

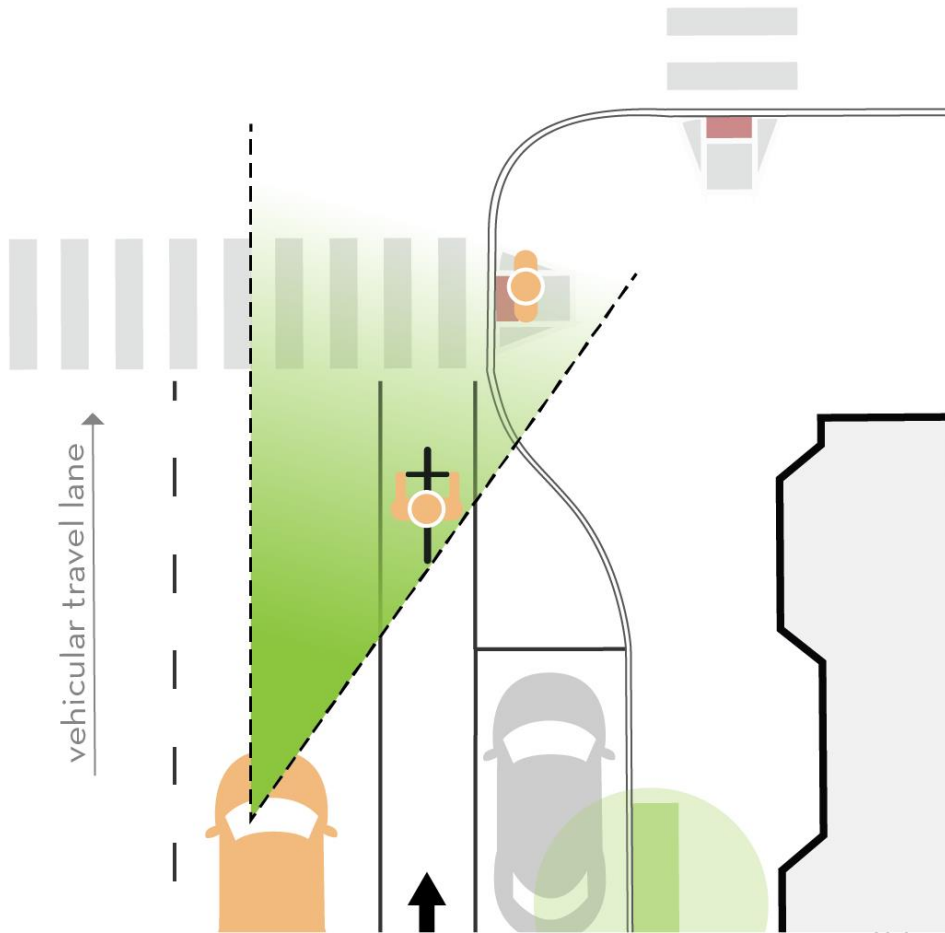
Upgrading Tactical Safety Improvements

District Department of Transportation

Agenda

- Project Background
- Identifying Need
- Quick-build Installation
- Upgrading to Permanent

What is a curb extension?



Shorter crossing
distance

*

Reduces motorist
turning speeds

*

Increased visibility
between
motorists and
pedestrians

Tactical Curb Extension



Concrete Curb Extension



Why tactical curb extensions?

- Safety benefits are realized immediately
- Improve planning to construction timeline
- Provide an opportunity to right-fit designs and make changes before a permanent installation



Safety & Mobility Studies

Identifying Need

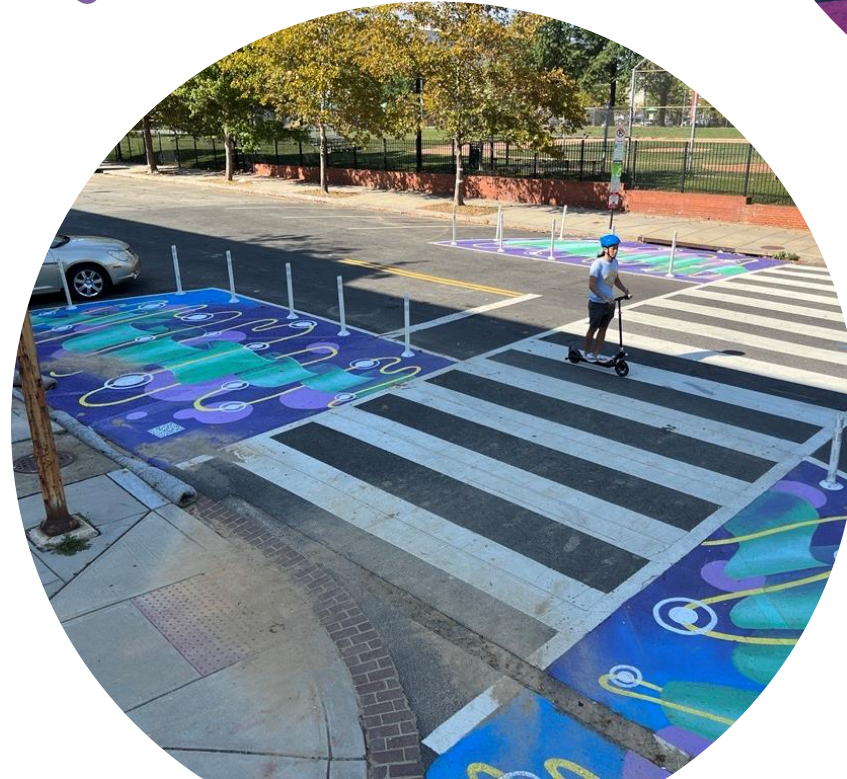
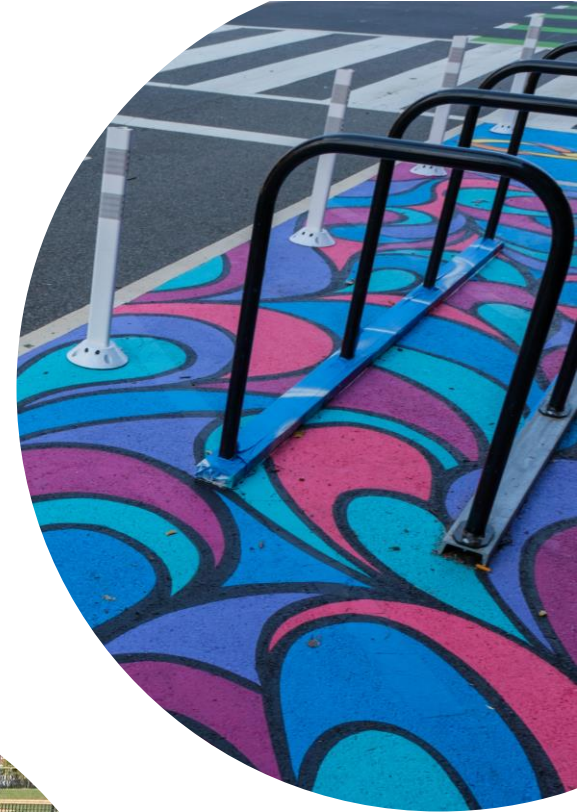
Expected Outcomes

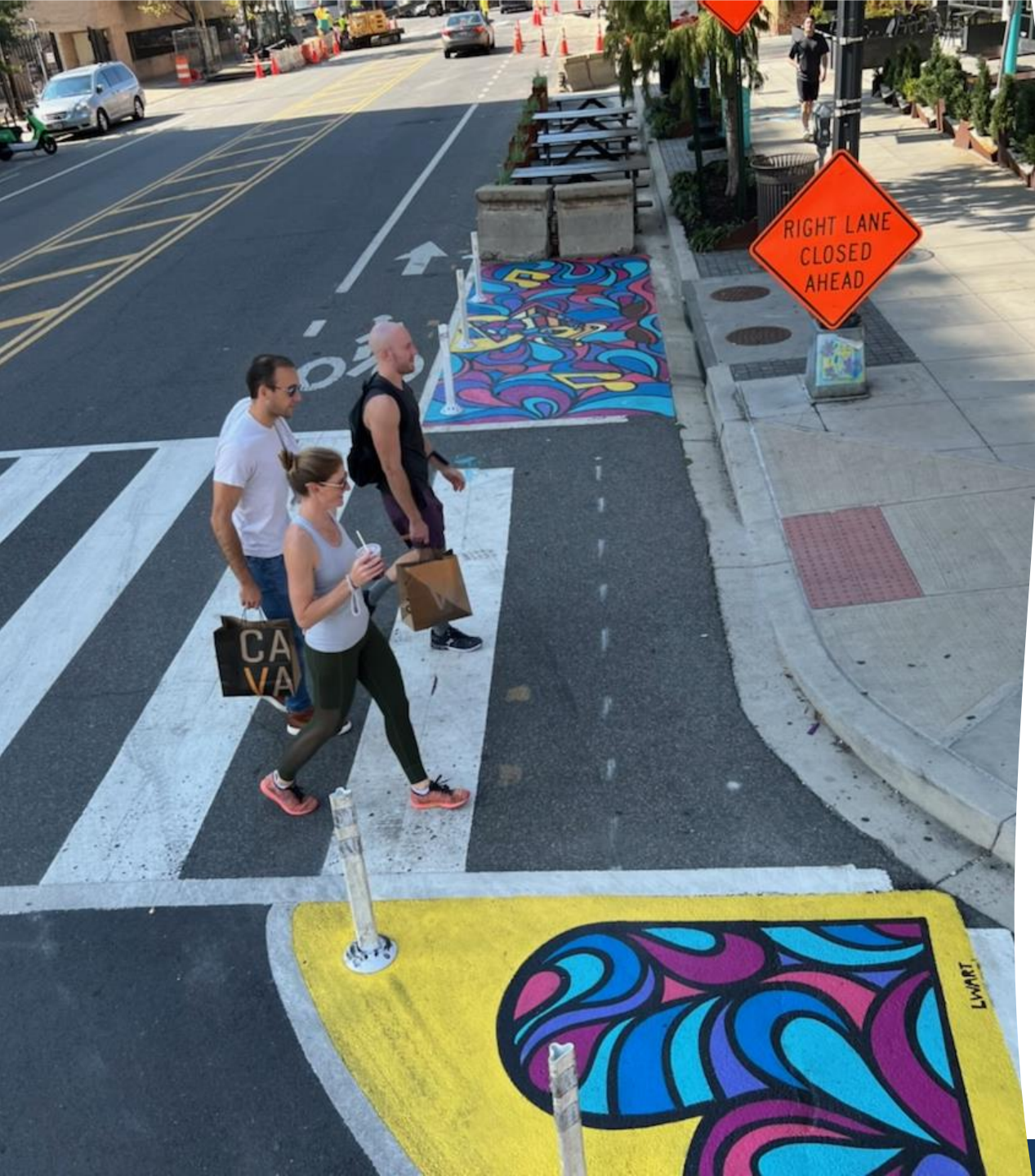
- Focus is on short-term, quick-build projects, that may include traffic calming and intersection safety enhancements.

40 short-term recommendations to be implemented within 3 years

10 of the 40 recommendations implemented during the study.

5 of the 10 immediate installations had murals installed.





Toolbox

- Key messaging for public engagement
- All recommendations were created to be tactical installations, though some will be implemented with more permanent materials
- Our tools consist of low-cost materials such as:
 - Flex posts
 - Paint
 - Modular Speed Bumps
 - Signage

Typical process:



3+ years from project recommendation to installation

Safety and Mobility Studies:

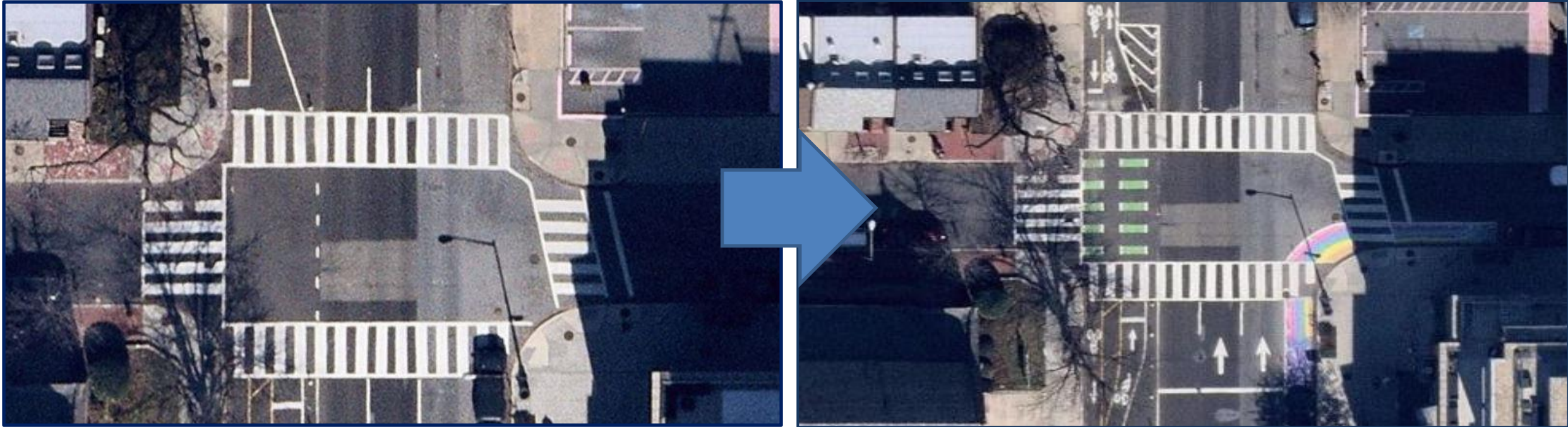


Recommendations installed quickly to realize the safety benefit while long-term planning continues.

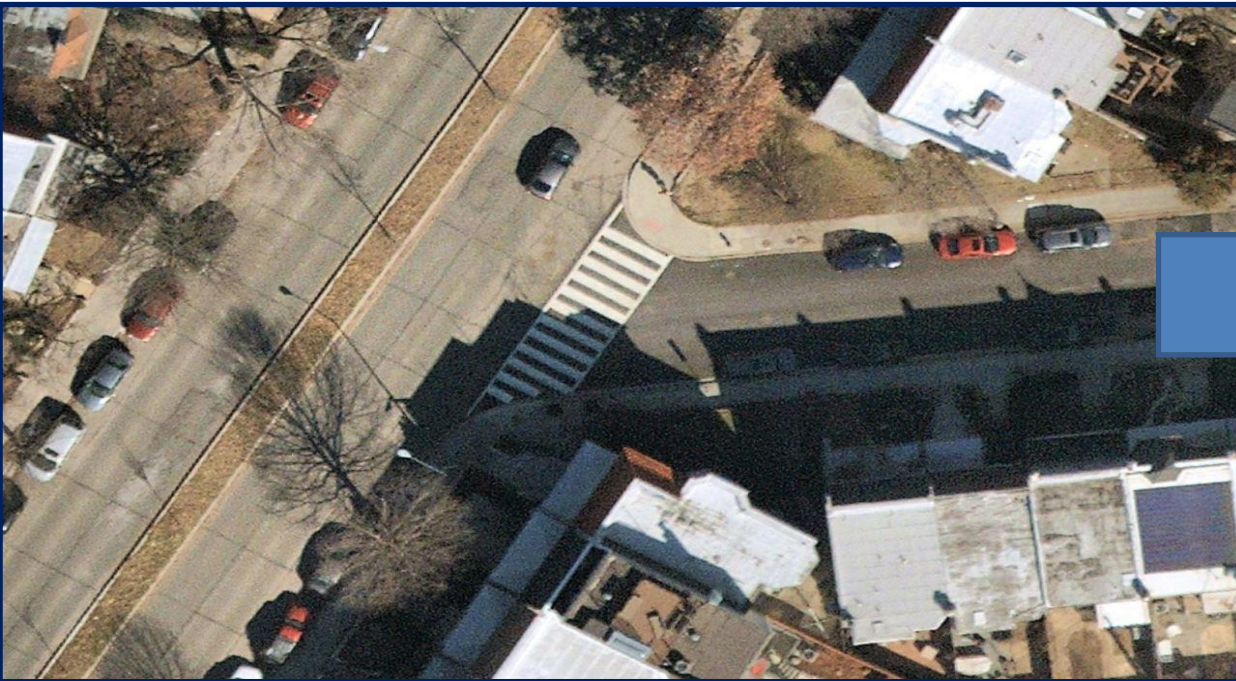
How did DDOT decide to incorporate tactical installations in planning processes?

- Shift from long-term, vision-focused studies into implementation-focused planning
- Safety and Mobility Studies identify immediately implementable and concrete actions to increase safety and improve transportation connectivity and accessibility on **neighborhood-serving streets**
- These types of projects are meant to be responsive to immediate needs and can also test solutions that could be built out in a future project

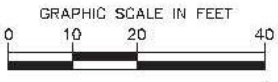
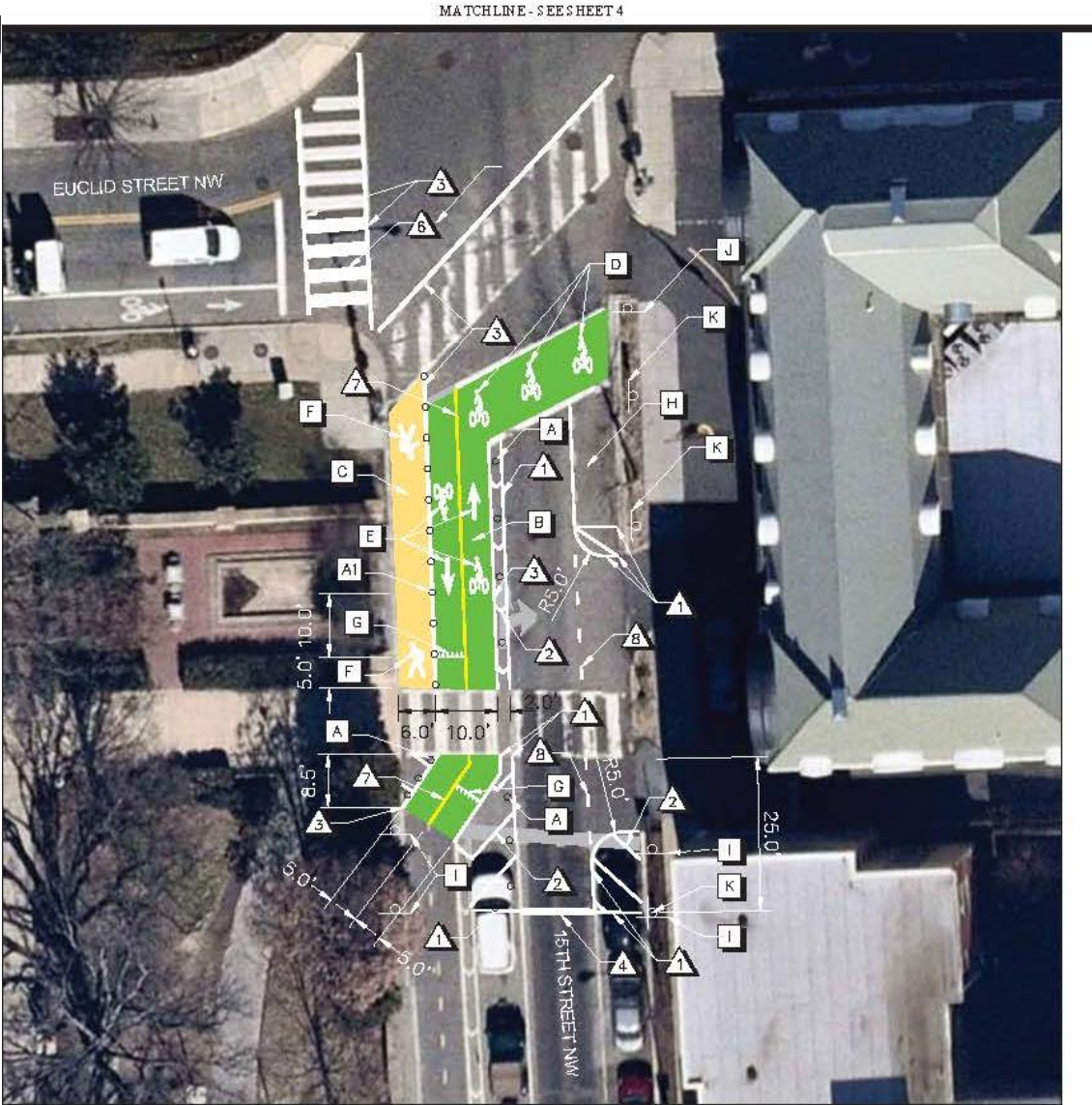
15th and Church NW – Washington DC



New Hampshire and Newton NW – Washington DC



Incorporating Design



IMPLEMENTATION NOTES

- A** INSTALL WHITE FLEXIPOSTS. SPACING SHALL BE CENTERED ON HATCH MARKINGS WHEN PRESENT OR TYPICALLY BE 5 FEET ON CENTER AND OFFSET 6 INCHES FROM LANE LINES, AWAY FROM TRAVEL LANES.
- A1** INSTALL WHITE FLEXIPOSTS. SPACING SHALL TYPICALLY BE 5 FEET ON CENTER AND INSTALLED ON WHITE LANE LINE.
- B** INSTALL GREEN PAVEMENT PAINT AS INDICATED TO RELOCATE TWO-WAY BICYCLE LANE APPROXIMATELY 6 FEET TO THE EAST. MAINTAIN 2 FOOT BUFFER BETWEEN NORTHBOUND BICYCLE LANE AND NORTHBOUND VEHICULAR TRAFFIC.
- C** INSTALL 6 FOOT WIDE PEDESTRIAN WALKING SPACE USING TAN PAVEMENT PAINT ALONG THE WEST CURB OF 15TH STREET NW.
- D** SEE DETAIL A. INSTALL THREE HELMETED BICYCLIST MARKINGS TO INDICATE THE ADVANCE BICYCLE BOX.
- E** SEE DETAIL B. INSTALL HELMETED BICYCLIST MARKINGS AND DIRECTIONAL ARROWS.
- F** SEE DETAIL C. INSTALL PEDESTRIAN LANE PAVEMENT MARKING.
- G** SEE DETAIL D. INSTALL ADVANCE YIELD LINE FOR BICYCLE LANE 5 FEET FROM CROSSWALK.
- H** PROVIDE PARKING BOX FOR DIPLOMAT PARKING RESTRICTION.
- I** RELOCATE EXISTING MUTCD R10-6A "STOP HERE ON RED" APPROXIMATELY 10 FEET TO THE SOUTH.
- J** INSTALL MUTCD R10-11 "NO TURN ON RED" SYMBOLIC SIGN.
- K** EXISTING PARKING SIGN ASSEMBLY TO REMAIN.

PAVEMENT MARKING LEGEND			
	WHITE, 4" WIDTH		WHITE, 24" WIDTH, 24" SPACE
	WHITE, 4" WIDTH, 5" SPACE		WHITE 4" WIDTH, 2 LONG, 4 GAP
	WHITE, 6" WIDTH		YELLOW, 4" WIDTH
	WHITE, 12" WIDTH		WHITE RETROREFLECTIVE FLEXIPOST

Incorporating Design



Vision Zero Hardening

Long-lasting Change

Program Need

- Tactical (flex post & paint) installations are key safety improvement
- Installations posed to community as “temporary” with intention to harden as part of a future capital project
- Community concern over maintenance/longevity of tactical installations
- Lack of a systematic path for upgrading tactical locations to permanent



Council Bill: Safer Streets Amendment Act of 2022

- Inventory & map tactical safety projects;
- Provide an annual target for converting tactical to permanent;
- Identify locations to upgrade by developing and utilizing criteria such as equitable distribution of safety infrastructure, safety needs, and state of repair; and
- Beginning in 2024, provide report on work completed the previous year.

"(1) "Permanent streetscape project" means a streetscape project such as curbs, barriers, medians, pedestrian islands, vehicle lane closures, and bus stop islands, or other infrastructure, constructed with durable materials such as concrete, stone, or metal, designed specifically for long-term use.

"(2) "Tactical safety project" means a streetscape project, such as curb extensions, barriers, medians, pedestrian islands, vehicle lane closures, and bus stop islands, or other infrastructure, constructed with temporary or semi-durable materials such as flex posts.

VZ Hardening Study

- Study funded through Transportation Alternatives Program (TAP) in 2022
 - Incorporates final requirements from the Safer Streets Amendment
- February 2023 – December 2023
- Deliverables:
 - Methodology and ArcGIS tool for scoring tactical locations for upgrading;
 - Feasibility Checklist for identifying final list of annual locations;
 - Report including decision-making process for use in annual council report; and
 - Concept designs & preliminary drainage analysis for 20 locations.



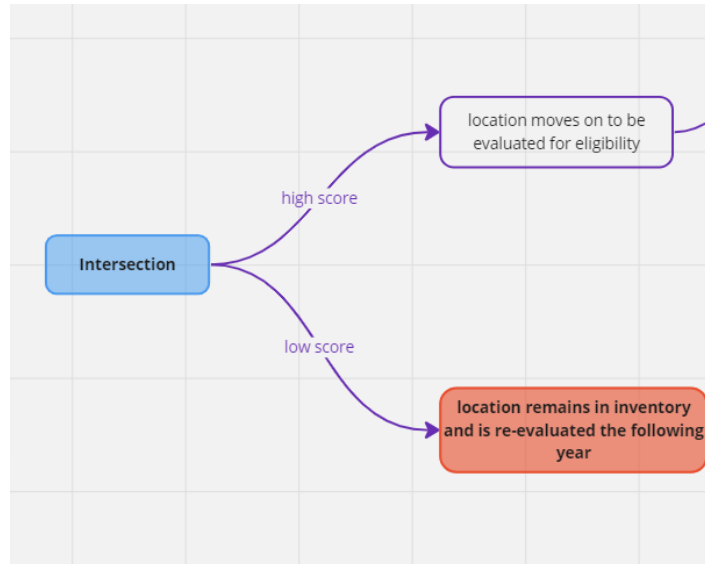
Site Selection – Priority Scoring

- 50% of score identifies locations that are **in need of safety improvements** with factors that align with TSI 2.0 scoring methodology

(Crash Safety, Roadway Characteristics, and Equity)

- 50% of the score identifies locations that **would benefit from the safety intervention being hardened**

(Pedestrian Exposure, and State of Good Repair)



Main Factor	Sub Factor	How is it measured?	Weight (within category)	Total Category Weight
Crash Safety	Non-Motorist Crashes	Bicycle/ped fatality/severe injury crash within 100 feet of the intersection	20%	10%
	Different-direction Crashes	3 or more angle crashes within 100 feet of the intersection	40%	
	HIN Segment	Intersection includes a segment on the High Injury Network	40%	
Roadway Characteristics	Roadway Lane Count	Number of lanes in each direction	33%	20%
	Intersection Traffic Control	Highest speed limit of all intersection legs	33%	
	Intersection Geometry	Skewed intersections, per DDOT's LRS dataset	33%	
Pedestrian Exposure	Curb to Curb width	Width of the intersection leg with the greatest width	10%	30%
	Peak Transit Walkshed	Within walkshed	10%	
	Metrorail Stop	Proximity to metrorail stop	25%	
	Metrobus Priority Network	Along priority network	20%	
	Destinations	Total number of destinations within the designated area	25%	
	Trail Entrances	proximity to a trail or park entrance	10%	
State of Good Repair	Treatment Age	Age of initial tactical installation	75%	20%
	311 Repair Requests	Total number of 311 flex post repair requests within 100 feet of the intersection	25%	
Equity	Race & Ethnicity	TSI scoring for race normalized city-wide	33%	20%
	Disability	TSI scoring for disability normalized city-wide	33%	
	Income	TSI scoring for income normalized city-wide	33%	

Identifying Priority Locations

- Create a model that prioritizes locations for upgrading
- Emphasize data points that capture the benefits of **permanent** over **tactical**
- Develop agency consensus on prioritization methodology

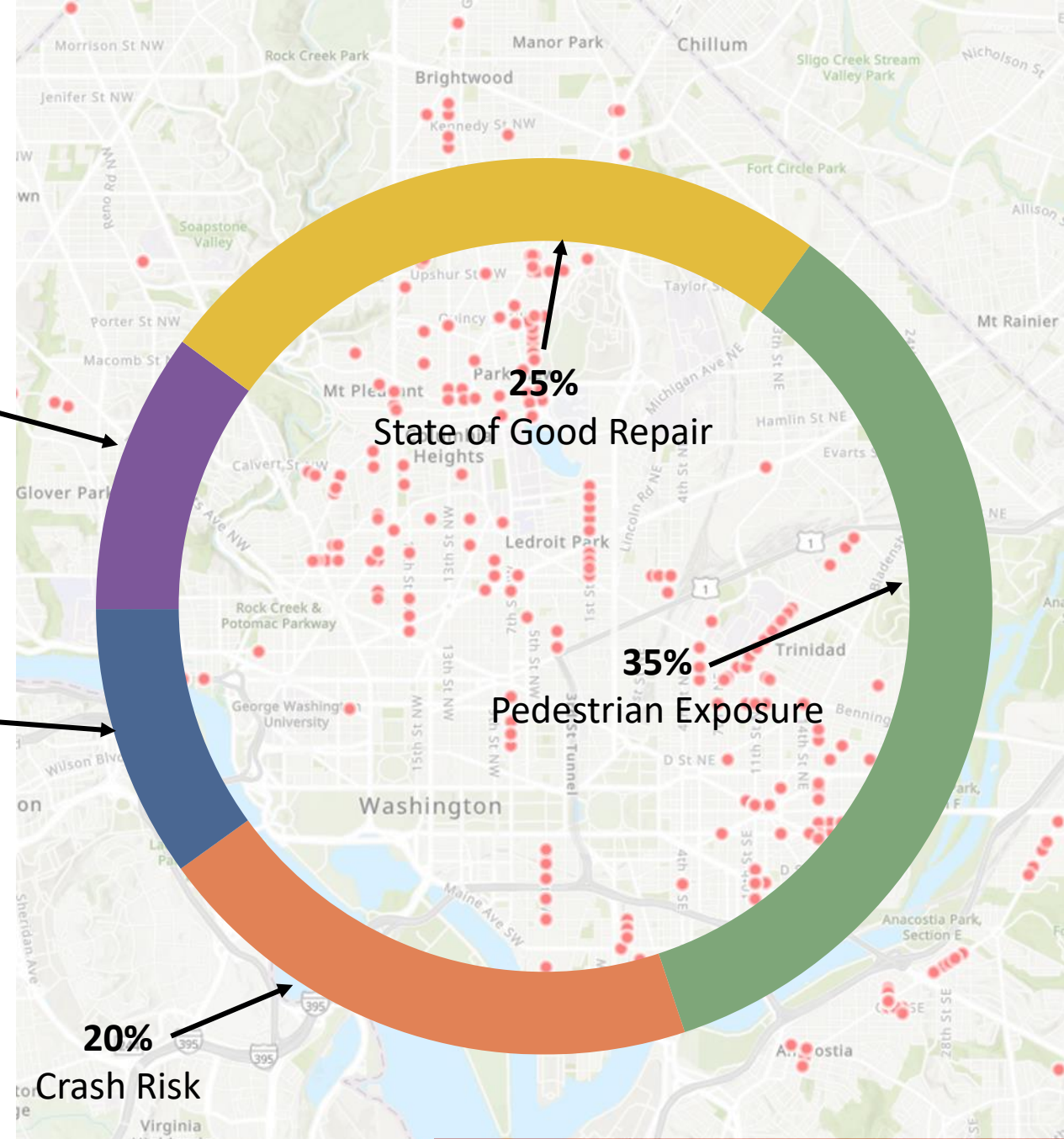
10%
Crash History

10%
Equity

20%
Crash Risk

25%
State of Good Repair

35%
Pedestrian Exposure



Identifying Priority Locations



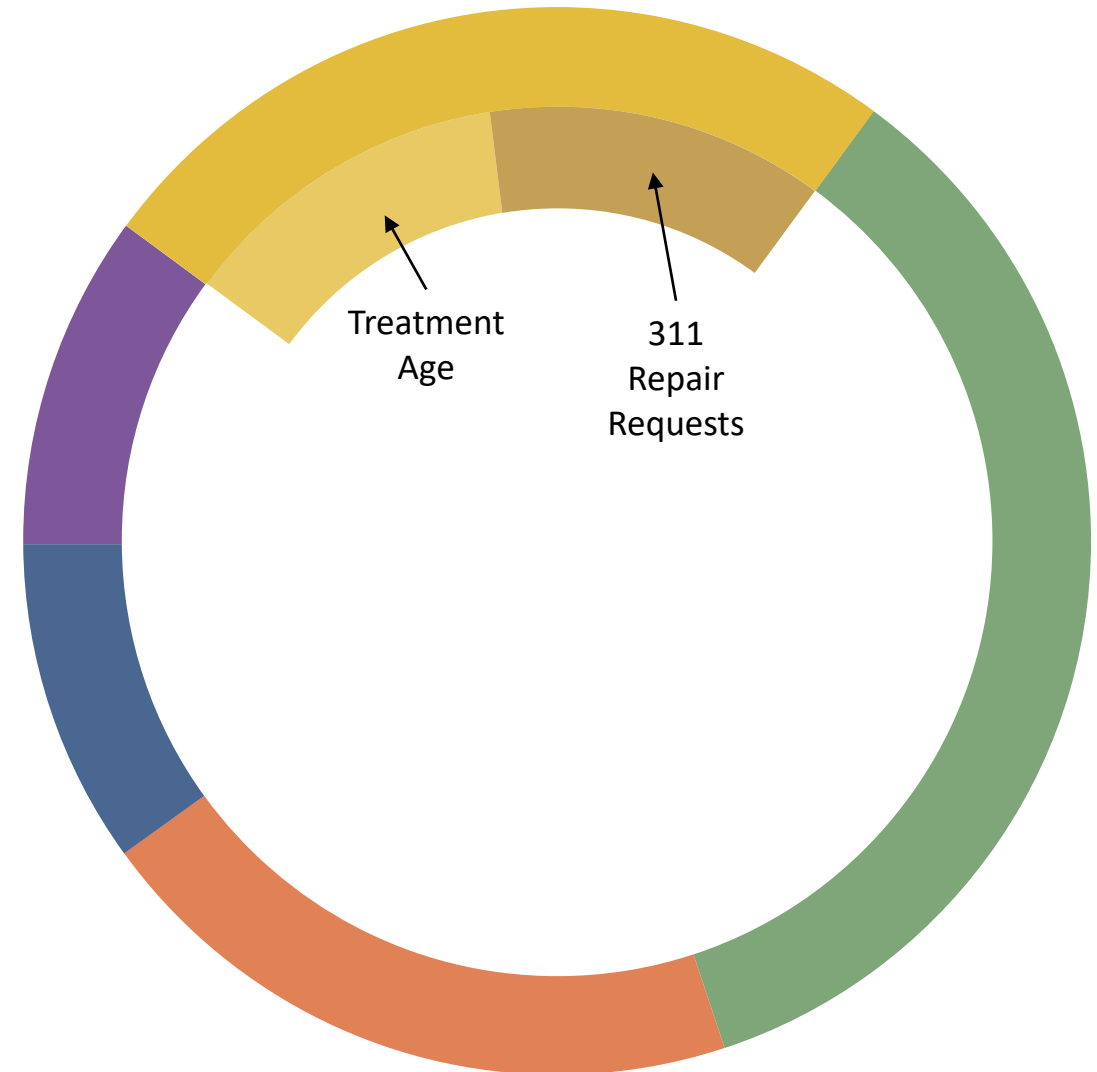
Where is the service location? * Required

Search for addresses

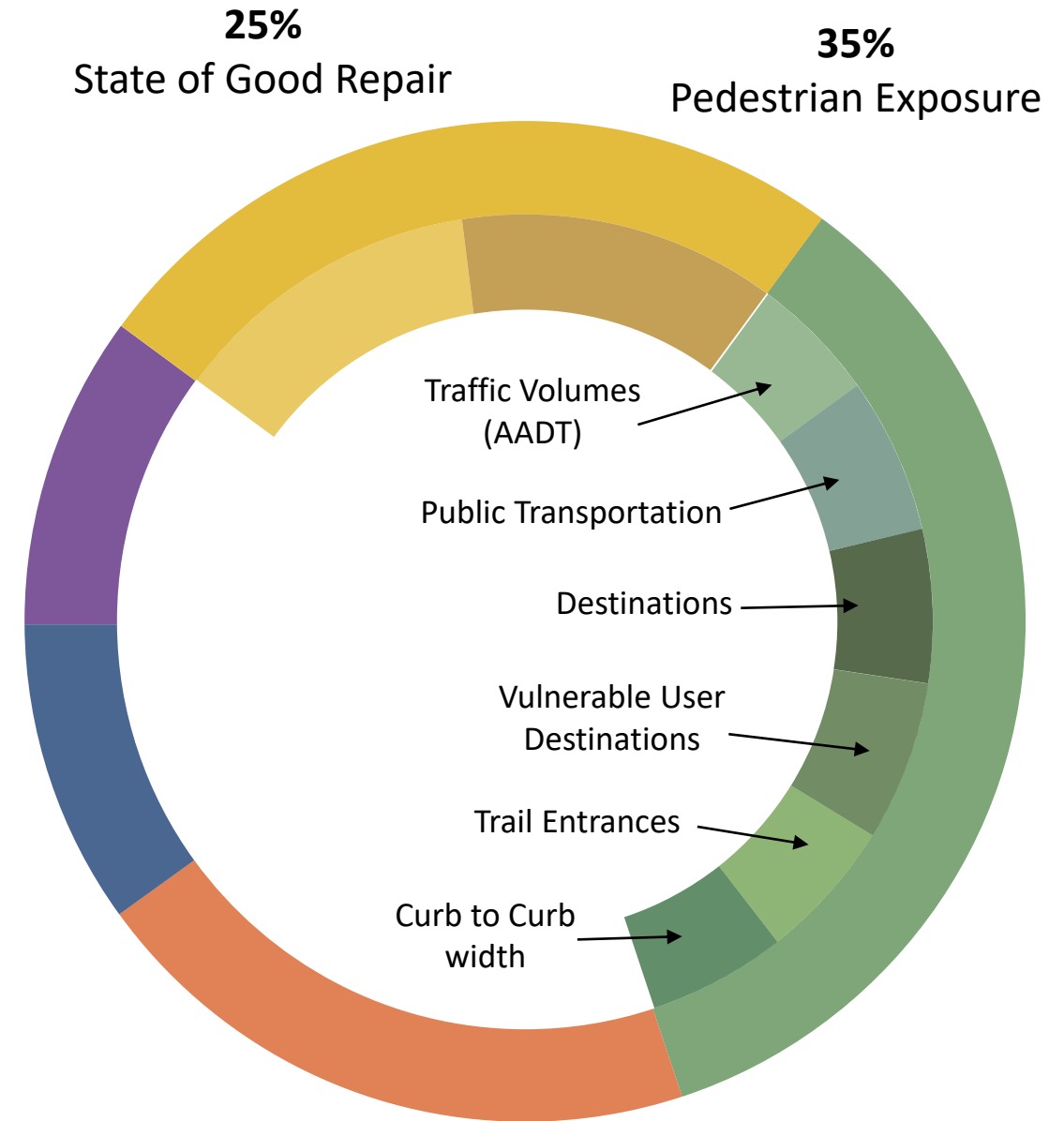
NEXT

Select location

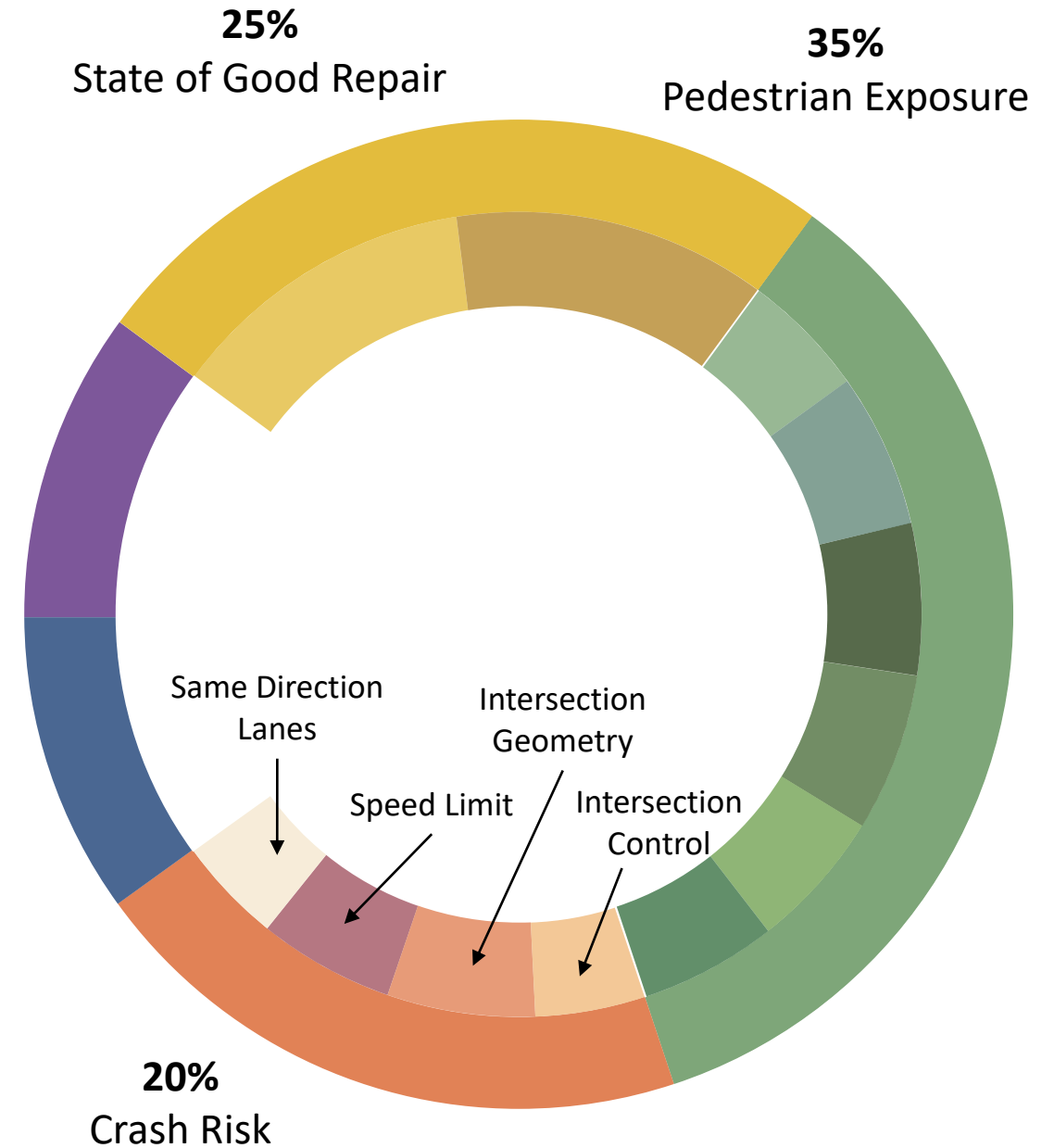
25%
State of Good Repair



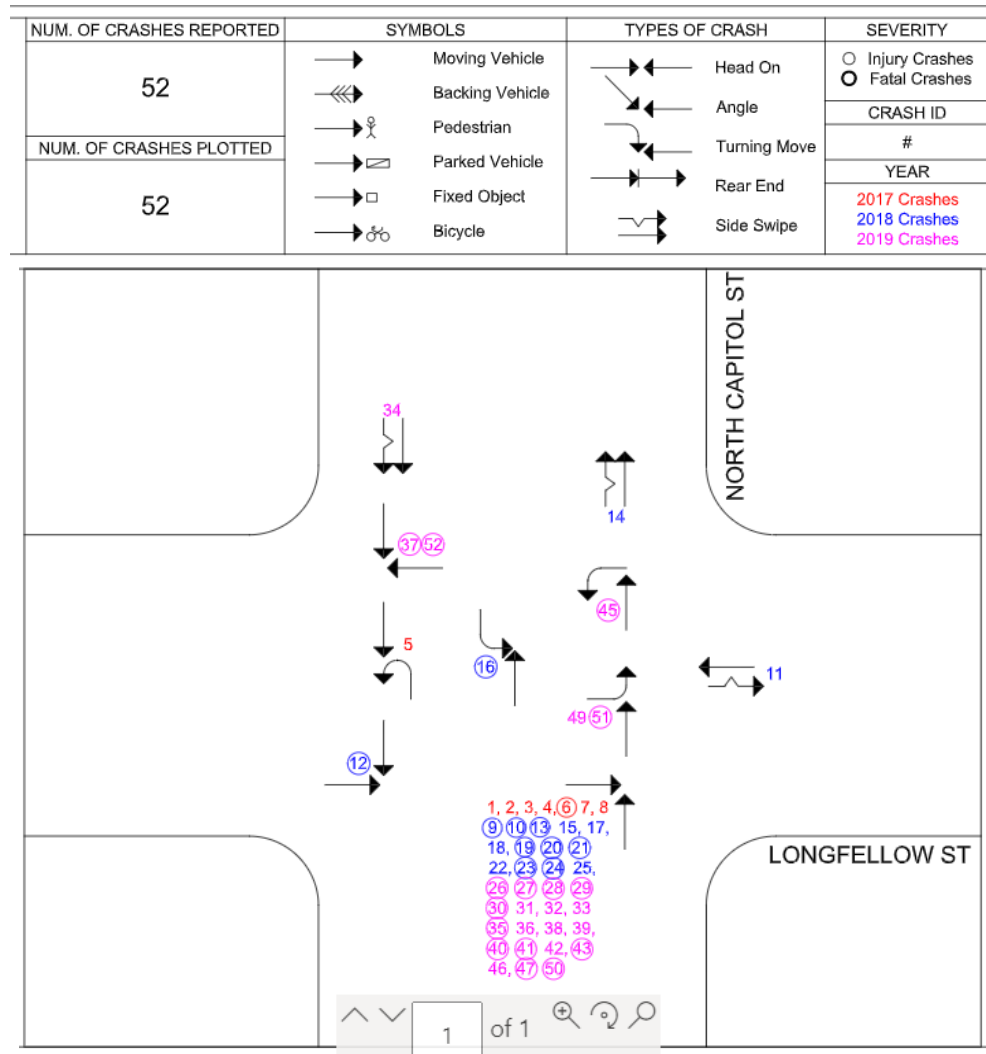
Identifying Priority Locations



Identifying Priority Locations



Identifying Priority Locations

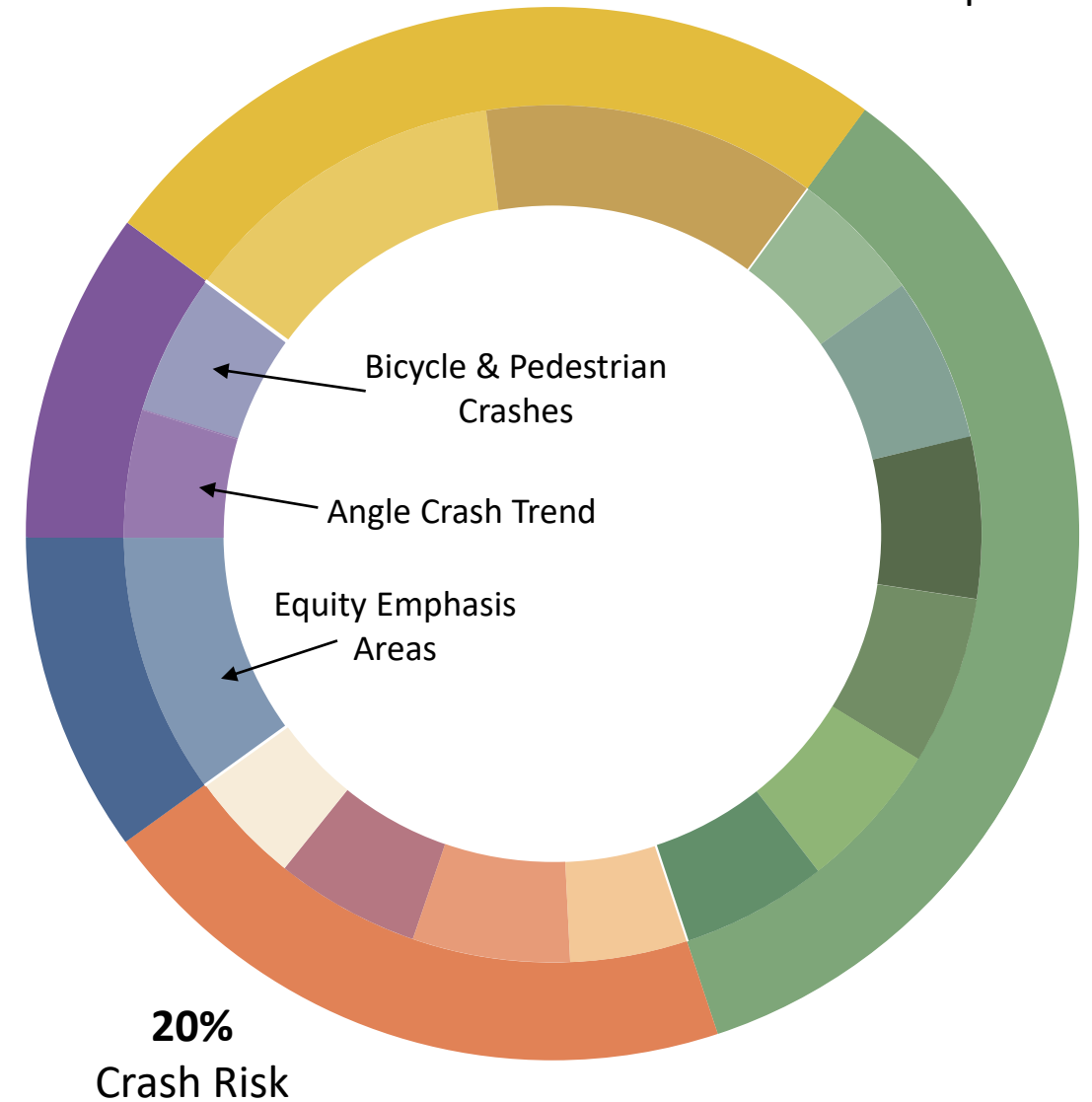


10%
Crash History

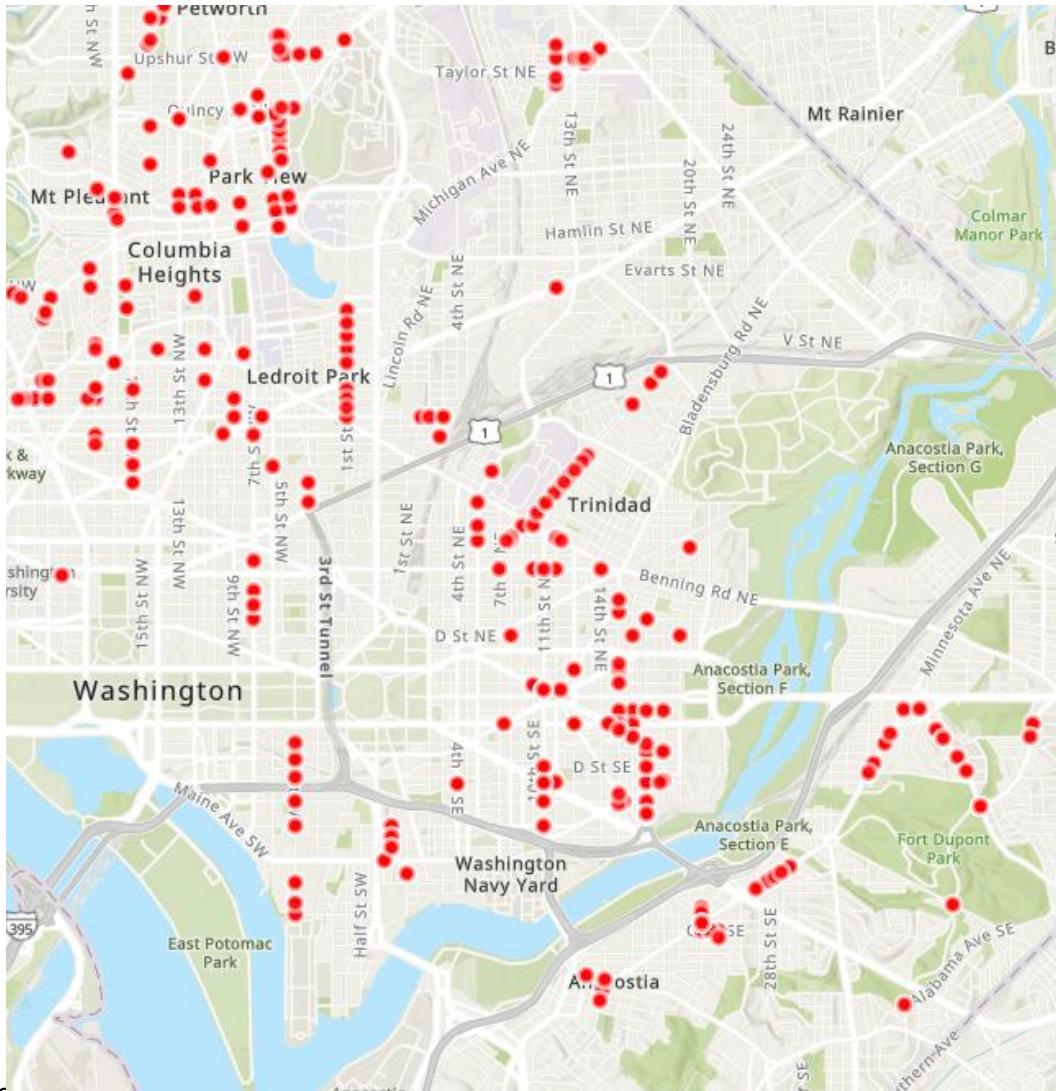
10%
Equity

25%
State of Good Repair

35%
Pedestrian Exposure



Identifying Priority Locations



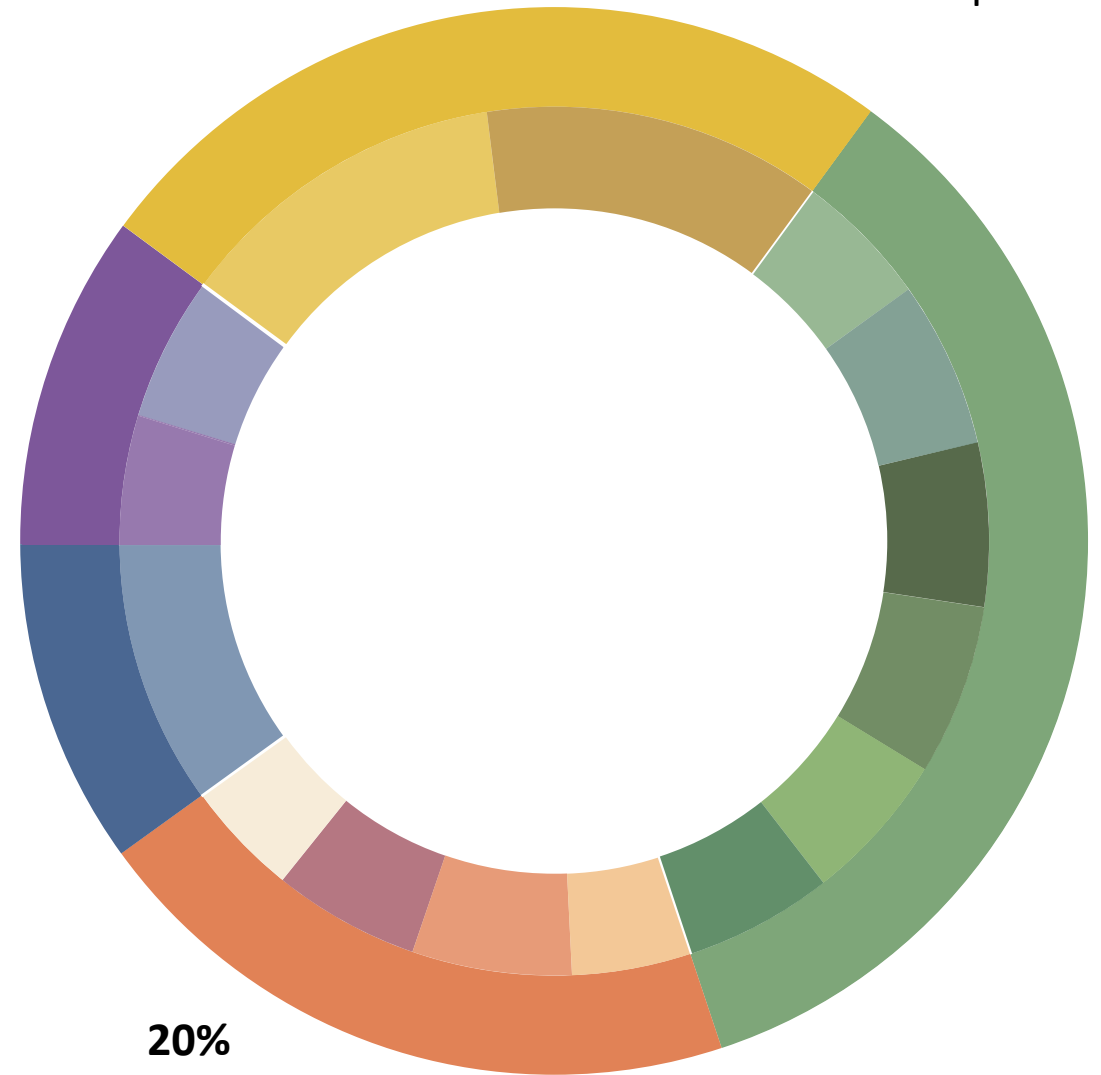
10%
Crash History

10%
Equity

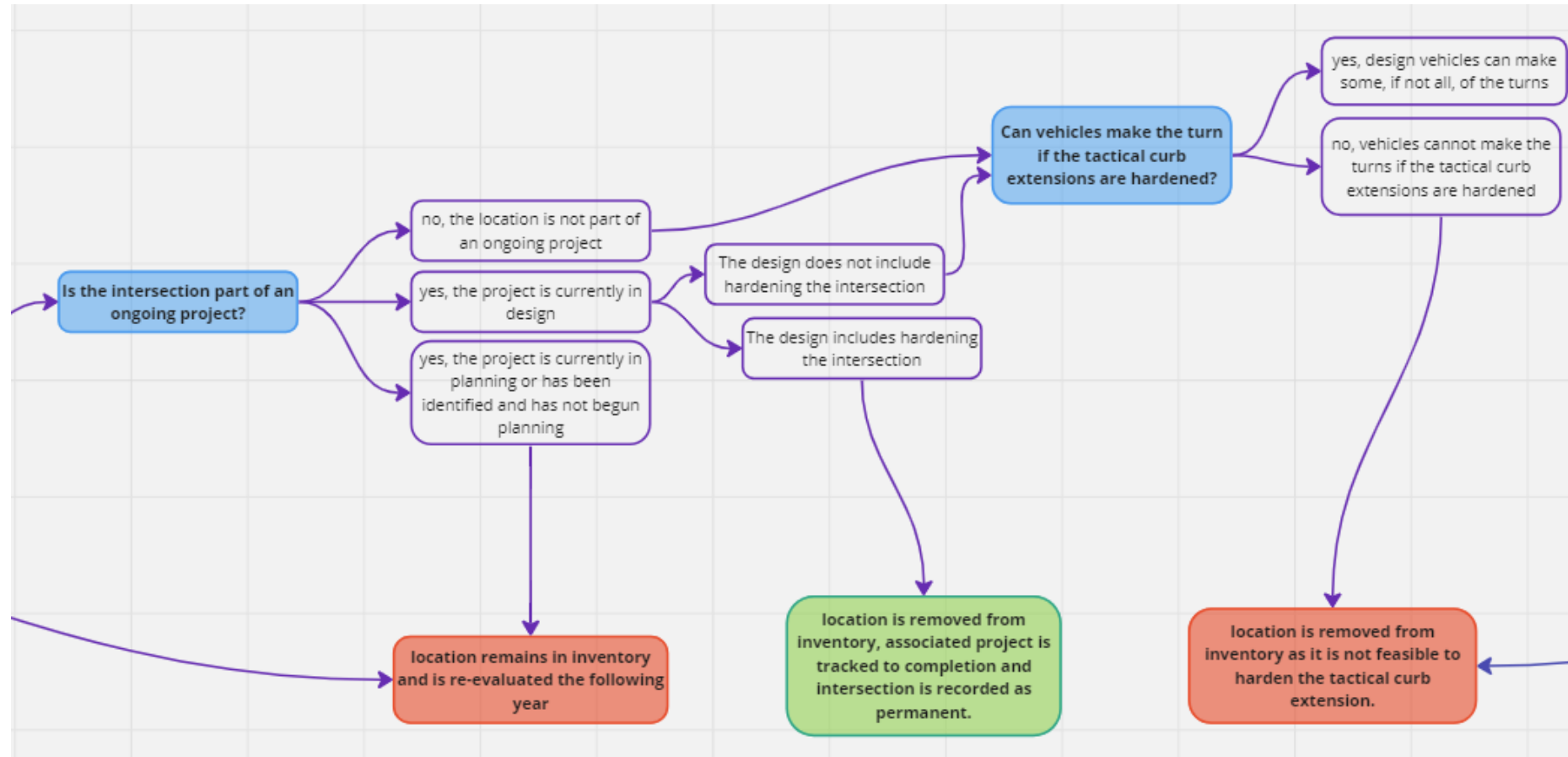
25%
State of Good Repair

35%
Pedestrian Exposure

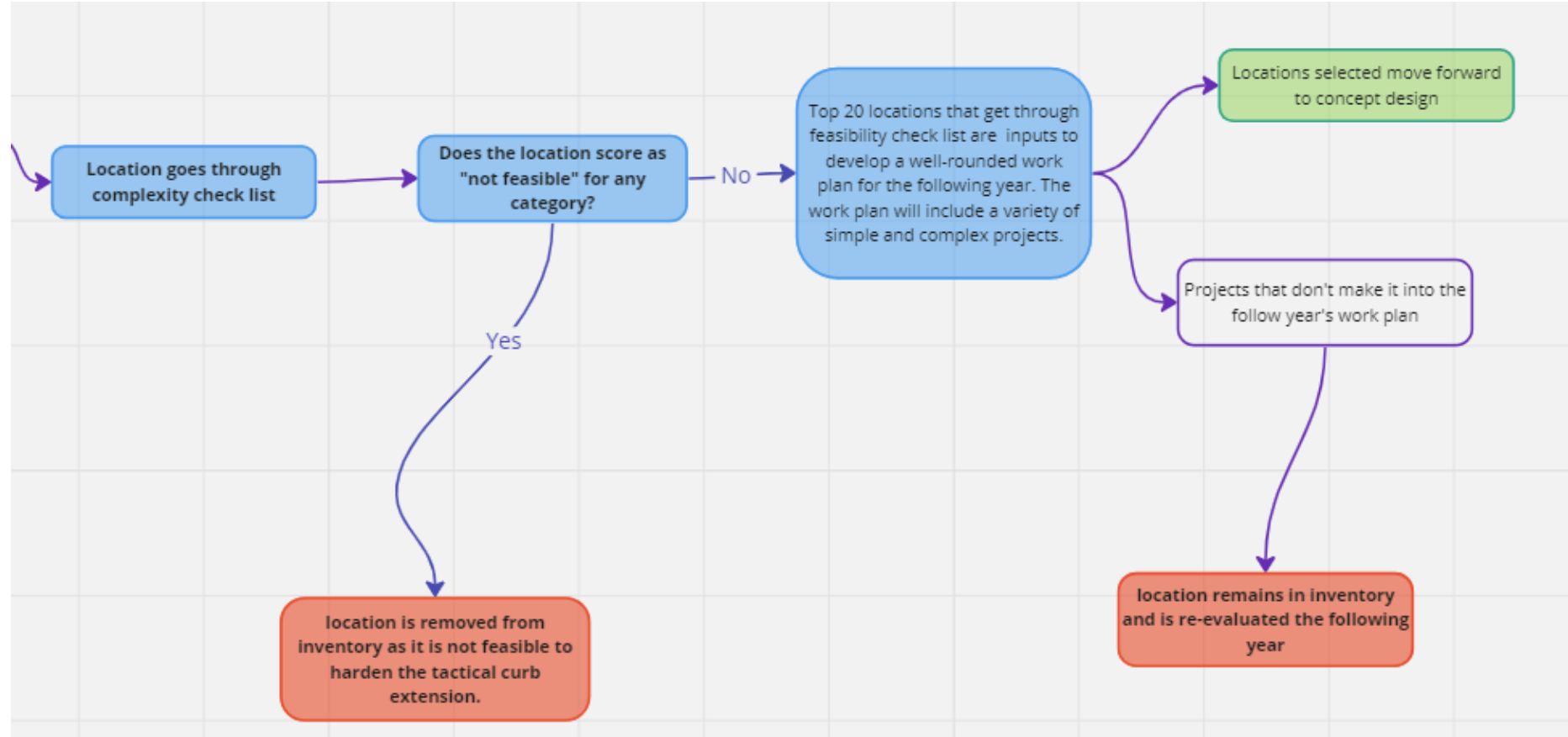
20%
Crash Risk



Site Selection - Feasibility

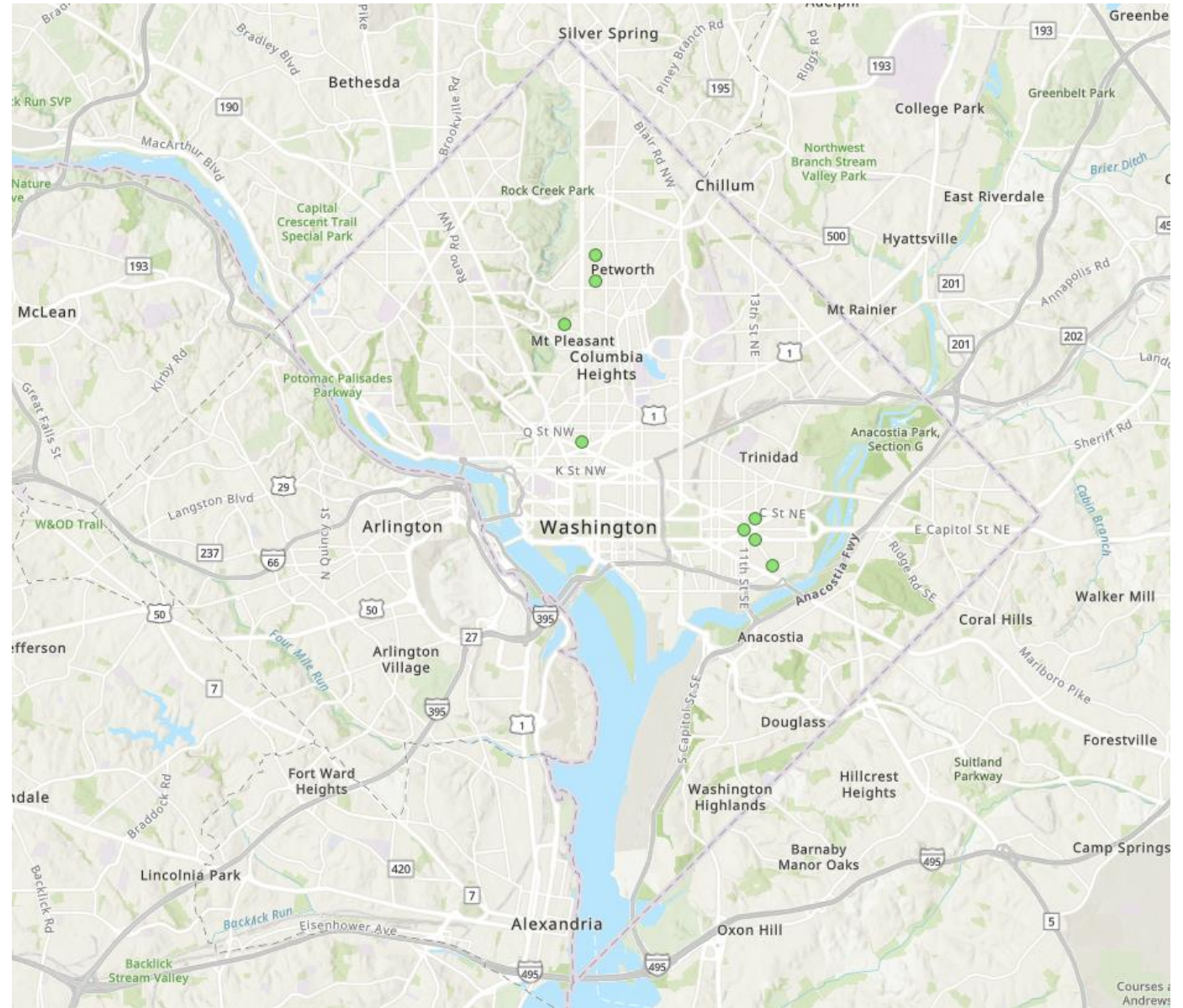


Site Selection - Complexity

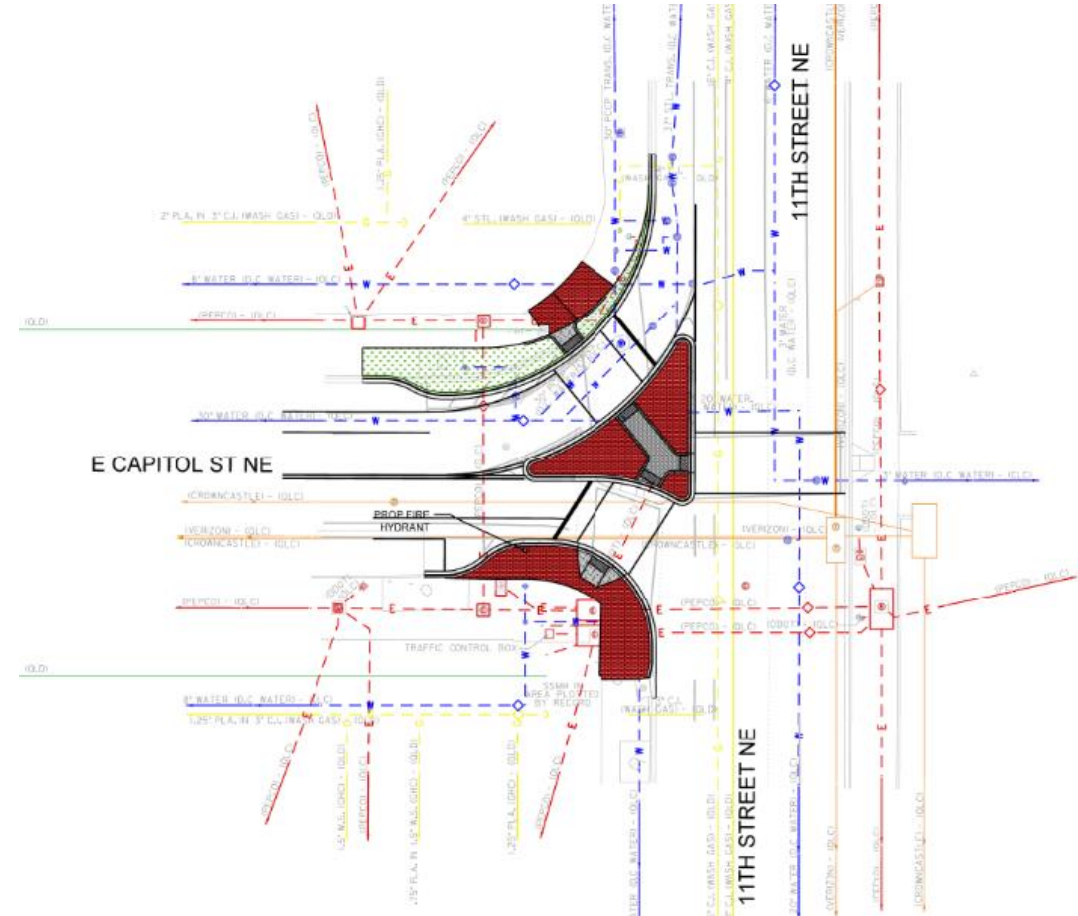


CY 2023 Locations

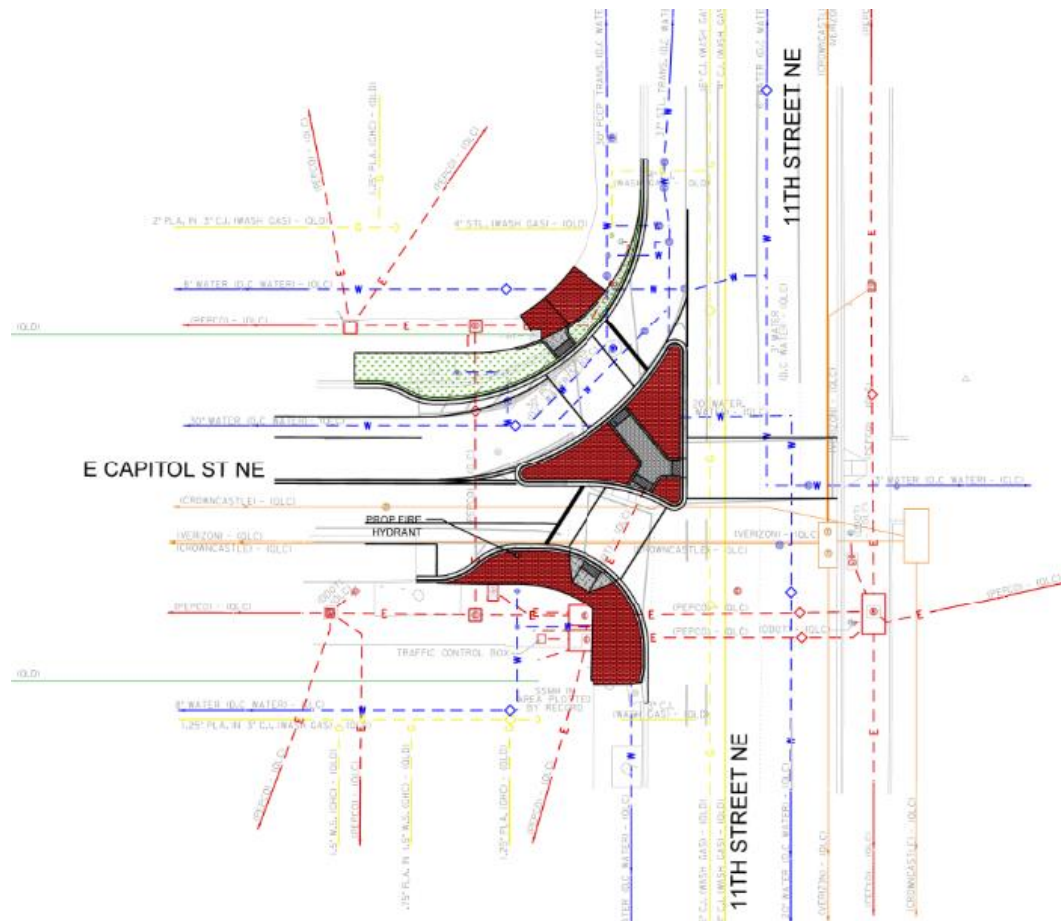
1. 11th Street & East Capitol Street SE
2. 14th Street & Arkansas Ave NW
3. 15th Street & Kentucky Ave SE
4. 13th Street & Kentucky Avenue SE
5. 14th Street & Delafield Place NW
6. 18th Street & Newton Street NW
7. 6th Street & O Street NW
8. 13th Street & Constitution Ave NE



VZ Hardening 2023– East Capitol and 11th Street NE



VZ Hardening 2023– East Capitol and 11th Street NE

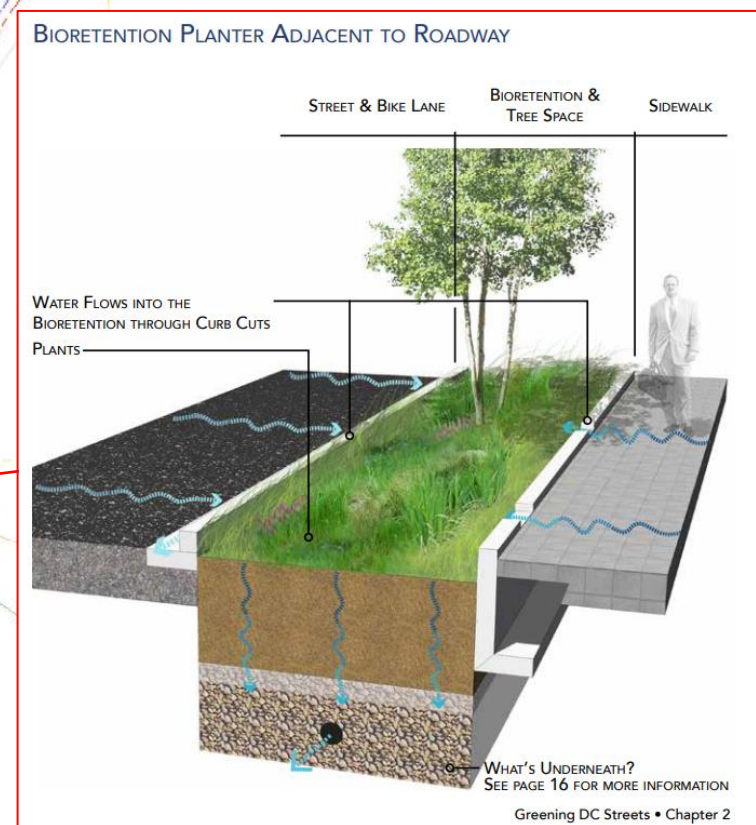
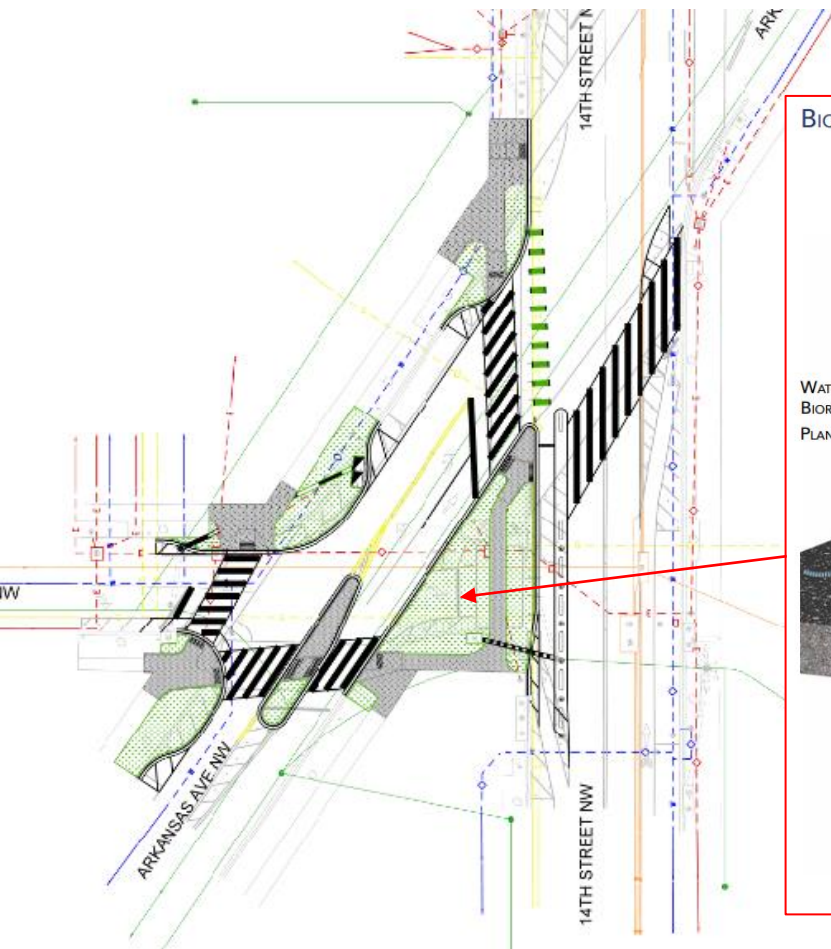
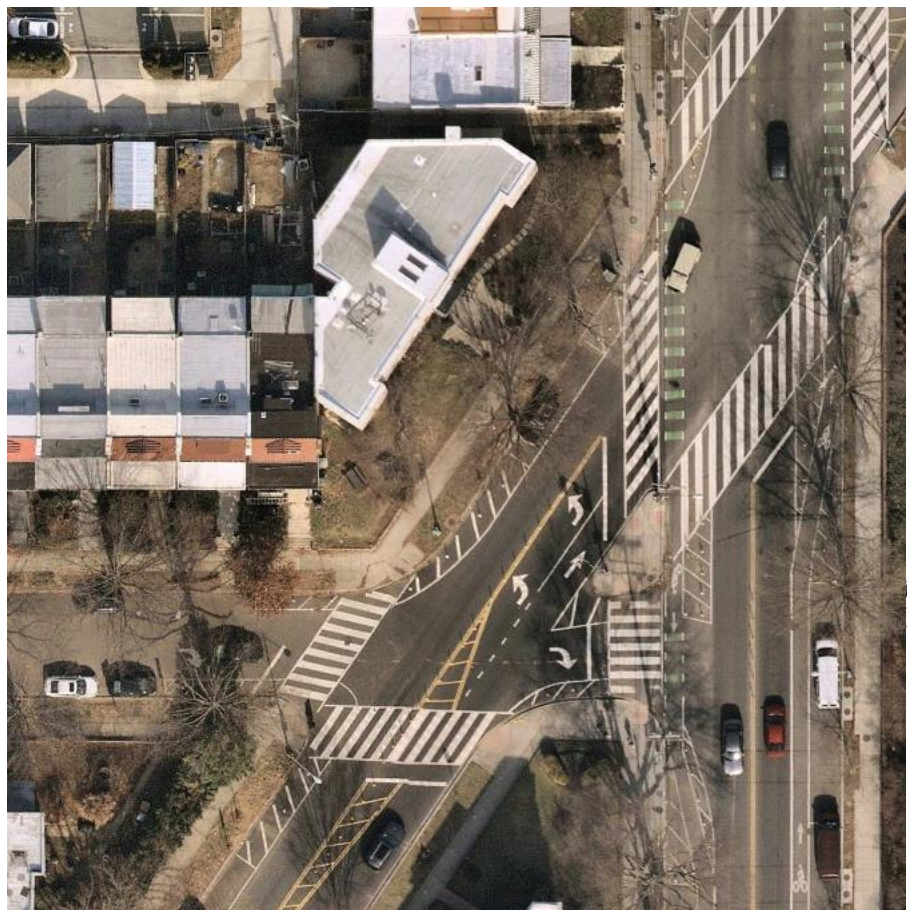


Design Characteristics:

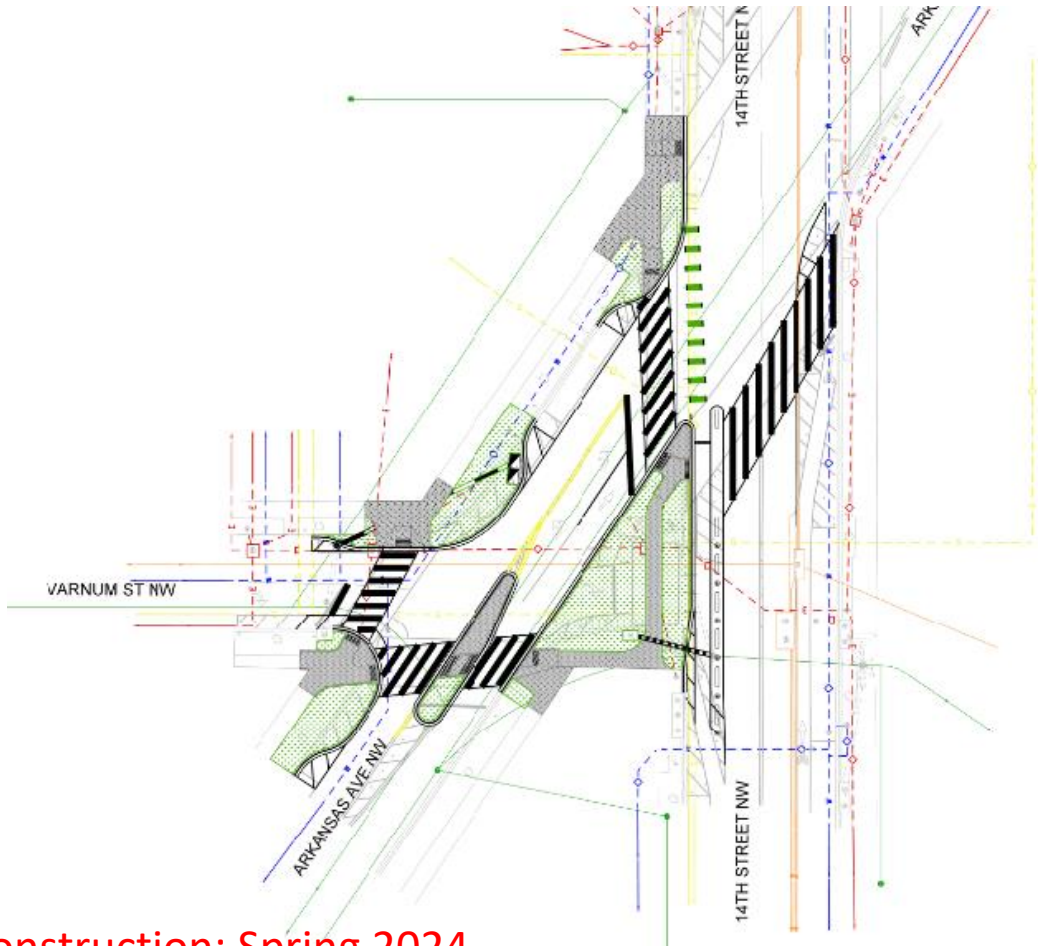
- AUTOTurn and Sight Distance analysis.
- Bringing existing Ped Ramps to ADA Standards
- Providing a bigger island and adding curb extension to the intersection, creates safer and shorter crossings for pedestrians.
- Relocation a Fire Hydrant.
- Drainage Report and DC Water Coordination started.

Construction: Winter 2023

VZ Hardening 2023– Arkansas Ave NW and 14th Street NW



VZ Hardening 2023– Arkansas Ave NW and 14th Street NW



Construction: Spring 2024

Design Characteristics:

- AUTOTurn and Sight Distance analysis.
- Closing a right turn lane, creating a green area, Bike Protected lane and safer Ped crossing.
- Upgrading an existing single inlet to double inlets.
- Bringing existing Ped Ramps to ADA Standards
- Coordination with DC Water.

Thank You!

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