



FORT HAMILTON PARKWAY PROTECTED BIKE LANE

Presented to Community Board 7
August 3, 2020



Project Area Location



- Existing westbound Fort Hamilton Pkwy bike lane installed in 2010 is a key connection from Prospect Park
- Connection from Prospect Park draws people walking and biking
- Community request for two-way, protected bicycle facilities on Fort Hamilton Pkwy between E 5th St and Caton Ave by Brooklyn Prospect Charter School
- Community request for pedestrian improvements at Fort Hamilton Pkwy and McDonald Ave

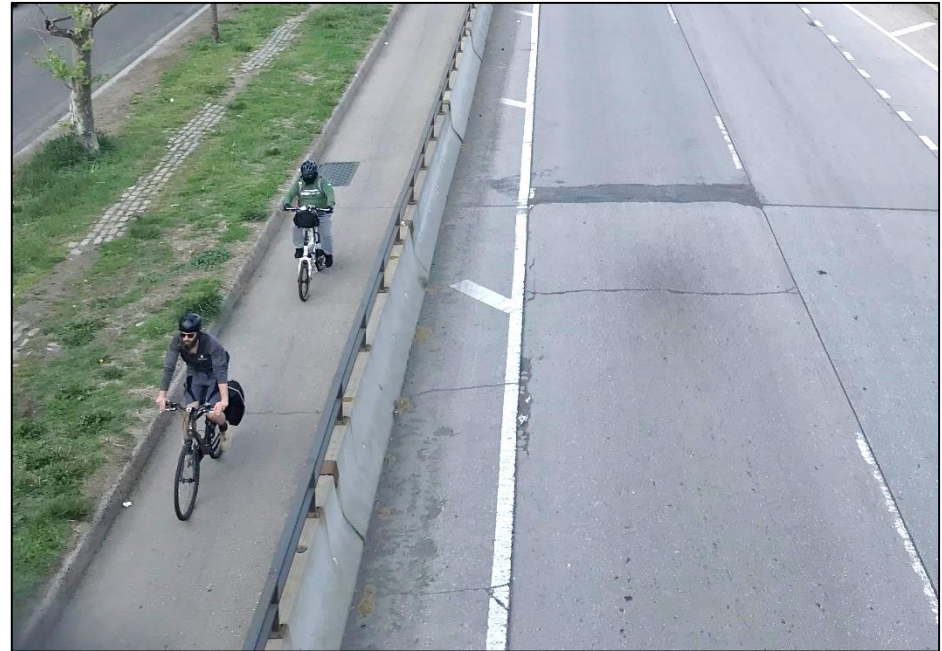
Existing Conditions Bicycle Route

- Bike lanes installed in 2010
 - One-way buffered westbound bike lane
 - One-way protected lane on overpass
 - Eastbound bike lane is on Caton Ave
- Buffered lane vulnerable to double parking
- Moderate bike volumes
 - 225 bikes 12-hr weekend count
 - 363 bikes 12-hr weekday count

July 2017, between E 2nd St and E 3rd St

- 366 bikes 12-hr weekend count
- 368 bikes 12-hr weekday count

August 2013, between E 2nd St and E 3rd St



Project Area Safety

Fort Hamilton Parkway Park Circle – McDonald Ave Crash History 2013-2017

	Total Injuries	Severe Injuries	Fatalities	KSI
Pedestrian	5	0	0	0
Bicyclists	3	0	0	0
Motor Vehicle Occupant	37	2	0	2
Total	45	2	0	2

- 22% of vehicles on Fort Hamilton Parkway are speeding mid-day



Issues Eastbound Bike Route

- Existing eastbound bike route on Caton Ave from McDonald Ave to Prospect Park is 0.5 miles longer than a Fort Hamilton Pkwy alternative
- Caton Ave bike route has twice as many severe injuries as proposed route
- Many eastbound cyclists ride against traffic on Fort Hamilton Pkwy as safer and shorter alternative to Caton Ave



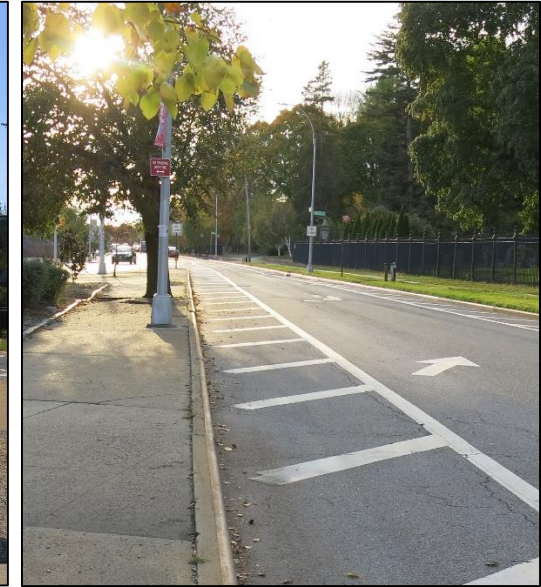
Caton Ave / Ocean Parkway Dahill Rd – Park Circle Crash History 2012-2016

	Total Injuries	Severe Injuries	Fatalities	KSI
Pedestrian	9	1	0	1
Bicyclists	11	2	0	2
Motor Vehicle Occupant	56	3	0	3
Total	76	6	0	6



Issues Dahill Rd Connection

- Existing westbound route leads people bikes to McDonald Ave and Caton Ave to Dahill Rd
- Eastbound cyclists from Dahill Rd face heavy turn conflict on Caton Ave at McDonald Ave
- Vehicles frequently travel in bike lane when vehicles are queued to turn left onto SB Dahill Rd
- Cyclists unprotected from traffic as they wait for left turn onto SB Dahill Rd
- Not intuitive wayfinding
- Numerous conflict points



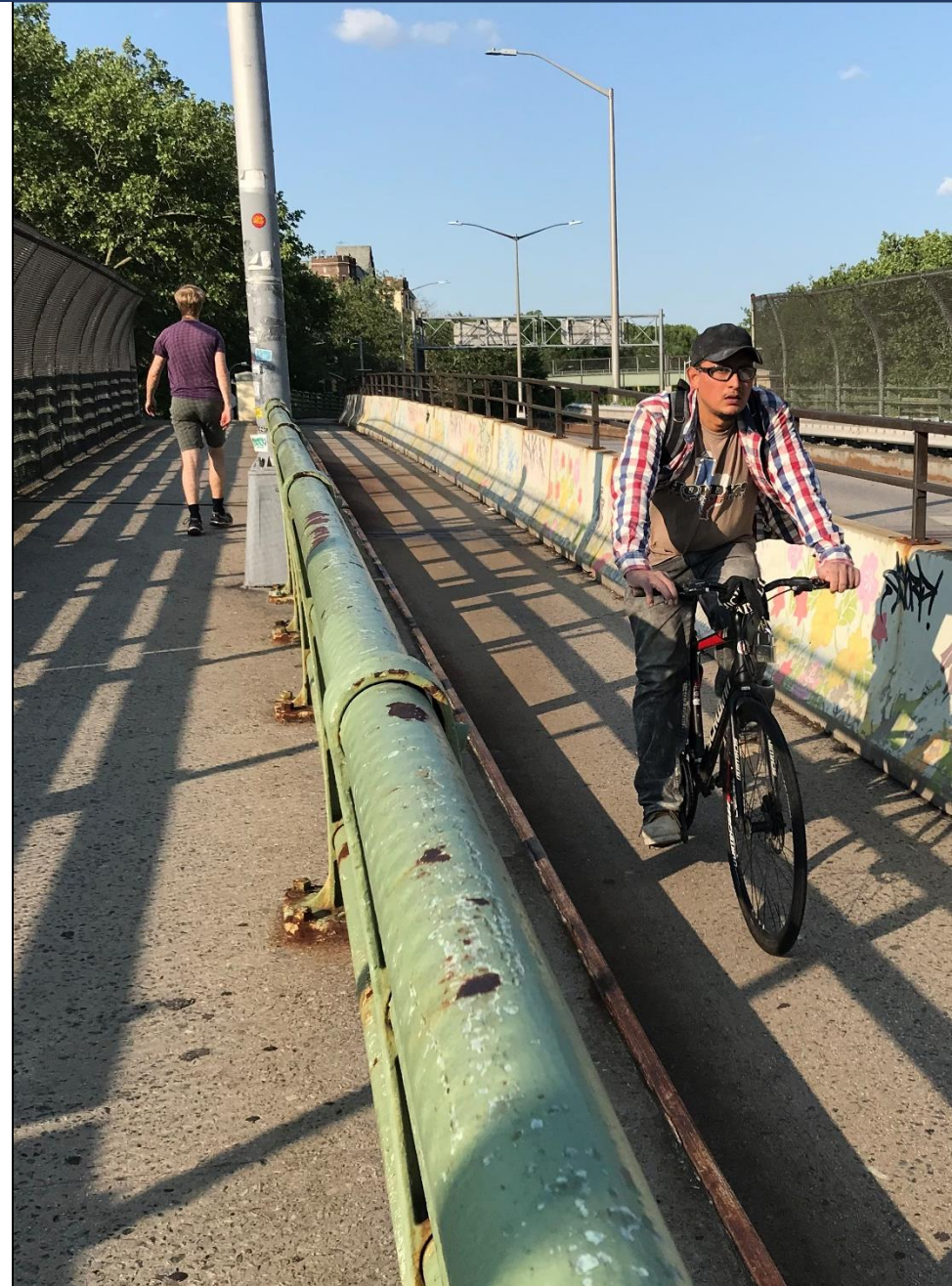
Issues School Access

- Protected bike lane requested by Brooklyn Prospect School
- Brooklyn Prospect School generates non-motorized traffic on Ft Hamilton Pkwy
- Lack of protected bike lane encourages younger and risk-averse cyclists to use sidewalk



Proposed Design Goals

- Improve pedestrian safety
 - Shorten crossing distances
 - Add crossing time, where feasible
 - Slow turns
- Create an eastbound bike route to Prospect Park
 - Formalize shorter route in current use
 - Provide alternative to Caton Ave
- Simplify connection to Borough Park and Sunset Park
 - Improve wayfinding
 - Reduce conflicts
- Improve cyclist safety and comfort
 - Reduce double parking in bike lane
- Maintain motor vehicle circulation
 - Reduce off-peak speeding



Fort Hamilton Parkway Protected Bike Lane

SAFETY – Protected Bike Lanes

Street designs that include protected bike lanes increase safety for all users

-15% drop in all crashes with injuries

-21% drop in pedestrian injuries

on streets where protected bike lanes were installed 2007-2017

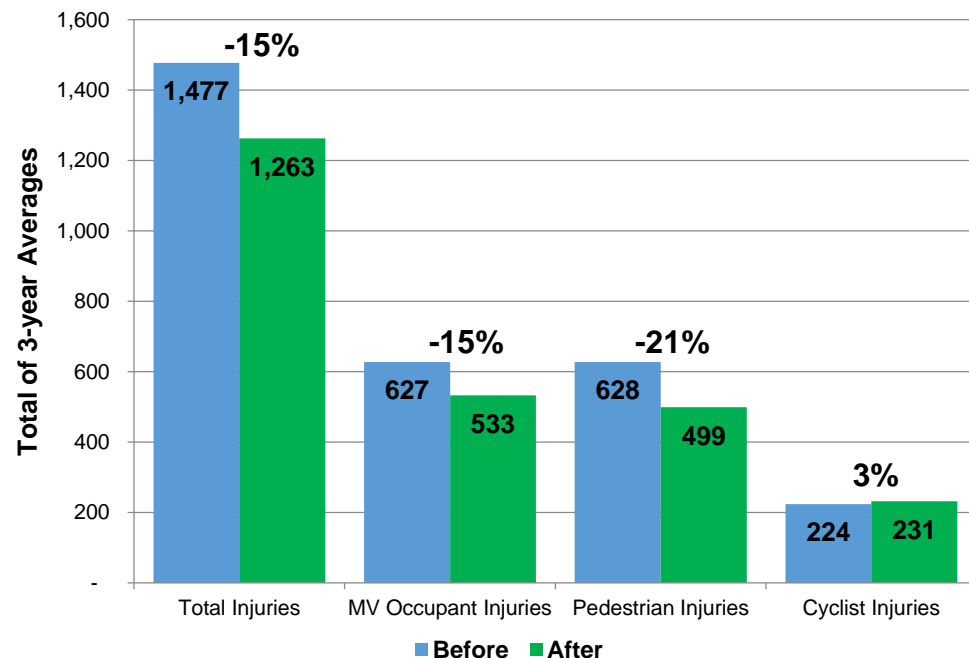
*Injuries to cyclists increase only 3%,
despite a 61% bike volume increase*



Kent Ave, BK

Protected Bike Lanes

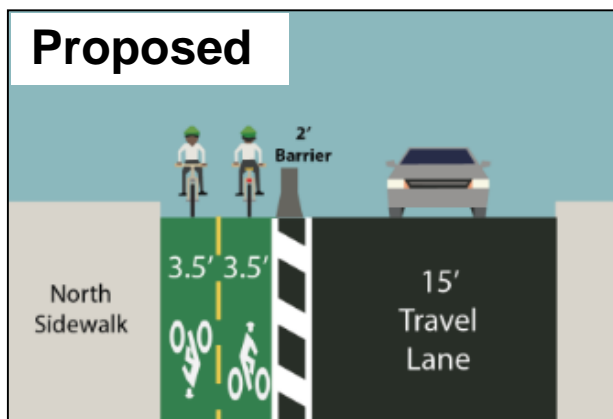
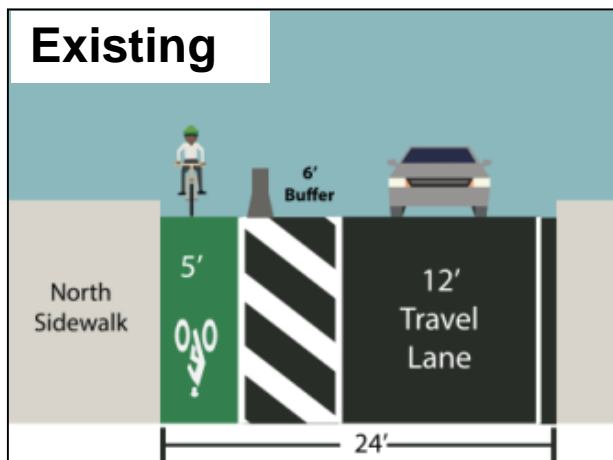
Before and After Crash Data, 2007 - 2017



Prospect Park W, BK

Data from 25 separate protected bicycle lane projects installed from 2007-2014 with 3 years of after data. Includes portions of 1 Ave, 2 Ave, 8 Ave, 9 Ave, Broadway, Columbus Ave, Hudson St, Lafayette St / 4 Ave, Sands St, Allen/Pike St, Kent Ave, Prospect Park West, Flushing Ave, Bruckner Blvd & Longfellow Ave, Imlay St / Conover St, Paerdegat Ave. Only sections of projects that included protected bike lanes were analyzed.
Source: NYPD AIS/TAMS Crash Database

Proposed Design Overpass

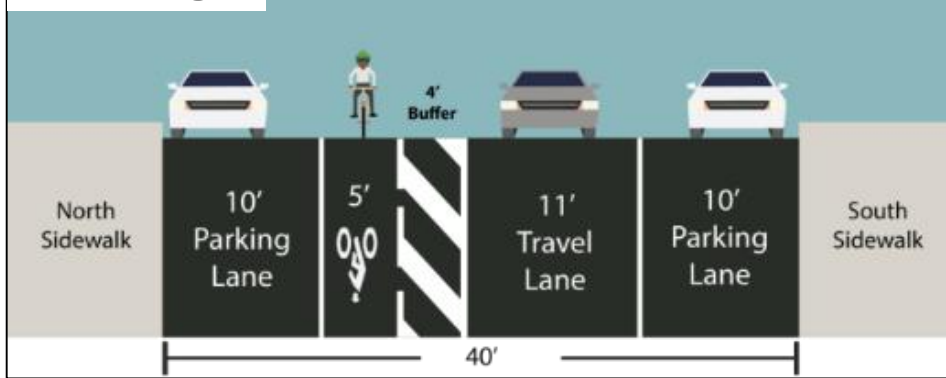


- Concrete barrier shifted to widen bike lane
- Eastbound bike lane will provide direct access to Prospect Park
- Moving lane continues to process westbound traffic



Proposed Design E 5th St – McDonald Ave

Existing



Proposed

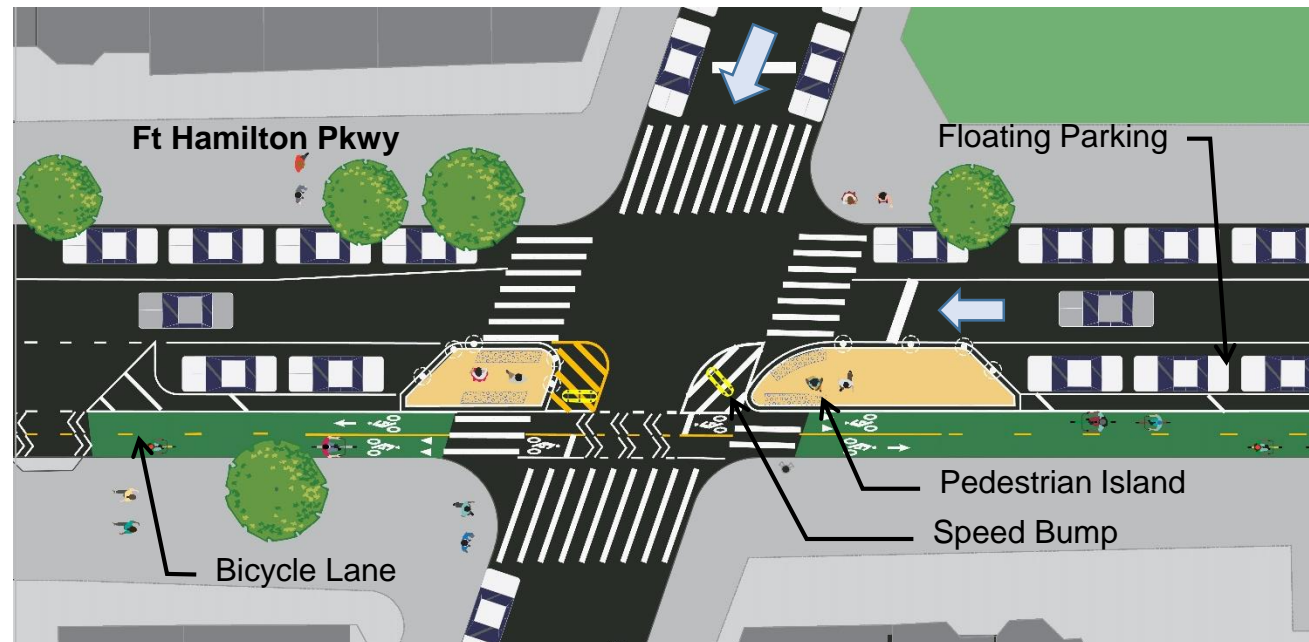


- Narrower roadway discourages off-peak speeding
- Parking lane discourages double parking and keeps bike lane clear of parked vehicles
- Reduces double parking in bike lane
- Shortens pedestrian crossing distances



Proposed Design Typical Intersection

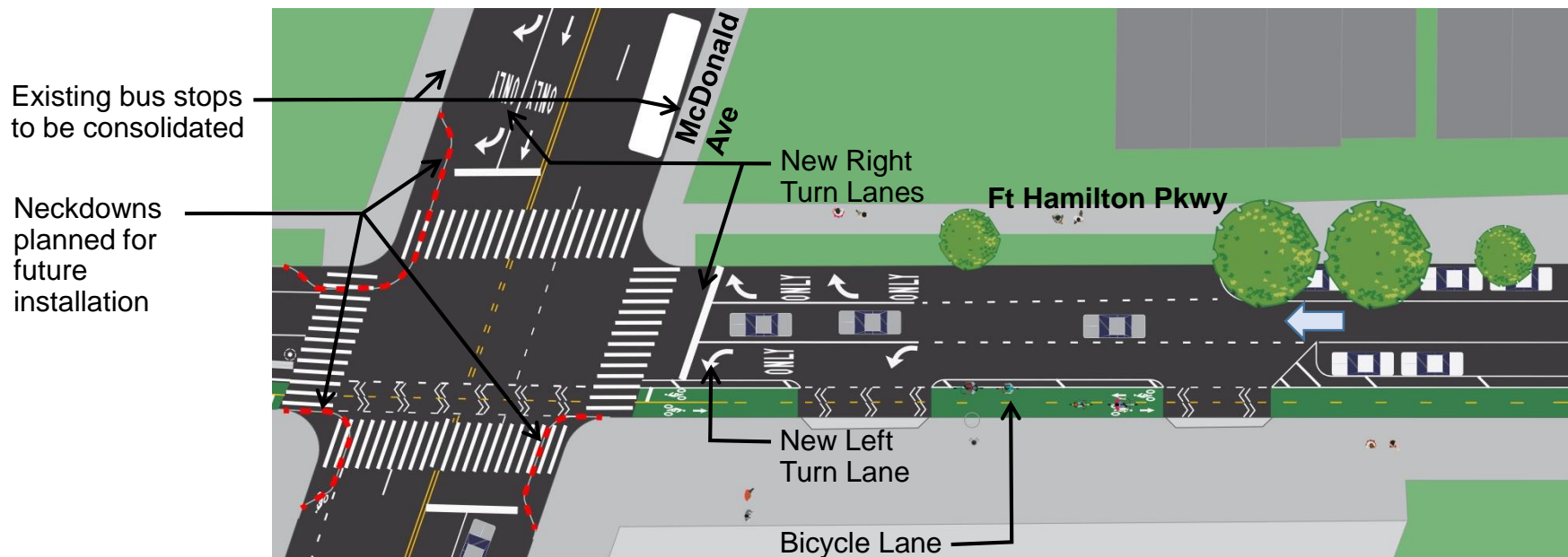
- Add pedestrian islands
- Reduce crossing distance from 40' to 21'
- Slow left-turning vehicles
- Improve visibility of bike lane by daylighting intersection and re-orienting left-turning vehicles
- Minimize parking loss



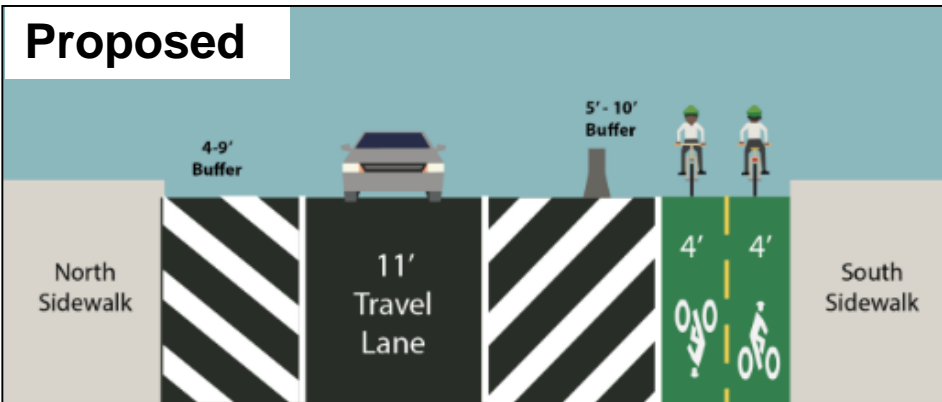
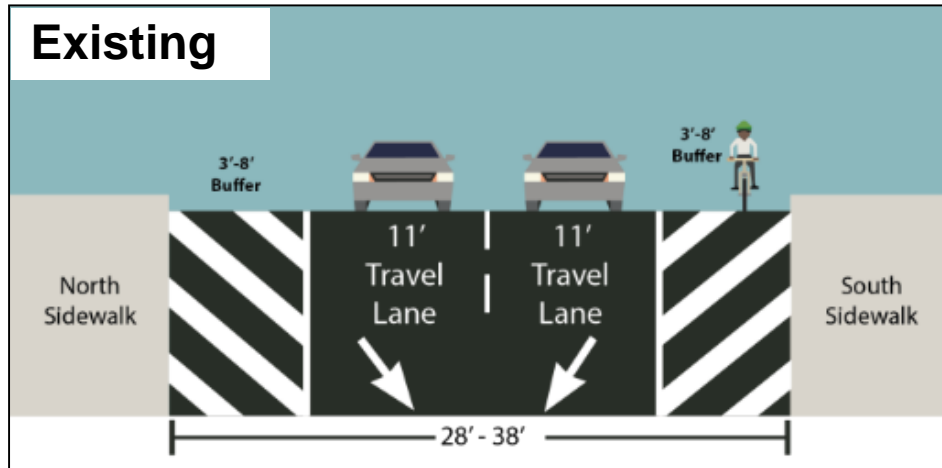
Typical intersection design

Proposed Design Ft Hamilton Pkwy at McDonald Ave

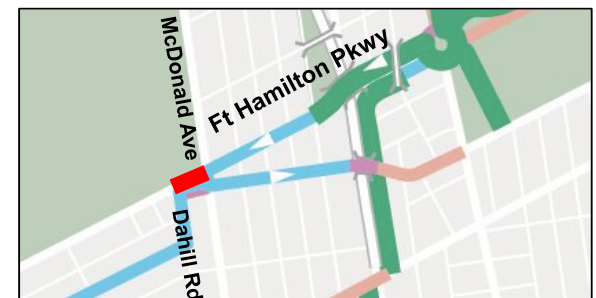
- 10 second LPI and WB left turn lane on Ft Hamilton Pkwy allows safe crossing for bikes and pedestrians
- SB right turn lane and protected turn on McDonald Ave reduces conflict between 360+ turning vehicles and pedestrians who get their own phase to cross Ft Hamilton Pkwy
- Banned NB left turn redirects vehicles to Caton Ave and provides time for SB right
- New neckdowns planned on northwest, southwest and southeast corners
- SB bus stop on the NW corner of McDonald Ave and Ft Hamilton Pkwy to be consolidated with bus stop on SW corner of McDonald Ave and Caton Ave



Proposed Design McDonald Ave – Dahill Rd

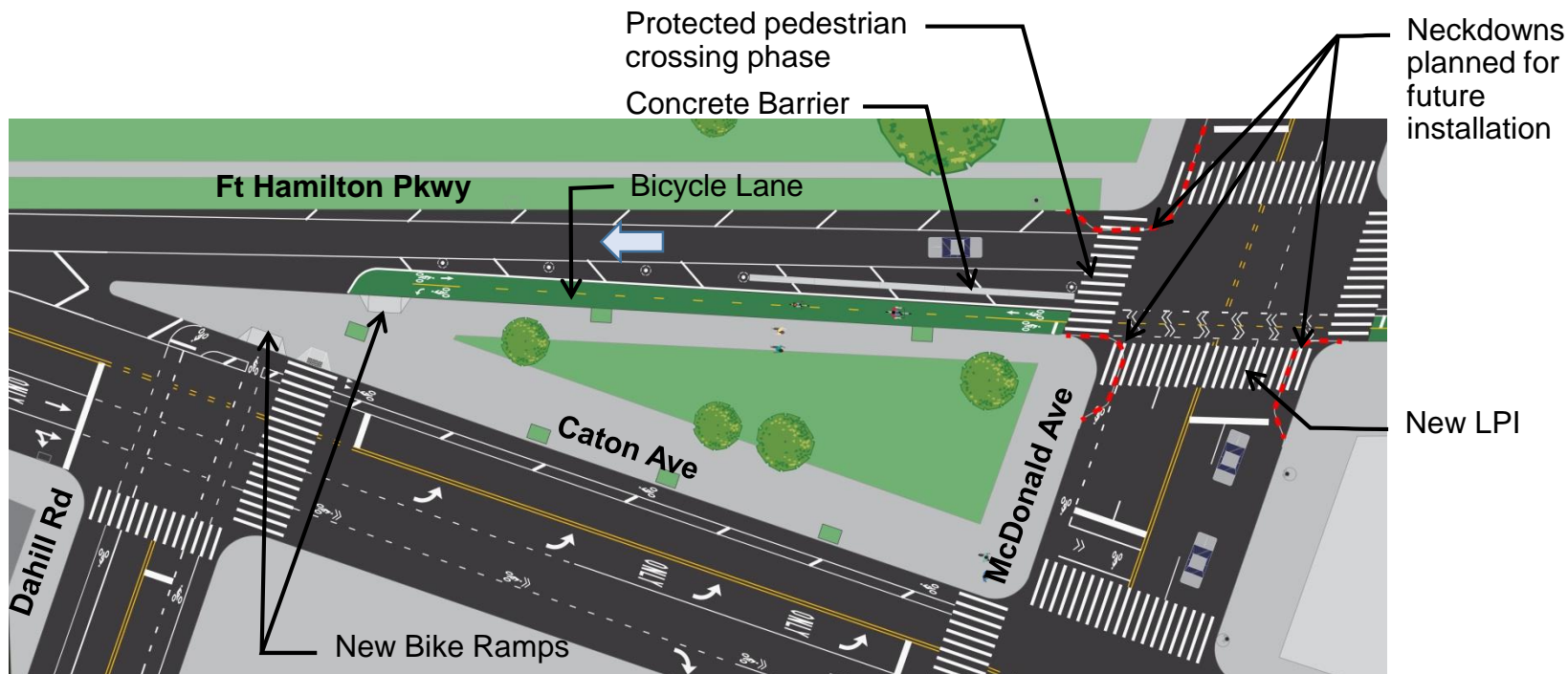


- Island cut-through connects Fort Hamilton Parkway to Dahill Rd
- Parking lane discourages double parking and keeps bike lane clear of parked vehicles
- Simplifies connection to Borough Park and Sunset Park

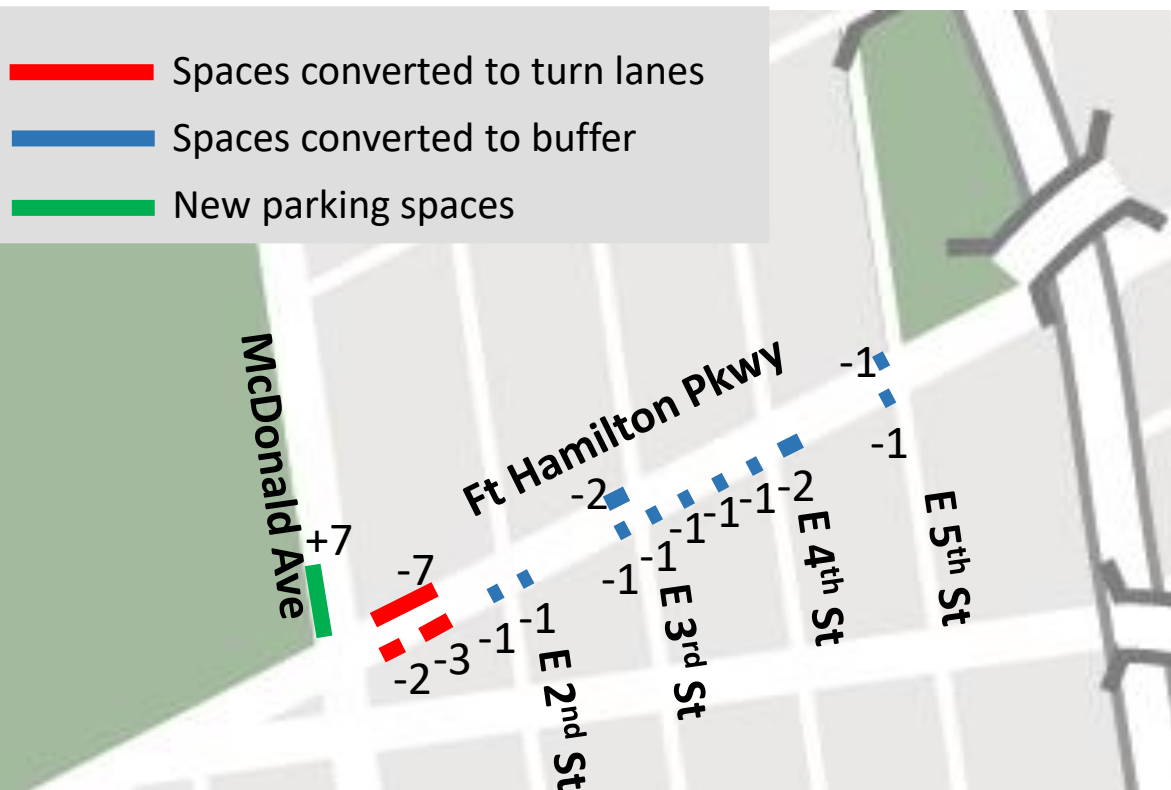


Proposed Design McDonald Ave to Dahill Rd

- Traffic volumes on Fort Hamilton Pkwy west of Dahill Rd are too high to accommodate lane removal and bike lane extension
- Install barrier-protected bike lane west of McDonald Ave
- Remove merge lane - unnecessary due to left turn lane
- Add new bike ramps on island between Dahill Rd and Fort Hamilton Pkwy



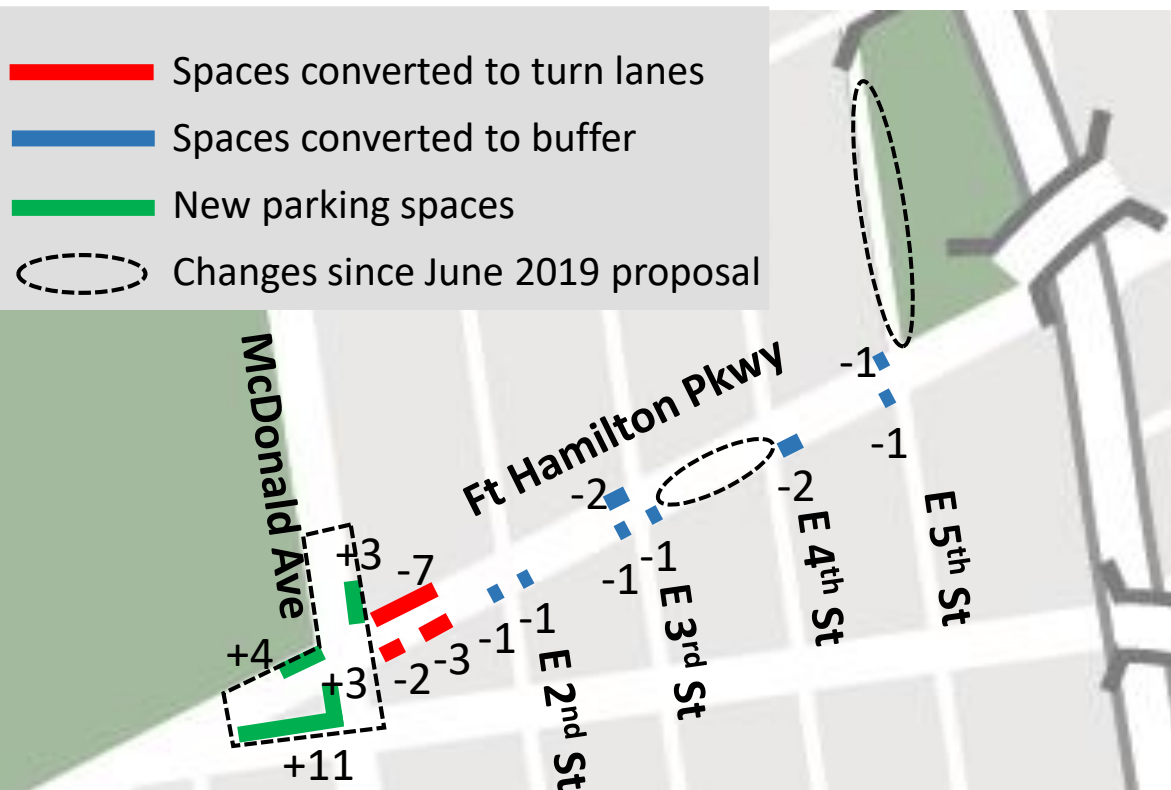
Previous Proposed Design Parking: 2019 Proposal



Fort Hamilton Parkway Parking Changes	
Street Block	Approx. # of Spaces (2019)
E 5 th St – E 4 th St	-4
E 4 th St – E 3 rd St	-4
E 3 rd St – E 2 nd St	-4
E 2 nd St – McDonald	-13
West of McDonald Av	+7

- New turn lanes necessitate the removal of 12 spaces
- Pedestrian islands and buffers necessitate the removal of 13 spaces
- Consolidation of bus stops adds 7 spaces
- Net change is 18 spaces converted (out of ~71 spaces on Ft Hamilton Parkway)

Proposed Design Parking: 2020 Proposal



Fort Hamilton Parkway Parking Changes	
Street Block	Approx. # of Spaces (2020)
E 5 th St – E 4 th St	-4
E 4 th St – E 3 rd St	-1
E 3 rd St – E 2 nd St	-4
E 2 nd St – McDonald	-13
West of McDonald Av	+21

- Safety improvements require conversion of 22 spaces to “No Standing Anytime” between E 5th St and McDonald Ave
- Consolidation B67/B69 bus stop on McDonald Ave adds 3 spaces
- Removal of redundant bike lanes on Caton and McDonald Ave adds 14 spaces
- Redesign adds 4 spaces on Ft Hamilton Parkway west of McDonald Ave
- Net change is -1 spaces converted (out of ~71 spaces on Ft Hamilton Parkway)
- Removal of rush hour parking on E 5th St added 20 spaces in 2019 (not included in total)

Summary Project Benefits

- Increases pedestrian safety by shortening crossing distances, slowing turns, and adding protected crossing times at McDonald Ave
- Discourages speeding by narrowing roadway
- Creates a safer, more direct and comfortable experience for cyclists
- Discourages double parking through redesign and new regulations
- Simplifies the connection to Sunset Park
- Maintains traffic capacity

