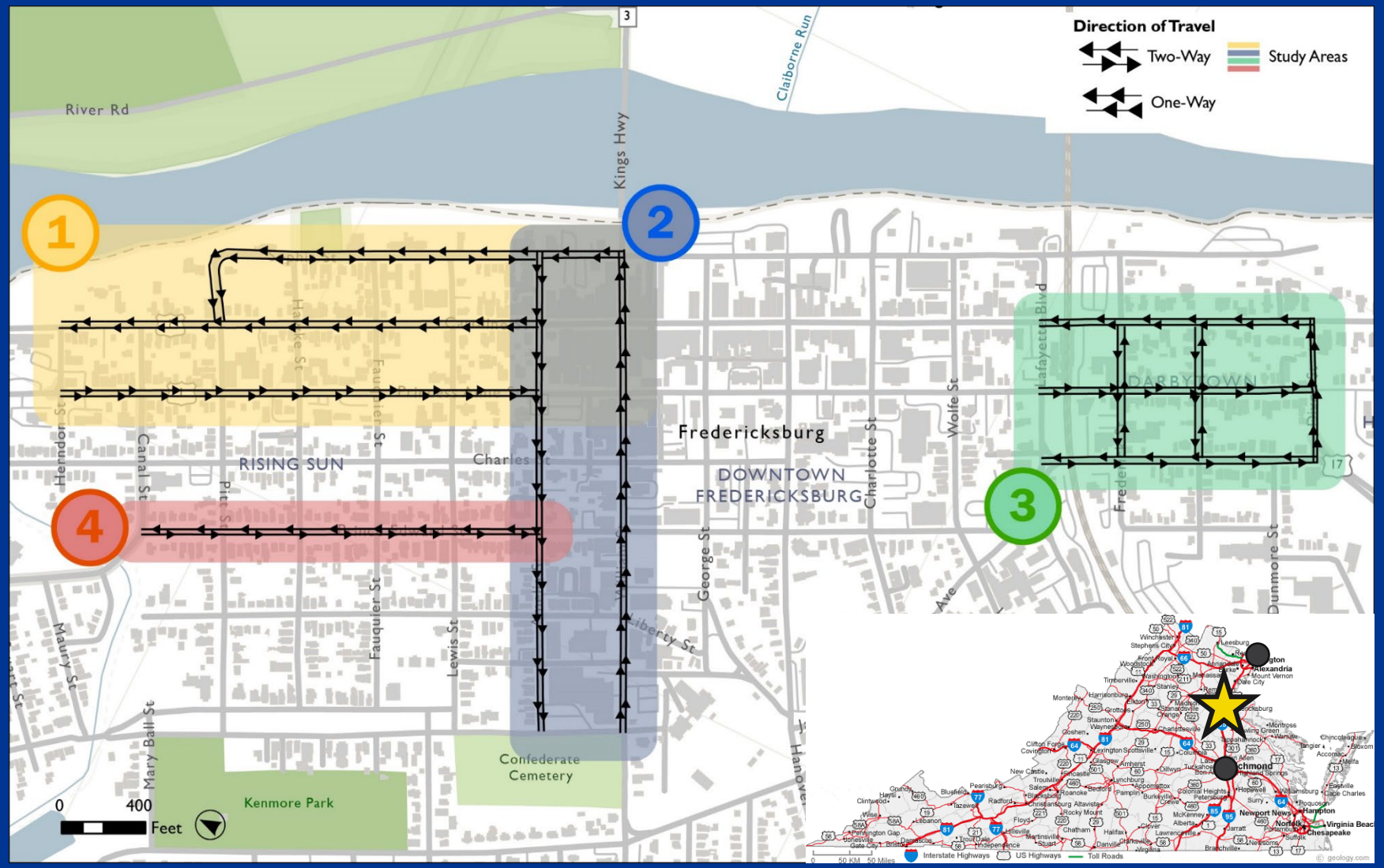
Recommendations

Source: Potomac Local News

Project Partners

EPRPC

TIMMONS GROUP
ENGINEERING | DESIGN | TECHNOLOGY



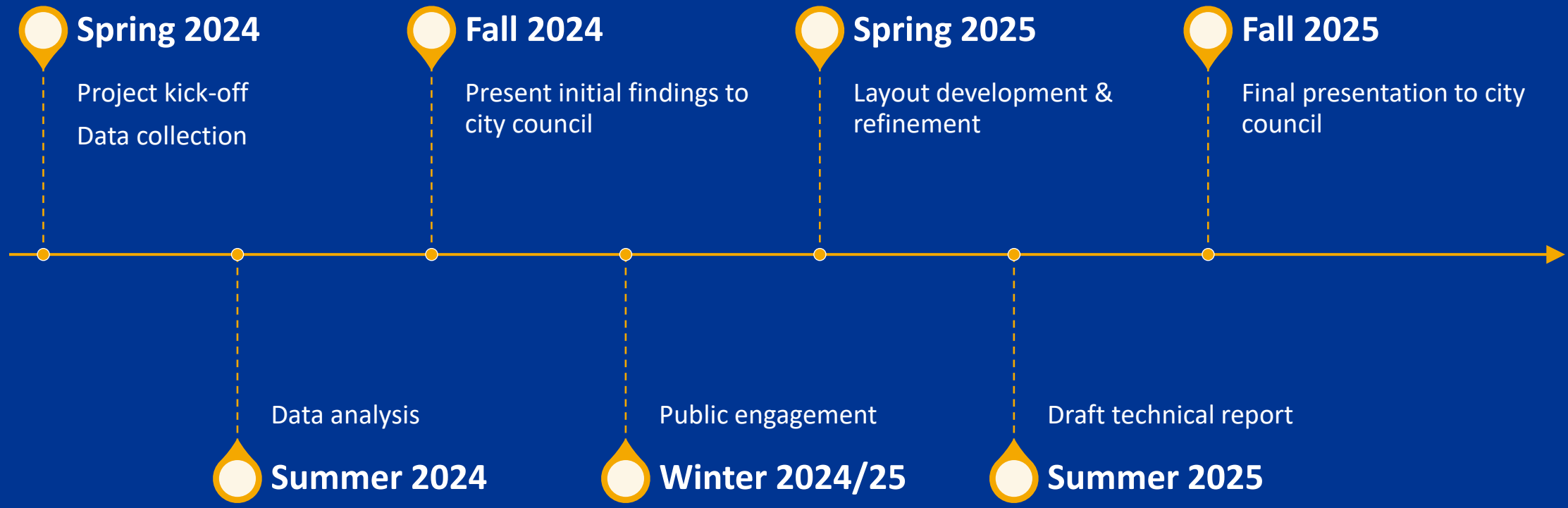
Project Overview

- Evaluate conversion of one-way pairs to two-way travel
- Improve bicycle and pedestrian safety and connectivity
- Determine traffic calming needs

Project Goals

- Reduced speeds and traffic calming
- Improved traffic circulation
- Increased pedestrian and bicycle access & safety

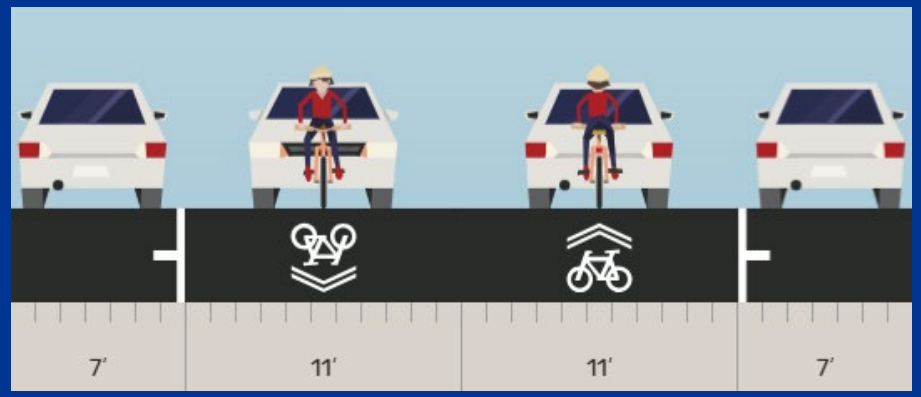
Project Timeline



Project Study Scenarios

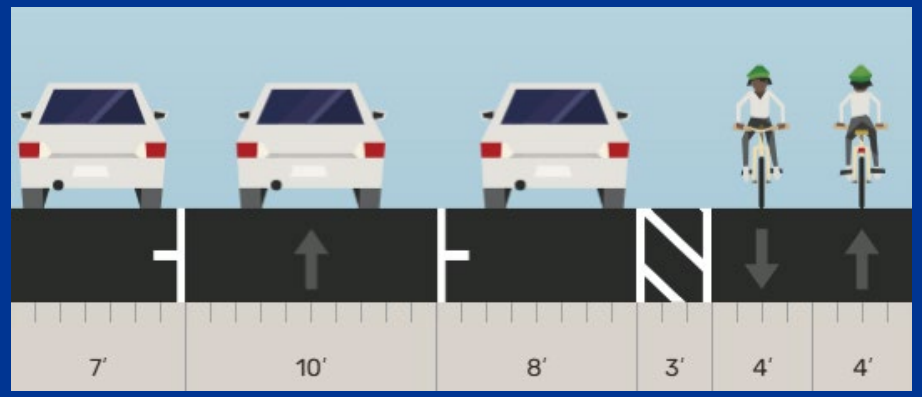
Two-way Conversion

- Maintain two travel lanes and two parking lanes
- Shared on-road bike facilities



One-way Reconfiguration

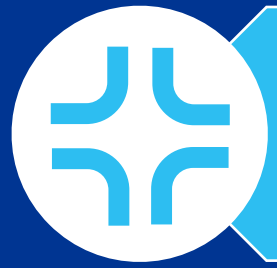
- Maintain two parking lanes
- Convert one travel lane to separated two-way on-road bike facilities



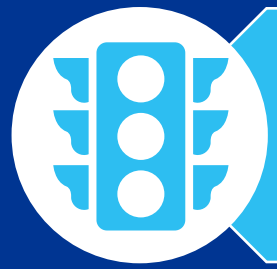
Why Convert to Two-Way?

- Increased safety
- Improved circulation
- Increased mobility
- Increased visibility for businesses/organizations

Types of Analysis



Intersection capacity



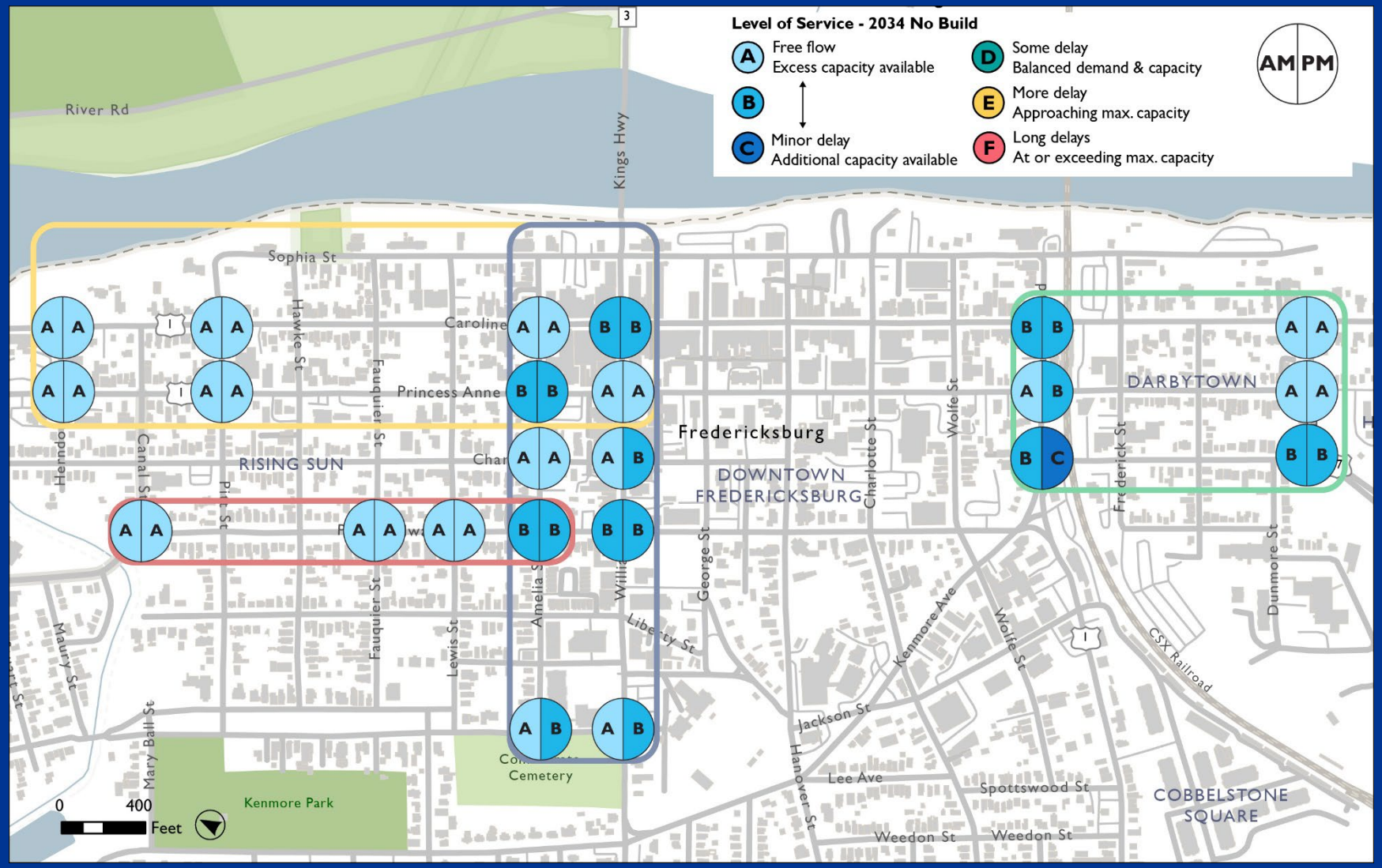
Intersection control

Intersection safety

Speed

Parking

Bicycle and pedestrian



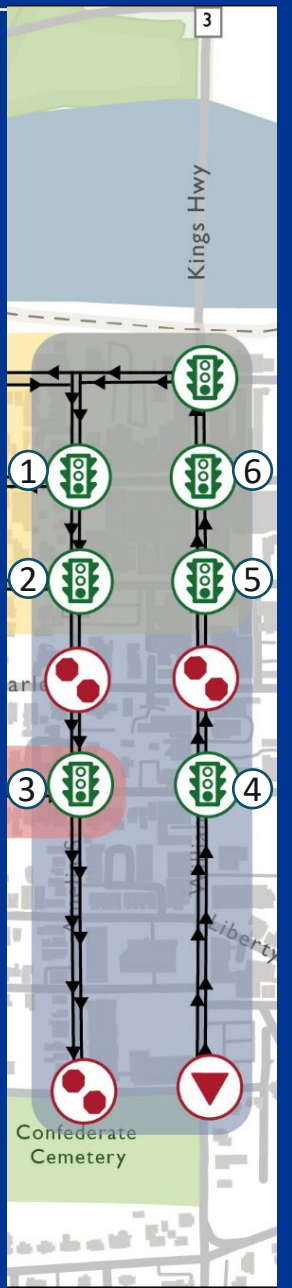
Intersection Capacity

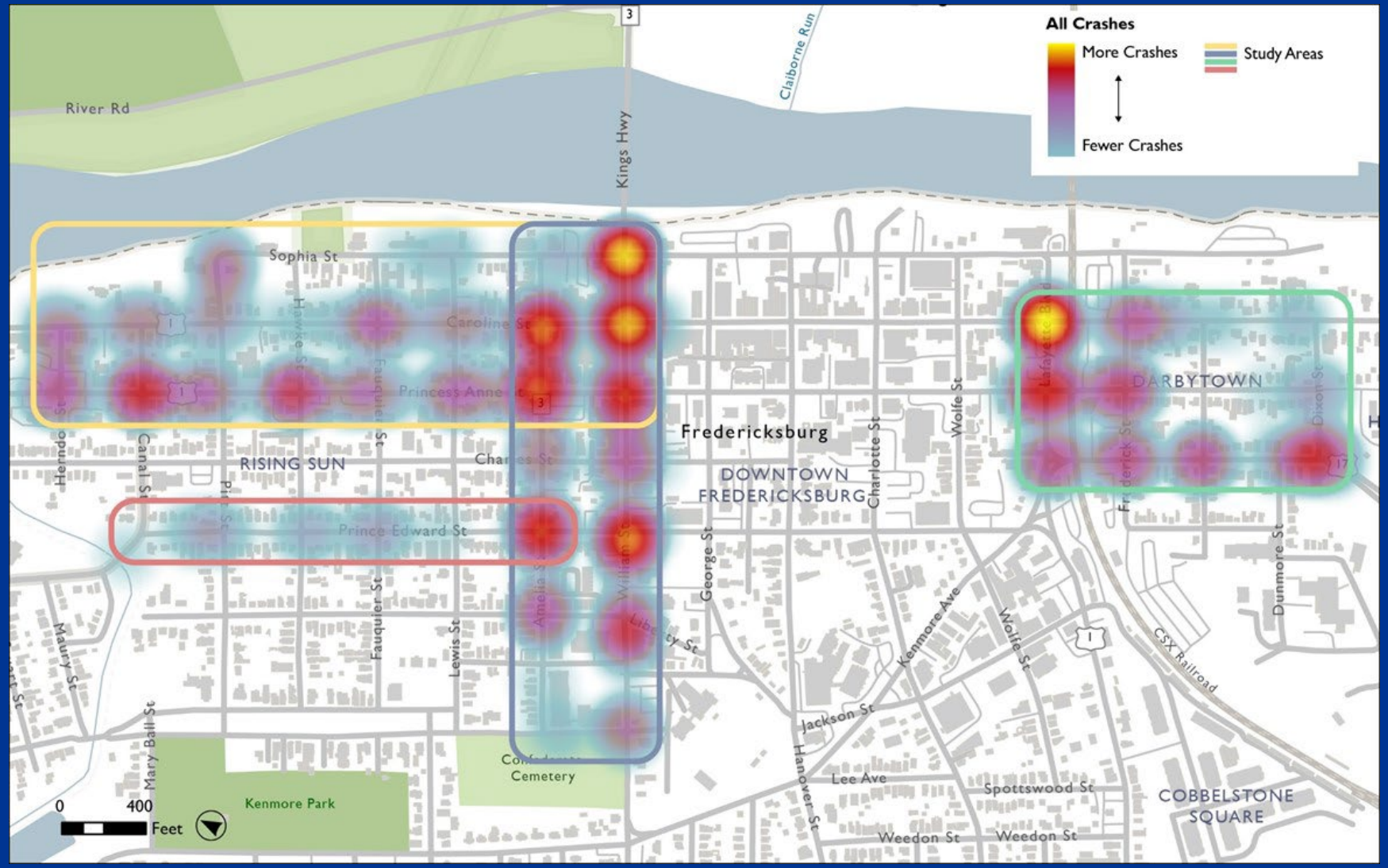
- Existing conditions – LOS C at some signals, LOS A & B at stop-controlled
- Future conditions – improved due to optimizing signal timing; still never beyond LOS C in any scenario

Intersection Control

- Evaluated six existing signals on William St and Amelia St for potential removal and/or conversion to all-way stop

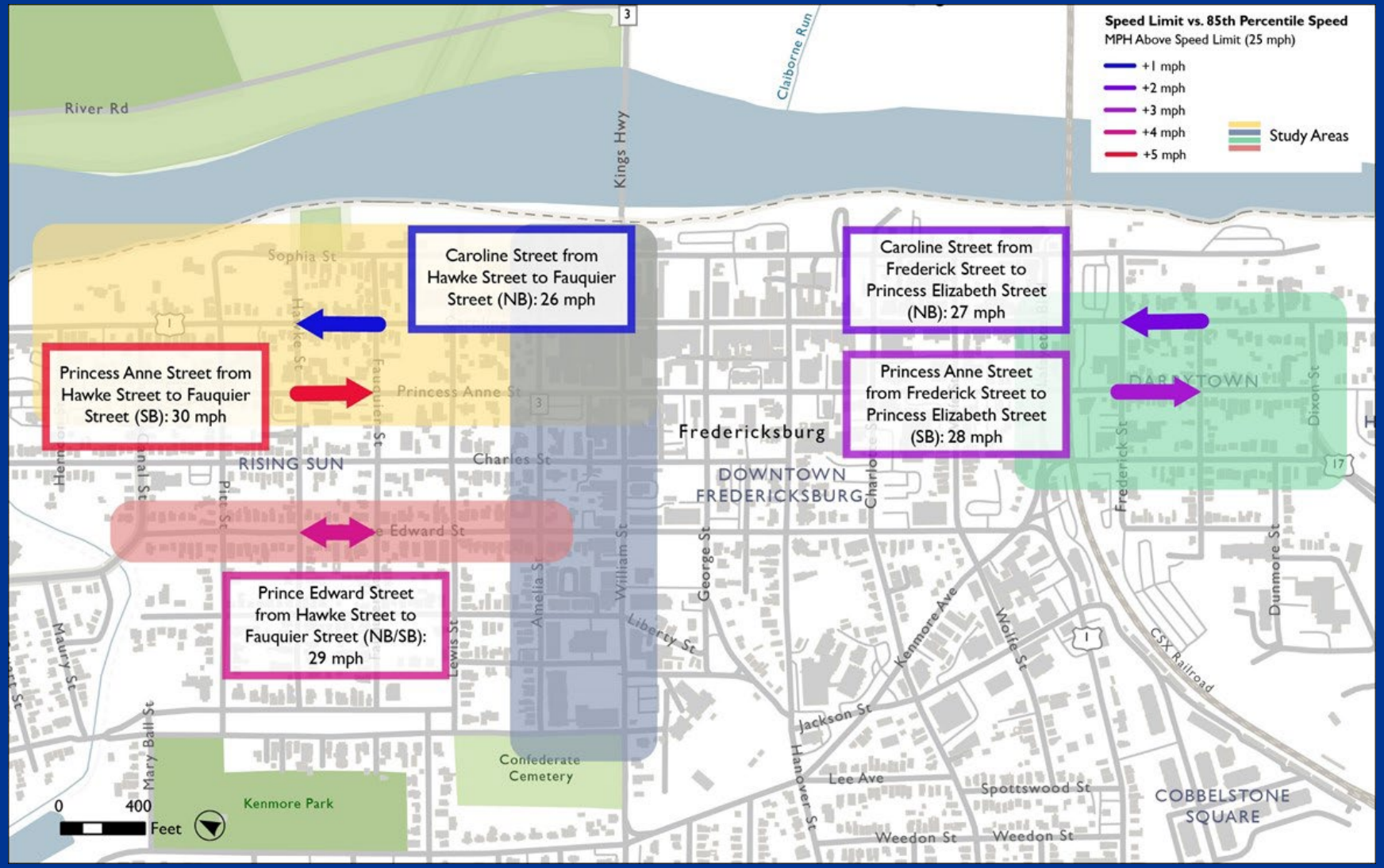
	Intersection	Signal Warrants			All-Way Stop Volume Warrants		
		2024 Volumes	2034 Volumes	Crash History	2024 Volumes	2034 Volumes	Crash History
1	Amelia & Caroline	N	N	N	N	N	Y
2	Amelia & Princess Anne	N	N	N	Y	Y	Y
3	Amelia & Prince Edward	N	N	N	N	N	Y
4	William & Prince Edward	N	N	N	N	N	N
5	William & Princess Anne	N	N	N	Y	Y	Y
6	William & Caroline	N	N	N	N	Y	Y





Safety Analysis

- 328 total crashes from 1/2020 to 12/2024
- Angle crashes were 52% of the total
- Pedestrian crashes were 4% (14) of total crashes but 22% (2) of serious injury crashes



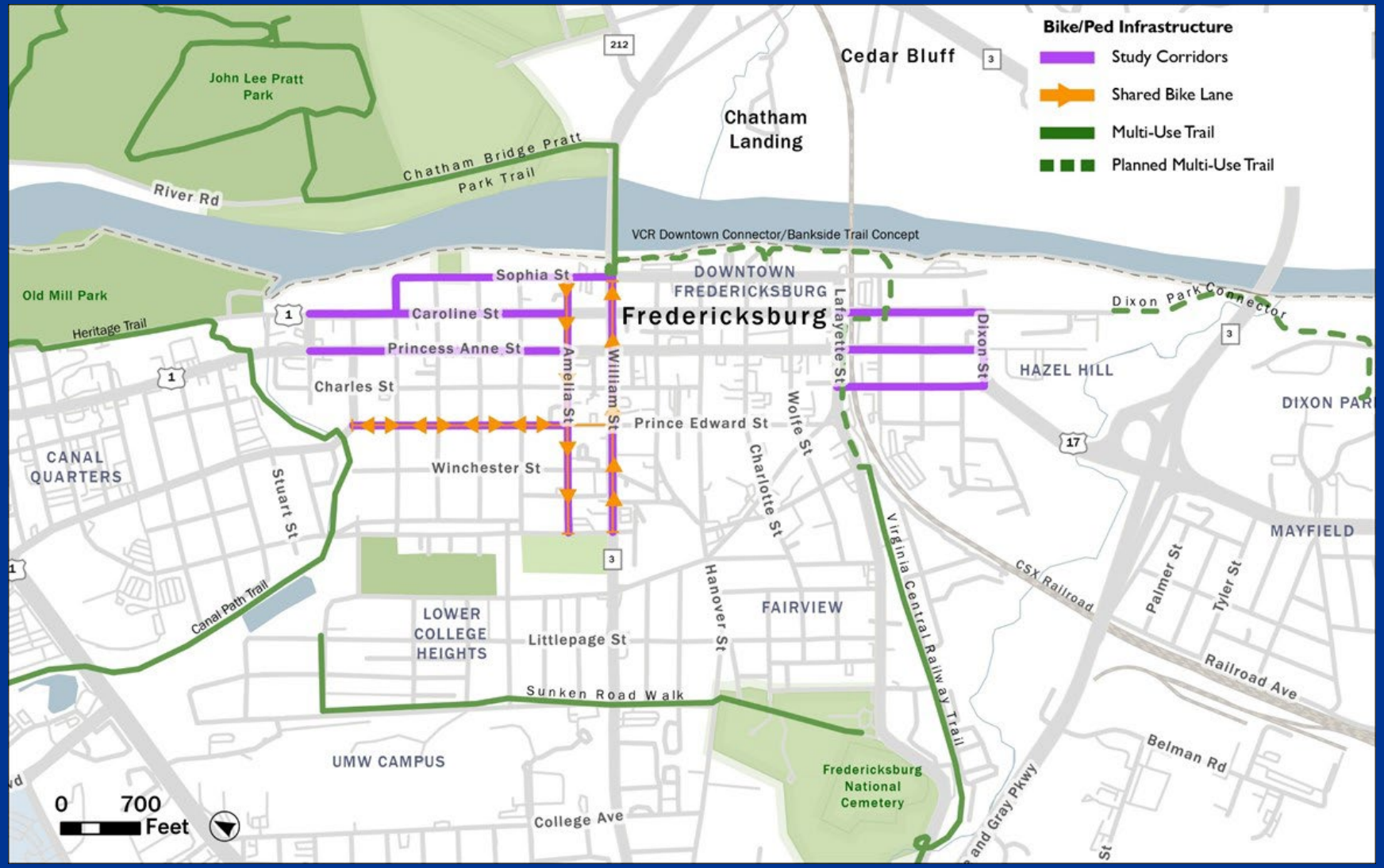
Speed Analysis

- Average speed (50th %ile) within 1-2 mph of posted speed limit
- 85th %ile within 5 mph of posted speed limit at all locations

Parking Analysis

- Estimated parking based on typical stall length of 22 feet and city code prohibiting parking in advance of intersections

Sub-Area	Approximate # of Existing Parking Spaces
North Princess Anne / Caroline	166
William / Amelia	178
South Princess Anne / Caroline	104
Prince Edward	70



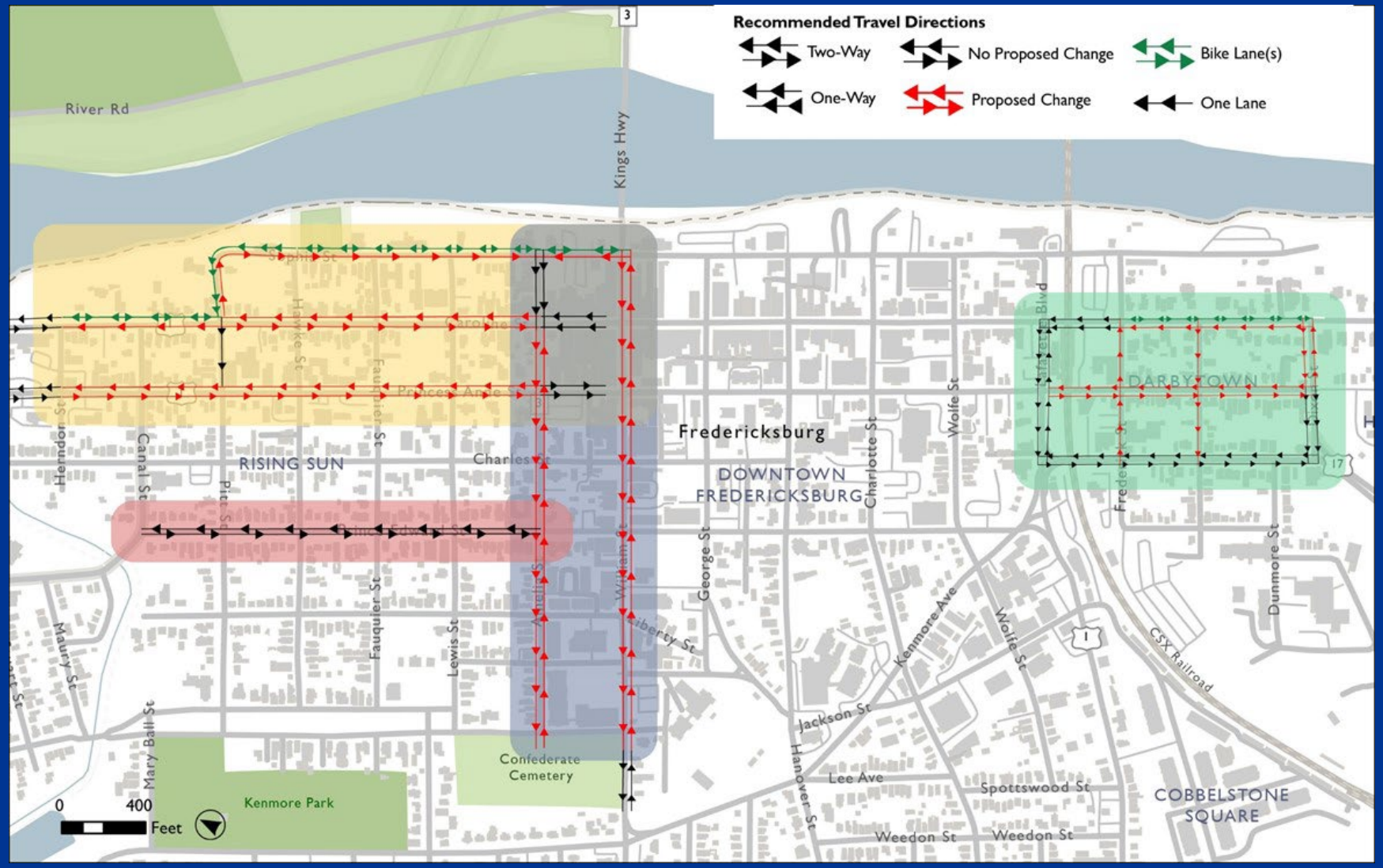
Bicycle & Pedestrian Analysis

- Signalized intersections
- Traffic calming
- Bicycle connectivity
- Other multimodal improvements

Community Engagement

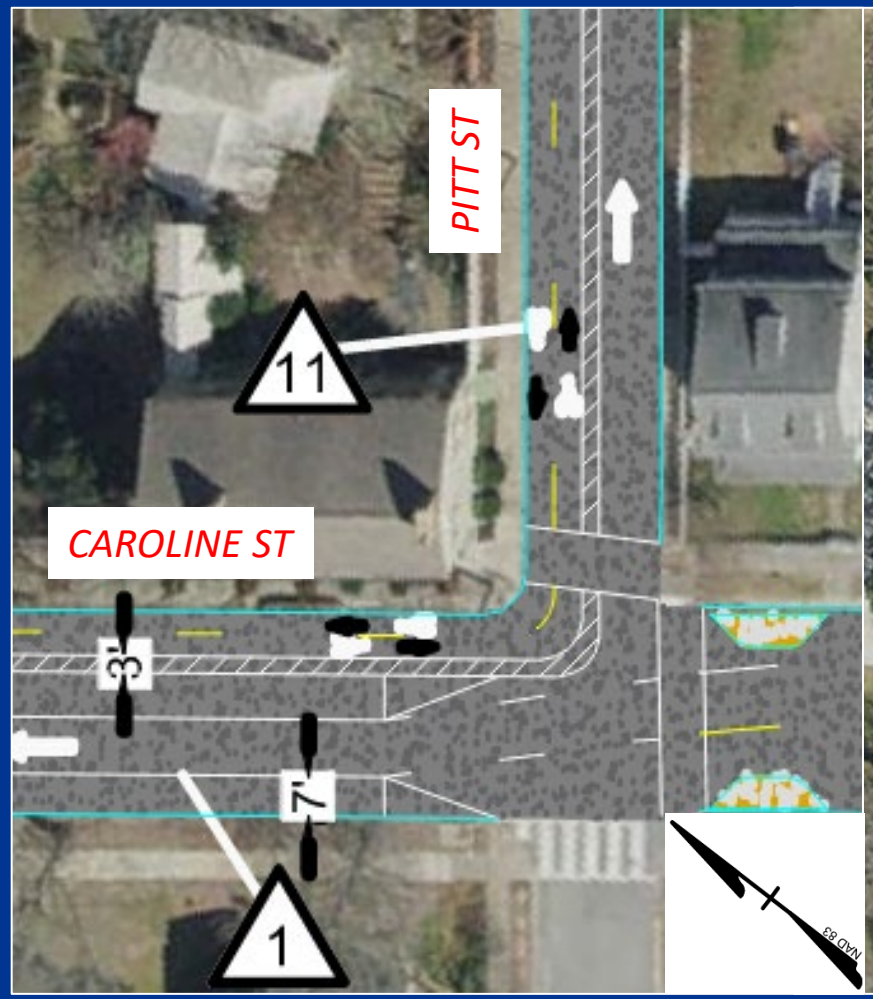
- City council presentations
- Community meeting
- Public survey
- Downtown business stakeholders meeting

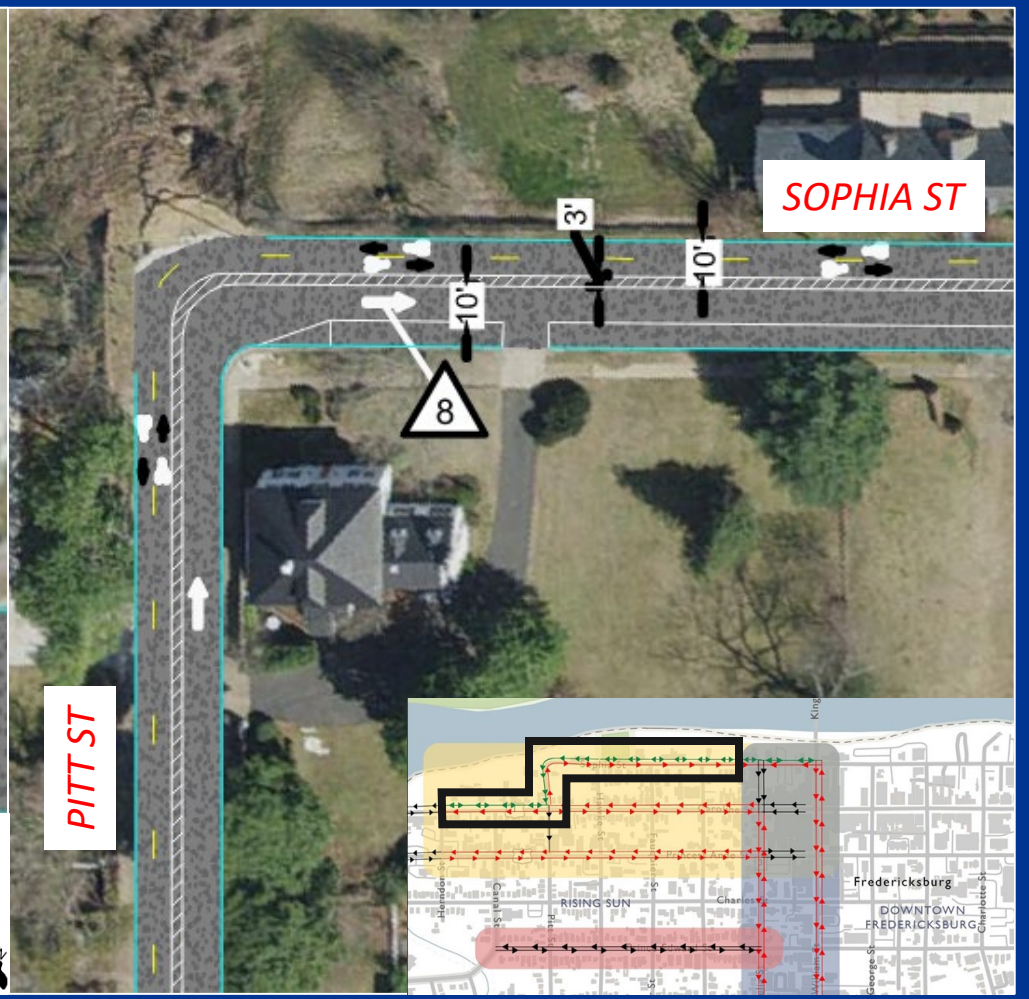
Source: Potomac Local News



Recommended Changes

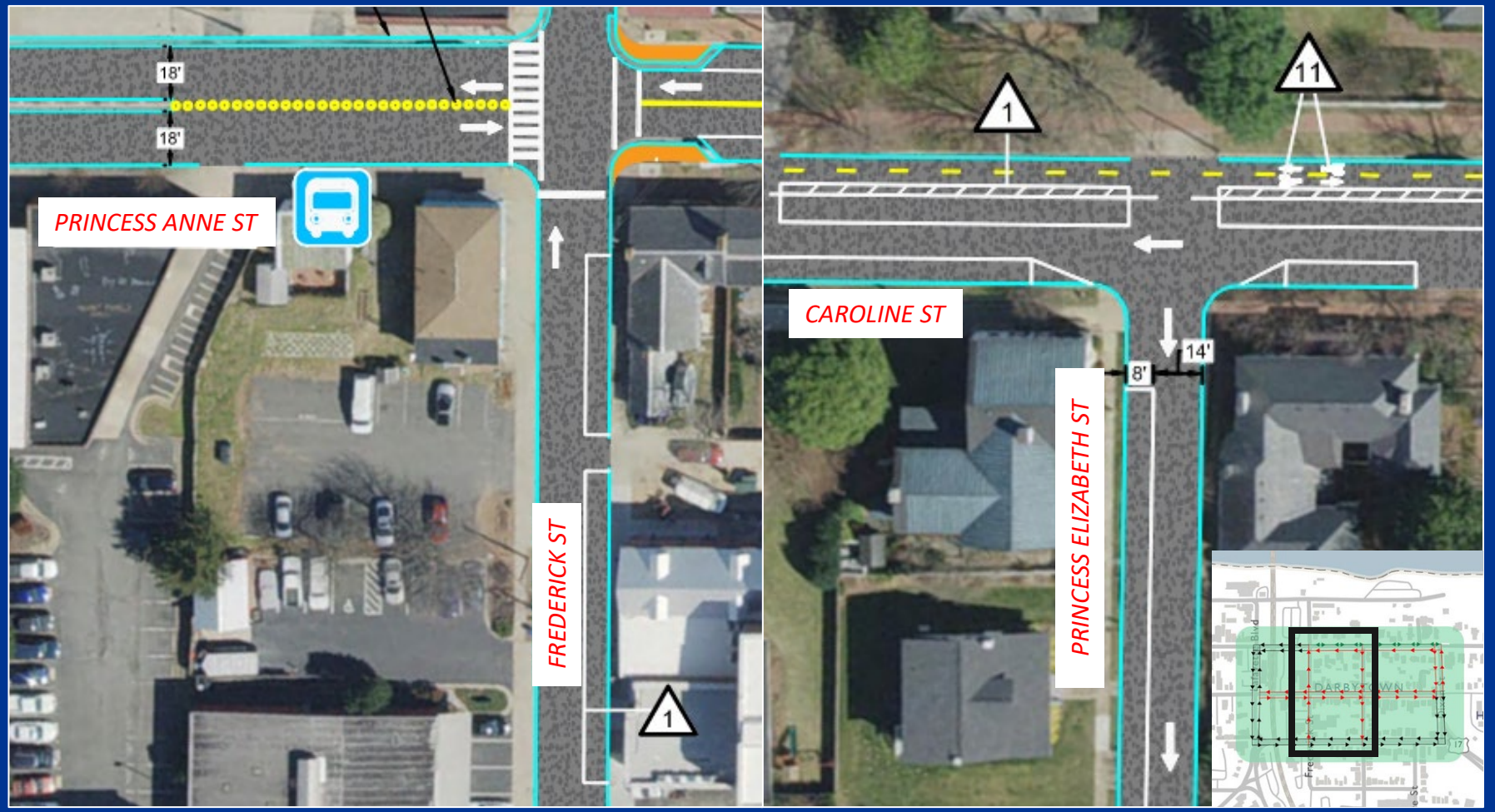
- One-way to two-way conversions
- Connected bicycle infrastructure
- Traffic signal operational improvements
- Traffic calming
- Project phasing





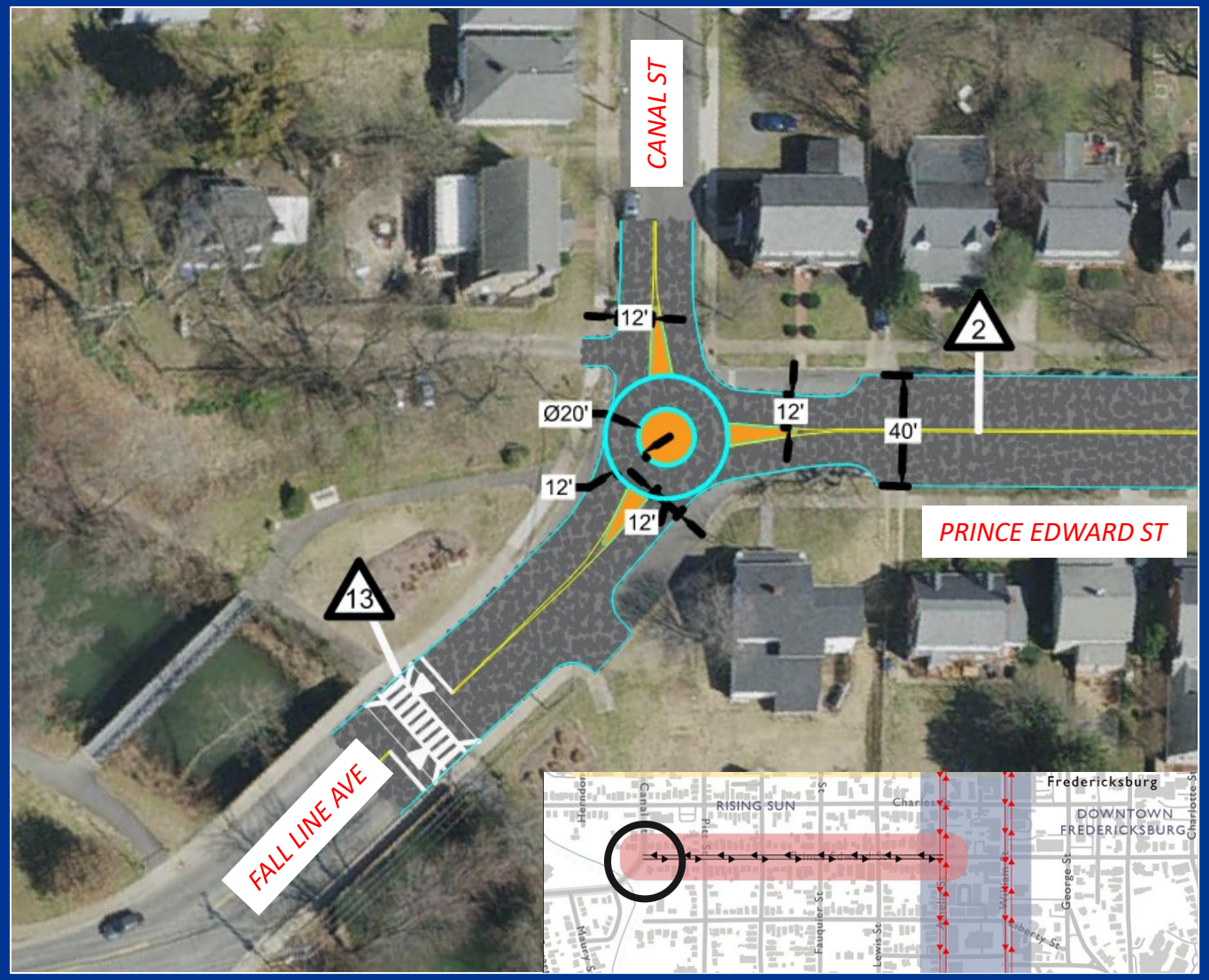
Sophia / Pitt / Caroline Bike Lanes

- Two-way bike lanes connecting existing and future trails
- Reverse travel direction on Sophia Street and Pitt Street
- Maintain one-way travel on Caroline Street, but reduced to one travel lane



Two-way to One-way Conversion

- Frederick Street and Princess Elizabeth Street



Prince Edward Street

- Mini roundabout at Canal St
- Raised crosswalk at Fall Hill Ave trail crossing

FXBG

Questions & Contact

City of Fredericksburg	David T. Brown dtbrown@fredericksburgva.gov
Timmons Group	Thomas Ruff thomas.ruff@timmons.com
Timmons Group	Ian Pike ian.pike@timmons.com