

ROUTE 50 STARS SAFETY AND OPERATIONAL IMPROVEMENTS STUDY – FALLS CHURCH

Strategically Targeted and Affordable Roadway Solutions (STARS) Program



Presentation Outline

- **VDOT STARS Program Overview**
- **Overview of this Planning Study**
- **Existing Traffic and Safety Conditions**
- **Survey Results from October 2019 Public Information Meeting**
- **Potential Improvements**
- **Next Steps**



VDOT STARS Overview

STARS PROGRAM GOALS

- **Strategically Targeted and Affordable Roadway Solutions**
- **Develop alternatives to relieve congestion and solve critical safety challenges for SYIP funding requests**
- **Data driven approach**
- **Involve planners, traffic engineers, safety engineers, roadway designers, and local stakeholders**

STARS Project Stakeholders



Study Purpose

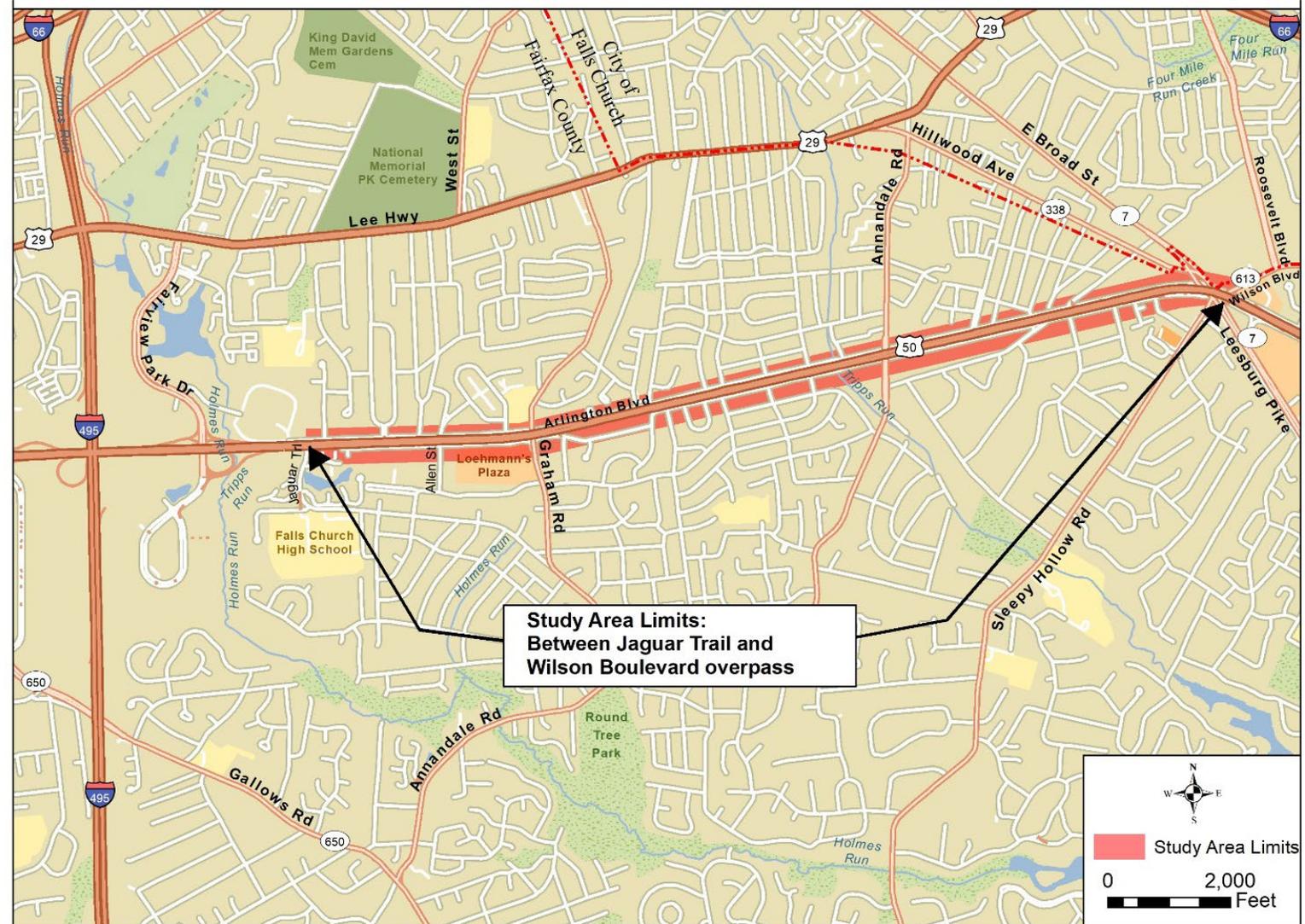
- Analyze traffic and safety conditions along Route 50 within the study area
- Consider and evaluate potential improvements to enhance safety and operations in the study area
- Develop improvement recommendations
- Develop cost estimates for the preferred alternative



Study Area

Arlington Boulevard (Route 50)

Between
Jaguar Trail
and the Wilson
Boulevard Overpass
(Route 613)

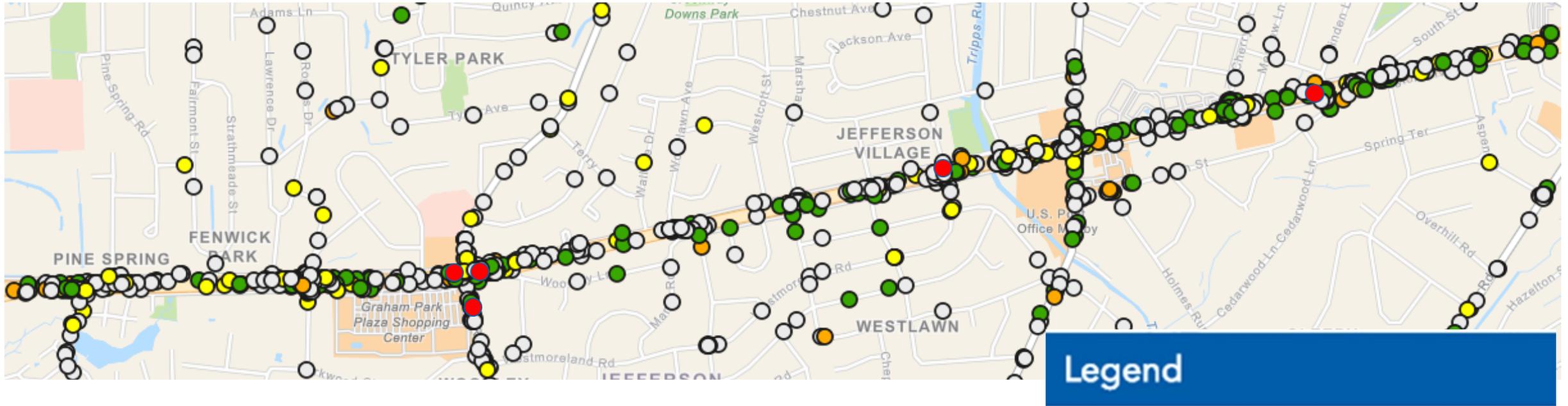


Pedestrian Crossings and Transit

- 10 crosswalks across Route 50
 - Six at signalized intersections
 - One at signalized mid-block
 - Two at unsignalized intersections
 - One at unsignalized mid-block
- 12 pairs of bus stops; 60 Metro buses/day



Crashes Reported (from January 2013 to June 2019)



Annual Crash Rates for Route 50 were 32% to 43% higher than average crash rate for primary highways in Northern Virginia

-  Fatal Injury Crash
-  Severe Injury Crash
-  Visible Injury Crash
-  Non-Visible Injury Crash
-  Property Damage Only Crash

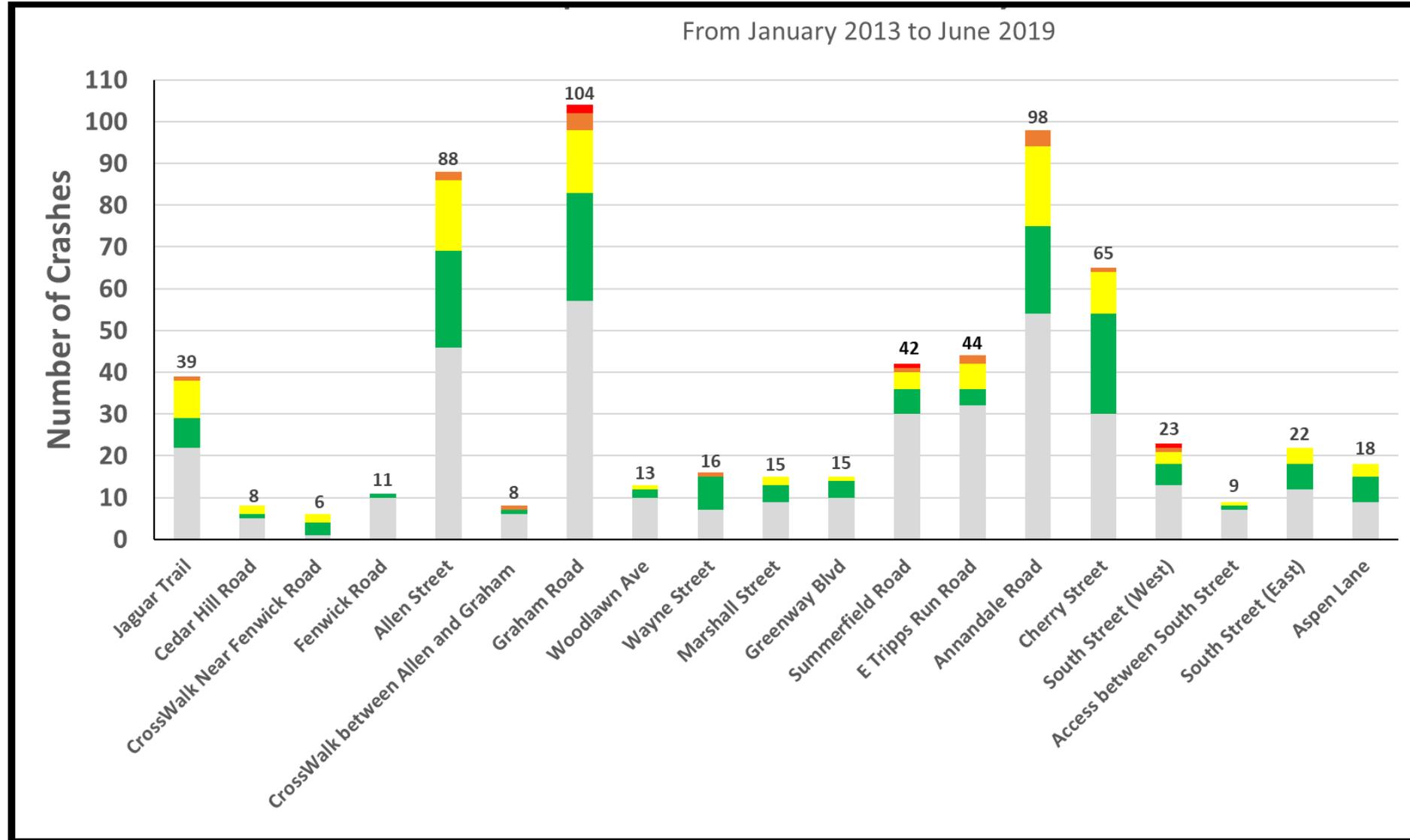


Crashes Reported On Route 50 by Intersection

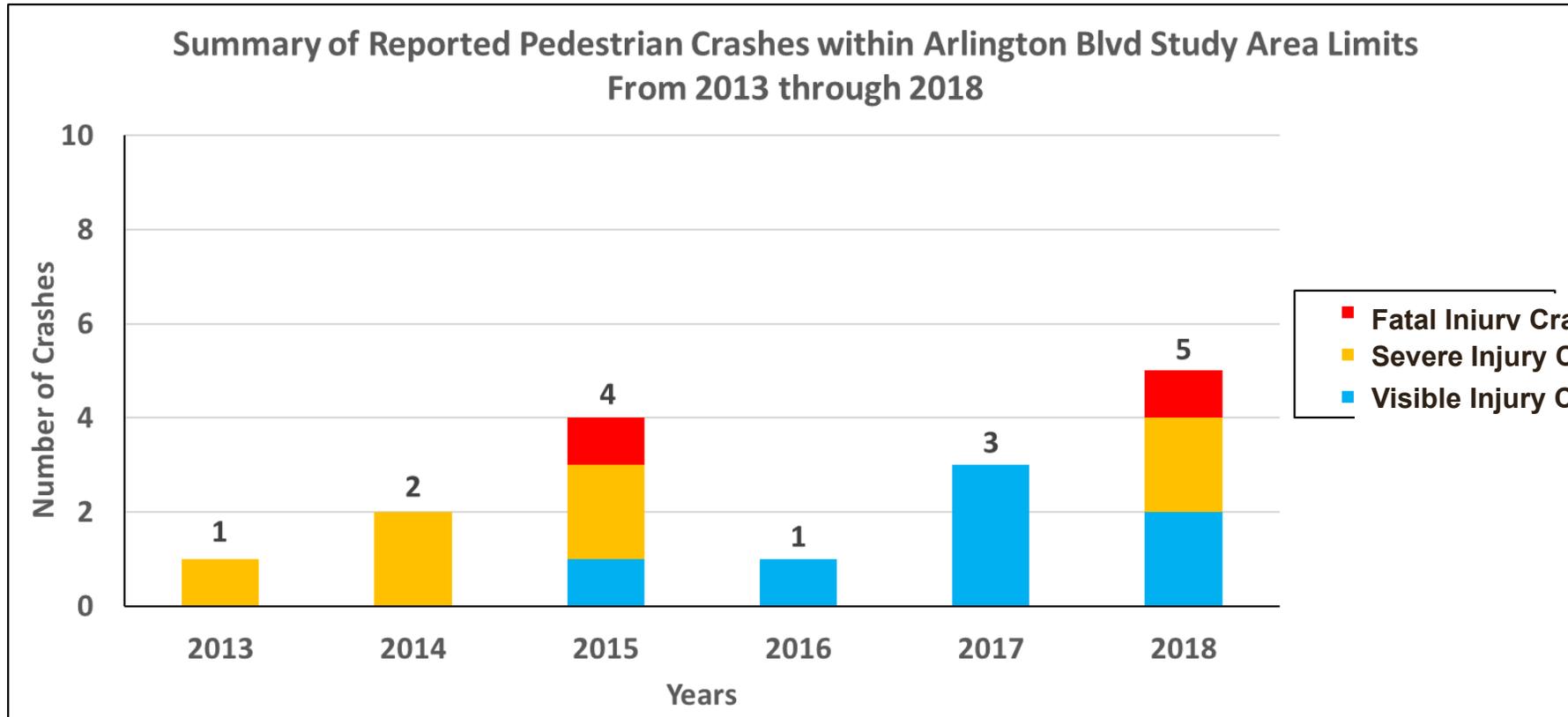
From January 2013 to June 2019

LEGEND

- Fatal Injury Crash
- Severe Injury Crash
- Visible Injury Crash
- Non-Visible Injury Crash
- Property Damage Crash

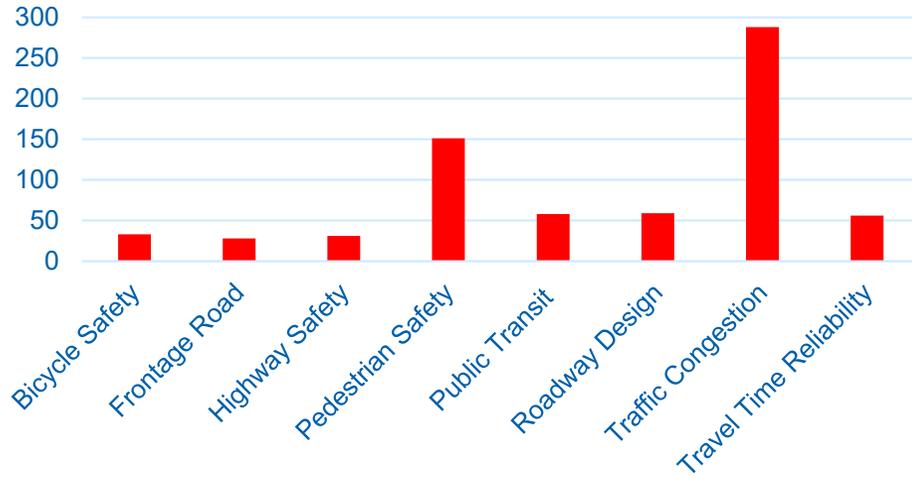


Pedestrian Crashes Reported in Route 50 Study Area

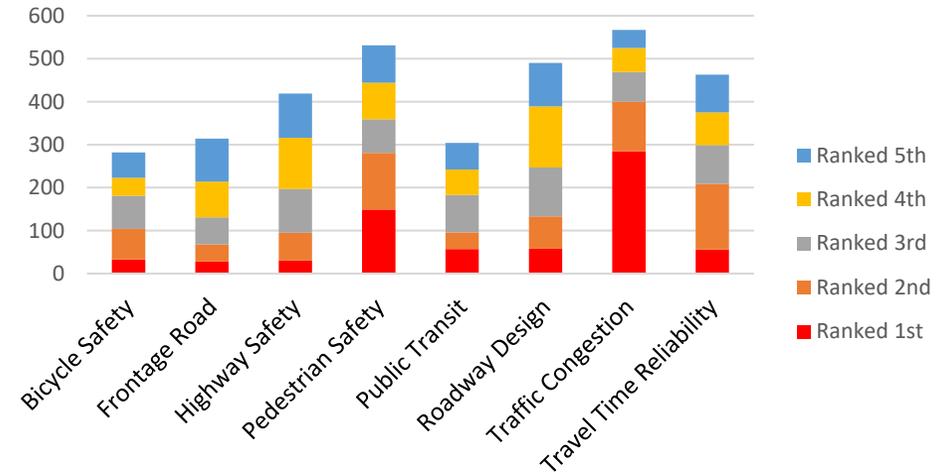


Results of MetroQuest Survey from October 2019

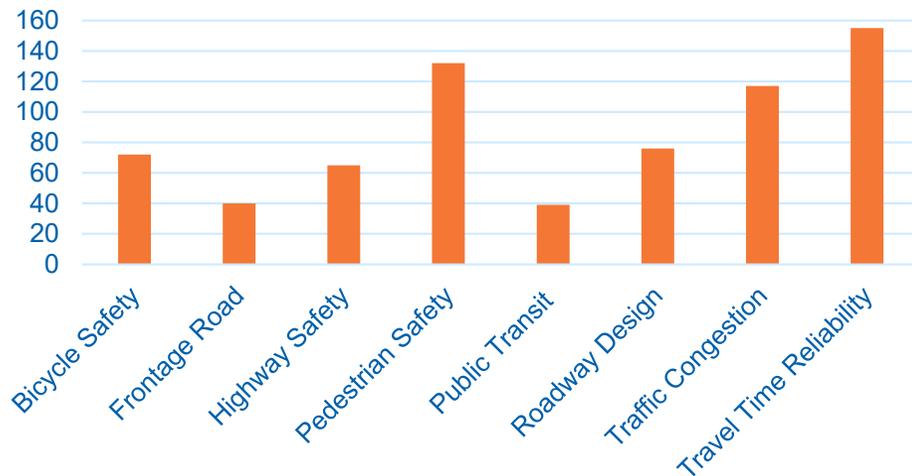
Number 1 Issue for Survey Respondents



Respondents Ranking of Issues



Number 2 Issue for Survey Respondents



Rank Order	Issue	% of Ranked 1st	% of Ranked 2nd	% of Ranked 3rd	% of Ranked 4th	% of Ranked 5th	% of Times Ranked 1st, 2nd or 3rd
	Bicycle Safety	5%	10%	11%	6%	9%	26%
	Frontage Road	4%	6%	9%	13%	16%	19%
	Highway Safety	4%	9%	15%	18%	16%	28%
#2	Pedestrian Safety	21%	19%	11%	13%	14%	52%
	Public Transit	8%	6%	13%	9%	10%	26%
	Roadway Design	8%	11%	17%	21%	16%	35%
#1	Traffic Congestion	41%	17%	10%	8%	7%	67%
#3	Travel Time Reliability	8%	22%	13%	11%	14%	43%
		100%	100%	100%	100%	100%	



| POTENTIAL IMPROVEMENTS



Jaguar Trail

Improvements Proposed:

Pedestrian

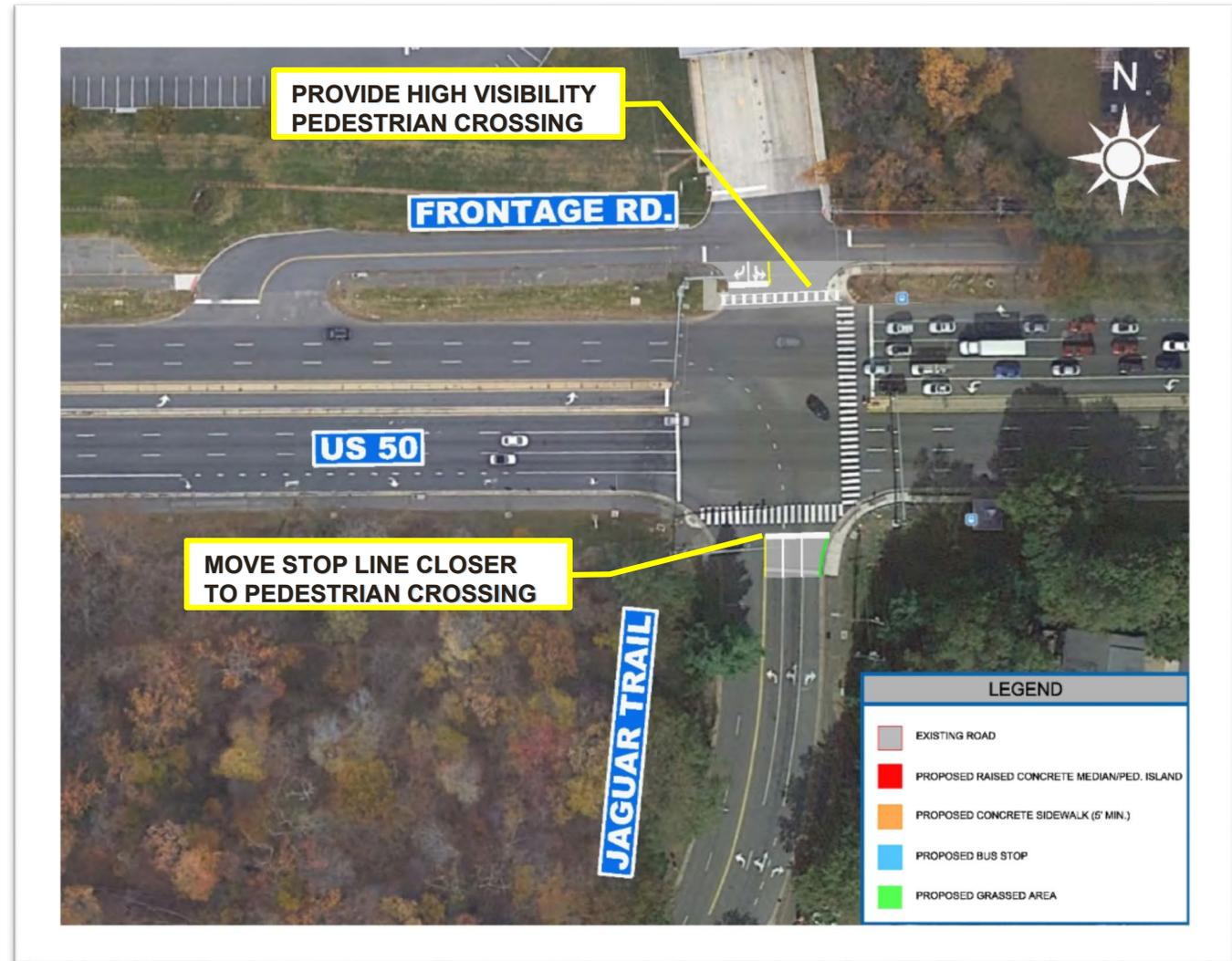
- Provide a high visibility pedestrian crossing

Roadway

- Move stop line on northbound approach closer to pedestrian crossing

Benefits :

- Enhance safety and reduce crashes involving pedestrians and crashes involving right-turning vehicles



Crossing Near Thomas Jefferson Library West of Fenwick Road

Improvements Proposed:

Pedestrian

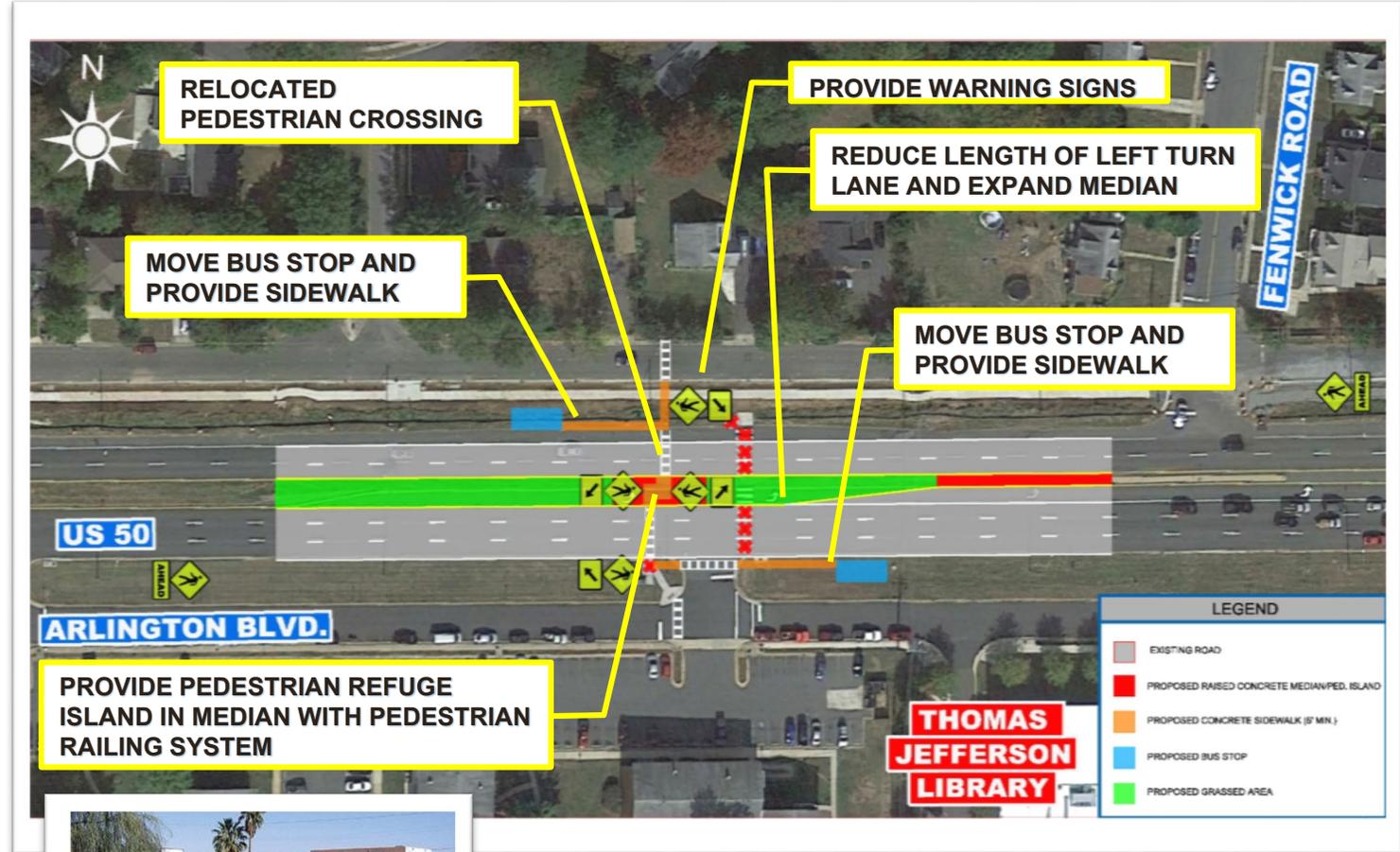
- Move existing pedestrian crossing to the west
- Provide pedestrian refuge in median with pedestrian railing system
- Provide sidewalks to relocated bus stops and new crosswalk
- Provide high visibility pedestrian crossings across frontage roads

Transit

- Move bus stops to far sides of pedestrian crossing

Roadway

- Reduce length of eastbound left turn lane and expand median
- Provide pedestrian warning signs



Benefits :

- Enhance safety for pedestrians and reduce crashes involving pedestrians crossing Route 50
- Enhance safety for buses and transit users

Allen Street

Improvements Proposed:

Pedestrian

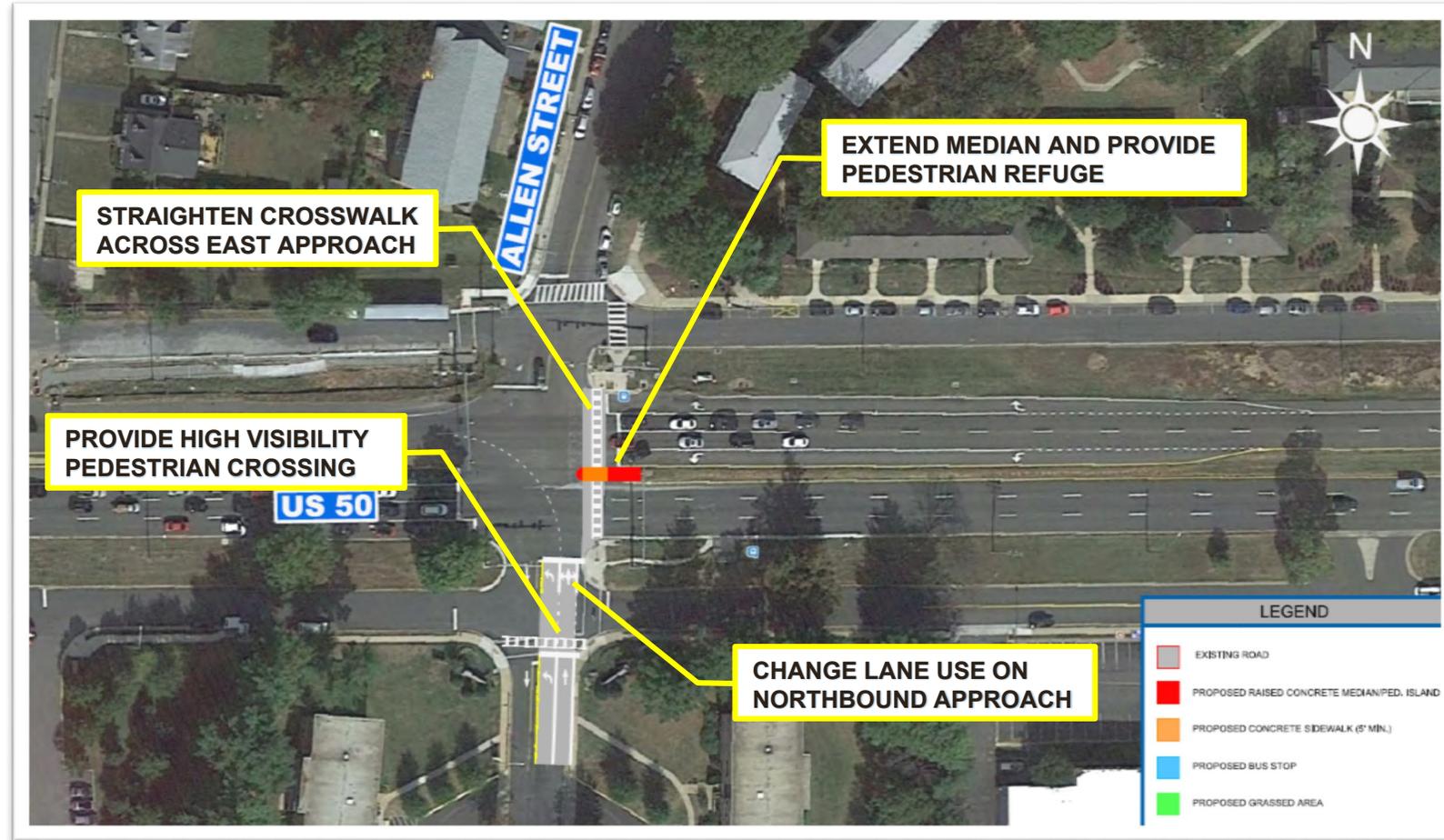
- Provide high visibility pedestrian crossing
- Straighten crosswalk across east approach
- Extend median and provide a pedestrian refuge

Roadway

- Change lane use on northbound Allen Street approach

Benefits :

- Enhance safety for pedestrians
- Reduce crashes
- Improve traffic operations at the intersection
- Decrease delays for northbound Allen Street



Graham Road

Improvements Proposed:

Pedestrian

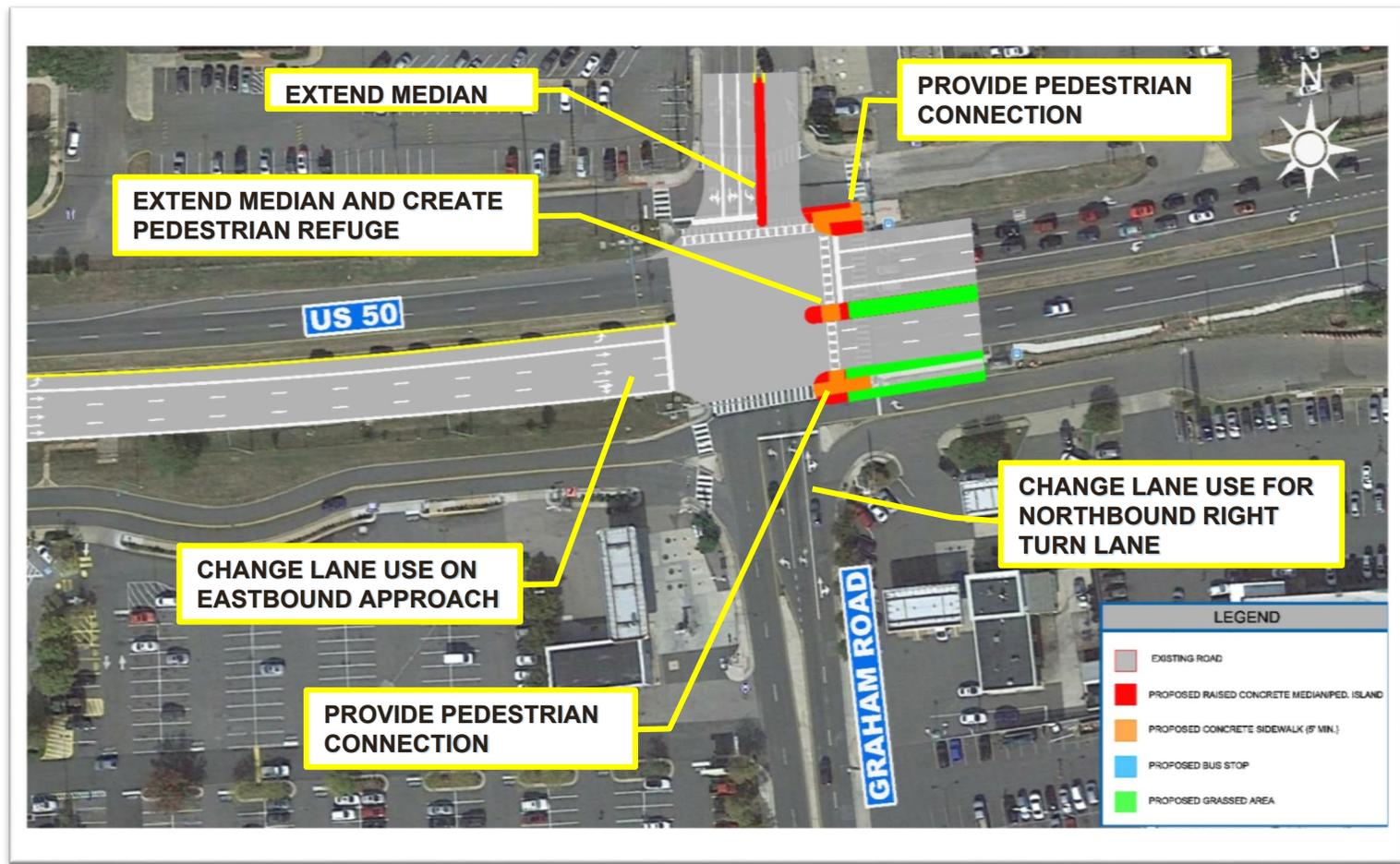
- Create a pedestrian refuge in median
- Provide improved pedestrian connections in the northeast and southwest corners

Roadway

- Change lane use on eastbound approach
- Extend median on westbound approach
- Move pedestrian crossing across westbound approach to the east
- Extend the raised median island on southbound approach

Benefits :

- Enhance safety for pedestrians
- Reduce crashes in the intersection
- Reduce delays for Graham Road
- Improve traffic operations at the intersection



Woodlawn Avenue

Improvements Proposed:

Pedestrian

- Provide high visibility pedestrian crossing across Woodlawn Avenue
- Provide sidewalk connection to the relocated bus stop

Transit

- Move bus stop to the far side of the intersection

Roadway

- Provide pedestrian warning signs

Benefits :

- Enhance safety for pedestrians
- Enhance safety for buses and transit users



Marshall St to E Tripps Run Rd: Signalized Midblock Crossing + Upgraded Crossing-Option A



Improvements Proposed:

Pedestrian

- Provide mid-block pedestrian signal with fencing to direct people to pedestrian crossing between Summerfield Road and East Tripps Run Road
- Move pedestrian crossing to the west at Marshall Street
- Provide pedestrian refuge in median at Marshall Street

Transit

- Move bus stops and construct sidewalks at Summerfield Road and Marshall Street
- Remove bus stops at Greenway Boulevard

Roadway

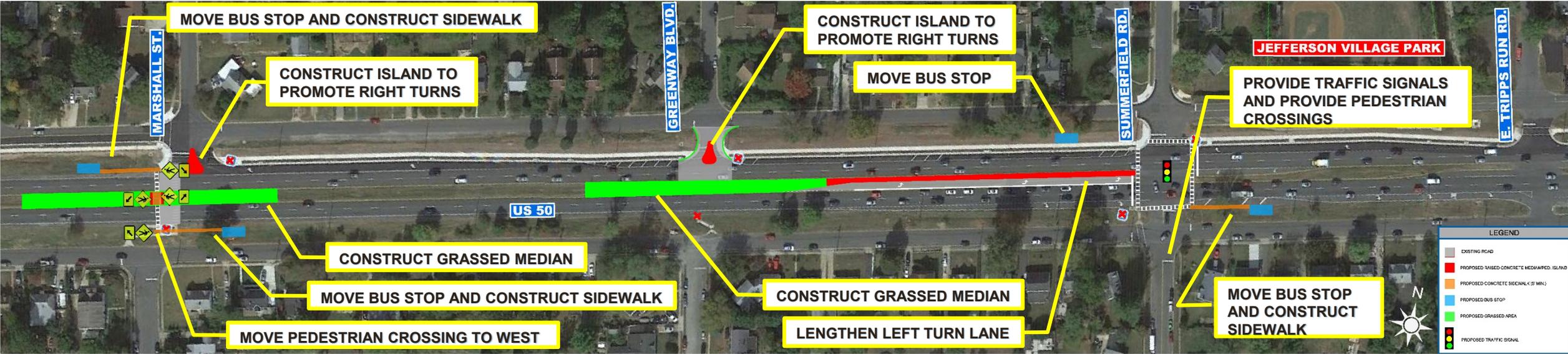
- Add pedestrian warning signs
- Construct new ramps in the southwest and northwest corners and extend median at the Marshall Street intersection

Benefits :

- Enhance safety for pedestrians and reduce crashes involving pedestrians
- Enhance safety for buses and transit users



Marshall St to E Tripps Run Rd: Summerfield Rd Signal and Access Changes - Option B



Improvements Proposed:

Pedestrian

- Construct additional sidewalk and pedestrian refuge in median and move pedestrian crossing at Marshall Street
- Provide traffic signals and pedestrian crossings at Summerfield Road intersection

Transit

- Move bus stops at Marshall Street and Summerfield Road
- Remove bus stop at Greenway Blvd

Roadway

- Construct grassed medians and construct islands to promote right turns only at Greenway Blvd and Marshall Street
- Provide pedestrian warning signs
- Lengthen eastbound left turn lane at Summerfield Road

Benefits :

- Enhance safety for pedestrians crossing Route 50
- Enhance safety for buses and bus riders
- Improve traffic operations and safety for left-turning vehicles

Annandale Road

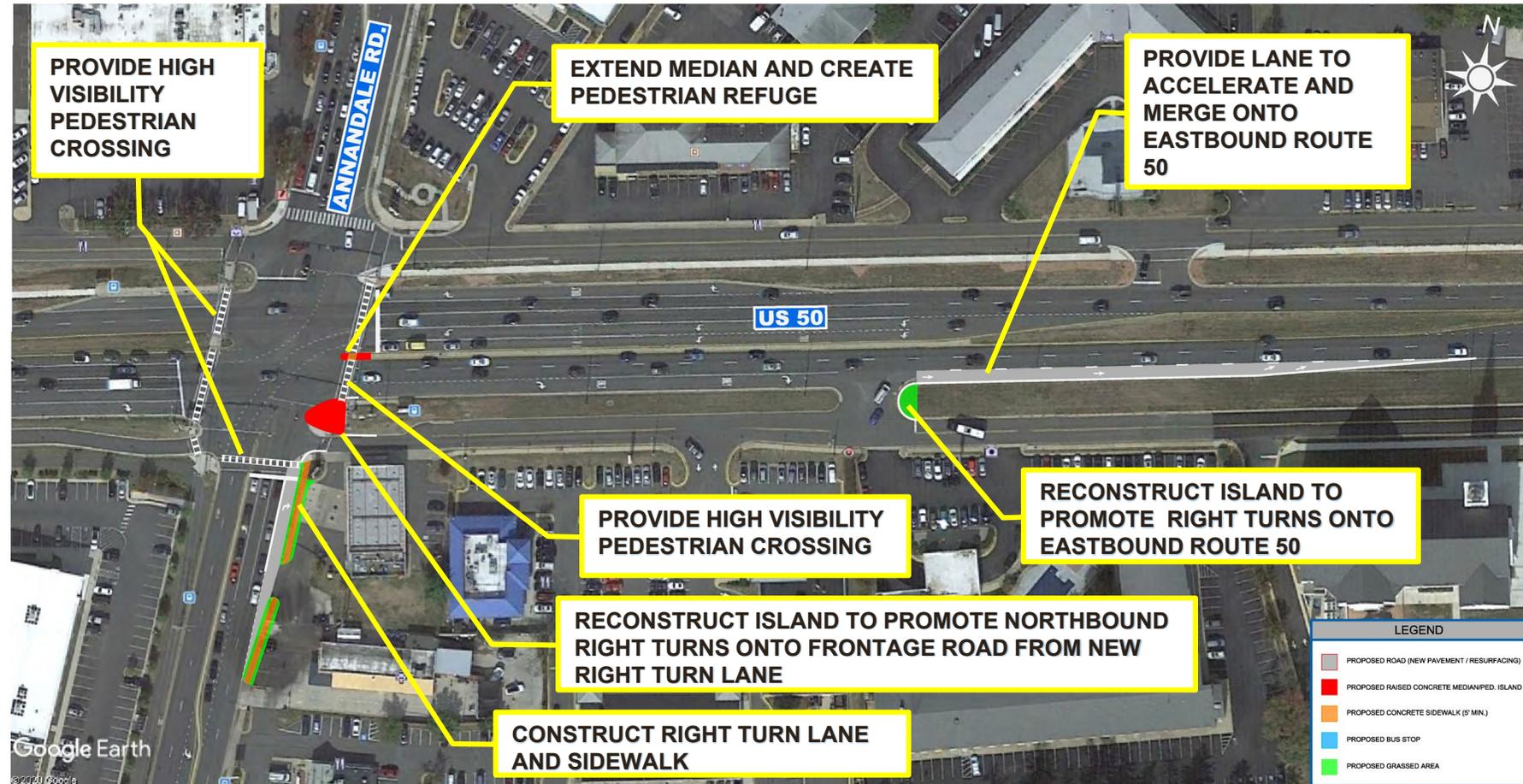
Improvements Proposed:

Pedestrian

- Add high visibility pedestrian crossings
- Extend median and create pedestrian refuge for pedestrian crossing on westbound approach

Roadway

- Construct right turn lane on northbound approach and require northbound right-turning vehicles to use eastbound frontage road
- Reconstruct island in southeast corner to promote northbound right turns onto frontage road from new right turn lane
- Provide acceleration lane for northbound right turns from frontage road onto eastbound Route 50



Benefits :

- Enhance safety and reduce crashes involving pedestrians with northbound right-turning vehicles on Route 50
- Improve traffic operations and safety for northbound right-turning vehicles

South Street / Beechwood Lane



Improvements Proposed:

Pedestrian

- Provide pedestrian crossing on the south side at South Street

Roadway

- Lengthen westbound left turn lane to South Street on south side
- Construct directional islands to prohibit westbound U-turns and left turns from southbound South Street at eastern median opening
- Modify South Street on the south side of Route 50

Benefits:

- Enhance safety and reduce crashes for eastbound and westbound left-turns from Route 50
- Improve traffic operations, enhance safety and reduce crashes for southbound left-turns from South Street
- Enhance safety and accessibility for pedestrians on the south side for Route 50 at the intersection of South Street with frontage road

Aspen Lane – Minor Changes - Option A

Improvements Proposed:

Pedestrian

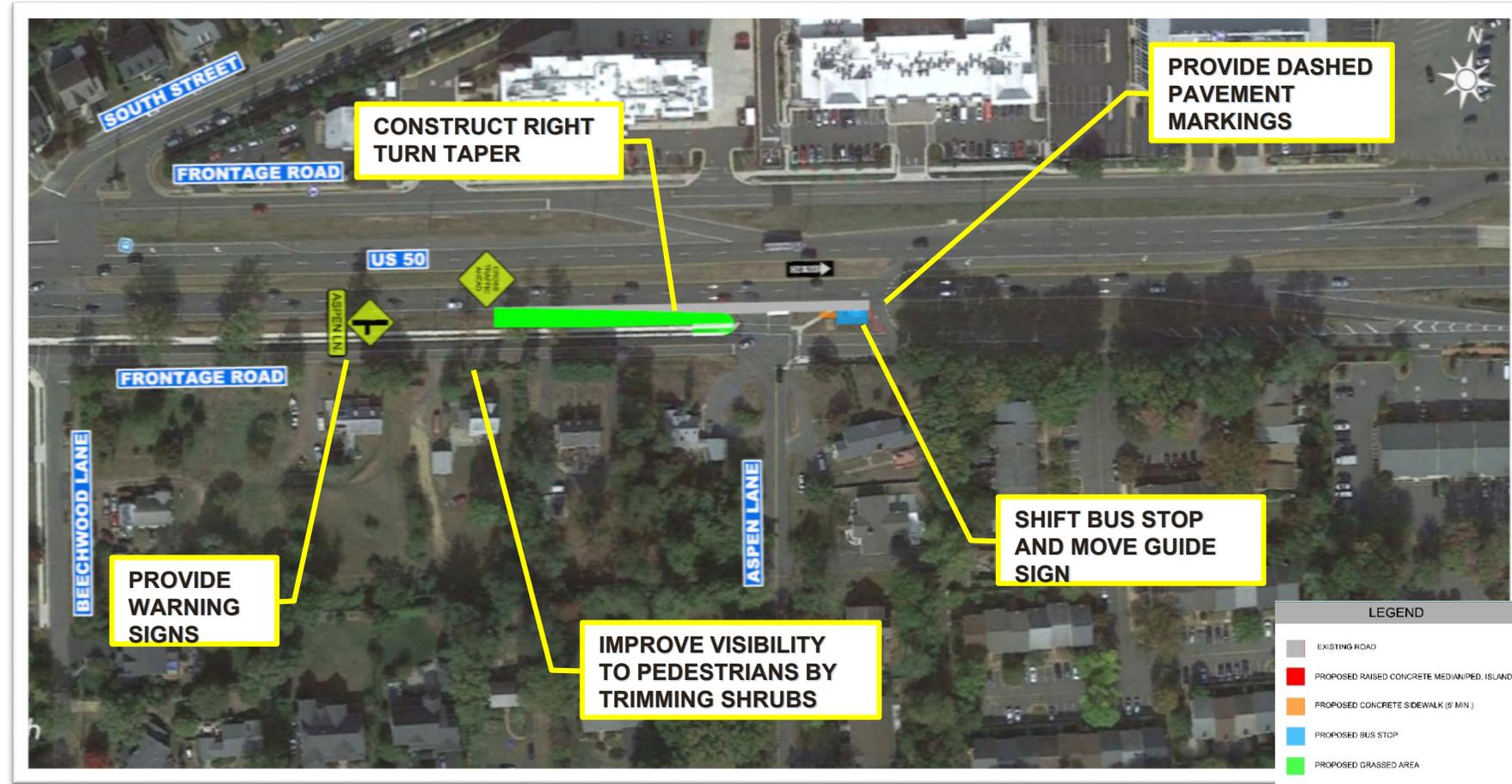
- Improve sight distance to pedestrians by trimming shrubs and tree branches

Transit

- Provide pull-off area for buses at bus stop

Roadway

- Add eastbound right turn taper to off-ramp
- Enhance safety for U-turns from westbound Route 50 to eastbound Frontage Road
- Provide warning signs on eastbound approach
- Relocate guide sign
- Provide dashed pavement markings for westbound U-turn



Benefits :

- Enhance safety for drivers and reduce crashes related to turning vehicles

Aspen Lane – Extended Exit Lane - Option B

Improvements Proposed:

Pedestrian

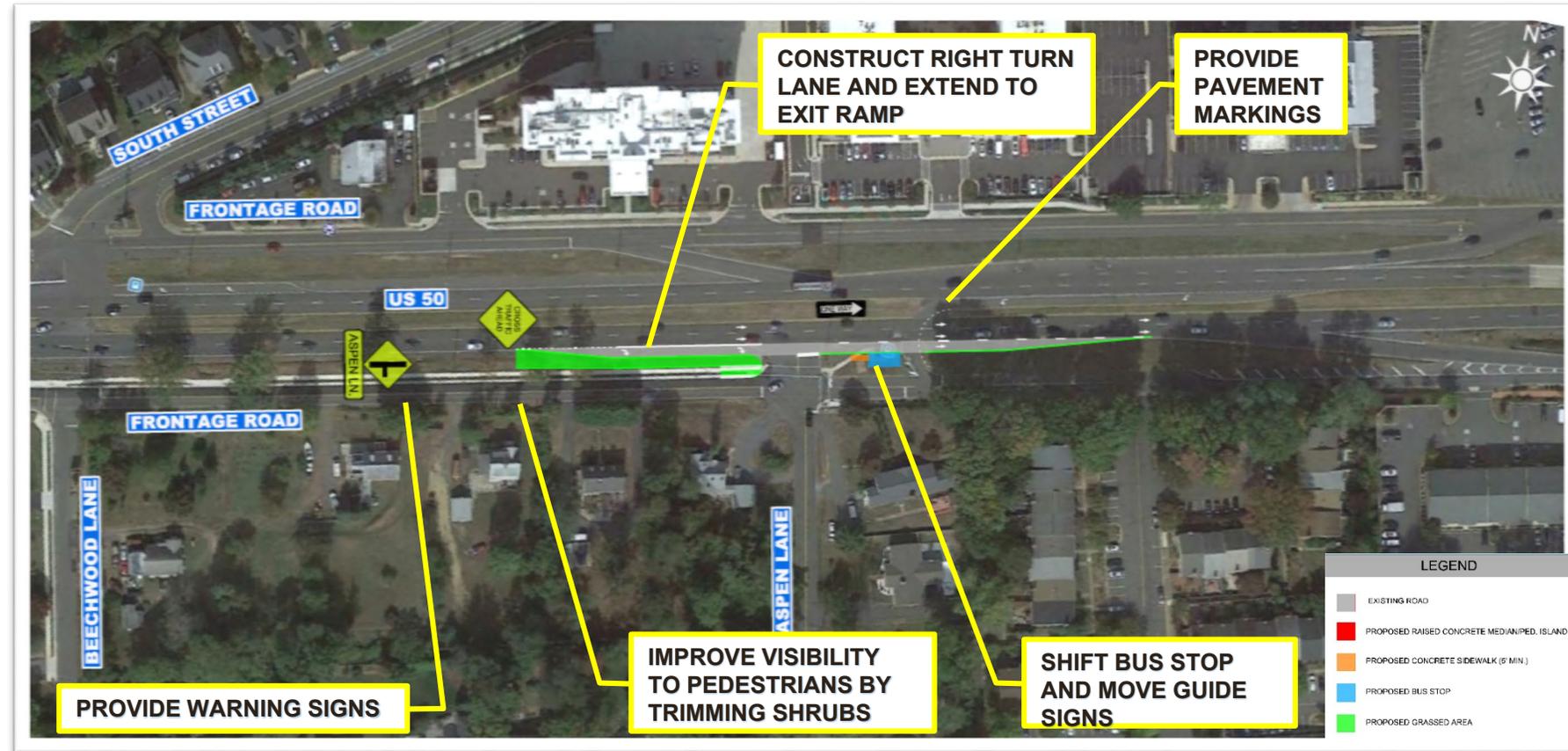
- Improve sight distance to pedestrians by trimming shrubs and tree branches

Transit

- Relocate bus stop

Roadway

- Add eastbound right turn lane to off-ramp
- Enhance safety for the U-turn from westbound Route 50 to eastbound Frontage Rd
- Add warning signs on eastbound approach
- Relocate guide sign



Benefits :

- Enhance safety for drivers and reduce crashes related to vehicles turning right from northbound Aspen Lane to eastbound Route 50, turning right from eastbound Route 50 onto Aspen Lane and U-turning from westbound Route 50 to go eastbound on Frontage Road

Traffic and Safety Effects and Implementation Costs

Improvement Type	Traffic Effects	Safety Effects	Planning Level Order-of-Magnitude Costs
Pedestrian and Bus Stop Improvements without Roadway Changes	No change	Reductions in pedestrian crashes and improved safety for pedestrians and bicyclists crossing Route 50	\$2.5M - \$5.5M
Minor Roadway Improvements	Reduction in delays at specific locations and improved travel times	Reductions in crashes involving multiple vehicles and improved safety for drivers and passengers	\$5M - \$12M

Next Steps

- **Evaluate feedback based on public survey:**
virginiadot.org/route50fallschurchstudy
- **The online survey will be available starting Thursday, October 1, until Friday, October 30**
- **VDOT and Fairfax County will identify a preferred alternative after evaluating public feedback and comments**
- **Study recommendations and a final report will be finalized Late Fall 2020**

THANK YOU!

Your input is essential as we evaluate potential improvement alternatives.

Please take our survey located on our project website!

virginiadot.org/route50fallschurchstudy

**Comments may also be sent to:
meetingcomments@vdot.virginia.gov**