



# BRUCKNER BLVD & E 138<sup>TH</sup> ST **RANDALL'S ISLAND CONNECTIONS**

Pedestrian and Bicycle Safety Improvements  
Connecting Mott Haven and Port Morris

June 13, 2016



## PROJECT CONTEXT

Mott Haven's **46,000+** residents  
(including 14,000+ children)  
**lack adequate access  
to open space**

Bruckner Blvd and E 138<sup>th</sup> St is a  
**Vision Zero Priority Intersection**  
with **15 people severely injured** (2009-2014)

Port  
Morris

Port Morris is a  
**growing industrial zone**  
providing many jobs within  
walking/biking distance from  
neighborhood

Randall's  
Island  
Park

Randall's Island Connector puts nearly  
**10,000 Mott Haven residents** within a  
**20 minute walk** to the recreational and natural  
resources of **250+ acre Randall's Island Park**

Mott  
Haven

Bruckner  
Expressway

Randall's  
Island  
Connector

## PRESENTATION OVERVIEW

*Pedestrian and bicycle safety improvements connecting Mott Haven and Port Morris*

### 1. Bruckner Blvd and E 138<sup>th</sup> St Safety Improvements

*Vision Zero Priority Intersection*

### 2. Randall's Island Connections Route Selection

### 3. Willow Ave Connection

### 4. St. Ann's Ave / E 133<sup>rd</sup> St Connection

- *Proposed safety improvements require street network and parking trade-offs*
- *Project aims to balance needs of all street users*



Bruckner Blvd and E 138<sup>th</sup> St



Randall's Island Connector

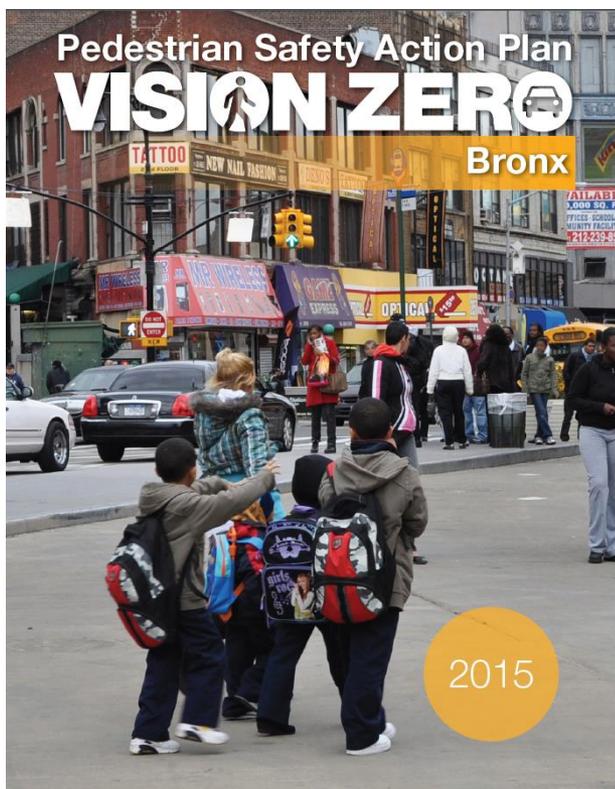
---

**BRUCKNER BLVD & E 138<sup>th</sup> ST**  
**Safety Improvements**

**1**

## SAFETY – Vision Zero

- Multi-agency effort to reduce traffic fatalities in NYC
- Borough Action Plans released in 2015
- Priority intersections, corridors, and areas identified for each borough



Complete plan available online:

<http://www.nyc.gov/html/dot/downloads/pdf/ped-safety-action-plan-bronx.pdf>

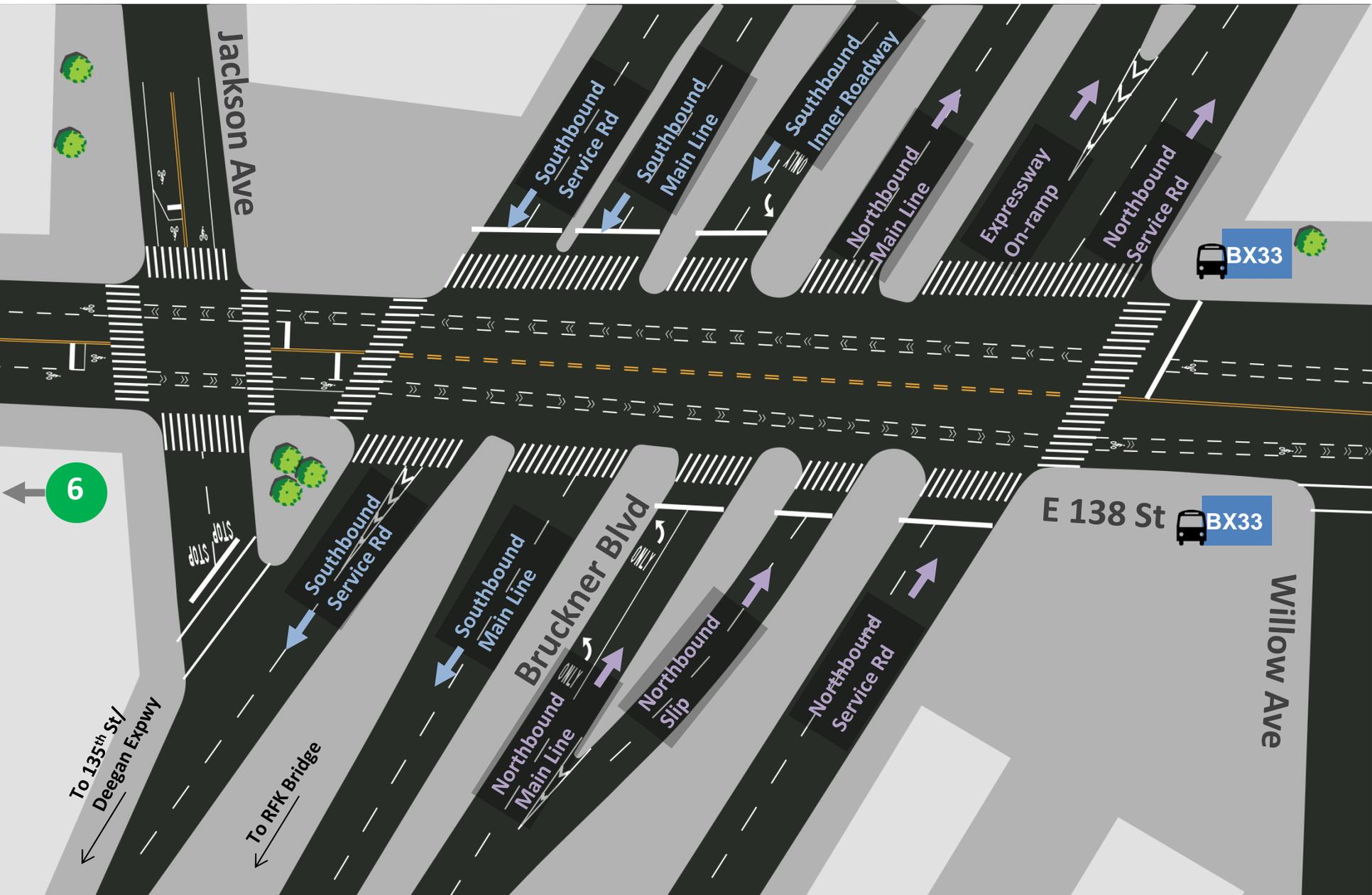
## Vision Zero Priority Intersection

### Bruckner Blvd and E 138<sup>th</sup> St

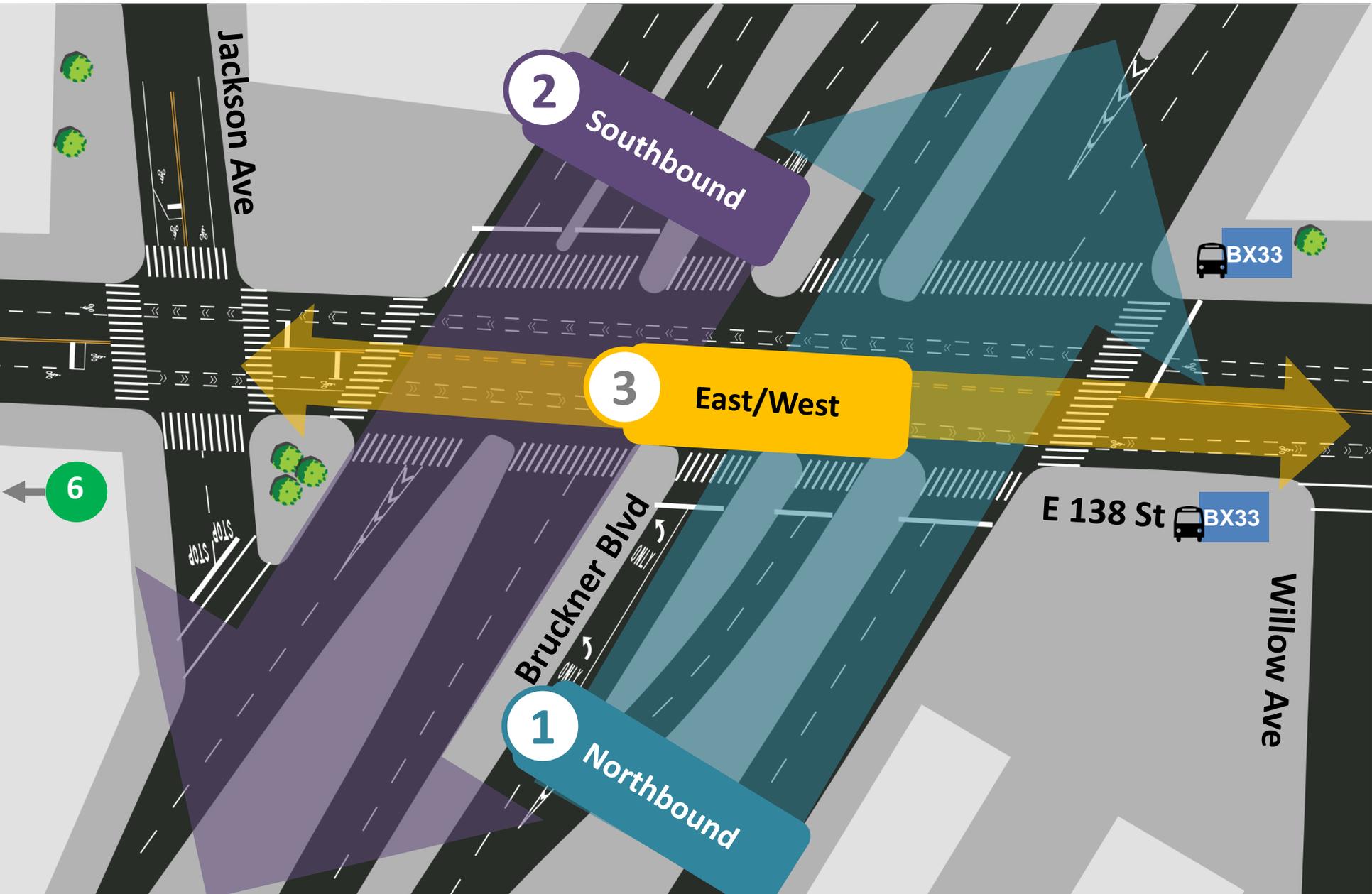
- **15 people severely injured** 2010-2014 (including 4 pedestrians)
- **Pedestrian fatality in 2015**



# OVERVIEW – Complex Intersection



# OVERVIEW – Complex Intersection



## EXISTING CONDITIONS



### Challenging Merge at Intersection

All northbound vehicles go at once resulting in vehicular conflict

## EXISTING CONDITIONS



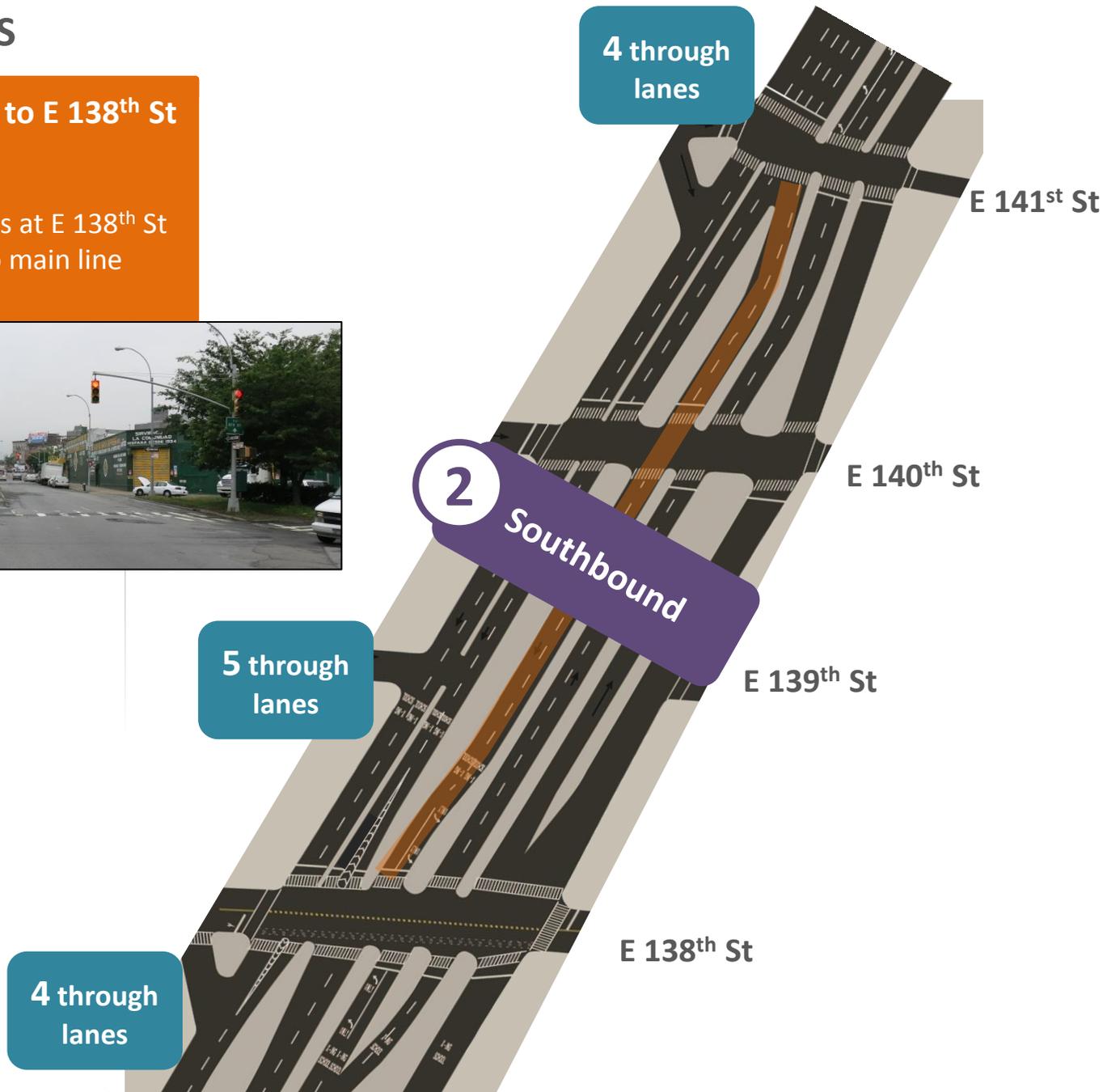
### Limited Access from Main Line to Service Rd and Hunts Point

- Main line is underutilized between E 138<sup>th</sup> St and Leggett Ave

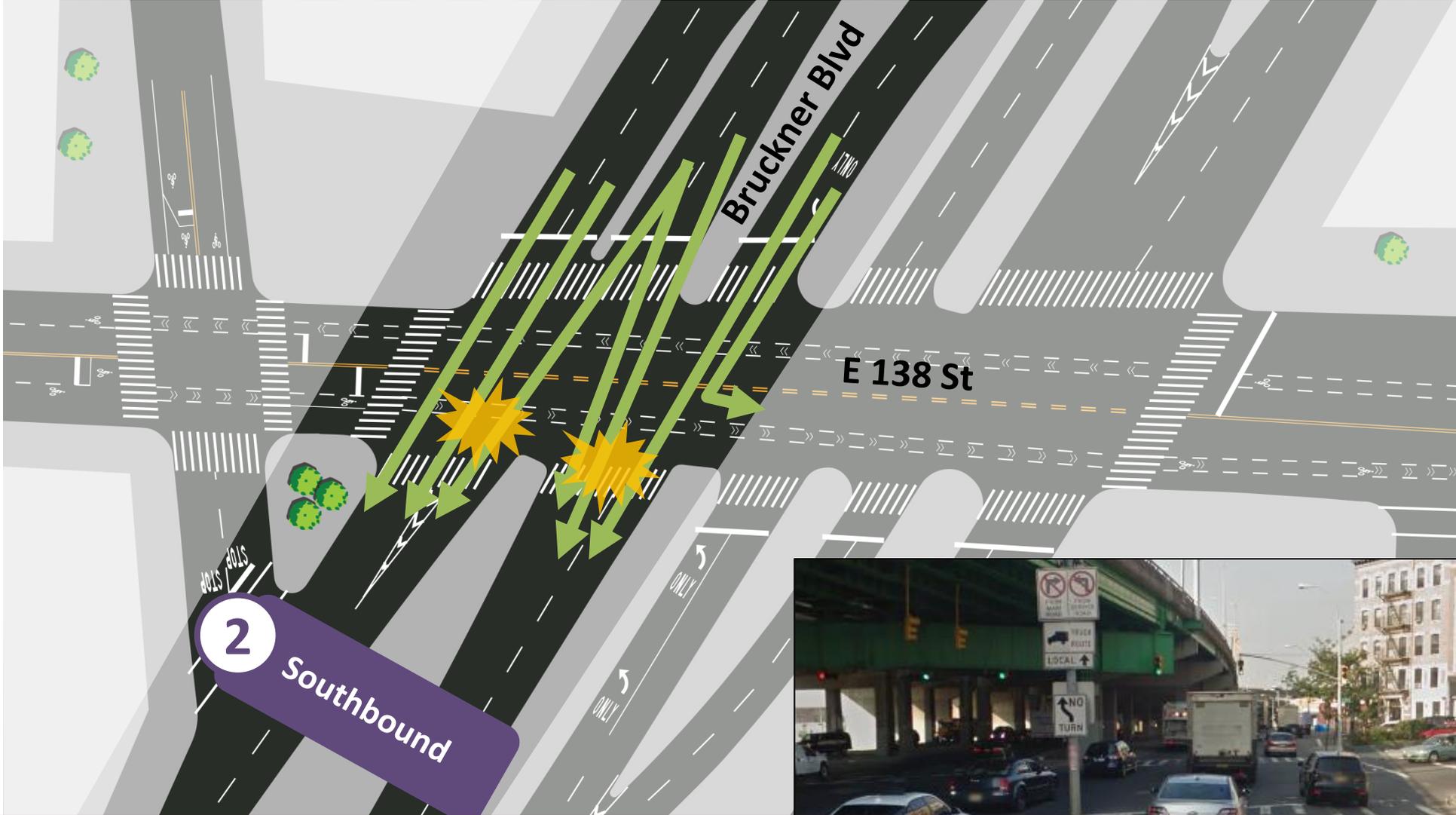
## EXISTING CONDITIONS

### Inner Roadway – E 141<sup>st</sup> St to E 138<sup>th</sup> St

- Roadway opens up
- Adds 2 lanes for 3 blocks
  - 1 lane used for left turns at E 138<sup>th</sup> St
  - 1 lane merges back into main line
- Creates driver confusion



## EXISTING CONDITIONS



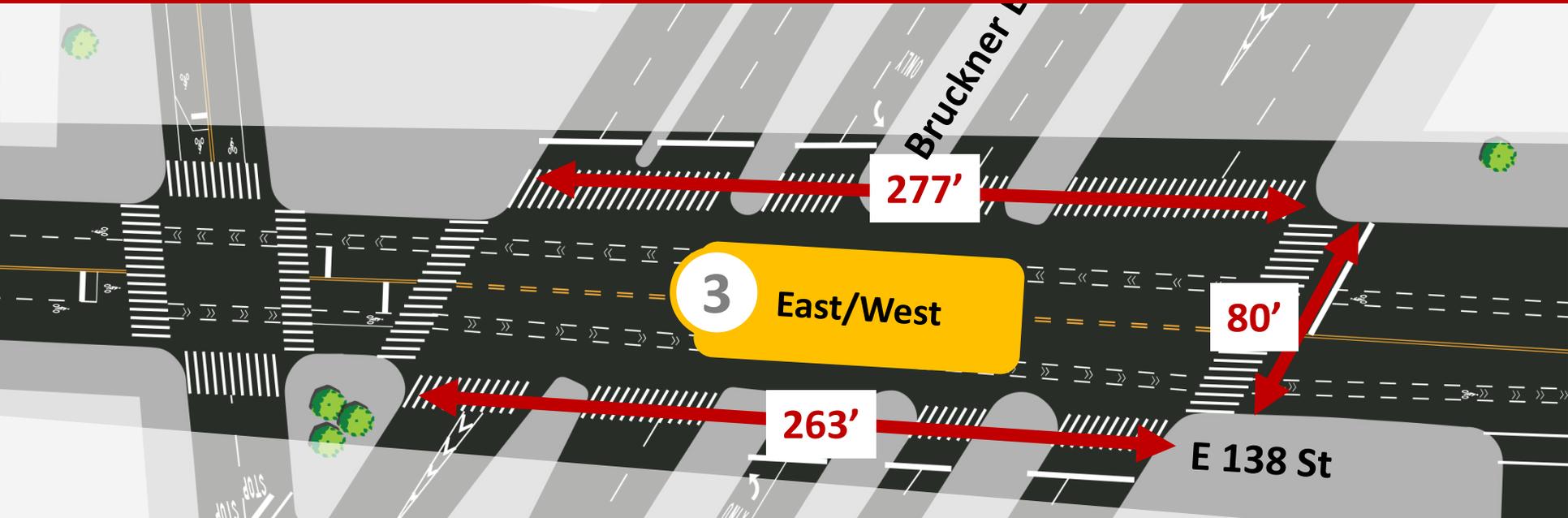
### Challenging Merge at Intersection

- Outermost lane in main line merges with 2 lanes in service road (3 lanes become 2)
- Vehicles in inner roadway enter main line from 2 locations

## EXISTING CONDITIONS

### Long pedestrian crossings and uncomfortable space to wait

- 45 seconds to cross 260+ feet
- Many pedestrians cannot cross in one cycle (average walking pace is 3.5 feet per second)

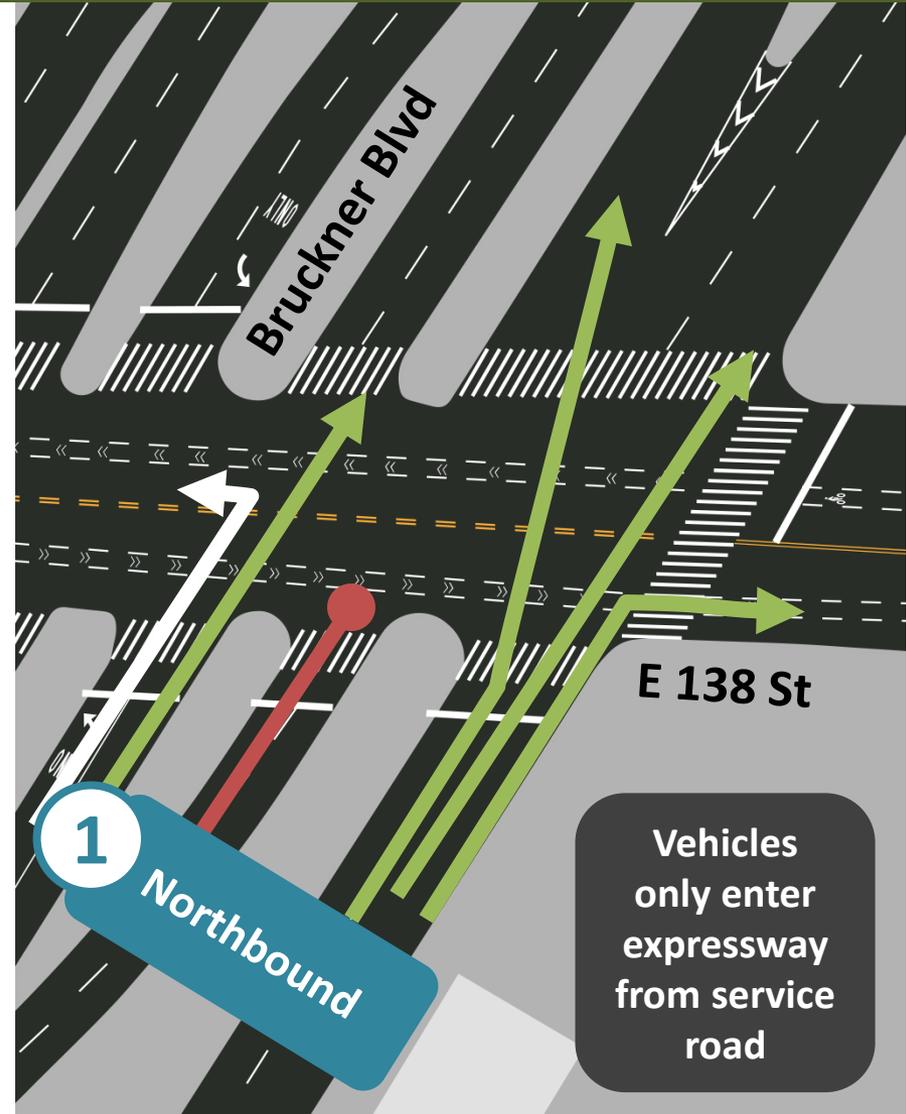
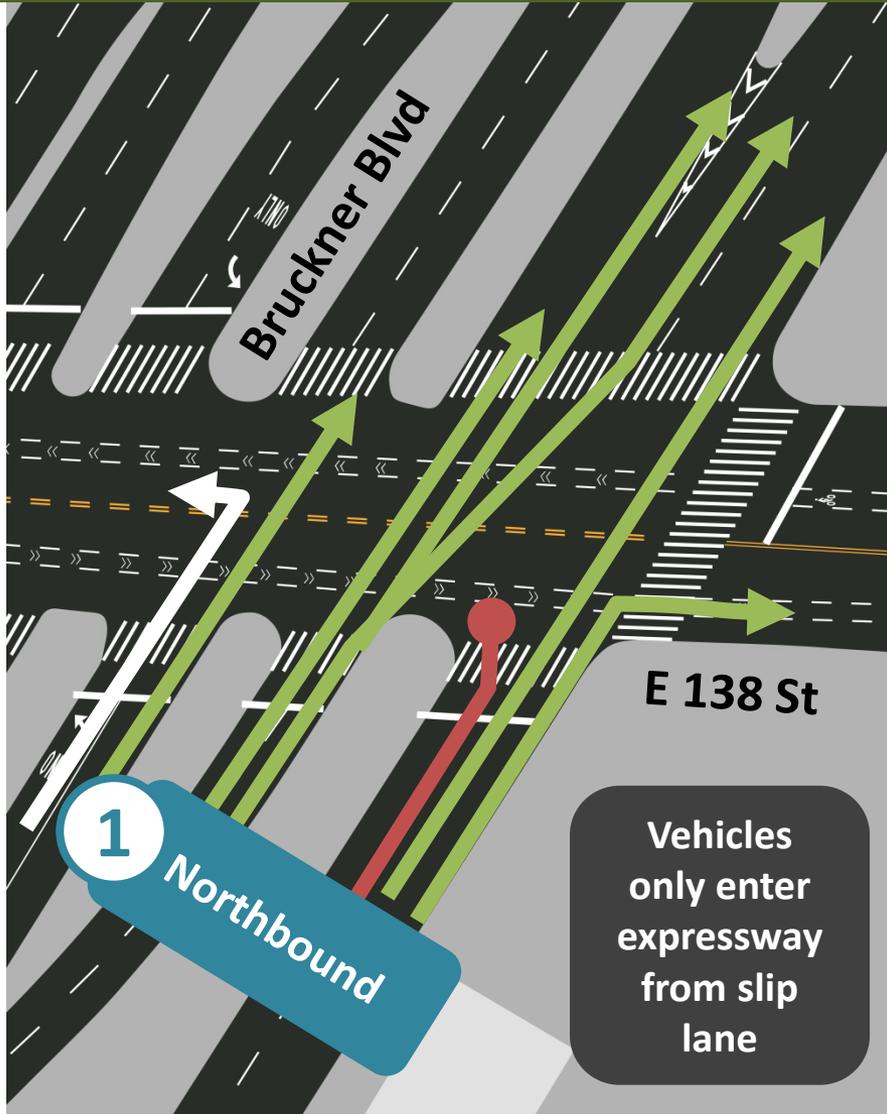


E 138<sup>th</sup> St  
widens from  
standard  
50' to 80'  
Long crossing  
Poor alignment

## PROPOSED IMPROVEMENTS

### Add separate signal phase for vehicles entering expressway from service road

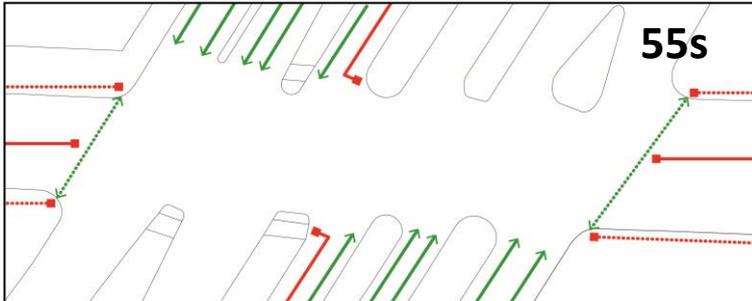
- Eliminate conflicting movement
- Requires elimination of left turns onto E 138<sup>th</sup> St (28 vehicles in the peak hour)



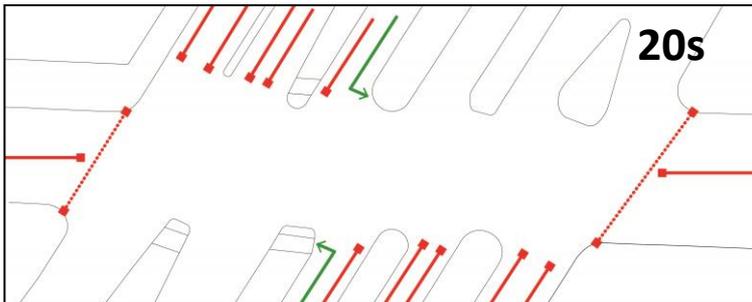
# PROPOSED IMPROVEMENTS

## Signal Timing Changes

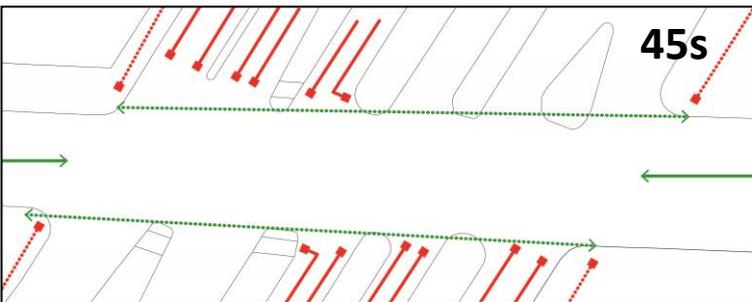
### EXISTING



Bruckner Blvd Thru and to Expwy

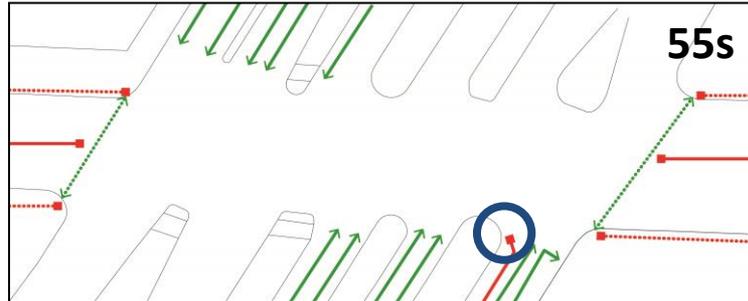


Bruckner Blvd Left Turns

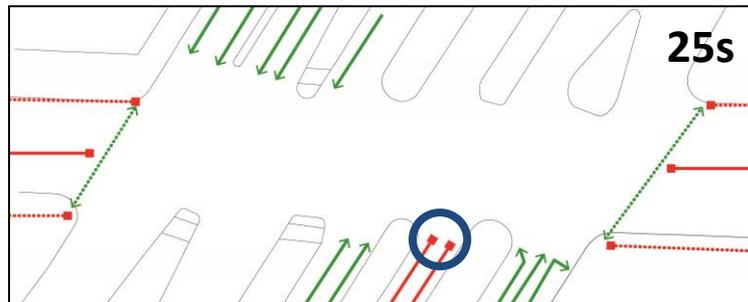


E 138<sup>th</sup> St

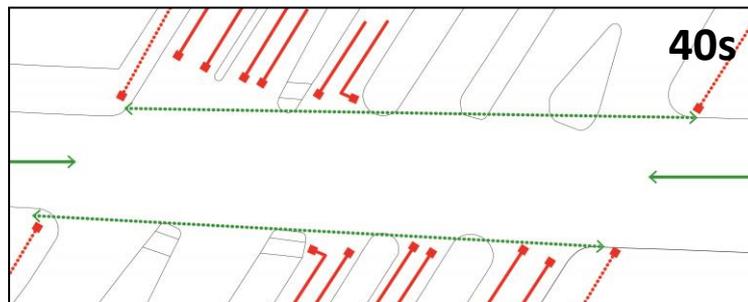
### PROPOSED



Bruckner Blvd Thru, NB Service Rd to Expwy Held



Bruckner Blvd Thru, NB Slip Lane to Expwy Held



E 138<sup>th</sup> St

Vehicles enter expressway from Service Rd and Slip Lane during separate phases

Left turns from Bruckner Blvd to E 138<sup>th</sup> St banned

Green time increased for all Bruckner Blvd thru movements

55s → 80s

Time to cross Bruckner Blvd on E 138<sup>th</sup> St reduced by 5s

45s → 40s

## PROPOSED IMPROVEMENTS

Build new slip lane from main line to service road between  
**E 149<sup>th</sup> St and Leggett Ave**

Allow vehicles to stay on main line at E 138<sup>th</sup> St  
and still access Hunts Point



New Slip Lane  
between  
E 149th St and  
Leggett Ave

1  
Northbound



New slip lane on Bruckner Blvd  
between Longwood Ave and E 156<sup>th</sup> St

## PROPOSED IMPROVEMENTS

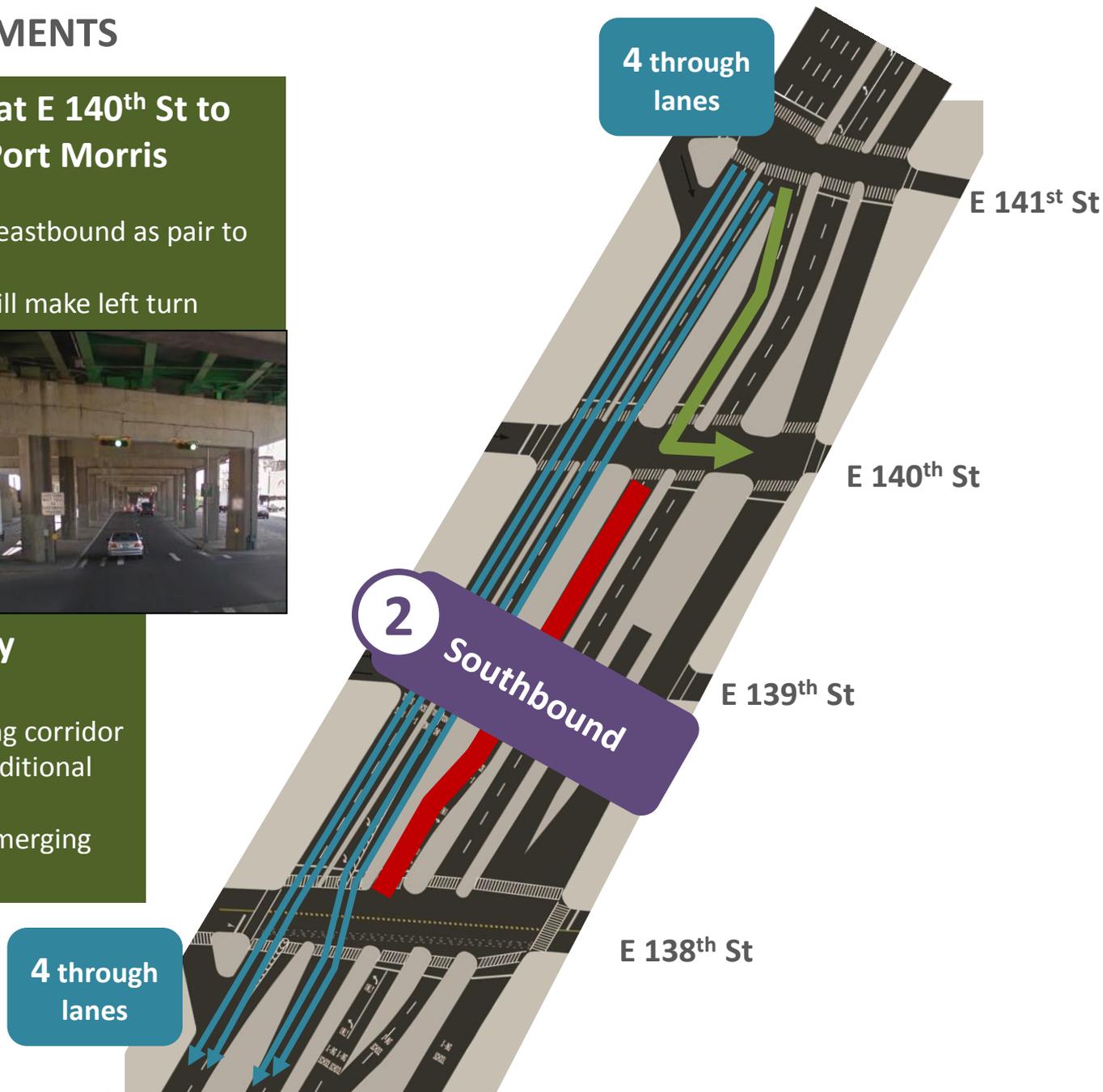
### Add protected left turn at E 140<sup>th</sup> St to maintain access to Port Morris

- Currently unprotected left
- Convert E 140<sup>th</sup> St to one-way eastbound as pair to westbound E 141<sup>st</sup> St
- 100-130 additional vehicles will make left turn



### Close inner roadway south of E 140<sup>th</sup> St

- Maintains 4 through lanes along corridor
- Volumes accommodated by additional green time at E 138<sup>th</sup> St
- Reduces driver confusion and merging conflicts



## PROPOSED IMPROVEMENTS

### Expand medians

### Install pedestrian safety island

- Create shorter, safer crossings
- Provide more comfortable waiting space for pedestrians and cyclists
- Organize roadway

3

East/West

### Install bus bulb

- Creates consistent alignment through intersection
- Shortens north-south pedestrian crossing

BX33

6

New concrete islands work with signal timing to separate conflicting movements

Schematic Design – exact dimensions of new concrete to be determined in final design



## SUMMARY

### 2 Southbound

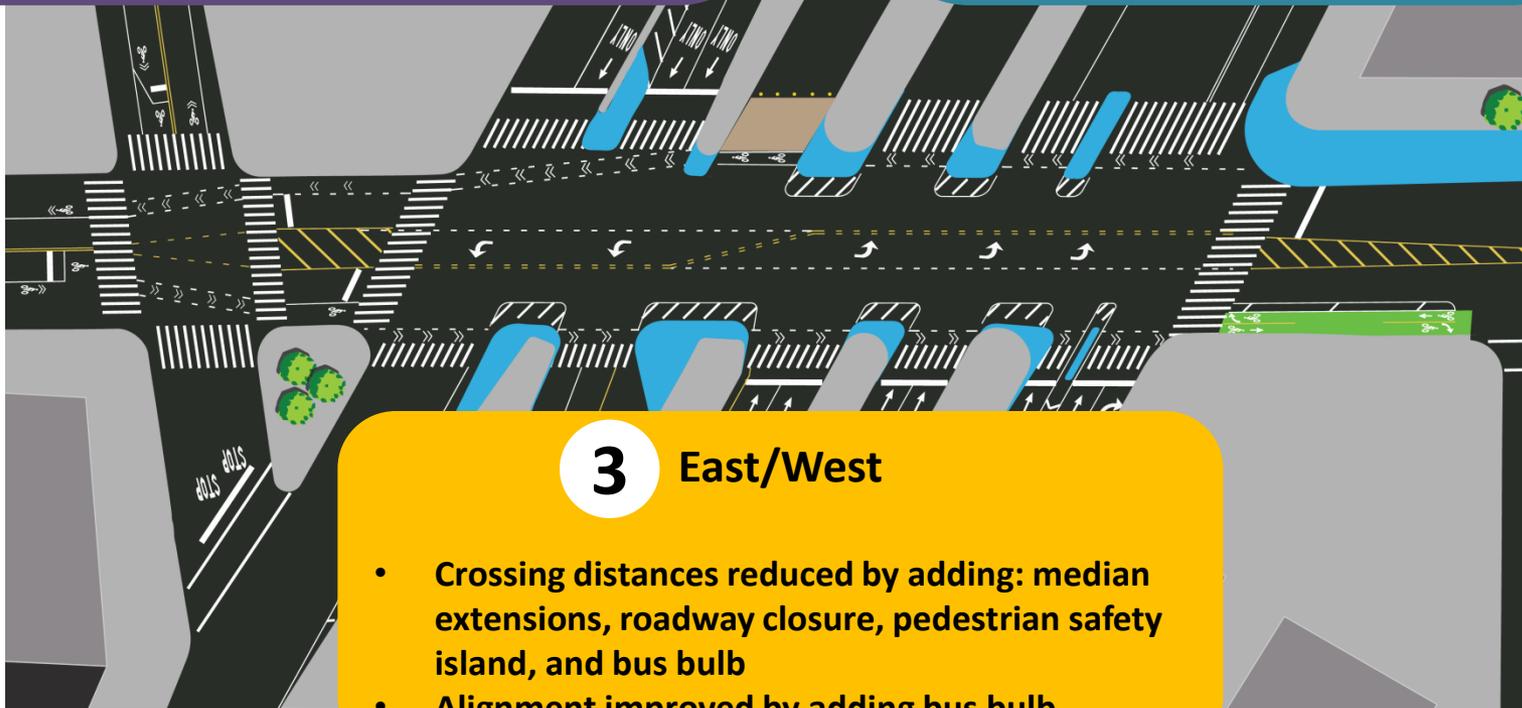
- New protected left turn at E 140<sup>th</sup> St
- E 140<sup>th</sup> St converted to one-way eastbound
- Left turn ban from Bruckner Blvd to E 138<sup>th</sup> St
- Inner roadway closed
- Consistent number of lanes along corridor
- Median extensions organize and calm traffic

### 1 Northbound

- Separate signal phases for vehicles entering expressway from main line and service road
- Left turn ban from Bruckner Blvd onto E 138<sup>th</sup> St
- Concrete islands separate and organize traffic

### 3 East/West

- Crossing distances reduced by adding: median extensions, roadway closure, pedestrian safety island, and bus bulb
- Alignment improved by adding bus bulb



---

RANDALL'S ISLAND CONNECTIONS  
ROUTE SELECTION

2

# PROJECT BACKGROUND



**Randall's Island Connector counts**  
**May 2016, 7am – 7pm**

 Saturday: 506  
 Weekday: 226

- Randall's Island Park**  
**Recreational and Natural Resources**
- 8 miles of bike and pedestrian paths
  - 66 fields for a variety of sports
  - Picnic areas
  - 9 acres of salt marsh, freshwater wetlands
  - Gardens and a 1-acre urban farm
  - Fishing sites
  - Free programs for family and youth

# PROJECT BACKGROUND



**Randall's Island Connector**  
 (Constructed by NYC EDC, Completed 2015)  
 Identified as a priority project in  
 South Bronx Greenway Plan (NYC EDC, 2005)



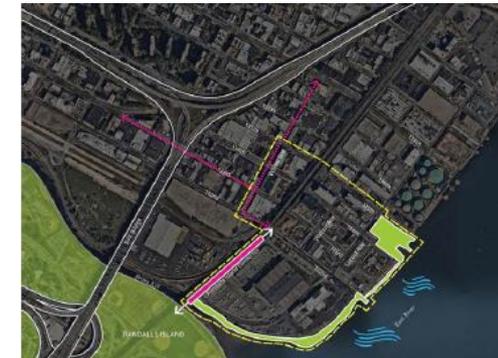
Photo Credit: Nicole Bengiverno, The New York Times



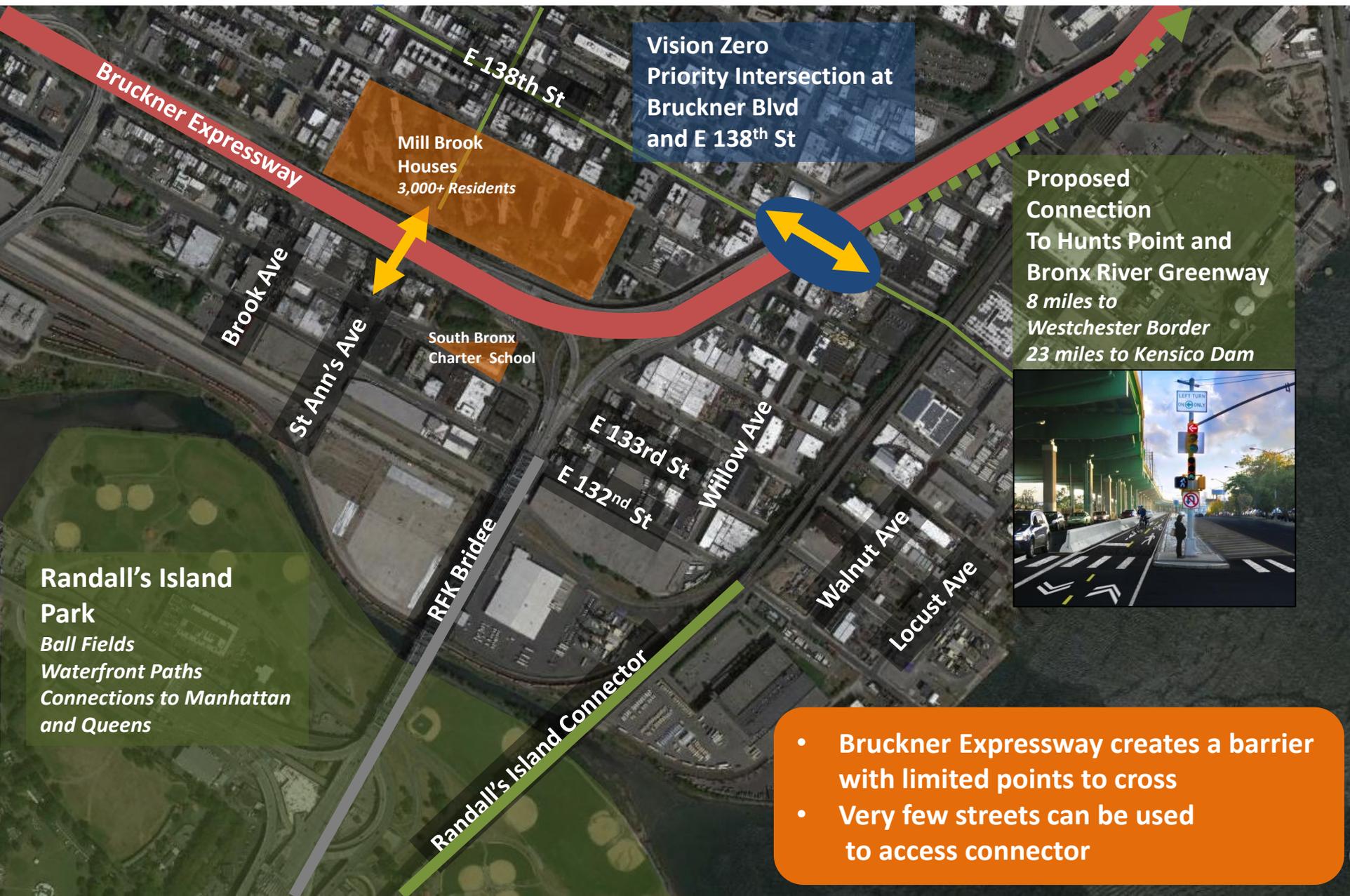
**Mott Haven Open Space Index**  
 (New Yorkers for Parks, 2014)  
**Mott Haven's 46,000 residents, including 14,000+ children, lack adequate access to open space**  
 RIC puts 10,000 Mott Haven residents within a 20 minute walk to the recreational and natural resources of the 250+ acre Randall's Island Park  
 Recommends improved pedestrian and bicycle access to RIC, including traffic calming, bike lanes, and improved pedestrian crossings



**The Haven Project**  
 (New York Restoration Project, 2015)  
**South Bronx residents suffer from some of the highest rates of obesity, diabetes, and asthma in the city**  
 Research shows that access to large parks (6+ acres) is linked to lower body mass index at the neighborhood scale  
 Recommends creating safe and welcoming corridors to connect residents across physical and perceived barriers, identified priority routes to connect to RIC, based on community input



# PROJECT AREA



Vision Zero  
Priority Intersection at  
Bruckner Blvd  
and E 138<sup>th</sup> St

Mill Brook  
Houses  
3,000+ Residents

Proposed  
Connection  
To Hunts Point and  
Bronx River Greenway  
8 miles to  
Westchester Border  
23 miles to Kensico Dam

Randall's Island  
Park  
Ball Fields  
Waterfront Paths  
Connections to Manhattan  
and Queens

- Bruckner Expressway creates a barrier with limited points to cross
- Very few streets can be used to access connector



## PROJECT GOALS AND DESIGN CONSIDERATIONS

Create a **safe, visible connection** from Mott Haven, through Port Morris to the Randall's Island Connector that will:

- Reduce conflicts with trucks
- Encourage physical activity
- Establish a new amenity/public space/sense of place
- Drive economic development

Provide a Direct  
Route From:  
Housing, School,  
Subway, Future  
Greenway

Separate Bikes and  
Pedestrians from  
Heavy Truck  
Movements/Volumes

Create Bike Facility  
Comfortable for  
Different Ages / Skill  
Levels

Improve  
Streetscape/Walking  
Environment

Calm Traffic

## EXISTING BIKE ROUTES CONNECTING MOTT HAVEN TO PORT MORRIS



Shared Lanes on Walnut Ave



Shared Lanes on E 132<sup>nd</sup> St

- Are not comfortable for inexperienced riders
- Do not separate cyclists from trucks – challenging for both cyclists and truck drivers
- Do not create a sense of place or special corridor
- Walnut Ave is not a direct route to Randall's Island Connector



Bike Lanes on St. Ann's Ave

## PROTECTED BIKE LANES IN INDUSTRIAL AREAS

### Two-way bike lanes along curb, separate from moving vehicles

- Provides comfortable space for cyclists of varied ages and experience levels
- Reduces conflicts between cyclists and trucks
- Provides way-finding and improves sight lines for pedestrians

### Consolidate majority of cyclists to one route

- Increases predictability of cyclist location for drivers
  - Adds a *safety in numbers* benefit, making the route more comfortable for both cyclists and pedestrians
  - Facilitates streetscape improvements
- ➔ Establish new amenity/public space/sense of place
- ➔ Encourage physical activity – recreational bike rides, walking, jogging
- ➔ Encourage economic development



## SELECTED ROUTES



### St Ann's Ave / E 133<sup>rd</sup> St Connection

- Provides direct route from Mill Brook Houses and Charter School
- Provides opportunity to calm traffic in front of school
- Uses calmer block of E 133<sup>rd</sup> St east of Cypress St

### Willow Ave Connection

- Provides direct route from subway, future greenway connection
- Consolidates bike and pedestrian traffic to street with light industrial use, fewer active loading docks and large trucks
- Offers pleasant streetscape / walking environment

---

WILLOW AVE CONNECTION

3

## EXISTING CONDITIONS – Willow Ave



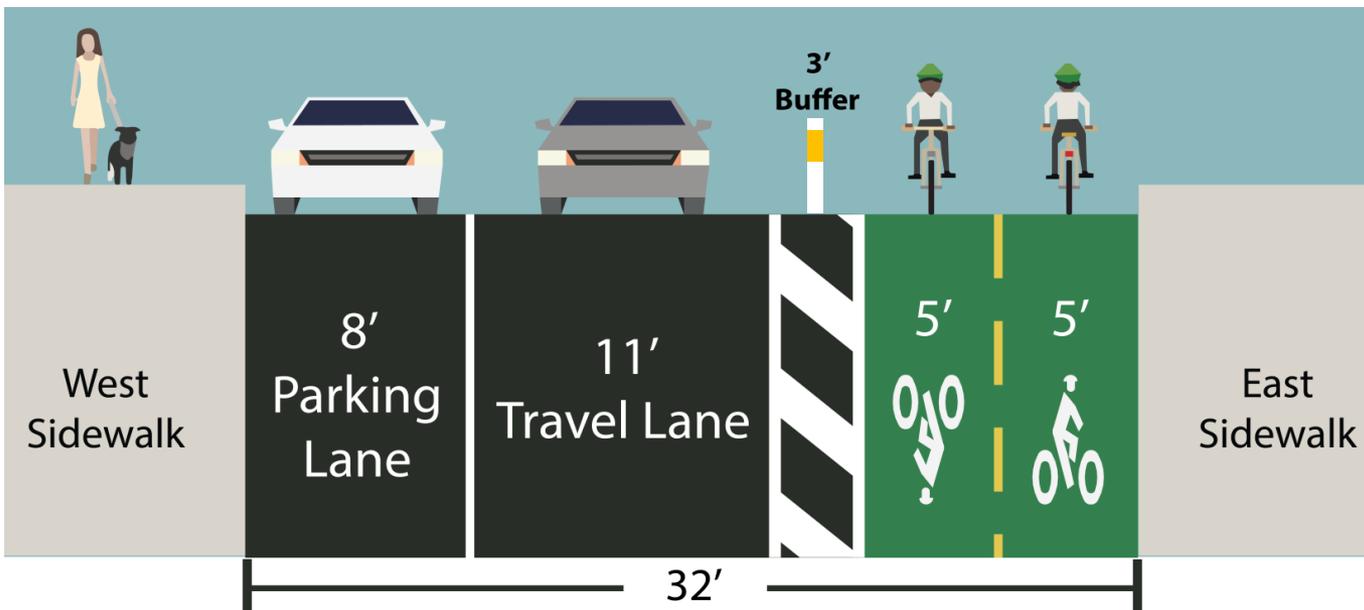
### Calm street with light industrial and residential use

- No heavy industry that requires large trucks
- Most direct route from Bruckner Blvd & 138 St to Randall's Island Connector
- Challenges: Relatively narrow (32') , one-way street

## PROPOSED IMPROVEMENTS – Willow Ave (E 138<sup>th</sup> St to E 133<sup>rd</sup> St)

### Install two-way protected bike lane on east curb of Willow Ave

- Consolidates bike traffic to one route, away from heavy industry
- Minimizes mixing with large trucks
- Creates facility that is comfortable for all skill levels
- Encourages active recreation and creates sense of place



# EXAMPLE OF PROPOSED DESIGN – Imlay St, Red Hook, Brooklyn



**Before**



**After**



## EXISTING CONDITIONS – Willow Ave and E 132<sup>nd</sup> St

**No space to maintain protected bike lane in roadway on E 132<sup>nd</sup> St**



**No signs or markings at RIC Entrance**

- Vehicles not aware of pedestrian and bicycles entering/exiting Connector
- Pedestrians and cyclists unsure where to access or where to continue



**Wide sidewalk  
No active driveways or  
loading on last block  
of Willow Ave**



# PROPOSED IMPROVEMENTS – Willow Ave and E 132<sup>nd</sup> St



## Establish shared path on sidewalk

- Install bike stamps and yield to pedestrian signs
- Eases transition & protects cyclists at corner
- Work with businesses to resolve issue of parking on sidewalk



## Randall's Island Connector



# PROPOSED IMPROVEMENTS – Willow Ave and E 132<sup>nd</sup> St



## Add Enhanced Ped/Bike Crossing at RIC Entrance

- Install signs and markings to indicate pedestrian and bicycle crossing at entrance to Randall's Island Connector



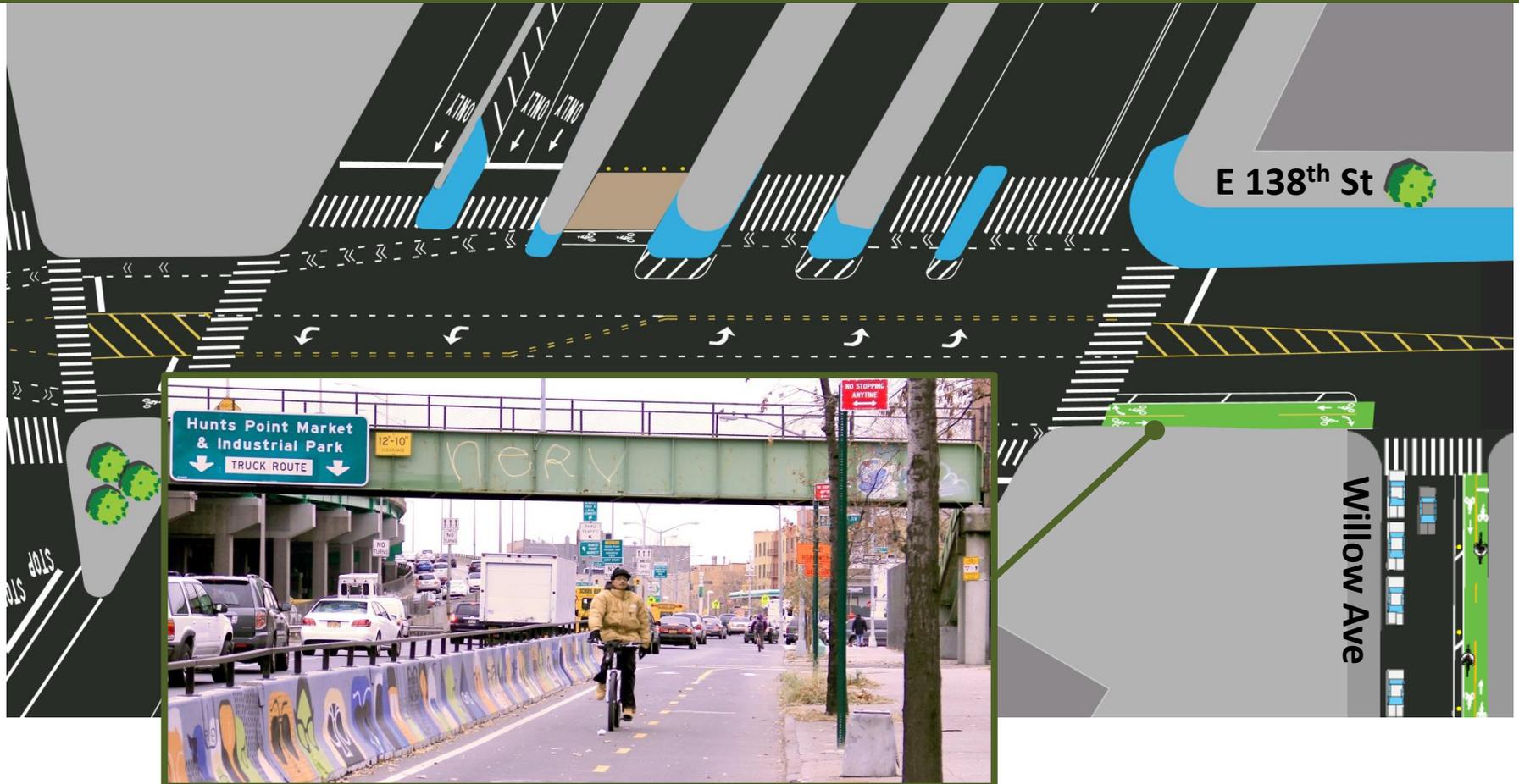
## Randall's Island Connector Entrance



## PROPOSED IMPROVEMENTS – Willow Ave and E 138<sup>th</sup> St

### Install Jersey barrier-protected path to connect to bike lanes on E 138<sup>th</sup> St

- Narrows roadway, calms traffic
- Connects RIC to existing bike network at signalized intersection
- Connects to proposed future protected bike lanes on Bruckner Blvd
- Requires relocation of bus stop to next block (working with NYCT)



---

ST ANN'S AVE / E 133<sup>rd</sup> ST  
CONNECTION

4

## EXISTING CONDITIONS – E 133<sup>rd</sup> St (Willow Ave to Cypress Ave)



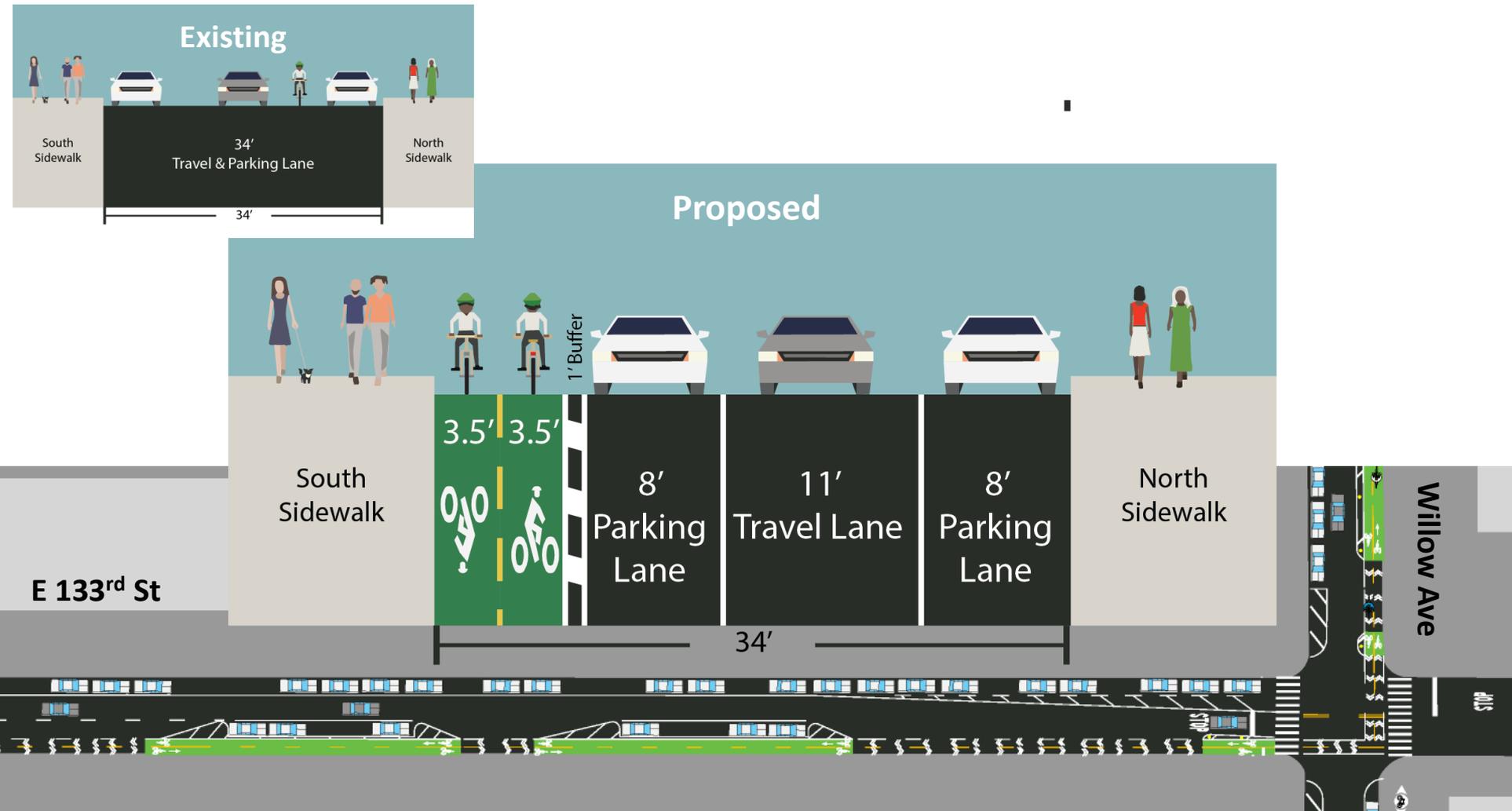
### Calm street with mixed light industrial and residential use

- No heavy industry that requires large trucks
- Challenges: Relatively narrow (34') , one-way street

## PROPOSED IMPROVEMENTS – E 133<sup>rd</sup> St (Willow Ave to Cypress Ave)

### Install two-way protected bike lane on south curb of E 133<sup>rd</sup> St

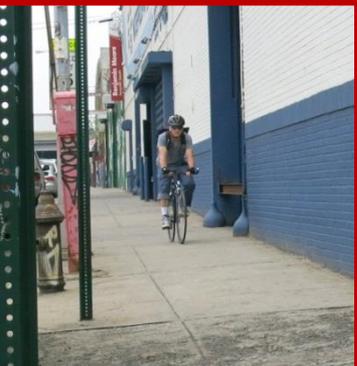
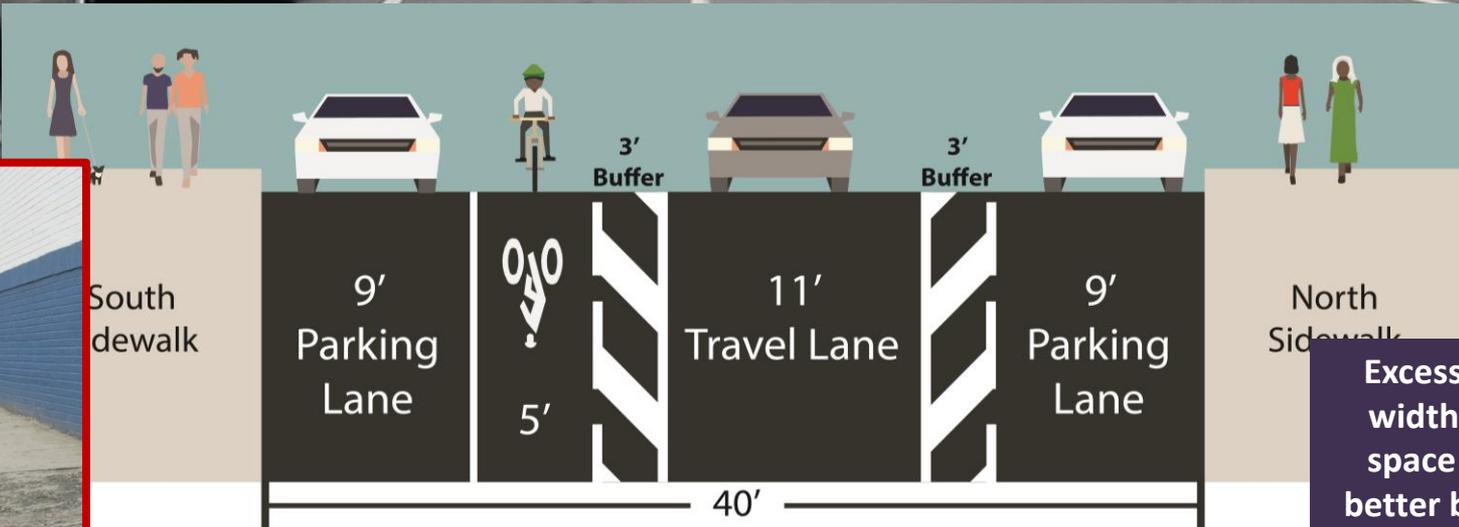
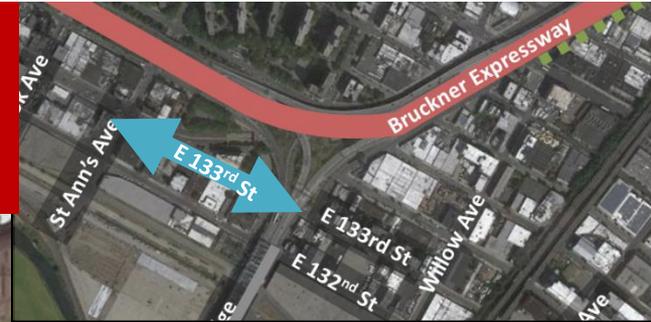
- Consolidates bike traffic to one route, away from heavy industry
- Minimizes mixing with large trucks
- Creates facility that is comfortable for all skill levels



# EXISTING CONDITIONS – E 133rd St (Cypress Ave to St Ann's Ave)

## Existing one-way buffered bike lane

- Cyclists not protected from truck traffic
- One-way route and uncomfortable facility lead to sidewalk riding
- Wide roadway with truck traffic in front of school

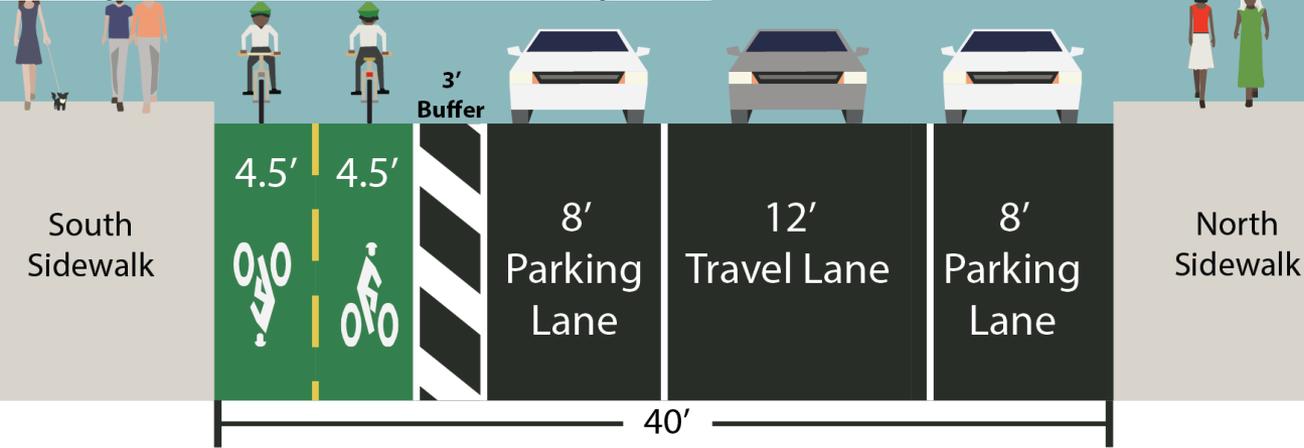
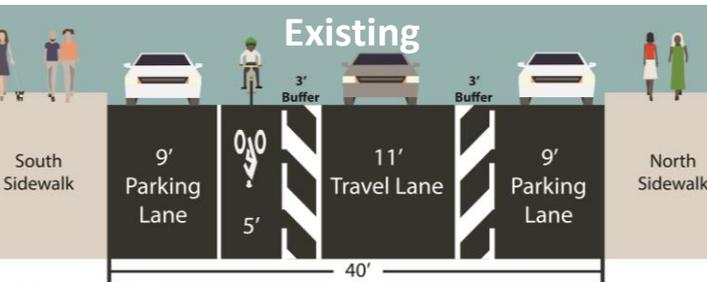


Excess roadway width provides space to create better bike facility

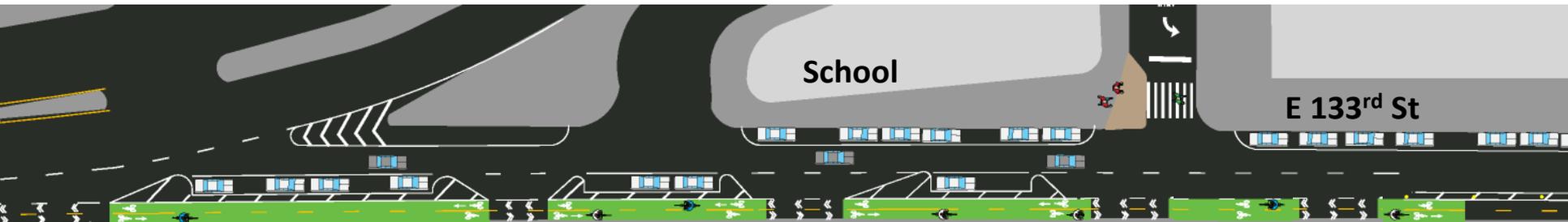
# PROPOSED IMPROVEMENTS – E 133<sup>rd</sup> St (Cypress Ave to St Ann's Ave)

## Install two-way parking protected bike lane on south curb of E 133<sup>rd</sup> St

- Calms traffic in front of school
- Creates facility that is comfortable for all skill levels
- Loading zones can be maintained, will work with businesses



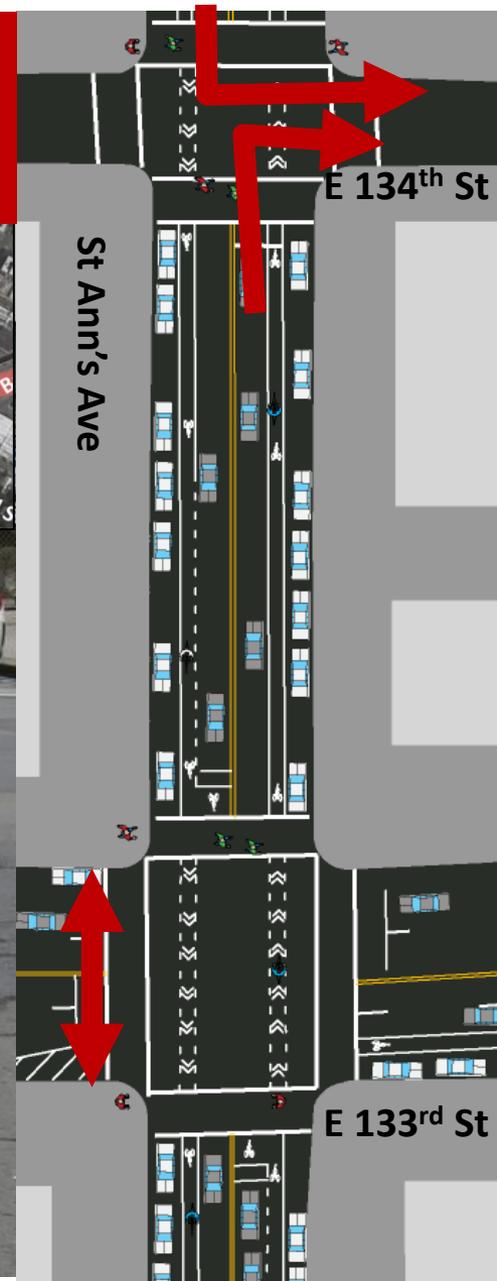
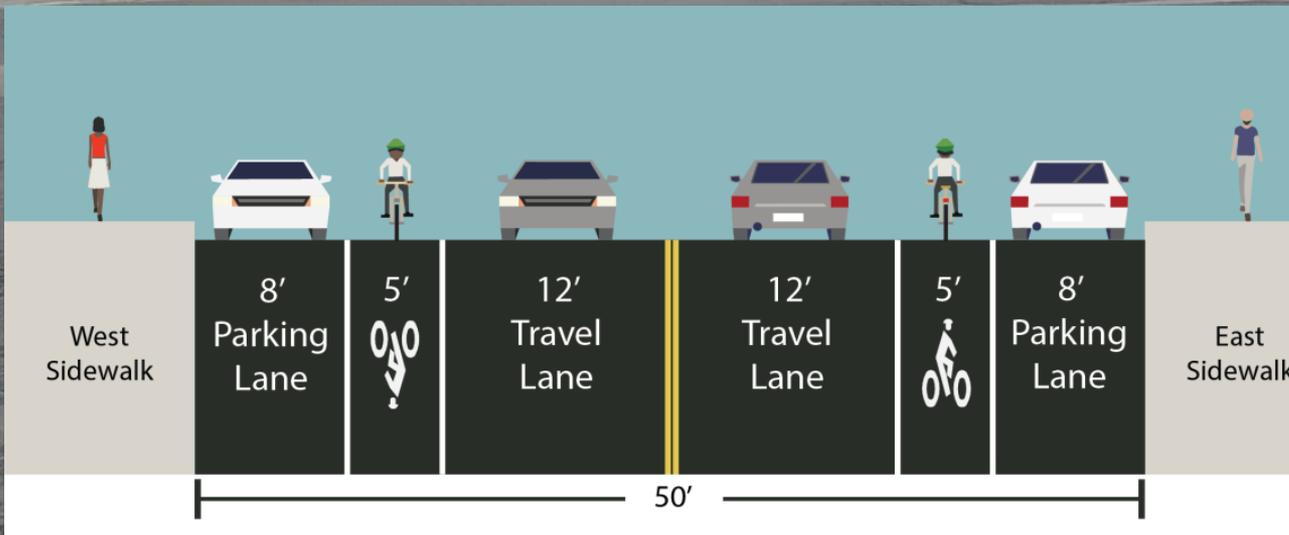
Loading can be maintained with parking protected bike lanes



# EXISTING CONDITIONS – St Ann's Ave (E 135<sup>th</sup> St to Bruckner Blvd/E 133<sup>rd</sup> St)

## Existing standard bike lanes

- Cyclists not protected from truck traffic and turns onto E 134<sup>th</sup> St/RFK Bridge
- Long pedestrian crossing at Bruckner Blvd
- Transition from industrial area to residential neighborhood

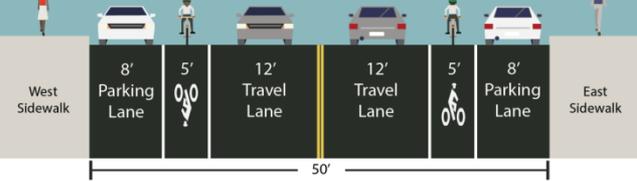


# PROPOSED IMPROVEMENTS – St Ann's Ave (E 135<sup>th</sup> St to Bruckner Blvd/E 133<sup>rd</sup> St)

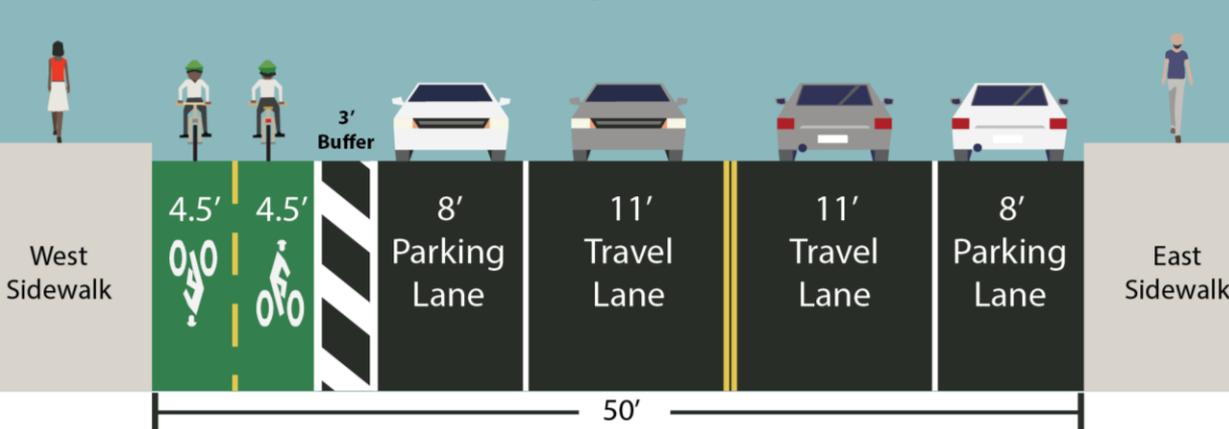
## Install two-way parking protected bike lane on west curb of St Ann's Ave

- Reconfigures roadway to create protected bike lanes
- Minimizes mixing with large trucks
- Creates facility that is comfortable for all skill levels
- Opens up sidewalk for more comfortable pedestrian experience

### Existing

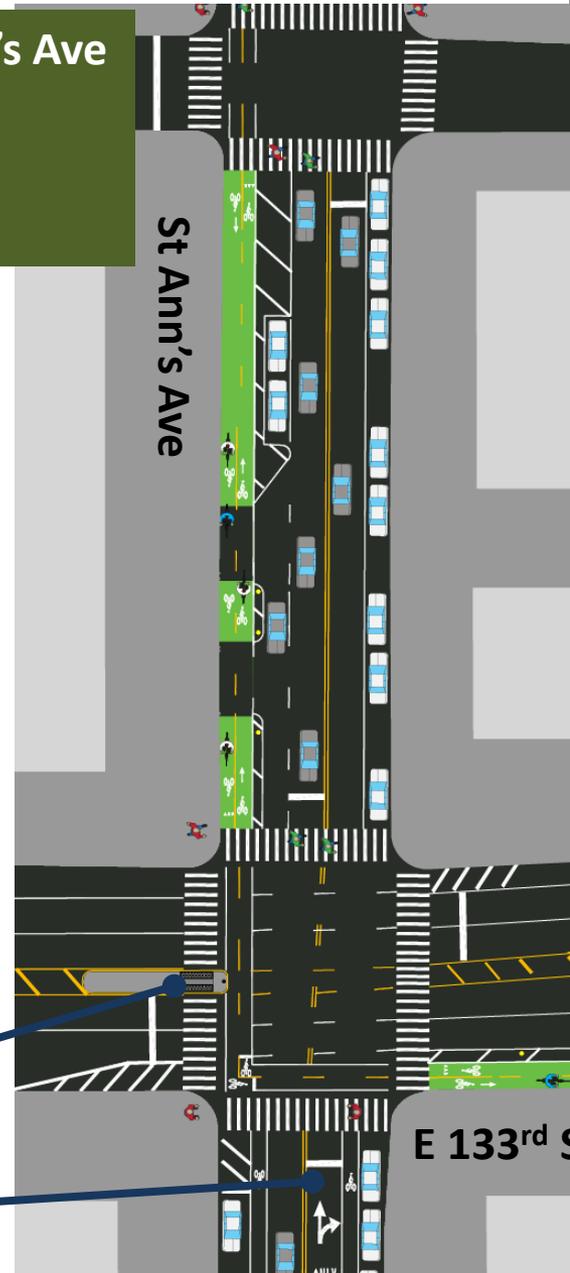


### Proposed



Potential addition of pedestrian safety islands at St Ann's and Bruckner Blvd

Potential ban of northbound left turn from St Ann's Ave to Bruckner Blvd



# PROPOSED IMPROVEMENTS – St Ann's Ave and E 135<sup>th</sup> St

## Calm traffic in front of housing

- Install painted curb extensions to shorten pedestrian crossing and slow vehicles turning onto residential block and
- Add markings to indicate two standard width travel lanes on E 135<sup>th</sup> St

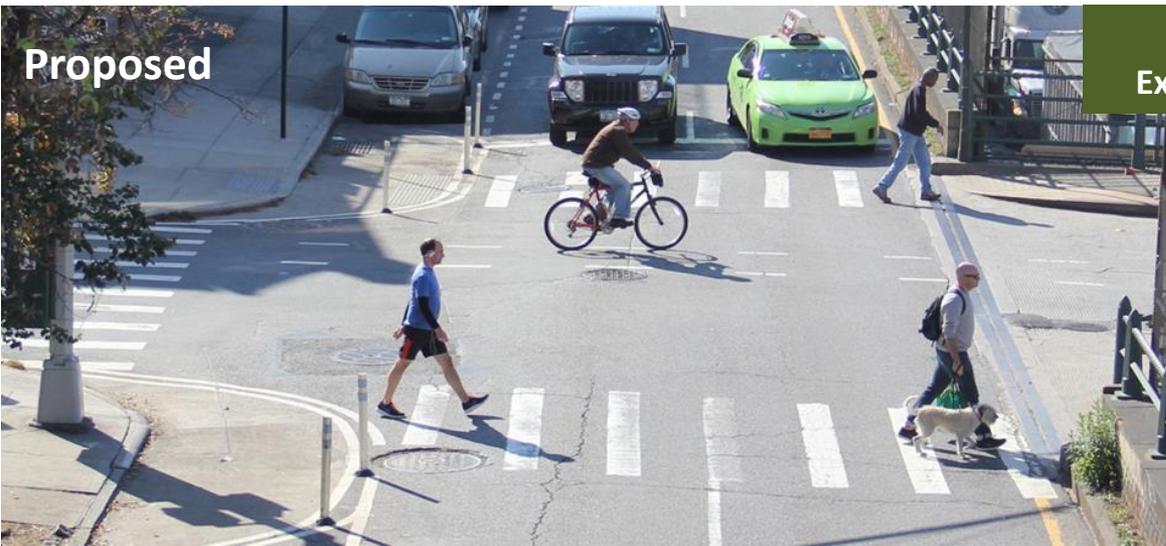
Existing



Existing

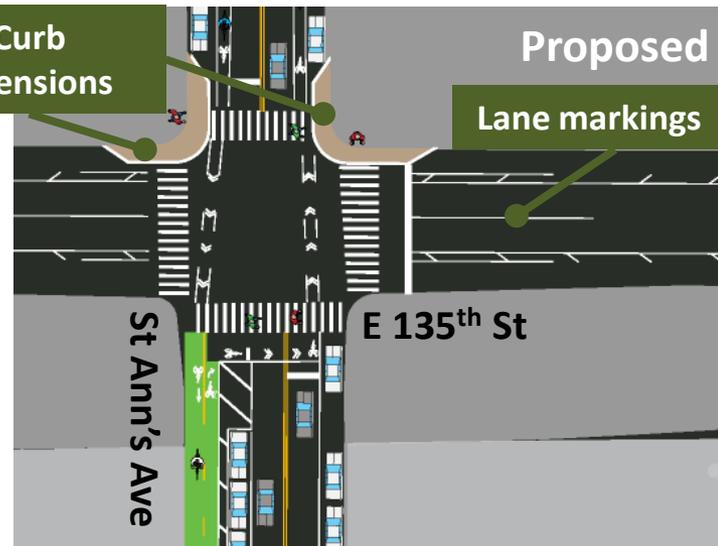


Proposed

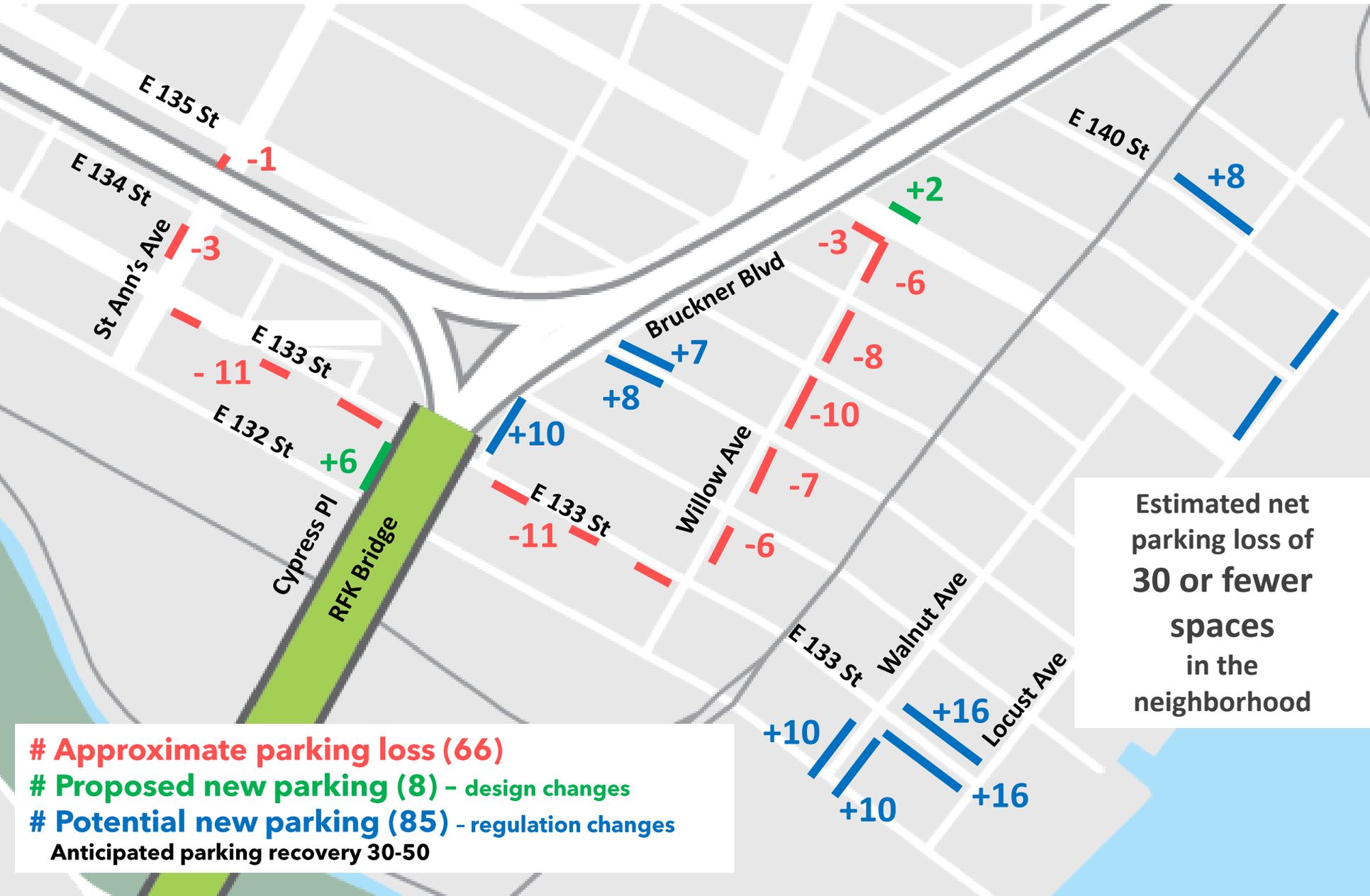


Curb Extensions

Proposed Lane markings



# APPROXIMATE PARKING LOSS & POTENTIAL LOCATIONS FOR PARKING RECOVERY



**# Approximate parking loss (66)**  
**# Proposed new parking (8) - design changes**  
**# Potential new parking (85) - regulation changes**  
Anticipated parking recovery 30-50

Estimated net parking loss of 30 or fewer spaces in the neighborhood

# IMPROVED BIKE AND PEDESTRIAN SAFETY AND ACCESS TO RANDALL'S ISLAND

## Direct Routes

from: Housing,  
School,  
Subway, Future  
Greenway

**About ½ mile  
bike ride from  
Mill Brook  
Houses to RIC**

**Traffic Calming**  
in front of school

Maximize  
**Streetscape/Walking  
Environment**  
along route by using  
quieter, less industrial streets

**Comfortable  
Bike Facility**  
for Different Ages / Skill Levels  
**1.7 new protected  
bike lane miles**

Bikes and Pedestrians  
**Separated from Heavy Truck  
Movements/Volumes**



# THANK YOU

---

Questions?



NYC DOT



NYC DOT



nyc\_dot



NYC DOT