



McDonald Ave Two-Way Protected Bike Lane

Workshop Presentation

August 26, 2026



Background



McDonald Ave Update

Agenda

- Welcome (6:00pm)
- Code of Conduct (6:05pm)
- Introductory Remarks (6:10pm)
- Presentation (6:20pm)
- Breakout Rooms (6:50pm)
- Breakout Activity Share Out (7:15pm)
- Thank You and Wrap Up (7:25pm)

Code of Conduct

Purpose

This code of conduct is intended to facilitate respectful and productive community conversations at public events and workshops. Participants who violate the conduct will be removed from the workshop.

Community Guidelines

Listen. Listen intently and without judgment so we may learn from one another's experiences and perspectives, even if they differ from our own. Do not interrupt others when they are talking.

Share the air. Take a step back if you are dominating the conversation and share responsibility for including all voices in the discussion.

Treat others with respect and dignity. Treat people as having intrinsic value and allow them to maintain their sense of worth and well-being. Don't make assumptions about how people want to be addressed.

Show empathy. Demonstrate the ability to recognize and respect how someone feels. No hate speech, discrimination, harassment or violence of any kind will be tolerated.

Be present. Focus on the conversation at hand. Use of videography or audio recording devices—particularly during group discussions—is strongly discouraged as it can make fellow participants feel uncomfortable.

Code of Conduct

Prohibited Behaviors

The following behaviors will not be tolerated and will result in the immediate removal of the participant from the event:

Harassment and Discrimination

- Verbal abuse, slurs, or derogatory comments
- Discrimination based on race, color, religion, national origin, age, disability, gender, sexual orientation, or any protected status
- Intimidation or threatening behavior

Disruptive Conduct

- Preventing others from speaking or participating
- Sustained interruption of presentations or discussions
- Refusing to follow facilitator instructions
- Using amplified devices without authorization
- Deliberately exceeding allocated speaking time after warnings
- Any other conduct intended to disrupt the event

Physical Misconduct

- Any form of physical violence or threatening gestures
- Intentional physical contact without consent
- Damaging or defacing venue property or any workshop materials

Other Prohibited Actions

- Bringing weapons or dangerous materials to events
- Being under the influence of alcohol or illegal substances
- Deliberately spreading misinformation to disrupt proceedings

New York City DOT reserves the right to determine whether any action violates the rules above. NYCDOT also reserves the right to end the meeting at any point to ensure the safety of staff and attendees.

Introduction



Cycling in Numbers

Daily and Annual Cycling:

- **28%** of adult New Yorkers, more than 1.8 million people, **ride a bike** (at least once in past year)
- **762,000 ride a bike regularly** (at least several times a month). Source: Community Health Survey

Bike Trips to Work:

- **620,000** daily cycling trips
- **64%** increase in daily cycling between 2013 and 2023
- **16%** increase in daily cycling between 2018 and 2023
- **Growth in daily cycling is higher than any other transportation mode.** (Source: US Census, American Community Survey)



Safe Streets for Cycling

Safety Benefits of Bike Facilities:

Protected Bike Lanes

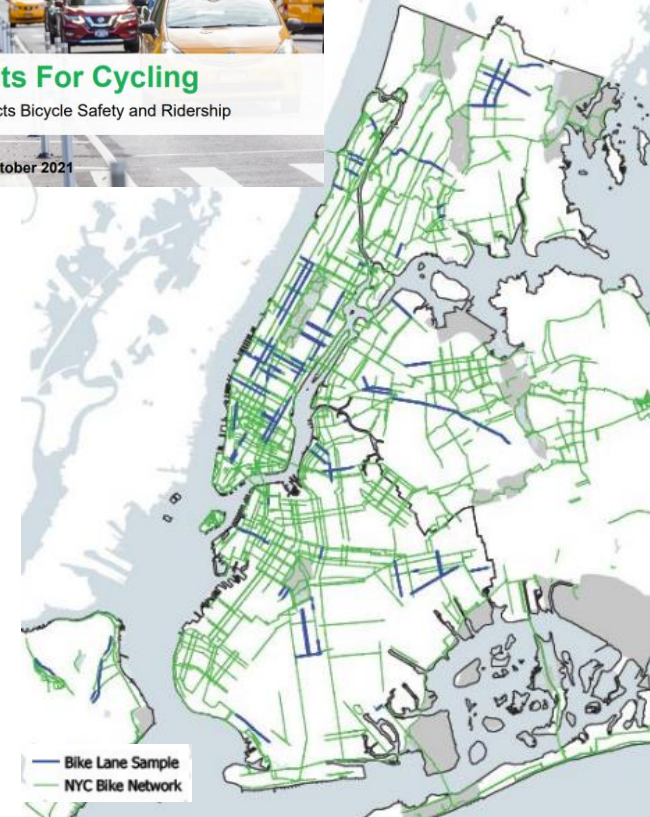
- **Risk reduction of 34% across all study projects**
- On the highest risk streets, cyclist risk is reduced by over 60%

Conventional Bike Lanes

- **Risk reduction of 32% across all study projects**
- Improved safety on all streets, particularly on low and mid- volume streets (42%, 26% reduction in risk respectively)

Cycling Volumes:

- Installation of PBL and conventional bike lane increased bicycle volumes by 50%
- On the highest risk streets, bicycling volumes nearly doubled after a bike lane was installed



Pedestrian Safety and Older NYers (2022)

Key Findings:

- Seniors make up less than 15% of New York City's population, but over 45% of pedestrian fatalities

Crash Analysis:

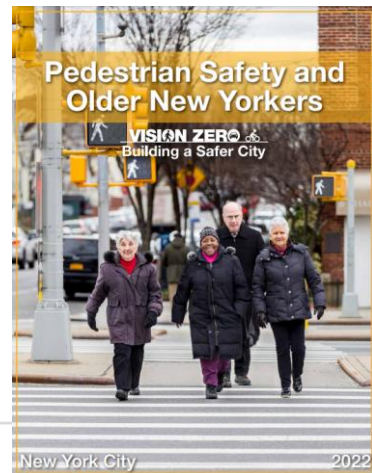
- About 90% of both senior and non-senior adult injuries occur at intersections; 72% of injury crashes occur at signalized intersections

Previous Work:

- Since 2010, the NYC DOT has completed over 900 street improvement projects
- 300 Street Improvement Projects in Senior Pedestrian Focus Areas since 2009

Protected Bike Lanes:

- On streets with protected bike lanes, seniors saw a **39% decrease in KSI** and a **22% drop in overall injuries**. Non-senior adults saw a **24% drop in KSI** and **9% drop in overall injuries**.
- Commonly-used road treatment benefits all adults, it especially improves conditions for seniors.**



Safety Treatment Effectiveness

Treatment Name & Safety Features	Senior Pedestrian Injuries	Senior Pedestrian KSI	Non-Senior Adult Pedestrian Injuries	Non-Senior Adult Pedestrian KSI
Protected Bike Lanes 	 22%	 39%	 9%	 24%

DOT Toolkit



Flush Medians, Turn Lanes



Pedestrian Space



Curb Management



Traffic Control Signals & Timing



Protected Bicycle Lanes



Street Furniture & Greenery

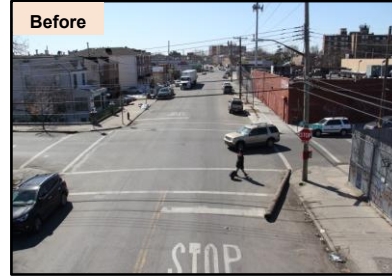
Toolkit: Geometric Constraints

What's the best way to make more space for all road users?



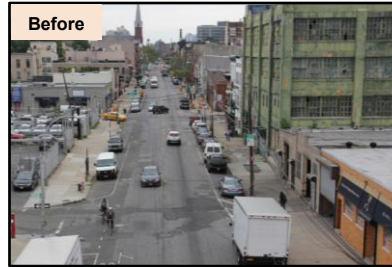
A. One-way Conversion

Example: Loring Ave, Brooklyn, 2017



B. Remove One Lane of Parking

Example: Vernon Blvd, Queens, 2013



C. Reduce Travel Lanes

Example: 111th St, Queens, 2017



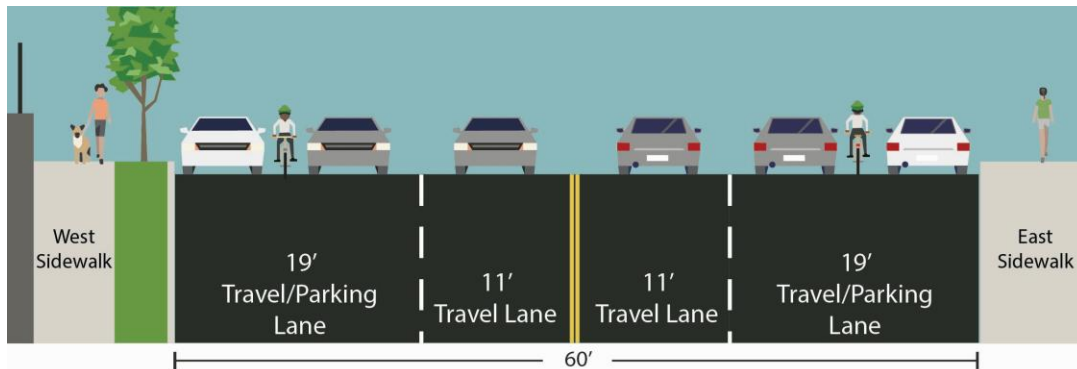
Existing Conditions

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Existing Conditions

McDonald Ave from 20th St to Ft Hamilton Pkwy

- Two-way street with two lanes and parking in each direction
- Connections to and from the Prospect Expressway
- Truck route and bus route
- Green-Wood Cemetery along the western side of the street



Bike Network

- ↔ Proposed
- Future Connections
- Protected Bike Lane
- Conventional Bike Lane
- Shared Lane
- Signed Route



Existing Conditions

Bike Lane Connections

- Two-way protected bike lanes on both 20th St and Ft. Hamilton Pkwy
- A pair of conventional one-way bike lanes on 10th and 11th Aves



Bike Network

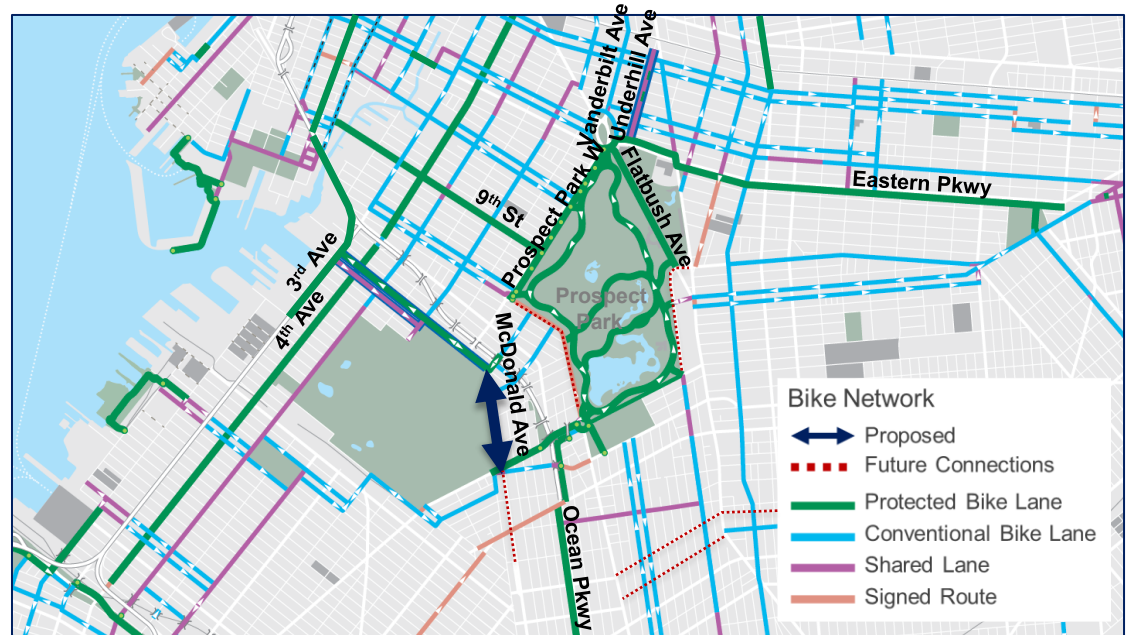
- ↔ Proposed
- ... Future Connections
- Protected Bike Lane
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Existing Conditions

Borough Connections

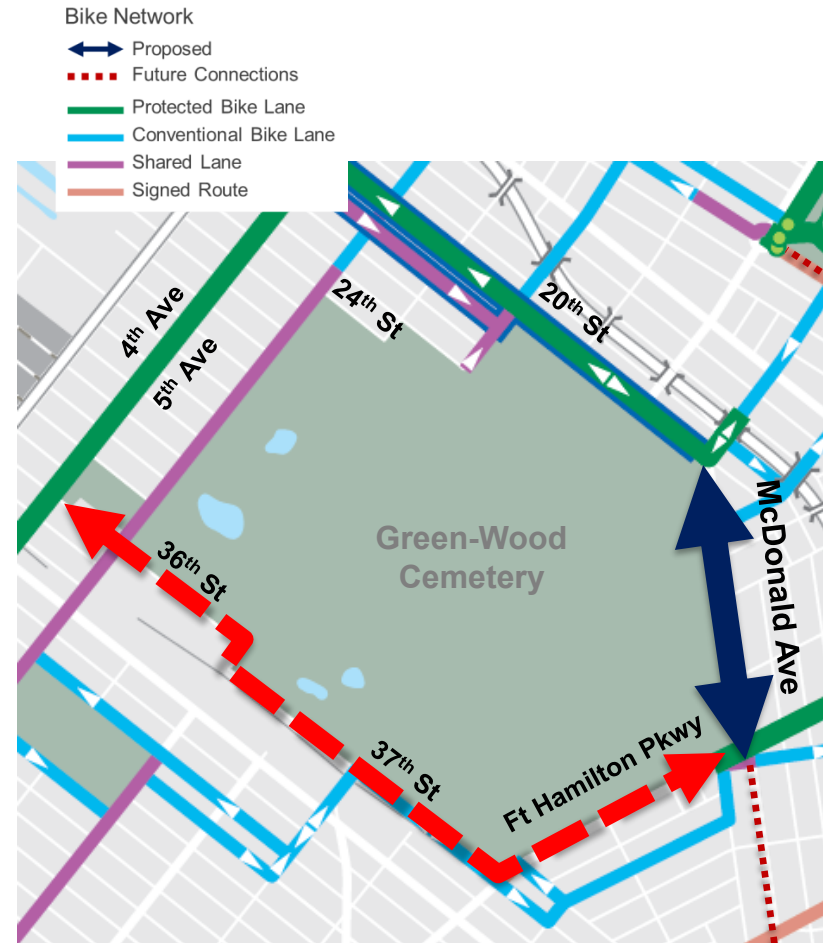
- Increasing the connectivity of the protected bike lane network in Brooklyn **improves access and usability** for cyclists of all ages and abilities



Existing Conditions

Green-Wood Cemetery

- The streets around cemetery are both a **destination** for active transportation and a **barrier** for those who must travel around it to continue to their destination
- Desire to improve the active transportation experience of McDonald Ave
- Opportunity to engage the community and plan pedestrian and cyclist improvements around southern side of the cemetery with Green-Wood Cemetery as a partner



Existing Conditions

McDonald Ave

- Available roadway capacity, even during peak times, **creates conditions conducive to speeding**
 - Two travel lanes have a capacity of **1,200-1,400 vehicles per hour**, currently there are approximately **650-750 vehicles per hour** at the busiest times
- Regular instances of speeding leads to cyclists often **using the sidewalk** instead of the roadway

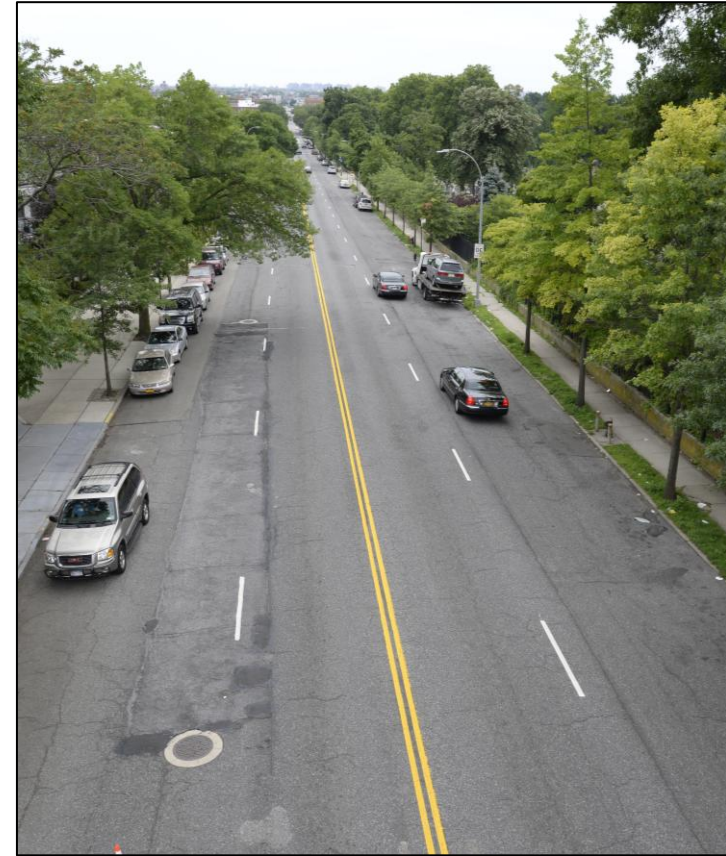


Existing Conditions

Vehicle Speeds

- In 2025, a study of 7,574 daytime vehicles and 2,800 nighttime vehicles traveling on McDonald Ave between 10th Ave and Ft Hamilton Pkwy found that:
 - **53%** of vehicles were exceeding the speed limit during daytime hours (7am-7pm)
 - **60%** of vehicles were exceeding the speed limit during nighttime hours (7pm-7am)
- An off-peak speed speeding observation recorded peak speeds of **48 mph** NB and **41 mph** SB

Source: Geotab analysis of fleet vehicle speeds on McDonald Ave between 10th Ave and Ft Hamilton Pkwy from January 1st to June 30th 2025. Fleet vehicles include trucks, buses, and passenger vehicles owned by both public and private entities. Spot speed analysis of 100 vehicles in each direction conducted 8/20/2025 beginning at approximately 8pm.

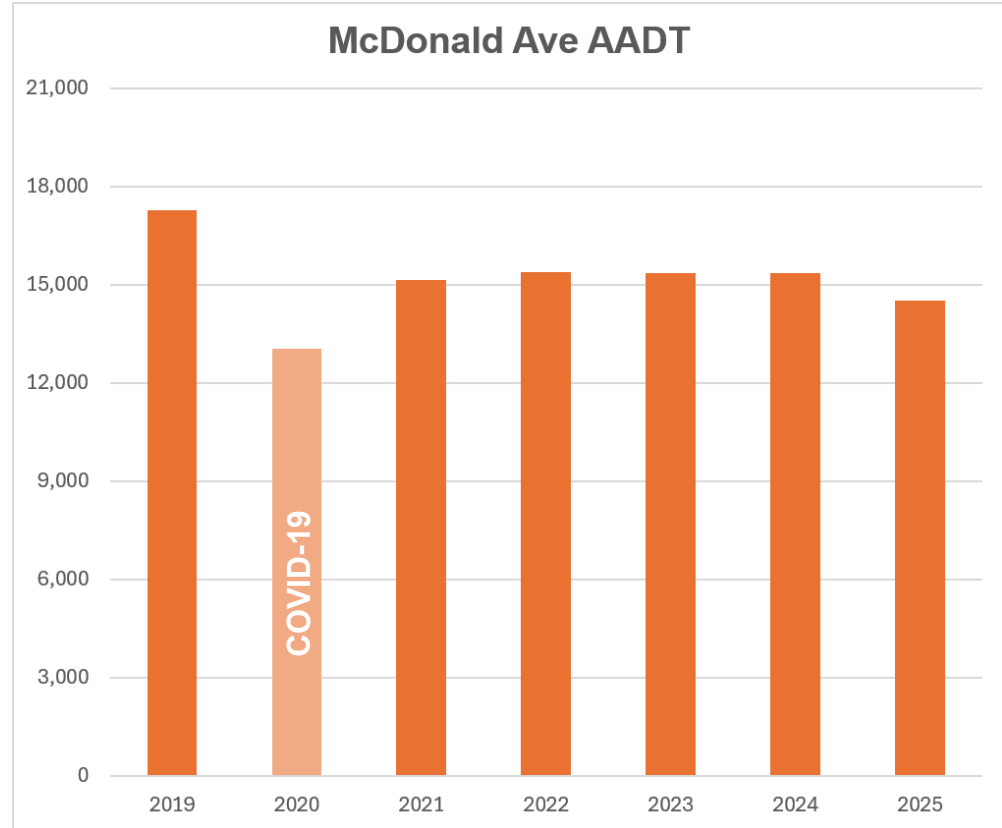


Existing Conditions

Average Annual Daily Traffic (AADT)

- AADT is the most widely-referenced benchmark for how busy a roadway or street is
- The AADT volume of vehicles on this part of McDonald Ave **declined** during the COVID-19 pandemic and never recovered to pre-pandemic levels
- The average daily volume of vehicles is **12% less** than the pre-COVID volume and has remained consistent since 2021

Estimated AADT via Street Light Insight data from location-based services (LBS) and GPS data from connected vehicles, includes all vehicle types, sample size is approximately 17,000,000 vehicles over seven years (or roughly 2,500,000 vehicles per year)



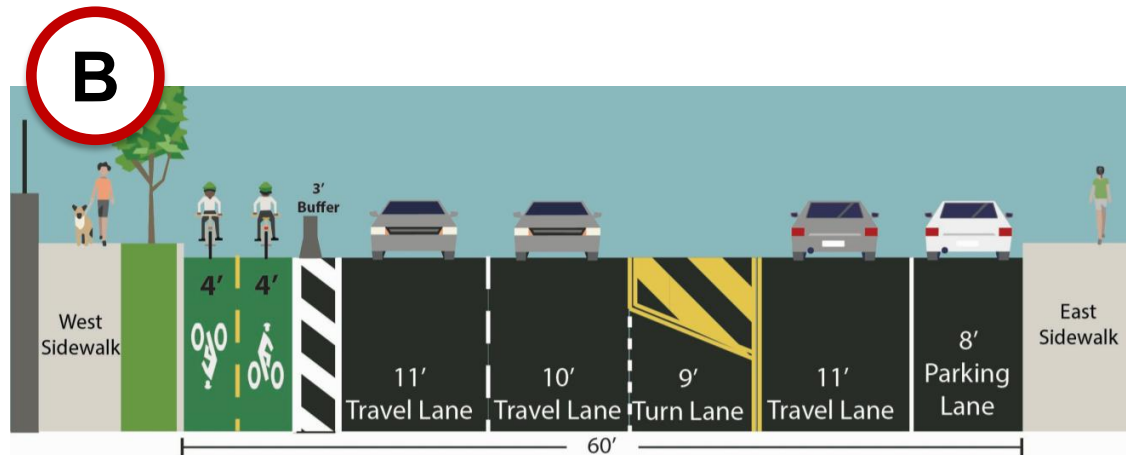
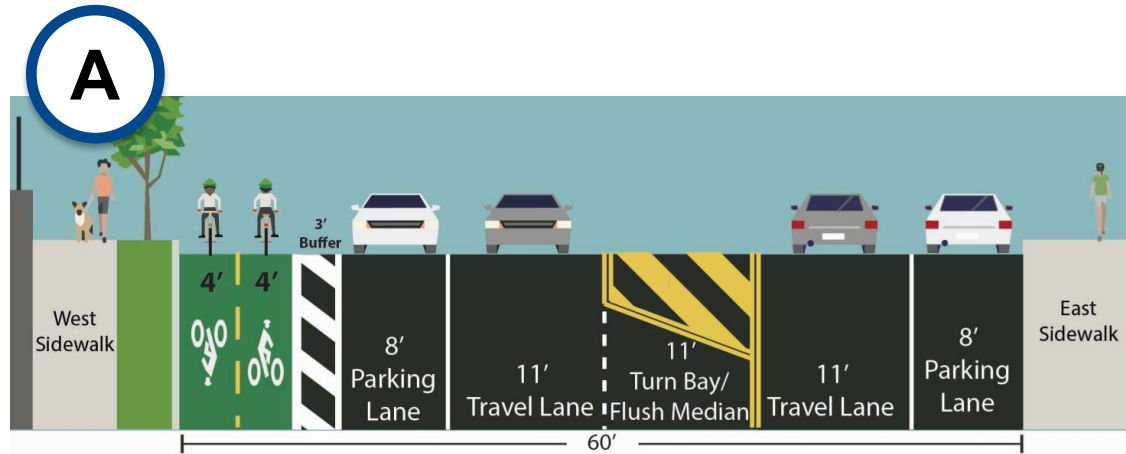
Potential Design Changes

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Design Proposals

McDonald Ave

- There are two designs for this corridor, both include a **two-way parking protected bike lane** on the west side of the street
- Both include **neighborhood loading zones** where needed to reduce instances of double parking



Potential Design A

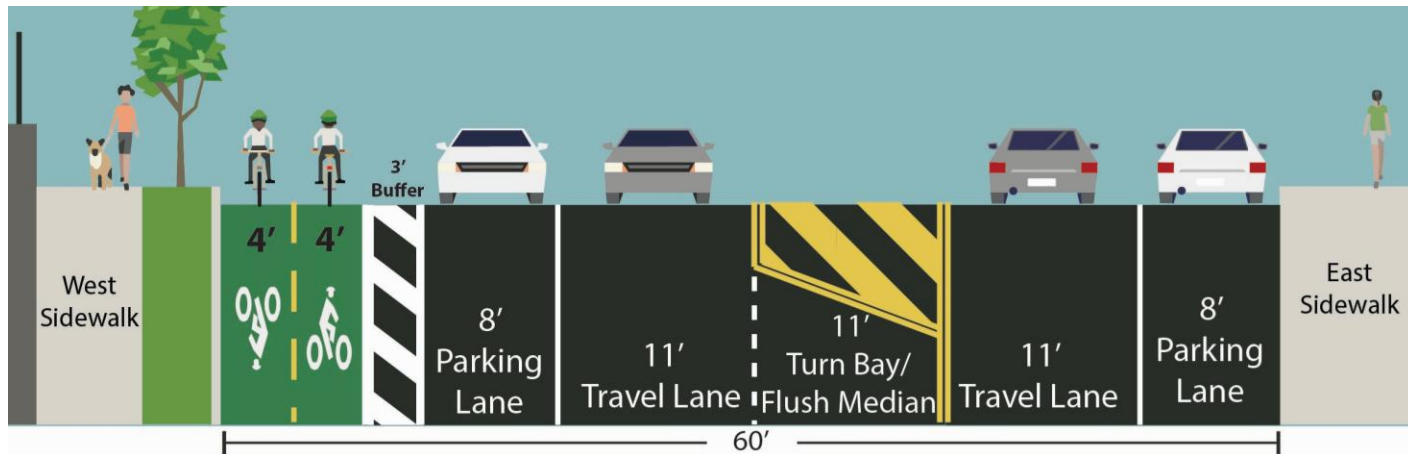
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Potential Condition



McDonald Ave

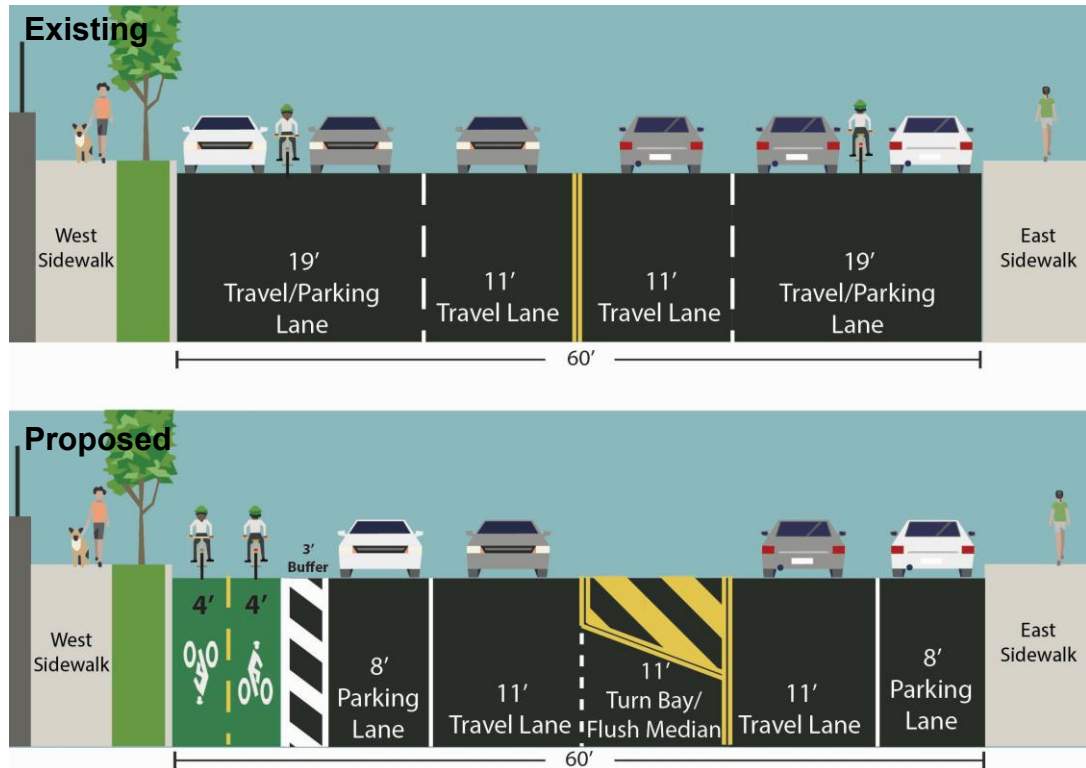
- Install a **two-way parking protected bike lane** on the west side of the street
- Existing vehicles will use one lane in each direction with the center lane becoming a turn lane with a painted median that can (as per FDNY) **be used by emergency vehicles if needed**
- Install **neighborhood loading zones** where appropriate to reduce instances of double parking
- This proposal repurposes approximately **six parking spaces** over the length of the corridor



Potential Condition



McDonald Ave between Terrace Pl and Greenwood Ave – Existing and Proposed Conditions

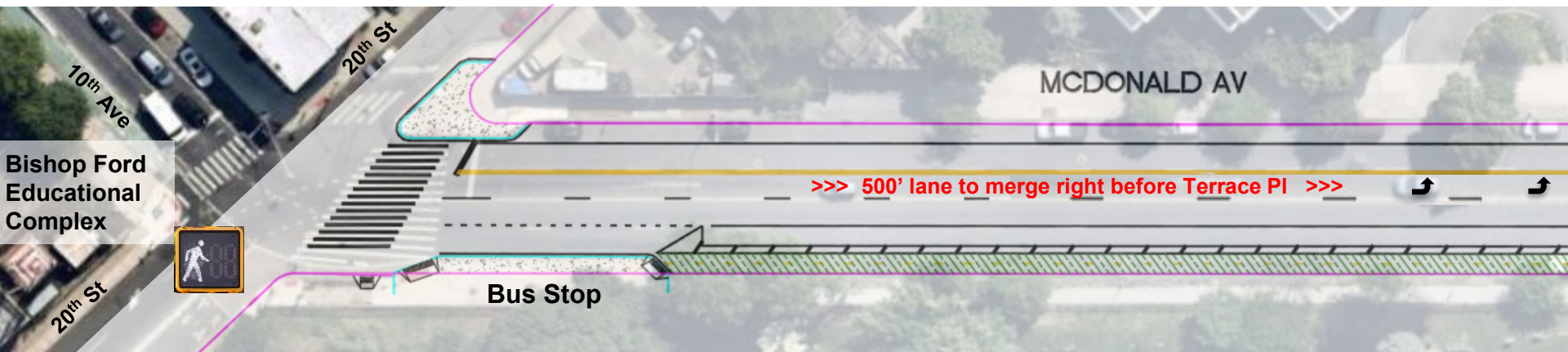


10th Ave / 20th St / Intersection Ped and Transit Improvements



Design Overview

- At the intersection, keep the same amount of southbound lanes McDonald Ave, which will **maintain the existing capacity of the intersection**
- Add a **leading pedestrian interval** (LPI) to the 20th St crossing to give people a head-start
- Install a **red light camera** at the intersection of the Prospect Expressway/19th St/10th Ave to prevent motorists from encroaching on the all-pedestrian phase (*Installed in early July 2026*)

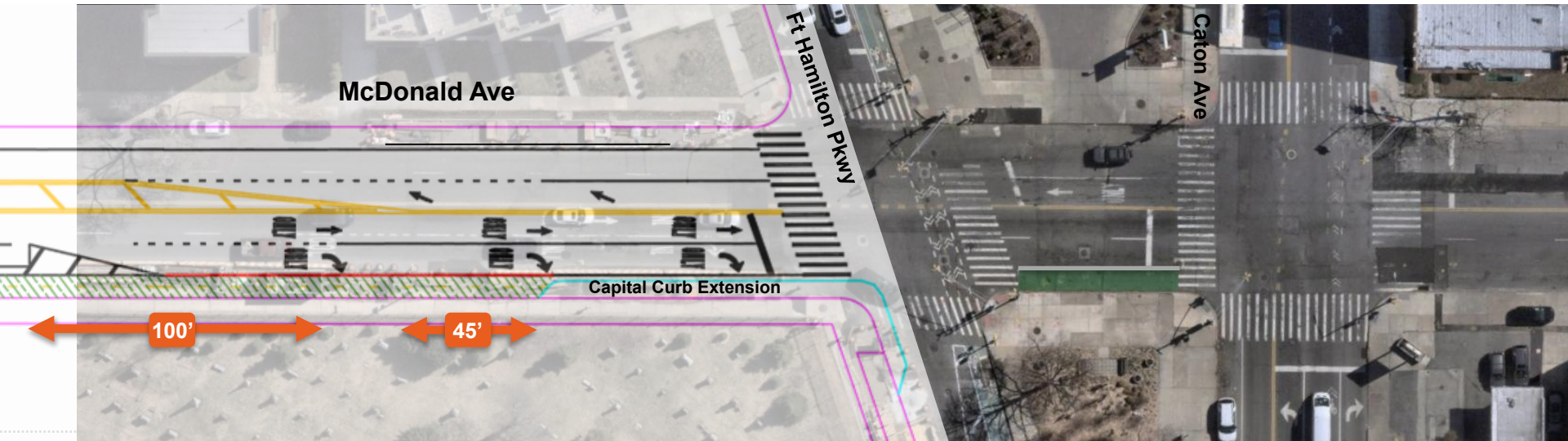


Ft Hamilton Pkwy / McDonald Ave Intersection



Design Overview

- McDonald Ave will have **same amount of lanes** at Ft Hamilton Pkwy as it currently does now, the signal timing and phasing will also remain the same
- The existing southbound right turn lane **will be lengthened** to keep the southbound thru lane clear, this where the six parking spaces will be removed



Potential Condition B

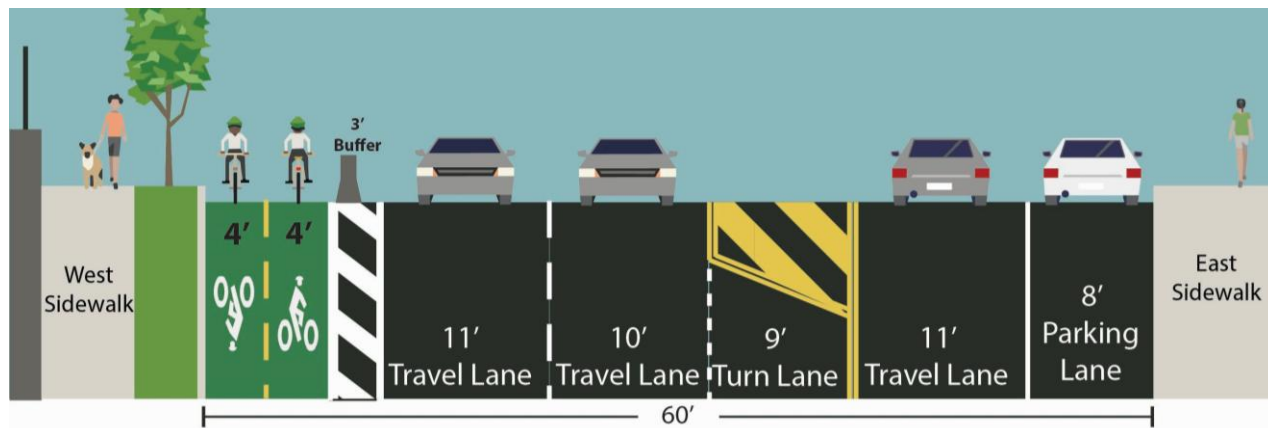
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Potential Condition – McDonald Ave



Maximize Southbound Capacity

- Install a **two-way jersey barrier protected bike lane** on the west side of the street
- Existing vehicles will have two southbound lanes, the second northbound lane will become a painted median that can (as per FDNY) **be used by emergency vehicles if needed**
- Install **neighborhood loading zones** where appropriate to reduce instances of double parking
- Including the second southbound travel lane repurposes all parking on the west side of the street, **approximately 110 spaces**

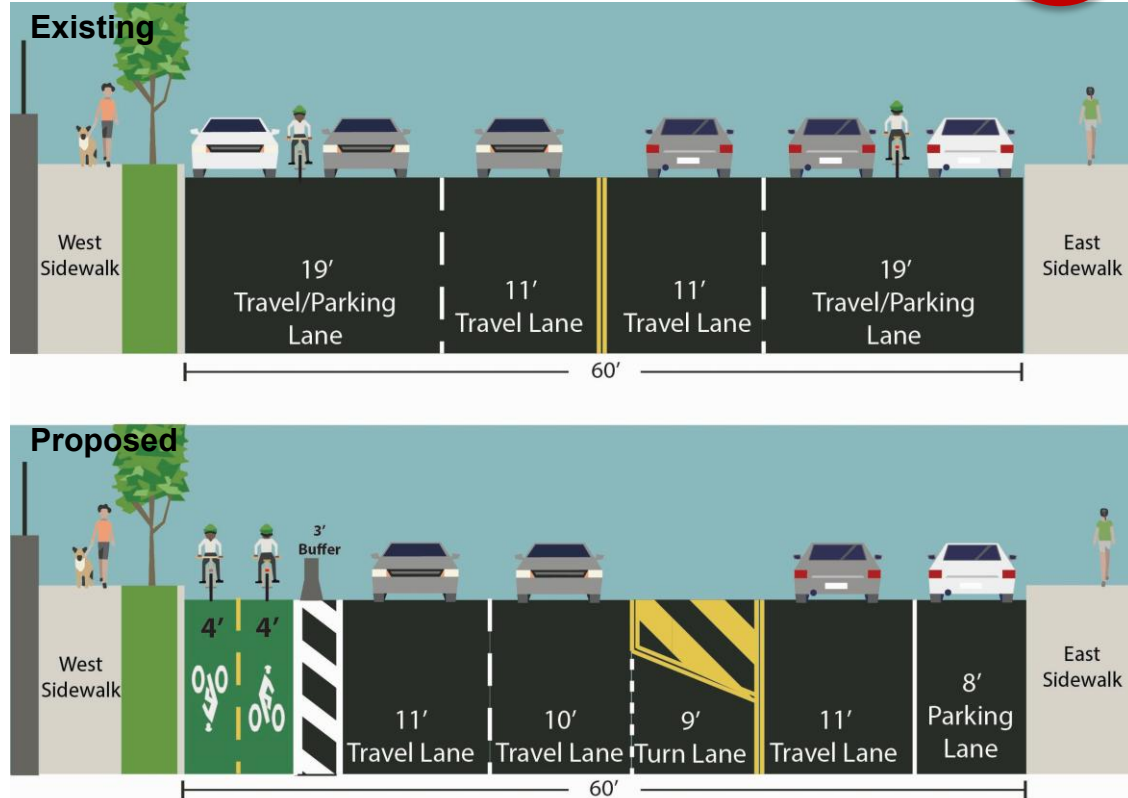


Potential Condition – McDonald Ave



Maximize Southbound Capacity

- This proposal retains two southbound travel lanes to maximize vehicle capacity in that direction
- Because there are two travel lanes for the entire corridor, no special designs for southbound vehicles are needed at the major intersections
- Northbound vehicles will need to merge into one lane just like in the prior design

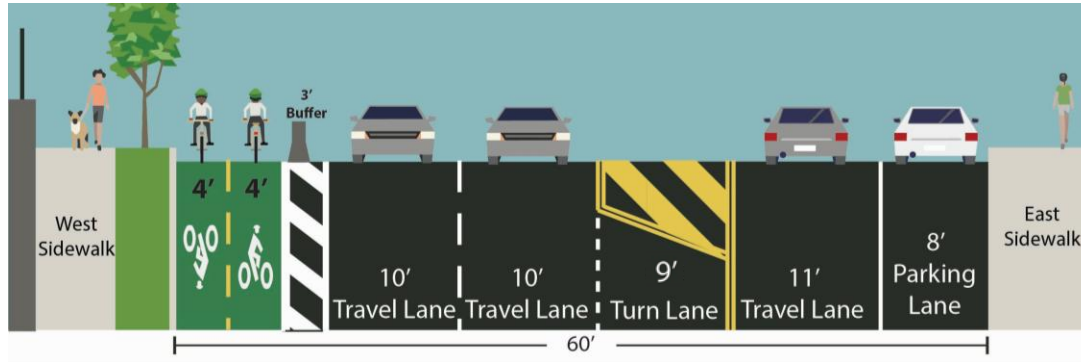


Potential Condition – McDonald Ave



Maximize Southbound Capacity

- **Retains** existing southbound vehicle capacity and **expands** that capacity at intersections by also including left turn lanes
- **Jersey barriers are required** to protect cyclists in this design because McDonald Ave is a truck route
- Traffic calming in the **northbound direction**
- Flush median and neighborhood loading zones **maintain flexibility** of the roadway for northbound vehicles



Potential Condition Comparison

	Potential Condition A	Potential Condition B
Meets DOT Traffic Standard	Yes	Yes
Calms Traffic/ Reduce Speeding Opportunities	In Both Directions	In One Direction
Total Travel Time on McDonald Ave	Slight Increase	Slight Increase
Crossing Distance Reduction	Yes	No
Usable width of biking space	11	8
Parking Spaces Removed	6	110

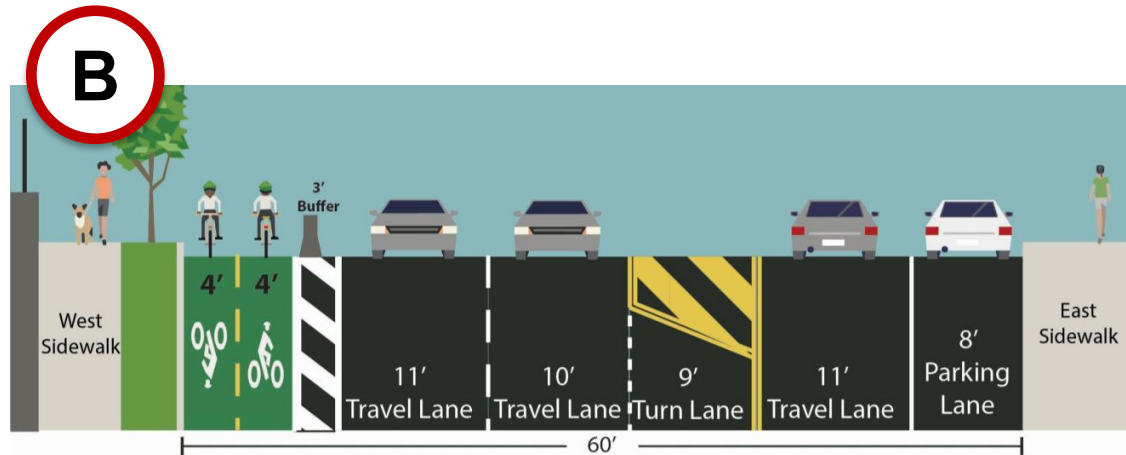
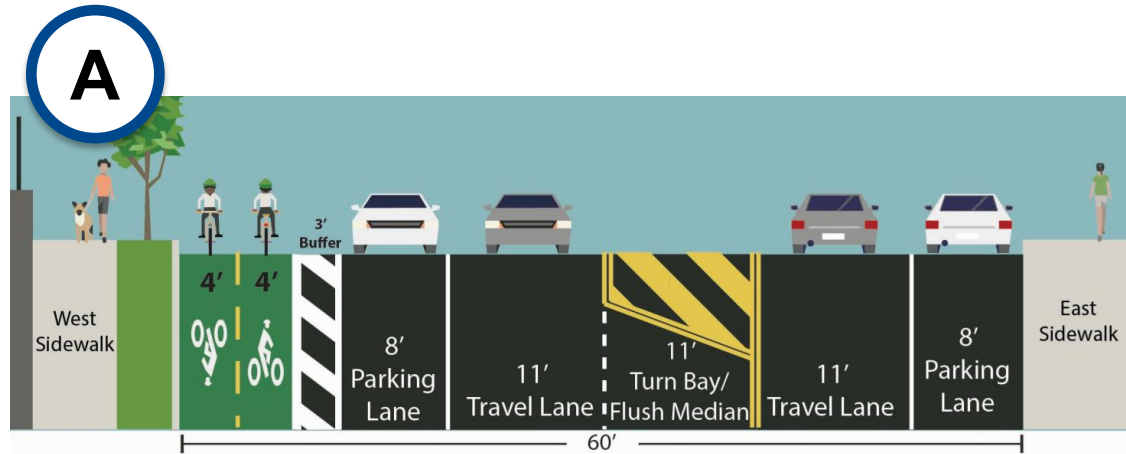
Making it Work

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Making it Work

Traffic Network Changes

- Both designs make changes to the capacity of the roadway, so the results and predictions presented on the following slides will apply, regardless of which design is advanced



Vehicle Travel Patterns

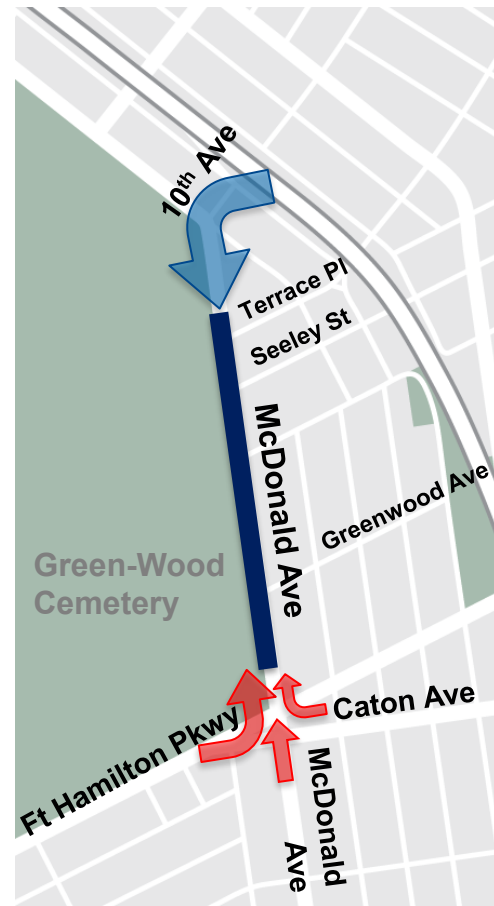
Where **Southbound** Vehicles Come From

- Southbound vehicles are almost entirely coming from the Prospect Expressway and 19th St via the 10th Ave intersection
- Very few vehicles turn south from Terrace Pl, Seeley St, or Greenwood Ave

Where **Northbound** Vehicles Come From

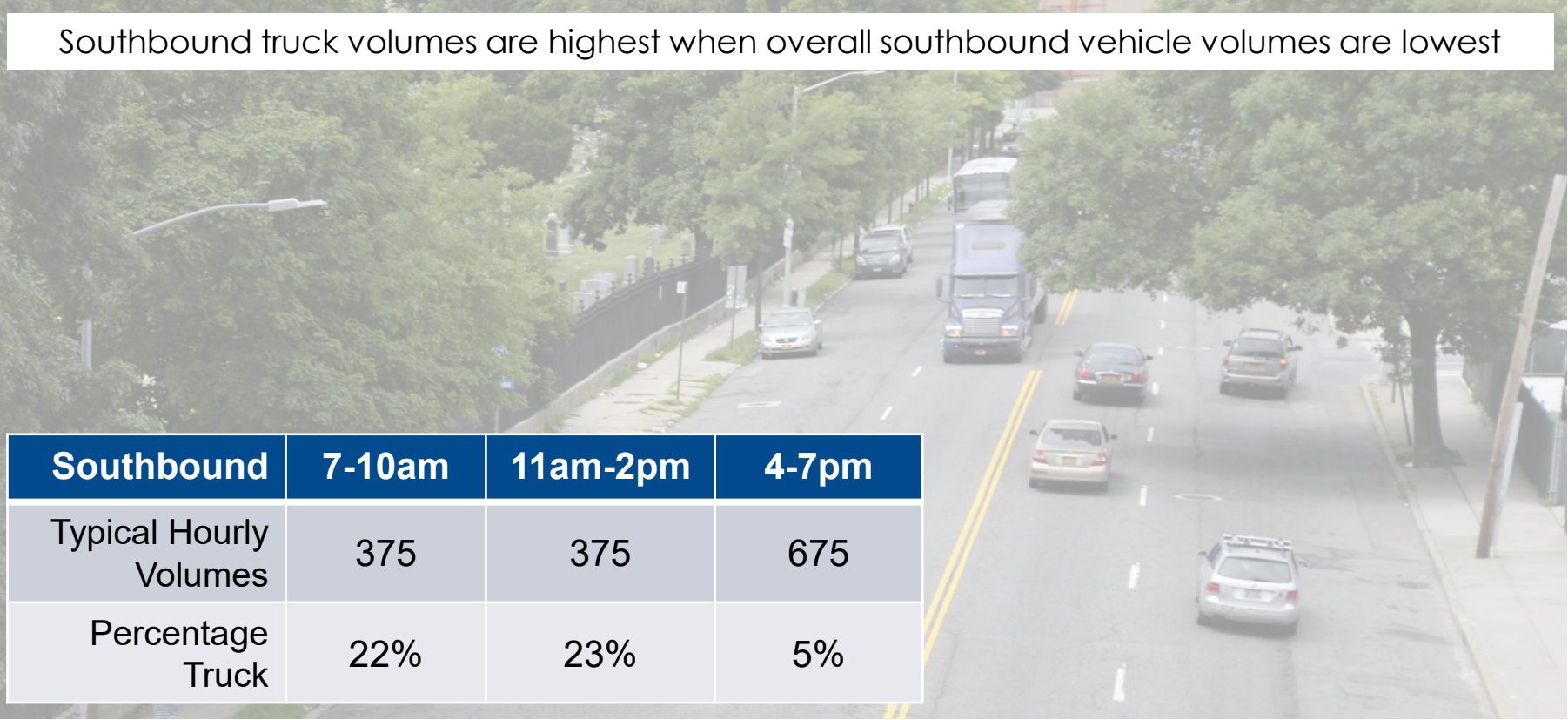
- Northbound vehicles are almost entirely coming from the intersection of Ft Hamilton Pkwy and Caton Ave
- Very few vehicles turn north from Greenwood Ave, Seeley St, or Terrace Pl

The number of vehicles on this section of McDonald Ave is largely dictated **by the capacity of these two intersections, not by the number of lanes on the roadway.**



Making It Work

Southbound truck volumes are highest when overall southbound vehicle volumes are lowest



Southbound	7-10am	11am-2pm	4-7pm
Typical Hourly Volumes	375	375	675
Percentage Truck	22%	23%	5%

Making It Work

McDonald Ave

- Issues Identified:
 - During the busiest times, the volume of vehicles using McDonald Ave is roughly **half of what the existing travel lanes have capacity for**
 - The two major intersections at 10th Ave and Ft Hamilton Pkwy operate with **different signal cycle lengths than the Greenwood and Vanderbilt intersections**, this results in a lot of unused green time when the roadway is busiest
- Solution:
 - Coordination of the intersections takes the same peak traffic volume and **better distributes it** among all the available green time
 - This allows existing vehicle volumes **to travel in half the space with minimal disruptions to travel times**
 - Approximately 1 minute extra travel time in the AM
 - Approximately 6 to 24 seconds extra travel time in the PM
 - The extra time comes from longer queues at the same red lights that motorists would have stopped at if there were two lanes



Making It Work

Neighborhood Loading Zones

- Neighborhood Loading Zones provide curb space during daytime and early evening hours to allow package deliveries by commercial vehicles, taxis and car service pick-up and drop off, active loading and unloading of personal vehicles.
- Zones are typically between 25-40 feet long and are installed to reduce the frequency of double parking on a street
- Zones will default to the alternate side regulation for the block when not in effect, which encourages parking turnover



McDonald Ave between Ft Hamilton Pkwy and Greenwood Ave

Thank You!

Questions?



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