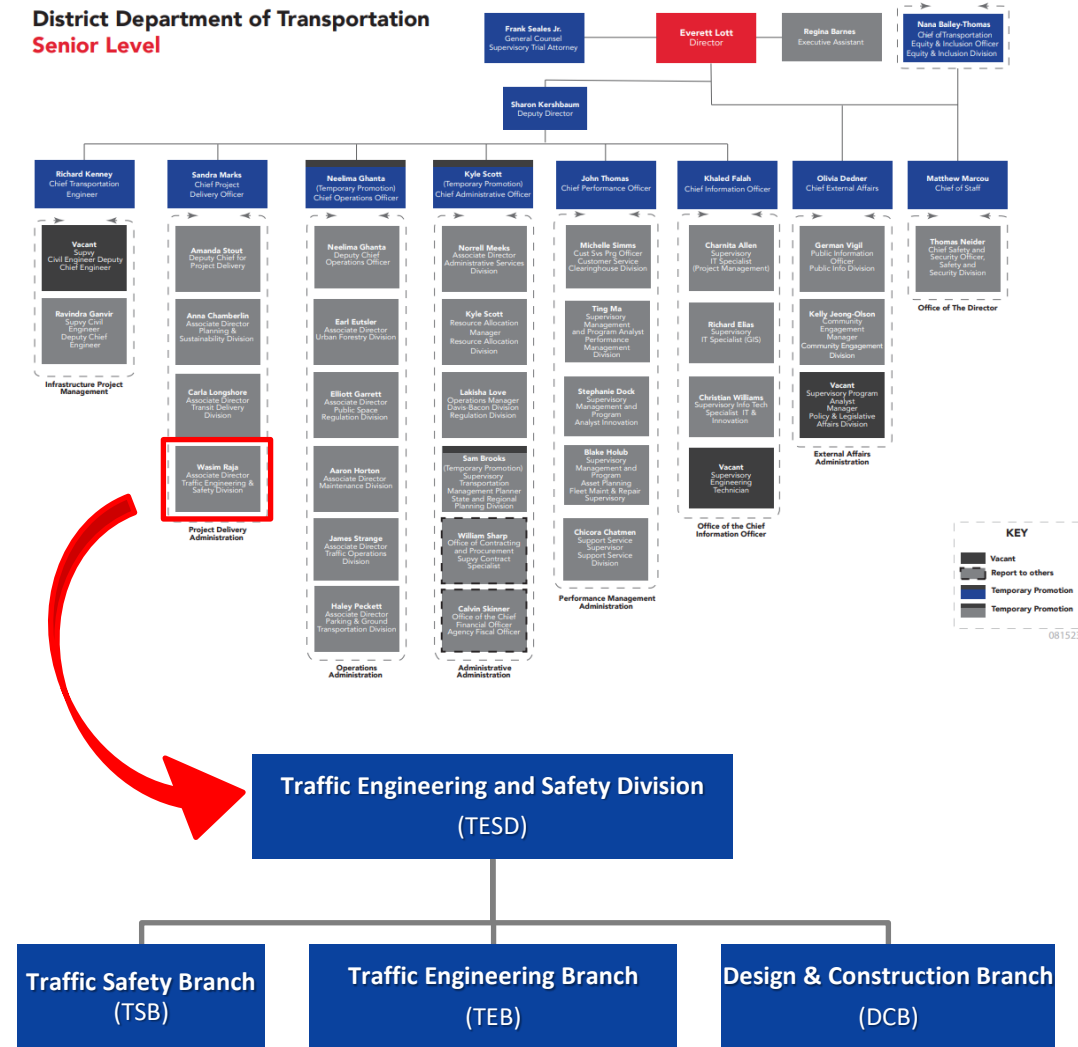


DDOT Traffic Engineering & Safety Division: Traffic Safety Programs and Initiatives

September 7, 2023

DDOT Traffic Engineering and Safety Division (TESD)

- Housed in DDOT Project Delivery Administration
- TESD org chart:
 - Traffic Safety Branch
 - Traffic Engineering Branch
 - Design & Construction Branch
- Traffic safety and engineering services (study and design)
- Construction for small- & mid-scale, quick delivery projects (i.e., non-capital projects)
- Expanded scope for TESD
 - Record number of projects delivered in 2022 and 2023
 - Medium-scale projects delivered on 1-to-2-year schedule
 - Prioritization/data driven approach used for all programs



TESD Generalized Portfolios

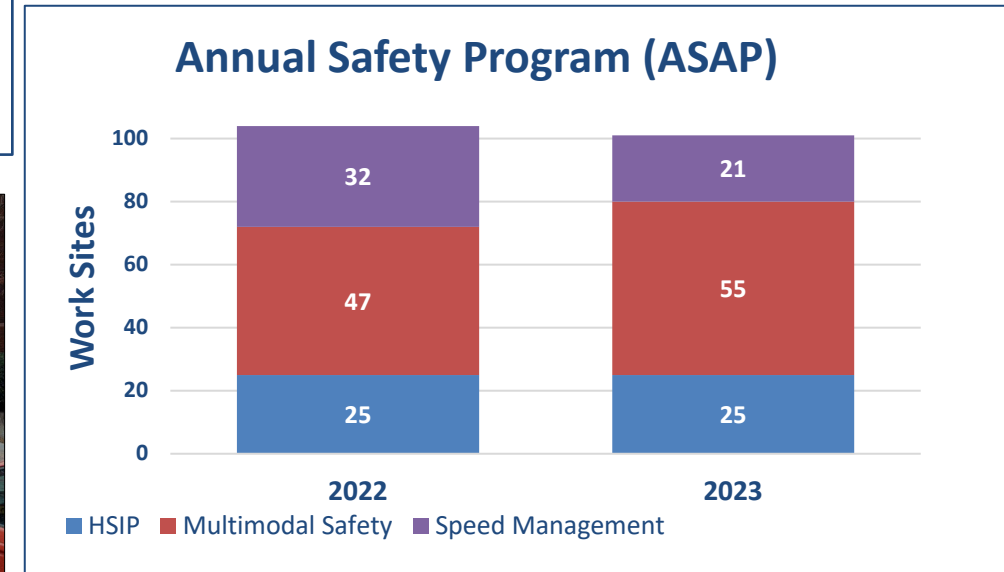
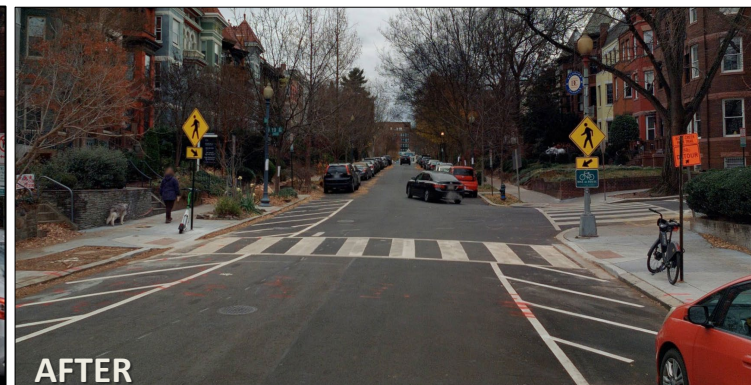
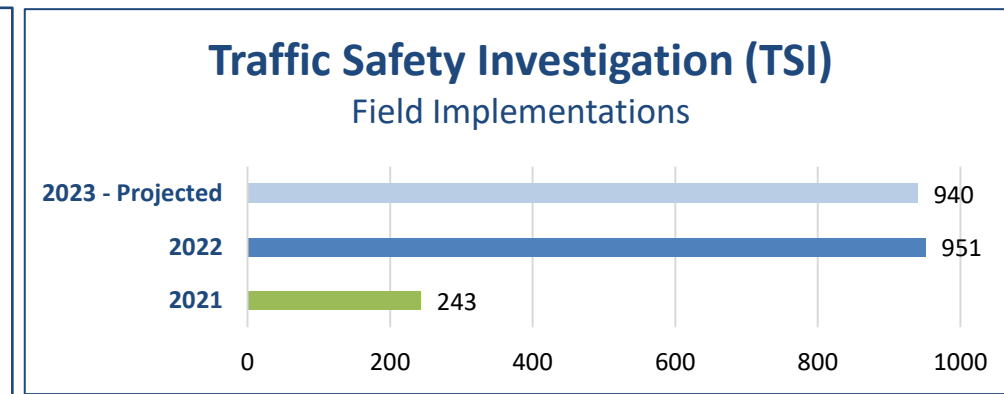
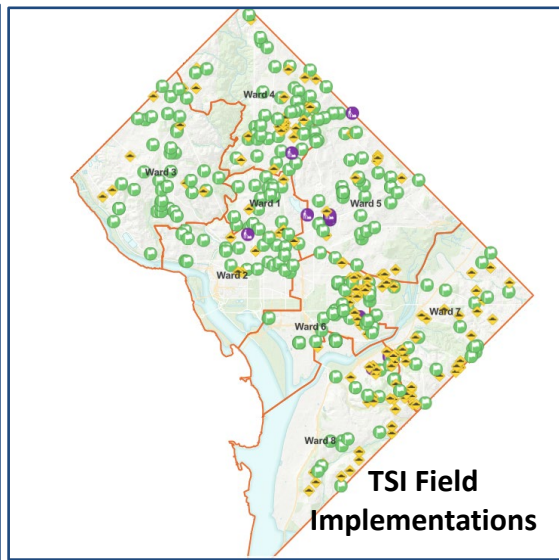
■ Proactive Portfolio

- Annual Safety Program (ASAP): 100 targeted, high-impact improvements per year
 - Intersection Safety Improvement Program (ISIP)
 - Multimodal safety (Livability Studies recommendations, Pedestrian flashers)
 - Speed Management (Driver Feedback Signs, Speed Limit Reduction)
- Vizion Zero Hardening: Converting tactical curb extensions to permanent infrastructure
- Corridor Projects
 - Vision Zero High Injury Network (HIN)
 - Protected Bike Lanes
 - Bus Priority
- Traffic Signal Construction & Modification

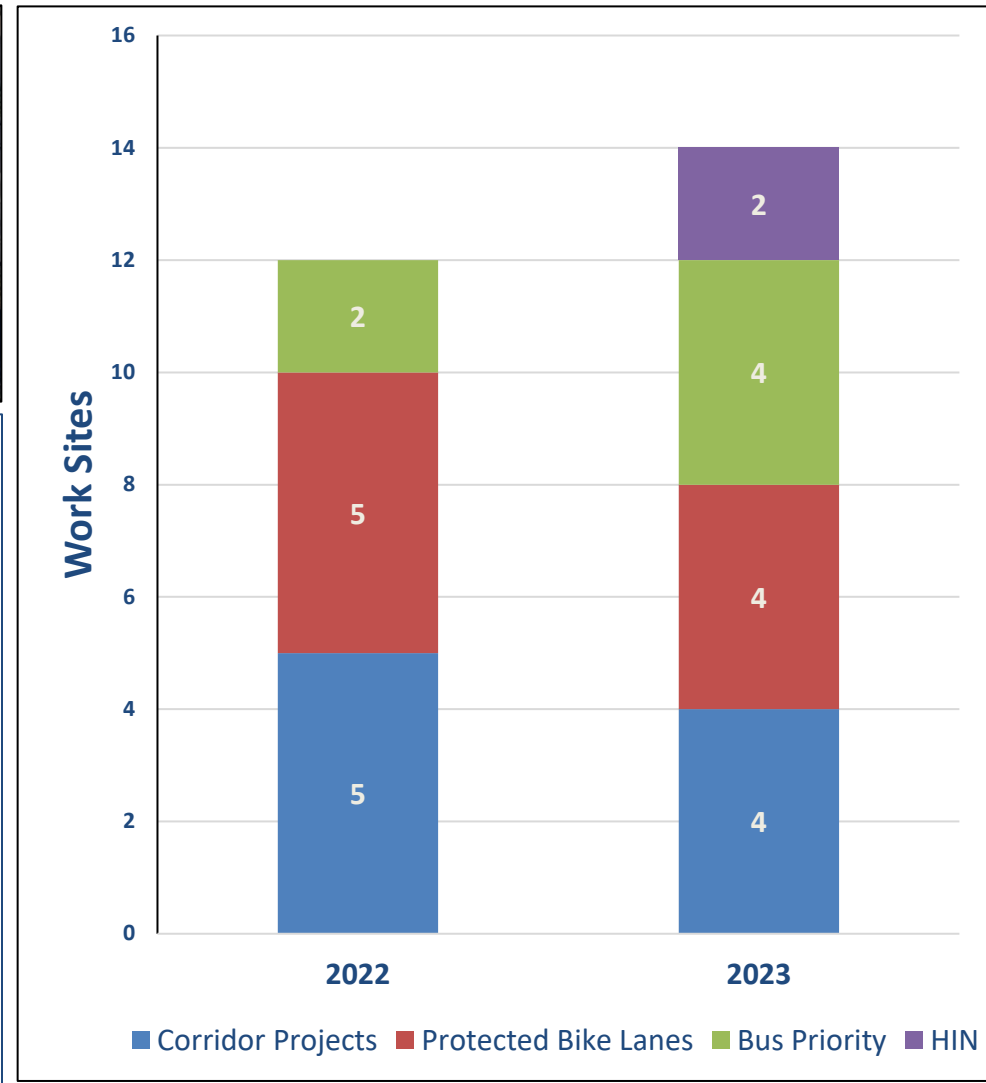
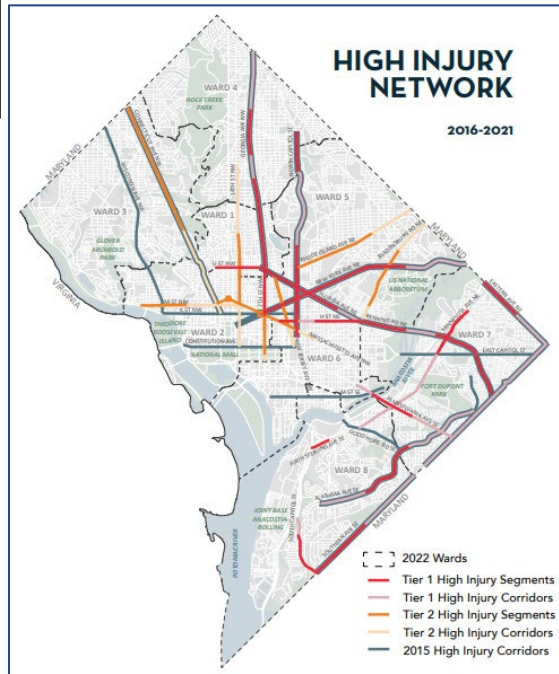
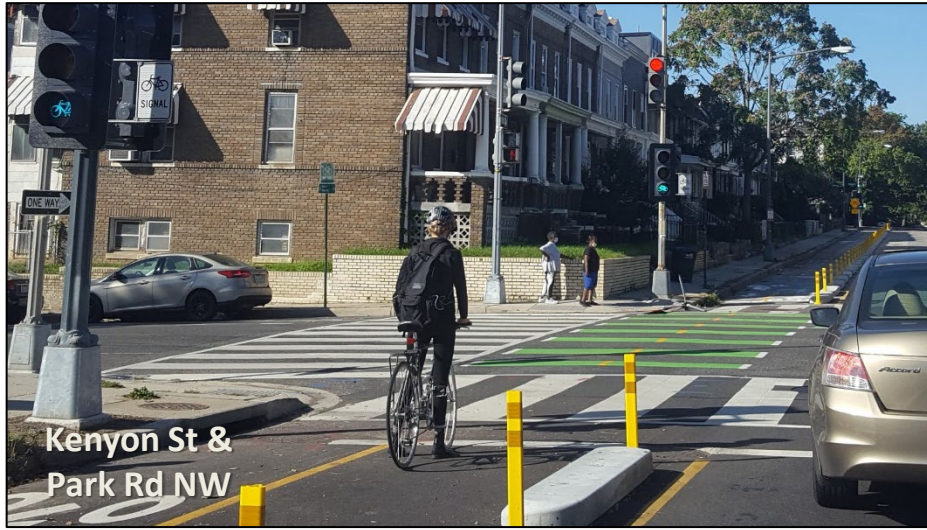
■ Reactive Portfolio

- Traffic Safety Input Program (TSI)
- Post Fatal Crash Response
- Automated Traffic Enforcement (ATE)

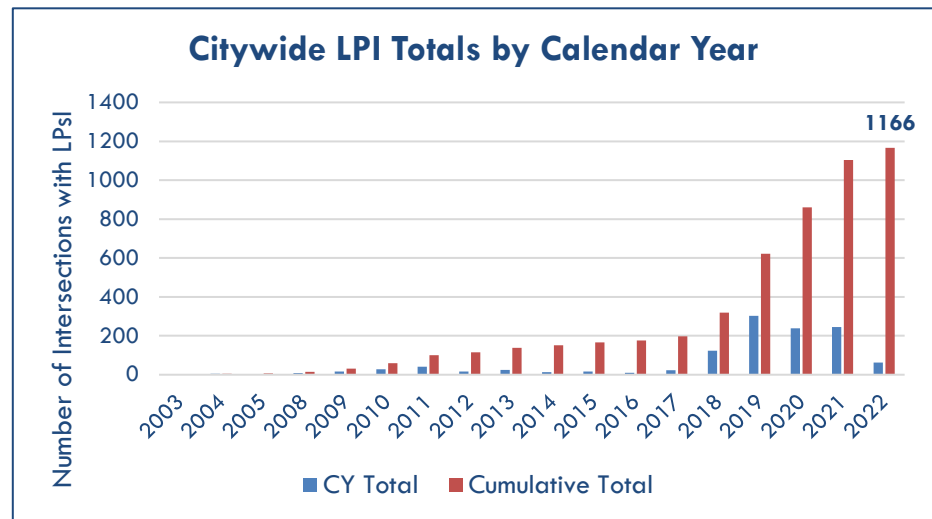
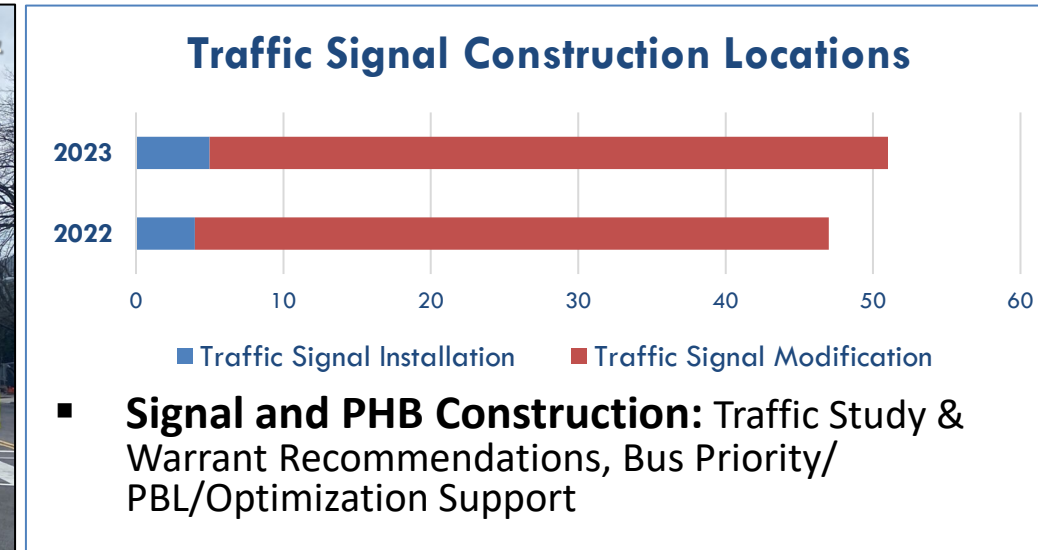
Spot Safety Improvement Projects (TSI and ASAP)



Corridor Safety Improvement Projects



Safety Improvements via Traffic Signals



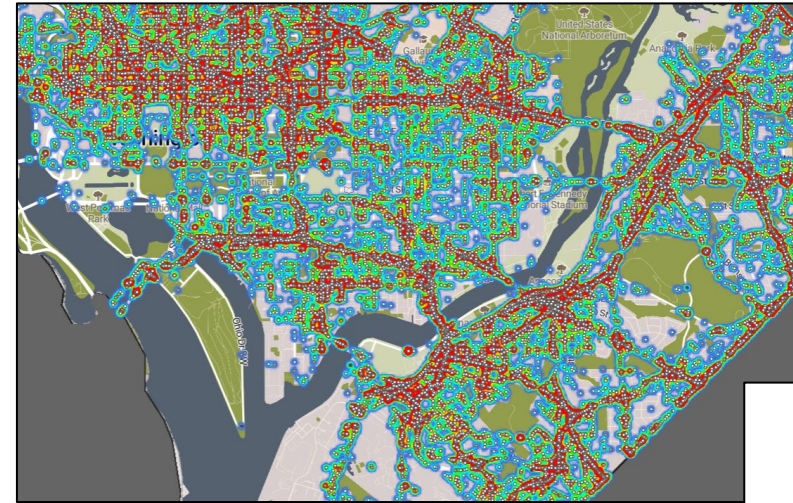
- **Traffic Signal Optimization:** Proactive 5-year multi-modal evaluation cycle covering all signals and all Wards
 - **2022 – Retimed 230 signals**
 - ❖ Added 62 Lead Pedestrian Intervals (LPIs)
 - **2023 – Preparation for Downtown Optimization of 650+ intersections**
 - ❖ Evaluation of 130+ LPIs
 - ❖ Age-Friendly Network Evaluation

Data driven decision-making

Proactive portfolio

ASAP Program

- Network screening
- Crash patterns
- Injury Crash Composite Index (CCI)
 $CCI = 0.25 * RF + 0.25 * RR + 0.50 * RS$
 - RF = Rank of injury crash frequency
 - RR = Rank of injury crash rate
 - RS = Rank of injury crash severity
- Pedestrian and bicycle CCI
- Pedestrian Master Plan (demand score)
- Speed and volume data
- Roadway characteristics
- Traffic Control Type



TARAS crash data analysis tool

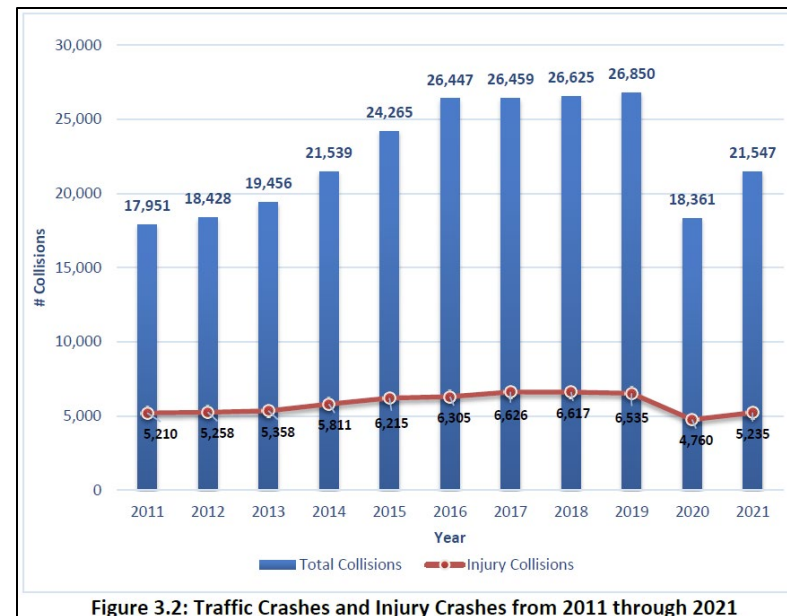
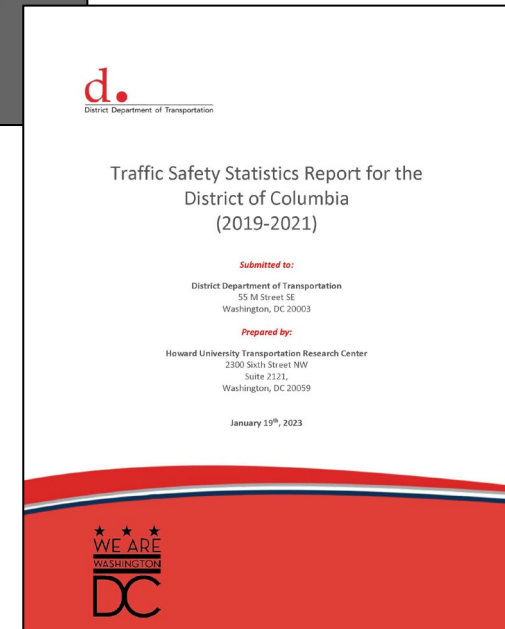


Figure 3.2: Traffic Crashes and Injury Crashes from 2011 through 2021



Annual Crash Statistics Report

Data driven decision-making

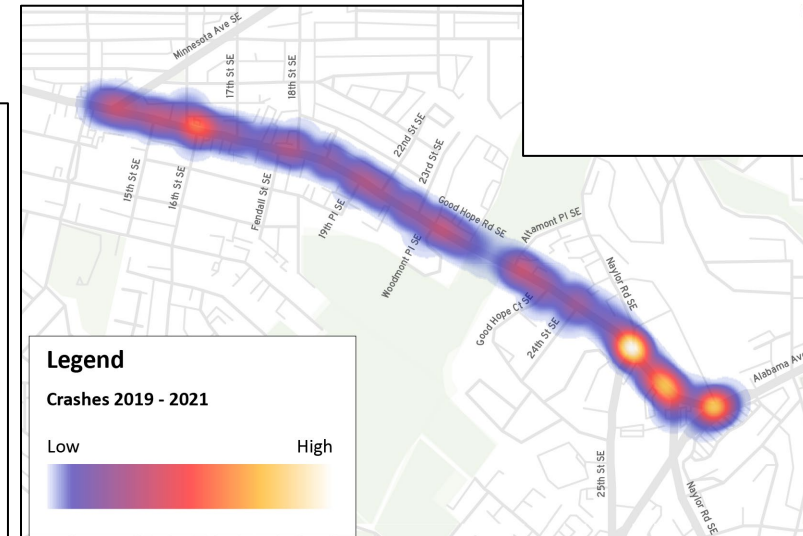
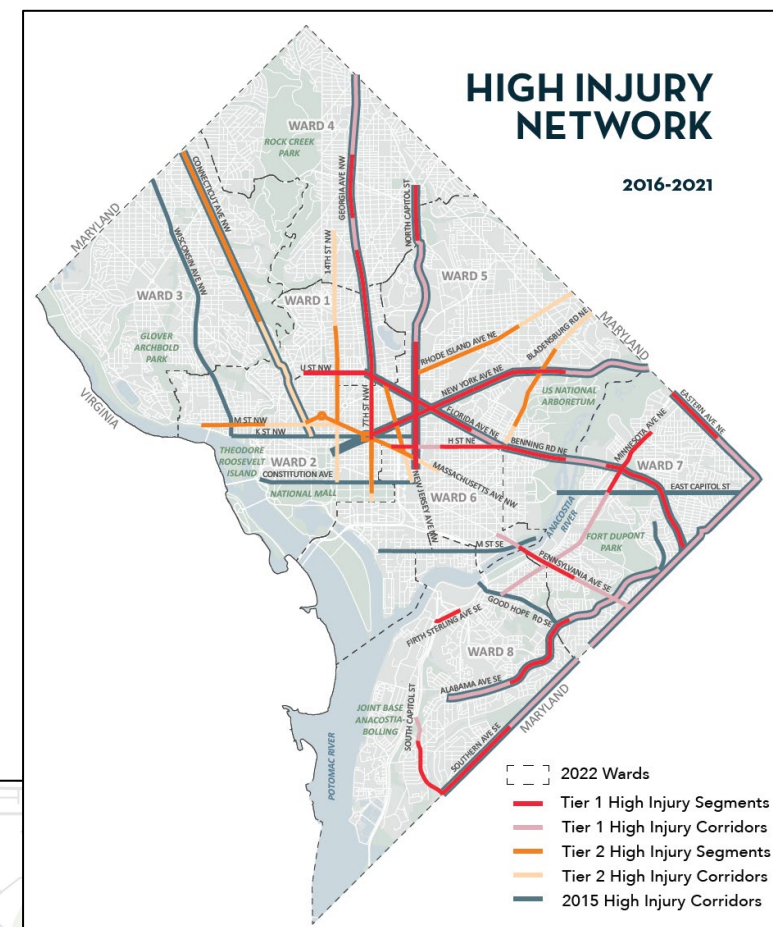
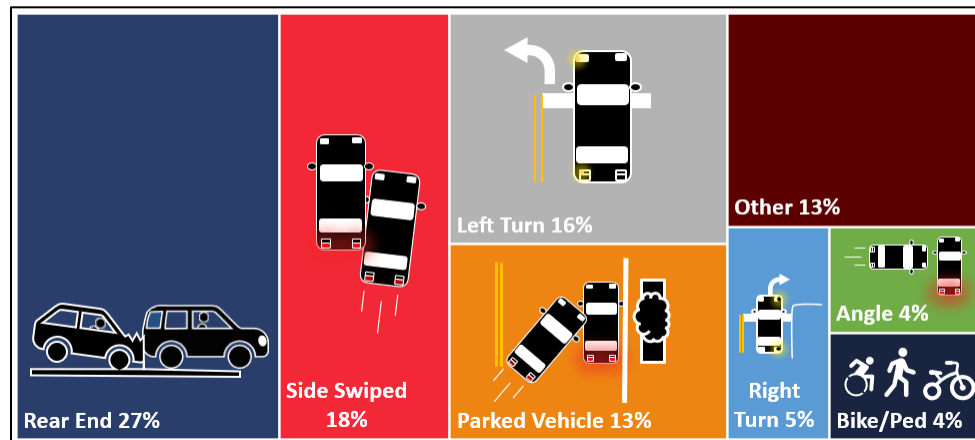
Proactive portfolio

Vision Zero HIN

- Injury and fatal crash data - sliding window analysis / tier system
- Roadway Safety Audit (RSA)

Bike lanes and Bus Priority

- MoveDC bike/bus priority network
- Safety
- Equity
- Bus ridership and delay
- Community support



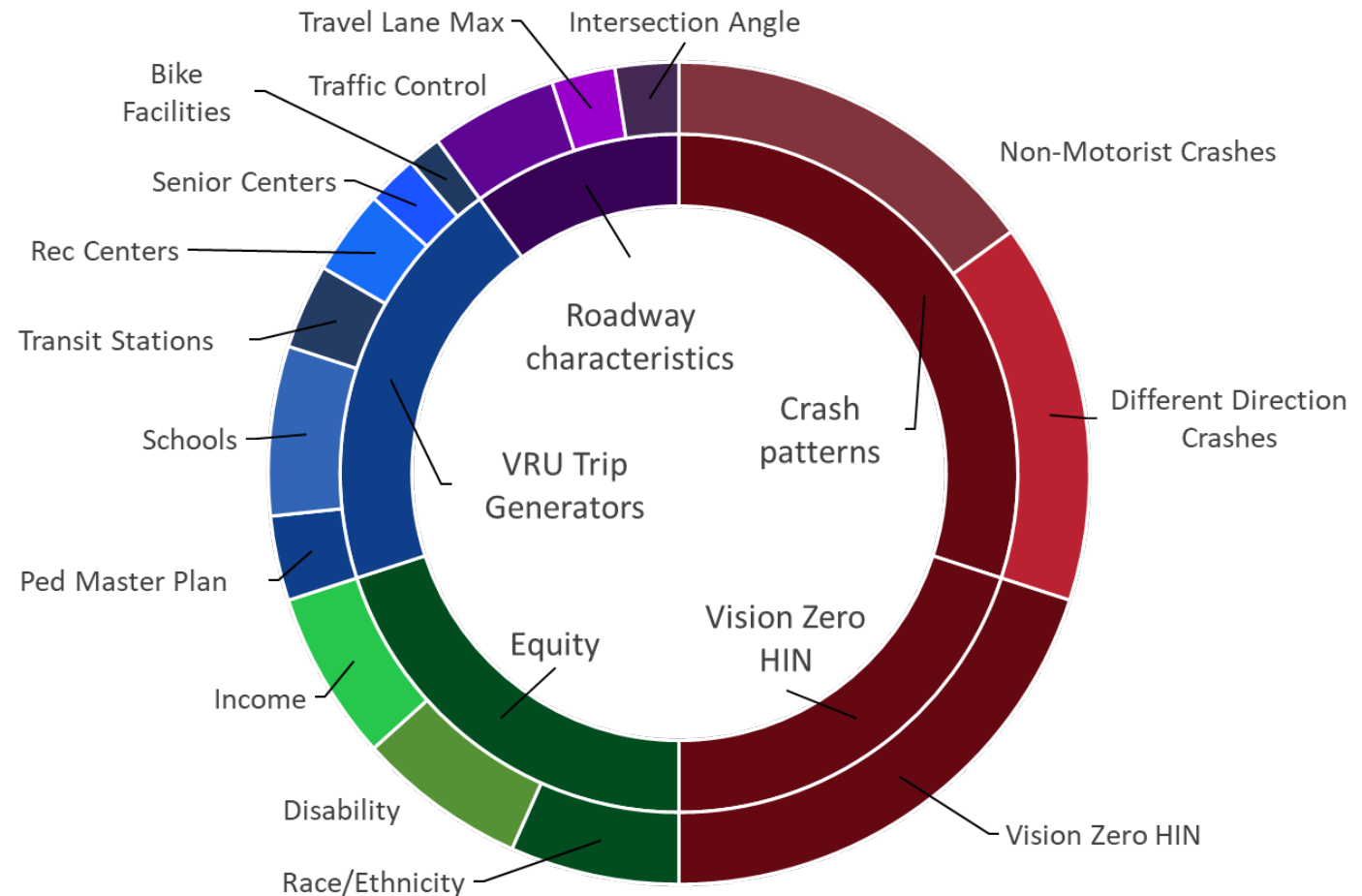
Data driven decision-making

Reactive portfolio

Traffic Safety Input (TSI) Program

Prioritization based on objective factors rather than unlimited first-come/first-served approach

- Application of Data:
 - Crash Patterns
 - Vision Zero HIN Proximity
 - Equity
 - Vulnerable Road Users (VRU)
 - Roadway Characteristics
- 200 locations prioritized per quarter (800 locations per year)



Conceptual Representation of TSI
Prioritization Factors

Data driven decision-making

Reactive portfolio

Automated Traffic Enforcement (ATE) Program

- Speed
- Red Light Running
- Stop Sign

- Application of Data
 - Crash data
 - Speed and volume data
 - Traffic control type
 - VRU infrastructure and exposure
 - Roadway characteristics
 - Violations

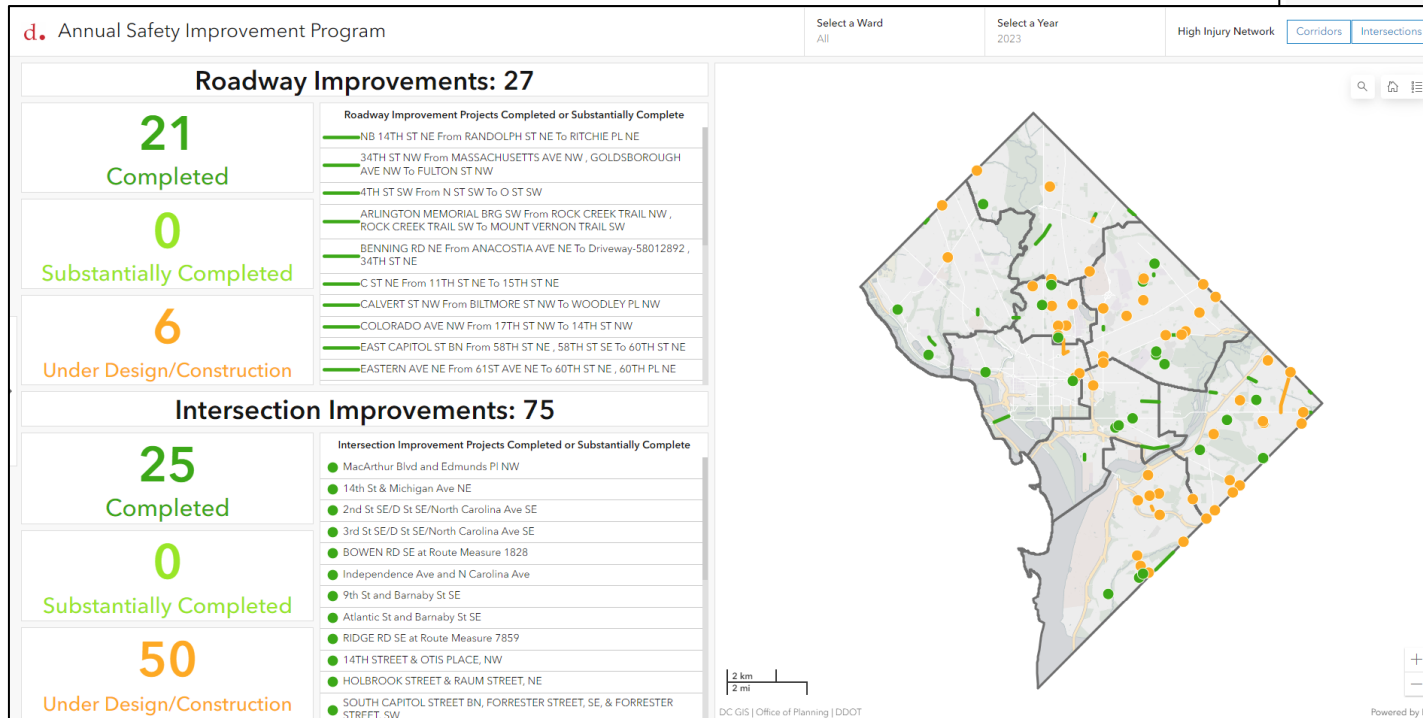
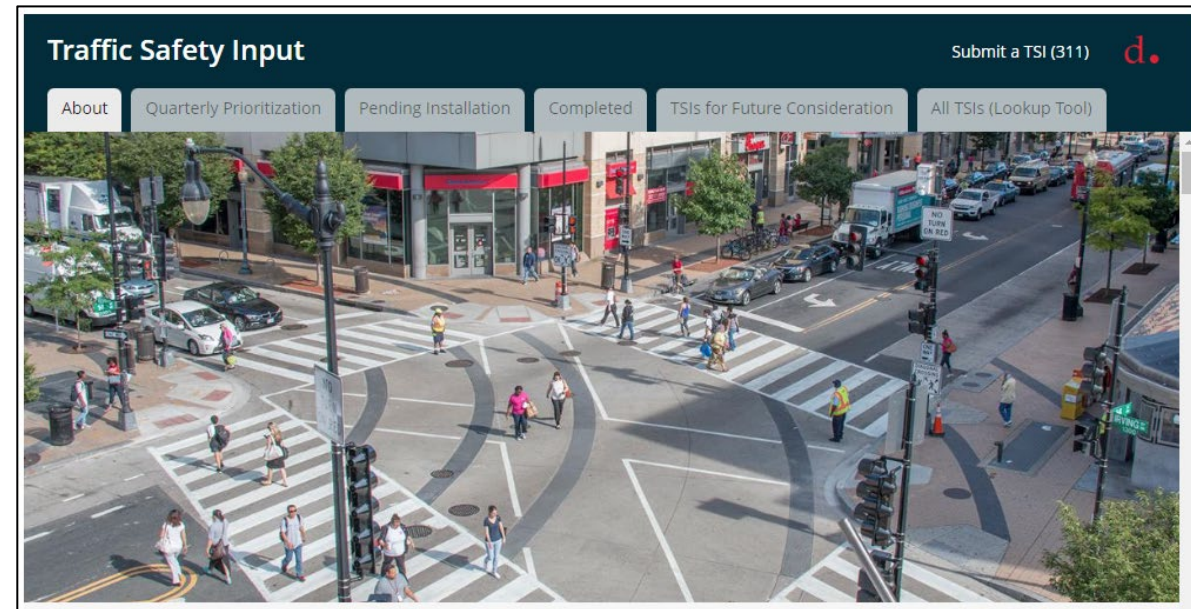
District of Columbia Department of Transportation Red Light Camera Site Assessment Worksheet	
Location: H Street and 6 th Street NE Posted Speed Limit: 25 MPH (Both Streets) Date: May 2022	
Criteria	Details
Crashes	<ul style="list-style-type: none"> • Jan 2018 – July 2021 (3.5 years). • 42 police-reported crashes, 12 of which (14%) involved injuries. • Zero (0) Fatal crashes. • Two (2) pedestrian crashes <ul style="list-style-type: none"> ○ Driver making right turn onto 600 block of H Street struck a pedestrian on the crosswalk. The pedestrian had the walk signal. ○ Driver making right turn onto 6th Street from H Street struck a pedestrian on the crosswalk. It is not clear who had the right of way. • Three (3) Bicycle crashes. <ul style="list-style-type: none"> ○ Bicyclist moving westbound got his tire struck in streetcar tracks and collided with a parked vehicle. ○ Bicyclist moving eastbound sideswiped a vehicle moving in the same direction. ○ Vehicle moving westbound struck a bicyclist on crosswalk. Bicyclist had the right of way. • Most common crash types – Rear end (13 crashes) and Sideswipe (12 crashes).
Existing Conditions	<p>Land use is commercial and high density residential. The intersection is signalized, with the following phasing:</p> <ul style="list-style-type: none"> • Concurrent eastbound and westbound movements • Northbound movement <p>A Leading Pedestrian Interval (LPI) is present at each approach. Right Turn on Red is permitted for the northbound and westbound approaches.</p> <p>The road profile on H Street is two (2) travel lanes in the eastbound and westbound direction. There is "pay to park" parking along both directions of the street. The DC Streetcar shares a track with the outer travel lane in each direction. The road profile for 6th Street is one way northbound with one travel lane. There is "pay to park" parking on the west side of 6th Street and Two-Hour Residential Permit Parking (RPP) for Zone 5 Holders 7:00 AM-8:30 PM Monday-Friday on the east side of the street.</p> <p>H Street is constructed with asphalt and with pavement markings (yellow line, stop lines, white spaced lines, red streetcar conflict lines, parking boxes, and gore areas) visible. 6th street is constructed with asphalt and with pavement markings (parking boxes, stop lines and white spaces lines) visible.</p> <p>Aerial photography from February 2022 indicates high-visibility crosswalks are present at all legs of the intersection. The crosswalks are faded at the north and west legs.</p>

District of Columbia Department of Transportation Speed Camera Site Assessment Worksheet									
Location: 1300 Block of C Street NE Posted Speed Limit: 25 MPH Date: June 2022									
Criteria	Details								
Crashes	<ul style="list-style-type: none"> • Jan 2018 – July 2021 (3.5 years). • Eight (8) police-reported crashes, one (1) of which (12.5%) involved injuries. • Zero (0) Pedestrian crashes. • Zero (0) Bicycle crashes. • Zero (0) Fatal crashes. • Two (2) Right-Angle Crashes. <ul style="list-style-type: none"> ○ Both right-angle crashes involved a northbound 13th Street vehicle striking a westbound C Street Vehicle. ○ For one crash, the northbound vehicle accelerated towards the intersection on a yellow light and struck the westbound vehicle which had been already given a green signal. Northbound vehicle issued NOI for passing a yellow signal. ○ For the other crash, it is unknown who had the right of way, and no NOI was issued because both drivers left the scene of the accident. 								
Existing Conditions	<p>Land use is low density residential. The C Street road profile is one (1) travel lane in the westbound direction. There is a bike lane in the westbound direction (outer lane).</p> <p>The middle of the 1300 block of C Street is intersected at an angle by Tennessee Avenue. The intersections at 13th Street, 14th Street, and Tennessee Avenue are signalized. 13th Street and Tennessee Avenue have one travel lane each in the northbound and southbound directions. 14th Street has one travel lane in the southbound direction.</p> <p>Metrobus stops for Route D6 are located at the Northeast corners of the 13th and 14th Street intersections. A stop for Route B2 is located at the Northwest corner of the 14th Street intersection.</p> <p>There is Residential Permit Parking (RPP) for Zone 6 holders between the hours of 7:00 AM-8:30 PM Monday to Friday on both sides of the street.</p> <p>The street is constructed with asphalt and with pavement markings (stop lines, parking boxes, and gore areas, bike lane markings) visible. Aerial photography from June 2022 indicates high-visibility crosswalks are present at all legs of the 13th Street, Tennessee Avenue, and 14th Street intersections.</p>								
Enforceable Daily Speed Violations (11+ MPH over limit)	<table border="1"> <thead> <tr> <th></th> <th>1300 Block</th> </tr> </thead> <tbody> <tr> <td># Violations</td> <td>27</td> </tr> <tr> <td>Total Vehicles</td> <td>3200</td> </tr> <tr> <td>% of All Vehicles</td> <td>0.8%</td> </tr> </tbody> </table>		1300 Block	# Violations	27	Total Vehicles	3200	% of All Vehicles	0.8%
	1300 Block								
# Violations	27								
Total Vehicles	3200								
% of All Vehicles	0.8%								

Example ATE Assessment Worksheets

Public Dashboards

- Public dashboards for TESD safety programs
- Improved transparency and public awareness
- TESD continues to improve existing dashboards and develop new platforms for other programs



Traffic Safety Input

311 service requests for Traffic Safety Inputs submitted to the District Department of Transportation (DDOT)

TSI Dashboard

- Track requests throughout prioritization, investigation, and field implementation
- Search requests by address, filter by Ward, ANC, SMD, quarter, and service request number
- Investigation status pop-up

Zoom to Pan 1 of 6

FY23 Q3 Traffic Safety Input

311 Service Request Number	22-00478321
Service Request Address	31 ROCK CREEK CHURCH ROAD NW, WASHINGTON, DC, USA, 20011
Initiated Date	October 4, 2022
Associated Location	VARNUM ST NW & ROCK CREEK CHURCH RD NW
Issue Reported	Vehicle Crashes
Investigation Status	Safety Mitigations Pending Installation (Check "Pending Installation" tab for more details)

Traffic Safety Input

Submit a TSI (311)

About Quarterly Prioritization Pending Installation Completed TSIs for Future Consideration All TSIs (Lookup Tool)

TSIs Under Investigat...

Ward All Wards	ANC All ANCs	SMD All SMDs	311 Service Requ... All	Quarter FY23 Q3 (Apr-...
-------------------	-----------------	-----------------	----------------------------	-----------------------------

The map shows locations that were prioritized by quarter. Use the filters above to change quarter. Each Traffic Safety Input received is associated with its appropriate location (intersection). The top 200 locations in the prioritization model with TSIs are investigated each quarter. One location may have multiple TSIs associated with it; DDOT reads each TSI associated with the 200 locations to fully understand the resident's concern. These TSIs are shown on the dashboard.

Investigation Status

- Under Investigation
- Investigation Complete

Traffic Safety Inputs (TSIs) Under Investigation

Use the filter in the header to view by Fiscal Year and Quarter. Click 311 Service Request

Number to view on map.

- 22-00058588
4355 TEXAS AVENUE
SE, WASHINGTON, DC, USA, 20019
- 22-00053062
Eckington PI NE and Quincy PI NE,
1600 block of Eckington PI NE.
- 22-00084673
4300 ALABAMA AVENUE
SE, WASHINGTON, DC, USA, 20019
- 21-00580666

TSI Dashboard

- Search by address, filter by Ward, ANC, SMD, quarter, and service request number
- Legend items represent main work type
- Details on investigation results and safety improvements planned / installed

Zoom to Fan 1 of 3


TSI 311 Service Requests: 21-00493328

The work order associated with Traffic Safety Investigation 311 Service Request 21-00493328 was closed on 1/23/2023 with Signage, Markings, and Other

Date TSI Submitted: 10/29/2021
Latest Comment: Thank you for submitting a request for Cortland Pl at 29th St and Devonshire Pl regarding installation of a marking crossing. We have investigated and will install new wheelchair/bicycle ramps and a ladder type crosswalk and adjust existing parking to improve traffic safety. This service request is being closed. Please visit <https://arccg.is/Dqe8T> for updates.
Comment Date: May 4, 2022

[TSI 2.0 FAQ](#)

Traffic Safety Input

Submit a TSI (311) 

About Quarterly Prioritization Pending Installation **Completed** TSIs for Future Consideration All TSIs (Lookup Tool)

Completed Field Install...	Date Closed	Ward	ANC	SMD	311 # (TSIs with Safety M...
	1/1/2022 - 6/...	All Wards	All ANCs	All SMDs	ALL

Traffic Safety Inputs (TSIs) Closed with a Safety Mitigation
Sorted by Date Closed

- 23-00102396**
NEW YORK AVENUE
NW AND 5TH STREET
NW,WASHINGTON,DC,
USA,
Date Closed:6/5/2023
- 23-00102435**
NEW YORK AVENUE
NW AND 5TH STREET
NW,WASHINGTON,DC,
USA,
Date Closed:6/5/2023
- 23-00102493**
NEW YORK AVENUE
NW AND 5TH STREET
NW,WASHINGTON,DC,
USA,
Date Closed:6/5/2023
- 22-00029792**
900 - 905 BLOCK OF
INGRAHAM STREET
WASHINGTON,DC

The data in this dashboard are updated daily. Thus, there may be a slight

DDOT has completed review and installation of TSIs on this map. This map shows locations where safety mitigations were installed or where no safety mitigation was deemed necessary.

Note: Please select one geographic filter at a time for accurate search results. For example, if you select "Ward" filter and "ANC" filter at the same time, the results will be show the broadest filter selected, i.e. all TSIs in the Ward.

TSI 2.0 Work Orders

Type of Work

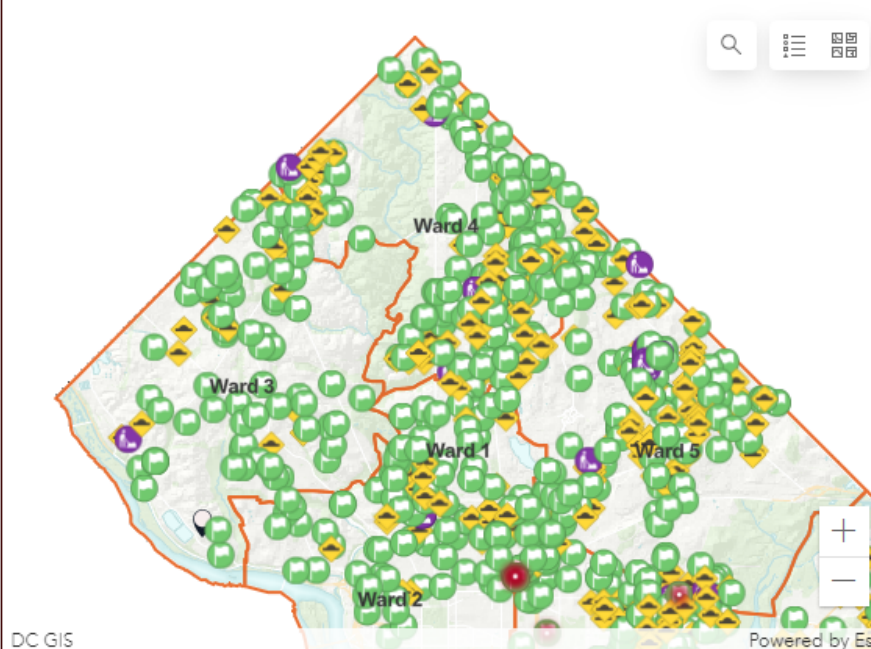
- Signal Timing Changes
- Signage, Markings, and Other

TSI 1.0 Work Orders

Type of Work

- Signage, Markings, and Other
- Speed Hump or Speed Table
- Curb Extension

No Further Interventions Recommended (TSI)



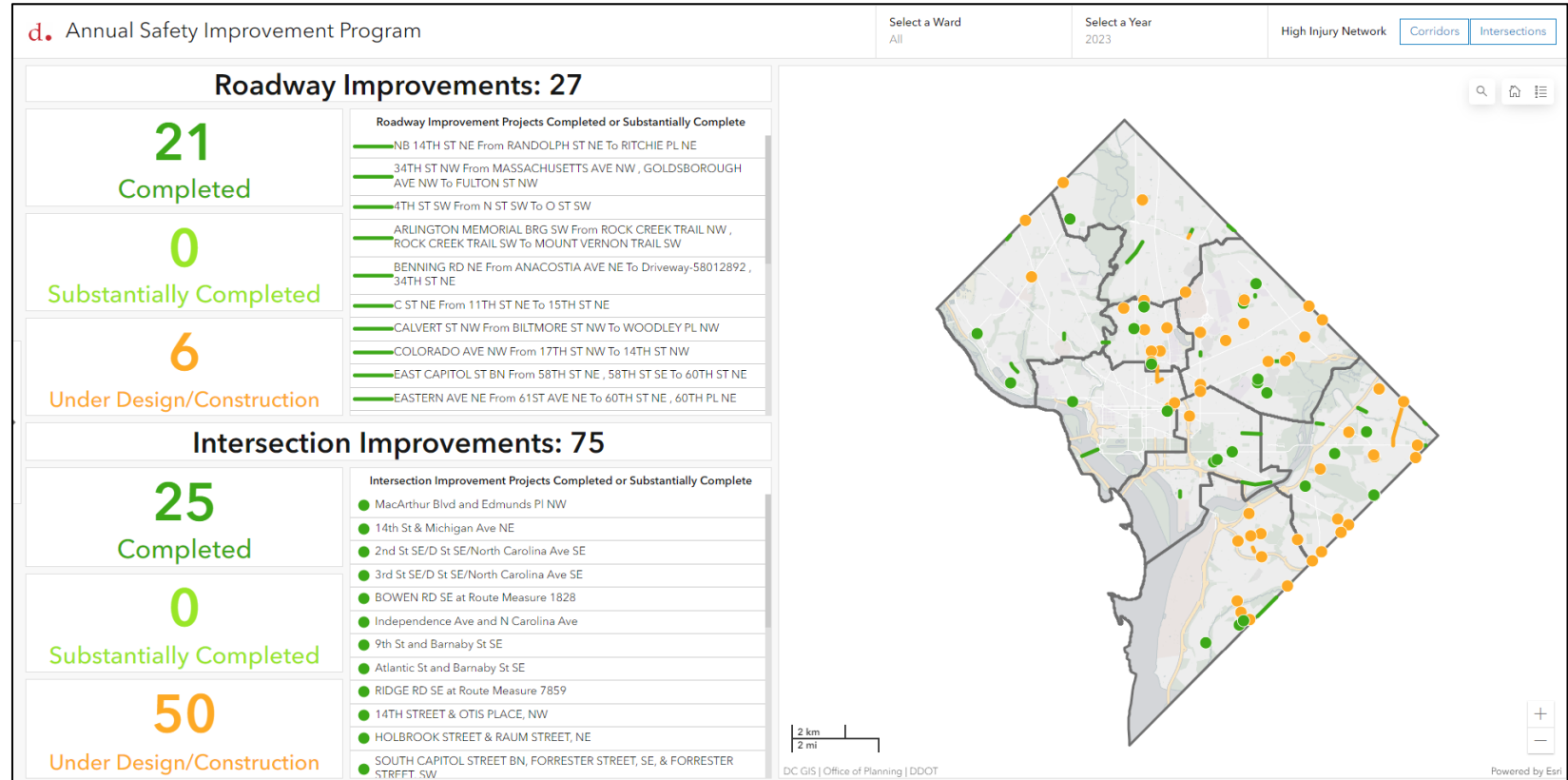
DC GIS Powered by Esri

If you have any questions, please contact DDOT's Community Engagement Team at <https://ddot.dc.gov/page/community-engagement>

ASAP Dashboard

- Search by ward and year
- Track roadway and intersection projects through design and construction
- Details on safety improvements planned / installed

17th St & Bladensburg Rd NE	
Program	ASAP 2022
Work Type	Highway Safety Improvement Program (HSIP) Improvements
Secondary Work Type	- Install New Signs - Install Thermoplastic Pavement Markings
Project Status	Completed
Ward	5
ANC	5D





District Department of Transportation