



BROADWAY AT VAN CORTLANDT PARK

SAFETY AND MOBILITY IMPROVEMENTS

New York City Department of Transportation

Presented by the Bicycle and Greenway Program on April 25, 2017



Project Timeline



Presentation Overview

1 - Broadway Corridor

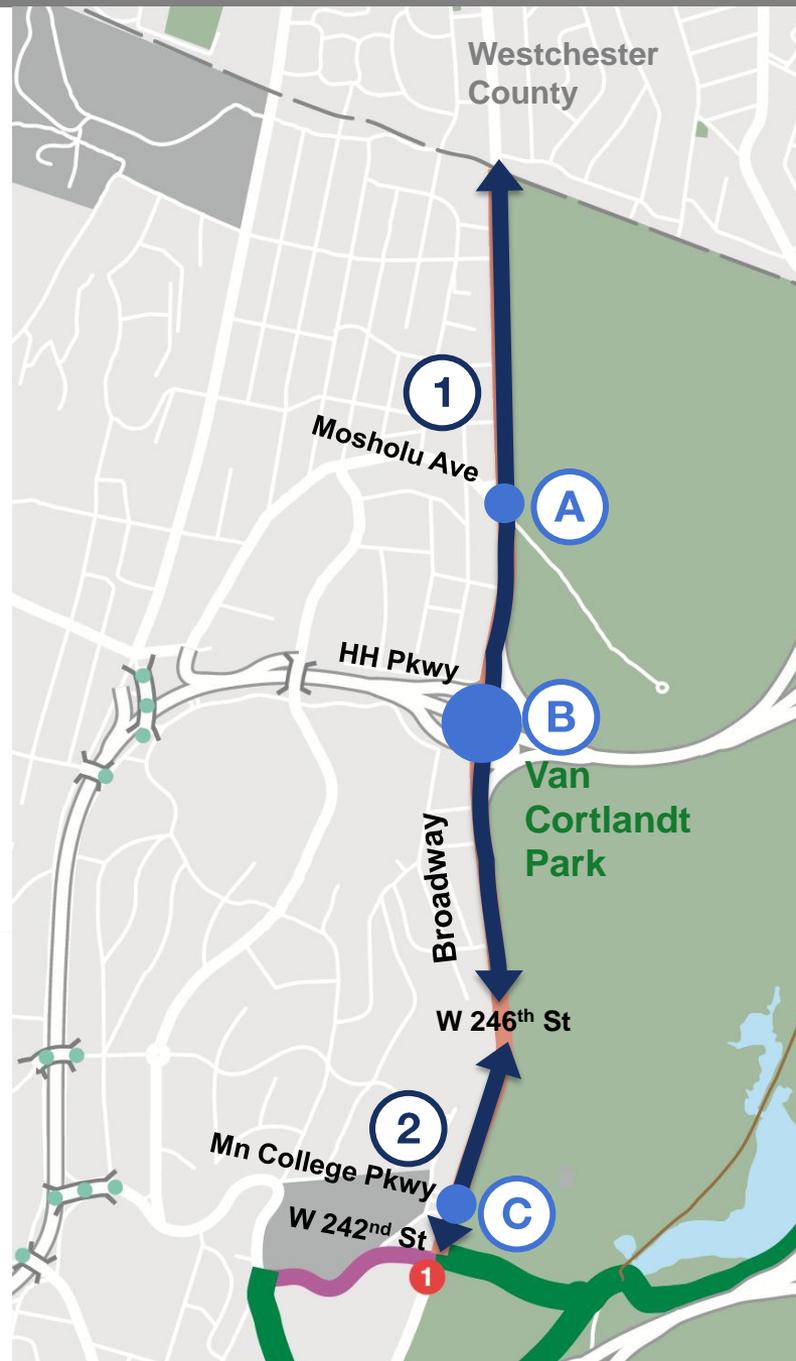
- Overall Issues
- Proposed Corridor Improvements

- ① Westchester County to W 246th St
- ② W 246th St to W 242nd St

2 - Targeted Intersections

- Ⓐ Mosholu Ave
- Ⓑ Henry Hudson Entrance/Exit Ramps
- Ⓒ Manhattan College Parkway

3 - Summary of Benefits



BROADWAY CORRIDOR

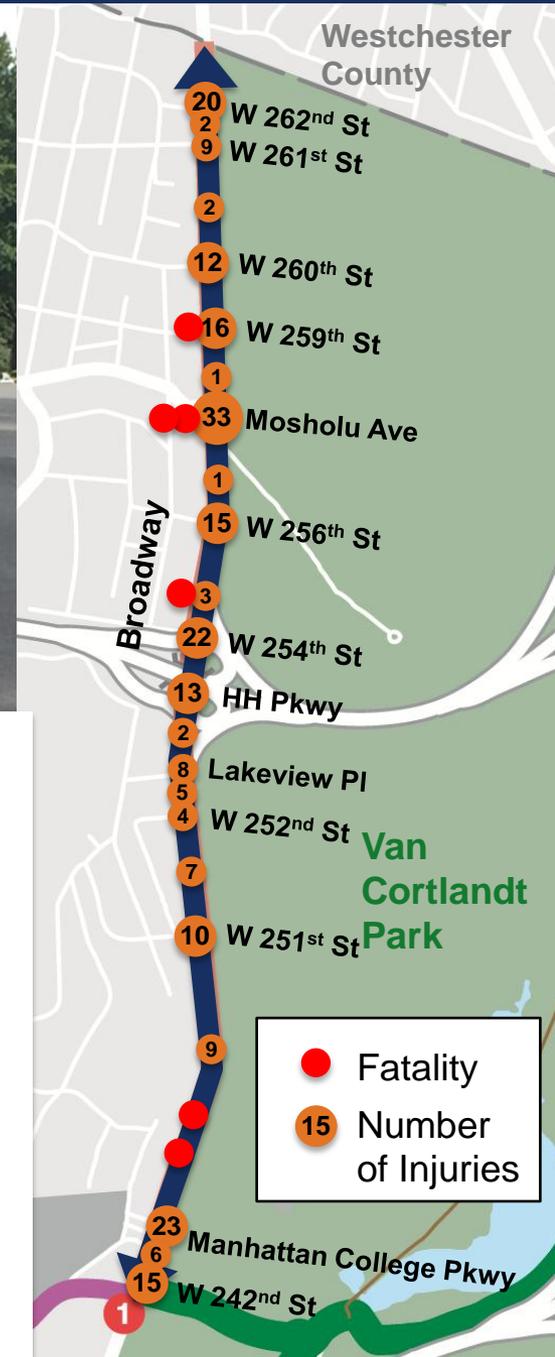
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Issue: Safety

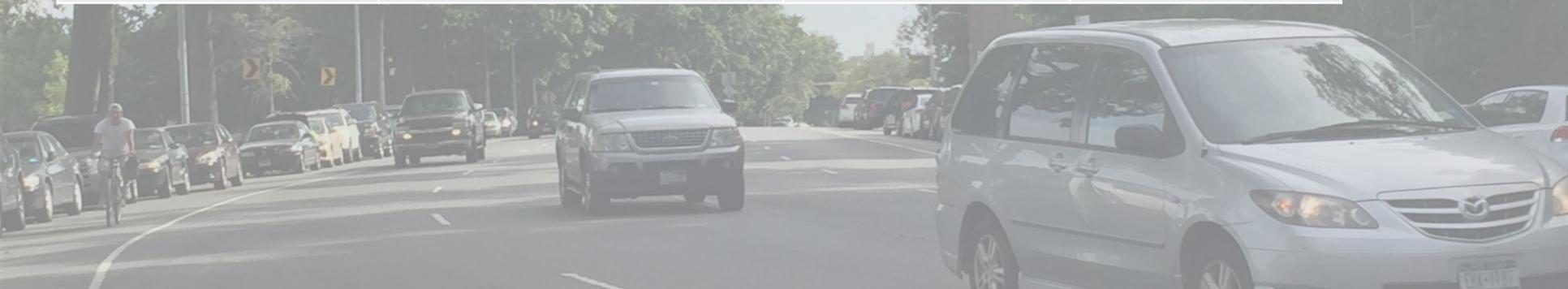
12 people, including 10 pedestrians, were killed or severely injured on Broadway between W 242nd St and Caryl Ave (2010-2014)

Of the 450+ people surveyed Fall 2015:
38% do not feel safe crossing Broadway
50% cited speeding as their top concern



Northbound	Percentage of Vehicles Speeding	Average Speed	Maximum Speed
Daytime	80%	30.2 mph	51 mph
Nighttime	73%	28.6 mph	41 mph

Southbound	Percentage of Vehicles Speeding	Average Speed	Maximum Speed
Daytime	82%	30.2 mph	44 mph
Nighttime	95%	32.1 mph	44 mph



Issue: Safety

Speeding is an issue along the corridor and is especially prevalent during off-peak hours

Source: Daytime radar speed study taken on March 9, 2016 btw. Manhattan College Parkway and W 251st Street on Broadway, nighttime radar speed study taken on March 29, 2017 btw Manhattan College Parkway and W 251st St on Broadway at approximately 8:00 pm.



Issue: Park Access

Broadway divides Van Cortlandt Park from the neighborhood

Of the 450+ people surveyed in Fall 2015:

30% come to the park less than once a month

11% never come to the park

58% would come to the park more often if it was safer to cross Broadway

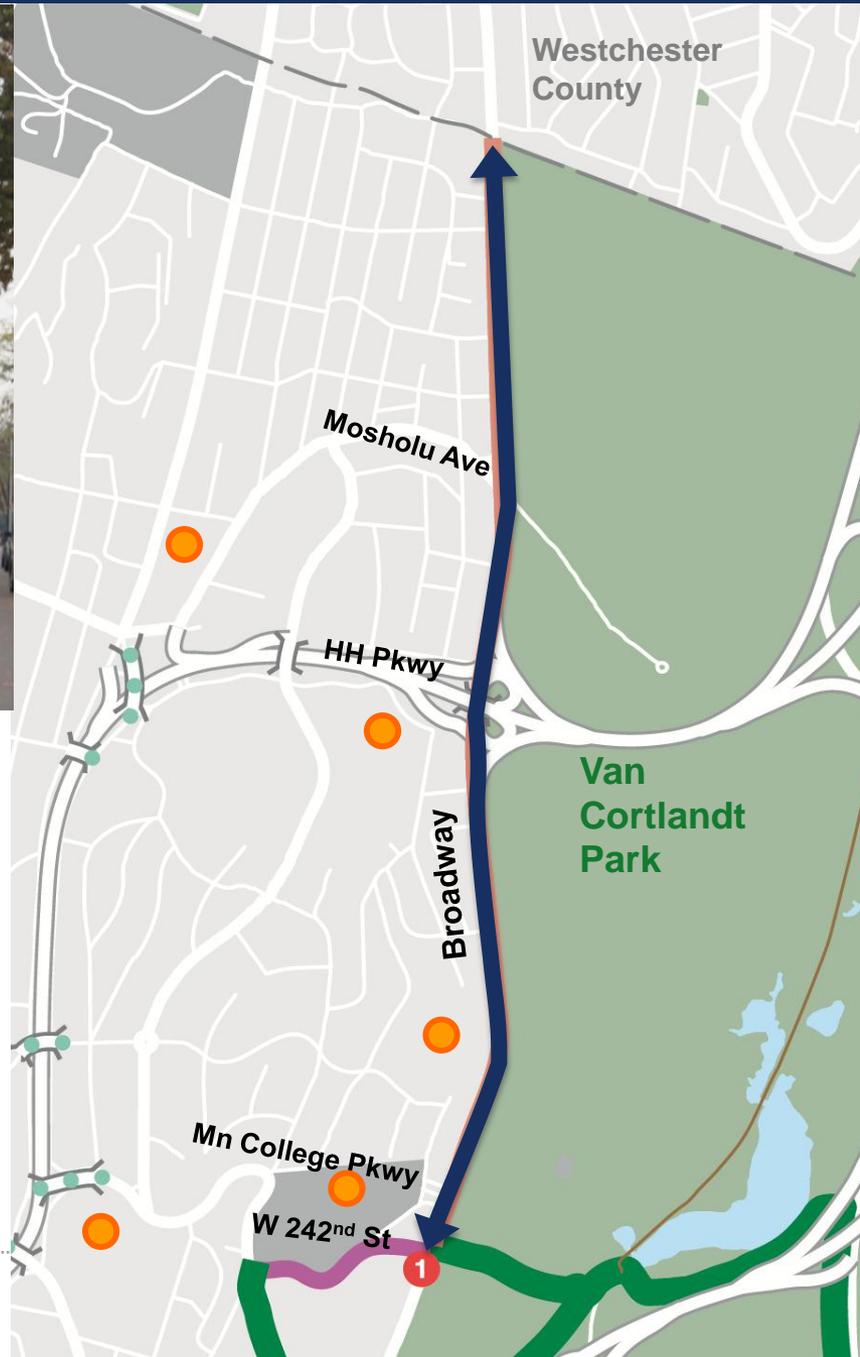


Broadway and W 252nd St

Issue: Vulnerable Populations

Broadway is close to several schools (●) whose students regularly use the park

Broadway also has several senior housing developments in this area

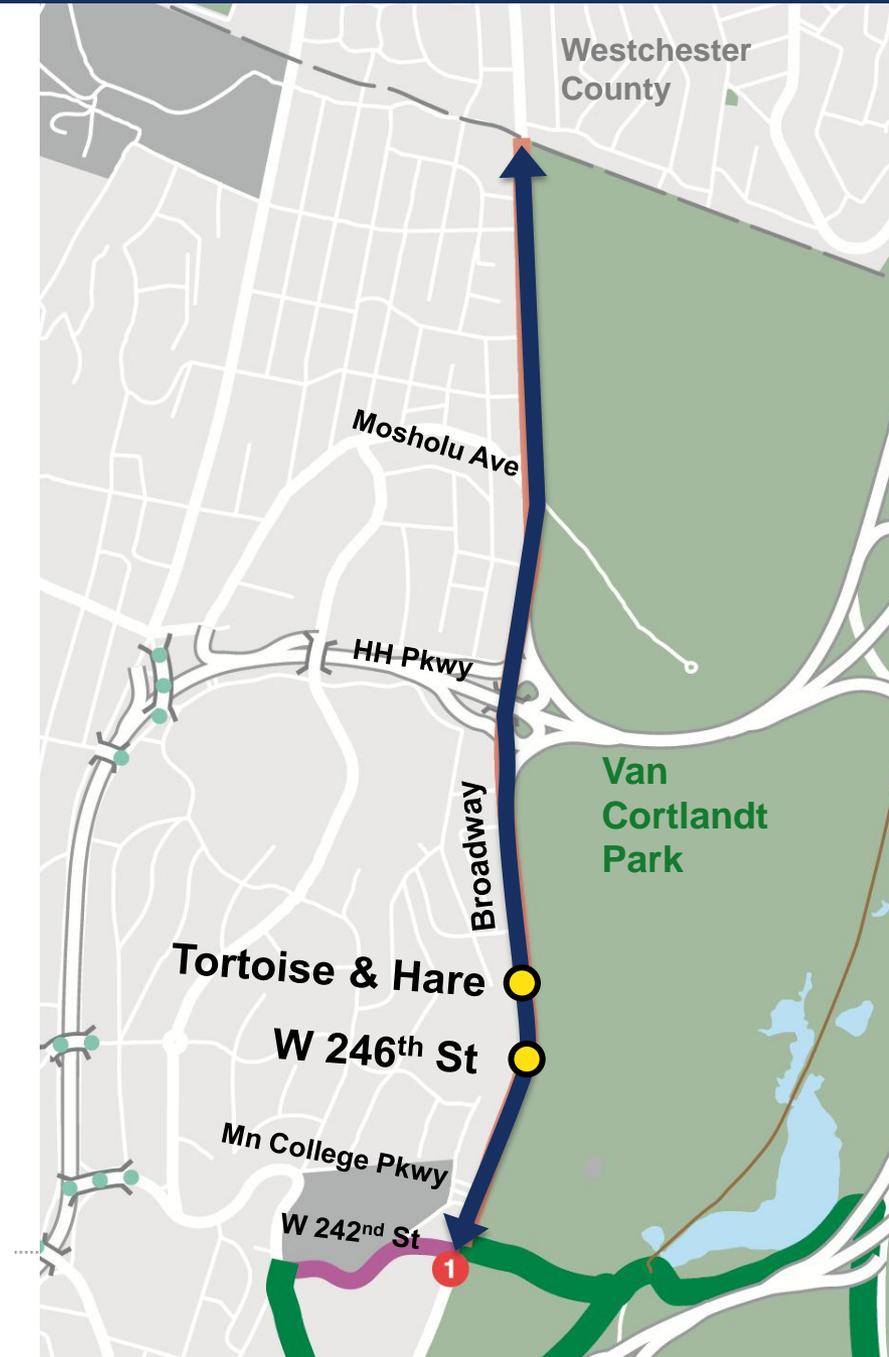


Issue: Infrequent Pedestrian Crossings

- Long distances between crossings between Manhattan College Parkway and W 251st St
- Multiple fatalities between Manhattan College Parkway and W 251st St

DOT Action

- Installed two signalized crossings in November 2016
 - Tortoise and Hare Statue Park Entrance
 - W 246th Street / Museum Entrance





Broadway and Manhattan College Pkwy

Issue: Important Bus Route

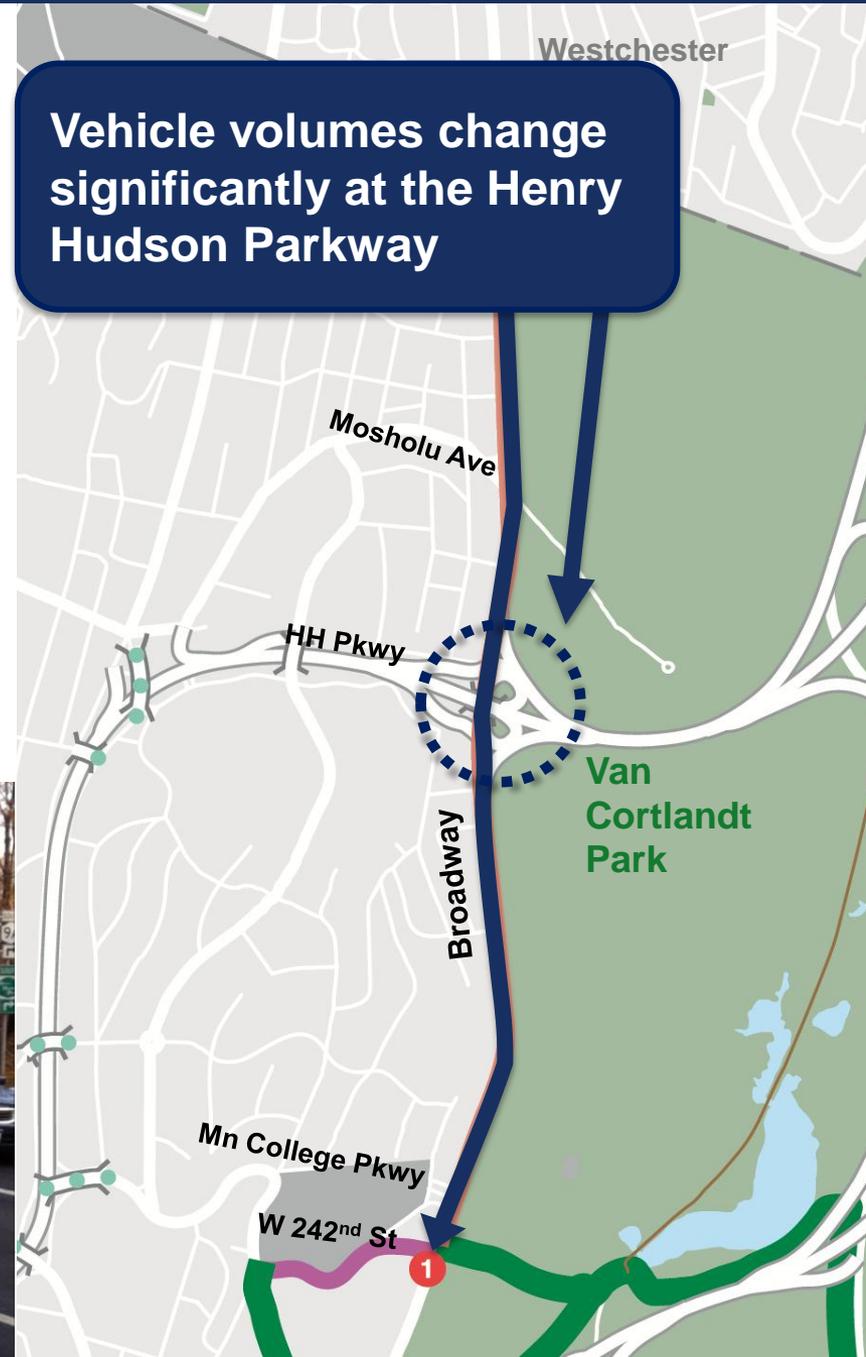
Broadway is an important bus route, serving 8 lines and connecting to the subway

- NYCT Local Buses
- NYCT Express Buses
- Westchester County Beeline

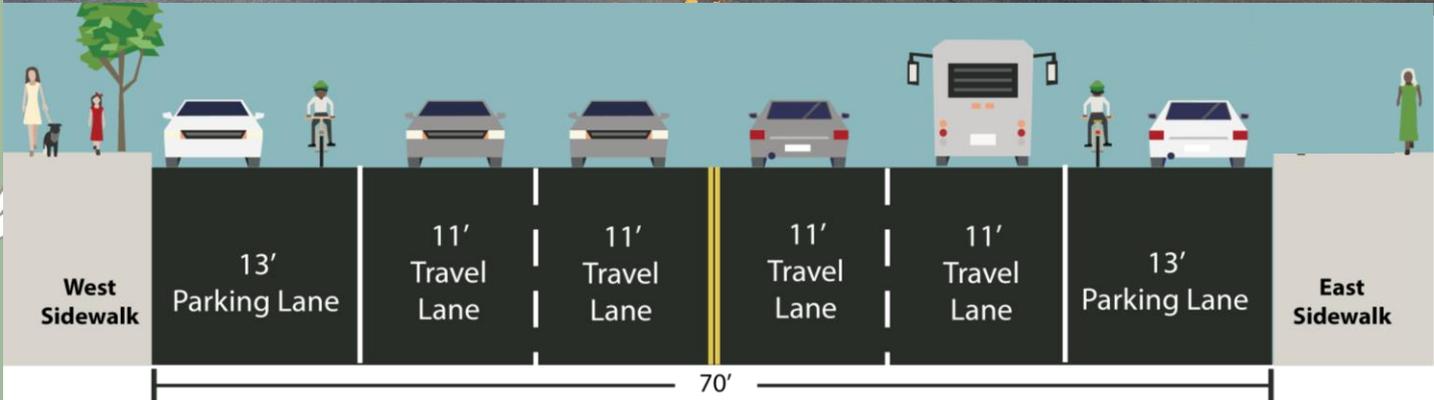
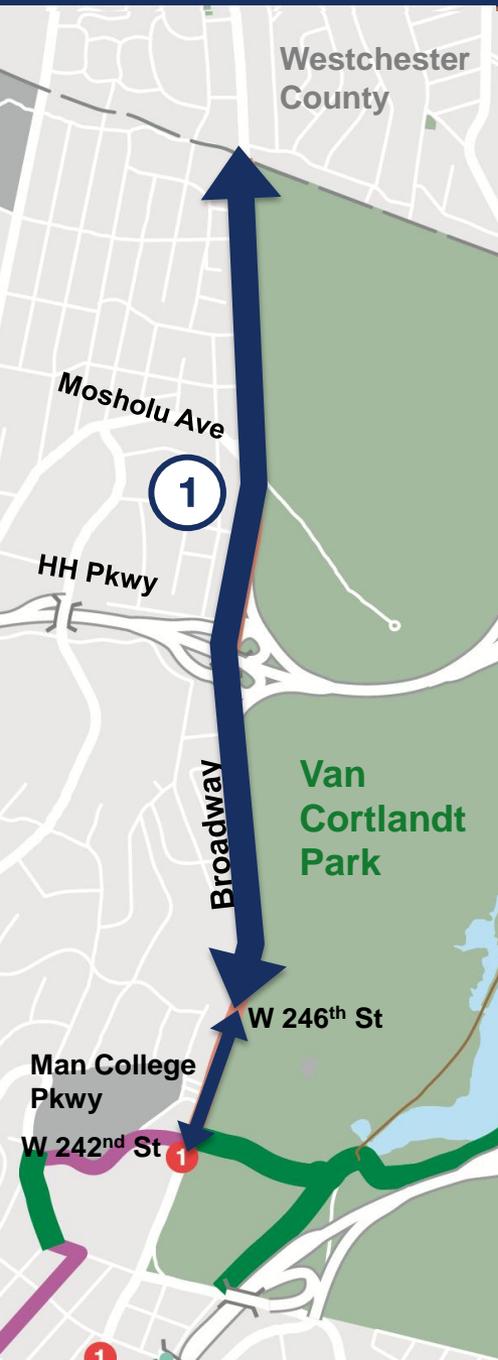


Issue: Variable Vehicle Volumes

- Southbound vehicle volumes are typically 900 – 1200 vehicles during peak hour
- Northbound vehicle volumes are typically 600 – 900 vehicles during peak hour
- Low volumes during off-peak periods encourage speeding



1 – Broadway Corridor: Westchester County to W 246th St



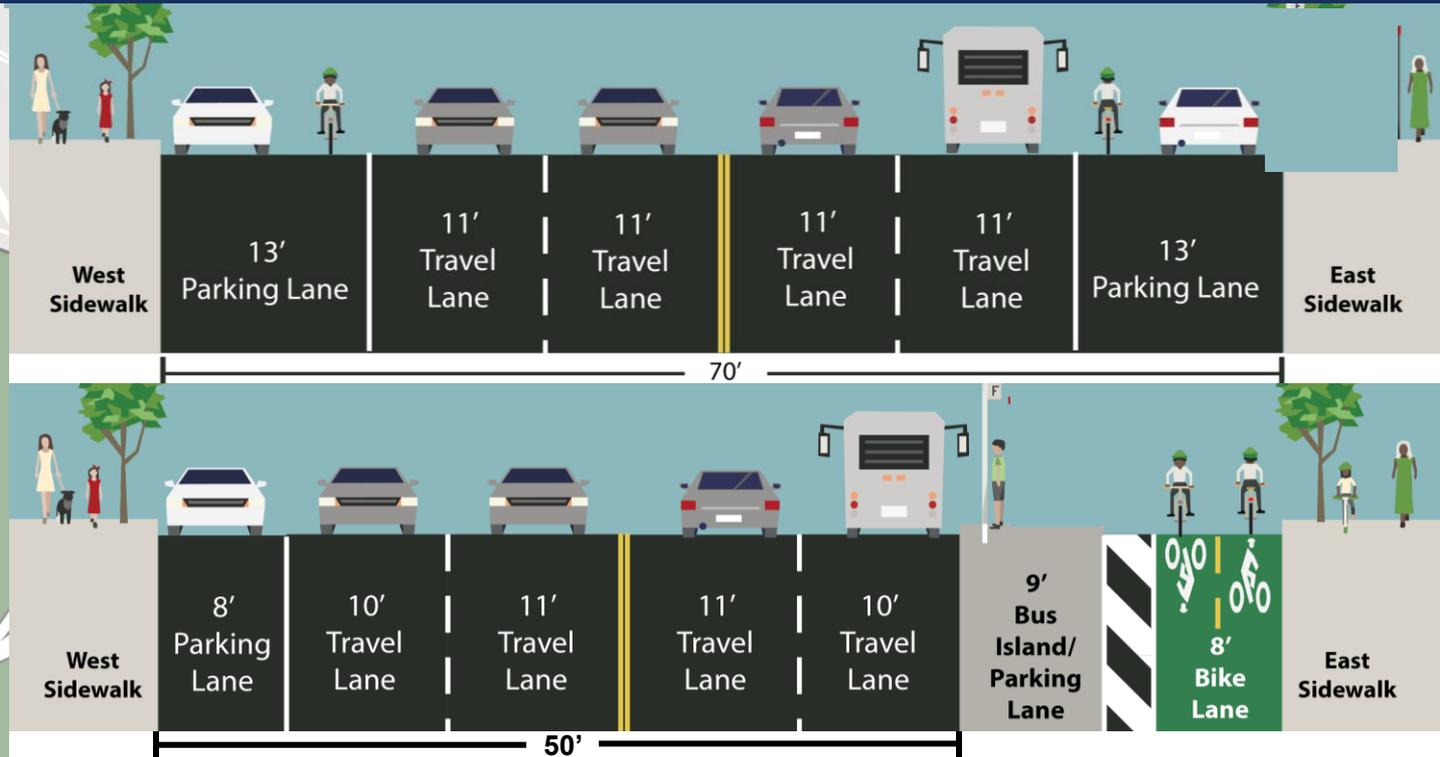
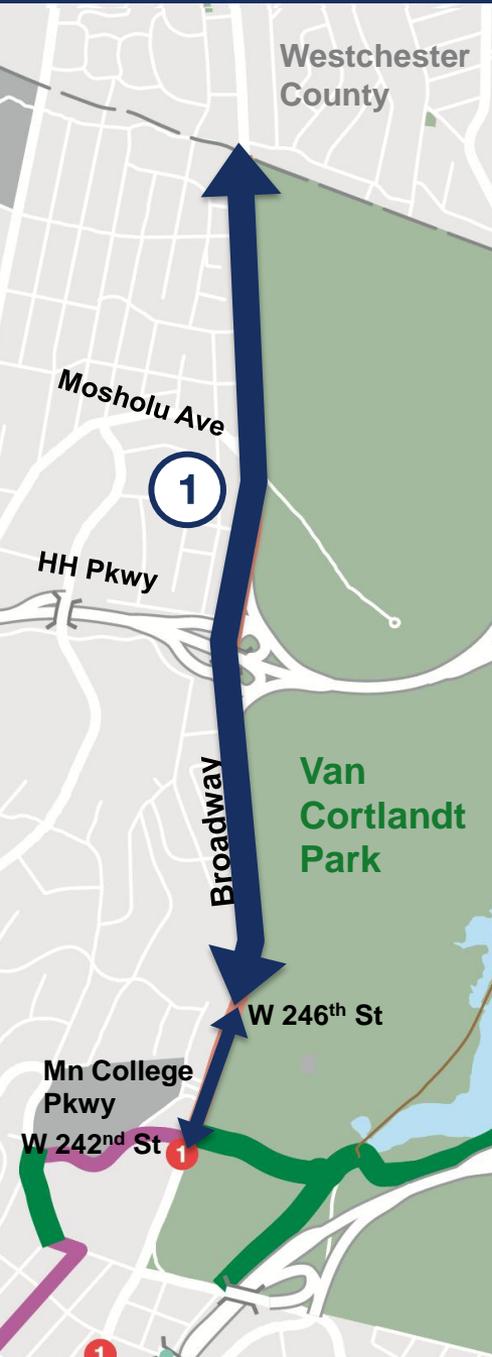
Existing Conditions

- 70' wide roadway
- Moderate traffic volumes during peak hours
- Low off-peak traffic volumes
- Edge condition along park
- Wide parking lanes create space for cyclists, 12hr counts: 260 Sat/150 weekday

Issues

- Speeding, especially during off-peak hours
- Long pedestrian crossings
- Infrequent pedestrian crossings

1 – Broadway Corridor: Westchester County to W 246th St



Proposed Design

- Install standard width lanes to narrow roadway
- Add two-way protected bike lane along park edge
- Install bus boarding islands at bus stops

Benefits

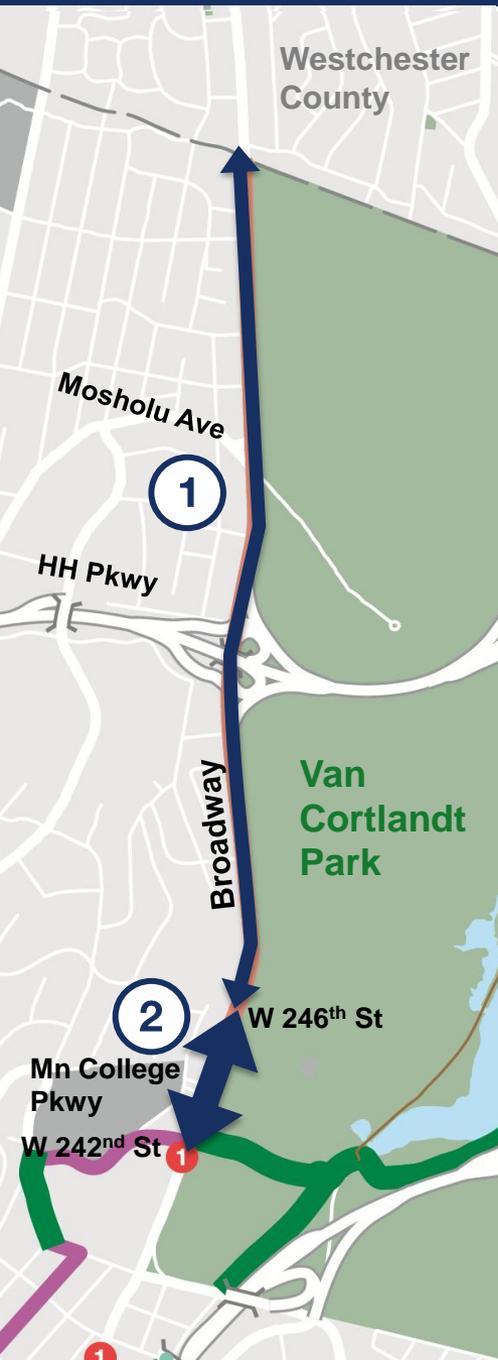
- Narrow roadway discourages speeding
- Islands shorten crossings, create ADA compliant bus stops
- Bus loading/unloading happens from travel lane, speeds up service
- Protected bike lane
 - creates new transportation/recreation facility, comfortable for all ages/abilities
 - improves bike access to Van Cortlandt Park, Westchester County trails
 - activates park edge

Crossing distance reduced nearly 30% from 70' to 50'

Protected two-way bike lane along park edge is a neighborhood amenity that provides a **recreation opportunity** for cyclists of **all ages and abilities** and **activates the park edge**



1 – Broadway Corridor: W 246th St to W 242nd St



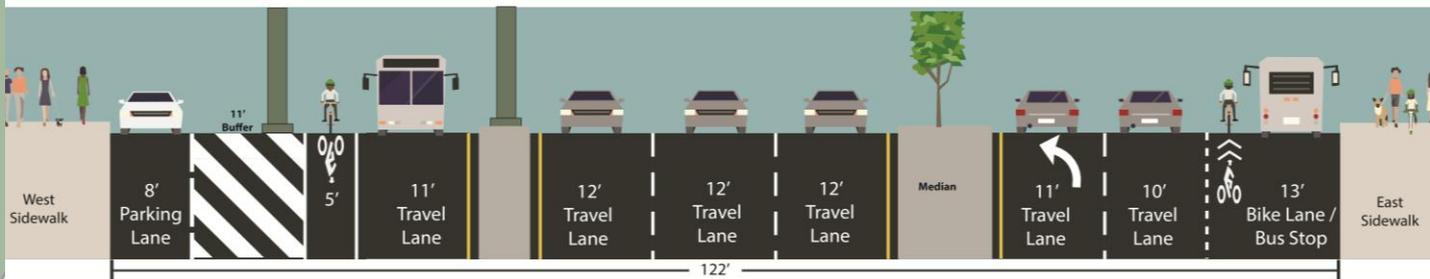
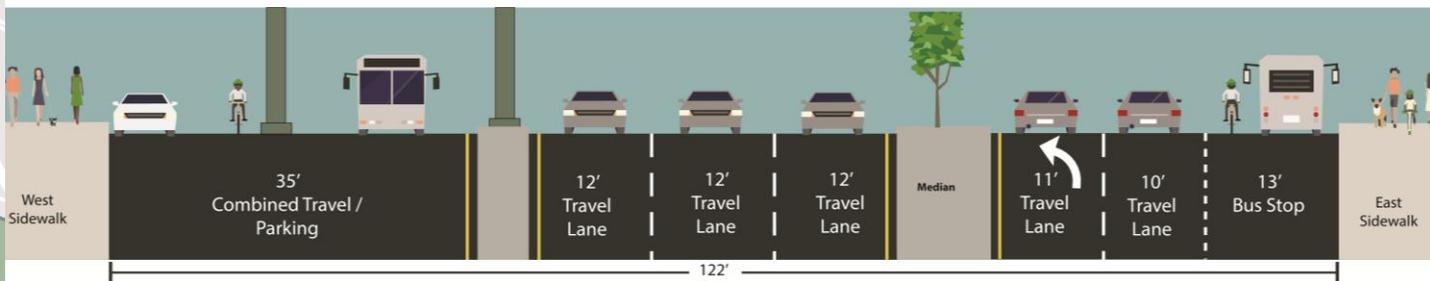
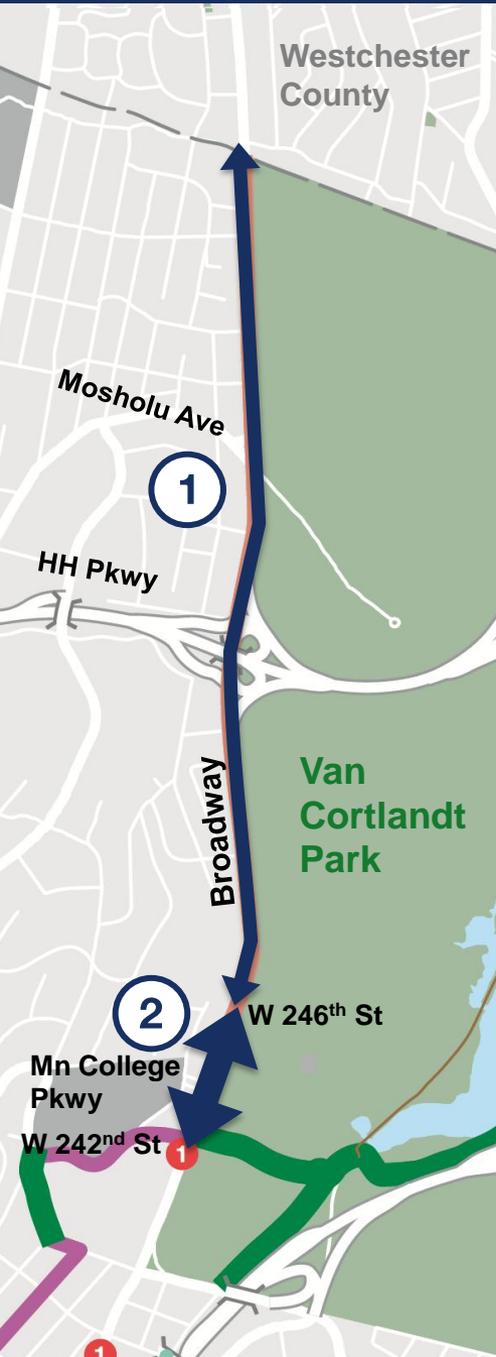
Existing Conditions

- Land use along both sides of Broadway changes
- Transfers between subway and bus lines
- Roadway widens significantly and includes a median

Issues

- Southbound roadway excessively wide
- Northbound roadway does not have space for protected bike lanes
- Heavy bus loading/unloading on east curb along park

1 – Broadway Corridor: W 246th to W 242nd St



Proposed Design

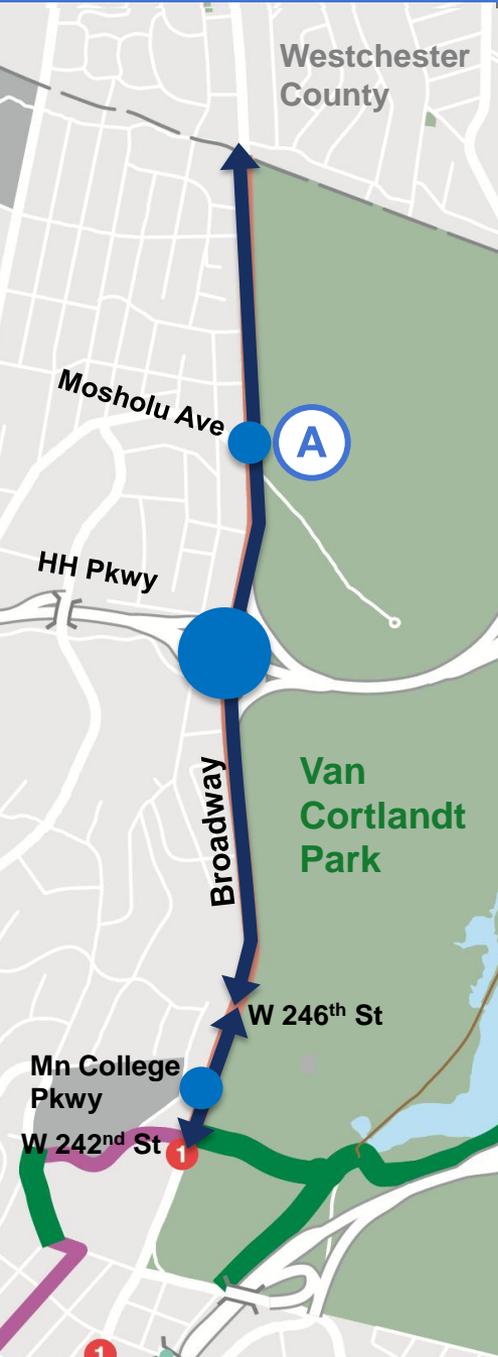
- Transition to conventional bike lane on each side of the street at W 246th St
- Transition will require removal of 5 parking spaces (~100 ft) to maintain vehicle alignment

Benefits

- Maintains parking in front of businesses
- Organizes space under the elevated train structure
- Continues bike lane and minimizes bus conflicts
- Connects to bike facilities at W 242nd St

TARGETED INTERSECTIONS

2



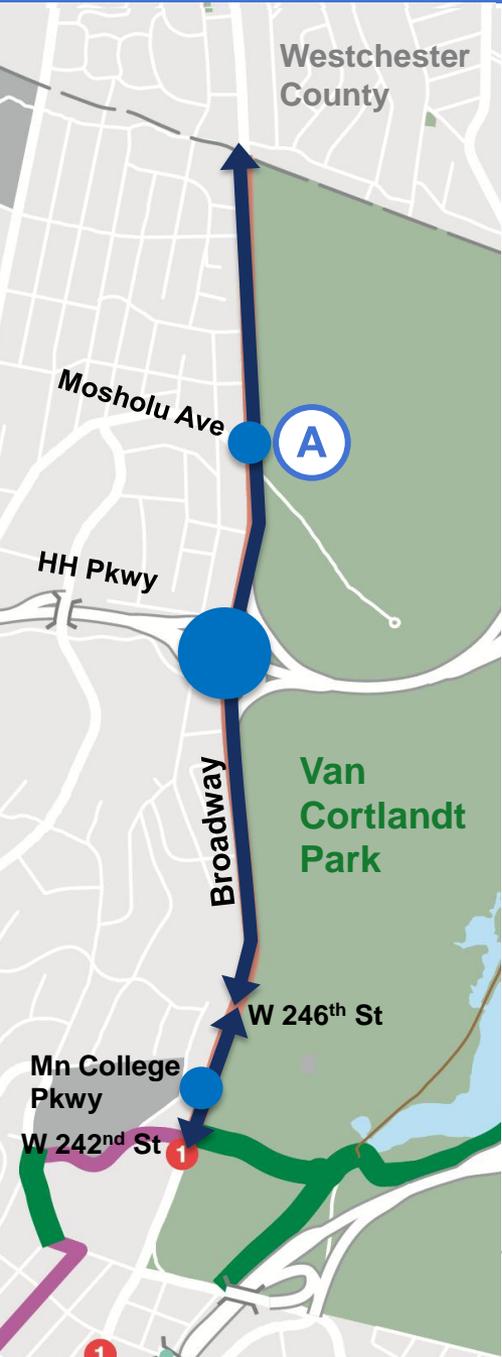
Existing Conditions

- Angled intersection
- Driveway for NYC DOT and DPR vehicles

Issues

- Angle creates very long diagonal pedestrian crossing
- Radius enables vehicles to take very quick turns
- No sidewalks at Sheridan Plaza

Pedestrian fatalities in 2011 and 2012



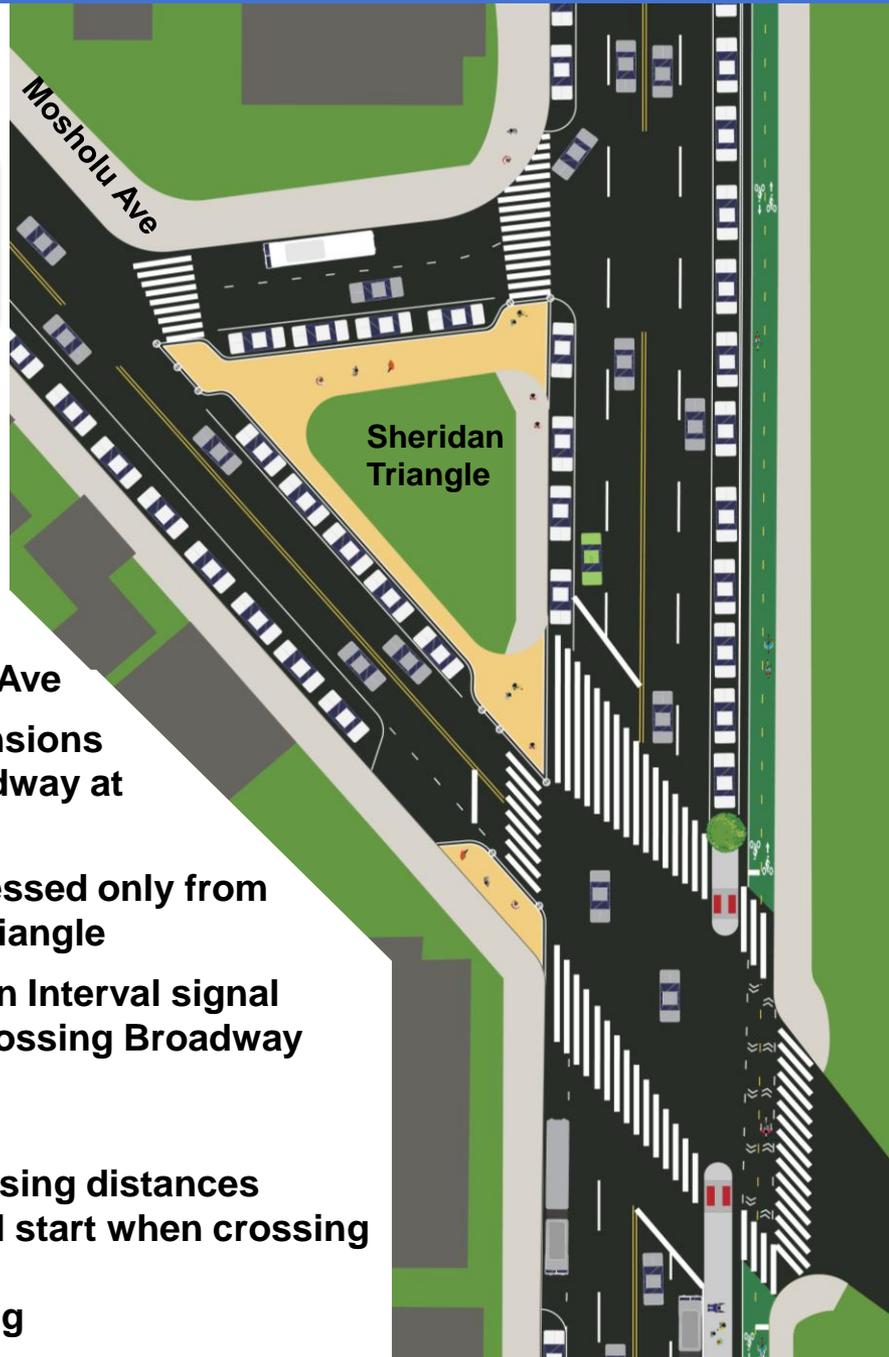
Crossing distance at intersection of Broadway and Mosholu Ave reduced 33% from 120' to 80'

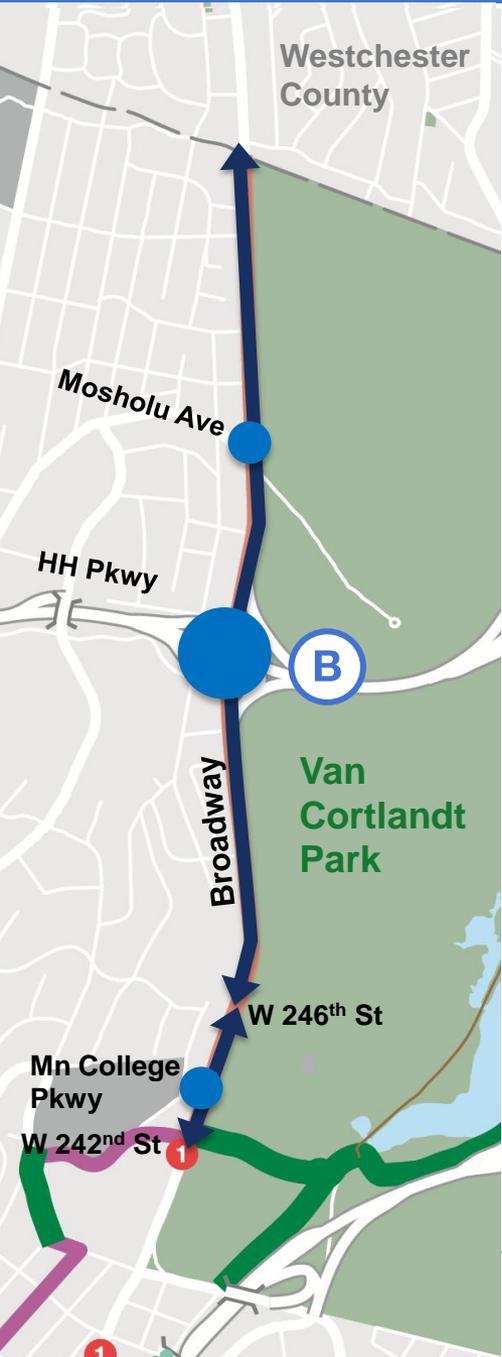
Proposed Design

- Install bus boarding and pedestrian safety islands on the east side of Broadway at Mosholu Ave
- Install painted curb extensions on the west side of Broadway at Mosholu Ave
- Mosholu Ave will be accessed only from north side of Sheridan Triangle
- Install Leading Pedestrian Interval signal timing for pedestrians crossing Broadway

Benefits

- Reduces pedestrian crossing distances
Gives pedestrians a head start when crossing Broadway
- Maintains existing parking



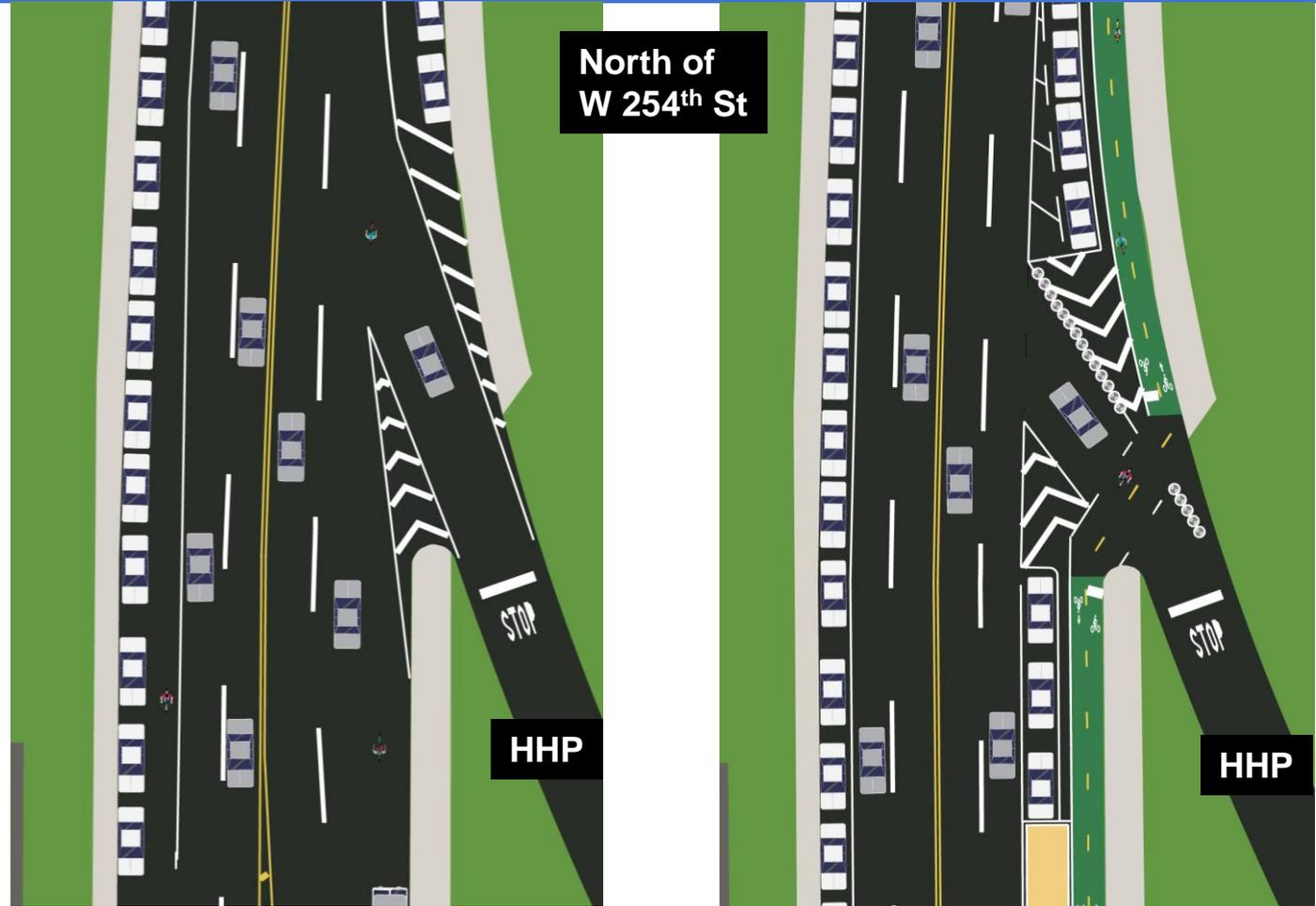
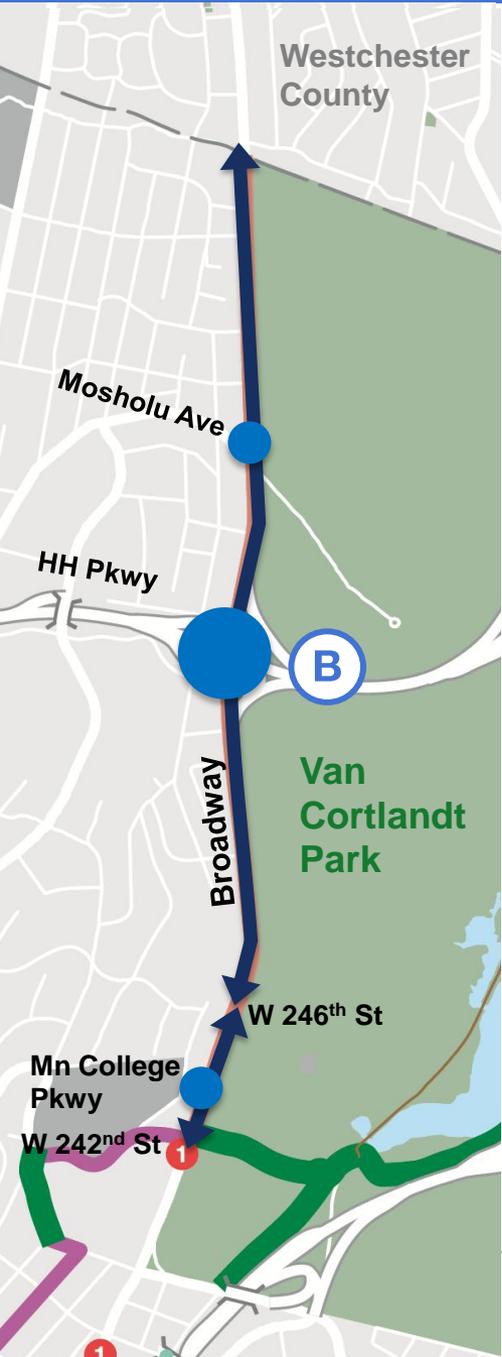


Existing Conditions

- Uncontrolled ramps crossings
- Angle of ramps facilitates fast vehicular movements
- Long distances to cross at ramps and across Broadway



Pedestrian fatality at W 254th St in 2015

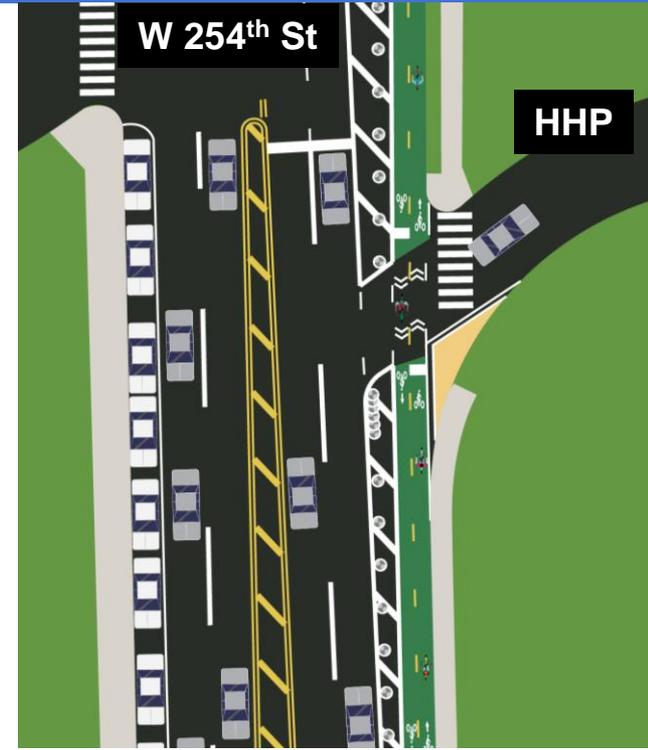
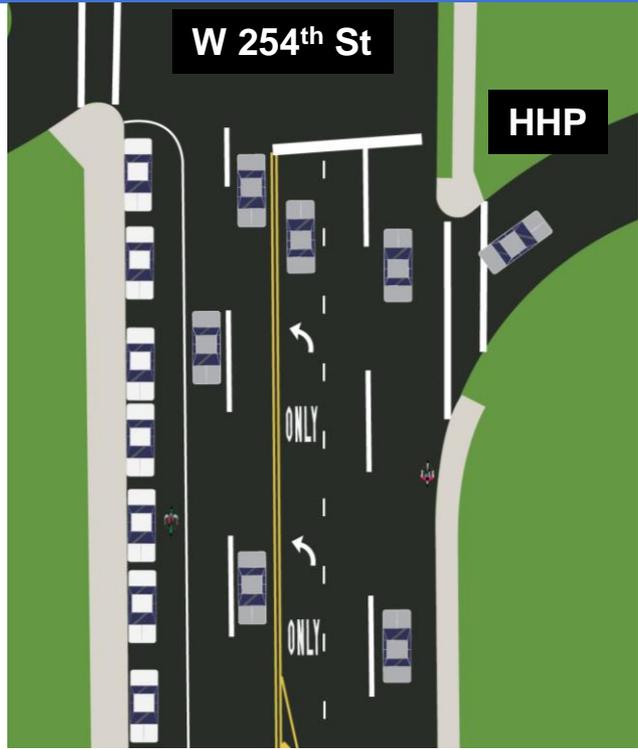
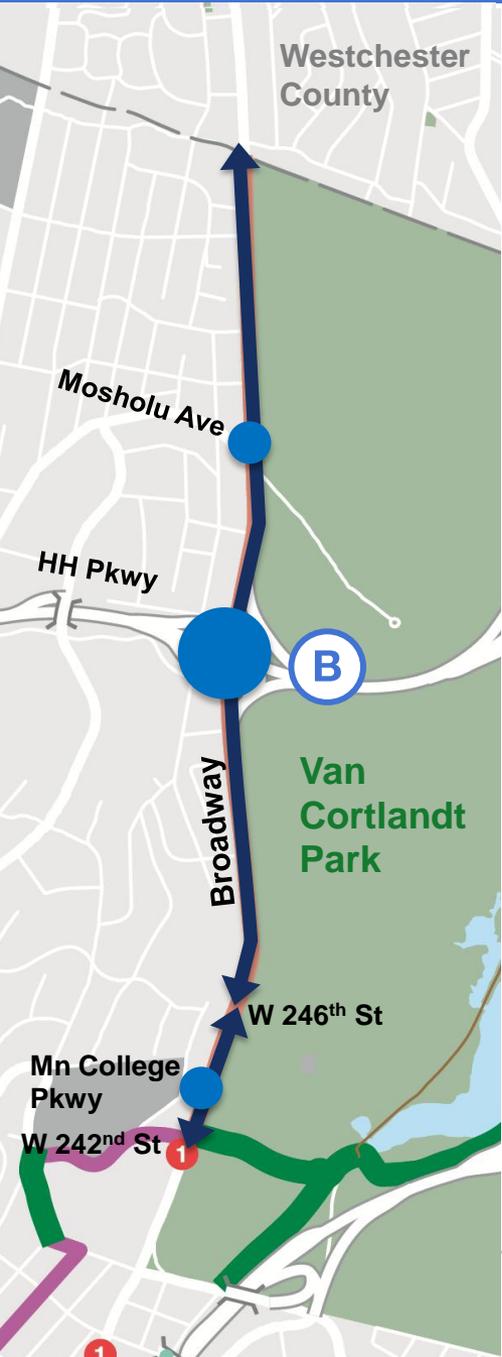


Proposed Design at Controlled Ramps

- Narrow roadway exits from the Henry Hudson Parkway

Benefits

- Shorter pedestrian crossings
- Adds approximately 8 parking spaces

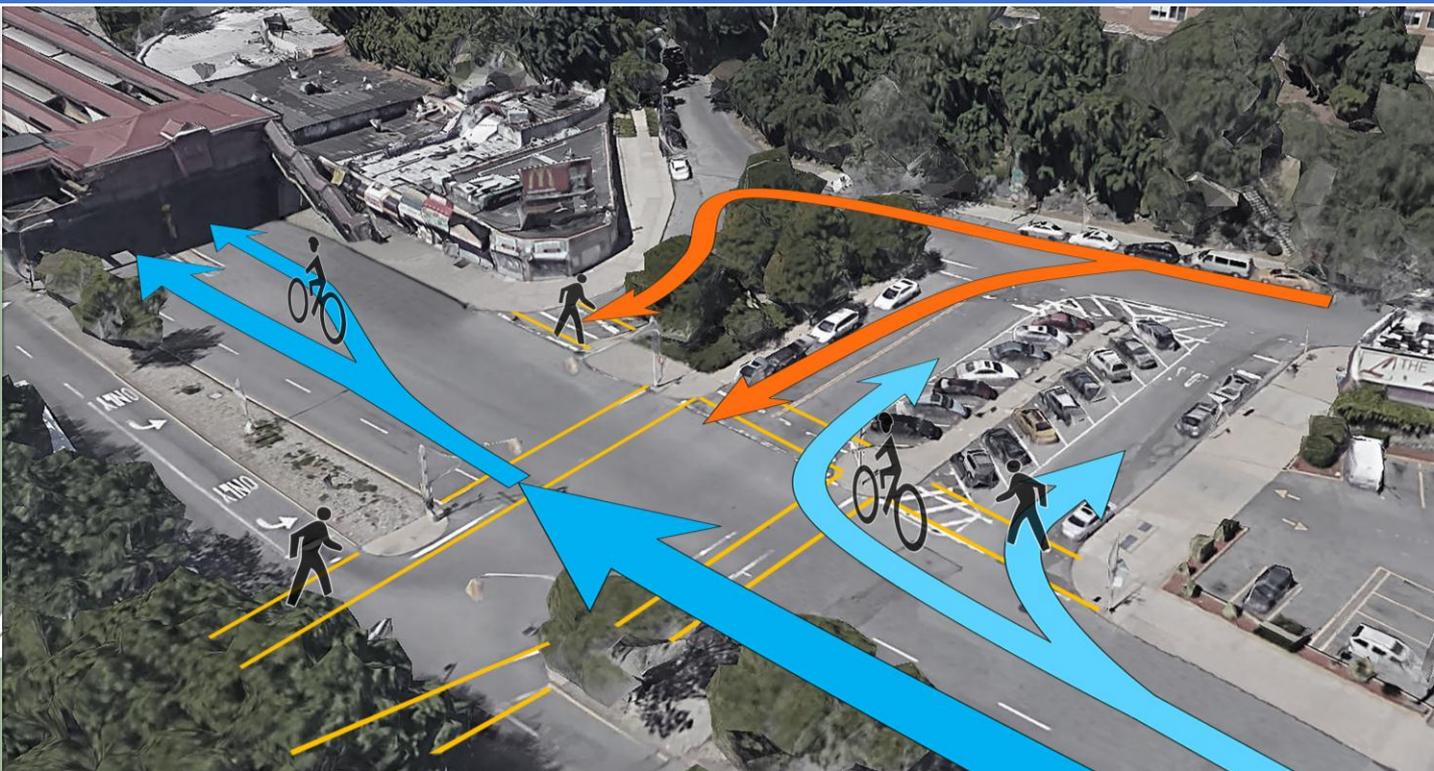
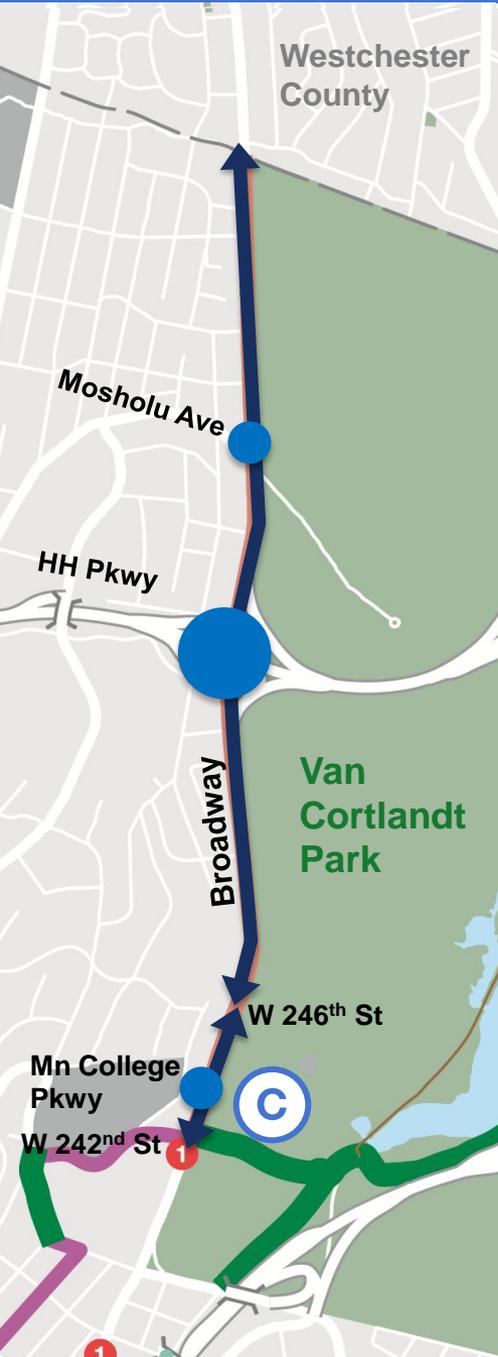


Proposed Design at Uncontrolled Ramps

- Redesign entrances to require sharper turns and reduce vehicle speeds
- Create shorter crossings and add missing pedestrian connection
- Control protected bike lanes with stop signs
- Remove underutilized left turn lane at W 254th St

Benefits

- Shorter pedestrian crossings
- Slower vehicle movements entering parkway
- Improved vehicle alignment at W 254 St

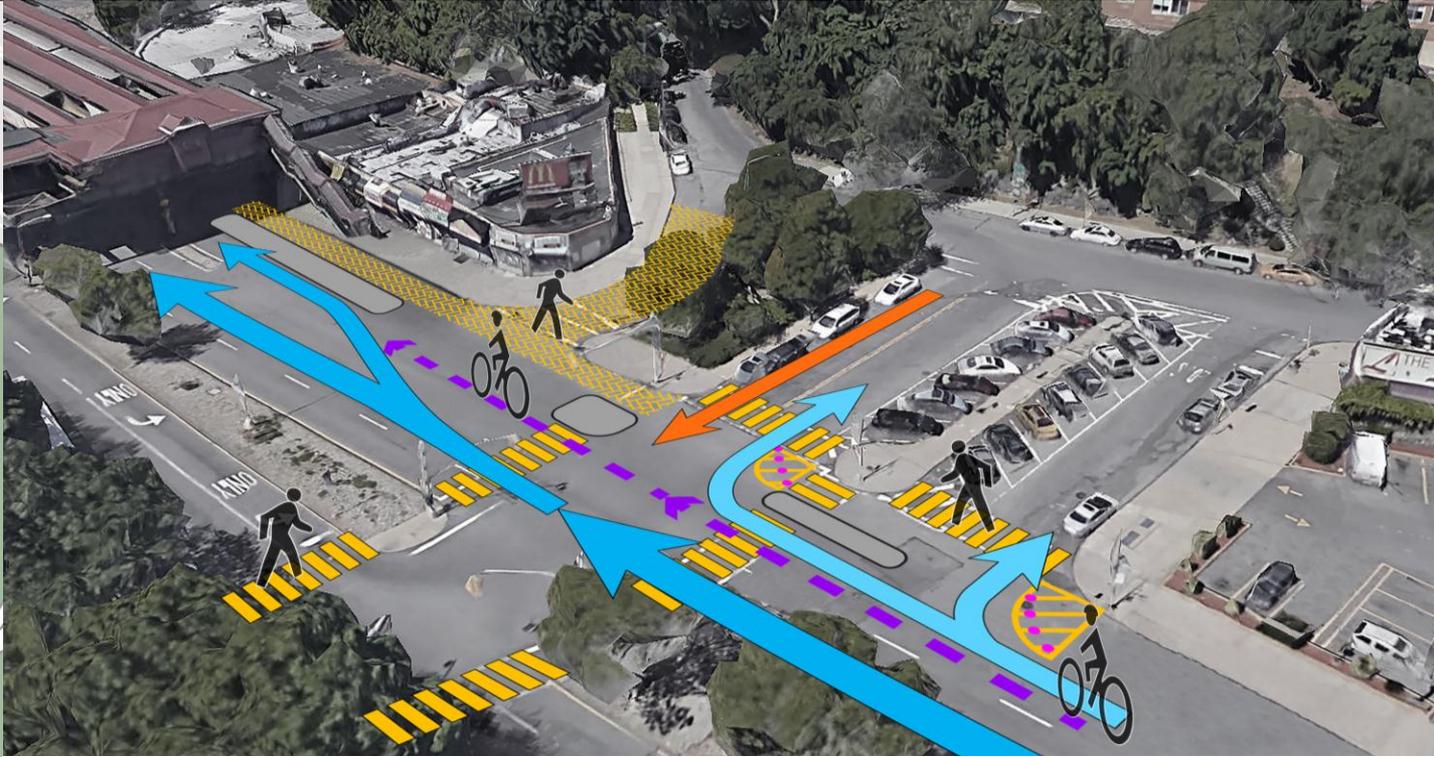
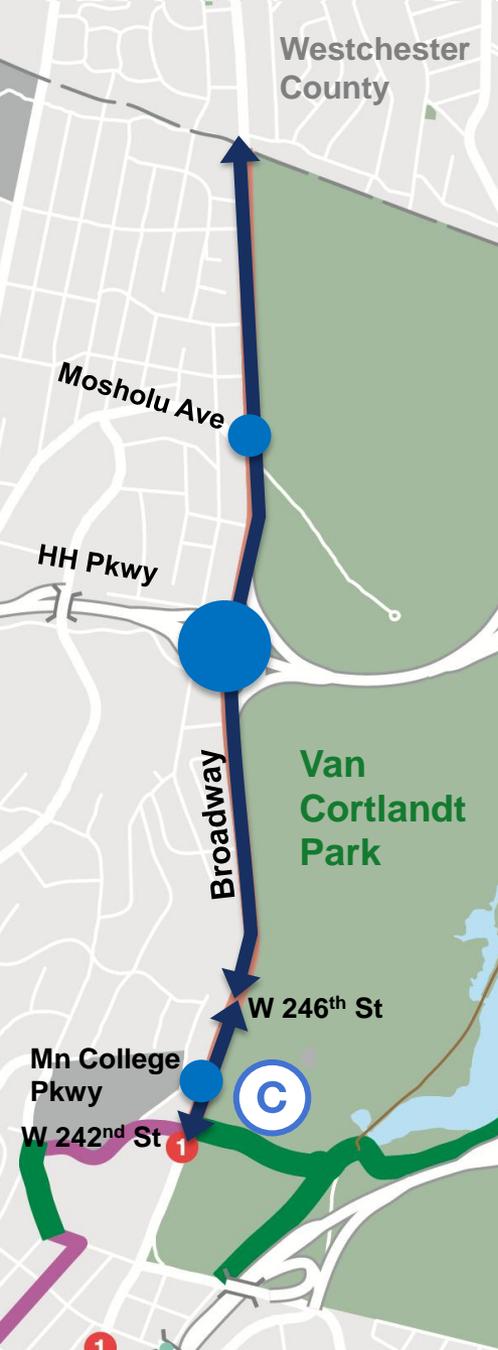


Existing Conditions

- SB roadway widens on approach to Manhattan College Pkwy
- Manhattan College Pkwy has WB service road and EB slip lane

Issues

- Long crossing distance (70 ft) from west curb to median
- Redundant slip lane complicates intersection
- Disorganized right turns for southbound motorists
- Bus stop consistently used for private vehicle pick-up and drop-offs

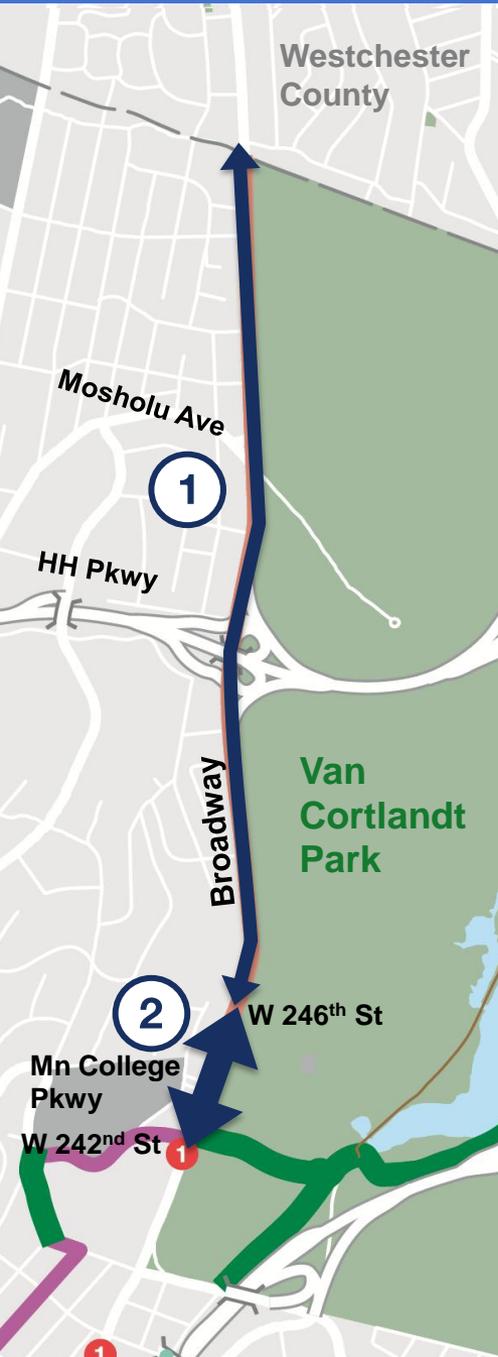


Proposed Design

- Close Manhattan College Parkway slip lane
- Install pedestrian safety islands and right turn wedges in the intersection
- Install bus boarding island at entrance of the 1 train

Benefits

- Closed slip lane simplifies the intersection and maintains current parking
- Pedestrian safety islands reduce crossing distances for pedestrians
- Right turn wedge slows right turning vehicles at uncontrolled right turn
- Bus boarding island improves safety and convenience of bus operations



Existing Conditions

- Bus stop at elevated train station
- Columns in roadway divide southbound travel lanes

Issues

- Buses regularly do not pull to the curb to drop off/pick up passengers



Broadway and Manhattan College Pkwy

PROJECT SUMMARY

3

Pedestrian Enhancements

- Crossings shortened by 30% at typical bus stops along the corridor
- Realigned, shortened crossing at Mosholu Ave
- Normalized crossings at entrance/exit ramps
- Shorter crossings and new plaza at Manhattan College Pkwy

Improved access to Van Cortlandt Park, transit, and new public space

Bus Service Improvements

- New bus boarding islands at northbound bus stops between W 246th St and 261st St shorten crossings and speed up service
- New southbound bus boarding island at elevated train station facilitates passenger drop-off and pick-up

Bus islands improve and sped up boarding and alighting experience

Protected Bike Lanes and Conventional Bike Lanes

- Creates new transportation and recreation facility that is comfortable for all ages and abilities
- Improves bike access Van Cortlandt Park, Westchester County trails, and subway station
- Enlivens park edge

New bike path increases transportation options and creates new recreation amenity for the neighborhood

Addition of 8 parking spaces, removal of 5, net gain of 3



THANK YOU!

Questions?



NYC DOT



NYC DOT



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