



Montgomery Planning

Forest Glen/Montgomery Hills Sector Plan

October 23, 2018

Preliminary Recommendations

Transportation



Topics Tonight

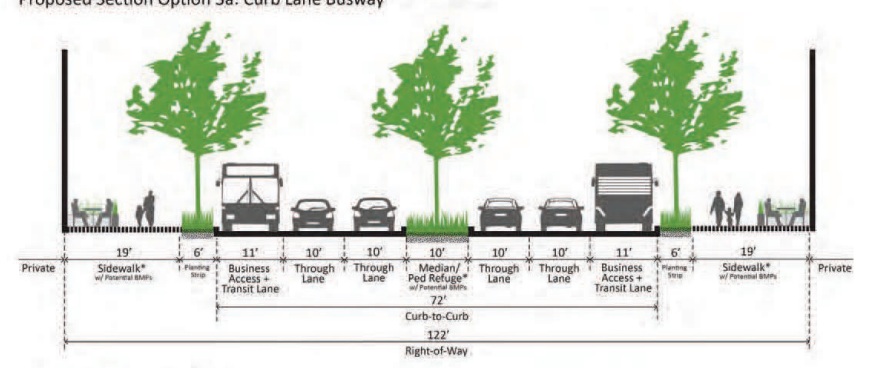
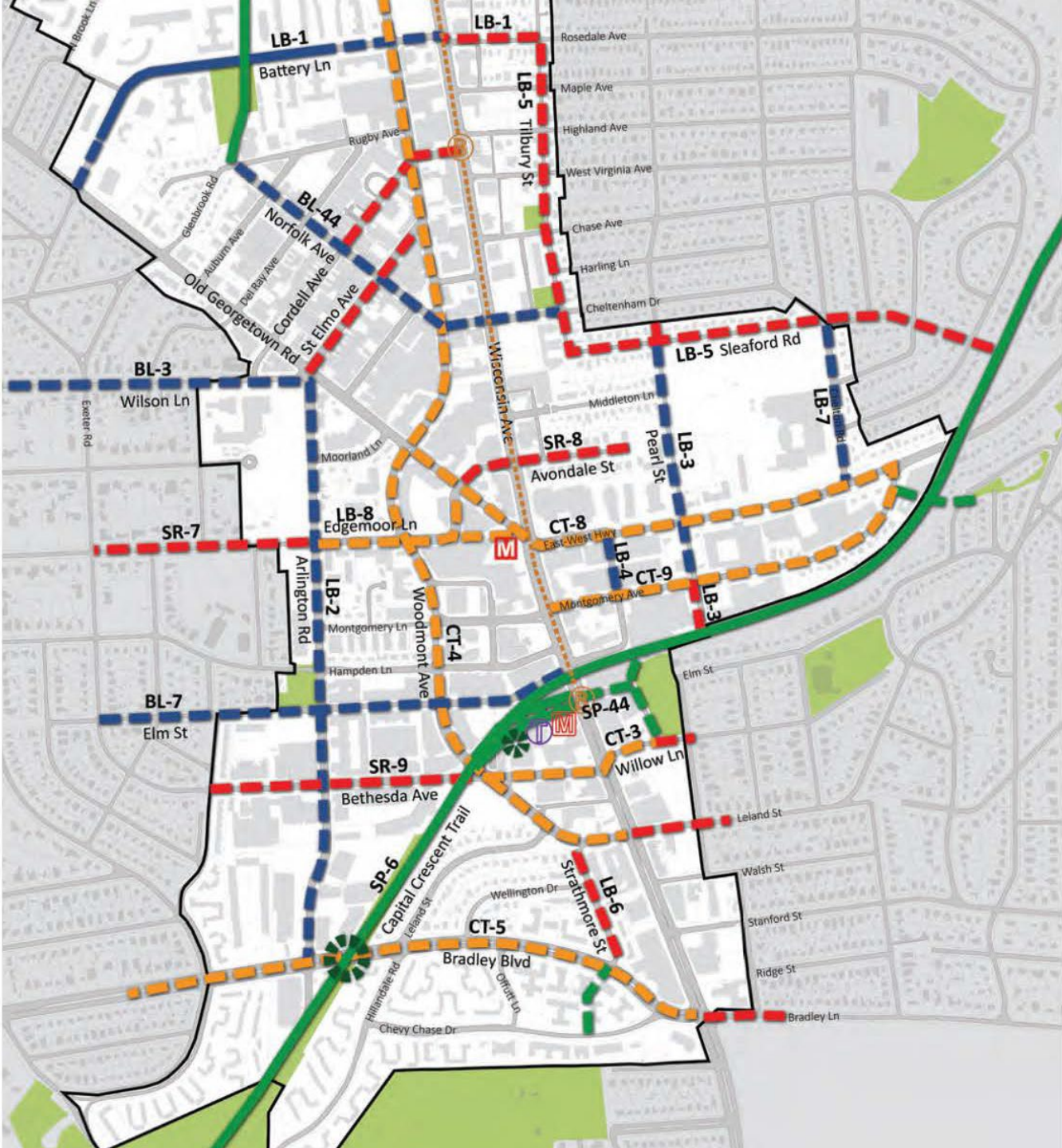
- ~~Managed Lanes~~
- Project Update
- Key Transportation Elements of a Sector Plan
- Vision Zero
- What We Heard & What We Observed
- Preliminary Recommendations
- Next Steps & Important Dates



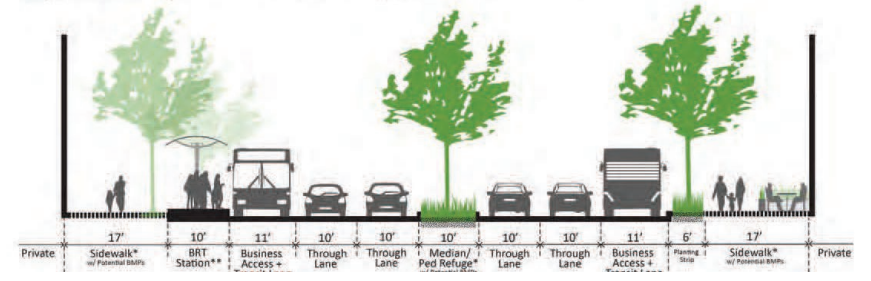
Timeline Thus Far



Timeline Update: Today



Wisconsin Ave (@ Cordell Ave, Looking North)
Proposed Section Option 3b: Curb Lane Busway @ BRT Station



2.3 Transportation



Downtown Bethesda is well connected to the surrounding region by a vibrant transportation network incorporating three major highways: Old Georgetown Road (MD 187), Wisconsin Avenue (MD 355) and East-West Highway (MD 410). The community is near the Capital Beltway (Interstate-495) and Metrorail Red Line.

In addition to these roadways and commuter rail system, the proposed Purple Line light rail and proposed MD 355 South Bus Rapid Transit Corridor are anticipated to be implemented during the horizon year (2040) of this planning document. A grid of local streets completes the transportation network by promoting safe and efficient travel throughout the community for pedestrians, bicyclists and motorists.

In order to enhance the existing transportation network, this Plan recommends “complete streets” improvements to the roadway network that increase the connectivity, safety and quality for all modes of transportation. Complete streets design principles refer to roadway treatments intended to accommodate multiple modes of transportation, including pedestrian, bicycle, vehicular and transit, within the same right-of-way. Due to the transit-oriented nature of Downtown Bethesda, future transportation improvements within the Sector Plan area

Chapter 4: Implementation

The Downtown Bethesda Plan will be implemented through incremental redevelopment over time consistent with the County's current subdivision staging policies. Recognizing that Bethesda is a mixed-use area, most of the Downtown is recommended for continued Commercial Residential (CR) or Commercial Residential Town (CRT) zoning, with significant flexibility to develop a mix of residential and non-residential uses. At the same time, there are certain public amenities and benefits that are critical to the economic, sustainability and quality-of-life goals of this Sector Plan.

4.6 Capital Improvements Program and New Financing Mechanisms

4.6.1 Capital Improvements Program

The following infrastructure projects will enable Downtown Bethesda to evolve into a mixed-use, transit-oriented community and should be funded through the County Capital Improvements Program.

Some projects may be completed using the Amenity Fund and with private sector participation.

4.6.2 New Financing Mechanisms

One of the four overarching goals of the Sector Plan is to increase parks and open space in Bethesda. The Sector Plan identifies several projects in the Capital Improvements Program (CIP) to achieve this goal, but the capacity of the current CIP to fund these projects is limited and the cost of acquiring and developing new parks in a developed area will be significant. This Plan recommends the exploration of new financing mechanisms that could help pay for new parks. This includes the park impact payment recommended for the Overlay zone, as well as other potential alternative financing mechanisms (such as a special taxing district) that could provide a more stable source of funding not linked to new development and therefore available in the near term.

Table 4.01: Capital Improvements Program

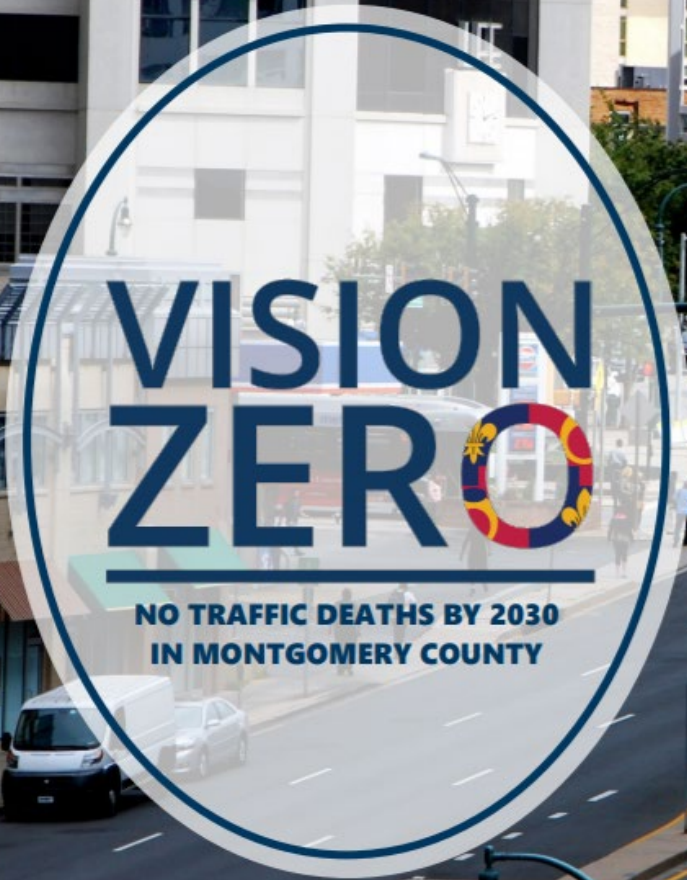
Project Name	Category	Lead Agency	Coordinating Agencies
Redesign Wisconsin Avenue as an urban boulevard	Transportation	SHA	M-NCPPC/MCDOT
Redesign Old Georgetown Road as an urban boulevard	Transportation	SHA	M-NCPPC/MCDOT
Redesign East-West Hwy as an urban boulevard	Transportation	SHA	M-NCPPC/MCDOT
Redesign Norfolk Avenue as a shared street	Transportation	MCDOT	M-NCPPC
Redesign Pearl Street as a shared street	Transportation	MCDOT	M-NCPPC
Pearl Street Connector	Transportation	M-NCPPC/MCDOT	M-NCPPC/MCDOT
Capital Crescent Trail tunnel/surface route beneath Wisconsin Avenue and Elm Street, via Elm Street Park	Transportation	MCDOT	SHA, M-NCPPC, Town of
Reconfigure East-West Hwy, Montgomery Lane, Old Georgetown Road and Woodmont Avenue with separated bike lanes	Transportation	SHA	M-NCPPC/MCDOT
Purple Line/Station Construction	Transportation	MTA	WMATA/MCDOT/M-NCP
Extend BRT Corridor 4: MD 355 South from the Bethesda North Station to the Bethesda South Station to connect the Purple Line	Transportation	MTA	WMATA/MCDOT/M-NCP
Bethesda South Bus Circulation	Transportation	MCDOT	SHA, BUP
Bethesda Circulator Bus Expansion	Transportation	MCDOT	SHA, BUP
Full-service bicycle storage facility located adjacent to the CCT tunnel route	Transportation	MCDOT	M-NCPPC
New separated bikeway lanes on Woodmont Avenue, Bradley Boulevard, Arlington Road and Bethesda Avenue/Willow Lane between Woodmont Avenue and 47th Street	Transportation	MCDOT	SHA, M-NCPPC
Shared Roadway on Commerce Lane, Avondale Street, Rosedale Avenue, Tilbury Street, St. Elmo, Cordell Avenue and Bethesda Avenue	Transportation	MCDOT	M-NCPPC
New trail connection at Bradley Boulevard and Capital Crescent Trail, and Pearl Street and the CCT.	Transportation	MCDOT	M-NCPPC
North Bethesda Trail- widening	Transportation	M-NCPPC	MCDOT
Bike Share Stations	Transportation	MCDOT	M-NCPPC
Undergrounding of public utilities	Transportation	MCDOT	SHA, M-NCPPC
New bike lanes on Chelton Road, Pearl Street, Norfolk Avenue, Cheltenham Drive, Elm Street, Battery Lane and Wilson Lane	Transportation	MCDOT, SHA	M-NCPPC
Veteran's Park Civic Green	Parks and Open Space	M-NCPPC	
The Farm Women's Market Civic Green	Parks and Open Space	M-NCPPC	
Capital Crescent Civic Green	Parks and Open Space	M-NCPPC	MCDOT
Bethesda Trolley Trail Gateway Park	Parks and Open Space	M-NCPPC	
Gateway to Norwood Local Park	Parks and Open Space	M-NCPPC	Private

Vision Zero

How is Safety Created? | Decreasing Crash Frequency | Decreasing Crash Severity

What is Vision Zero?

- In the **United States**, it is a response to the approximately **40,000 traffic fatalities annually**
- In **Montgomery County**, an annual average of **30 fatalities** and **340 severe injuries between 2012-2016**



OUR PLAN TO ELIMINATE FATALITIES AND SEVERE INJURIES ON OUR ROADS BY 2030

TWO-YEAR ACTION PLAN • NOV 2017

TRADITIONAL APPROACH

Traffic deaths are **INEVITABLE**

PERFECT human behavior

Prevent **COLLISIONS**

INDIVIDUAL responsibility

Saving lives is **EXPENSIVE**

VS

VISION ZERO

Traffic deaths are **PREVENTABLE**

Integrate **HUMAN FAILING** in approach

Prevent **FATAL AND SEVERE CRASHES**

SYSTEMS approach

Saving lives is **NOT EXPENSIVE**

How is Safety Created?

1. Decrease the **frequency** of crashes
2. Decrease the **severity** of crashes

Decreasing Crash Frequency

- Reduce Conflicts



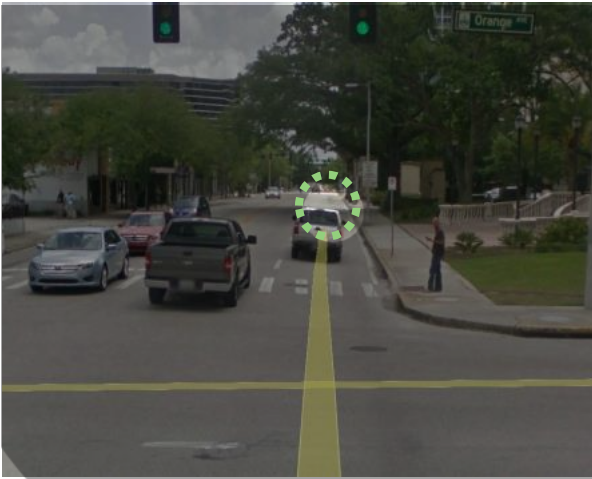
- Designate space for different users
- Provide predictability where users interact



Decreasing Crash Frequency

- Increase the ability to yield

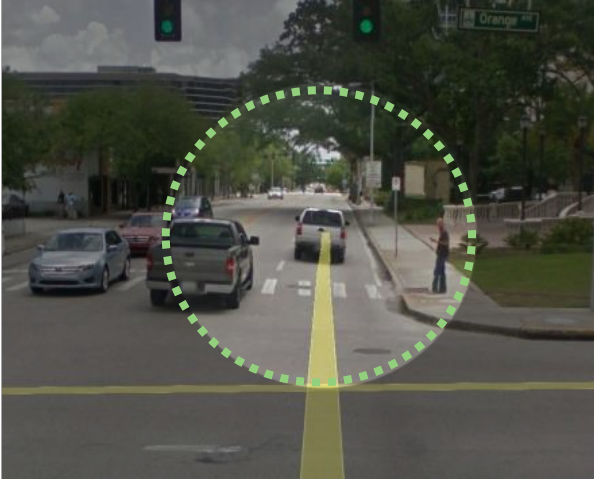
Driver Field of Vision at Various Speeds



40 MPH



30 MPH



20 MPH



15 MPH

Image Credit: Kittelson & Associates, Inc.

Decreasing Crash Severity

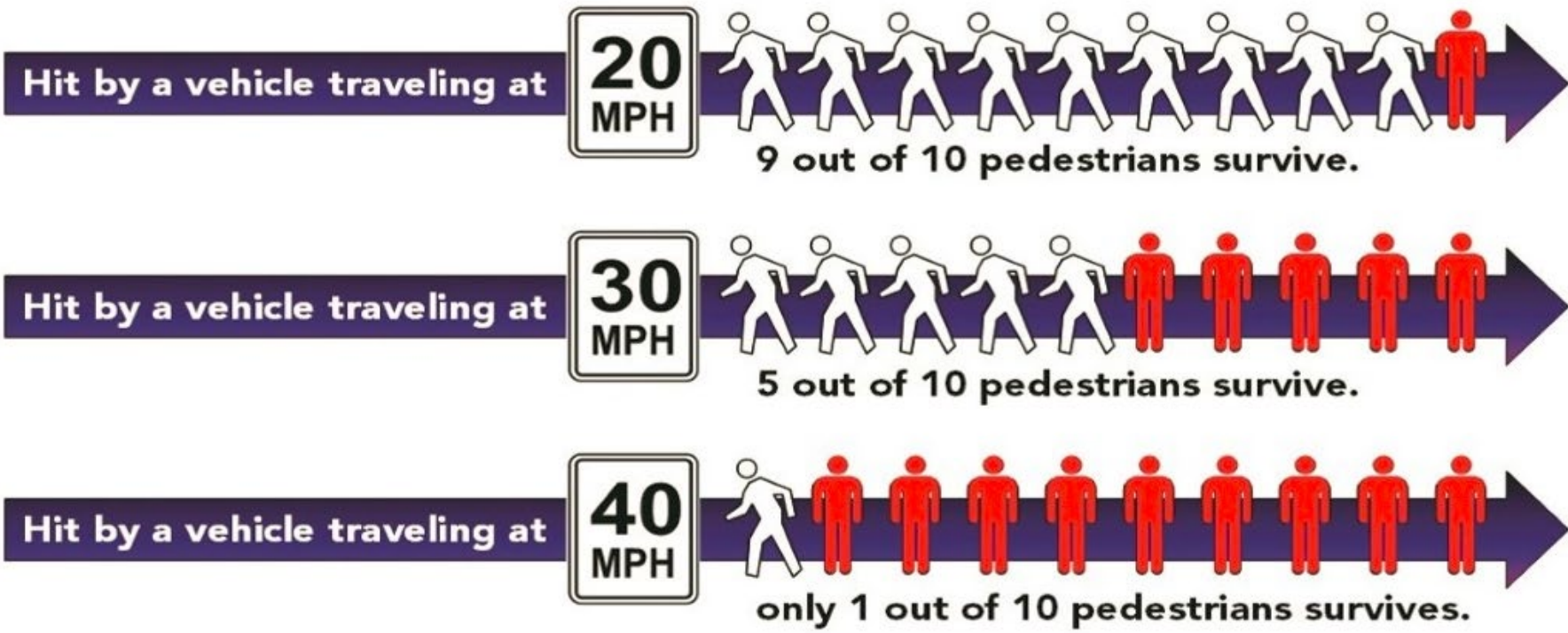



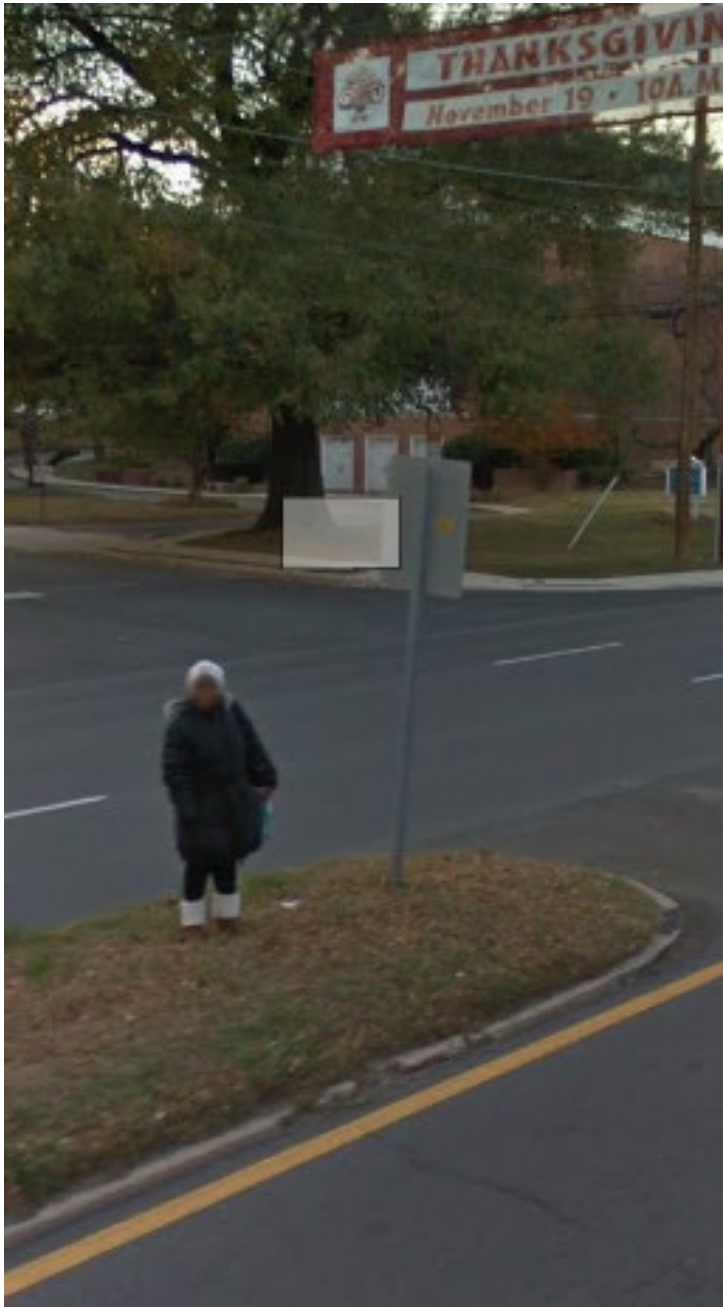
Image Credit: World Resources Institute



How do Corridors Cause Unsafe Behavior?

Innovation Health
Your health above all
www.innovationhealth.com

innovation
HEALTH
AETNA | INOVA



Forest Glen/Montgomery Hills Sector Plan Transportation Goals

Sector Plan Transportation Goals

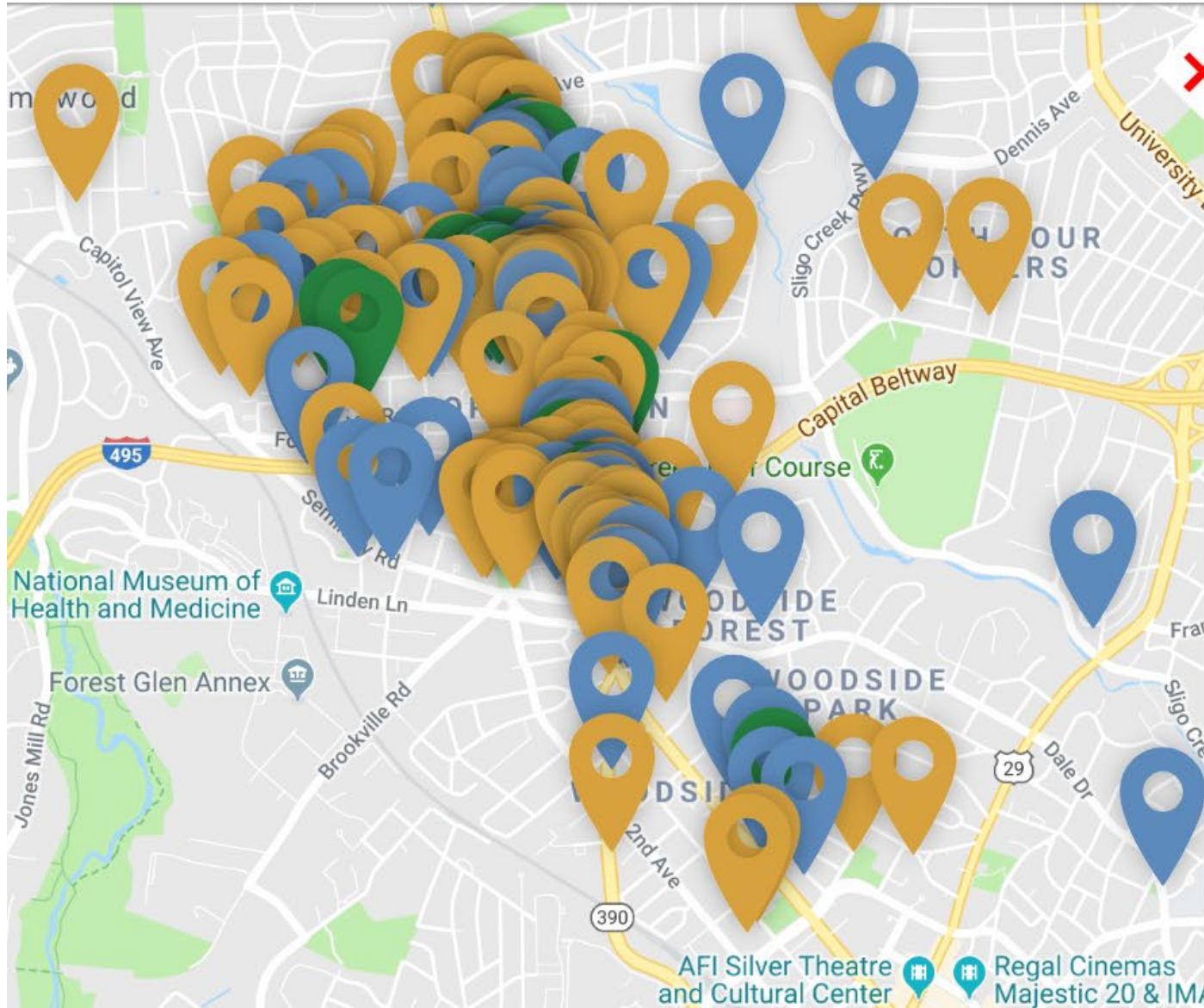
1. Eliminate all traffic-related deaths and severe injuries (aligned with County Council Vision Zero Initiative)
2. Improve the comfort, safety and overall traveling experience for non-motorized transportation modes (walking, biking, transit)
3. Reduce single-occupancy car travel within and through the corridor
4. Improve the efficiency of travel for all modes

What We Heard & What We Observed

Walking & Transit | Bicycling | Driving

- Support MDSHA **Alternative 5B**
- Difficult to **walk along** Georgia Avenue
- **Scary** to cross Georgia Avenue
- Why isn't there **dedicated space** for **bicyclists**?
- **Spillback** traffic on Georgia Avenue, especially **northbound** in the **evening**
- **Unsafe** Beltway interchange; limited space for merging
- Concern about **high speed traffic** on **neighborhood streets**
- **Lack** of a street **grid**
- **Speeding** vehicles in Forest Glen

What We've
Heard and
What We've
Observed



6/5/18 11:23 am \ anonymous

"Pedestrians have been struck and multiple car crashes have occurred here. During rush hour, southbound ambulances going to Holy Cross take left turns here and northbound cars need to take U turns here. Pedestrians going to bus stops and General Getty Park especially need a signal here. Tilton Drive is midway between the signals at Forest Glen Road and August Drive and will serve residents on the east and west sides of Georgia Avenue."

- We need a traffic signal here

6/4/18 7:03 pm \ anonymous

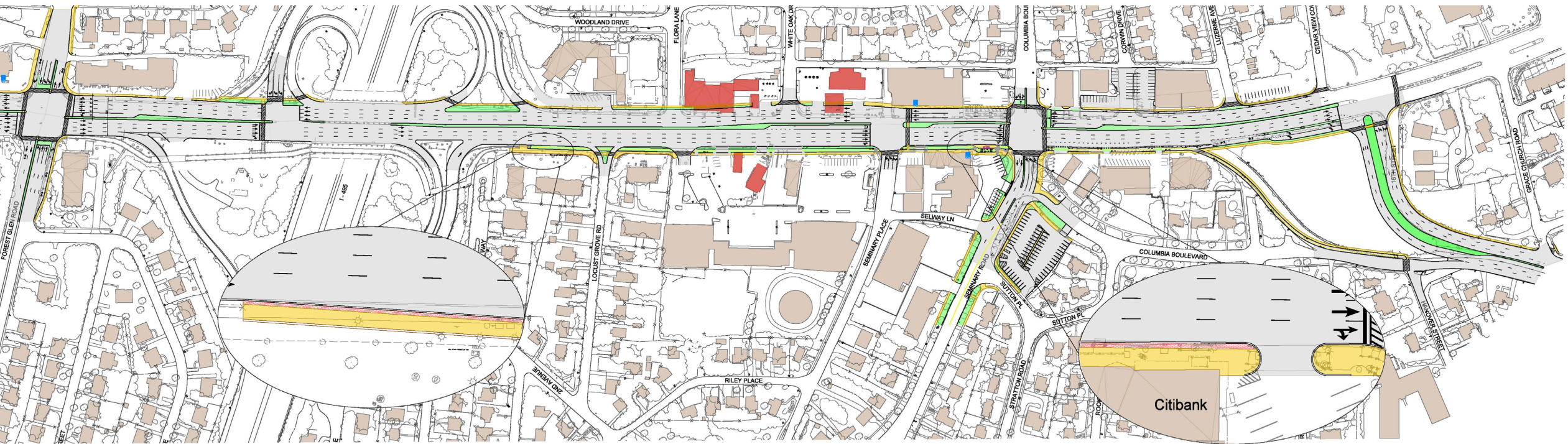
"The chicken must go"

- Huge Chicken

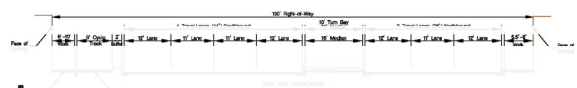
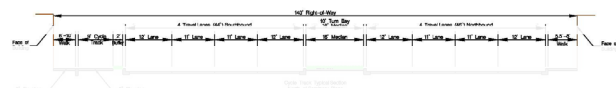
6/5/18 11:05 pm \ anonymous

"Add a time restriction to the "No Right Turn on Red" signs at the intersection of Spring Street and 2nd Ave. In off peak hours, it should

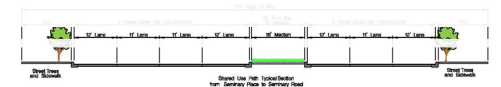
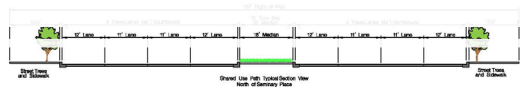
Preferred Alignment - Cycle Track/Shared Use Path - DRAFT



CYCLE TRACK
TYPICAL SECTIONS



SHARED USE PATH
TYPICAL SECTIONS



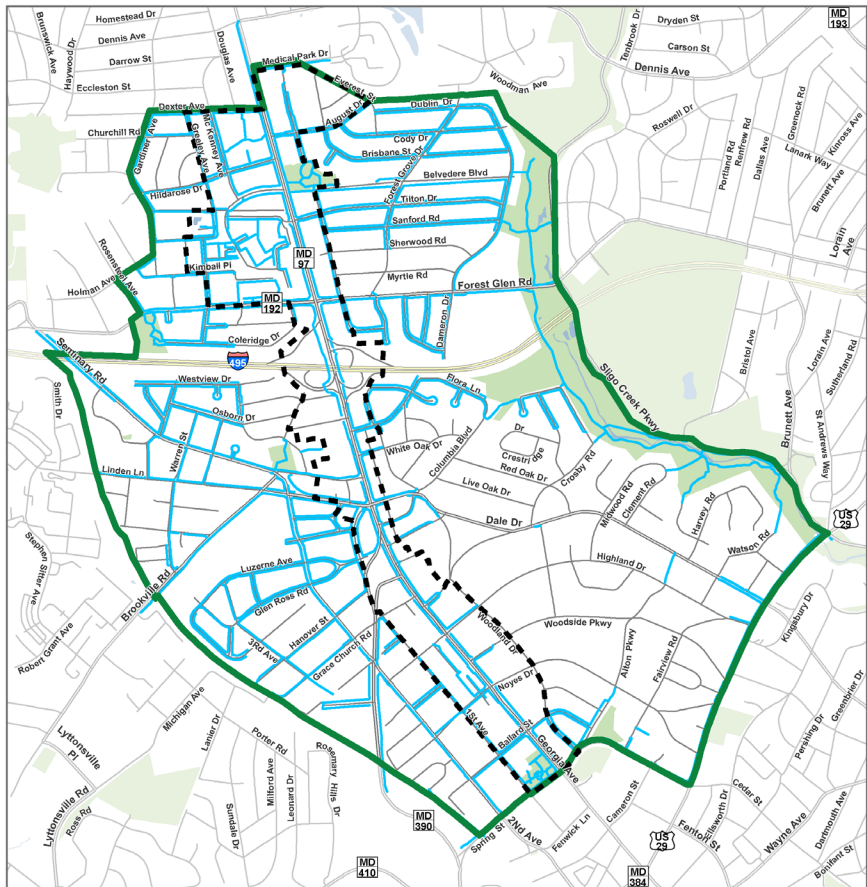
MD SHA Alternative 5B

Key Elements of MDSHA Alt 5B

- **Remove Reversible Lane**
- Install **landscaped median** between Beltway and 16th Street
- Cross section: 4 lanes southbound, 3 lanes northbound on Georgia Avenue
- Install a **two-way bikeway on the west side** of Georgia Avenue
- Upgrade **sidewalks** with buffers and a **consistent walkway of 5 feet wide on both sides** of Georgia Avenue
- Install a **traffic signal** at **Flora Lane**
- **Restore left turns at Seminary Road** during peak travel hours
- **Remove 16th Street southbound slip lane**
- Re-route 16th S to 16th Street N (add two lanes)



Walking Along Georgia Ave

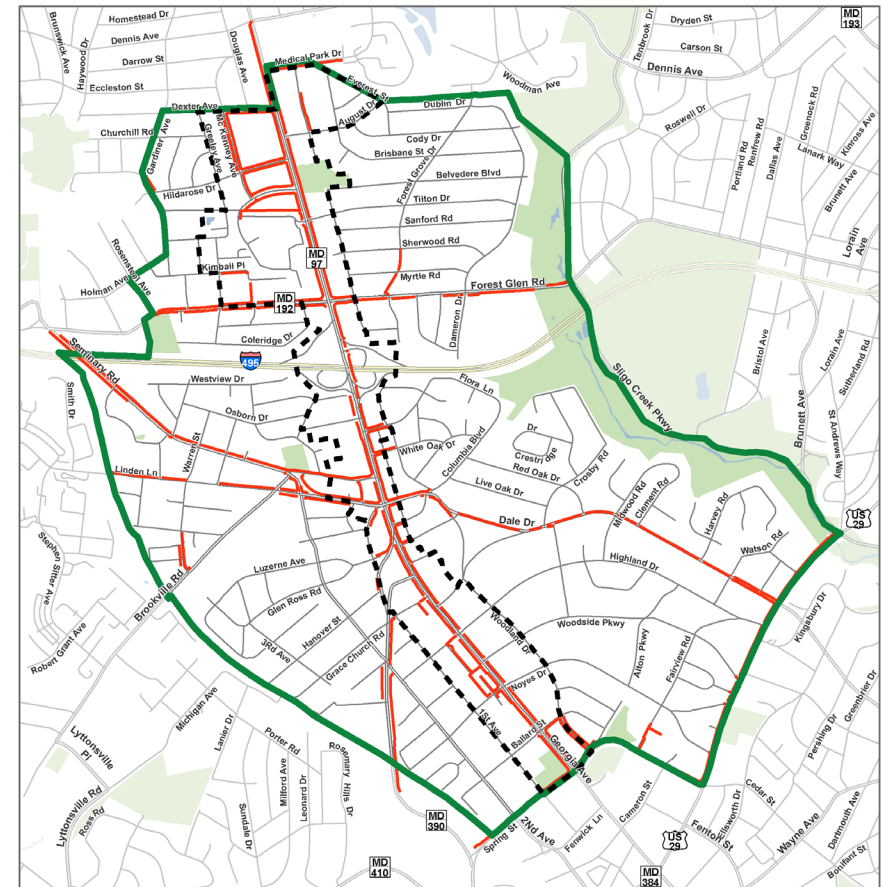


Existing Sidewalks

#GeorgiaAveConnects
**FOREST GLEN/
MONTGOMERY HILLS
SECTOR PLAN**

Sidewalks
 Master Plan Boundary
 Study Area Boundary

0 0.7
Miles



Unacceptable Pedestrian Links

#GeorgiaAveConnects
**FOREST GLEN/
MONTGOMERY HILLS
SECTOR PLAN**

Unacceptable Pedestrian Link
 Master Plan Boundary
 Study Area Boundary

0 0.7
Miles





Old Georgetown

TOYS

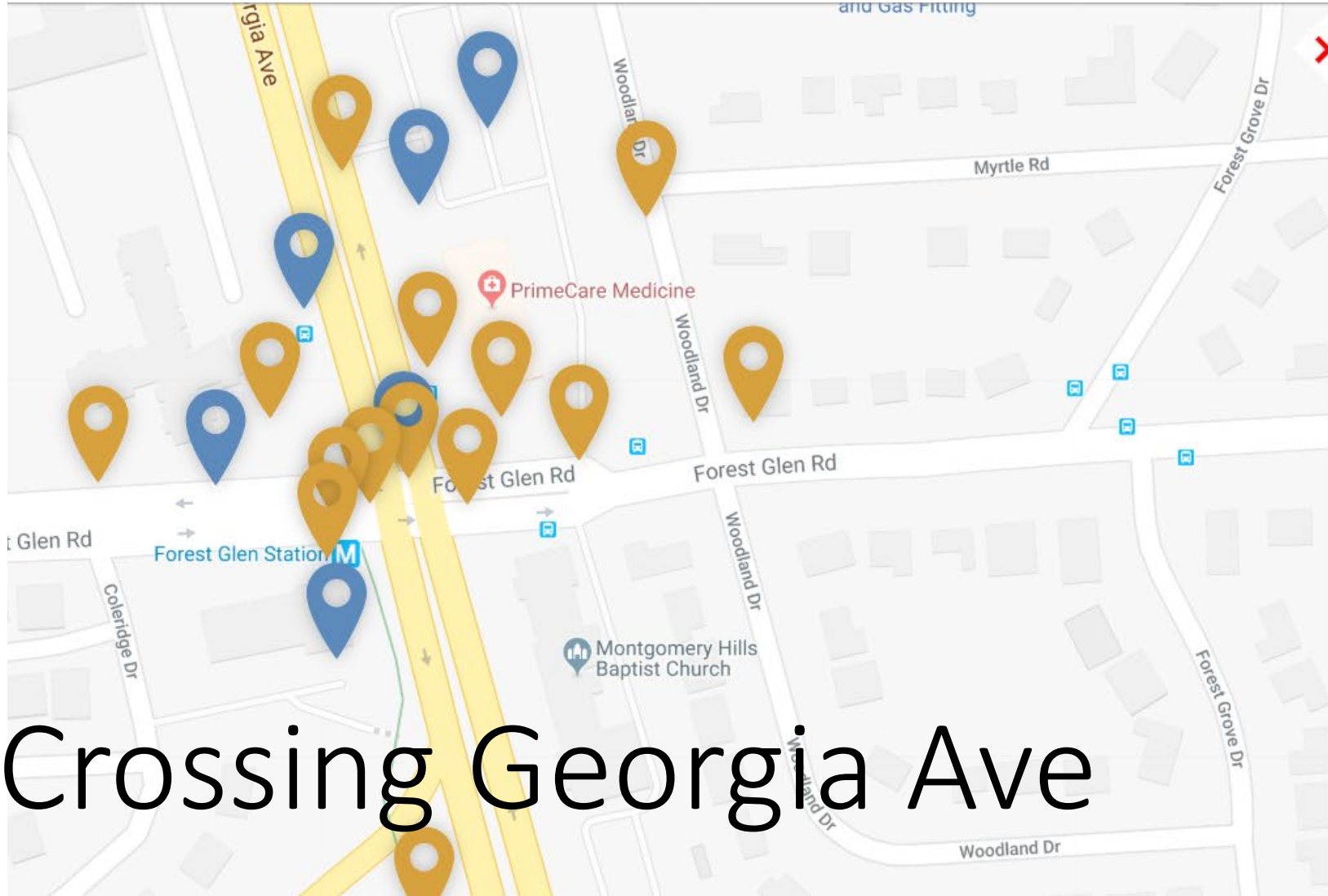


NORTH
MARYLAND
97









✖ Safe crossing for pedestrians

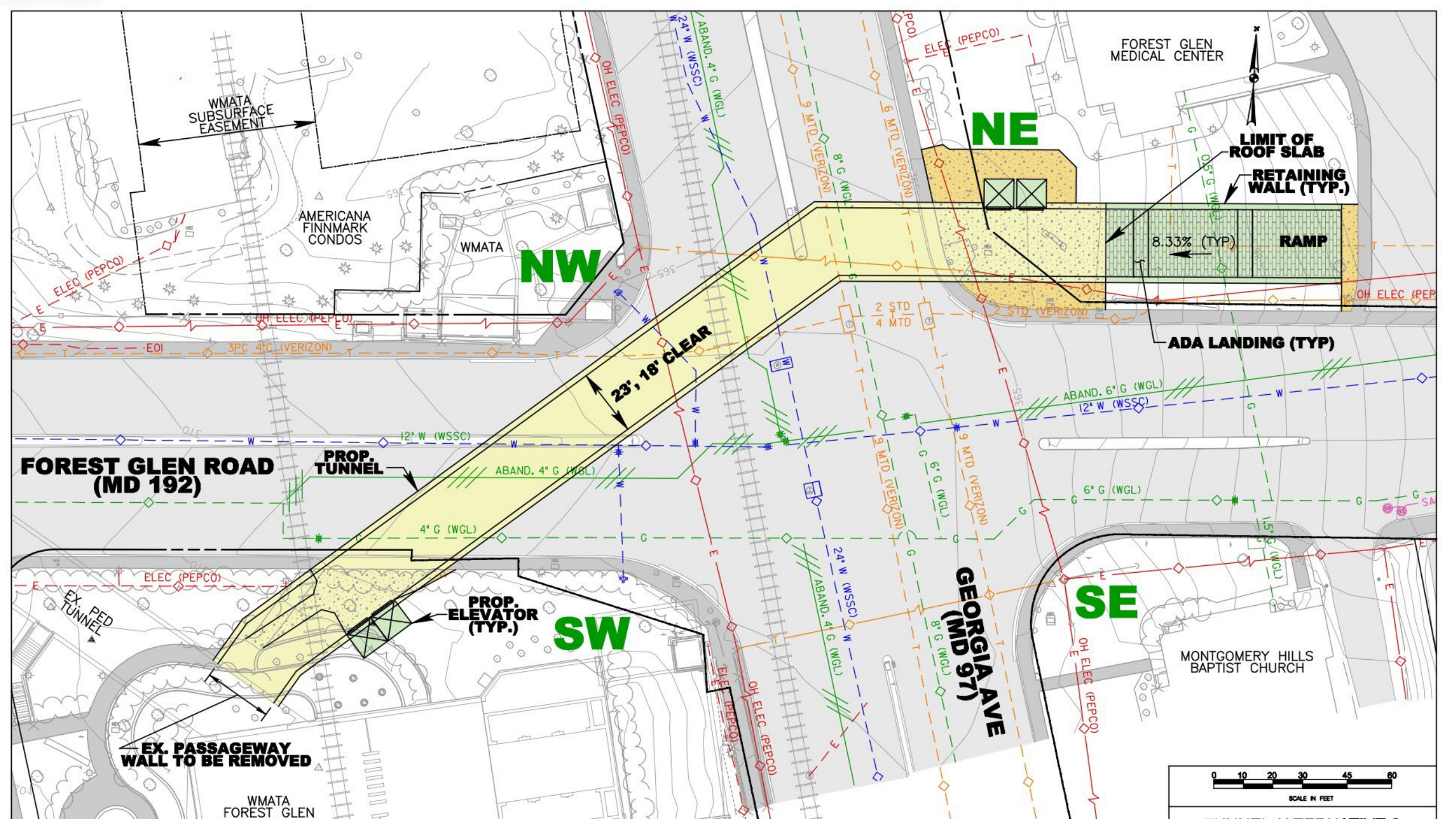
6/6/18 8:54 am \ anonymous
"With the metro entrance only on the west side of Georgia Ave, this makes for a very unsafe pedestrian crossing for residents, hospital workers and patients crossing to/from the east side"

👍 (9) 🗨 (0) 🔄

6/6/18 11:59 am \ james owens
"When turning right from Forest Glen Road pedestrians who want to cross Georgia Ave are hard to see because the crosswalk is displaced from the corner."

Your message

🟡 #FixIt 🟢 #Lovelt 🔵 #NeedIt



WMATA
SUBSURFACE
EASEMENT

AMERICANA
FINNMARK
CONDOS

WMATA

FOREST GLEN
MEDICAL CENTER

LIMIT OF
ROOF SLAB

RETAINING
WALL (TYP.)

8.33% (TYP)

RAMP

ADA LANDING (TYP)

FOREST GLEN ROAD
(MD 192)

PROP.
TUNNEL

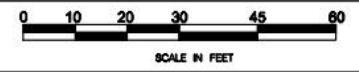
PROP.
ELEVATOR
(TYP.)

GEORGIA AVE
(MD 97)

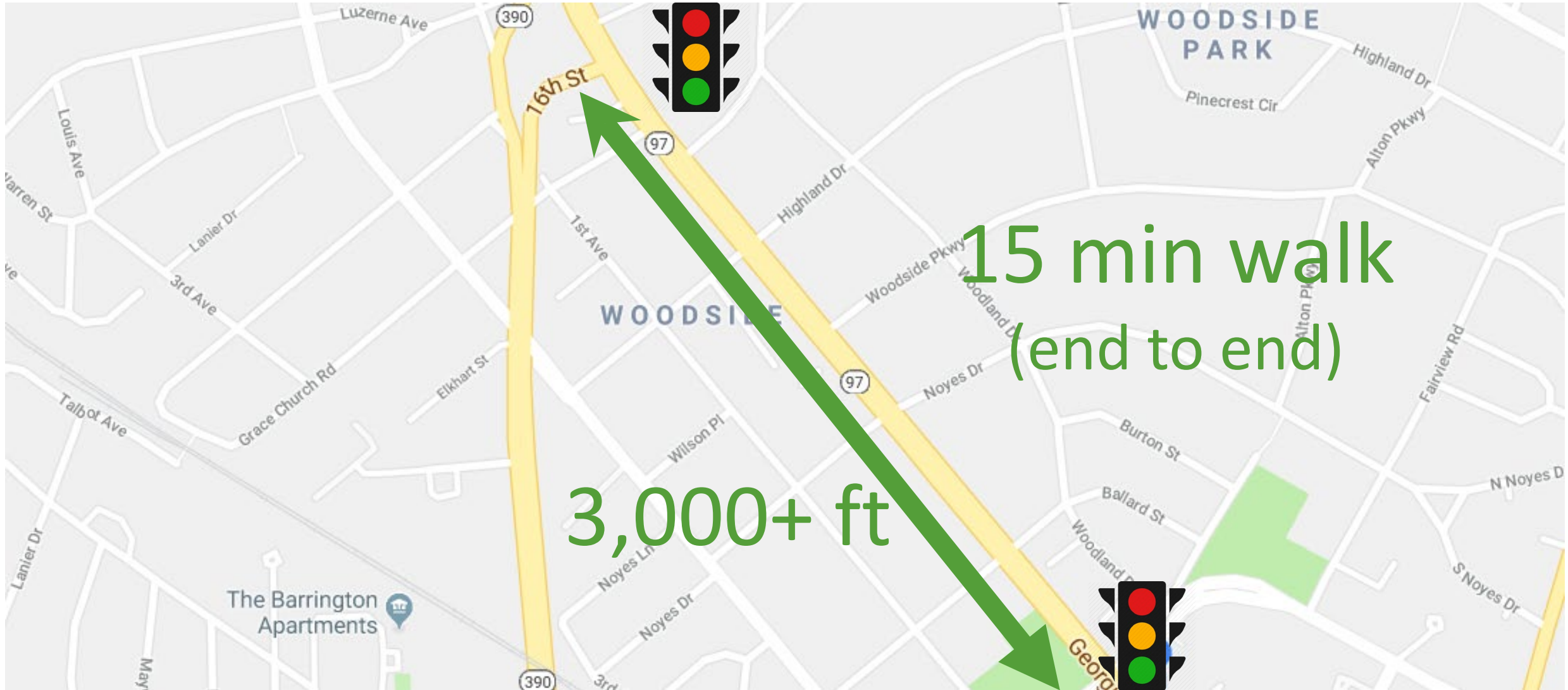
MONTGOMERY HILLS
BAPTIST CHURCH

EX. PASSAGEWAY
WALL TO BE REMOVED

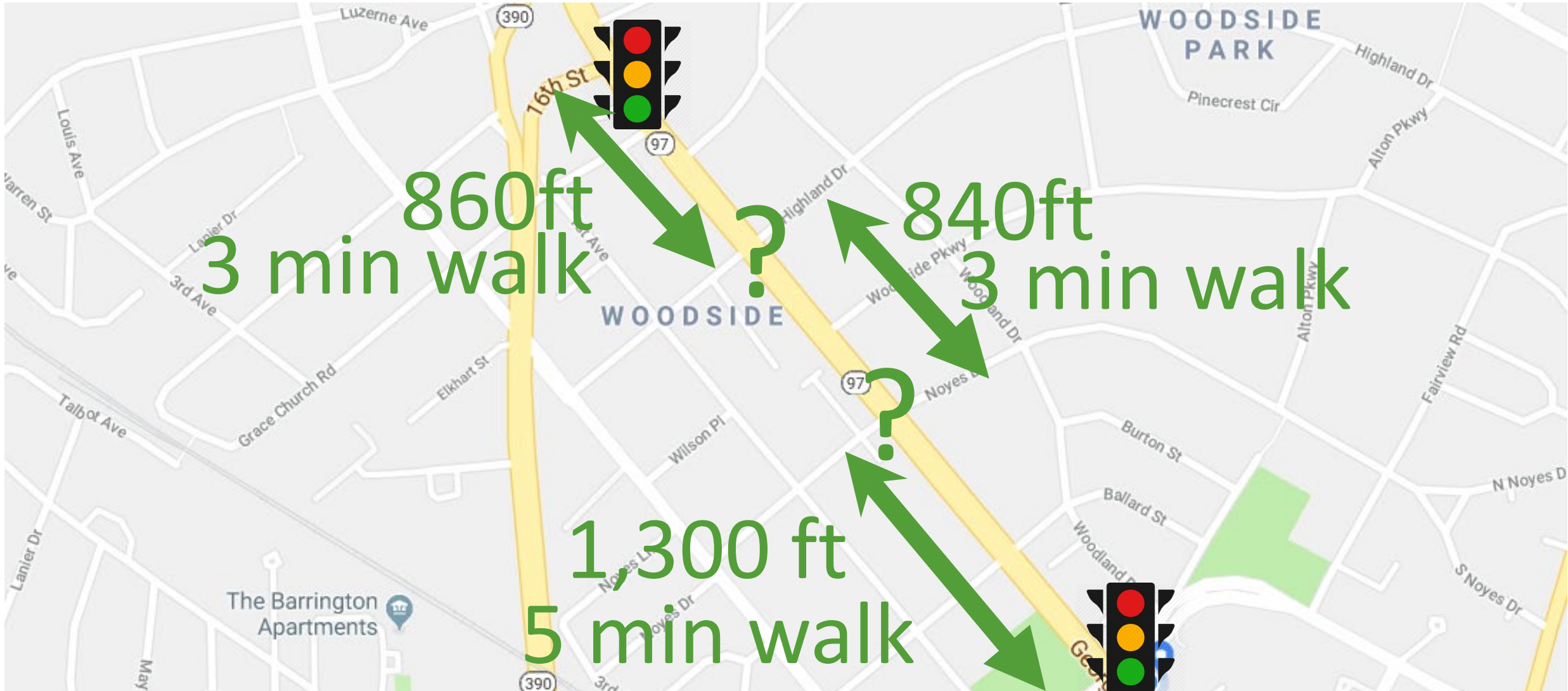
WMATA
FOREST GLEN



Pedestrian Crossing Experience Today



Potential Crossing Improvements





1,4000 ft

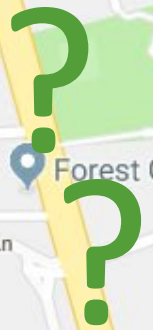
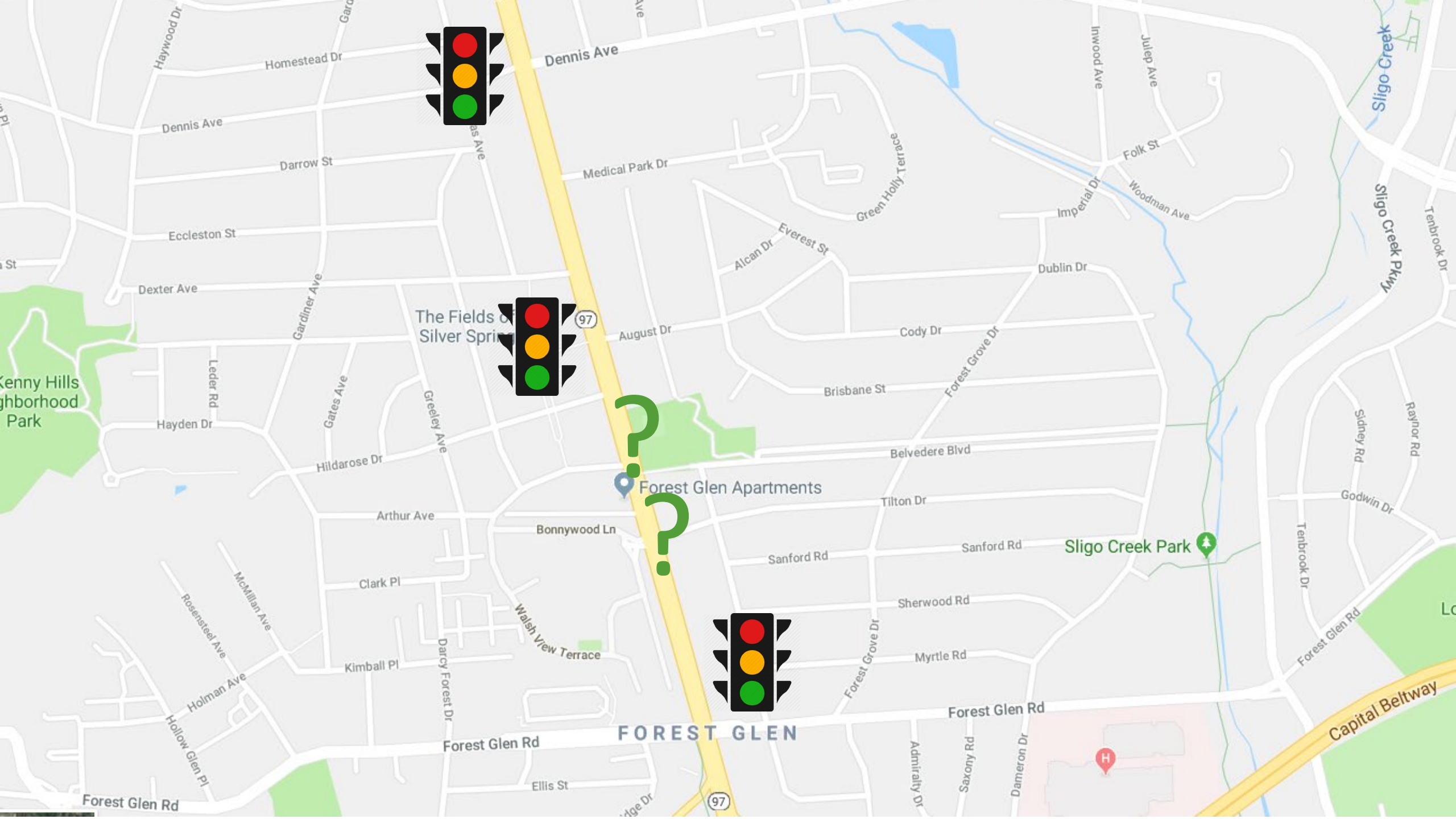
6 min walk



2,000 ft

8 min walk





The Fields of Silver Spring

Forest Glen Apartments

Sligo Creek Park

FOREST GLEN

Capital Beltway



1,100 ft

4 min walk

?

900 ft

4 min walk



700ft
3 min walk

1,300 ft
5 min walk



FOREST GLEN

97

97



Forest Glen Apartments

The Fields of Silver Spring

Sligo Creek Park

Kenny Hills Neighborhood Park

Capital Beltway

Sligo Creek

Sligo Creek Pkwy

Sidney Rd

Raynor Rd

Godwin Dr

Tenbrook Dr

Forest Glen Rd

Forest Glen Rd

Forest Glen Rd

Forest Glen Rd

Ellis St

Bridge Dr

Admiralty Dr

Saxony Rd

Dameron Dr

Sherwood Rd

Sanford Rd

Sanford Rd

Tilton Dr

Bowleder Blvd

East Lane St

Forest Grove Dr

Dublin Dr

Woodman Ave

Imperial Dr

Inwood Ave

Julie Ave

Green Holly Terrace

Alcan Dr Everest St

Medical Park Dr

Dennis Ave

Homestead Dr

Dennis Ave

Darrow St

Eccleston St

Dexter Ave

Gardiner Ave

Leder Rd

Hayden Dr

Gates Ave

Greely Ave

Hildarose Dr

Arthur Ave

Bonnywood

Clark Pl

McMillan Ave

Holman Ave

Hollow Glen Pl

Walsh View Terrace

Kirball Pl

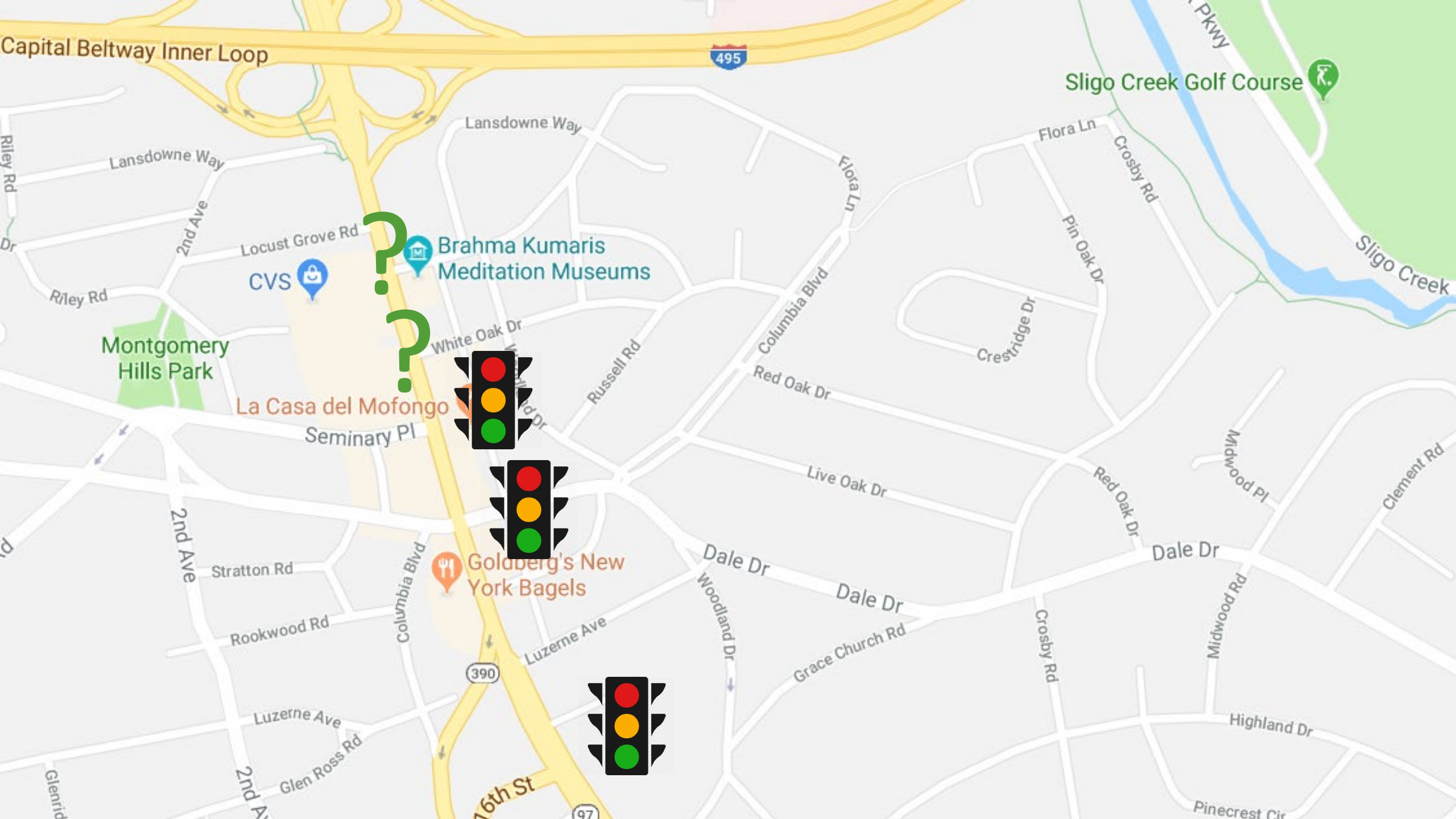
Darcy Forest Dr

Forest Grove Dr

Myrtle Rd



H



Capital Beltway Inner Loop

495

Sligo Creek Golf Course

Lansdowne Way

Lansdowne Way

CVS

Brahma Kumaris
Meditation Museums

Montgomery
Hills Park

La Casa del Mofongo



Goldberg's New
York Bagels



Luzerne Ave

16th St

97

Sligo Creek

Glenridge Dr

2nd Ave

Glen Ross Rd

Stratton Rd

Rookwood Rd

Columbia Blvd

Luzerne Ave

Woodland Dr

Grace Church Rd

Dale Dr

Dale Dr

Crosby Rd

Midwood Rd

Highland Dr

Pinecrest Cir

Clement Rd

Midwood Pl

Dale Dr

Red Oak Dr

Live Oak Dr

Red Oak Dr

Russell Rd

White Oak Dr

Locust Grove Rd

Riley Rd

2nd Ave

2nd Ave

Flora Ln

Flora Ln

Pin Oak Dr

Crosby Rd

PKwy

Sligo Creek

MEDIAN CROSSING ISLAND

HIGH VISIBILITY CROSSWALKS



Side Street

Major Highway

ADA CURB RAMPS

TRAFFIC CONTROL



 Beltway
Baltimore
Northern Virginia
JCT 1/4 MILE

SCHOOL BUS
18419

ALDI
CYS Pharmacy
BEER WINE ONLY

Shell

Linton Shafer &
CERTIFIED PUBLIC ACCOUNTANT

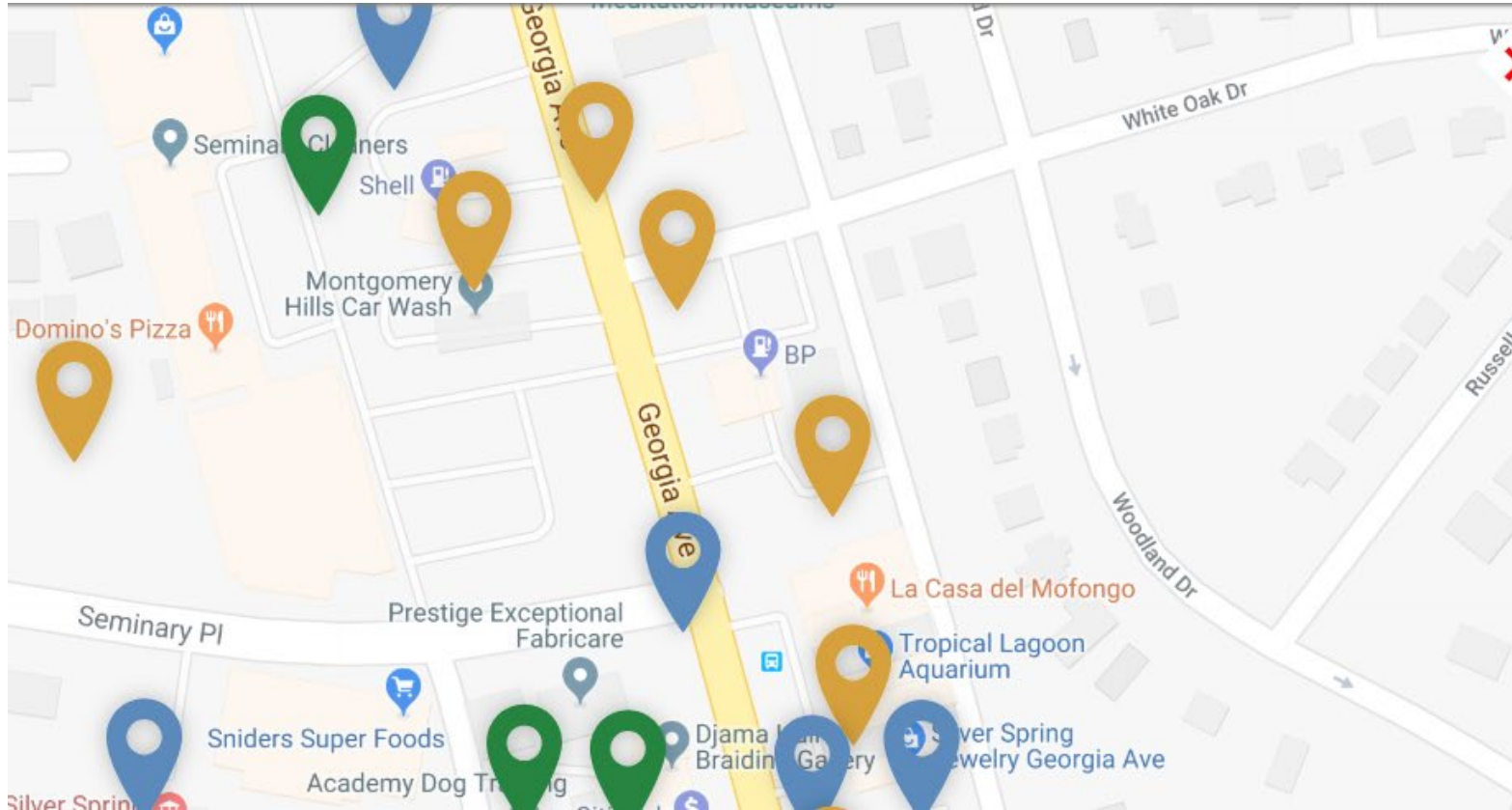
IRRA
NEW JAR
LIMITED TIME
OFFER

ONE LANE
CONTROL
SIGNALS



Bicycling Along Georgia Ave





Mongtomery Hills? #Lovelt, #Fixlt, #Needlt Tell Us More!

6/4/18 7:04 pm \ peter gray

"Protected bike lanes on Georgia Avenue"

👍 (15) 💬 (27) ↻

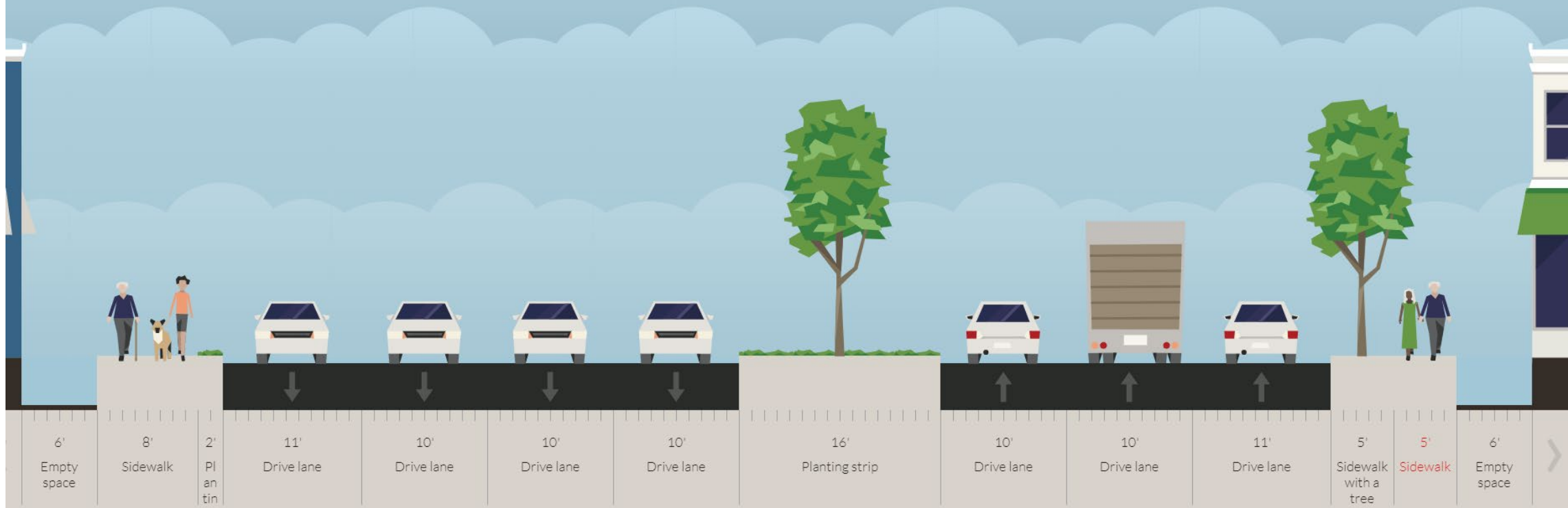






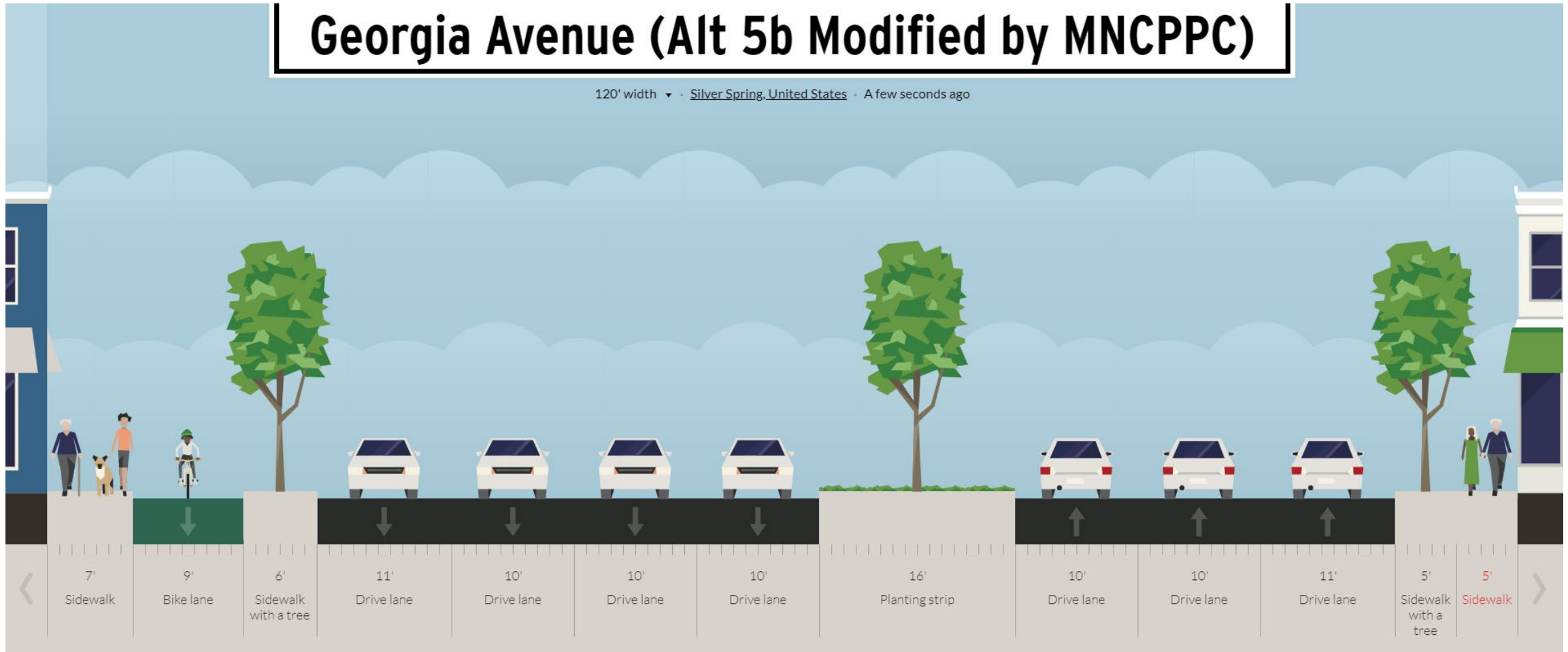
Georgia Avenue Short Term

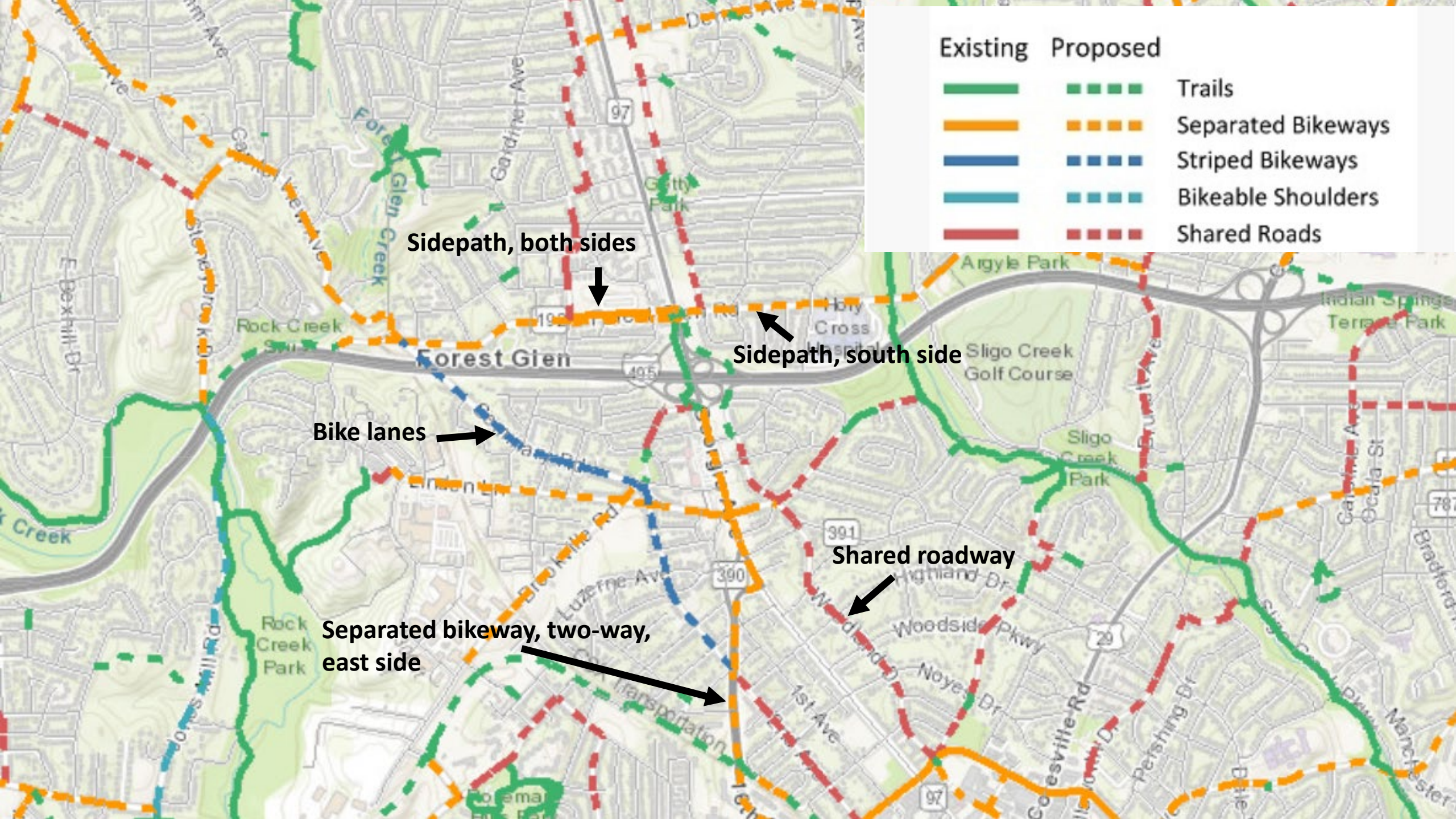
120' width (12' room) · Silver Spring, United States · A few seconds ago



Georgia Avenue (Alt 5b Modified by MNCPPC)

120' width ▾ · [Silver Spring, United States](#) · A few seconds ago





Existing

Proposed



Trails



Separated Bikeways



Striped Bikeways



Bikeable Shoulders



Shared Roads

Sidepath, both sides



Sidepath, south side



Bike lanes



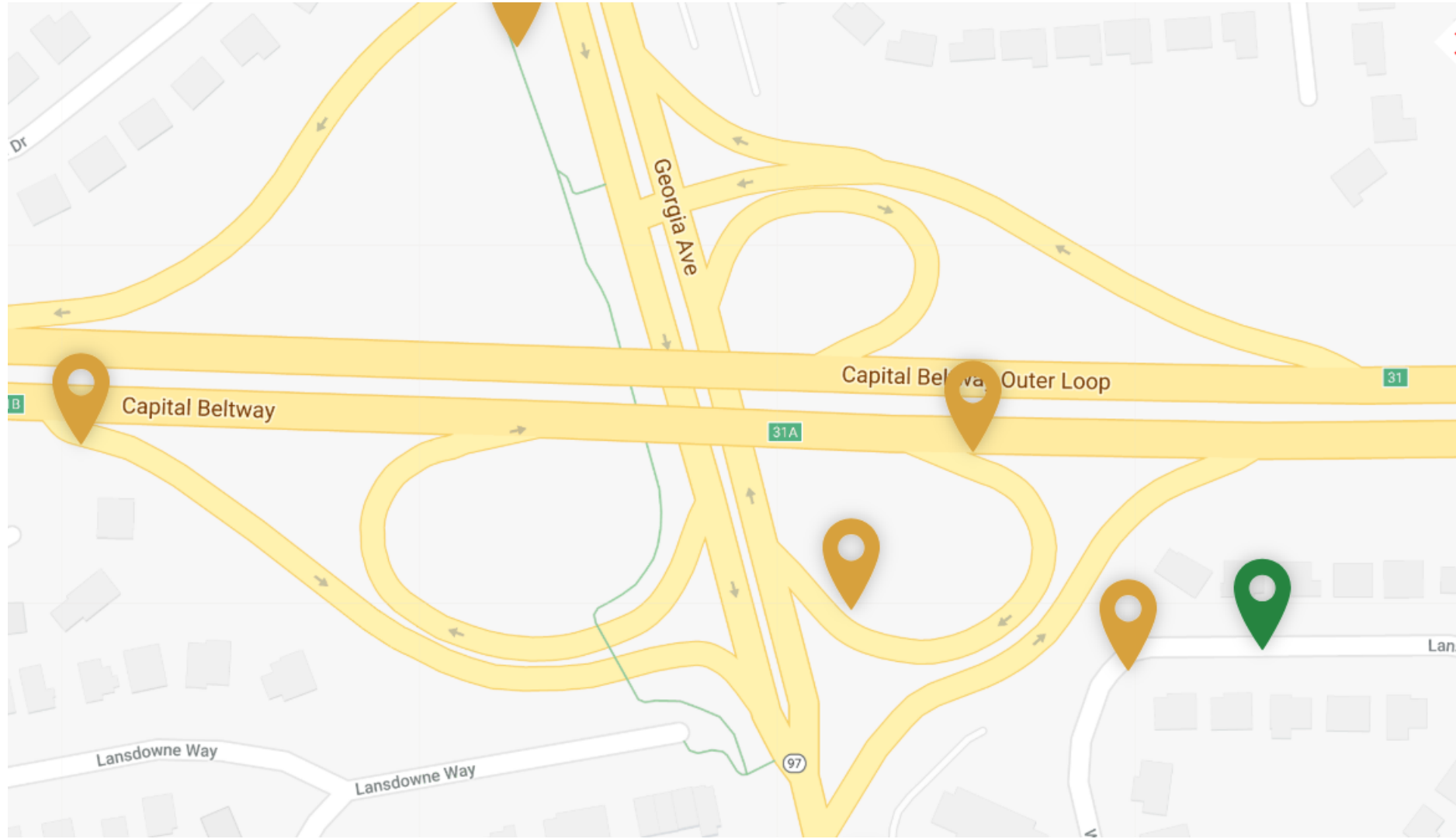
Shared roadway



Separated bikeway, two-way, east side



Unsafe Beltway Interchange



Get rid of this ramp

6/12/18 10:48 am \ gary h.

"This ramp is the generator of traffic jams for as long as I have lived here. The crossing/merging traffic between NB Georgia Ave. to WB beltway and EB Beltway to NB Georgia IS A HORRIBLE MESS and I think is the primary cause of backups on NB Georgia. I think it would be better to get rid of the ramp, and send all WB traffic off the beltway at exit 31B and let the NB traffic turn left at the bottom of the ramp. Sync the left turners from beltway to Georgia. Maybe the 31B

Your message

 #FixIt  #Lovelt  #NeedIt

Potential Interchange Improvements

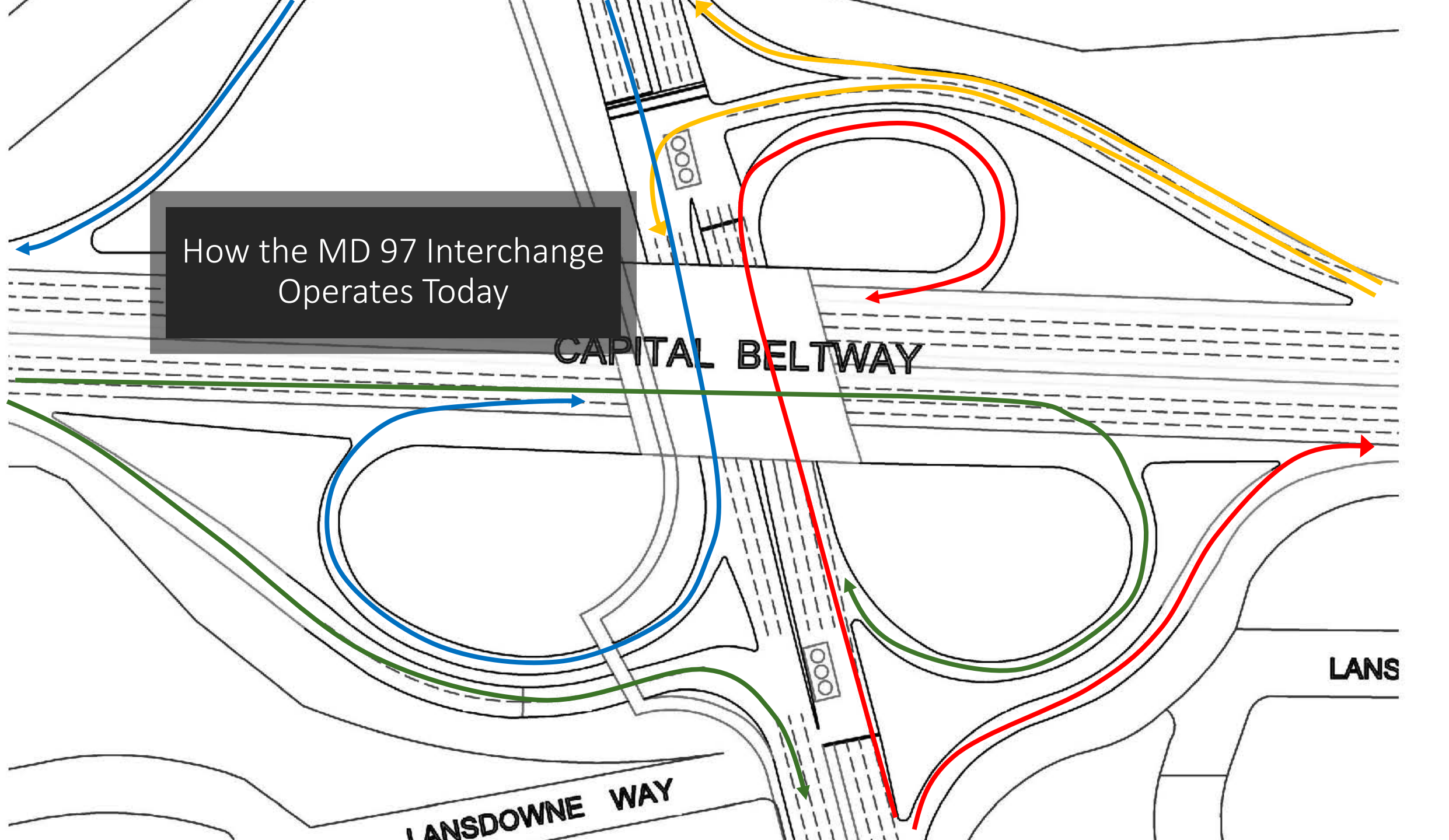
Option 1: Beltway Ramp Reconfiguration | Option 2: Diverging Diamond Interchange

How the MD 97 Interchange Operates Today

CAPITAL BELTWAY

LANSLOWNE WAY

LANS



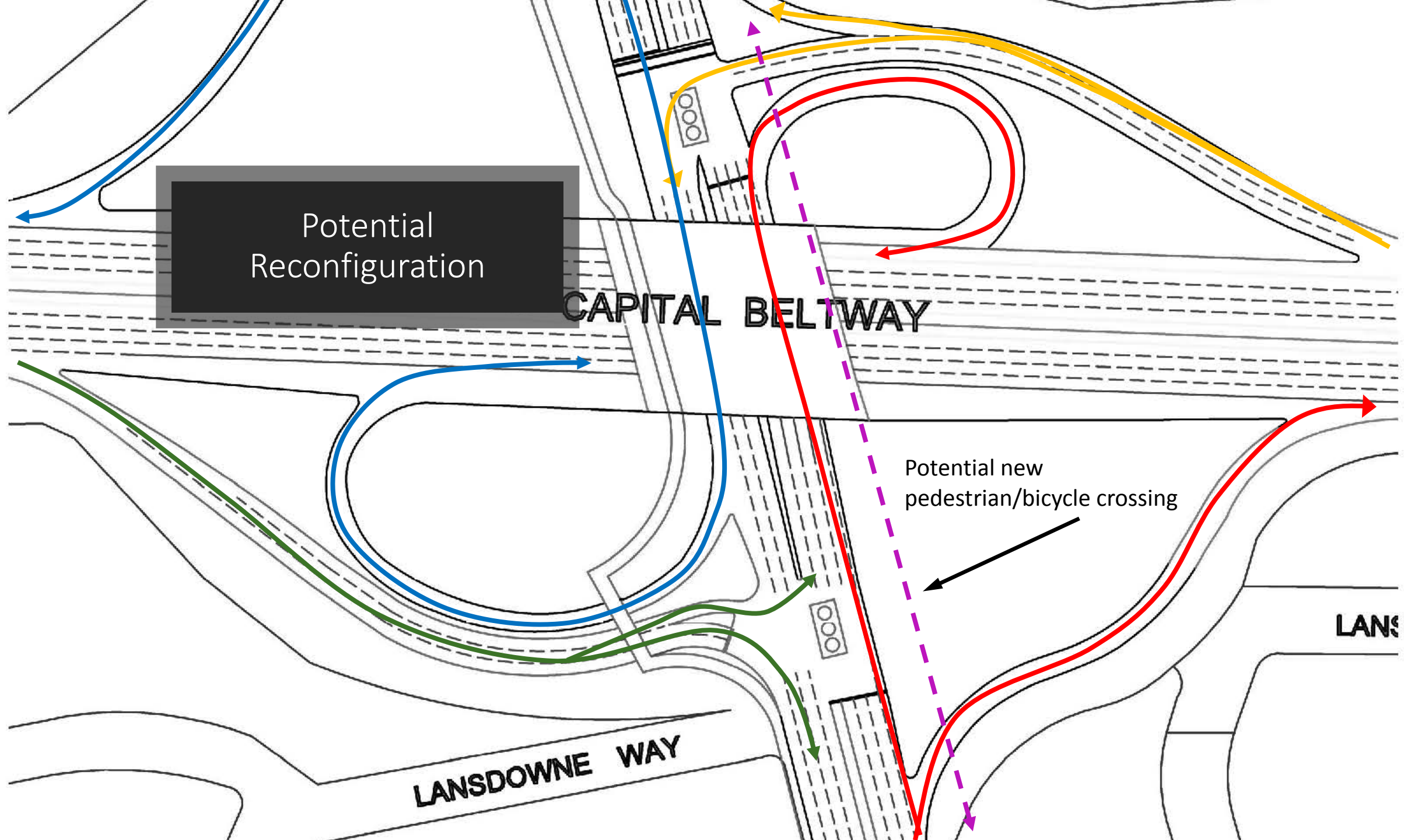
Potential
Reconfiguration

CAPITAL BELTWAY

Potential new
pedestrian/bicycle crossing

LANSLOWNE WAY

LANS



Beltway Ramp Reconfiguration

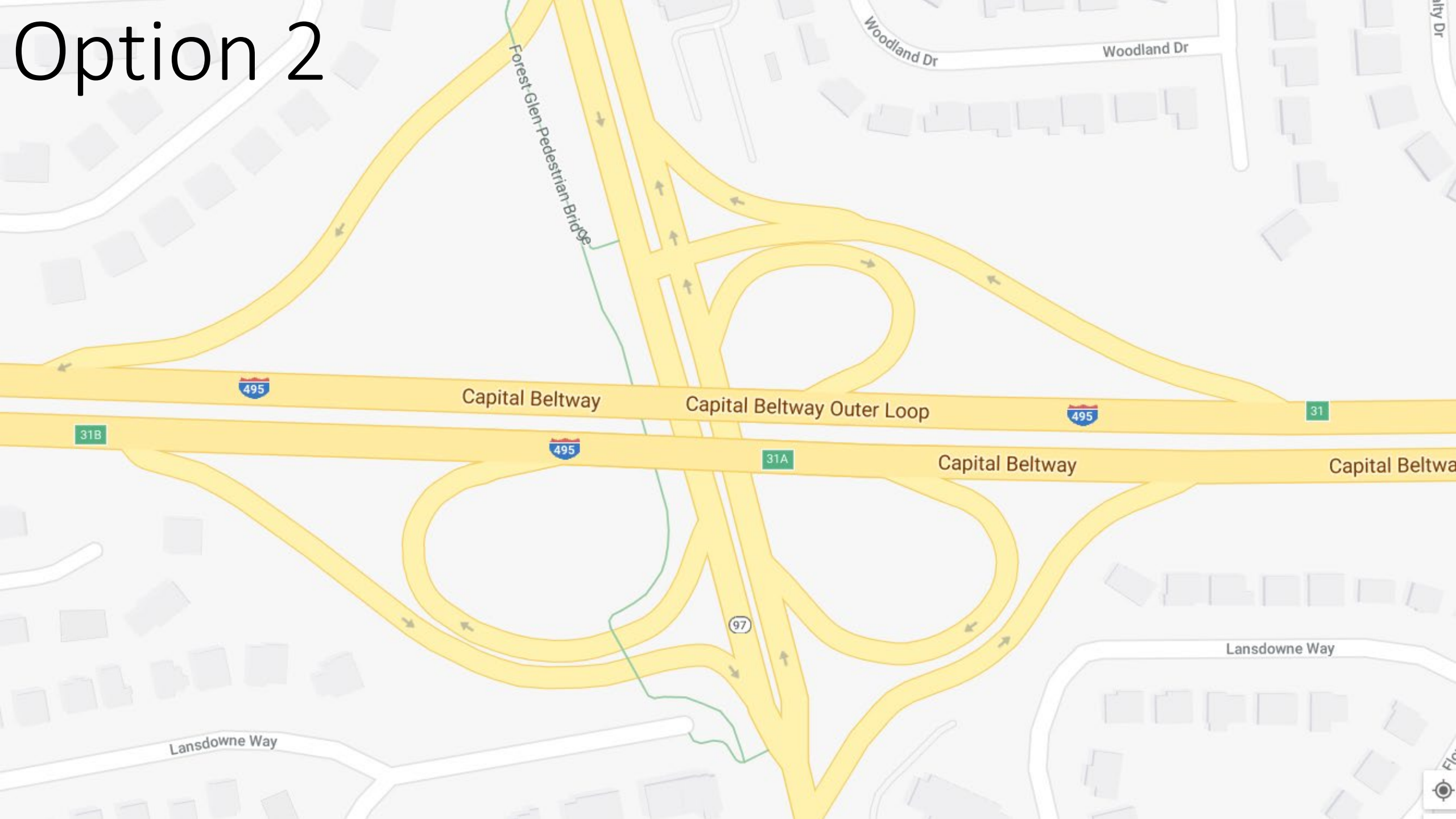
Benefits

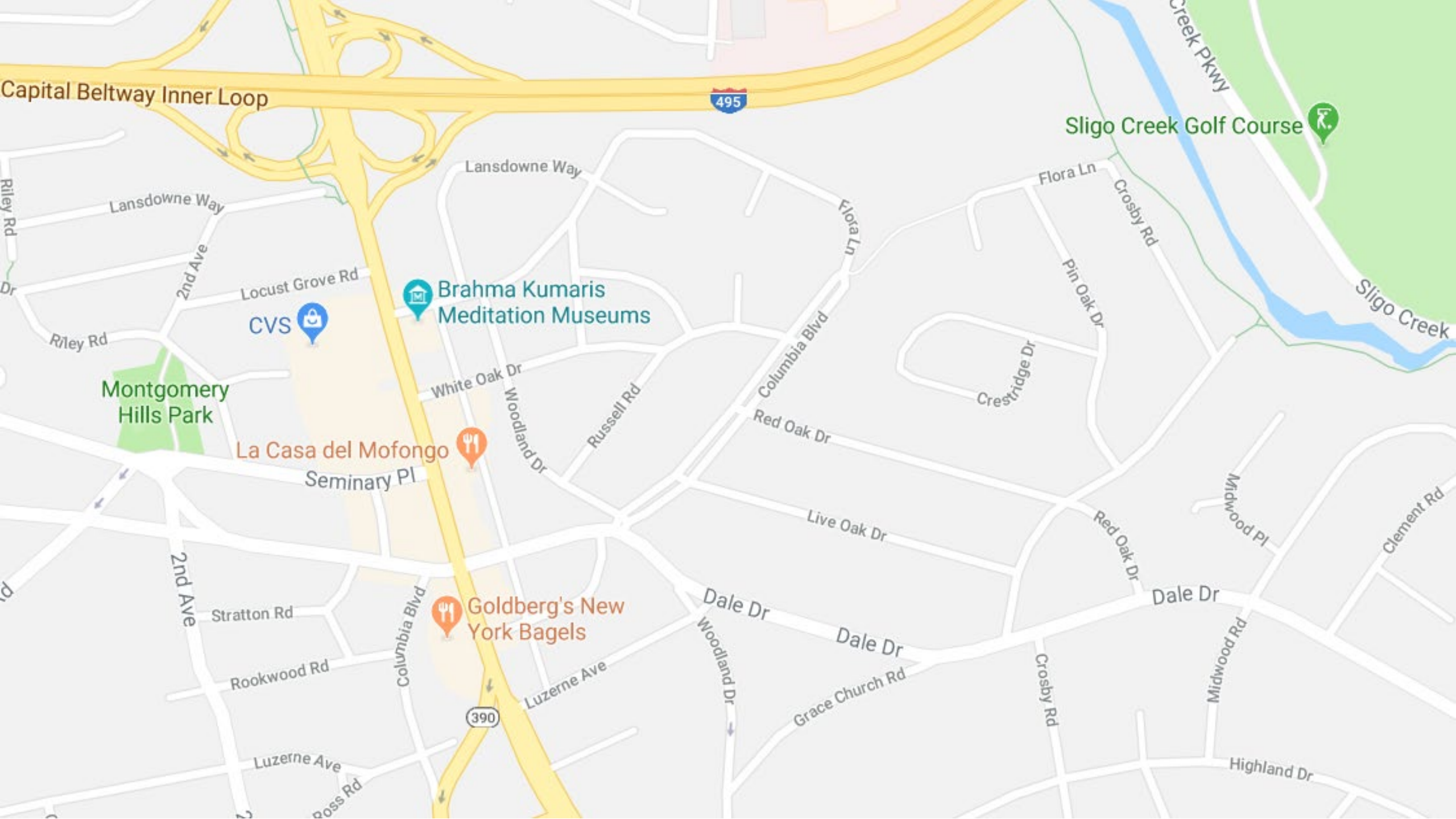
- Improves Safety
- Eliminates weaving
- May reduce northbound backups
- Relatively inexpensive
- Comparatively easier to implement
- Could fit within existing MDSA ROW
- Right turn on Inner Loop Off Ramp will be free flow
- Pedestrian Bridge unaffected

Considerations

- Will likely reduce congestion northbound on Georgia Ave
- Induced travel demand may undermine potential congestion reduction
- Pedestrian signals will be needed on the east side to cross ramps, or a new bridge should be considered

Option 2





Capital Beltway Inner Loop

495

Sligo Creek Golf Course

Brahma Kumaris
Meditation Museums

CVS

Montgomery
Hills Park

La Casa del Mofongo

Goldberg's New
York Bagels

390

Sligo Creek

Lansdowne Way

2nd Ave

Locust Grove Rd

Lansdowne Way

Flora Ln

Flora Ln

Crosby Rd

Pin Oak Dr

Riley Rd

White Oak Dr

Woodland Dr

Russell Rd

Columbia Blvd

Crestridge Dr

Red Oak Dr

Seminary Pl

Live Oak Dr

Red Oak Dr

Midwood Pl

Clement Rd

2nd Ave

Stratton Rd

Rookwood Rd

Columbia Blvd

Luzerne Ave

Dale Dr

Woodland Dr

Dale Dr

Grace Church Rd

Dale Dr

Crosby Rd

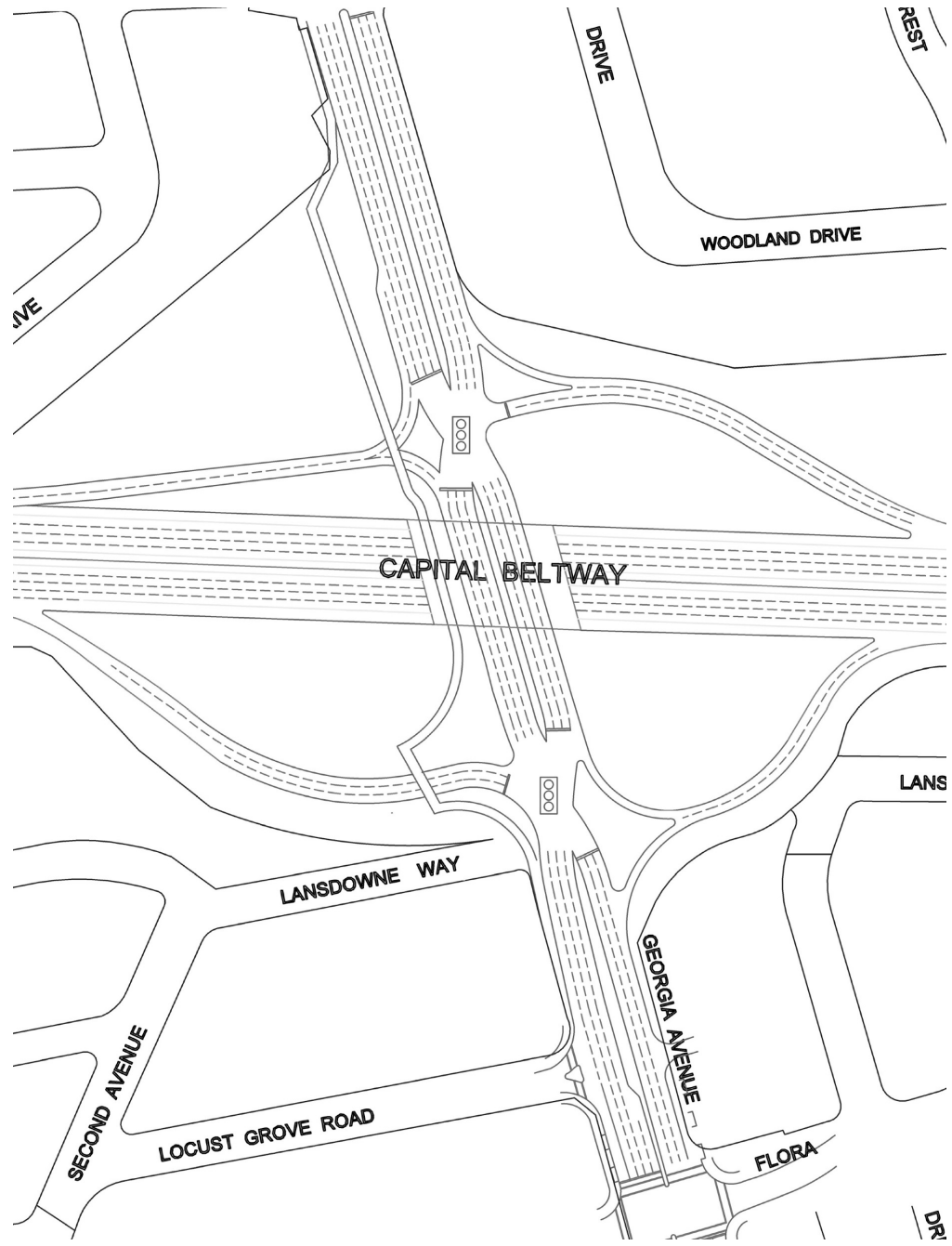
Midwood Rd

Luzerne Ave

Ross Rd

Highland Dr





VE

DRIVE

REST

WOODLAND DRIVE

CAPITAL BELTWAY

LANS

LANSDOWNE WAY

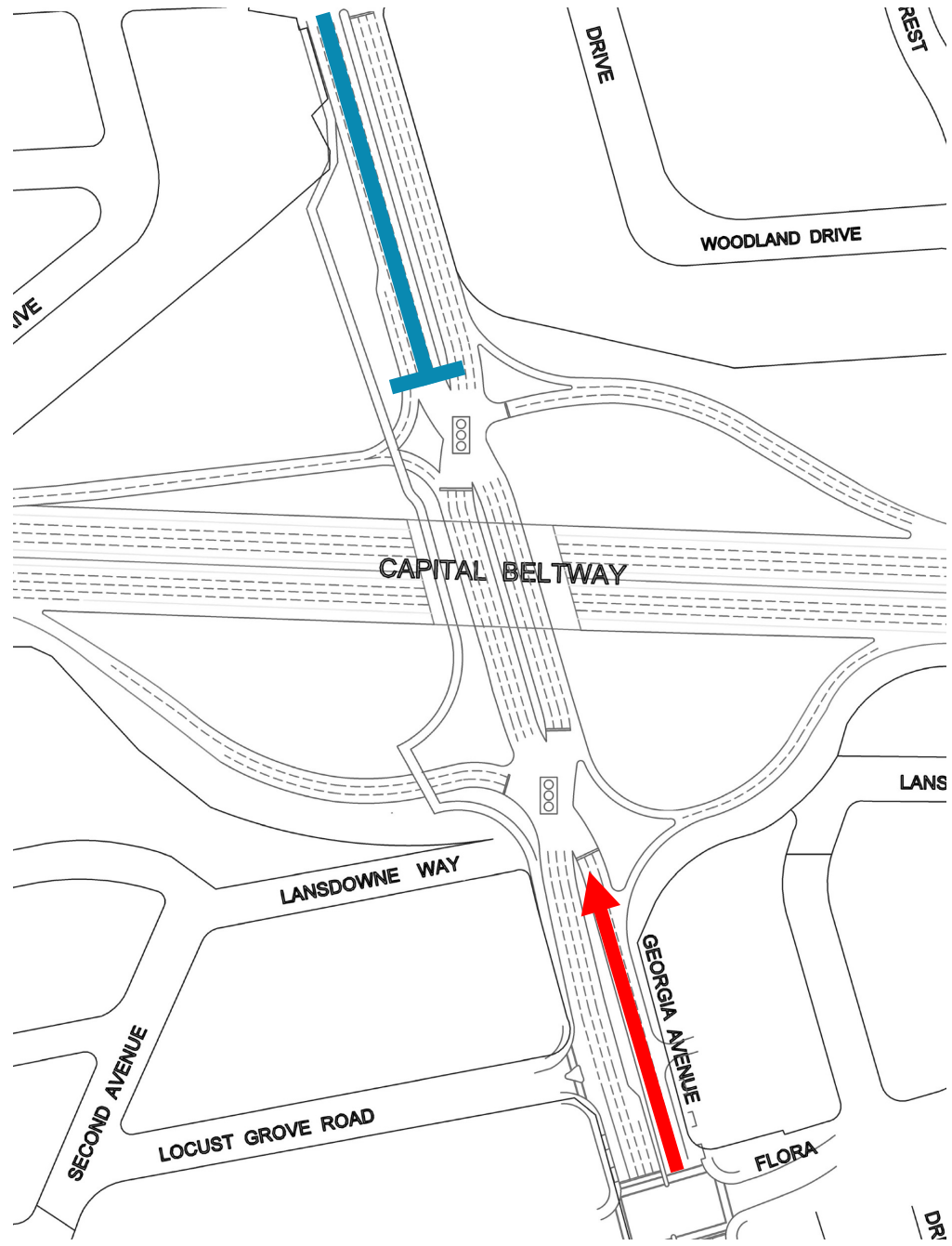
GEORGIA AVENUE

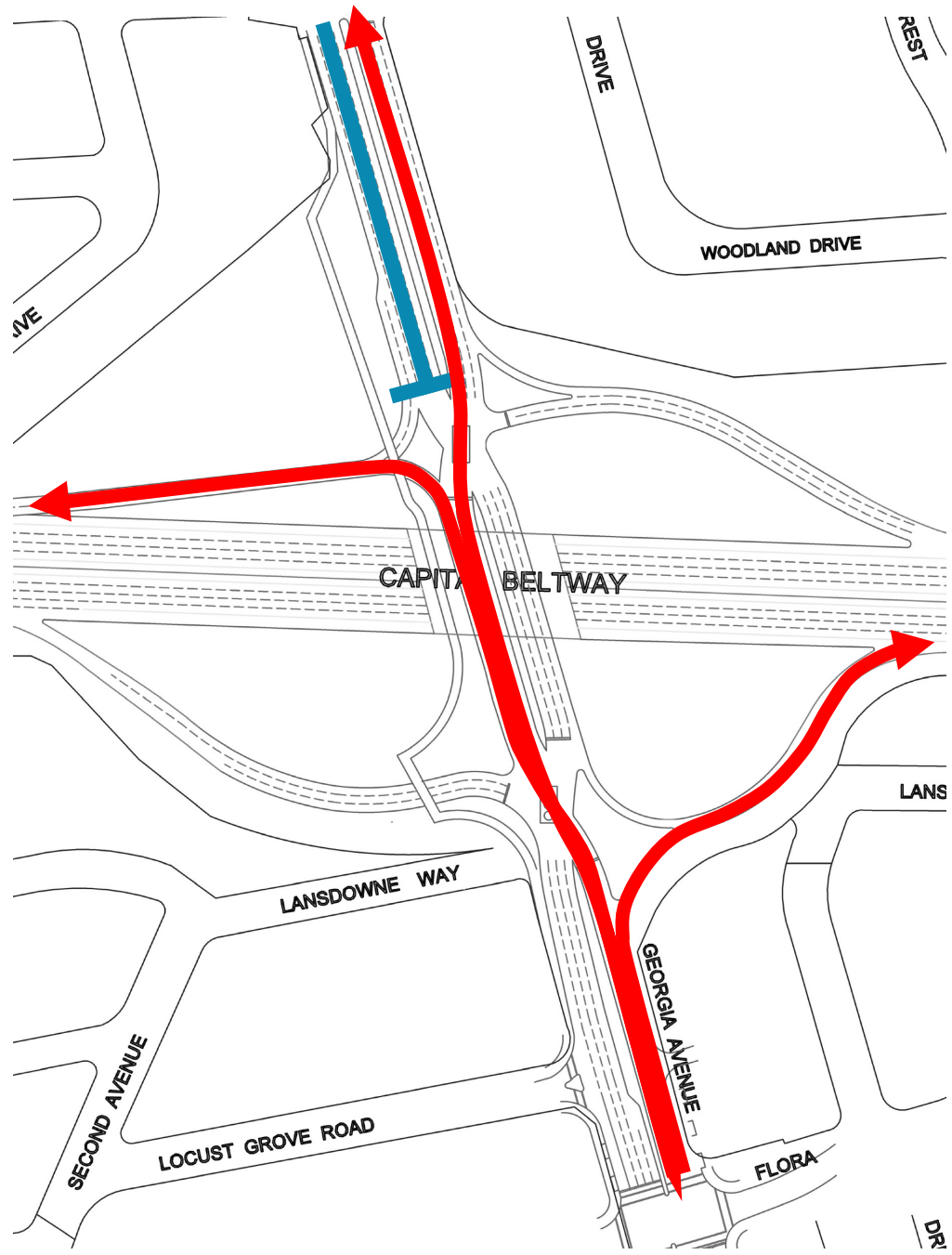
SECOND AVENUE

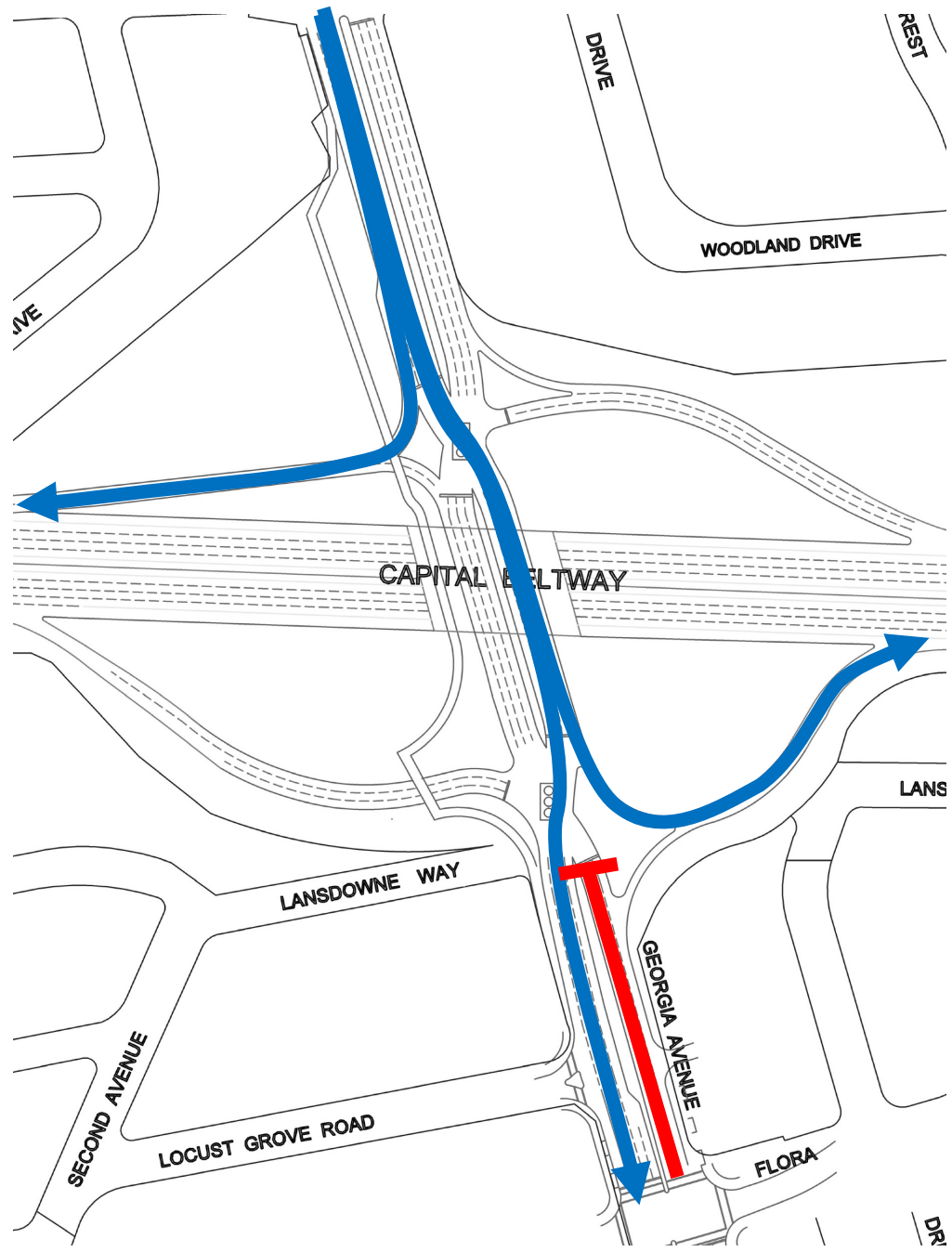
LOCUST GROVE ROAD

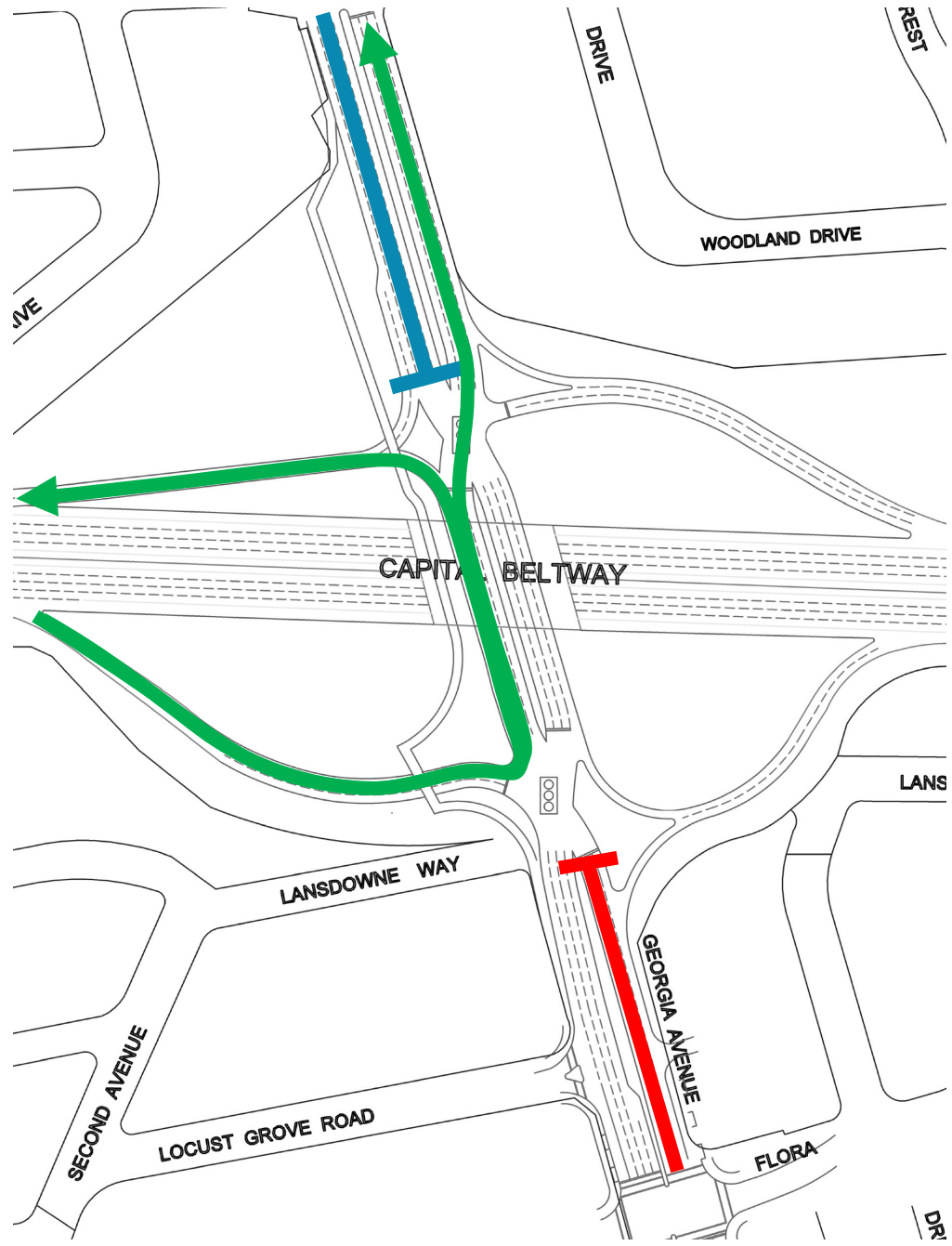
FLORA

DR

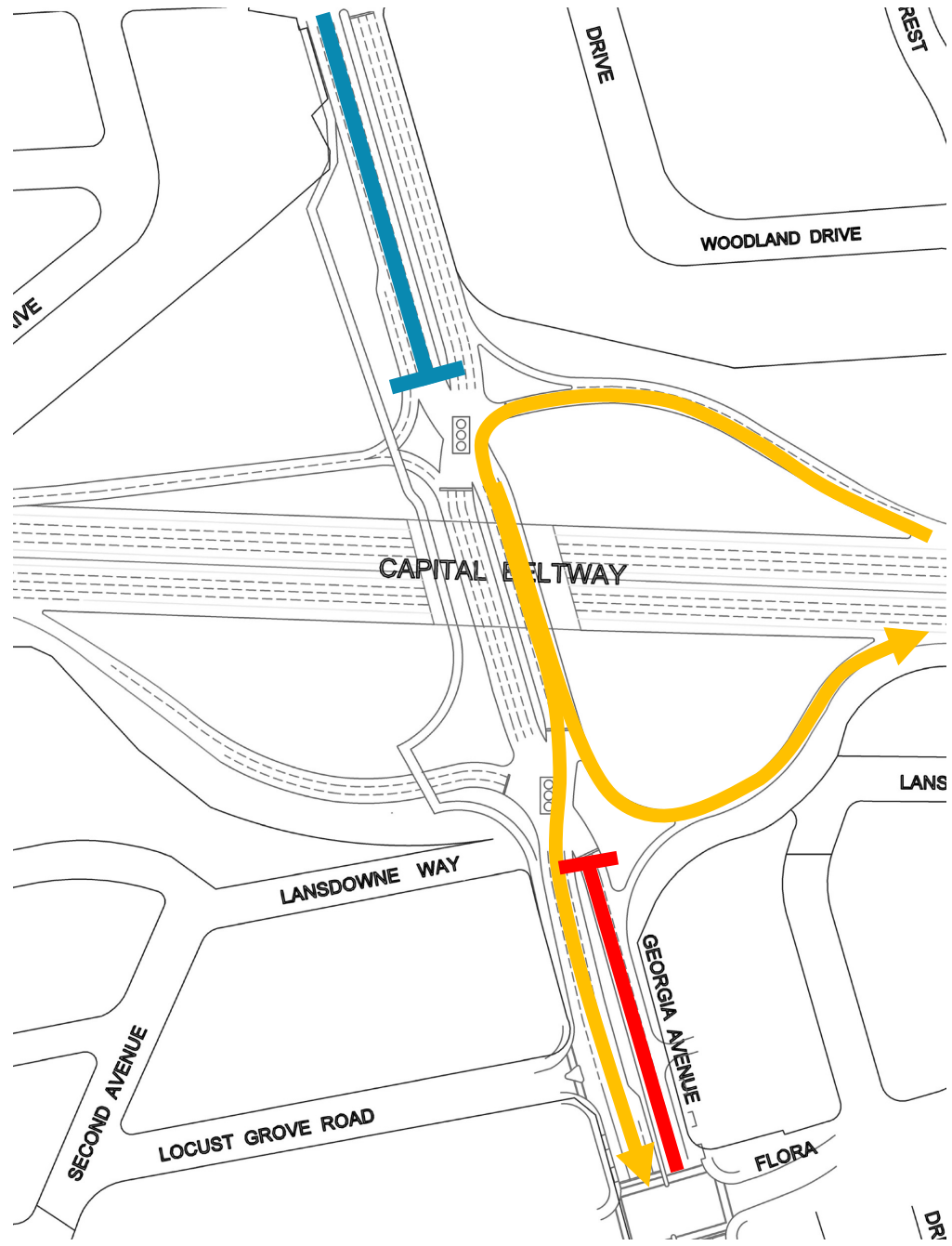








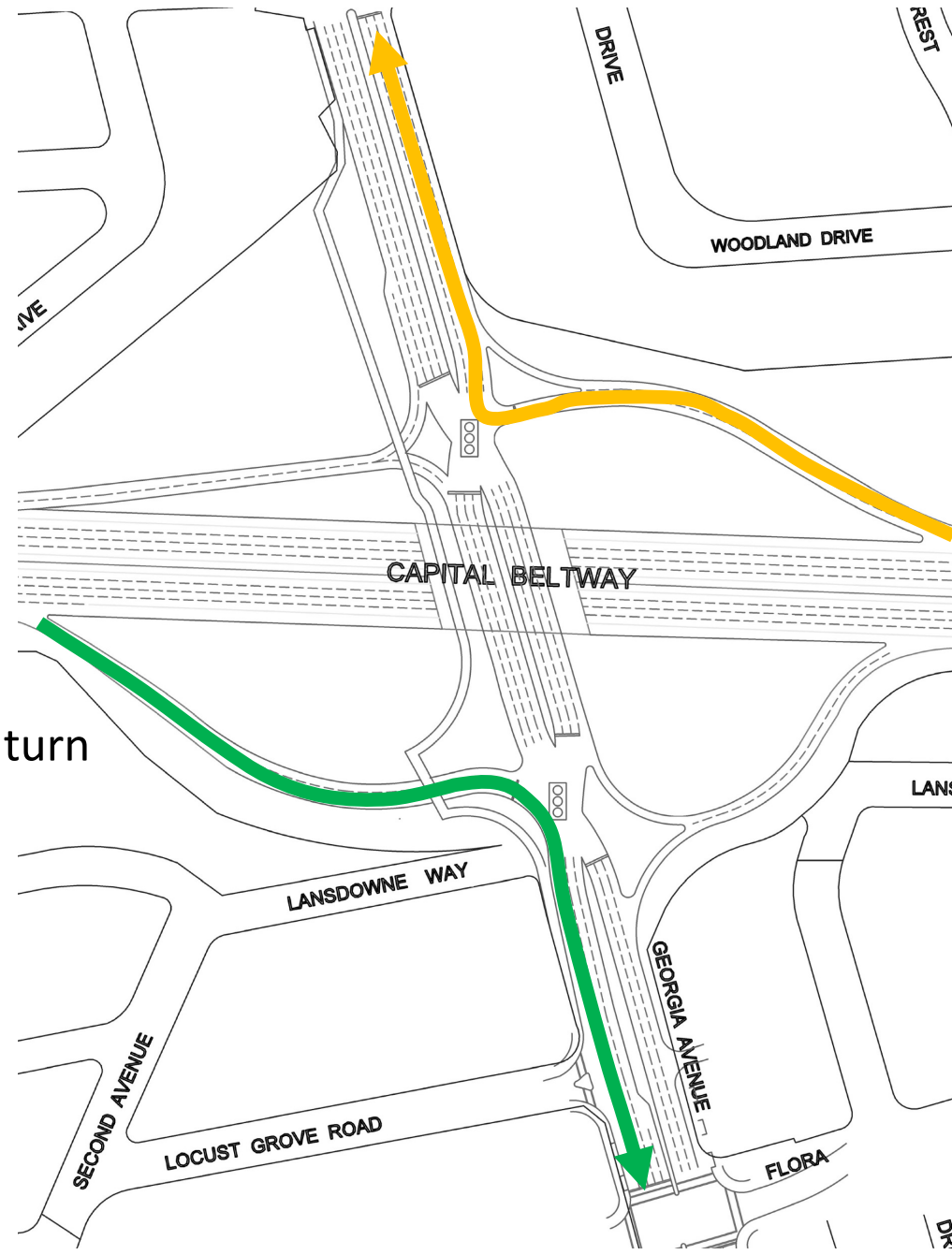
I 495 East (Inner Loop) to MD 97
North Bound and I 495 West
(Outer Loop)



I 495 West (Outer Loop) to MD 97 South Bound and I 495 East (Inner Loop)

I 495 East to North and South MD 97

Free right turn

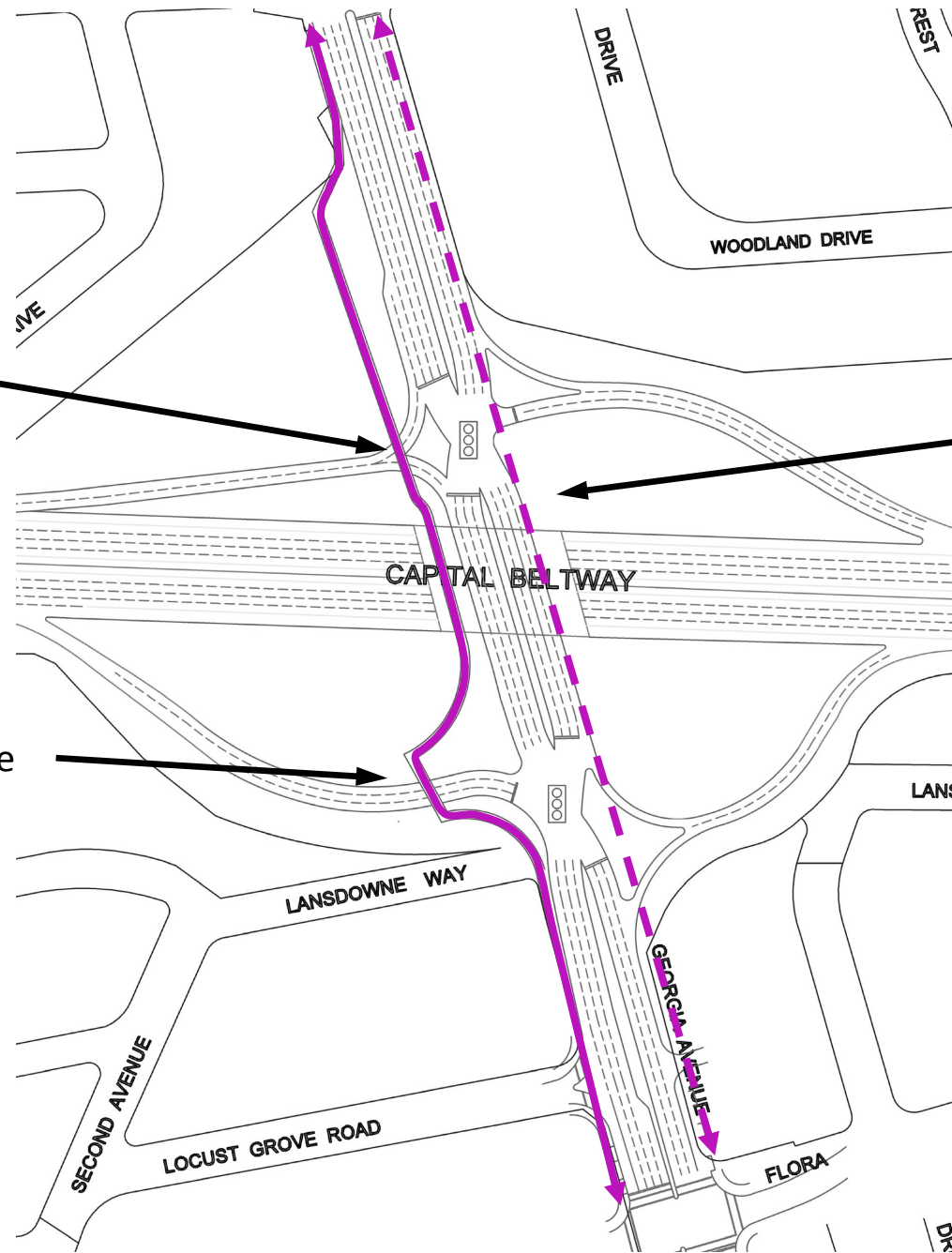


Bicycle and Pedestrian Beltway Crossing

Potential replacement bridge segment

Potential new pedestrian/bicycle crossing

Existing Pedestrian Bridge



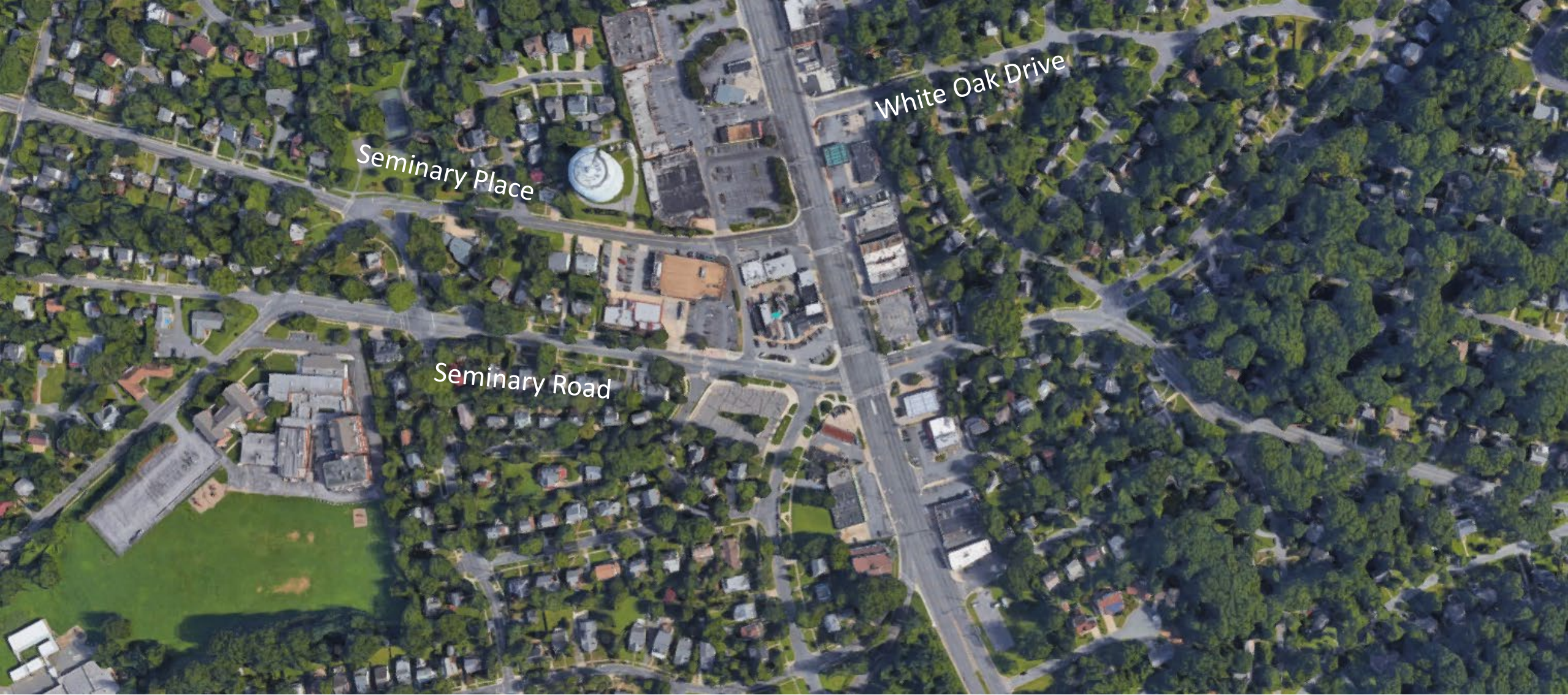
Diverging Diamond Interchange

Benefits

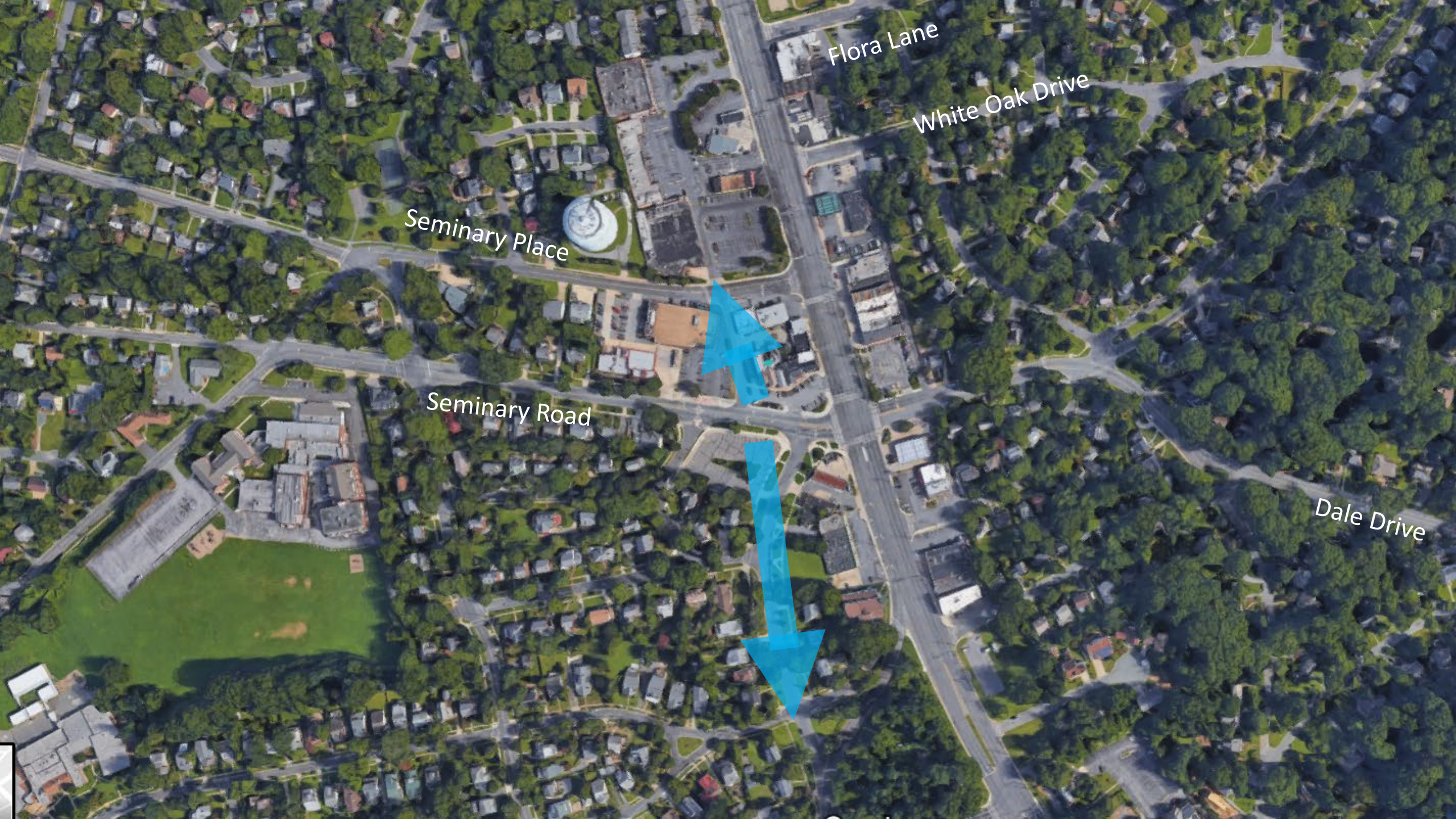
- Improves Safety
- Eliminates weaving
- Improves Reliability
- Could fit within existing MDSHA ROW
- Pedestrian bridge remains with modifications
- Reduces congestion

Considerations

- Major design change
- Very Expensive
- Induced travel demand may undermine potential congestion reduction
- Pedestrian signals will be needed on the east side to cross ramps, or a new bridge should be considered



Montgomery Hills: Street Grid



Flora Lane

White Oak Drive

Seminary Place

Seminary Road

Dale Drive



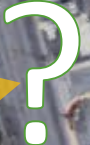
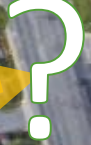
Flora Lane

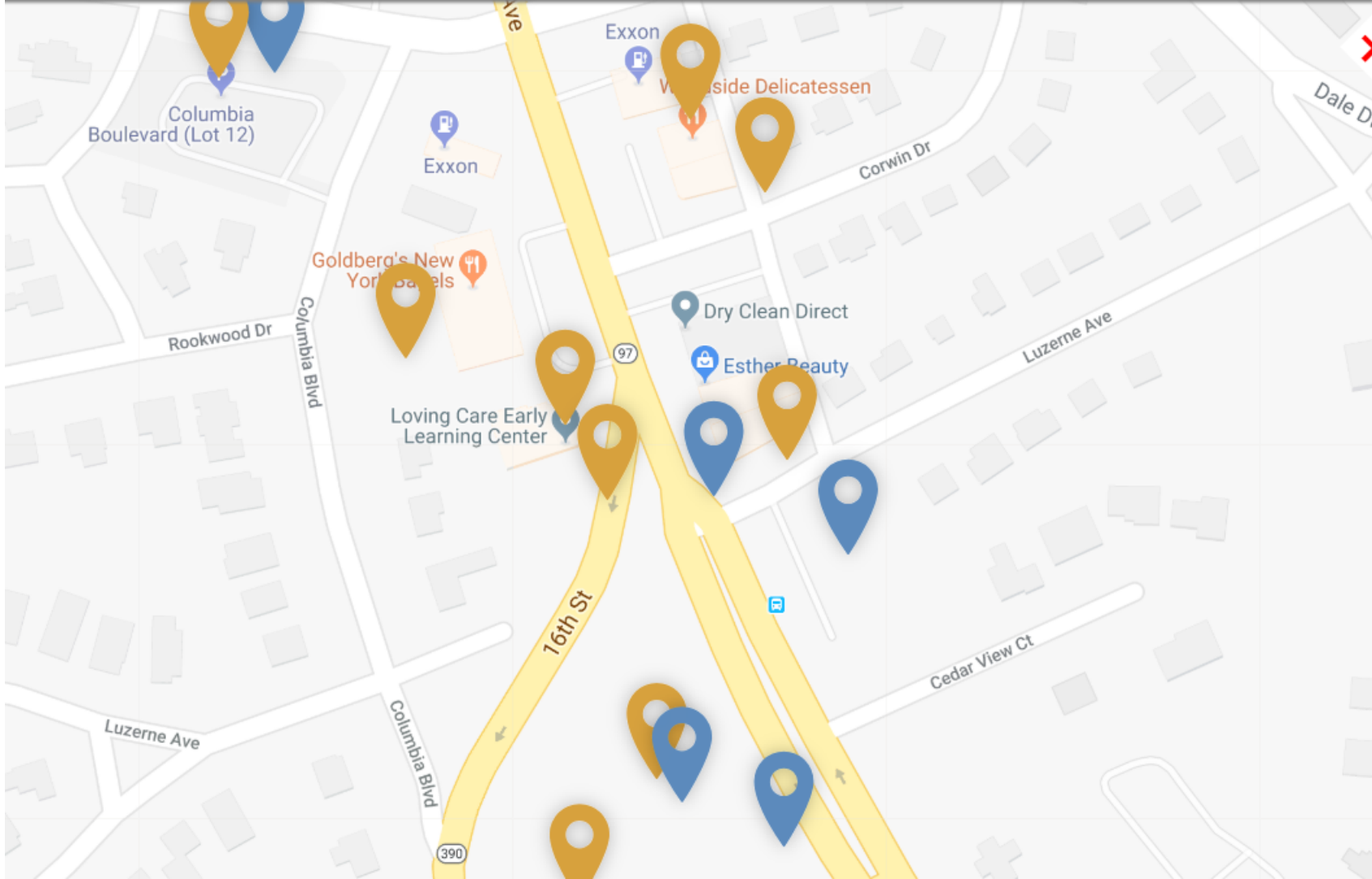
White Oak Drive

Seminary Place

Seminary Road

Dale Drive





Elementary School Access

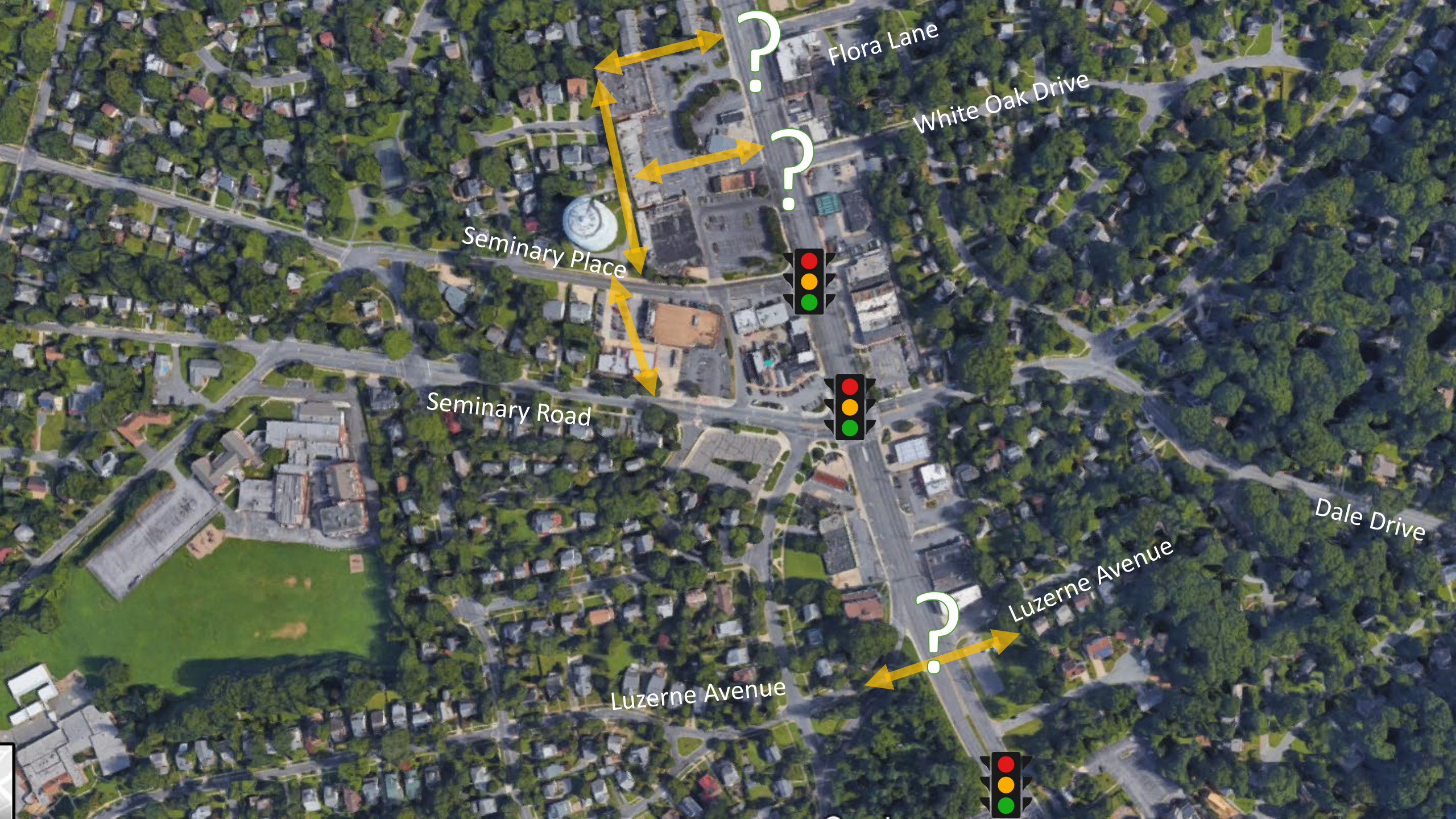
6/7/18 1:40 pm \ anonymous

"We are cut off from our children's school (Woodlin), which is actually on our street, but interrupted by the Georgia Ave/16th St intersection(s). We currently have to walk an additional 8 blocks round trip (2 blocks up Georgia and 2 blocks back down, each way) in order to access a (very dangerous) crosswalk. All this to walk our kids their school that is, in reality, just 5 blocks away. Our block alone has 3-4 families faced with this."

👍 (8) 🗨️ (0) ↻

Your message

🟡 #FixIt 🟢 #Lovelt 🔵 #NeedIt



Flora Lane

White Oak Drive

Seminary Place

Seminary Road

Dale Drive

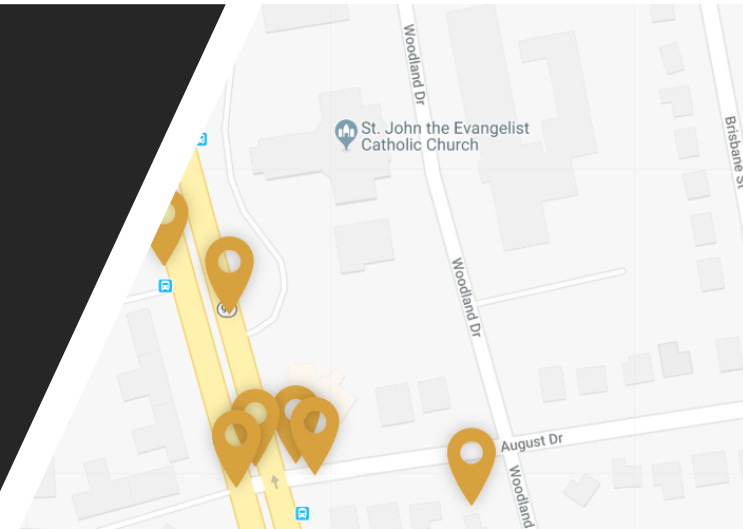
Luzerne Avenue

Luzerne Avenue



Vehicles Speeding in Forest Glen

“Traffic on the relatively uncongested stretch of Georgia Ave between Plyers Mill and August Drive is tempted to speed”

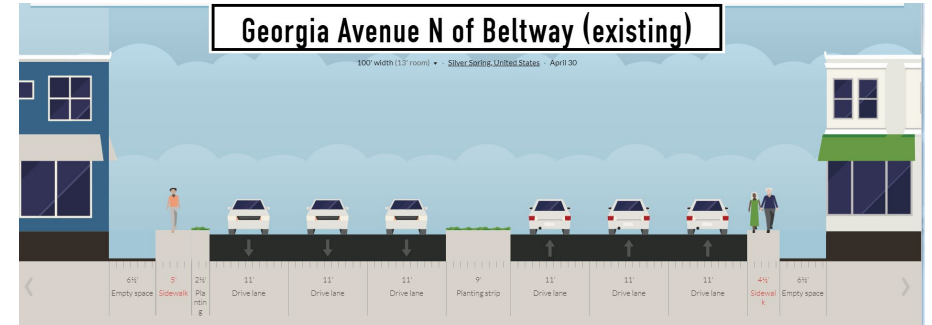


6/5/18 11:20 pm \ anonymous
"Traffic on the relatively uncongested stretch of Georgia Ave between Plyers Mill and August Dr is tempted to speed. Georgia between 16th and Spring St is similarly free-flowing, though has a camera and traffic moves at the speed limit. Is there an option to install a camera on the northern section of Georgia?"

👍 (2) 💬 (6) 🔄

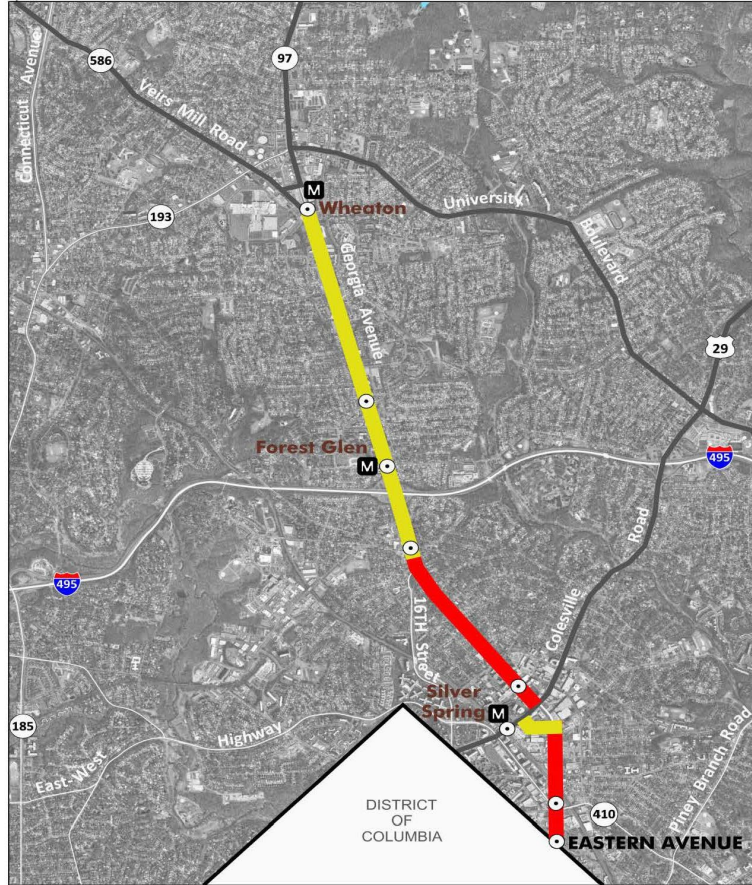
Your message





Addressing Vehicle Speeds

Map 4 Corridor 2: Georgia Avenue South

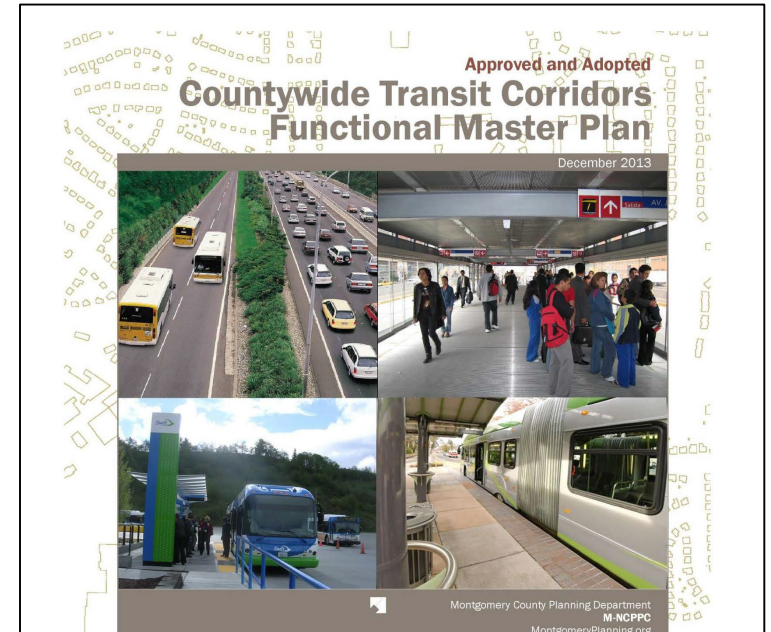


- County Line
- Dedicated Lane(s)
- Mixed Traffic
- Other BRT Corridors
- ⊙ BRT Station
- M Metro Station



Station Locations

- Wheaton Metro Station
- MD 97 and Dexter Avenue
- Forest Glen Metro Station
- MD 97 and Seminary Road
- MD 97 and Cameron Street
- Silver Spring Transit Center
- MD 97 and East West Highway
- MD 97 and Eastern Avenue/Burli



Confirming BRT Recommendations



Recommendations Summary

- **Improve the walking experience**
 - Buffered sidewalks
 - Street trees
 - Underground utilities
- **Improve crossings for all modes**
 - Study new traffic controls at intersections
 - Forest Glen Passageway
- Provide a **designated space for bicyclists**



Recommendations Summary contd.

- Explore reconfigurations for the **Beltway interchange** to improve vehicle safety
- Explore reconfigurations for the **Beltway** to improve traffic flow on Georgia Ave
- With redevelopment, build a **new street grid** on the **west side** to improve mobility for all in Montgomery Hills
- Confirm CTC Master Plan (2013) Recommendations for BRT along Georgia Ave
- **Reduce vehicle speeds**
 - Enforcement
 - Traffic-calming road design

Next Steps



SAVE THE
DATE

Tuesday December 4, 2018

Present ALL Preliminary
Recommendations to the Public

Thursday December 6

Present ALL Preliminary
Recommendations to the Planning
Board