



FORDHAM AREA, BRONX

BICYCLE LANE NETWORK EXPANSION

Presented to Bronx Community Boards 5, 6, 7
May 2021



PRESENTATION OVERVIEW

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2. Toolkit
3. Proposal
4. Summary



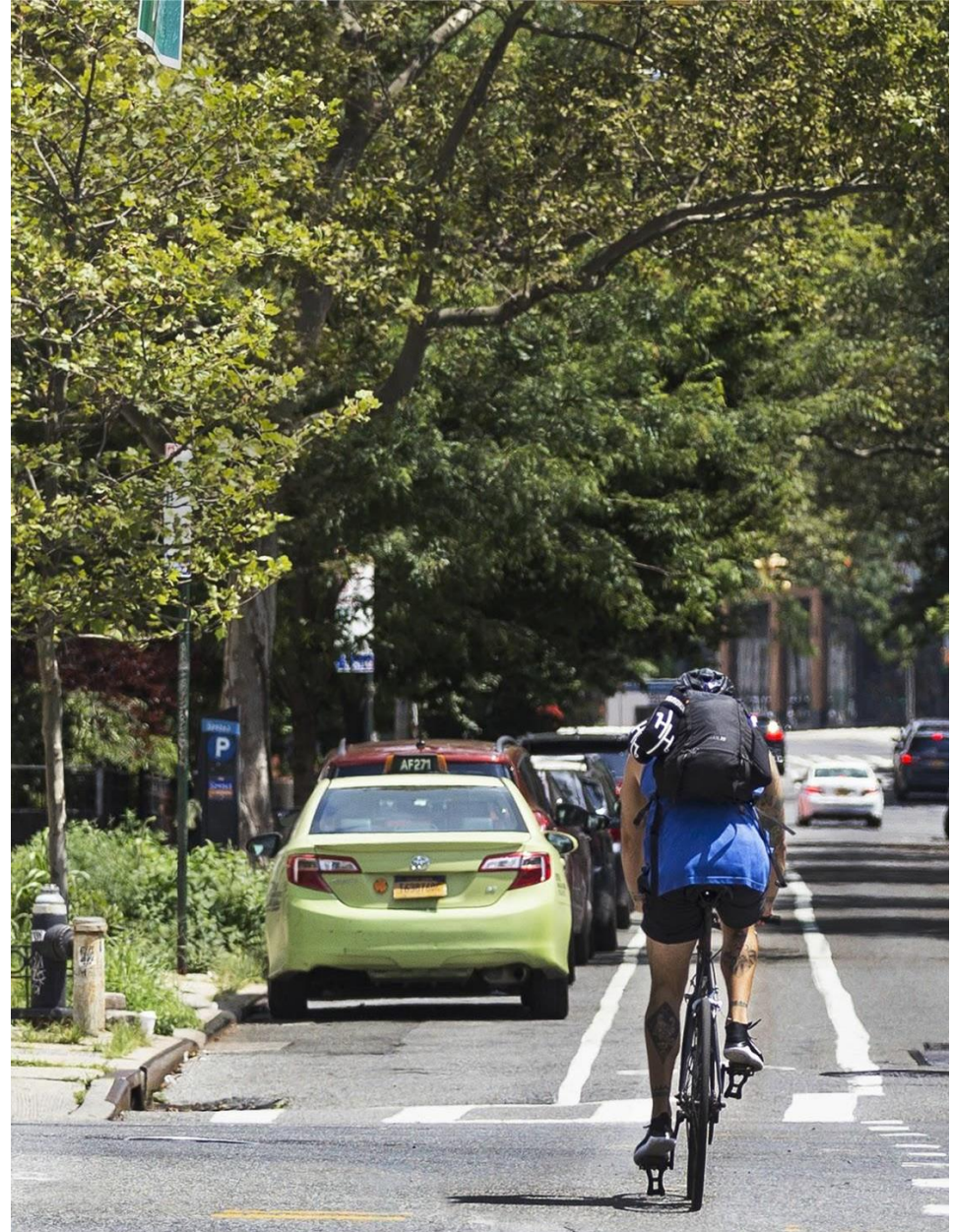
Background

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OVERVIEW

Project Goals

- **Build** robust on-street bicycle network
- **Support** new bike share riders and bicycle ridership growth
- **Improve** road safety for all road users
- **Create** new connections to key destinations:
 - *Fordham*
 - *University Heights*
 - *Tremont*
 - *Claremont*
 - *Crotona*



INTEREST IN IMPROVED BIKE ACCESS IN THE BRONX

NYC Bicycle Ridership

- **24%** (nearly 1.6 million) of adult New Yorkers ride a bike regularly
- **540,000** daily cycling commuting trips in 2019

Bike Share Expansion

- **Citi Bike** is Expanded to the Bronx CB 5 & CB 7 in 2021
- **15%** of New Yorkers use Bike Share (Mobility Survey, 2018)
- **Citi Bike** regularly serves over **80,000 trips per day; 10 million trips** in 2019



145,000+ Citi Bike trips started or ended in the Bronx in 2020

Reduced Fare Bike Share:

NYCHA residents & SNAP recipients 16 and older qualify for a discounted annual membership of \$5/month (7,000+ members)



Green Wave A Plan for Cycling in New York City



Analysis of fatalities – key findings (2014 - 2019):

- Nearly 90% of fatalities happened on streets **without bike lanes**
- 60% of fatalities happened at intersections
 - 23% involved a vehicle turn
 - 16% involved a driver's failure to yield the right of way

Green Wave Plan:

Citywide Protected Bike Lane Network:

- Build **30 miles of protected bicycle lane** annually
- Build **75 miles of bicycle infrastructure** in **10 Bicycle Priority Districts** (7 in Brooklyn, 3 in Queens) by 2022

Better Design:

- Implement **new design standards** based on national & international best practice **to enhance safety at intersections**
- Continue piloting new designs with rigorous safety analysis

Education and Outreach:

- Launch next phase of **Vision Zero public awareness campaign**, **educating drivers with a focus on cyclist safety** and expand the "Get There" bicycle encouragement/rules of road campaign.
- Educate all street users about safe truck operation on city streets
- **Increase helmet giveaways and helmet use encouragement**

NYPD Enforcement

- **Target enforcement on highest risk activities:** speeding, failing to yield, blocking bike lanes, oversized trucks/trucks off route

BICYCLE ROUTE SELECTION

Existing Bicycle Lane Network

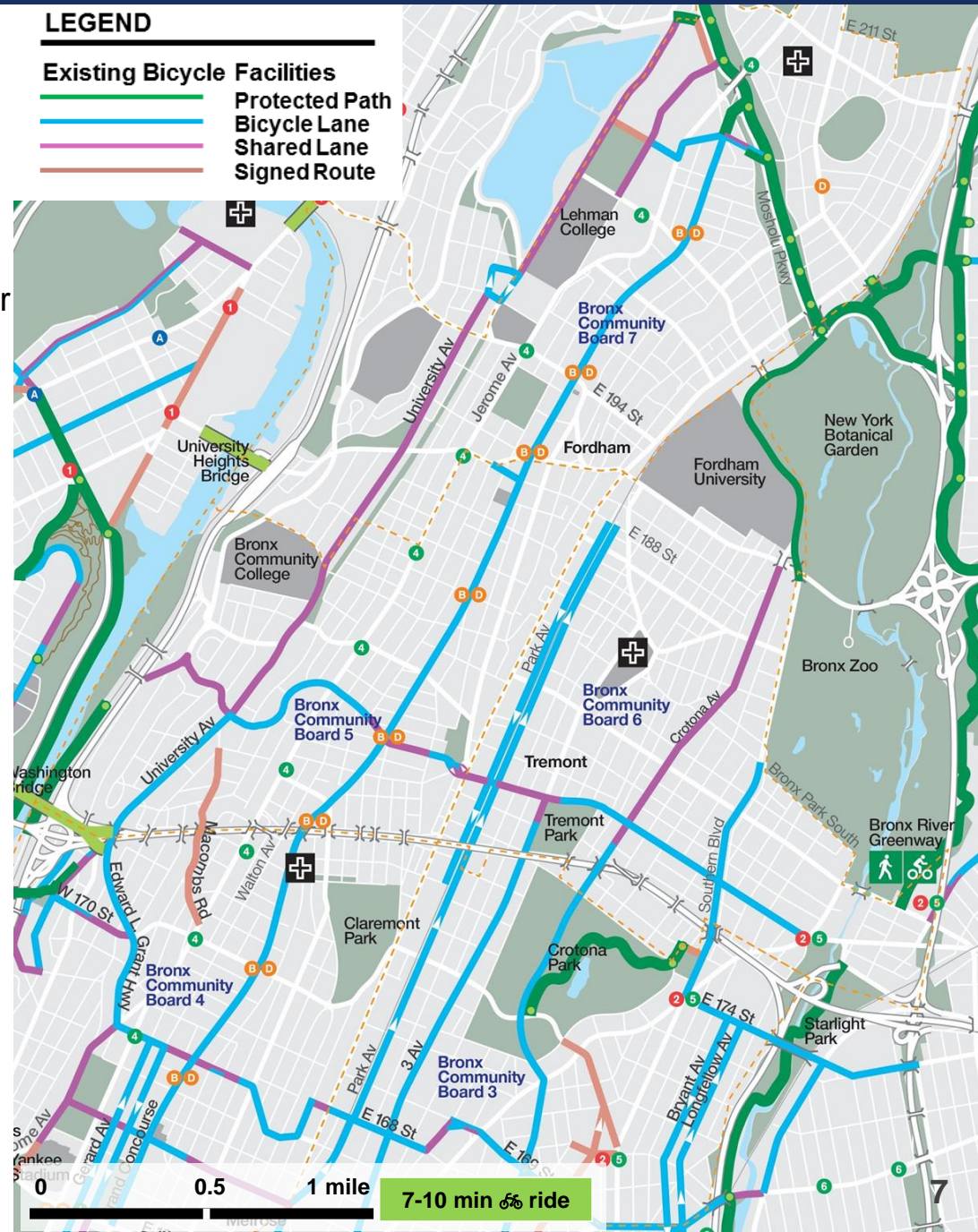
- Connections to Parks, Bridges
- New protected lanes on Southern Blvd, Greenway along Mosholu Pkwy, Bronx River Greenway
- Difficult to access some destinations (University Heights Bridge, Claremont Park)

Street Network Issues

- Discontinuous streets & irregular street grid
- Frequent changes in traffic direction
- Narrow street widths
- Lack of east-west bicycle routes
- Physical barriers created by Park Ave, Grand Concourse, the Aqueduct, Step Streets

Area Destinations

- **Parks:** Claremont, Crotona, & Bronx Parks
- **Bridges:** University Heights, Washington, & High Bridge Bridges
- **Transit:** Fordham Plaza
- **Schools:** Bronx Community College



Toolkit

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Safety Benefits of Bicycle Infrastructure

Bike Lane Projects Increase Safety for All Road Users

- Markings organize the roadway
- Standard width travel lanes discourage speeding, unsafe behavior
- Bike lanes provide dedicated space for cyclists and increase predictability of cyclist location for drivers and pedestrians
- Upgraded crosswalks improve visibility and pedestrian safety



Tremont Ave, Bronx

Shared Bicycle Lanes



Edgcombe Ave, Wash. Heights.

Sharrow markings guide cyclists where to ride on the street

- **Alert drivers & cyclists of shared space**
- **Provide wayfinding for cyclists**
- **Guide cyclists away from car doors**

Standard Bicycle Lanes

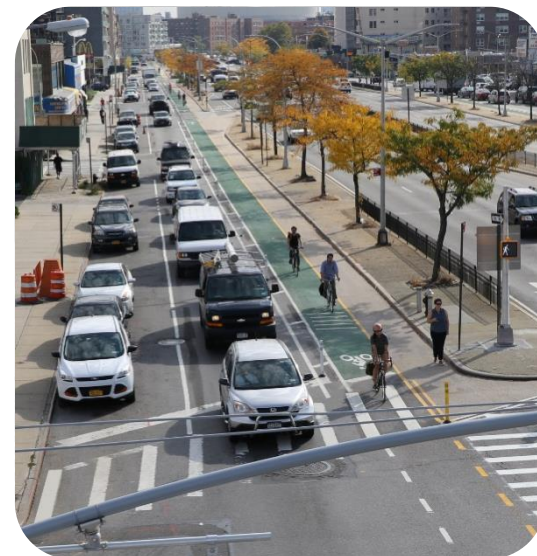


E 216th St, Bronx

Striped bicycle lane provides dedicated space in the road

- **Discourage speeding** by visually narrowing the road
- **Increase predictability** by clearly defining road space for each user

Protected Bicycle Lanes



Queens Blvd, QN

Striped bicycle lane protected by bollards or floating parking

- **Maximizes traffic calming** by physically narrowing roadways
- **Increases safety for all road users** by shortening crossing distances for pedestrians, & separating people driving and biking

Project Proposal

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PROPOSED BICYCLE LANE NETWORK EXPANSION

Add new cycling routes to key destinations

- **North South** connections
- **East West** connections

Route Selection Criteria

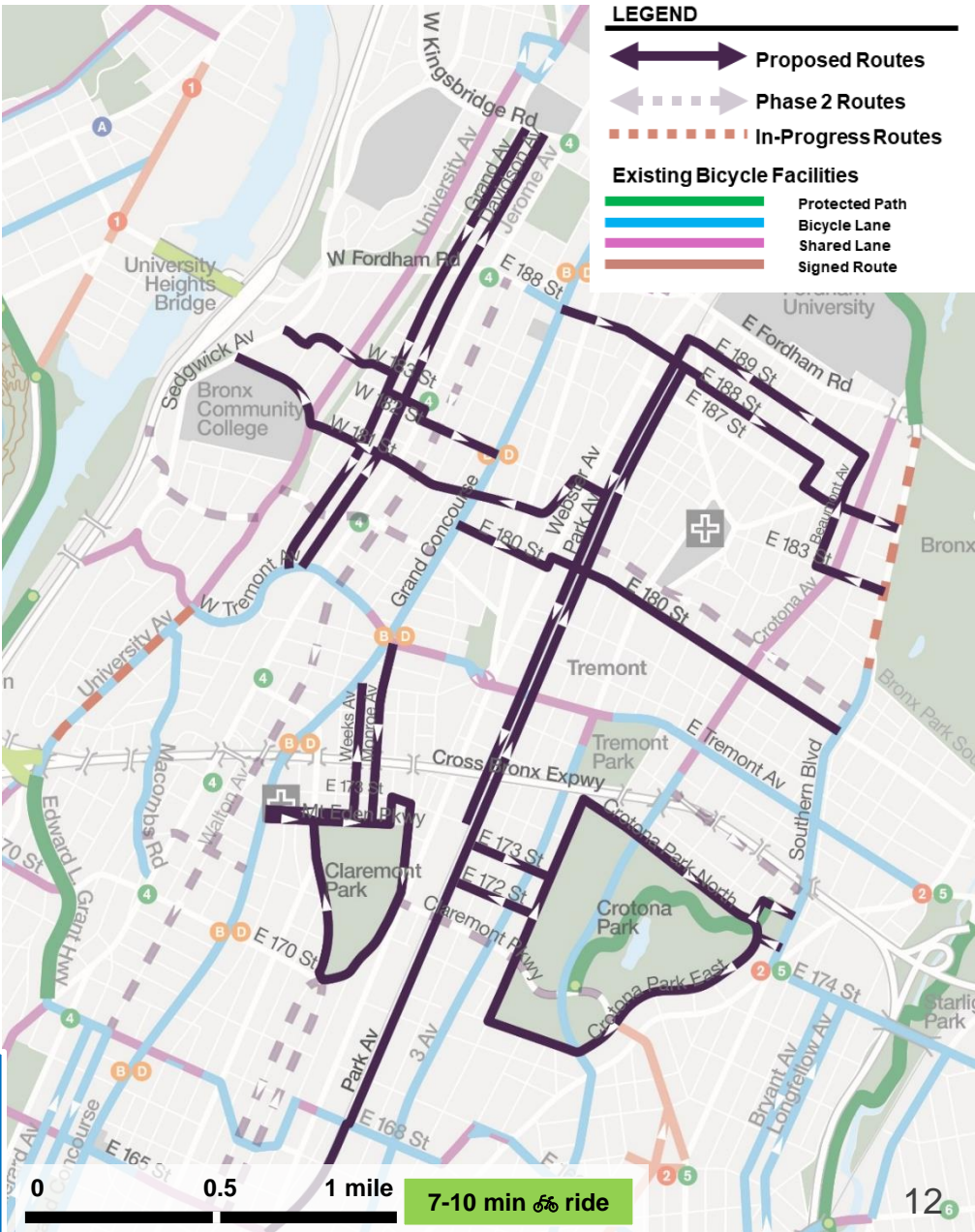
- Continuity
- Width
- Connectivity
- Road Typography

Proposed Route Groups:

- 1 Standard Bicycle Lanes
- 2 Shared Bicycle Lanes
- 3 180th St Standard Bicycle Lanes - Design Update
- 4 Park Avenue Protected Bicycle Lanes

Goals:

Increase Safety for All Road Users & Support Bike Share Ridership



1 Standard Bicycle Lanes

Standard Bicycle Lane Connections

Existing Typical Conditions: Grand Ave, BX

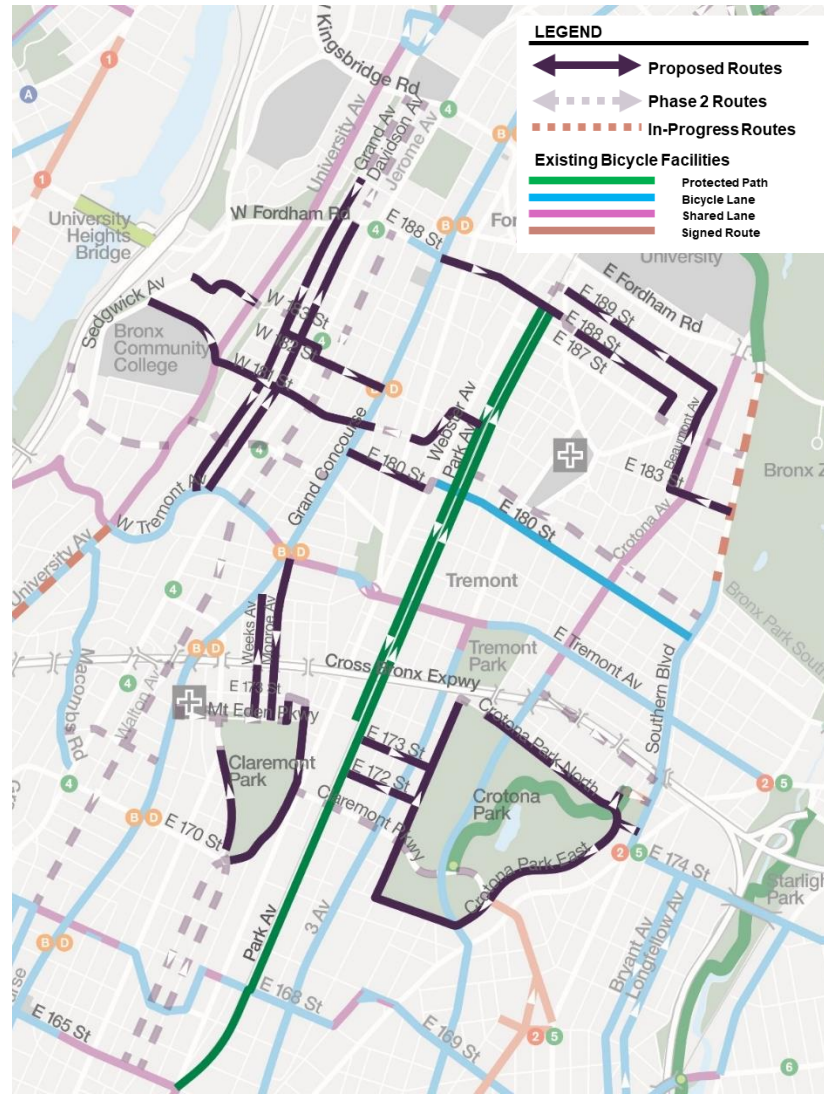


Proposed Typical Design Example: E 216th St, BX



Bicycle lanes create new neighborhood connections

- Provide dedicated space and wayfinding for cyclists
- Connects to existing & proposed protected bicycle lanes
- No parking loss or travel lane removal
- Crosses barriers: Park Ave, Grand Concourse, Aqueduct, Claremont & Crotona Park



Project Corridors

- Davidson Ave
- Grand Ave
- W 183 St
- Buchanan Pl
- W 182 St
- Folin St
- W 181 St
- E 189 St
- E 188 St
- Webster Ave
- E 175 St
- E 173 St
- E 172 St
- Fulton Ave
- Crotona Park N/E/S
- Monroe Ave
- Weeks Ave
- Clay Ave
- Teller Ave
- Findlay Ave
- E Moshulu Pkwy N
- Moshulu Pkwy S
- Marion Av
- Bainbridge Av

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Shared Bicycle Lanes

Shared Bicycle Lane Connections

Existing Typical Conditions: Grand Ave, BX

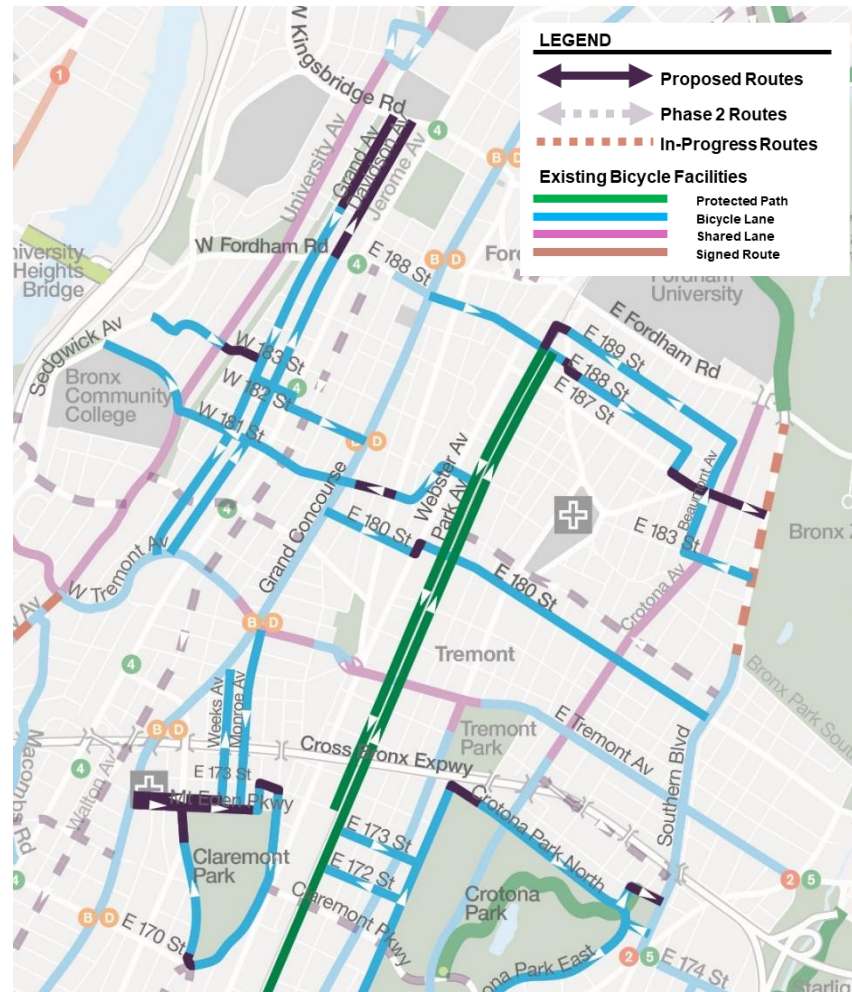


Proposed Typical Design



Shared bicycle lanes connect to network

- Organize roadway
- Provide wayfinding for cyclists – fill gaps in network where protected & standard bicycle lanes not feasible
- No parking loss or travel lane removal
- Connect between north-south & east-west routes



Project Corridors

- Davidson Ave
- Grand Ave
- W 183 St
- W 181 St
- E 189 St
- E 188 St
- E 187 St
- Webster Ave
- E 175 St
- E 173 St
- Fulton Ave
- Crotona Park N
- Morris Ave
- E Mt Eden Ave
- Bainbridge Av
- Park Ave

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E 180th St Standard Bicycle Lanes – Design Update

E 180th St: Southern Blvd to Webster Ave

*Example of existing conditions:
Morningside Ave, Manhattan*

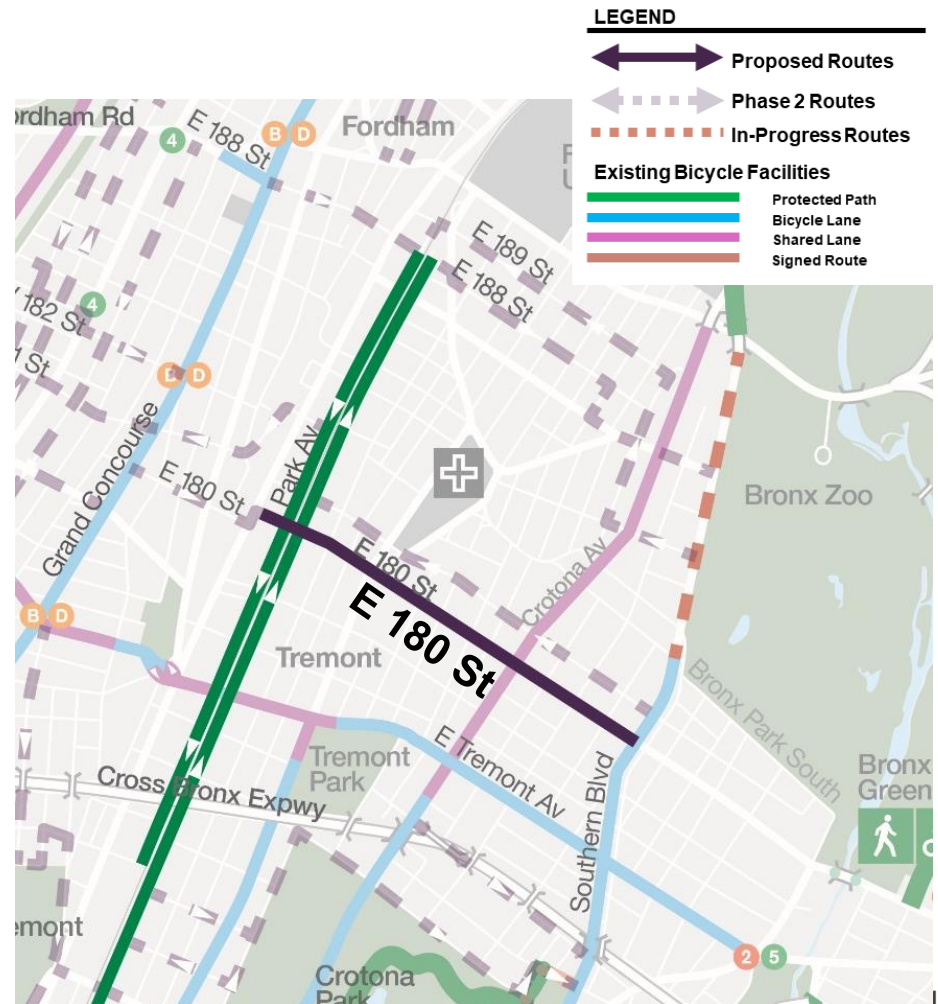


*Proposed Typical Design Example:
3rd Ave, Bronx*



Standard bicycle lanes connect to network

- Organize roadway, calm traffic
- Provide dedicated space and wayfinding for cyclists
- Connects Grand Concourse Bike Lane to Southern Blvd
- No parking loss
- Further traffic analysis needed to remove turning lanes



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Park Avenue Protected Bicycle Lanes

Park Avenue: E 165th St to E 188th St

Typical Existing Conditions: Park Ave



A *Proposed Typical Design: 188th – 173rd St*

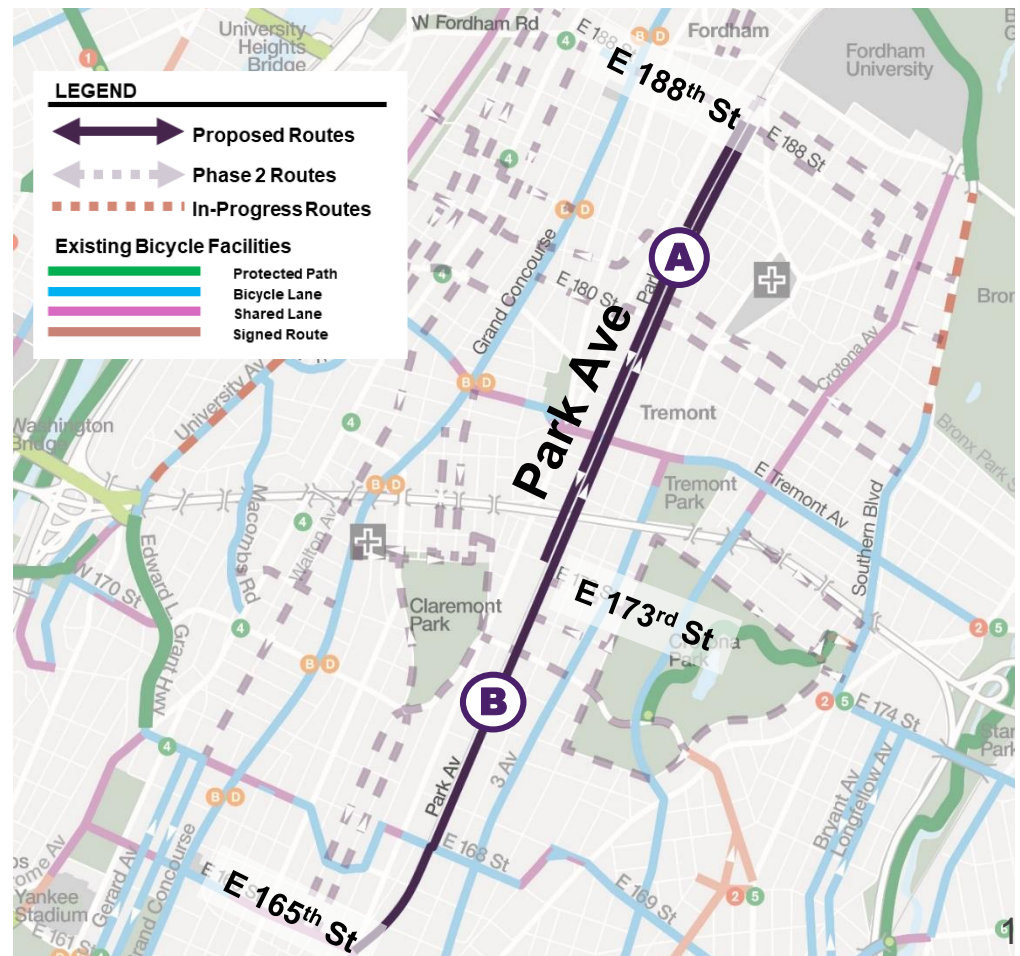


B *Proposed Typical Design: 173rd – 165th St*



Protected bicycle lanes create a central north-south path

- Cyclists protected by buffer and bollards
- Connect between Claremont & Crotona Park, & 165th St bike lane to Fordham Plaza
- Design is compatible with existing traffic volumes
- Convert existing conventional bike lanes to protected bike lanes without removing parking or travel lanes



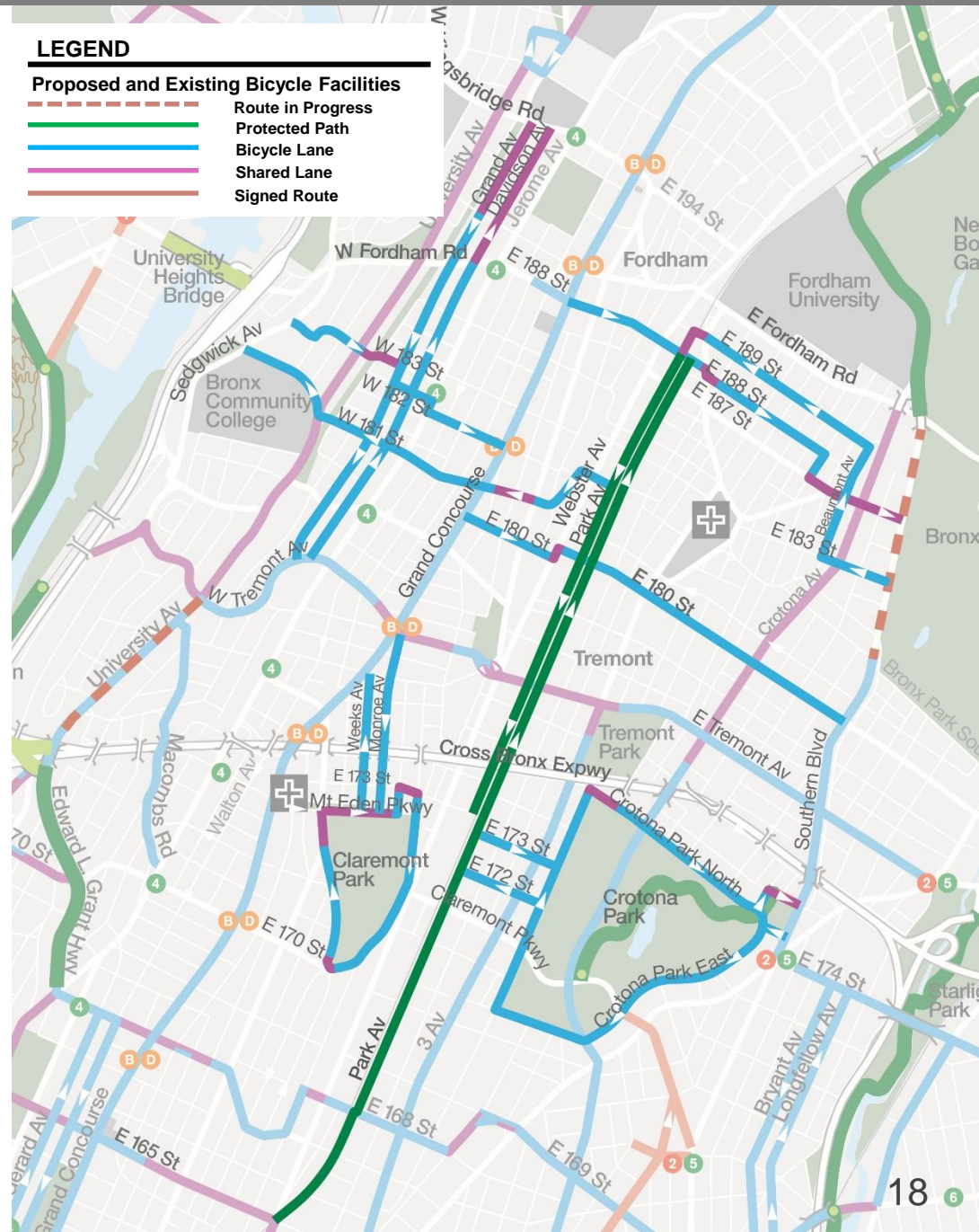
Summary

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Bronx Bike Share Area Bicycle Lane Network Expansion

Benefits

- Expand the bicycle network
 - *Standard & shared bicycle lanes*
 - *Protected bicycle lanes*
- Close gaps within bike network
- Support bike share users
- Network connections build on protected lane and provide wayfinding
- Increase safety for all road users



Questions?
THANK YOU!



NYC DOT



NYC DOT



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NYC DOT

PROJECT OVERVIEW

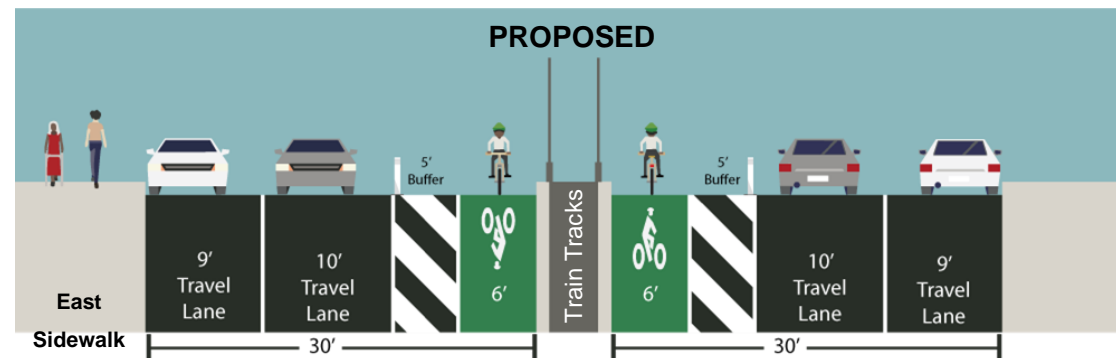
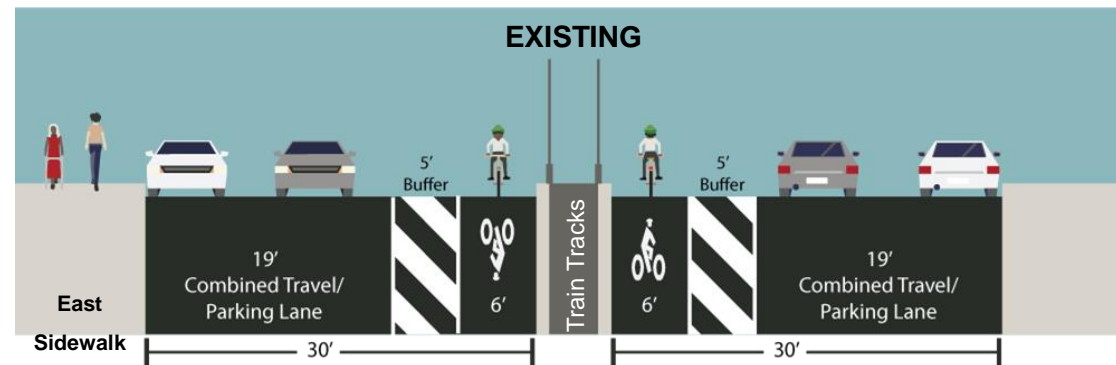
- 1** *Park Ave*
E 188 St to E 189 St
 Install Shared Lane Markings on low volume blocks for connection to Fordham Plaza
- 2** *Park Ave*
E 173 St to E 188 St
 Upgrade NB and SB curbside bike lanes to bollard-protected bike lane
- 3** *Park Ave*
E 165 St to E 173 St
 Upgrade NB curbside buffered bike lane to two-way bollard-protected bike lane
- 4** *Melrose Ave*
E 165 St to E 163 St
 Add upgrade curbside buffered bike lane and install green paint



PROPOSED

② Park Ave E 173 St to E 188 St

Upgrade NB and SB curbside bike lanes to bollard-protected bike lane



EXISTING/ISSUES

- **Buffered Curbside Bike Lane** does not prevent double parking in bike lane
- **Long pedestrian crossings** at targeted intersections

PROPOSED

- **Protected bike lane** creates dedicated, predictable space for cyclists, discourages wrong-way and sidewalk riding, and reduce pedestrian conflicts
- **Shortens pedestrian crossing distance, improve visibility** at targeted intersections
- Proposed **design has no impact on number of travel lane or parking loss**

PROPOSED DESIGN ELEMENTS

Creates bike lane that is comfortable for all ages and abilities

Example of one-way bollard-protected bike lanes separated by flexible delineators and quick kurb



PROPOSED

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Park Ave

E 165 St to E 173 St

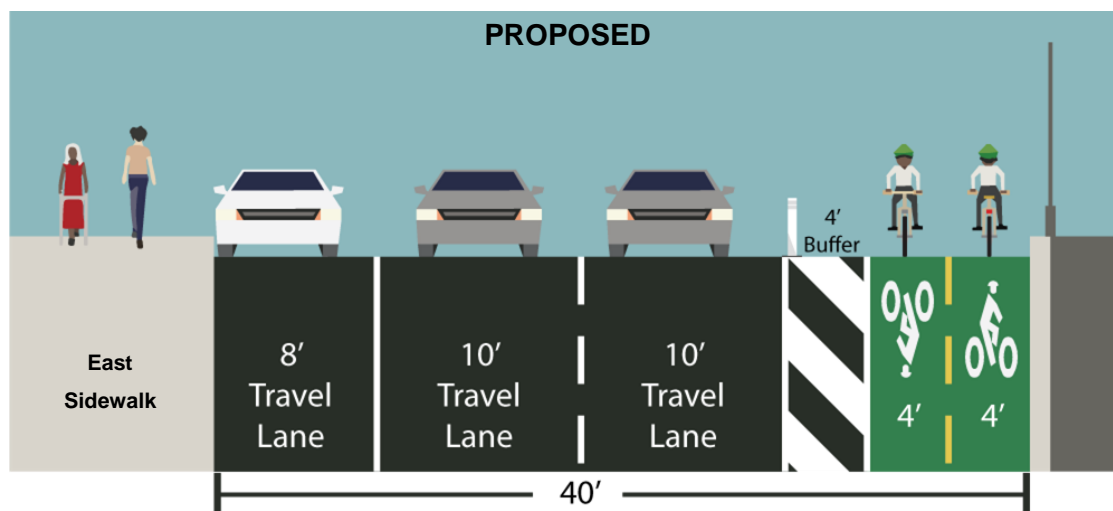
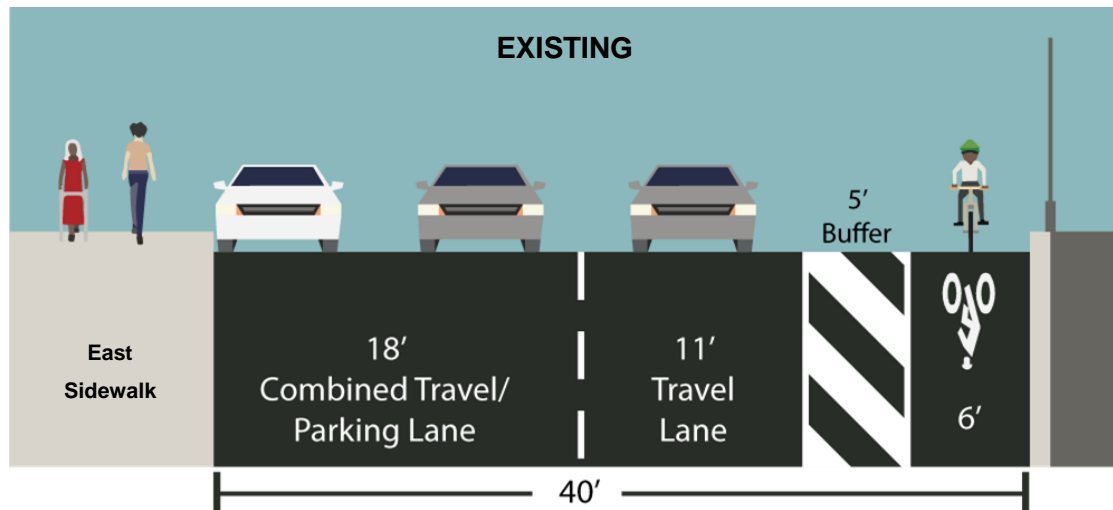
Upgrade NB curbside buffered bike lane to two-way bollard-protected bike lane

EXISTING/ISSUES

- **Buffered Curbside Bike Lane** does not prevent double parking in bike lane
- **No southbound bike lane**
- **Long pedestrian crossings** at targeted intersections

PROPOSED

- **2-way protected bike lane** creates dedicated, predictable space for cyclists, discourages wrong-way and sidewalk riding, and reduce pedestrian conflicts
- **Shortens pedestrian crossing distance, improve visibility** at targeted intersections
- Proposed **design has no impact on number of travel lane or parking loss**



PROPOSED DESIGN ELEMENTS

Creates bike lane that is comfortable for all ages and abilities

Examples of two-way bollard-protected bike lane separated with quick-kurb and flexible delineators

