PROTECTED BIKE LANES

CROSSTOWN

DC PROTECTED BIKE LANES PROJECT

Final Concept Memo

March 22, 2019

d. WE ARE WASHINGTON DC GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

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EXECUTIVE SUMMARY

Background

The District of Columbia has few East/West ("East/West" or "E/W") network connections north of the original L'Enfant Plan street grid. This makes E/W travel to and from neighborhoods and activity centers challenging as a limited number of corridors carry the majority of the traffic.

In September 2016, DDOT completed the Crosstown Multimodal Transportation Study, which was a part of the Two-Year Action Plan from moveDC. The Crosstown Multimodal Transportation Study recommended a variety of multimodal improvements throughout the Columbia Heights to Brookland E/W corridor, and made recommendations for safe east and westbound biking connectivity to close a major gap in the existing bicycle network. The Crosstown Protected Bicycle Lane project along Warder Street NW, Park Place NW, 5th Street NW, and 7th Street NW is a result of a community request that surfaced during the Crosstown planning study.

In 2017, as a result of the Crosstown and moveDC studies, DDOT initiated a project to create PBLs running east/west along Irving Street NE/NW, Kenyon Street , NW and north/south along 5th Street NW/Park Place NW, and 7th Street NW/Warder Street NW . The scope of the project includes bicycle facility design, safety analysis, traffic analysis, parking analysis, and public outreach. The key goals of the Crosstown project are to create a protected bicycle facility that will enhance safety, be suitable for people of all ages and be completed in a cost-effective manner. These goals, along with extensive stakeholder input, have guided the development of the current Crosstown concepts.

Concept Development (February to June 2018)

Concept development for the E/W corridor explored a variety of median-running PBL configurations based on the Crosstown recommendation along Kenyon Street / Irving Street (between Warder Street NW and Michigan Avenue NE) and avoided vehicular traffic to/from the North Capitol Street interchange.

Concept development for the North/South ("North/South" or "N/S") corridor developed two concepts: a pair of north/south parking-protected bike lanes on 5th Street NW/Park Place NW, 7th Street NW/Warder Street NW (from Kenyon Street NW to Grant Circle and New Hampshire Avenue NW) or a two-way PBL on Park Place NW.

As part of the concept development, the team considered safety, traffic impacts, parking impacts, continuous and simple to understand bicycle facilities, land use, potential conflicts, topography, future growth, connectivity, and stormwater impacts. The design team coordinated with DDOT staff to explore designs, plan for future traffic impacts, and align the facility with other current, planned, and future facilities in the District.

The first phase of the concept development included the following alternatives:

- **E/W Alternative 1:** A two-way PBL using a repurposed lane on the south side of the Irving Street median, with a north/south crossover that transitions to a PBL along the north side of Irving Street NW at First Street NW
- **E/W Alternative 2a:** A two-way PBL using a repurposed lane on the north side of the Irving Street NW median, with a road closure on westbound Irving Street NW/Hobart Place NW at the split to Kenyon Street NW to continue the PBL along the south side of Kenyon Street NW
- **E/W Alternative 2b:** A two-way PBL using a repurposed lane on the north side of the Irving Street NW median, with a transition to a PBL on the north side of Kenyon Street NW at the Irving Street NW/Hobart Place NW/Kenyon Street NW split
- **NS Alternative 1:** Parking protected bike lanes on 5th Street NW/Park Place NW (west side) and 7th Street NW/Warder Street NW (east side)

- **NS Alternative 2:** Two-Way PBL along east side of Park Place NW

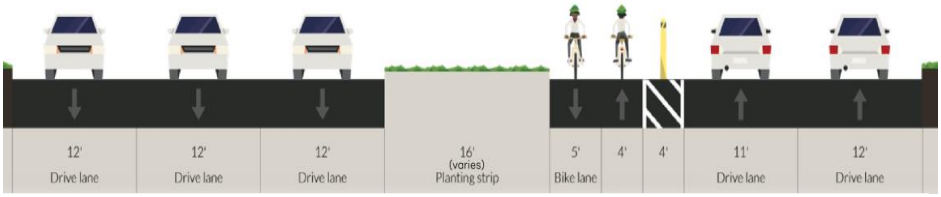
The above listed concepts were vetted during an Interagency Meeting on May 15, 2018 and an Open House Meeting on June 12, 2018.

Final Concept (June to September 2018)

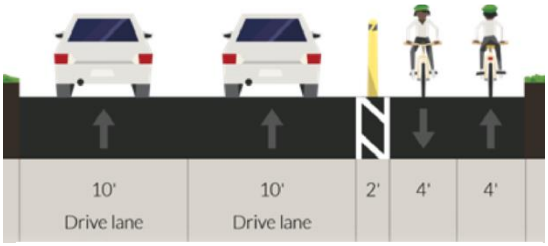
Between June and September 2018, the Project Team reviewed the comments generated by the Interagency Meeting and the Open House Meeting and considered comments while also examining each design. The final concept made refinements to the North/South and East/West portions of the Project Limits.

FINAL CONCEPT SUMMARY East/West Median Running Protected Bike Lanes

The main East/West component of the Crosstown facility is a median running PBL along Kenyon Street and Irving Street from Michigan Avenue (eastern project limit) to Warder Street (western project limit). A short multi-use side path on the north side of Michigan Avenue would provide a mixed-use connection between the 2-way PBLs on Irving Street and 4th Street / Harewood Road. The bike facility crossing and pedestrian crosswalk at the dual-right from Michigan Avenue onto Irving Street are enhanced by the addition of a traffic light, stopping the current free-flow westbound traffic on a red ball coordinated with the existing signal at Michigan/Irving, with the operations of the new signal. The PBL is placed on the north side of the median island transitioning to the south side of the median at the MIRV Project intersection. The PBL continues along Irving Street to the First Street intersection, where it transitions to the north side of the median. This configuration avoids conflicts with the North Capitol Street ramps, preserves the dual left into First Street by westbound traffic, and maintains a right turn lane drop on for eastbound traffic on Irving Street. The concept provides vertical protection, reconfiguration of medians, and modifications to existing stormwater inlets or sub-surface infrastructure. The facility remains adjacent to the median shifting across the westbound traffic to the north side of Kenyon Street at the Irving Street and Hobart Place intersection. To facilitate this movement and respond to Vision Zero pedestrian concerns, a new traffic signal will be provided. This will stop traffic in both west- and eastbound



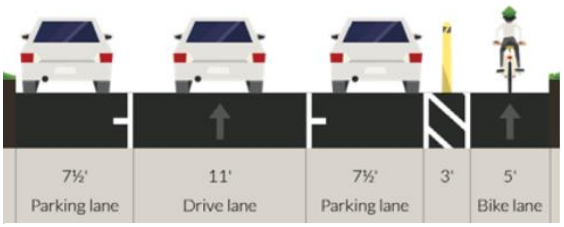
E/W Section – East of MIRV Entrance



E/W Section Between Park and Warder

directions when actuated by a pedestrian or bicyclist. The two-way PBL continues along the north side of Kenyon Street to Warder Street, where a receiving bike lane transitions the PBL to a shared road facility. The proposed facility eliminates 7 parking spaces on the south side of Kenyon Street to provide a merge area for westbound traffic crossing Park Place.

NORTH/SOUTH PARKING PROTECTED COUPLET



Northbound Section –7th Street NW/Warder Street NW

The North/South component of the Crosstown Facility analyzed a pair of east side, one-way parking protected bike lanes (PBLs) running northbound along Warder Street NW/ 7th Street NW from Kenyon Street NW to New Hampshire Avenue and southbound on Park Place NW/ 5th Street NW from Grant Circle to Kenyon Street and, 2) two-way protected bike lanes (PBLs) on the east side of Park Place/ 5th Street. Based upon public comments and traffic analysis, a modified version of alternative 1 was chosen. This alternative switches the bikeway on 5th Street / Park Place to the east side of the street to avoid side-street conflicts. The final concept development overview and public input summaries include information supporting this change.

Due to the narrowness of 7th Street NW, at New Hampshire Avenue the PBL will transition into the existing 7th Street NW bike lane. On 5th Street / Park Place, the bikeway will be protected from Kenyon Street to Grant Circle. At the Kenyon Street intersections, Park Place and Warder Street will tie into the east / west PBL and existing bike lanes to the south. On Park Place, bicyclists will make a two-stage transition to cross into the existing bike lane on the west side of Park Place just south of Kenyon Street.

Southbound Section – 5th Street NW/Park Place NW

Parking will be impacted at some intersection, alley, and driveway approaches to increase the visibility of the bikeway on 7th Street / Warder Street and 5th Street / Park Place. This will eliminate approximately 28 parking spaces (23 on Warder Street / 7th Street, and 5 on 5th Street / Park Place). Nonetheless, this reduction will be offset by the projected net gain of approximately 39 parking spaces along Park Place. These spaces will be created by converting one of the two travel lanes on Park Place between Rock Creek Church Road and Luray Place to full-time parking.

An additional advantage of the location on the east side of Park Place is the continuous, un-interrupted curb space along the Armed Forces Retirement Home (AFRH) property. There will be no conflicts for through cyclists in this segment.

30% Design (September 2018 to March 2019)

The Project team used feedback from a public meeting held in June 2018 and from an in-field pop-up protected bicycle lane demonstration project in September 2018 to develop the concepts described in the final concept over the summer 2018. Based on the community feedback, the Project team moved forward a 30% design for the E/W corridor between the intersection of Kenyon Street NW and Warder Street NW and Michigan Avenue NE and Irving Street NE, and will continue work on the N/S concept in the future.

As the Project moves forward to construction or additional concept design work, the Project Team anticipates the following areas for consideration:

- Stormwater management: Additional stormwater management analysis will likely be needed for the East/West corridor, particularly at any area where the proposed design requires a relocation of the existing median.
- Developer coordination: As more development moves forward through the site planning process, the Project design will need to be closely coordinated, particularly if the construction phases for private development are concurrent with the construction of the Project.
- Lack of 30% N/S plans: Because of concerns voiced by the community about the North/South connection, the Project Team will continue the North/South corridor concept in the final concept in the future.

Safety, Traffic, and Parking

The Project Team took a technical approach to address safety, traffic and parking to develop the final concept that was developed. Over the life of the Project, the team developed a methodology to collect, examine and report out on the safety, traffic and parking concerns for each of the proposed concepts. The paragraphs below briefly describe the approach and findings of the technical analysis.

Safety - The Project Team examined safety by reviewing crashes at key intersections, comments recorded through the District of Columbia Vision Zero website, and turning movement counts at intersections. Internal staff was engaged to discuss their knowledge and concerns about the existing conditions and to vet the concepts.

Traffic - Using data provided by DDOT (Synchro models, signal timing plans, and traffic volume counts), the project team reviewed current and future traffic conditions for Year 2040 with build and no-build scenarios to identify the future baseline and impacts of the Crosstown protected bike lane concept. Level of Service (LOS) evaluation was considered for the concepts and can be found in the body of the summary. Generally, the evaluation found that the 2040 build and no-build scenarios would cause acceptable service levels at all intersections analyzed, with the exception of Michigan Avenue NE at 4th Street NE in the No-Build Scenario and Michigan Avenue NE at 4th Street NE and Michigan Avenue NE at Harewood Road NE for the 2040 Protected Bicycle Lane Build Scenario.

Parking – The Project Team placed cameras throughout the project area to record parking occupancy rates. The corridors analyzed were:

- Irving Street/Kenyon Street NW, from Park Place NW to Warder Street NW
- 5th Street NW/Park Place NW, from Kenyon Street NW to Grant Circle NW
- 7th Street NW/Warder, from Columbia Road NW to New Hampshire Avenue NW
- Kenyon Street NW, from Warder Street to 14th Street NW

Analysis found that the highest occupancy rate was approximately 82% with several blocks ranging from the high 20's to low 70's, indicating that parking is not fully occupied. The design anticipates a gain of 39 spaces along the North/South corridor and a loss of seven (7) spaces along the East/West corridor.

Next steps

The East/West portion of the Project will move forward to construction, which will be managed by the Traffic Engineering and Signals Division (TESD). As described above, the 30% E/W design that will be moved into final design, will examine and address any constructability issues. The PBL couplet that is proposed along and 5th Street NW/Park Place NW will require additional public outreach and final engineering design work. On 7th Street NW/Warder Street NW, it may include an option to integrate approximately 11 street trees within the parking lane.

The Project Team, in both the East/West and North/South areas of the Project, will continue to coordinate with adjacent development, including the Armed Forces Retirement Home (AFRH). In the long term, once the AFRH redevelops, the East/West center running protected bicycle lanes would be removed if a multi-use trail is constructed along the Irving Street NW/NE. The multi-use trail along Irving Street is a long-term recommendation of the Crosstown Mutli-modal Study and the moveDC Bicycle Element. In the short-term, the Project's construction will need to be coordinated with the MIRV development project at Irving Street NE/Michigan Avenue NE.

CONCEPT DEVELOPMENT OVERVIEW

CROSSTOWN Final Concept Memo Overview

INTRODUCTION

In 2017, DDOT initiated a project to create protected bicycle lanes (PBLs) throughout the Washington D.C. area, including the Crosstown protected bicycle facility running east/west along Irving Street NE/NW, Kenyon Street NW and north/south along 5th Street NW, 7th Street NW, Warder Street NW and Park Place NW. The scope of the project includes bicycle facility design, safety analysis, traffic analysis, parking analysis, and public outreach. The key goals of the Crosstown project are to create a protected bicycle facility that will enhance safety, be suitable for people of all ages (8-80) and be completed in a cost-effective manner. These goals, along with extensive stakeholder input, have guided the development of the current Crosstown concept.

The project team worked with DDOT staff members to analyze current safety, traffic and parking conditions within the project limits. The results from this initial analysis were combined with stakeholder feedback to develop several concepts for the Crosstown facility. As additional analysis and public outreach were completed, the project team identified a single concept design for the Crosstown facility that will best meet the key project goals. This concept was reviewed with the inter-agency working group on August 29, 2018.

The below narrative includes a brief description of analysis, public outreach, and the final concept. Attached to this memo are more detailed analysis memos and public input reports that support the development of the final concept.

DESIGN SELECTION AND PUBLIC OUTREACH

There were three phases of the project: Concept development from February to June 2018; Concept refinement and selection from June 2018 to October 2018; and Preliminary Design from October to the contract completion in April 2019.

Concept Development (February to June 2018)

Concept development for the east-west corridor explored a variety of median-running PBL configurations based on the Crosstown Study recommendation for a protected bike lane along Kenyon Street / Irving Street (between Warder Street NW and Michigan Avenue NE) that avoids vehicular traffic to/from the North Capitol Street interchange.

Concept development for the north-south corridor developed two concepts: a pair of north/south parking-protected bike lanes on 5th Street NW/Park Place NW, and 7th Street NW/Warder Street NW (from Kenyon Street NW to Grant Circle and New Hampshire Avenue NW) or a two-way PBL on Park Place NW.

As part of the concept development, the team considered safety, traffic impacts, parking impacts, continuous and simple to understand bicycle facilities, land use, potential conflicts, topography, future growth, connectivity, and stormwater impacts. The design team coordinated with DDOT staff to explore designs, plan for future traffic impacts, and align the facility with other current, planned, and future facilities in the District.

The first phase of the concept development included the following alternatives:

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- **E/W Alternative 2a:** A two-way PBL using a repurposed lane on the north side of the Irving Street median, with a road closure on westbound Irving Street/Hobart Place NW at the split to Kenyon Street NW to continue the PBL along the south side of Kenyon St

- **E/W Alternative 2b:** A two-way PBL using a repurposed lane on the north side of the Irving Street median, with a transition to a PBL on the north side of Kenyon Street NW at the Irving Street/Hobart Place/Kenyon Street NW split
- **NS Alternative 1:** Parking protected bike lanes on Park Place NW (west side) and Warder Street NW (east side)
- **NS Alternative 2:** Two-Way PBL along east side of Park Place NW

The above listed concepts were vetted during an Interagency Meeting on May 15, 2018 and Public Meeting on June 12, 2018.

Concept Selection

The project team took the comments from the Interagency and Public Meeting and considered technical analysis of the corridors for parking, traffic and existing infrastructure considerations to select a preferred concept to move forward into the preliminary design phase.

Below is a summary of considerations, comments, and impacts by labeled segment for the east/west corridor and by alternative for the north/south facilities.

Alternative Considerations

EAST-WEST CORRIDOR: KENYON STREET / IRVING STREET / MICHIGAN AVENUE

SECTION A: INTERSECTION OF KENYON STREET AND WARDER STREET AND WARDER STREET PBL

- West of Warder Street, which is a one-way westbound street, the two-way PBL on Kenyon Street will need to transition to a shared lane environment. To avoid potential car/bicycle conflict, the most clear and best organization of multiple modes led the design team and DDOT to determine that a north side two-way PBL should transition to a receiving westbound bike lane to allow bicyclists to cross through the intersection, have dedicated space west of Warder Street, and then transition to a shared lane environment. This transition highly influenced the decision to place the bike lane on the north side of Kenyon Street
- A north-side PBL on Kenyon Street also allows westbound bicyclists to easily transition to a northbound bicycle facility on Warder Street.
- Parking would be eliminated along the north curb between Warder Street and the alley entrance slightly west of the intersection. Two parking spaces would be removed.
- The facility for Warder Street represented in public and interagency meetings was a one-way PBL on the

east side of Warder Street as part of a couplet (Park Place southbound and Warder Street northbound) or a no-build scenario for Warder Street, leaving the existing bike lane with a two-way PBL on Park Place.
- Street tree placement was also explored but will be a component of a future feasibility study for street trees and sidewalk widening along Warder Street.

As described in the final concept below, DDOT elected to move forward with the receiving bike lane west of Warder Street, a north side two-way protected bike lane on Kenyon Street, and a parking protected bike lane on Warder Street as part of a couplet.

SECTION B: ROADWAY BETWEEN WARDER STREET AND PARK PLACE

- As presented in Sections A & C, the decision to place the PBL on the north side of Kenyon Street was influenced by the intersections of Kenyon Street with Warder Street and Park Place.
- The travel lane along the northern curb would be repurposed as a PBL. The remaining two travel lanes would be maintained.
- Parking along this block would be restricted during peak hours to maintain two travel lanes during peak periods.

As described in the final concept below, DDOT elected to move forward with a northside two-way protected bike lane.

SECTION C: INTERSECTION OF KENYON STREET AND PARK PLACE AND PARK PLACE PBL

- At this intersection, bicyclists on Kenyon Street traveling westbound will continue westbound/straight on Kenyon Street or turn left to transition into an existing southbound west-side bike lane on Park Place.
- Bicyclists traveling southbound on Park Place will turn left to travel eastbound on Kenyon Street or continue straight to continue southbound on Park Place (into an existing west-side bike lane).
- The Alternatives for the east/west corridor and north/south corridor have varying impacts on the intersection design. Some considerations include:
    - The Warder Street options were:
        - A northside PBL transitions better through the intersection for east/west bicycle movement on Kenyon Street and through to the receiving bike lane on Kenyon Street west of Warder Street.
        - A southside PBL on Kenyon Street was tested in conjunction with the closing of Hobart Place at the split. However, this option increases westbound left turning traffic at Park Place/ Kenyon Street and would create a conflict for bicyclists traveling westbound

through the intersection (potentially creating a left turn hook). Traffic operations were also negatively impacted by closing Hobart Place and redirecting westbound vehicles through the Kenyon St/Park Place intersection. This led the design team to focus on a northside placement for the Irving Street PBL at the approach to this intersection.

- The Park Place facility options were:
  - A two-way PBL on the east side of Park Place:
    - This was illustrated in the first interagency meeting and public open house. The east side placement necessitates a two-stage movement to continue traveling south on Park (into an existing west-side bike lane) which will create more delay for cyclists by requiring them to cross both the north leg and west leg of the intersection. In the public open house, the community was surveyed to gauge compliance with a two-stage movement and the majority (20 out of 30 respondents) said they would disregard the traffic control devices and likely move straight through the intersection (instead of crossing to the west side prior to moving south through the intersection). The community also commented they would prefer a west-side two-way facility for easier access to the neighborhood.
    - The two-way PBL on the east side of Park provides a seamless, uninterrupted facility south of Quincy, by avoiding conflicts with cars exiting and entering the adjacent eight side streets. On the other hand, the east side PBL will require that neighborhood bike traffic cross over southbound vehicular traffic traveling downhill to exit or enter the PBL.
    - The two-way PBL was determined to be problematic based on minimum dimensions required for travel lanes, parking and the new bike lanes north of Rock Creek Church Road. This alternative was not carried forward.
  - A two-way PBL on the west side of Park Place:
    - This option provides a single movement through the intersection to transition to the existing bike facility south of Kenyon. DDOT staff noted they believed this to be the most frequent bicycle movement at this intersection.
    - The two-way PBL on the west side of park was the preferred placement for a two-way facility on Park as noted by the community in the Public Open House.
    - The PBL moves on-street parking away from the curb which was not preferred by local residents.
    - The two-way PBL was determined to be problematic based on minimum dimensions required for travel lanes, parking and the new bike lanes north of Rock Creek Church Road. This alternative was not carried forward.
  - A one-way PBL on the east side of Park Place:
    - This became an option after the first interagency meeting and public open house.
    - This option enables southbound cyclists to avoid conflicts with side street traffic and does not impact the on-street parking currently located along the west side of the roadway.
    - The east side PBL also avoids modification/displacement of parking along the west side curb.
    - The east side location requires neighborhood cyclists to cross southbound vehicular traffic at an uncontrolled intersection.
    - This approach to the intersection requires a two-stage movement to transition to the southbound bike lane on Park (south of Kenyon). As noted above, the majority of public input respondents noted they would not comply with the two-stage

movement through the intersection.

- A one-way PBL on the west side of Park Place:
  - A facility on this side of the road was noted as preferred by the community for access to the neighborhood.
  - The west-side PBL allows for a single, straight movement through the intersection to connect with the existing bike lane south of Kenyon on Park.
  - The PBL moves on-street parking away from the curb which was not preferred by local residents.
  - The PBL will displace, or move out further into the street, existing handicap parking.
  - The PBL requires navigation through nine intersections between Quincy and Kenyon Streets.

As described in the final concept below, DDOT elected to move forward with the east-side one-way protected bike lane, prioritizing the continuous southbound movement (on Park from Quincy to Kenyon),- which may reduce potential pull-through and right turn conflicts - over the potential non-compliance of a two-stage southbound movement.

SECTION D: ROADWAY BETWEEN PARK PLACE AND IRVING STREET/HOBART PLACE

- Potential design solutions for this segment included a north-side PBL and a south side PBL with the closing of Hobart. As noted above, the closing of Hobart causes a fatal flaw at the intersection of Kenyon and Park.
- The potential closure of Hobart Street was not carried forward.

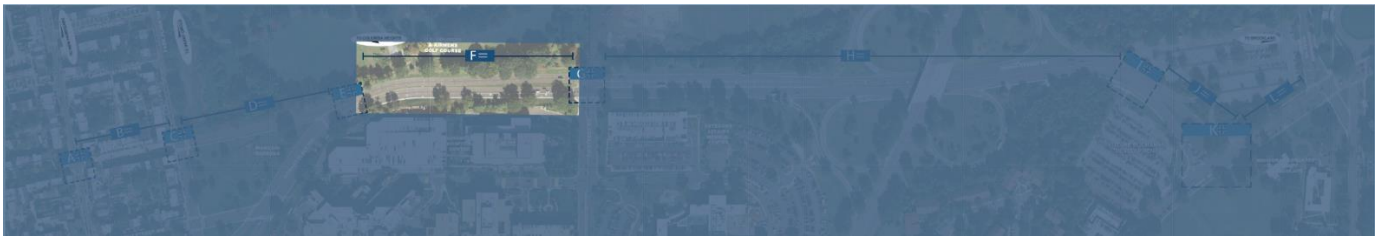
As described in the final concept below, DDOT elected to move forward with the northside two-way protected bike lanes.

SECTION E: INTERSECTION OF IRVING STREET/HOBART PLACE

- This area was highlighted as a potential new signalized crossing to transition a median running PBL to the north side of Irving.
- By testing scenarios at both the intersection of Kenyon/Park and Irving/First this new signal provides the opportunity to safely transition bicyclists from a through movement at First and a northern placement to approach Kenyon/Park.
- This new signal also provides an opportunity to address Vision Zero pedestrian safety concerns being evaluated by DDOT under a separate study.

As described in the final concept below, DDOT elected to implement a new signal at this intersection that will be actuated by bicyclists and pedestrians, stopping both east and westbound vehicles.

SECTION F: ROADWAY BETWEEN IRVING STREET/HOBART PLACE AND FIRST STREET



- This section provides the transition between Irving and Kenyon. The design team tested median running placement as well as north-side placement.
- The median running placement provided the most clear transition across First Street NW for east and westbound bicyclists.
- The north-side placement causes multistage transitions, unclear movements, and conflicts with westbound traffic at First street.

As described in the final concept below, DDOT elected to move forward with a median running protected bike lanes along the north side of the median.

SECTION G: INTERSECTION OF IRVING STREET AND FIRST STREET

- Several options were tested for the intersection of First and Irving based on a variety of approaches for westbound and eastbound bicyclists.
- Transitions through the intersection were explored from median to median (straight across the intersection) and a westbound median to north-side option.
- Eastbound lane assignments on Irving Street (2 through lanes and 1 dedicated right turn lane) eliminated potential to locate a protected bike lane along the south side of the median.
- East of the intersection, Irving Street only serves 2 eastbound lanes because of the right turn lane drop approaching the intersection.
- The team explored removing one of the left turn lanes to align the new PBL in the existing lane. DDOT TESD stressed maintaining the westbound dual left turn due to peak hour (am) volumes.
- The community commented that the median to north-side transition was not clear and would require many stages. The median to median transition was preferred by the public.

As described in the final concept below, DDOT elected to move forward with the median to median transition, an eastbound lane drop, the preservation of the double left turn into First, and maintaining the current stormwater inlet placement.

SECTION H: ROADWAY BETWEEN FIRST STREET AND THE BUCHANAN PROPERTY

- To avoid conflicts with the North Capitol Street interchange, a median was reviewed for all alternatives.
- The position on the north or south side of the median varied per concepts to allow the design team to test traffic impacts for a westbound or eastbound lane drop.
- A transition through the median from the north side (at First Street intersection) to the south side (accommodating an eastbound lane shift) was required to maintain the westbound dual-left turn lanes at First Street. In addition, the receiving lane from the southbound to westbound North Capitol Street exit ramp would be dropped, allowing 2 westbound lanes to be maintained on Irving Street approaching First Street.

As described in the final concept below, DDOT elected to move forward with a median running PBL, transitioning from the north median configuration to the south median configuration between First Street and the North Capitol exit ramps, preserving the westbound dual left turn lane and function for North Capitol Street.

SECTION I: ENTRANCE AT BUCHANAN PROPERTY

- The Buchanan Property, or MIRV Project, will redevelop the parcel south of Irving Street between North Capitol Street and Michigan Avenue. The project will install a new signalized entrance slightly east of the exiting median break. The northbound North Capitol Street to eastbound Irving Street exit ramp will be reconfigured to “T” into Irving Street.
- West of the intersection, a south side configuration is necessary as discussed in Section H.
- East of the intersection, bike facility selection was influenced by the facility transition from Michigan Avenue, see sections J & K.

As described in the final concept below, recognizing the traffic impacts at Irving/Michigan and a desire to reduce potential conflict points at the Basilica driveways, DDOT elected to move forward with a median running PBL on the north side of the median/island east of the MIRV property.

SECTION J: ROADWAY BETWEEN BUCHANAN PROPERTY ENTRANCE AND MICHIGAN AVENUE

- This segment of the design relies heavily on the configuration of the PBL at the intersection of

Michigan/Irving.

- Bike lane configurations reviewed included:
    - A north-side of Irving approach would require bicyclists to cross the ingress/egress to the Basilica parking lot, creating two conflict points. It would also require bicyclists to transition across westbound traffic at the Buchanan site entrance.
    - A median running PBL on the westbound approach would reduce the conflict of bicyclists crossing westbound vehicular traffic; approaches from the north-side and the south-side of the median were tested.

As described in the final concept below, DDOT elected to move forward with a median running PBL on the north side of the median/island per the notes in Section I and Section K.

SECTION K: INTERSECTION OF IRVING STREET AND MICHIGAN AVENUE

- Several options were tested for the transition from Michigan to Irving with critical design decisions being fueled by safety and traffic operations.
- Traffic volume on eastbound Irving Street turning left onto Michigan Avenue would be severely impacted by crossing the bike lanes from the south median configuration to a shared use path along the east side of Michigan Avenue.
- On-road bike lanes in the westbound curb lane of Irving Street along the north curb would present several safety concerns at the Basilica entrance and crossing to the Median at the Buchanan Property entrance, see Section J.
- The proposed PBL on 4th Street/Harewood Road, when integrated into traffic modeling for this intersection appears to meter traffic for Michigan/Irving but the volume increases in 2040 do still pose problematic impacts including a lack of room to stack vehicles between Irving and Harewood Road. This makes the in-road PBL in Section L problematic.
- Transition from a shared use path on the west side of Michigan Avenue to the median would improve safety for pedestrians using the existing crosswalk across the dual-right turn movement from Michigan Avenue onto westbound Irving Street. Coordination of the new traffic signal with the 4th Street/Harewood Road intersection will allow for optimal operation of the new signal for all users.

As described in the final concept below, DDOT elected to move forward with a shared use path on the west side of Michigan Avenue transitioning to a north side bike lane along Irving Street, with the right turn from Michigan Avenue onto Irving Street being signalized to serve the bike lane crossing and existing pedestrian crosswalk.

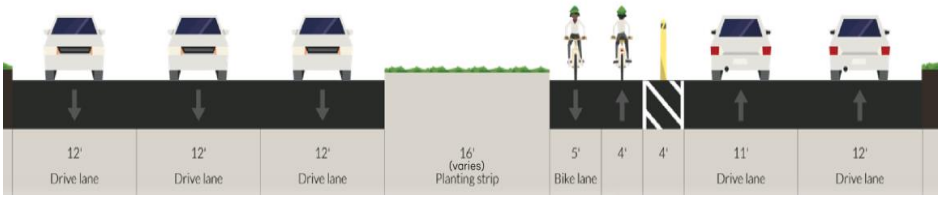
SECTION L: SEGMENT ALONG MICHIGAN AVENUE BETWEEN IRVING STREET AND HAREWOOD ROAD

- The team tested three options for this segment: a south-side sidepath, a north-side in-road PBL, and a north-side sidepath.
    - The south-side sidepath would require impacting the slope on the south-side of Michigan Avenue and constructing a retaining wall. This was cost prohibitive to the original intent of the PBL project to be a signing and striping implementation strategy. The south-side sidepath also channels bicyclists to a crossing at either the east or west leg of the southernmost intersection at Michigan/Irving. Discussion can be found under section K noting the impacts of these crossings.
    - The in-road PBL presented lane continuity issues for the southbound Michigan Avenue approach and reduced available storage for queued vehicles making the dual-right turn onto westbound Irving Street.
    - The north-side sidepath was not preferred by the community due to the sharing of space with pedestrians.

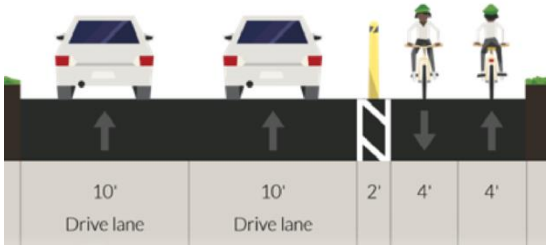
As described in the final concept below, While the north-side sidepath was not preferred by the community (due to their desire to not mix with pedestrians) traffic and safety impacts led DDOT to elect the north-side sidepath as the preferred option.

FINAL CONCEPT SUMMARY East/West Median Running Protected Bike Lanes

The main East/West component of the Crosstown facility is a median running PBL along Kenyon Street and Irving Street from Michigan Avenue (eastern project limit) to Warder Street (western project limit). A short multi-use side path on the north side of Michigan Avenue would provide a mixed-use connection between the 2-way PBLs on Irving Street and 4th Street/Harewood Road. The bike facility crossing and pedestrian crosswalk at the dual-right from Michigan Avenue onto Irving Street are enhanced by the addition of a traffic light, stopping the current free-flow westbound traffic and coordinated with the existing signal at Michigan Avenue/Irving Street. The PBL is placed on the north side of the median island transitioning to the south side of the median at the MIRV Project intersection. The PBL continues along Irving Street to the First Street intersection, where it transitions to the north side of the median. This configuration avoids conflicts with the North Capitol Street ramps, preserves the dual left into First Street by westbound traffic, and maintains a right turn lane drop for eastbound traffic on Irving Street. The concept provides vertical protection, reconfiguration of medians, and potential modifications to existing stormwater inlets or sub-surface infrastructure. The facility remains adjacent to the median, shifting across the westbound traffic to the north side of Kenyon Street at the Irving Street and Hobart Place intersection. To facilitate this movement, and respond to Vision Zero pedestrian concerns, a new traffic signal will be provided. This will stop traffic in both west- and eastbound directions when actuated by a pedestrian or bicyclist. The two-way PBL continues along the north side of Kenyon Street to Warder Street, where a receiving bike lane transitions the PBL to a shared road facility. The proposed facility eliminates 7 parking spaces on the south side of Kenyon Street to provide a merge area for westbound traffic crossing Park Place.

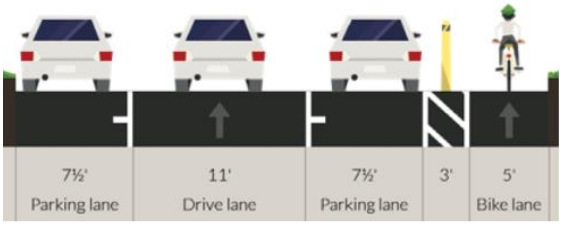


E/W Section – East of MIRV Entrance



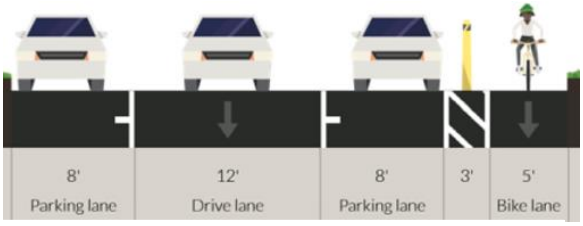
E/W Section Between Park Place and Warder Street

NORTH/SOUTH PARKING PROTECTED COUPLET



Northbound Section – 7th Street NW/Warder Street NW

The main north/south component of the Crosstown Facility is a pair of one-way parking protected bike lanes running northbound along 7th Street/Warder Street from Kenyon Street (southern limit) to New Hampshire Avenue (northern limit) and southbound on 5th Street/Park Place from Grant Circle (northern limit) to Kenyon Street (southern limit). The northbound bike lane starts at Kenyon Street and runs along the east side of Warder Street with conflict striping at all intersections, driveways, and alleys. The bike lane transitions into the existing 7th Street bike lane at New Hampshire Avenue, where conflict striping is included through the intersection to enhance visibility and provide organization within the intersection for multiple modes. The southbound bike lane starts at Grant Circle and runs along the east side of Park Place and 5th Street. Conflict striping is included along the 5th Street portion at major intersections, driveways, and alleys. South of Quincy. PBLs on Park Place will be striped to facilitate connections to neighborhood streets on the west side of Park Place. Parking protection tapers into a buffer at Luray Place to allow for two lanes of vehicular stacking at the southbound light at Kenyon. At the Park/Kenyon intersection, the facility ties into the east/west PBL and contains a 2-stage transition to align bicyclists with the existing bike lane on the west side of Park Place just south of Kenyon Street.



Southbound Section – 5th Street NW/Park Place NW

The Quincy Street NW and Park Place NW unconventional signal/stop sign combination has been identified as an existing condition issue that will need to be addressed by DDOT in the future. The southbound travel lanes from Rock Creek Church Road to Luray Place NW on Park Place have been reduced to one lane with minimal impact on vehicular traffic. The facility ties into existing bike facilities on 7th Street NW and Grant Circle NW.

On both corridors, parking will be impacted at some intersection, alley, and driveway approaches to increase the visibility of the bikeway. This will eliminate approximately 28 parking spaces (23 on Warder Street / 7th Street, and 5 on 5th Street / Park Place); however, this reduction will be offset by a projected net gain of approximately 39 parking spaces along Park Place.

While not a component of the concept design, street tree placement on Warder Street was explored in anticipation of a possible sidewalk widening and street tree project. Given the assumptions of utility placements, buffers, and sight distances, approximately 11 streets trees could be added (using the Ivy City Precedent), with a

potential parking loss of 20 parking spaces on Warder Street NW. *This concept study recommends a full analysis of the corridor for sidewalk widening opportunities and street tree placement prior to moving forward to street tree bulbout installations.*

Additional traffic counts were conducted along 5th Street/Park Place (five intersections) and 7th Street/Warder Street (one intersection) in October of 2018. On the southbound-only corridor of 5th Street/Park Place, through traffic volumes range from a low of 531 in the AM peak at Quincy Street to 1048 at Lamont Street. Bicycle volumes were highest in the AM peak hour with 52 through bikes at Lamont Street. A right-side bike lane would be susceptible to right-turn conflicts from 5th Street/Park Place and right-turns off side streets. While turning volumes were low at most intersections (range from 5 to 41), the intersection of Park Place and Park Road is of particular concern: 38 rights were observed off of Park Place in the AM peak, and 135 rights occurred from Park Road to Park Place. This equates to approximately two vehicles obstructing a right-side protected bike lane each minute while waiting to enter Park Place. A left side bike facility would not encounter these potential conflicts.

On the northbound-only 7th Street/Warder Street, one traffic count was conducted at the intersection of Lamont Street. Through traffic volumes were highest in the PM peak hour with 652 vehicles. The bike volume was also highest in the PM period with 28 observed bicyclists in the peak hour. Right turns from 7th Street/Warder Street, and right turns from westbound Lamont Street would conflict with a protected right side bike facility. On both streets, right turn volumes were low at only 11 per hour.

SAFETY, TRAFFIC, AND PARKING SUMMARY FOR FINAL CONCEPT

Safety - The team examined the crashes at key intersections along Warder Street NW, Park Place NW, Kenyon Street NW, and Irving Street NW from 2015-2017. Comments recorded through the District of Columbia Vision Zero efforts were reviewed to gauge citizen concerns and potential challenging areas along the corridor. Within the Safety, Parking, and Traffic Assessment section of this memo, tables and narrative summarize crash incidents, trends relative to safety over time, analysis of incident type, and a table of pertinent civilian complaints from the Vision Zero Dataset. Within the corridor, the intersections with the highest number of reported crashes (which are also higher-volume intersections) are:

- Irving Street NW at Kenyon Street NW
- Michigan Avenue NE at Fourth Street NE
- Michigan Avenue NE at Irving Street NE

Traffic - Using data provided by DDOT (Synchro models, signal timing plans, and traffic volume counts), the project team reviewed current and future traffic conditions for Year 2040 with build and no-build scenarios to identify the future baseline and impacts due to the implementation of the Crosstown protected bike lane concept.

The following table compares the levels of service (LOS) based on average delay per vehicle at each signalized intersection along the proposed Crosstown PBL alignment for existing conditions, future no-build conditions, and future build conditions.

	Existing 2018				2040 No-Build*				2040 Build PBLs*			
	AM		PM		AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Michigan Avenue NE at 4th Street NE	C	24	D	52	**F**	**112**	E	78	**F**	**99**	E	77
Michigan Avenue NE at Harewood Road NE	B	19	D	50	E	77	**F**	**100**	**F**	**85**	**F**	**98**
Michigan Avenue NE at Irving Street NE	B	18	C	20	B	20	C	24	D	36	C	26
Irving Street NE at New Development Access	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	A	7	A	9
Irving Street NW at Ramp from Southbound N Cap Street	B	11	A	2	C	26	A	2	C	23	A	3
Irving Street NW at First Street NW	C	22	C	31	C	22	D	44	B	18	B	19
Irving Street NW at Kenyon Street NW	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	A	5	A	6
Kenyon Street NW at Park Place NW	B	13	B	11	C	24	B	12	D	40	B	17
Kenyon Street NW at Warder Street NW	B	14	B	13	A	6	B	20	C	25	D	52

*Note: 2040 No-Build and Build both assume the 4th Street NE PBLs would be built, with one south bound lane repurposed along Harewood Road NE and 4th Street NE

Analysis indicated the protected bike lane concept would have no significant impact on signal phasing or traffic operations compared to the no-build scenario for:

- Michigan Avenue NE at Fourth Street NE
- Michigan Avenue NE at Harewood Road NE
- Irving Street NW at Ramp from Southbound North Capitol Street
- Irving Street NW at First Street NW
- Kenyon Street NW at Warder Street NW

Two currently unsignalized intersections (Irving Street NW at Kenyon Street NW, and Irving Street NE at New Development Access) are proposed to be signalized under the Build PBLs scenario. Potential traffic related issues for the remaining two intersections (Michigan Avenue NE at Irving Street NE, and Kenyon Street NW at Park Place

NW) are detailed in the following Safety, Parking, and Traffic Assessment section.

Parking – RK&K coordinated with DDOT to place cameras throughout the project area to record parking occupancy rates. The corridors analyzed were:

- Irving Street/Kenyon Street NW, from Park Place to Warder St
- 5th Street NW/Park Place NW, from Kenyon Street NW to Grant Circle NW
- 7th Street NW/Warder, from Columbia Road NWto New Hampshire Avenue NW
- Kenyon Street NW, from Warder Street to 14th Street NW

Analysis indicated the highest occupancy rate was approximately 82% with several blocks ranging from the high 20's to low 70's. The team currently anticipates a gain of 39 spaces along the north/south corridor and a loss of seven (7) spaces along the east/west corridor.

Supporting reports and memos regarding the Safety, Traffic, and Parking Analysis for the project can be found in the Appendix.

FINAL CONCEPT PUBLIC OUTREACH

Following several internal vetting sessions with DDOT, including collaboration with TESD, the final concept was vetted at a second interagency meeting, public "pop-up" event, and at a presentation to the Parkview United Neighborhood Coalition. The feedback received will be incorporated into the 30% design. Summaries of all public input meetings are included in the Public Input section of this memo.

Next steps

The East/West portion of the Project will move forward to construction, which will be managed by the Traffic Engineering and Signals Division (TESD). As described above, the 30% E/W project that will be moved into final design, will examine and address any constructability issues during design. The PBL couplet that is proposed along 7th Street NW/ Warder Street NW and 5th Street NW/ Park Place NW will need additional public outreach and final engineering design work to be completed. The design and implementation of the north-south streets will occur with separate design and construction contracts for a potential 2020 installation. On 7th Street NW/ Warder Street NW, it may include an option to integrate approximately 11 street trees within the parking lane. Throughout the progression of the design, DDOT will engage the relevant Advisory Neighborhood Commissions (ANC) and community groups. A formal notice of intent will be sent to the ANCs preceding implementation of the north-south protected bike lanes.

The Project in both the East/West and North/South areas will continue to coordinate with adjacent development, including the AFRH. In the long term, once the AFRH redevelops, the East/West center running protected bicycle lanes would be removed if a multi-use trail is constructed along Irving Street NW/NE. The multi-use trail along Irving Street is a long-term recommendation of the Crosstown Mutlimodal Study and the moveDC Bicycle Element. In the short-term, the Project's construction will need to be coordinated with the MIRV project at Irving Street NE/Michigan Avenue NE.

Appendix

SAFETY, TRAFFIC, AND PARKING ANALYSIS FOR FINAL CONCEPT

Crosstown Safety, Traffic, and Parking Analysis

Introduction

The District Department of Transportation (DDOT) has proposed constructing Protected Bike Lanes (PBLs) within three areas of the district – Eastern Downtown, Crosstown, and the 20th/21st/22nd Street NW corridors formerly collectively referred to as Downtown West – to improve bicyclists' safety and mobility within the District as planned and studied by the DC Bicycle Master Plan, moveDC, and the Crosstown Multimodal Study. This report summarizes the results of crash history, on-street parking utilization, and traffic operations analyses for the Crosstown PBL corridors. **Figure 1** illustrates the project area for the Crosstown PBLs. The Crosstown PBL project limits are as follows:

a) Irving Street - Michigan Avenue NE to Warder Street NW (1 mi)
b) 5th Street/Park Place NW - Grant Circle to Kenyon Street (.8 mi)
c) 7th Street/Warder Street NW - Columbia Road to New Hampshire Avenue NW (.7 mi)

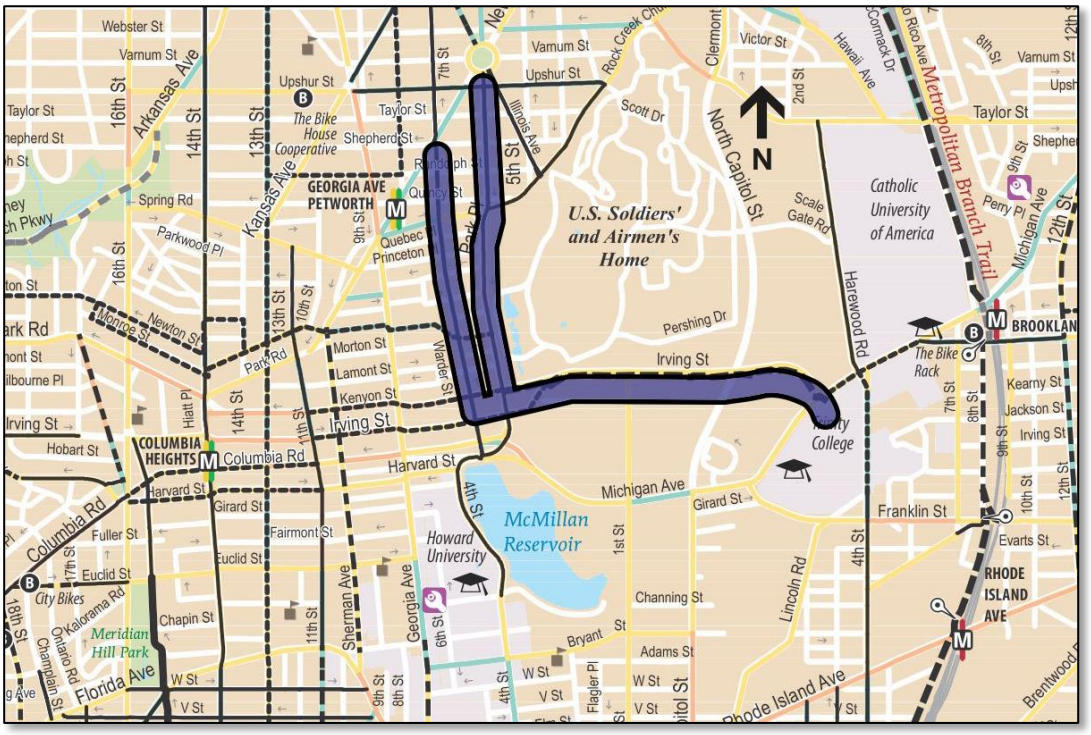


Figure 1 - Crosstown Protected Bike Lanes Project Area

Numerous alternatives were considered for design and implementation. However, only one alternative proved to introduce the least impact on the built environment while providing a safer space for bicyclists. Traffic, safety, and parking analyses were conducted to evaluate the feasibility of this alternative. This report describes these analyses and summarizes their results.

This section introduces the alternative considered for design by describing the major changes at each of the intersections along the corridor:

7th Street/Warder Street NW

- Proposed protected bike lane along east side of street
- Upgrades existing traditional bike lane along east side of street
- Provides buffer between parking lane and bike lane
- Minimal loss of parking spaces for improved bike lane visibility at street corners and for potential tree-planting spaces

5th Street/Park Place NW

- Proposed protected bike lane along east side of the street
- Relocates and upgrades existing traditional bike lane along west side of street
- Provides buffer between parking lane and bike lane
- Adds more parking spaces along the street
- Places the bike lane on the opposite side of the street from the right-turn conflicts
- Reduces number of travel lanes from two to one along most of street
- Maintains two travel lanes approaching Kenyon Street NW to sustain acceptable delays and queue lengths at that signalized intersection
- Does cause additional delay for cyclists at the transition from east side bike lane north of Kenyon to existing west side bike lane south of Kenyon

Irving Street NE at Michigan Avenue NE

- Adds signal on right turn ramp from westbound Michigan to westbound Irving
    - Provides protection for pedestrians crossing and for cyclists using the proposed protected bike lane
    - Allows protected bike lane in median along Irving to transition to shared-use path along north side of Michigan
- Shared-use path along north side of Michigan Avenue
    - Preferred location (versus south side) to provide better access to Catholic University
    - Reduces vehicle delay at the intersection
    - Construction has fewer impacts to adjacent property

Irving Street NW at First Street NW

- Maintains existing double left turn lanes into hospital campus
- Provides simple movement for east-west cyclists

Irving Street NW at Kenyon Street NW Split

- Adds signal for westbound Irving to allow cyclists to enter/exit the median-running protected bike lanes
- Allows protected bike lane along the north side of Kenyon, which is preferred for more efficient access to/from the proposed north-south protected bike lanes along Park and Warder

Safety Analysis

Vision Zero seeks to achieve zero traffic fatalities and serious injuries in the District of Columbia by the year 2024 through methods including better engineering of roadways smarter use of data and safety analysis. The themes Vision Zero focuses on include:

- Create Safe Streets: Streets should be designed for all users and need to be built to account for inevitable human errors. Safe streets require short- and long-term engineering capital improvements, as well as data-based analysis, education around safe behavior, and enforcement.
- Protect Vulnerable Users: Younger and older people, people biking, people walking, and people with disabilities are all more vulnerable to serious human traffic injuries and fatalities. Vision Zero strategies reflect different levels of reaction time and agility to allow all people to travel safely.

A safety analysis of Kenyon Street NW and Irving Street NE & NW within the limits described above was conducted to identify any crash patterns and any potentially serious safety issues within the project area. Crash data obtained from DDOT, as well as the DDOT Vision Zero Open Dataset containing real and perceived dangers along the roadway from citizens' perspectives, and were used to understand potential safety hazards and potential crash causes. The crash data was also used to identify any trends in crashes within the project area. The crash data included information on crash type, the number of vehicles involved in the crash, the day and time of the crash, potential crash contributing factors, weather. The crash data spanned from January 1, 2015 and December 31, 2017. **Table 1** provides an overall summary of the number of crashes by intersection within the project limits.

Table 1 - Number of Crashes per Intersection along the Crosstown Corridor, 2015-2017

Intersection	Number of Crashes	Numbers of Pedestrians Involved	Numbers of Bicyclists Involved
Kenyon Street and Warder Street NW	21	0	0
Kenyon Street and Park Place NW	15	0	0
Irving Street and Warder Street NW	13	1	0
Irving Street and Park Place NW	28	1	0
Irving Street and Kenyon Street NW	87	6	2
Irving Street and First Street NW	28	0	1
Irving Street and North Capitol St	17	0	0
Michigan Avenue and Irving Street NE	31	0	0
Michigan Avenue and Harewood Road NE	18	0	1
Michigan Avenue and 4th Street NE	65	3	0

In addition, **Table 2** provides a detailed crash summary by intersection. The following list summarizes the overall results of the crash analysis:

- There were two fatal crashes reported in 2017, each resulting in 1 fatality
  - These crashes were not pedestrian- or bicycle-related
  - These fatal crashes occurred at Irving Street and Kenyon Street NW, and at Michigan Avenue and Fourth Street NE
- The number of crashes increased by 9% between 2015 and 2017
- The following intersections experienced increased in the number of crashes between 2015 and 2017:
  - Irving Street and First Street, NW
  - Irving Street and Park Place, NW
  - Irving Street and Warder Street, NW
  - Kenyon Street and Park Place, NW
- The number of injury crashes decreased by 7% between 2015 and 2017
- The number of pedestrians involved in crashes decreased from 3 in 2015 to 1 in 2017
- All bicycle related crashes (4) occurred during 2017
- 24% of the crashes are side-swipe crashes
- 33% of the crashes occurred during peak hours (7:30-9:30 AM, 4:00-6:30PM)
- 62% and 9% of the crashes occurred under clear and rainy weather conditions, respectively
- 71% of the crashes occurred under daylight conditions
- 68% of the crashes are property damage only crashes

In addition to analyzing crash data within the project area, RK&K reviewed civilian complaints collected on the DDOT Vision Zero application that allows the public to report real and perceive dangers within the District of Columbia. The complaints are categorized by user type (Pedestrian, Bicyclist, or motorist), and were classified as relating to either design or operational issues. The complaints dataset was reduced because it was observed that numerous complaints were entered on multiple occasions. The Vision Zero Complaints Dataset could help in recommending multiple safety measures that will help all roadway users. **Table 3** provides a summary of the complaints contained in the dataset.

Table 2 - Crash Analysis Summary by Intersection

Intersection	Summary
Kenyon Street and Warder Street NW	• The number of crashes decreased between 2015 and 2017 • No pedestrian/bicyclist crashes reported • 71% of crashes were property damage crashes • The number of injury crashes increased between 2015 and 2017 • 35% of the crashes occurred during peak hours
Kenyon Street and Park Place NW	• Number of crashes increased between 2015 and 2017 • 67% of crashes occurred during peak hours • 80% of crashes occurred under daylight conditions • No pedestrian or bicyclist crashes reported
Irving Street and Warder Street NW	• The number of crashes increased from 2015 and 2017 • No bicyclist crashes reported • 92% of the crashes were property damage crashes • 85% of crashes occurred under daylight conditions
Irving Street and Park Place NW	• The number of crashes increased between 2015 and 2017 • The number of injury crashes increased between 2015 and 2017 • 50% of crashes were property damage only crashes • No bicyclist crashes reported • One pedestrian crash reported
Irving Street and Kenyon Street NW	• **One fatal crash (1 fatality) occurred here in 2017** • The number of crashes increased between 2015 and 2017 • 72% of the crashes were property damage collisions • There were 6 pedestrian crashes reported • 67% of the crashes occurred during daylight conditions
Irving Street and First Street NW	• The number of crashes increased from 2015 to 2017 • No pedestrian or bicyclist crashes reported • 61% of the crashes occurred under daylight conditions
Irving Street and North Capitol St	• 59% of the crashes involved injuries • The number of crashes decreased between 2015 and 2017 • The number of injuries decreased from 2015 and 2017 • No pedestrian/bicyclist crashes reported
Michigan Avenue and Irving Street NE	• 32% of crashes occurred during peak hours • 32% of crashes occurred on Thursdays • No pedestrian or bike crashes reported • The number of injury crashes decreased between 2015 and 2017 • The number of crashes decreased between 2015 and 2017
Michigan Avenue and Harewood Road NE	• The number of crashes decreased between 2015 and 2017 • The number of injury crashes decreased between 2015 and 2017 • 89% of crashes occurred under daylight conditions • No pedestrian crashes reported between 2015 and 2017 • 78% of crashes were property damage only crashes
Irving Street and Kenyon Street NW	• **One fatal crash (1 fatality) occurred here in 2017** • 43% of the crashes occurred during peak hours • The number of crashes increased between 2015 and 2016 and decreased between 2016 and 2017 • The number of injury crashes increased between 2015 and 2017 • 30% of the crashes were side-swipe crashes • 65% of the crashes were property damage only crashes • 77% of the crashes occurred under daylight conditions

Table 3 - Summary of Vision Zero Civilian Complaints

	Location	User Type	Complaint	Issue Type
1	Kenyon Street between Georgia Avenue and Warder Street NW	Pedestrian	• Long blocks and speeding cars negativity affect many senior pedestrians living along this block	Design
2	Kenyon Street between Warder Street and Park Place NW	Biker	• Important thoroughfare for biking but very scary because of high traffic and high car speeds	Design
3	Kenyon Street between Warder Street and Park Place NW	Car Driver	• Quick shifts from highway to residential endangers pedestrians and cyclists.	Design
4	Kenyon Street and Park Place NW	Pedestrian	• People zoom down Irving, and speed up to make the light. It is very dangerous and speed bumps need to be in place, and Irving needs to be one lane for people to not think it is a race track.	Design
5	Kenyon Street and Park Place NW	Pedestrian	• So much speeding at this set of intersections. Cars speed down Park Place NW, Kenyon Street NW, and Irving Street NW. This has resulted in multiple car accidents in the past year. Speed humps and single lanes should be installed. only a 25mph	Design
6	Kenyon Street and Park Place NW	Pedestrian	• Cars coming off Irving Street NW speed up to make the light before entering the residential neighborhood. This is extremely unsafe for pedestrians, bikers, and cars coming down Park Place NW. Speed bumps and a single lane would help tremendously	Design
7	Irving Street between Georgia Avenue and Warder Street NW	Pedestrian	• The 500 and 600 blocks on Irving are merged into one long block. There anew many seniors and parents with young children who cross the street to get to their cars and often interface with speeding cars.	Design
8	Irving Street between Georgia Avenue and Warder Street NW	Car Driver	• Creative calming measure are needed due to DDOT restrictions on Irving re: snow emergency route, major bus lane and major gateway to the hospital centers.	Design
9	Irving Street between Georgia Avenue and Warder Street NW	Biker	• Since this is a long block, cars routinely go over 40mph to make the next light at Warder. City buses and large vehicles go so fast that it shakes the foundation of my house many times a day.	Design
10	Irving Street between Georgia Avenue and Warder Street NW	Car Driver	• Limited parking due to hospital staff illegally parking in residential zones and limited enforcement	Operational/Design
11	Irving Street between Georgia Avenue and Warder Street NW	Pedestrian	• Cars go super-fast down 400-500 Kenyon and Irving.	Design
12	Irving Street between Warder Street and Park Place NW	Car Driver	• Traffic backs up on Irving every morning during weekdays due to parents illegally parking during no parking hours to drop off their children at the child care center at 424 Irving	Operational
13	Irving Street and Park Place NW	Car Driver	• Many accidents and fatalities happen on Irving and Park Place	Operational/Design
14	Irving Street and Hobart Place NW	Pedestrian	• Extremely dangerous crossing as the crosswalk is directly under a traffic light, leading drivers to assume there is a ped signal/phase. There is no such phase, requiring peds crossing Irving to/from hospital here to run to avoid being hit	Operational/Design
15	Irving Street and Kenyon Street NW	Pedestrian	• Extremely dangerous crossing in area with frequent speeding requiring peds crossing Irving to/from hospital here to run to avoid being hit.	Operational/Design
17	Kenyon Street between Park Place and Irving Street NW	Biker	• All along this fast 2 lane road, cars speed and do not yield for bikers. I almost got run over, and yelled out by crazy drivers. This road needs to have speed bumps, be more narrow, and a safer walkable and bikeable throughway between neighborhoods	Design
18	Irving Street between Kenyon Street and First Street NW	Biker	• Drivers go incredibly fast here	Design
19	Irving Street between Kenyon Street and First Street NW	Pedestrian	• No pedestrian path on northside; new development is coming to a parcel of the Old Soldiers' Home and this needs to be addressed	Design
20	Irving Street between First Street NW and North Capitol St	Biker	• Need real bike facilities for this stretch. The sidewalk on the eastbound side is hazardous, has many sharp turns, and crosses on/off ramps for this highway.	Design
21	Irving Street between First Street NW and North Capitol St	Biker	• Potholes and road irregularities pose serious cycling risks	Design
22	Irving Street at North Capitol Street Ramps	Biker/Pedestrian	• Drivers turn onto and off these ramps at high speeds, and rarely slow down for pedestrians and cyclists.	Design
23	Michigan Avenue	Biker	• Need bike lanes on Michigan Avenue NE between Taylor Street and North Capitol St	Design
24	Michigan Avenue at Harewood Road NE	Car Driver	• Commuters taking left hand turns creates traffic jams every morning here.	Operational
25	Michigan Avenue at 4th Street NE	Car Driver	• Drivers on 4th street approaching Michigan Avenue should be able to turn right on Michigan Avenue on the green signal, while yielding to pedestrians. There is no reason to wait for the green arrow to turn right. this causes unnecessary traffic backups.	Operational
26	Michigan Avenue at 4th Street NE	Pedestrian	• Cars turning left from westbound Michigan Avenue onto 4th Street NE frequently run the red turn arrow. Often, they continue to turn at high speeds when pedestrians have the right-of-way. I have seen several near-misses at this intersection.	Operational/Design
27	Michigan Avenue between 4th Street and Monroe Street NE	Biker	• Fast and impatient cars and rapid light sequencing pushes bikers to the sidewalk, posing conflicts between bikers and walkers	Design
28	Michigan Avenue between 4th Street and Monroe Street NE	Car Driver	• Impossible to see light. Leads to running of red lights from westbound traffic	Design

Traffic Analysis

RK&K received available traffic data from DDOT, including current signal timing plans and traffic volume counts. DDOT has provided Synchro files covering the Crosstown study corridors of Irving Street NE & NW, Michigan Avenue NE & NW, Warder Street NW, and portions of Kenyon Street NW. These files contained traffic volumes previously collected by others in 2013 and the current signal timing and phasing along these corridors developed by Sabra & Associates under separate contract. The RK&K Team, which includes SAMMAT Engineering Services, performed new weekday AM and PM peak period turning movement counts which included bicycle and pedestrian volumes. New turning movement counts were collected at the following intersections to supplement the turning movement counts provided by DDOT:

- Michigan Avenue NE at Irving Street NE
- Michigan Avenue NE at Harewood Road NE
- Michigan Avenue NE at 4th Street NE
- Northbound North Capitol Street NE onto Eastbound Irving Street, NE

RK&K developed Design Year 2040 traffic volume forecasts for the Irving Street NE & NW, Michigan Avenue NE & NW, and Warder Street NW corridors, and portions of Kenyon Street NW, utilizing the currently-adopted version of the Metropolitan Washington Council of Governments (MWCOG) regional travel demand model. The MWCOG model output was used to calculate a growth rate that was applied to existing/recently collected traffic data to obtain future 2040 traffic volumes along the corridor.

RK&K performed the traffic analysis effort for this study. Traffic operations analysis for all corridors and intersections along the study area was performed using Synchro/SimTraffic and the Synchro files obtained from DDOT. RK&K updated the DDOT Synchro files using more recent traffic data obtained from DDOT and collected by the RK&K Team for the current study. The Measures of Effectiveness (MOEs) evaluated using Synchro and SimTraffic include delay, level of service (LOS), and 95th-percentile queue lengths. Analyses were conducted for the weekday AM and PM peak hours under current Year 2018 conditions, No-Build Year 2040 conditions, and Year 2040 conditions with the proposed PBL alternative.

Traffic analysis showed that the proposed PBL alternative would have no significant impact on traffic operations at the following intersections, compared to the No-Build conditions:

- Michigan Avenue NE at Fourth Street NE
- Michigan Avenue NE at Harewood Road NE
- Irving Street NW at Ramp from Southbound North Capitol Street
- Irving Street NW at First Street NW
- Kenyon Street NW at Warder Street NW

The following section summarizes potential traffic-related issues at the remaining intersections, summarizes the traffic conditions (traffic volumes, pedestrian crossing time), and presents conclusions of the Synchro results.

A. Michigan Avenue NE at Irving Street NE

1. Description of the Issue:

- The preferred east-west alternative for Crosstown PBLs would place a shared use path along the north side of Michigan Avenue NE between Irving Street NE and Harewood Road NE.
- The bi-directional protected bike lanes (PBLs) along Irving Street would repurpose one of the existing three westbound travel lanes (adjacent to the median) between Michigan Avenue NE and the North Capitol Street interchange.
- Cyclists traveling between the median-running PBLs and the north side shared-used path will need to cross the free-flowing multi-lane right-turn movement from westbound Michigan Avenue onto westbound Irving Street, which currently has a crosswalk for pedestrians but no traffic signal to stop vehicles and create gaps for pedestrians to cross.
- The preferred east-west alternative proposes a new traffic signal for this currently free-flowing multi-lane right turn movement, which would operate in conjunction with the existing traffic signal for the multi-lane left-turn movement from eastbound Irving Street onto eastbound Michigan Avenue.
- DDOT TESD has expressed concern that signalizing this right turn movement will cause excessive queuing and delays during the AM peak hour.

2. Traffic Volumes:
    - The **Existing 2018 AM (PM)** peak hour traffic volumes for the multi-lane right turn movement from Michigan onto Irving are **1,625 (590)**.
    - The **Projected Year 2040 AM (PM)** peak hour traffic volumes for the multi-lane right turn movement from Michigan onto Irving are **1,805 (655).**

3. Pedestrian Crossing Times:
    - Distance for pedestrians/cyclists to cross the proposed signalized multi-lane right turn from Michigan to Irving: **27 feet**.
        - At walking speed of 3.5 ft per second, minimum required Flashing Don't Walk time is 8 seconds
        - Add the DDOT-desired Walk time of 7 seconds, and the total minimum pedestrian crossing interval is **15 seconds**.
    - Distance for pedestrians to cross Michigan Avenue in the existing crosswalk: **72 feet**.
        - At walking speed of 3.5 ft per second, minimum required Flashing Don't Walk time to cross Michigan Avenue is 21 seconds.
        - Add the DDOT-desired Walk time of 7 seconds, and the total minimum pedestrian crossing interval is **28 seconds**.
    - The proposed signal across the multi-lane right turn does NOT have to give peds/bikes the same amount of time required to cross Michigan.
        - See the attached Synchro reports which show how the phasing would work (with explanatory notes for your reference)

- Although providing the minimum required time for pedestrians to cross the signalized right turn would reduce vehicle delays and queue lengths, it would increase delay for pedestrians and cyclists waiting to cross.

4. Analysis Results:
   - The proposed conditions analyses for 2018 and 2040 both assume the planned north-south PBL along Harewood Road and 4th Street NE would be in place.
     - This planned project would repurpose one of the two southbound travel lanes along Harewood Road.
     - The effect of this lane reduction would be to potentially give more green time to Harewood Road at this location and less time to Michigan, which would further restrict, or meter, the traffic on Michigan flowing toward the proposed ped/bike signal on Irving.
     - Without the PBL on Harewood/4th, the traffic operations at the proposed ped/bike signal would likely be worse (higher delays and longer queues).
   - Years 2018 and 2040: The AM and PM peak hour queue lengths along westbound Michigan Avenue between Irving and Harewood would not exceed the available storage distance, due to the upstream signal at Harewood metering the volume of traffic approaching Irving along Michigan.
   - Year 2018 AM: The volume-to-capacity (v/c) ratio for the ped/bike-signalized right-turn from westbound Michigan onto Irving would be close to, but less than, 1.00; this increases the chances of queues occasionally being longer than what Synchro is reporting, but mainly east of Harewood.
   - Year 2040 AM: The volume-to-capacity (v/c) ratio for the ped/bike-signalized right-turn from westbound Michigan onto Irving would exceed 1.00; therefore, queues are likely to be longer than what Synchro is reporting, but mainly east of Harewood.
   - **Table 4** summarizes the results of the Synchro analysis of the right turn movement with and without the proposed ped/bike signal across the right turn from Michigan onto Irving:

Table 4 - Analysis of the Right Turn from WB Michigan Avenue NE onto WB Irving Street NE

Westbound Michigan Avenue NE at Irving Street NE		Year 2018			Year 2040		
		Delay (s/veh)	LOS	Queue (ft)	Delay (s/veh)	LOS	Queue (ft)
Existing (No WBR Signal)	AM	6.6	A	195	None	A	45
	PM	3.6	A	None	4.5	A	25
Proposed (WBR Signal)	AM	13.8	B	140	47.8	D	245
	PM	9.7	A	190	10.6	B	240
Proposed (WBR Signal) without 4th Street NE PBLs	AM	15.8	B	220	58.1	E	895

Note: The available distance between Irving Street NE and Harewood Road NE for queuing is 365 feet

5. Conclusions:
   - Due to the metering effect of the traffic signal at Harewood Road on traffic along westbound Michigan Avenue NE, queues are not likely to exceed the distance between Irving and Harewood

(365 ft) in either 2018 or 2040, even with the high v/c-ratios for the westbound right-turn onto Irving Street

- Growth in traffic through 2040 will lead to longer queues along westbound Michigan Avenue approaching Harewood regardless of whether the Michigan to Irving right turn is signalized, while the traffic operations at Michigan and Irving would remain similar to the 2018 conditions.

B. Kenyon Street NW at Park Place NW

1. Description of the Issue:
   - The preferred north-south alternative for Crosstown PBLs would repurpose one of the two existing southbound travel lanes along Park Place NW approaching the traffic signal at Kenyon Street.
   - DDOT TESD has expressed concern that reducing the number of lanes on the southbound approach will cause excessive queuing and delays during the AM peak hour.
2. Traffic Volumes:

- The **Existing 2018 AM (PM)** southbound Park Place peak hour traffic volumes are **1,045 (505)**.
- The **Projected Year 2040 AM (PM)** southbound Park Place peak hour traffic volumes are **1,160 (560)**.

3. Analysis Results:
   - **Table 5** summarizes the results of the southbound Park Place approach in terms of delays, levels of service, and queue lengths:

Table 5 - Analysis of SB Approach of Park Place NW at Kenyon Street NW

Southbound Park Place NW at Kenyon Street NW		Year 2018			Year 2040		
		Delay (s/veh)	LOS	Queue (ft)	Delay (s/veh)	LOS	Queue (ft)
Existing (2 SB Lanes)	AM	38.8	D	490	51.9	D	625
	PM	19.4	B	125	20.6	C	140
Proposed (1 SB Lane)	AM	**144**	**F**	**1,310**	**211**	**F**	**1,500**
	PM	69.8	E	380	**107**	**F**	**435**

   - The repurposing of one of the two existing southbound lanes along Park Place at Kenyon would have a noticeably adverse impact on traffic operations, especially during the AM peak hour.
4. Conclusion:
   - Based on the queue length of 625 feet during the AM peak hour in 2040 with 2 lanes, the proposed alternative would need to provide two travel lanes along Park Place between Luray Place NW and Kenyon Street NW.

Parking Analysis

A parking analysis was performed within the Project limits to determine the location of the proposed protected bike lanes (PBL) within the street cross-section (i.e., on which side of the street would a PBL have the least impact on the on-street parking supply). The analysis identified the total number of on-street spaces along the study corridors, as well as the adjacent parallel streets and cross streets. The analysis included a parking utilization assessment to determine parking capacity in the residential portion of the Project area. The corridors analyzed as part of the parking analysis are as follows:

- Irving Street NW, from Park Place to Warder St
- 5th Street NW/Park, from Kenyon Street to Grant Circle
- 7th Street NW/Warder, from Columbia Road to New Hampshire Avenue
- Kenyon Street NW, from Warder Street to 14th St

The parking analysis was based on the analysis of footage from digital time-lapse cameras installed by DDOT at various locations within the study area. The camera footage consisted of photos taken every five minutes. The analysis of the footage consisted of determining the parking utilization in each collected frame during the period between May 24, 2018 and June 3, 2018. The parking utilization data was used to create a heat map that made it easier to spot trends in parking utilization at various locations across the study area.

The results of the parking utilization assessment indicate that throughout the study area, there is available parking capacity to accommodate the elimination of spaces to accommodate PBLs and modifications to improve sight lines at intersections. Utilization of the available on-street parking is consistently highest during the nighttime hours, which is to be expected in residential neighborhoods such as these.

The following is a summary of the detailed parking utilization trends, by observed location.

400 block of Kenyon Street NW at Park Place NW:

- On average, the daily parking utilization for the south side of the street varies from a minimum of 52% to a maximum of 74%. On Tuesdays, the south side parking utilization drops to 0% during the day due to street cleaning. Parking on the south side of the street is most occupied during the nighttime period and least occupied during the PM peak period (3 PM to 7 PM).
- On average, the daily parking utilization for the north side of the street varies from a minimum of 0% percent to 5%. Parking is not permitted on this block throughout the week except for Tuesdays when there is street cleaning on the south side of the street.

1200 block of Kenyon Street NW at 13th Street NW:

- On average, the daily parking utilization for the north side of the street varies from a minimum of 14% to a maximum of 23%. Parking on the north side of the street is most occupied during the nighttime period and least occupied during the PM peak period (3 PM to 7 PM).
- On average, the daily parking utilization for the south side of the street is 35%

400 block of Irving Street NW at Warder Street NW:

- On average, the daily parking utilization for the north side of the street varies from a minimum of 51% to a maximum of 66%. Parking utilization drops to 0% on Tuesdays during the day because of street cleaning.

Parking on the north side of the street is most occupied during the nighttime period and least occupied during the PM peak period (3 PM to 7 PM).

- On average, the daily parking utilization for the south side of the street varies from a minimum of 28% to a maximum of 49%. Parking utilization reaches a maximum of 58% on Tuesdays when there is street cleaning on the north side of the street. Parking on the south side of the street is most occupied during the nighttime period and least occupied during the PM peak period (3 PM to 7 PM).

4100 block of 5th Street NW at Upshur Street NW:

- On average, the daily parking utilization for the east side of the street varies from a minimum of 64% to a maximum of 82%. Parking on the east side of the street is most occupied during the nighttime period and least occupied during the PM peak period (3 PM to 7 PM).
- On average, the daily parking utilization for the west side of the street varies from a minimum of 32% to a maximum of 54%. Parking on the west side of the street is most occupied during the nighttime period and least occupied during the midday peak period (10 AM to 3 PM).

4100 block of 5th Street NW at Taylor Street NW:

- On average, the daily parking utilization for the east side of the street varies from a minimum of 29% to a maximum of 40%. Parking on the east side of the street is most occupied during the nighttime period and least occupied during the midday peak period (10 AM to 3 PM).
- On average, the daily parking utilization for the west side of the street varies from a minimum of 61% to a maximum of 71%. Parking on the west side of the street is most occupied during the nighttime period and least occupied during the midday peak period (10 AM to 3 PM).

3600 block of Park Place NW at Quebec Place NW:

- On average, the daily parking utilization for the west side of the street varies from a minimum of 43% to a maximum of 56%. Parking on the west side of the street is most occupied during the nighttime period and least occupied during the PM peak period (3 PM to 7 PM).

3600 block of Warder Street NW at Otis Street NW:

- On average, the daily parking utilization for the east side of the street varies from a minimum of 60% to a maximum of 71%. Parking on the east side of the street is most occupied during the AM peak period (6 AM to 10 AM) and least occupied during the nighttime period.
- On average, the daily parking utilization for the west side of the street varies from a minimum of 60% to a maximum of 73%. Parking on the west side of the street is most occupied during the AM peak period (6 AM to 10 AM) and least occupied during the nighttime period.

3600 block of Warder Street NW at Quebec Place NW:

- On average, the daily parking utilization for the east side of the street varies from a minimum of 45% to a maximum of 64%. Parking on the east side of the street is most occupied during the nighttime period and least occupied during the PM peak period (3 PM to 7 PM).

- On average, the daily parking utilization for the west side of the street varies from a minimum of 37% to a maximum of 61%. Parking on the west side of the street is most occupied during the nighttime period and least occupied during the PM peak period (3 PM to 7 PM).

Conclusions

- The intersections with the highest number of reported crashes are higher-volume intersections:
  - Irving Street NW at Kenyon Street NW
  - Michigan Avenue NE at Fourth Street NE
  - Michigan Avenue NE at Irving Street NE
- Due to the metering effect of the traffic signal at Harewood Road on traffic along westbound Michigan Avenue NE, queues are not likely to exceed the distance between Irving and Harewood (365 ft) in either 2018 or 2040.
- Based on the Year 2040 AM peak hour queue length with 2 lanes, the proposed alternative would need to provide two travel lanes along Park Place between Luray Place NW and Kenyon Street NW to prevent excessive queuing and delay.
- There is available parking capacity to accommodate the elimination of spaces to accommodate PBLs and modifications to improve sight lines at intersections.

PUBLIC INPUT SUMMARIES

Crosstown Public Input

INTERAGENCY MEETING: CONCEPT REVIEW Tuesday, May 15

An open house-style interagency meeting was held Tuesday, May 15, 2018, to introduce the protected bicycle facility concepts for Crosstown. Three Alternatives (Alt-1, Alt-2, and Alt-2b) were presented for the East/West segment along Irving from Warder Street NW to Michigan Avenue NE. Two Alternatives were presented for the North/South corridors of Warder Street NW and Park Place NW from Grant Circle to Kenyon. In Summary, the Alternatives are:

E/W Alternative 1: A median running cycletrack with a north/south crossover that transitions to a north side roadway cycletrack at 1st Street NW E/W Alternative 2: A north side median running cycletrack with a road closure at Hobart to continue the cycletrack along the median

E/W Alternative 2b: A north side median running cycletrack with a north side roadway cycletrack transition/crossing at Hobart NS Alternative 1: Parking protected bike lanes on Park and Warder

NS Alternative 2: 2-Way cycletrack along Park Place NW

Participants were provided an 11''x17'' "Trade-Off" and Comment sheet when entering the room and the consultant team from RK&K and internal DDOT team were available to discuss the concepts, potential trade-offs, design challenges, safety, and traffic impacts. Five roll plots were available to review each concept with illustrative lane markings, sections, turning movement diagrams, parking (existing and proposed), and traffic volumes. As new challenges, comments, and ideas surfaced, sticky notes were used to record thoughts, modifications, and questions to present to the public in an Open House planned for June 12th.

The below sections summarize comments posted on the roll plots, organized by Alternative and labeled sections A through L.

The sign in sheet and photos of the roll plots can be found at www.dccycletrack.com

E/W ALTERNATIVE COMMENTS

SECTION A: INTERSECTION OF KENYON STREET AND WARDER STREET

E/W Alt-1

- NO COMMENTS

E/W Alt-2

- NO COMMENTS

E/W Alt-2b

- What are right turn volumes? Should not allow free right across two-way cycletrack.

SECTION B: ROADWAY BETWEEN WARDER STREET AND PARK PLACE

E/W Alt-1

- NO COMMENTS

E/W Alt-2

- NO COMMENTS

E/W Alt-2b

- NO COMMENTS

SECTION C: INTERSECTION OF KENYON STREET AND PARK PLACE

E/W Alt-1

- Why isn't this a significant conflict? (SB through bike vs SB vehicular RT)
- Likely unacceptable lane shift through intersection for SB movement.

E/W Alt-2

- Left turn volume conflicts with bike maneuver, cannot be shared lane for left and through.

E/W Alt-2b

- With east side Park one-way bike lane and northside Irving Street bike lane, tray a bike scramble phase to accommodate all movements with less delay.

SECTION D: ROADWAY BETWEEN PARK PLACE AND IRVING STREET/HOBART PLACE

E/W Alt-1

- NO COMMENTS

E/W Alt-2

- NO COMMENTS

E/W Alt-2b

- [Note posted at crosswalk on Hobart Street/Irving Street near south side of Wangari Gardens] No ramp, just steps.

SECTION E: INTERSECTION OF IRVING STREET/HOBART PLACE

E/W Alt-1 (No Crossing Noted In This Alternative)

- DDOT HSIP evaluation ongoing at Irving Street/Kenyon Street to reduce crashes and improve pedestrian safety (2018/2019 completion)

E/W Alt-2 (No Crossing Noted In This Alternative)

- NO COMMENTS

E/W Alt-2b

- This intersection should include crosswalk across Irving. Short turn pocket will spill back onto Irving Street if peds cross. [Response] But if crosswalk is provided, where would you put them? (No facilities on north or south side at this part of the intersection).
- Add pedestrian crossing signal (perhaps HAWK) on eastbound lanes. Coordinate with new bike crossing.

SECTION F: ROADWAY BETWEEN IRVING STREET/HOBART PLACE AND 1ST SREET

E/W Alt-1

- NO COMMENTS

E/W Alt-2

- NO COMMENTS

E/W Alt-2b

- NO COMMENTS

SECTION G: INTERSECTION OF IRVING STREET AND 1ST STREET

E/W Alt-1

- 1st Street between Irving Street and Michigan Avenue is private so sidewalk proposed may not be possible.
- Future access point for AFRH. Need to consider how reduction in capacity impacts possible future 4th leg.
- [Movement from northeast bike box or median cycletrack on east side to southeast corner of intersection] When does this phase go? Doesn't seem to be an opportunity / phase in Option 1.
- Acknowledge consistency with and timing of AFRH redevelopment with third Irving access point.
- [Option 2] How "minimal" is LT impact (1st and Irving)

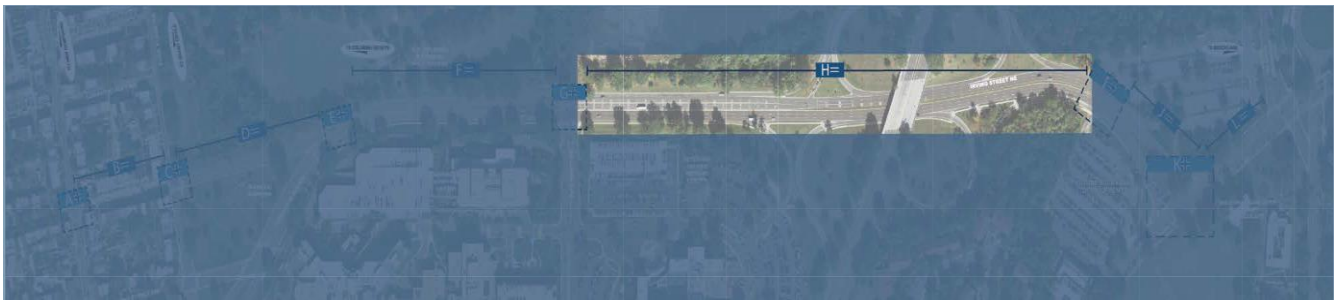
E/W Alt-2

- Keep double lefts by transitioning bike lane somewhere else.
    - [Notes further east near ramp leading into Veterans Affairs Medical Center] Modify ramp to eliminate lane shift / merge. This would allow for double left to remain at 1st Street.

E/W Alt-2b

- Why not consider north side cycletrack along entire segment? Would require intersection modification [at 1st] abut would be simpler signal operations.
- How is the impact to the westbound movement minimal when the westbound left turn peak hour volume is that high?

SECTION H: ROADWAY BETWEEN 1ST STREET AND THE BUCHANAN PROPERTY



E/W Alt-1

- Consider realigning ramp to match configuration on southeast corner (will be done by AFRH development).

E/W Alt-2

- [See notes related to lane shift impacting 1st street in Section G].

E/W Alt-2b

- No conflict with path from Park to cloverleaf. No conflict with median cycletrack from cloverleaf to

Michigan. Can you combine those and cross bikes at reconfigured southbound North Capitol / westbound Irving ramp?

SECTION I: ENTRANCE AT BUCHANAN PROPERTY

E/W Alt-1

- Add proposed right-in / right-out by developer [at Buchanan Property and Irving. Also, a note to add proposed access on Michigan].

E/W Alt-2

- Confirm eastbound lane shift through intersection is acceptable.
- Support to close driveway but will need to coordinate with owner (CUA / Basilica). What are volumes and will they impact Harewood intersection of rerouted? [NOTE: the concept does not intend to close to driveway – suggest removing white line and rendering gray in driveway to avoid confusion].

E/W Alt-2b

- NO COMMENTS

SECTION J: ROADWAY BETWEEN BUCHANAN PROPERTY ENTRANCE AND MICHIGAN AVENUE

E/W Alt-1

- NO COMMENTS

E/W Alt-2

- NO COMMENTS

E/W Alt-2b

- NO COMMENTS

SECTION K: INTERSECTION OF IRVING STREET AND MICHIGAN AVENUE

E/W Alt-1

- NO COMMENTS

E/W Alt-2

- When would ped phase go? [Note: turn on turning movement diagram legend to indicate vehicular, bike, and ped movements].
- What is queue spillback for right with short storage in 2nd (shared) lane?

E/W Alt-2b

- NO COMMENTS

SECTION L: SEGMENT ALONG MICHIGAN BETWEEN IRVING STREET AND HAREWOOD ROAD

E/W Alt-1

- NO COMMENTS

E/W Alt-2

- NO COMMENTS

E/W Alt-2b

- I prefer south side wide sidewalk for bikes on Irving Street BUT we should add signalized crosswalk across Irving/Michigan anyway to improve pedestrian access and safety.

N/S ALTERNATIVE COMMENTS

N/S ALT-1: PARKING PROTECTED BIKE LANES ON PARK PLACE NW AND WARDER STREET NW

Park Between Kenyon Street NW and Lamont Street NW

- Residents with handicap parking will likely object due to loading and need to cross physical barrier.

Warder Street NW Driveway at Luray Place NW

- Existing crosswalk is not ADA compliant (no ramps) and could be removed to allow for new parking spaces.

Warder Street NW and New Hampshire Avenue NW Intersection

- Evaluate intersection operations at this location (add "no right turn on red" for Warder, etc.)

Illinois Avenue Between Upshur and Grant Circle NW

- Note: this block will be converted to one-way northbound with contraflow bike lane.

Non-Location Specific Comments

- High speeds on Park Place and sign distance issues concern me with drivers pulling into and blocking bike lanes.

N/S ALT-2: PARKING PROTECTED BIKE LANES ON PARK PLACE AND WARDER STREET

Park Place NW Between Lamont and Luray Place NW

- Did you consider one-way pairs for protected bike lanes on Warder and Park Place? Would preserve space for sidewalk on east side of Park where it is currently missing.

Warder Street NW Between Lamont and Luray Place NW

- Is there any potential or need to reconfigure lane usage and bike lane [on Warder] in this option, with the addition of the two-way cycletrack on Park?

Park Place NW Between Luray Place NW and Park Road NW

- Guardrail is right on top of curb [it] will pinch cycletrack and doesn't meet 2' offset.

Park Place NW Between Park Road NW and Manor Place NW

- Would provide traffic calming that is needed along Park Place.

Rock Creek Church Road NW and Quincy Street NW

- Show northbound bike lane on Rock Creek Church.
- Add transit info: H8.
- Contraflow would meet desire line.
- Contraflow lane [west] to Georgia? On Rock Creek Church Road.
- Examine signal and intersection design (Quincy and Park). [NOTE: there is a stop sign and a traffic signal].

Section on Park Place NW North of Quincy Street NW

- 7' – 10' – 7' Cross section TOO TIGHT!
- This is a big ambulance route to Washington Hospital. Center 10' is too tight.

Warder Street NW and New Hampshire Avenue NW Intersection

- Examine intersection / signalization work.

Upshur Street NW

- Mark existing bike facility.

Grant Circle NW

- Add yield signs.

Non-Location Specific Comments

- Add existing facility color.
- This alternative makes it difficult for local access for bikes (they are locked behind a median).
- Park = Minor Arterial / Warder = Collector. Confirm the minimum required lane widths in the Design and Engineering Manual (may be 11', I don't remember).
- Can we combine the Warder protected bicycle design with the two-way cycletrack along Park Place? What are the traffic implications?

PUBLIC OPEN HOUSE: CONCEPT REVIEW Tuesday, June 12

Meeting Quick Facts

- Tuesday, June 12, 2018 from 6 p.m. to 8 p.m. at the Raymond Recreation Center
- 91 meeting attendees (based on the meeting sign-in sheet)
- 74 Title VI respondents

To increase safety and mobility within the District, the District Department of Transportation (DDOT) is looking to implement protected bike lanes within the following three (3) corridors as part of the DC Protected Bike Lanes project. These projects include:

- Eastern Downtown
- Crosstown
- 20th/21st/22nd Street NW

This document summarizes Crosstown's Open House outreach efforts and public comments.

The purpose of the Crosstown project is to develop preliminary (30%) designs for protected bike lanes along

- East-West design alternatives: Irving Street NE/NW between Michigan Avenue NE and the 400 block of Kenyon Street NW; and
- North-South design alternatives: 5th Street/Park Place between Grant Circle and Kenyon Street NW, and/or 7th Street/Warder Street between New Hampshire Avenue NW and Kenyon Street NW.

1.1. Background

As part of DDOT's Crosstown Multimodal Transportation Study completed in 2016, the community identified east-west bike connectivity as a priority to close a major gap in the existing bicycle network. This preliminary design project is the first action item stemming from the Transportation Study Recommendation B.1, which proposes protected bike lanes along Irving Street NE/NW and the 400 block of Kenyon Street NW.

North-South design alternatives for protected bicycle lanes on Park Place, Warder Street, 7th Street, and 5th Street NW are also under evaluation, per community request. Between 2006 and 2010, bicycle lanes were installed onto various locations of 5th Street/Park Place NW and 7th Street/Warder Street NW until a continuous bicycle lane was established. Years later, the community requested that a protected bicycle lane be examined to establish protections for vehicles, pedestrians and bicycle movements throughout the study area.

1.2. Event Information

On Tuesday, June 12, 2018, DDOT hosted an open house for the Crosstown project. The purpose of the meeting was to present and obtain feedback on the proposed protected bike lane (cycle track) designs.

The public meeting was held at the Raymond Recreation Center (3725 10th Street NW, Washington, DC 20010) from 6:00 p.m. to 8:00 p.m. in the Multipurpose Room. The meeting location was accessible by Metrorail (Green line) and Metrobus (79, 70, 60, 62/63, 64).

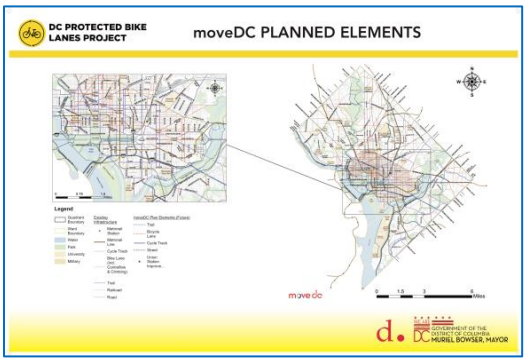
During the open house, attendees had the opportunity to view the boards and roll plots, ask questions to the project team, and provide comments directly onto the plan by using Post-It notes. In addition, the project team developed an activity that allowed attendees to vote and provide their opinion on four design questions.

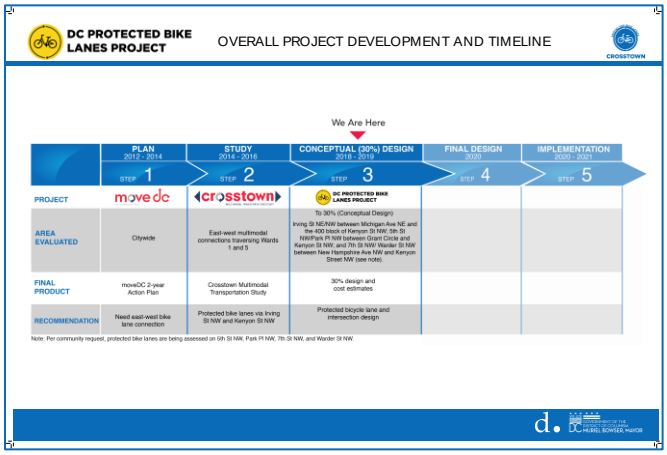
1.3. Meeting Materials

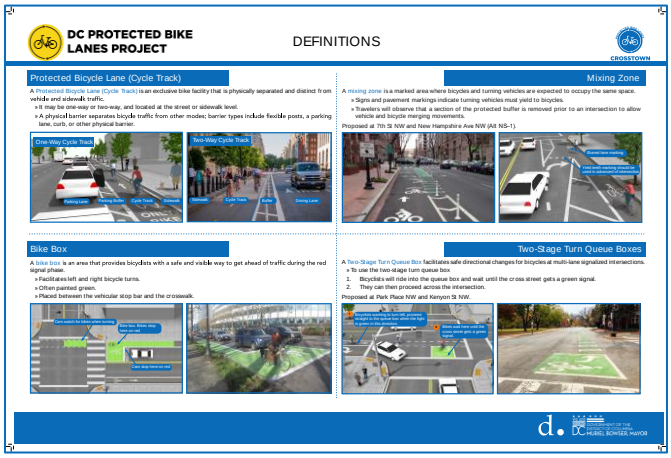
The meeting materials included four (4) boards and five (5) roll plots providing attendees with information on the East-West and North-South design alternatives as well as three (3) activity boards, and handouts.

Boards

- Welcome board (not shown)
- moveDC planned elements (including bicycle infrastructure)
- Overall project development and timeline
- Bicycle Facility Definitions







Roll Plots

The project team developed five (5) roll plots (approximately 36-inch wide and 120-inch long) for each design alternative. The concepts included:

East/West

- Alternative 1: Median Running Cycle Track with Roadway Transition at 1st Street NW to Northside Cycle Track (Transition achieved through a multistage crossing)
- Alternative 2: North Side Median Running Cycle Track with Road Closure of Hobart Place NW between Kenyon Street NW and Irving Street NW
- Alternative 2B: North Side Median Running Cycle Track with North-South Transition at Hobart Place NW/Kenyon Street NW to Northside Cycle Track (Transition achieved via a new intersection)

North/South

- Alternative 1: One-Way Parking Protected Cycle Track on 5th Street/Park Place and 7th Street / Warder StreetNW
- Alternative 2: Two-Way Protected Bike Lane on Park Place NW and 5th Street NW to Grant Circle

Each roll plot was printed and displayed on large tables. Each roll plot included an aerial as a base map, section views, and illustrated locations of:

- Proposed cycle tracks
- Existing bike lanes
- Buffer
- Full-day and off-peak parking spaces
- Stop- and signal-controlled intersections
- Proposed bike signals
- Parking counts (existing and proposed)

The roll plots for the East-West alternatives also showed the trade-offs at specific locations.

Activity Boards

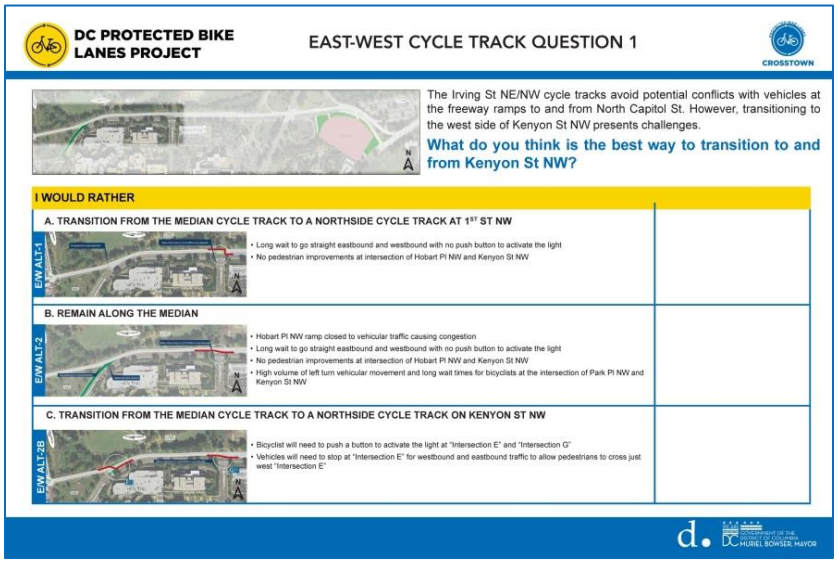
The team also developed three activity boards with questions related to the East/West and North/South design alternatives. Participants were asked to place a dot in their preferred option and place Post-It notes with their comments on the roll plots to further explain their selection, if desired.

Regarding East/West design alternatives, the project team asked participants to identify their preferred method to transition to Kenyon Street NW and Michigan Avenue NW from the median cycle track. For the North/South design alternatives participants gave their preferences for one-way and two-way cycle tracks and the potential connection between the two-way cycle track (proposed on the east side of Park Place) and the existing bike lane located south of Kenyon Street NW on the west side of Park Place NW.

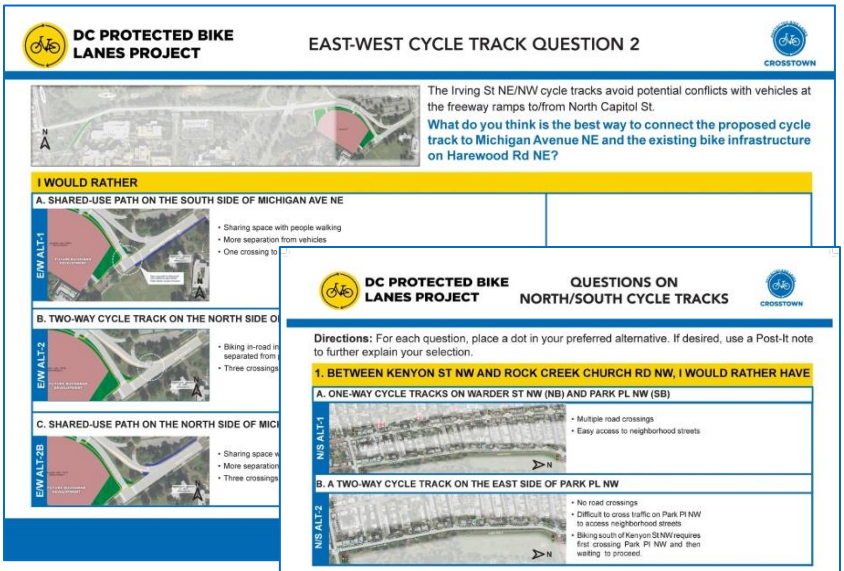
The questions and options are presented below.

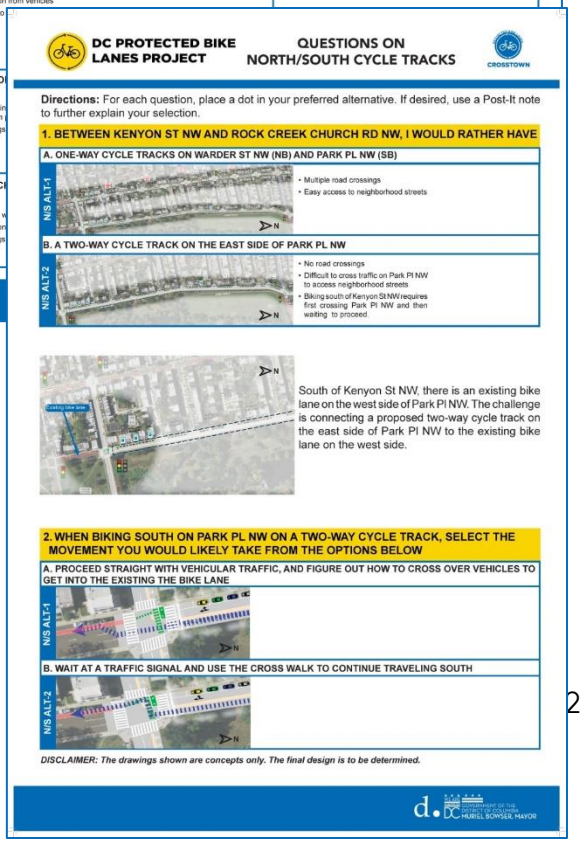
East/West

1. What do you think is the best way to transition to and from Kenyon Street NW?
   - A. Transition from the median cycle track to a northside cycle track at 1st Street NW
   - B. Remain along the median (which would require closing Hobart to westbound vehicular traffic)
   - C. Transition from the median cycle track to a northside cycle track on Kenyon Street NW (via a new intersection).



2. What is the best way to transition a cycle track at the intersection of Irving Street and Michigan Avenue NE?
   - A. Shared-use path on the south side of Michigan Avenue NE
   - B. Two-way cycle track on the north side of Michigan Avenue NE
   - C. Shared-use path on the north side of Michigan Avenue NE





North/South

1. Between Kenyon Street NW and Rock Creek Church

Road NW, I would rather have:

A. One-way cycle tracks on Warder Street NW(NB) and Park Place NW (SB).

B. A two-way cycle track on the east side of Park Place NW

2. When biking south on Park Place NW on a two-way cycle track, select the movement you would likely take from the options below:

   A. Proceed straight with vehicular traffic and figure out how to cross over vehicles to get into the existing bike lane

   B. Wait at a traffic signal and use the cross walk to continue traveling south

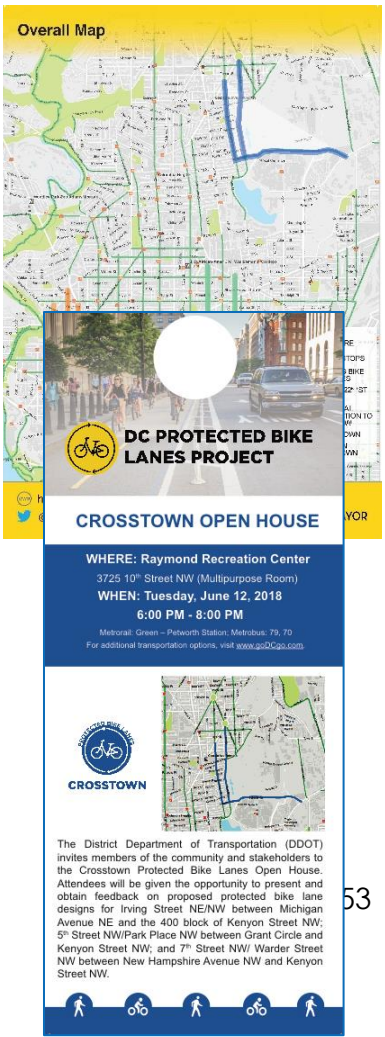
   C.

Handouts

Each attendee received a Title VI questionnaire with comment sheet, a copy of the definition board in 11 by 17, and if desired, a project postcard (see Section 2.1 Project Postcard).

2. OUTREACH EFFORTS

The following section summarizes the outreach efforts for this meeting. The Appendix provides larger images of the outreach materials.



2.1 Project Postcard

To promote the DC Protected Bike Lanes project, the project team developed a postcard showing the three corridors and directing the public to the project website (https://www.dccycletrack.com/). The postcards were distributed during Bike to Work Day (May 17, 2018) at various pit stops around the District, including those within or nearby the project corridors. The remaining postcards were distributed during 20th/21st/22nd Street NW first public meeting and the Crosstown Open House.

2.2 Door Hangers and Posters

About 250 door hangers were placed on residences located between 5th Street

NW/Park Place NW and 7th Street NW/Warder Street NW and between Kenyon Street NW and Grant Circle NW during the week of May 30, 2018.

In addition, the project team placed posters at the Raymond Recreation Center in English, Ahmaric, and Spanish.

2.3 Press Release, Email Blasts and Social Media

The open house was also announced through email blasts, a press release, and social media.

Email Blasts:

Large stakeholders, members of the community subscribed to the Crosstown Multimodal Study listserv, and members of the community interested in this project received email blasts providing information on the open house. Email blasts were sent on the following dates:

- May 23, 2018: Initial announcement
- June 6, 2018: Reminder #1
- June 11, 2018: Reminder #2
- June 15, 2018: Thank you message.

Facebook and Twitter

The open house was also announced on DDOT's Facebook and Twitter accounts on May 22, 2018 (District Department of Transportation and @DDOT DC, respectively).

Press Release

DDOT also released a press release on May 19, 2018 (https://ddot.dc.gov/event/open-house-crosstown-protected-bike-lanes-june-12).

2.4 Stakeholders

The project team contacted ANC commissioners, interested stakeholders, and cyclist groups through e-mail blasts and social media (moveDC's Twitter and Facebook accounts). ANC 4C contacted many of the local churches within the project area.

ANC Commissioners

- ANC 1A, 1B, and 4C

Interested Stakeholders

- Washington Hospital Center
- Children's Hospital
- VA Hospital
- Howard University
- Howard University hospital
- Catholic University

- Trinity University
- McMillan Partners/Envision McMillan
- Old Soldier's Home (Armed Forced Retirement Home)
- Buchanan Partners
- Basilica of the National Shrine of the Immaculate Conception

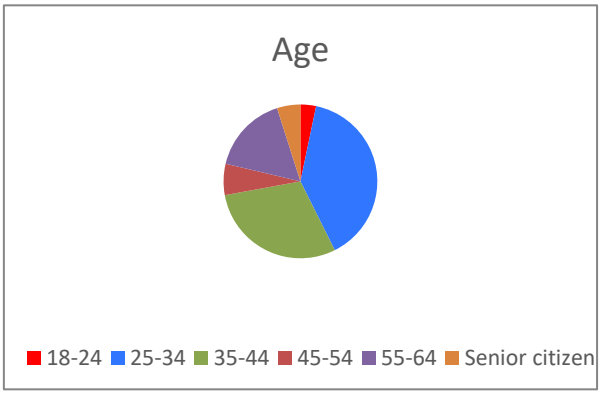
Cyclist Groups

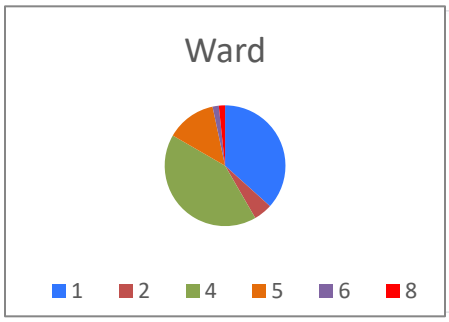
- Washington Area Bicyclist Association (WABA)
- DC Bicycle Advisory Council

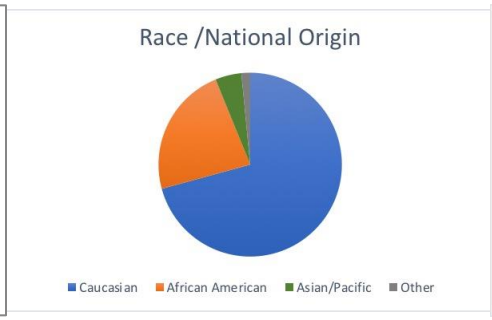
3. ATTENDANCE

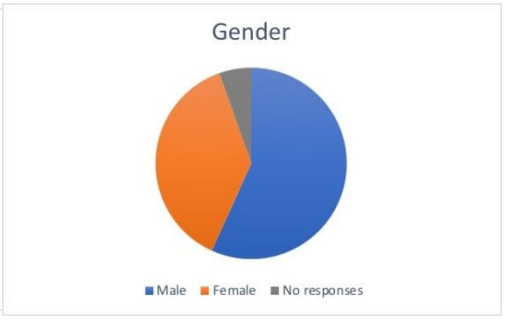
Ninety-one (91) members of the public attended this meeting. These attendees included ANC councilmembers, key stakeholders, residents, commuters, and local bicycle advocates.

The charts below represent the demographic makeup of meeting attendees based on the 74 completed Title VI forms.









4. SUMMARY OF COMMENTS

Attendees provided feedback via the comment form and by placing Post-It notes on the roll plots. In addition, DDOT encouraged submission of additional comments via email, mail, and the project website until June 27, 2018. The following table provides the total number of comments received though the comments forms, roll plots and via email. No comments were received via regular mail.

Source	No. Comments
Comment form	51
Post-it notes on East-West roll plots	90
Post-it notes on North-South roll plots	78
Email	44

In addition, the following interested stakeholders sent the project team letters via email:

- Georgia Avenue Thrive
- DC Crosstown Safety Now
- WABA
- Sierra Club

The following section presents a summary of the comments received before, during, and after the meeting.

4.1 Key Takeaways

- Safety is a big concern among respondents. Attendees would like to see clear separation between people driving, biking, and walking.
- Supporters of the project want this project built sooner than 2021 in order to improve safety and achieve Vision Zero goals.
- Participants requested continued connectivity to Columbia Heights to the west and Catholic University and the Metropolitan Branch Trail to the east.

4.1 Key Comments on Design Alternatives

East-West Alternatives

- Given the high speeds on Irving Street NE/NW, multiple respondents stated that they would like to see concrete barriers-like planters with native vegetations or jersey barriers- placed along the median cycle track instead of flexible posts. One participant inquired if a vehicle lane from both directions could be removed to create a larger bike thoroughfare with green barriers on both sides. Other participant suggested putting the cycle track on the south of Irving Street and removing some car parking from the Washington Hospital Center.
- Attendees suggested placing signage and road markings at the intersection of Kenyon Street and Warder Street NW to alert motorists that bicyclists will be continuing on Irving Street NW but unprotected.
- One participant proposed having a pedestrian trail alongside the cycle track to provide connectivity.
- Multiple participants suggested removing the clover leaf and adding trees and green space along this corridor.
- Some participants suggested signalizing the intersection of Michigan Avenue and Irving Street NE.

Alternative 1
Respondents described the transition at the Irving Street and 1st Street NW intersection "uncomfortable, cumbersome and confusing" for cyclists.

Alternative 2

- Multiple participants supported the closure of Hobart Place NW, since the intersection Hobart Place and Irving Street NW is dangerous for bicyclists and pedestrians. In fact, there was a fatality on this intersection in 2017. However, some respondents recognized that this would create traffic congestion.
- Many participants agreed that this alternative provided a smoother transition than Alternative 1.
- One respondents suggested reducing the number of Eastbound lanes on Irving Street NE/NW to two (2) and adding tress in the median. Some participants stated that the intersection of Irving Street and Michigan Avenue NE is currently unsafe and suggested making the entire intersection 90 degrees.

Alternative 2B

- Multiple participants stated that this option provided the best East-West flow and promoted safety.
- In addition to "Beg Buttons," participants suggested that bicyclists should have regularly timed signal phases. If there are bicycle "beg buttons," there should be lean bars or curbs to make it safer to stop and rest.
- One respondent stated that the lights on Irving Street NE/NW are good but could improve night access.

Other Comments

- One participant suggested exploring adding North-South bike lanes on 1st Street NW so that people can get to destinations such as the hospital & Bloomingdale via the Irving Street NW/NE cycle track. This will require coordination with Hospital Center, since this is a private road.

North-South Alternatives

- Parking reduction is a main concern especially on 5th Street NW.
- Some participants expressed that they would like to keep parking along the curb due to accessibility concerns.
- Multiple participants stated that cars travel fast on Park Place NW. Some people suggested removing one lane; others stated they would prefer keeping two vehicle lanes since this is a heavily traveled street.
- Participants stated they prefer an East-West connection on Rock Creek Church Road instead of Quincy Street NW due to the presence of a signal. However, a participant suggested having both streets as connections.
- Participants asked DDOT not to divert cyclists to 7th Street NW but continue going northbound to connect with new traffic calming in Grant Circle.

Alternative 1

- Many respondents expressed concerns about removal of parking around the First Baptist Church and the Israel Metropolitan CME Church.
- One respondent stated that "mixing zones are terrifying" and suggested looking for other alternatives.

Alternative 2

- Multiple participants proposed placing the two-way cycle track on the west side of Park Place NW, instead of east, making the cycle track more accessible to neighborhood streets.
- If a cycle track is proposed on the east participants would like to see concrete barriers.
- A participant suggested adding more bulbouts and trees, widened sidewalk and remove lanes.

4.2 Activity Boards

The following section presents the results from the activity and a summary of the comments.

East-West Alternatives

What do you think is the best way to transition to and from Kenyon Street NW?	
Transition from the median cycle track to a northside cycle track at 1st Street NW	1
Remain along the median (which would require closing Hobart to westbound vehicular traffic)	19
Transition from the median cycle track to a northside cycle track on Kenyon Street NW (via a new intersection).	11
What is the best way to transition a cycle track at the intersection of Irving Street and Michigan Avenue NE?	
Shared-use path on the south side of Michigan Avenue NE	8
Two-way cycle track on the north side of Michigan Avenue NE	35
Shared-use path on the north side of Michigan Avenue NE	1

Over 60 percent of participants stated that the best way to transition to and from Kenyon Street NW is n a median cycle track (East/West Alternative 2). Furthermore, the majority of the community agreed that a transition on 1st Street NW (East/West Alternative 1) is very tough

Participants stated that a two-way cycle track on the north side of Michigan Avenue NE is the best way to transition to a cycle track at the intersection of Irving Street and Michigan Avenue NE since it separates bicyclists from pedestrians. However, one participant suggested having the cycle track on the south side of Michigan Avenue NE. Another attendee stated that this option will create conflicts between bicyclist and pedestrian traffic at Harewood Road NE.

North-South Alternatives

Between Kenyon Street NW and Rock Creek Church Road NW, I would rather have:	
One-way cycle tracks on Warder Street NW (NB) and Park Place NW (SB).	15
A two-way cycle track on the east side of Park Place NW	18
When biking south on Park Place NW on a two-way cycle track, select the movement you would likely take from the options below:	
Proceed straight with vehicular traffic and figure out how to cross over vehicles to get into the existing bike lane	20

Wait at a traffic signal and use the cross walk to continue traveling south	10

There didn't seem to be a significant preference by respondents for one-way or two-way cycle tracks between Kenyon Street and Rock Creek Church NW. However, 66 percent of the participants stated that when biking south on Park Place on a two-way cycle track, they would proceed straight with vehicular traffic and figure out how to cross over vehicles to get into the existing bike lane. One participant suggested adding a leading signal for bikes to have a head start over vehicles.

THE PATH FORWARD

The project team will be using the results from technical analyses and public comments received before, during, and after the public meeting to develop the preliminary (30%) designs for the north/south and east/west cycle tracks. The project team will continue updating the project webpage (https://www.dccycletrack.com/crosstown) to maintain the community and stakeholders informed about the development of the project. The preliminary design will be finalized by March 2019.

INTERAGENCY MEETING: REFINED CONCEPT REVIEW Wednesday, August 29

An open house style interagency meeting was held Wednesday, August 29, 2018, to discuss the protected bicycle facility concept for Crosstown. The concept includes a North-South pair of parking protected bike lanes on Warder Street NW and Park Place NW from Grant Circle to Kenyon. The East-West alignment traverses Irving Street NW from Warder Street NW to Michigan Avenue NE as a median running cycle track.

Participants were provided with two 15-minute open discussion periods, a presentation, and a question and answer period. As challenges, modifications, comments and ideas surfaced, participants were encouraged to verbally discuss and provide written comments using sticky notes during the appropriate periods. All comments, challenges and suggestions will be incorporated into the materials to be presented to the public during the pop-up event on September 21st.

The below sections summarize comments on the roll plots.

The sign in sheet and photos of the roll plots can be found at www.dccycletrack.com

E/W MEDIAN RUNNING CYCLE TRACK

GENERAL COMMENT

- Please don't call your Friday event a parking Day event – concerned this would confuse existing Parking Day program.

INTERSECTION G

- Will depend on the type of inlets – many need to replace, at least, or move all together (I think move/replace is most likely)

SEGMENT H

- Public space committee approved WBL at site driveway

INTERSECTION K

- May want to show MIRV improvements as a slightly longer horizon – hopefully after the interim bike lane project.
- Add extensions lines through intersection for lane shift in WB direction.
- This intersection for one person is very dangerous. Putting in a signal would improve safety by a lot. Southside of Michigan Avenue does have a lot of pedestrians coming from Trinity going to Metro.
- Advance warning for new signed may be needed to boost expectancy.
- Based on our analysis results, TESD still doesn't feel that putting the bike lane on the north side of the street is operation-workable.

N/S PARKING PROTECTED COUPLET

PARK PLACE NW (BETWEEN KENYON ST NW AND LAMONT STREET NW)

- One travel lane will reduce the LOS to F for Park Place/Kenyon Intersection
- Move bike lane to west side on Park and 5th
  - Connects better with the lane closer to Kenyon
  - Prevents crossing traffic to neighborhood.

PARK PLACE NW AND PARK ROAD NW

- Need more trees

PARK PLACE NW AND NEWTON STREET NW

- Generally – ensure sight distance is sufficient for SB bicycles entering bike lanes from side streets – more need to remove some more parking.

PARK PLACE NW AND PRINCETON STREET NW

- FEMS concerns with road diet?

5TH STREET AND QUINCY STREET NW

- Figure out – stop and signal are confusing!
- Keep 11' travel lane and 7'parking lane so the bike lane can be increased to 7'.
- Bend in the cycle track at the intersection area for better visibility

ILLINOIS AVENUE NW AND UPSHUR STREET NW

- Are these intersections AWS in existing? If not, please be mindful of any and additional measures needed to ensure stop compliance, especially if there are big volume imbalances between approaches (along 5th and 7th Streets)

NEW HAMPSHIRE AVENUE NW AND GRANT CIRCLE NW

- Please include Ward 4 stakeholders – CM Todd's office, ANC 4C, Petworth Action Committee – and residents we contacted through Grant Circle process – Ted will send list of contacts

PRESENTATION COMMENTS

CHALLENGES:

- E/W Facility – Michigan Avenue: Concerns of the proposed concept not working. The volume of traffic can back up traffic patterns beyond this project scope.
- The current pedestrian count does not provide information to support the proposed pedestrian path. (New hotel development is projected to increase foot traffic. It's expected tor the foot traffic to increase once safety is improved).
- Is there value in beginning the WB movement? (Noted, but not in the current scope)

POP-UP EVENT: REFINED CONCEPT REVIEW Friday, September 21

Pop Up Quick Facts

- Friday, September 21, 2018 from 7: 00 AM to 9:00 AM and 4:00 PM to 7:00 PM at 400 Kenyon Street NW (Between Park Place NW and Warder Street NW)
- 37 attendees (based on the sign-in sheet)

1. INTRODUCTION

To increase safety and mobility within the District, the District Department of Transportation (DDOT) is looking to implement protected bike lanes within the following three (3) corridors as part of the DC Protected Bike Lanes project. These projects are named:

- Crosstown
- Eastern Downtown
- 20th/21st/22nd Street NW

This document summarizes Crosstown's Pop Up Event outreach efforts and public comments.

The purpose of the Crosstown project is to develop preliminary (30%) designs for protected bike lanes along:

- East-West design alternatives: Irving Street NE/NW between Michigan Avenue NE and the 400 block of Kenyon Street NW; and
- North-South design alternatives: 5th Street/Park Place between Grant Circle and Kenyon Street NW, and/or 7th Street/Warder Street between New Hampshire Avenue NW and Kenyon Street NW.

1.1. Background

The Crosstown protected bicycle lane designs along Irving Street NE/NW and the 400 block of Kenyon Street NW is Project Recommendation B.1 from the September 2016 Crosstown Multimodal Transportation Study. In addition to the protected bicycle lane recommendations, the Crosstown Study recommended a variety of multimodal improvements throughout the corridor to enhance operations for motorists, transit, cyclists, and pedestrians. The study identified safe east and westbound biking connectivity as a priority to close a major gap in the existing bicycle network between Columbia Heights and Brookland.

Bicycle lanes were installed on 5th Street NW/Park Place NW and 7th Street NW/Warder Street NW between 2006 and 2010. However, the community has requested protected bike lanes in this portion of the project. This project provides an opportunity to reassess the existing street design of Park Place NW, Warder Street NW, 7th Street NW, and 5th Street NW to examine design options for protected bicycle lanes.

1.2. Event Information

On Friday, September 21, 2018, DDOT hosted a Pop Up event for the Crosstown project. The purpose of the meeting was to demonstrate how the proposed bike lanes will function and to provide the public with an opportunity to speak with the project team about the Crosstown Protected Bicycle Lane Project. It took place at the peak hours of traffic: 7:00 AM to 9:00 AM and 4:00 PM to 7:00 PM.
The full-scale model of the protected bike lane was set up along the 400 block of Kenyon Street NW located between Park Place NW and Warder Street NW. The Pop Up location was accessible by Metrobus (H1, H2, H3, H4).

During the Pop Up, attendees had the opportunity to experience a full-scale model of the protected bike lane, view the roll plots, ask questions about the proposed design, and provide comments directly on the plan by using Post-It notes.

1.3. Meeting Materials

The meeting materials included two (2) roll plots that displayed the East-West and North-South designs, post card handout, and an 11x17 print out of the project schedule.

Roll Plots

The project team presented two (2) roll plots (approximately 36-inch wide and 120-inch long) of the design. The concepts included:

East/West

- Median Running Cycle Track with North-South Transition at Hobart Place NW/Kenyon Street NW to Northside Cycle Track (Transition achieved via a new intersection)

North/South

- Alternative 1: One-Way Parking Protected couplet on 5th Street/Park Place and 7th Street / Warder StreetNW

Each roll plot was printed and displayed under a tent that was in the mid-block location of Kenyon Street NW between Park Place NW and Warder Street NW. Each roll plot included an aerial as a base map, section views, and illustrated locations of:

- Proposed cycle tracks
- Existing bike lanes
- Full-day and off-peak parking spaces
- Stop- and signal-controlled intersections
- Proposed bike signals
- Parking counts (existing and proposed)

Handouts

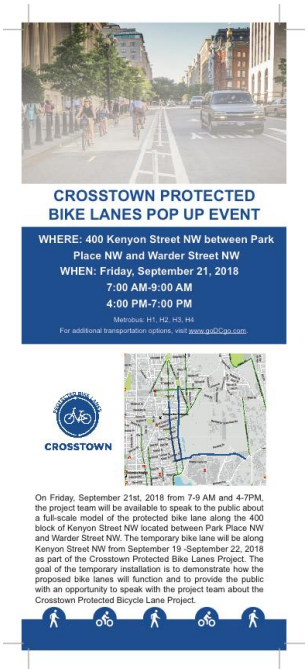
Each attendee was offered a Title VI questionnaire with comment sheet and an opportunity to sign up for the project listserv.

2. OUTREACH EFFORTS

The following section summarizes the outreach efforts for this meeting. Appendix A provides larger images of the outreach materials.

2.1 Project Postcard

To promote the DC Protected Bike Lanes Crosstown project, the project team developed a postcard detailing the event and the presentation of the full-scale model and directing the public to the project website (https://www.dccycletrack.com/). The postcards were distributed to the attendees at the Pop Up event.



2.2 Door Hangers

Approximately 150 door hangers were placed on residences located between 5th Street

NW/Park Place NW and 7th Street NW/Warder Street NW and between Kenyon Street NW and Grant Circle NW on September 14, 2018.

2.3 Press Release, Email Blasts and Social Media

The Pop Up event was also announced through email blasts, a press release, and social media.

Email Blasts

Stakeholders, members of the community subscribed to the Crosstown Multimodal Study listserv, and members of the community interested in this project received email blasts providing information on the pop up. Email blasts were sent on the following dates:

- September 11, 2018: Save the Date
- September 13, 2018: Initial announcement
- September 17, 2018: Reminder #1
- September 20, 2018: Reminder #2

Twitter

The Pop Up was also announced on DDOT's Twitter account on September 12th, 19th, 20th, and 21th. (District Department of Transportation and @DDOT DC).

Press Release

DDOT also released a press release on September 11, 2018 (https://ddot.dc.gov/release/ddot-host-crosstown-protected-bike-lanes%C2%A0pop-event)

2.4 Stakeholders

The project team contacted ANC commissioners, interested stakeholders, and cyclist groups through e-mail blasts and social media (moveDC's Twitter and Facebook accounts).

ANC Commissioners

- ANC 1A
- ANC 4C

Single Member District

- SMD 1B10
- SMD 5E01

Stakeholders

- Washington Hospital Center
- Children's Hospital
- VA Hospital
- Howard University
- Howard University hospital
- Catholic University
- Trinity University

- McMillan Partners/Envision McMillan
- Old Soldier's Home (Armed Forced Retirement Home)
- Buchanan Partners
- Basilica of the National Shrine of the Immaculate Conception

Resident Groups

- Georgia Avenue Thrive President
- DC Crosstown Safety Now

3. ATTENDANCE

Thirty-seven (37) members of the public visited the staffed tent during the pop up event. These attendees included ANC councilmembers, key stakeholders, residents, commuters, and local bicycle advocates. The demographic makeup of pop up attendees is unknown due to attendees declining to complete the Title VI forms. About 50 bicyclists used the bike lane. All did not stop.

4. SUMMARY OF COMMENTS

Attendees provided feedback verbally and by placing Post-It notes on the roll plots. In addition, DDOT encouraged submission of additional comments via email, mail, and the project website. The following table provides the total number of comments received though the roll plots and via email.

Source	No. Comments
Post-it notes on East-West roll plots	8
Post-it notes on North-South roll plots	5
Email	7

The following section presents a summary of the comments received before, during, and after the meeting.

4.1 Comment Summary

- Safety is a big concern among respondents. Attendees would like to see clear separation between people driving, biking, and walking and would like newly paved streets for safer biking.
- Supporters of the project want this project built sooner than 2021 to improve safety and achieve Vision Zero goals.

East-West Concept

- Respondents would like to see road diets and slower traffic and an addition of sidewalks into the Michigan/Irving Street NW (MIRV) Project.
- Respondents requested continued connectivity to Columbia Heights to the west, Catholic University and the Metropolitan Branch Trail to the east and to extend to Brookland using Michigan Avenue.

North-South Concept

- Parking reduction is a main concern.
- Fast vehicular traffic and congestion at the 5th and Quincy intersection.
- Respondents were interested in the bike lane's impact on the flow of traffic, school bus routes along Kenyon Street NW between Warder Street NW and Georgia Avenue NW when school is in session.

Social Media Comments

- Attendees desire to see a plan for bike/car law enforcement for violators.
- A question regarding the surface of streets, noting potholes. Individuals requested resurfacing of the bike lanes to improve safety and flow.
- Question about accessibility for emergency vehicles when bike lanes are installed.

5. THE PATH FORWARD

The project team will be using feedback collected to inform the final 30% designs for the north/south and east/west cycle tracks. The project team will continue updating the project webpage (https://www.dccycletrack.com/crosstown) to maintain the community and stakeholders informed about the development of the project. The preliminary design will be finalized by March 2019.

PARKVIEW UNITED NEIGHBORHOOD COALITION (UNC) MONTHLY MEETING SUMMARY Wednesday, November 7, 2018

1.1. Event Information

Members of the DDOT Project Team attended the November 7, 2018 Parkview UNC meeting, which was held at Parkview Community Center (693 Otis Place NW) from 7-8:15pm. Approximately 50 individuals attended the meeting. The Parkview UNC board organized the meeting. Four DDOT staff members attended and there were 69 comments collected during the meeting.

The Project was the primary discussion item for the UNC meeting, the format was a short presentation followed by an open house. DDOT staff presented an overview of moveDC and the miles of bicycle lanes envisioned in the District of Columbia, oriented the audience with a protected bicycle lane design, and discussed the project background, and gave a concept overview of the Project After the presentation. Immediately following the presentation, a short question and answer session occurred, and then the DDOT staff held an open house. During the open house, the DDOT team presented the same boards as the September 2018 Pop-Up event. Attendees were encouraged to record their thoughts onto post-its and place their comments onto the project concept boards.

The comments from the meeting are listed at the end of this section of the document. A short summary of the number and type of comments are below. Generally, the comments received focused on the north-south concept that included the Parkview UNC neighborhood area. The majority of the comments were a mix of both support and concern for the following: Proposed trees on Warder Street NW, the design and location of protected bicycle lanes on both Warder Street NW and Park Place NW, and vehicle parking in the neighborhood. The team also received comments regarding curb-space use for school day drop-offs and pick-up, access to the proposed parking and PBLs, traffic calming measures, and access and visibility issues for handicapped, pedestrian, bicycle and vehicle users at street corners and across vehicle traffic and PBLs. For detailed information, please visit the Appendix for full comments.

1.2 SUMMARY OF COMMENTS

Parkview UNC Meeting - Directional Comment Count by Topic

North-South Concept (Warder Street NW, 7th Street NW) 34 Comments	
Design	10
Parking	9
Pedestrian	2
Trees	10
General	3

North-South Concept (Park Place NW, 5th Street NW, Kenyon/Irving Street NW,) 28 Comments	
Design	21
Parking	4
Pedestrian	5
Safety	3
General	3

East-West Concept (Irving Street NE/NW, Kenyon Street NW/Park Place NW/Warder Street NW) 7 Comments	
Design	4
Parking	0

Pedestrian	1
Trees/Safety	0
General	2

Parkview UNC - Total Comment Count by Direction and Topic

69 Total Comments Received			
North-South Comments 62 Comments		**East-West Concept 7 Comments**	
Design	31	Design	4
Parking	13	Parking	0
Pedestrian	7	Pedestrian	1
Trees	10	Trees	0
Safety	3	Safety	0
General	6	General	2

1.3 ROLL PLANS COMMENTS ON 7TH STREET/ WARDER STREET

General

- Need bicycle lanes on both Warder and Park to make direct route – otherwise have to go far out of way
- Protected option much safer for cyclists
- Please keep the new street trees (or most of them) in the plan
- Would be great to widen sidewalks where possible on Park Place/ Warder
- Yes to trees
- Please do not change Park View to Parking View! Keep parking on Warder, off Park
- This plan will greatly increase the safety of roads that I ride on daily; crucial to Vision Zero
- Diagonal parking on Warder for more spaces
- Having been hit by a car while biking recently, I am in favor of this plan. Thanks.
- No to the entire concept. What happens to the elderly? Handicap vehicles?

Kenyon Street

- Extend this to connect to existing PBL on 5th by the reservoir
- This project at Kenyon Street will greatly affect handicap and elderly people who live on this block, and will create so many parking issues. NO to this nonsense project!!!

Lamont Street

- Someone drew a picture of a high-visibility crosswalk and refuge island and asked, “more refuges maybe?”

Luray Place

- Don’t take parking for trees.
- Can we add curb extensions for safety for pedestrians?

Park Road

- Separated lanes are a great and needed safety improvement here
- More trees Pls!

- Note points at south side of Warder between Park and Manor and says, "Losing 6 spaces here (27% of the spots) would be catastrophic so please No trees – I love them but not where parking has become such a challenge.

Manor Place

- Recommend move the buffer to directly where Manor comes into Warder. You would then not be eliminating a parking spot. (Note that they are referring to moving the proposed tree to the intersection to preserve a parking space)
- Way to make bicycle left turns safer? Can it be explained more (Note that Mike spoke with this person. They are asking for bike boxes or other ways to facilitate left turns out of the PBL).

Newton Place

- Plenty (relatively) of street parking here, usually
- This comment applies to the proposed tree on the NW corner of Newton: "Families use this space to drop-off/pick-up of school and the school playground has a tree at this location.
- This comment applies to the proposed tree on the SE corner of Newton: "We need spaces here for morning drop-off at school, otherwise parents double park & block traffic
- Yes trees! Will create a more walkable streetscape. Need to consider cleaning/snow removal, though
- I love trees but the parking situation on Warder Street is already fraught and remaining 20 spaces will make it worse. In particular, Warder becomes dangerous and nearly impassable every school day from 2:45 – 3:15. Lots of parents drive to school and stop/park anywhere and everywhere. What's desperately needed is a safe, designated pickup lane so kids and parents aren't dodging traffic along Warder every day, as they are now.
- Bi-directional bike lane on Park Place! No additional parking on Park Place. Get rid of jersey barrier on Park Place

Otis Place

- I had two bikes hit me while I was driving my car and while they were in their bike lane. They had ear pods in their ears but did not pay attn to the stop sign and notes when I was leaving my parking space.
- Provide resident only parking on side streets – i.e. Otis, Princeton, etc.
- This comment is referring to the north side of the road between Otis and Princeton: "This does not show 6 spaces remaining after tree is installed."

Princeton Place

- I love all these street trees. Please keep some of them in the plan.
- Not in favor of tree bump-outs; already parking is already limited with new condo conversions only worsening.

Quebec Place

- Undue burden on residents fighting subway riders (too many condos, too many cars per house to take parking)
- Keep the street trees please

Rock Creek Church Road

- This comment is for the north side of RCC west of Warder St: "Can we get some trees on the north side of Rock Creek Church Road?"

1.4 ROLL PLANS COMMENTS ON 5TH STREET/ PARK PLACE

General

- I like the continuous bike lane from Grant Circle down to Irving – make it two way!
- Consider making Park Place two-way bike lane, and scrap the bike lane on Warder
- Thus, no extra parking necessary on Park Place?
- I commute by bike 5 – 7 times a week. Yes to bike lanes protected by a curb. I have seen too many accidents on Warder and Park. Parking on Park could be diagonal to accommodate more cars and keep the flow of traffic on the east side of the street. Also, strongly support narrowing Park to one lane of traffic.
- Thank you! A bicyclist who lives in this neighborhood.

Lamont Street

- No matter what gets added in the end, this section of Park Place does not need two lanes. It makes cars go too fast, and too much capacity.
- I bike this every day. The southbound protected lane on the east side of Park is not safe for cyclists or drivers. Putting it on the west side would be OK. Doing nothing/leaving as is would be good, too.

Luray Place

- It is not clear how pedestrians will safety cross Park Place when entering/exiting parked cars along the fence on Old Soldiers Home side of the road. The drawing doesn't show crosswalks.

Park Road

- I like that the lane is on the east side – fewer intersections with cars.
- Let non-residents park here (Note: post-it note is pointing to east side of Park Place) to relieve parking pressure on residents in the neighborhood.

Manor Place

- Cars go way too fast due to 2 lanes (lots of speeding). Would like safe speeds and like lane reduction.
- I am concerned about what happens during street cleaning. We are already struggling for parking and concerned with taking spaces for trees reduces additional space.

Newton Place

- As a Park Place and Otis Place resident, I already have bike lanes and I can't park sometimes.
- What will the zoning be for the new parking on Park Place? It would be good to add non-zoned spaces to make having a guest or service worker easier during the workweek.
- I don't want the bike lane. Too much congestion.
- Like protected lane. Maybe some traffic calming in addition.

- Would like to see exit spaces in these longer bike protection facilities.
- What happens to street sweeping with cars and bike lanes? Where will cars be able to move during designated sweeping times? More people, more cars seeking places to move during sweeping hours will create a mess!

Otis Place

- Possible to add crosswalks to aid with parkers?
- Crosswalks? Across Park Place for pedestrians to cross to/from parking cars on the east side of Park Place. Also, bikers can walk to/from the protected bike lane via crosswalks.
- Keep simple bike lane on Warder, bi-directional on Park Place. Consolidate down the number of signs on Warder, they are everywhere. Curb bump-outs on Warder.
- As a Park Place resident, I have been anxious for:
    - Reducing to 1 lane of car traffic
    - Protected bi-directional lane for bikes
    - I and my neighbors do not want new parking lane! We don't need 39 parking spots!
    - Our neighbors on Warder do not want bike lanes or disruptions to their parking habits.
    - Make all of us happy by giving Park Place the bike lanes and leaving their parking to Warder Street residents.

Princeton Place

- Additional parking on Park Place ruins the appeal of the street. Make a two-way bike lane instead.
- A sidewalk here would be nice but parking is also important (note: post-it is pointing to east side of Park Place).

Quebec Place

- C Park Place and Park Place (5th St). Cars often do not stop here, which could be dangerous to pedestrians and bikers. Is there a way to incorporate a streetscape change to prevent this? (shamik.trivedi@gmail.com; note that Mike spoke to this person; they would like to tighten the slip lane, which is proposed in the plans)
- My suggestions:
    - Bi-directional bike lane on Park Place (east side)
    - No additional parking on Park Place
    - One lane of car traffic on Park Place
    - Warder bike lane can be removed

Rock Creek Church Road

- I have specific suggestions but overall love the addition of safe bike lanes so my kids can bike to school at Bruce Monroe.
- Can you bump out curb here to shorten crossing distance? (Note that Mike spoke to this person; they are referring to the SE corner; having difficulties entering crosswalk before eastbound cars turn south of Park Place; An LPI would also be appropriate here).

1.5 ROLL PLANS COMMENTS ON PARK PLACE/5TH STREET

Park Place

- Favor unidirectional lanes on Warder and Park, not bi-directional
- Make Park bike lane bi-directional to merge into Kenyon.
- Agree – a bi-directional lane on Park Place makes sense!

Irving Sreet/Kenyon Street split

- Very supportive of being able to have bikes off sidewalk by hospital.

1st Street

- Way to make double-lefts less frightening to cyclists?
- This is awesome and important. Let's accelerate it!
- This project is awesome and sorely needed. Please expedite.