

21st Street Transit Priority & Safety Project

Queens Community Board One Transportation Committee

March 9, 2022



Outline

- Introduction
- Corridor Proposal
 - Bus and Pedestrian Improvements
 - Curb Management
 - Other Improvements
- Traffic Considerations
- Next Steps

Introduction

2021 21st Street Bus Priority & Pedestrian Safety Study

- Requested by former CM Constantanides
- Yearlong study to develop a conceptual corridor redesign
- Interactive planning process with community stakeholders
- Study area = Queens Plaza North to Hoyt Ave North
- Vision Zero Priority Corridor
- Identified as bus priority corridor in MTA's Queens Bus Network Redesign Draft Plan



Previous Studies and Improvements

Western Queens Transportation Study (Department of City Planning)

- Recommended corridor-wide traffic calming on 21st St
- Recommended pedestrian safety improvements at Astoria Blvd
- Identified bus stop crowding issues at 41st Avenue

NYC DOT Safety Improvements (2015)

- 10 Leading Pedestrian Intervals
- 12 painted curb extensions
- New signal at 29th Ave
- Parking lane stripe
- Additional Street Lights

BQX

- 21st St part of proposed alignment
- Project halted in March 2020 prior to EIS scoping



2015 Pedestrian Safety Improvements: 21st St and 31st Rd

Public Engagement

Community Advisory Board

- Over 50 Community stakeholders representing Community Board, Electeds, Neighborhood Associations, Advocacy Groups, and many others
- Provided input onto study during four meetings

Online Feedback Map

- Allows anyone to identify issues in the corridor
- Over 200 individual comments received

On-street Pop-ups

- Shared potential corridor approaches with pedestrian and bus riders
- Completed 144 in-person surveys



Public Meetings

- December 20th 2021 and January 12th 2022

What We Heard - Pedestrian Safety

- Crossing 21st Street is difficult
- Vehicles speed and drive aggressively
- Pedestrian safety was #1 issue identified during in-street surveys.

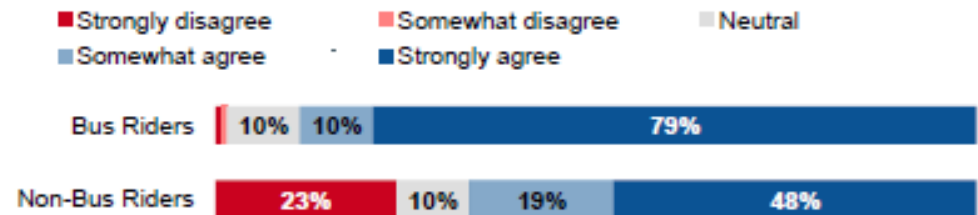


What We Heard - Slow and Unreliable Buses

- Second most important issue for on-street survey respondents
- Both bus riders and non-bus riders said they would ride more if buses were fast and reliable
- Feedback maps identified double parking blocking buses, bus bunching, and signal delays

more than three-quarters of respondents who identify as bus riders said they **would take the bus more often** if buses were faster and more reliable; Additionally, nearly three quarters (67%) of non-bus rider respondents said they would consider taking the bus instead of other modes if buses were faster and more reliable as well

In a agree/disagree question among participants who self identify as bus riders, % who agree or disagree on whether they would take the bus more often in 21st St if buses were faster and more reliable

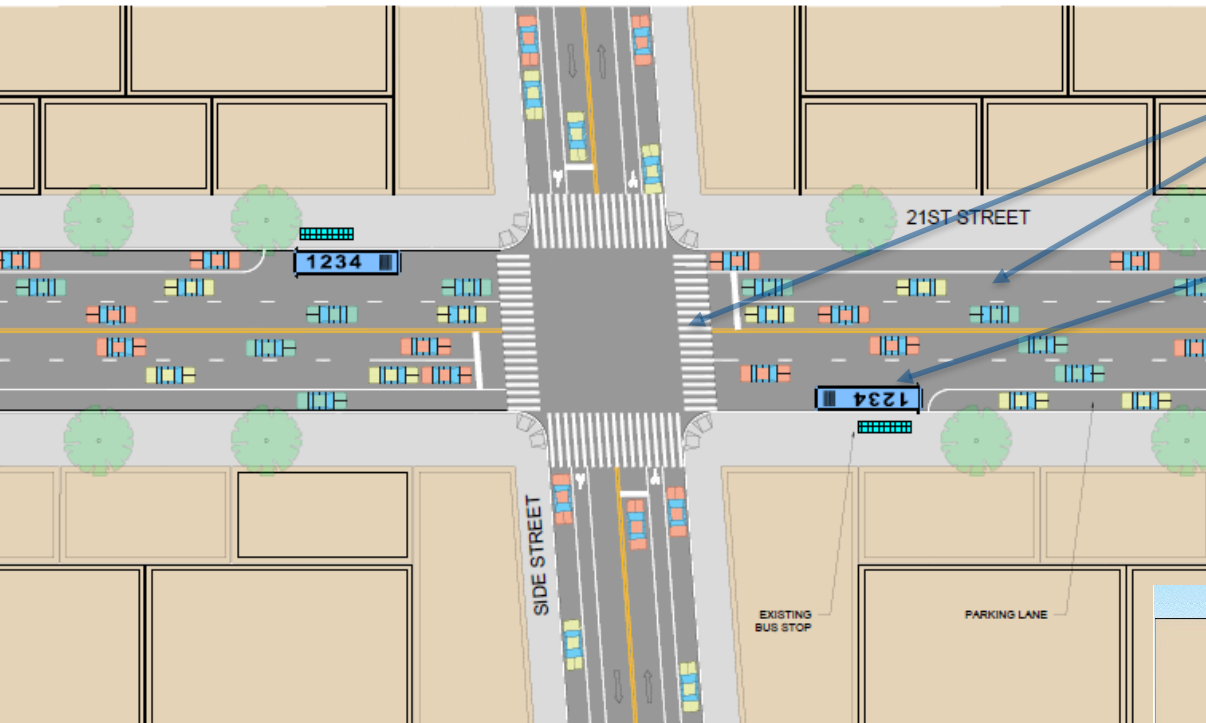


What We Heard - Double Parking & Sidewalk Parking

- Double parking seen as a congestion and safety concern
- Concern among CAB members and others with auto oriented businesses parking on sidewalk
- Current parking regulations (primarily alternate side parking) means that passenger drop offs, commercial loading, etc. happens in the street



21st Street Today

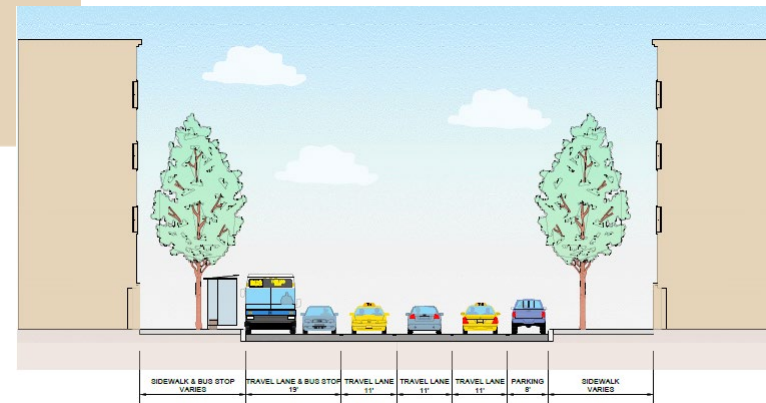


Existing Conditions

Pedestrians have a long crossing of 21st Street

Buses use same lane as other traffic and can get caught in congestion or behind double parked cars

Buses must pull in and out of bus stops which slows them down



21st Street Bus Routes

Q66

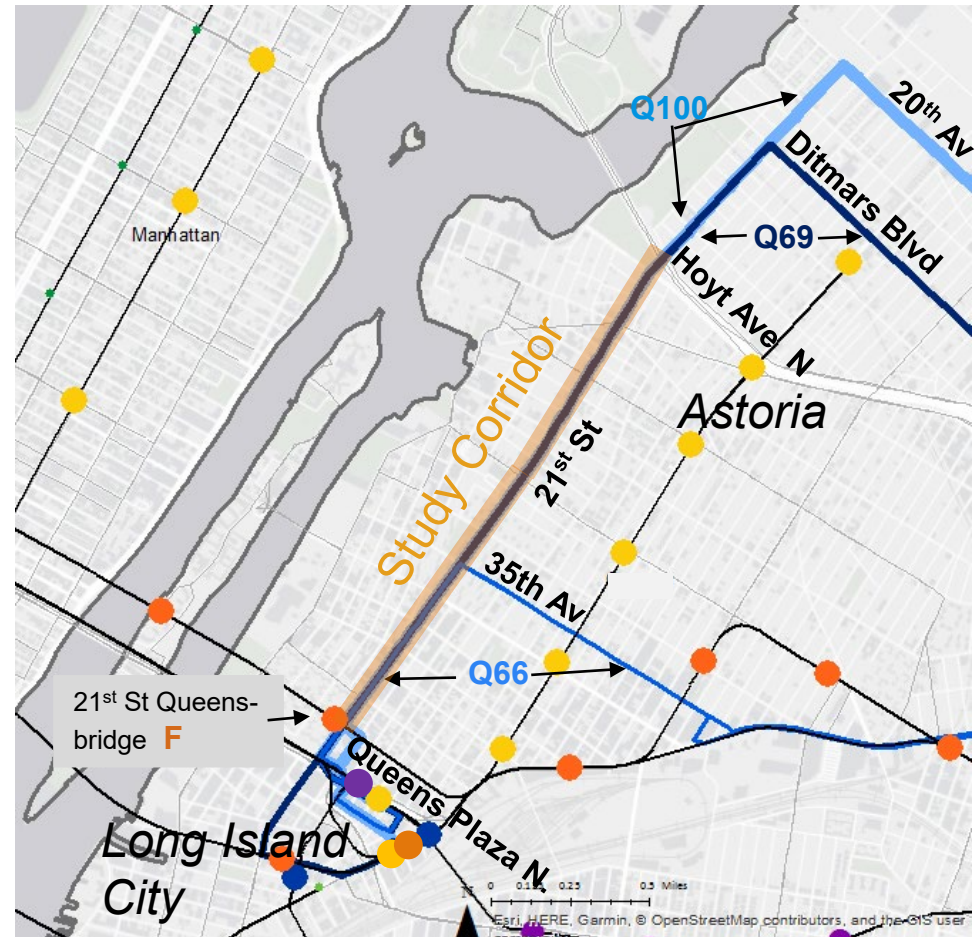
- Queens Plaza to Flushing
- Leaves 21st St at 35th Ave
- Local Service

Q69

- Queens Plaza to Jackson Heights
- Leaves 21st St at Ditmars Blvd
- Local Service

Q100

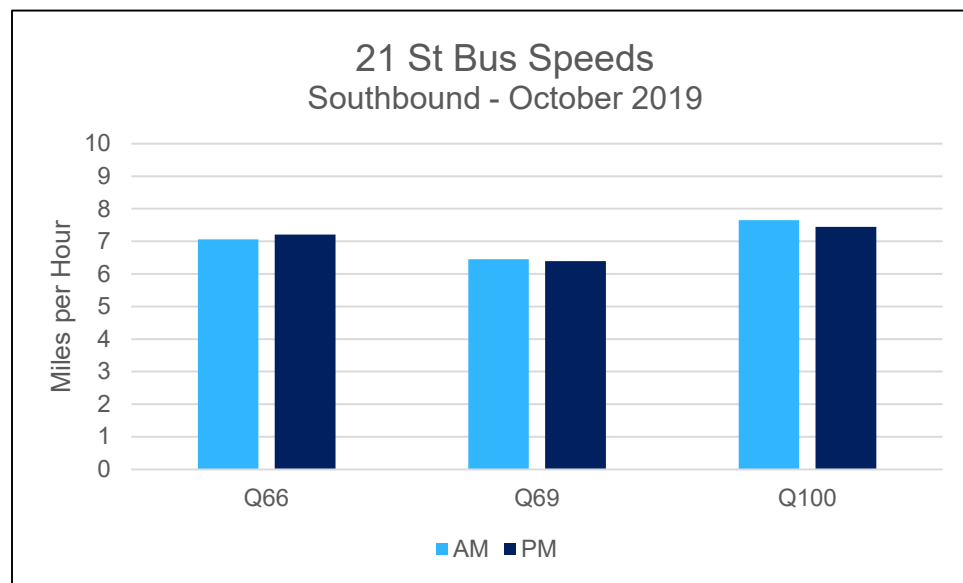
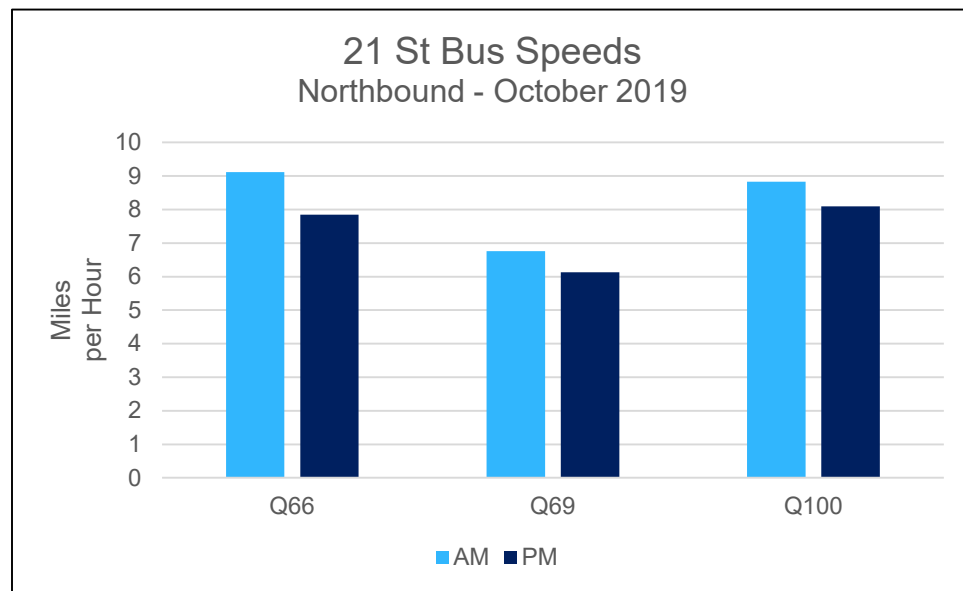
- Long Island City to Rikers Island
- Leaves 21st St at 20th Ave
- Limited Stop Service



Note: Q102 & Q103 travel on short segments of 21st St;
multiple bus lines cross over 21st St

Bus Speeds

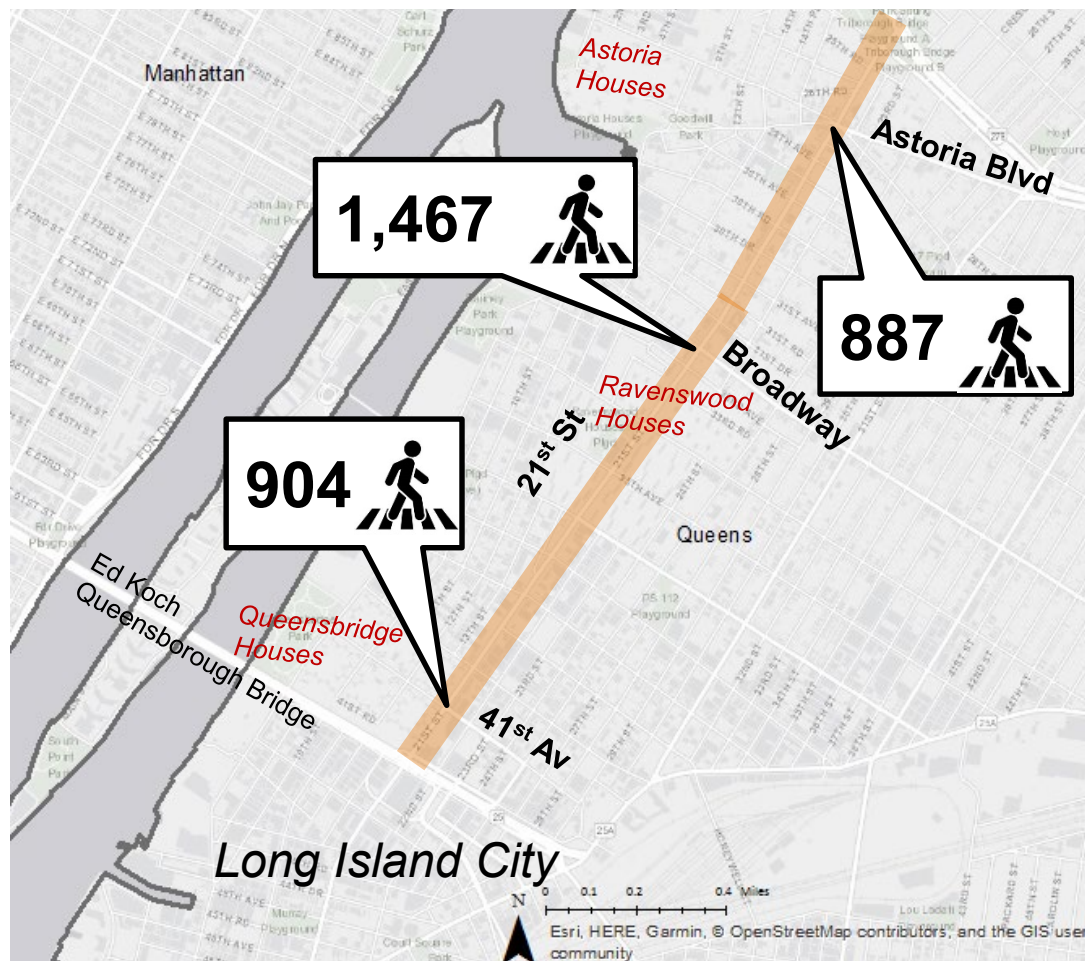
- Northbound buses generally faster than Southbound buses
- Northbound speeds decrease in PM
- Q69 is slower than other routes (runs as local through full corridor)
- Bus Speeds impacted by congestion and vehicles double parking



Pedestrian Volumes

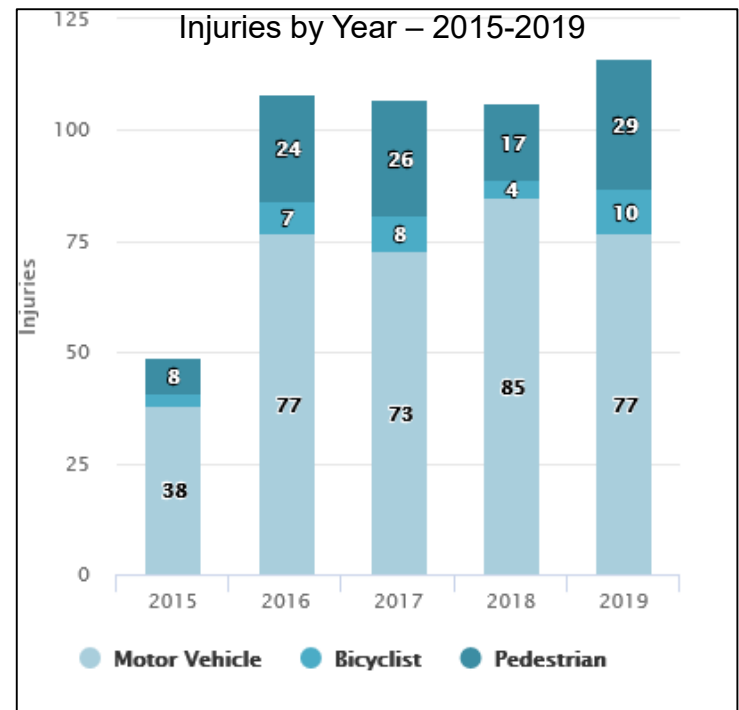


Weekday AM peak hour
intersection pedestrian
volumes
May/June 2019



Injuries 2015-2019

- All of 21st Street designated as a Vision Zero corridor in 2019
- All study corridor injury types increased after 2015
- Most common pedestrian injury is left turn vehicles striking pedestrian crossing with the signal.
- Three fatalities – all were pedestrians



Vehicle Action Versus Ped Action, 2015-2019 (5 Years)

	Crossing with Signal	Crossing against Signal	Crossing No Signal, Marked Crosswalk	Crossing No Signal or Crosswalk	Others	Unknown	Total
Left Turn	25	2	1	4	1	1	34
Right Turn	10	0	0	0	0	0	10
Going straight	10	11	0	14	9	1	45
Making U Turn	0	0	0	0	0	0	0
Backing	0	1	0	1	5	0	7
Other	0	0	0	0	1	0	1
Unknown	3	0	0	0	2	2	7
Total	48	14	1	19	18	4	104

Corridor Proposal

Bus and Pedestrian Improvements

Key Considerations

- Design should significantly enhance both pedestrian safety and bus speed and reliability
- Design needs to accommodate truck and emergency vehicles turns
- Left turns should be restricted where possible, and safely accommodated where needed

Precedent

Utica Ave, Brooklyn



Utica Ave @ Ave L

- Major north-south arterial in Southern Brooklyn
- Offset bus lanes move to curb to accommodate left turns
- Pedestrian islands included in some locations
- 20% reduction in injury crashes and 75% reduction in serious injuries/fatalities



Utica Ave @ Winthrop St



Utica Ave @ Winthrop St

Elements – Offset Bus Lane & Bus Boarder



Woodhaven Blvd, QN

Proposed Bus Lane Location

- Queens Plaza North to 26th Road



7th Ave, MN

Proposed Bus Boarder Locations

- 21st St @ 41st Ave (northbound)
- 21st St @ 35th Ave (northbound and southbound)

Elements – Left Turn Lane & Pedestrian Island



Utica Ave, BK



Hillside Ave, QN

Proposed Left Turn Lane Locations

- 21st St @ Queens Plaza North (northbound)
- 21st St @ 41st Ave (southbound)
- 21st St @ 40th Ave (northbound)
- **21st Ave @ 36th Ave (southbound)**
- 21st Ave @ 30th Ave (northbound)
- 21st St @ Astoria Blvd (northbound)

All other intersections have NB/SB left turn restrictions except Hoyt Ave South SB.

Proposed Pedestrian Island Locations

- 21st St @ 40th Ave (north side)
- **21st Ave @ 36th Ave (south side)**
- 21st Ave @ Broadway (south and north sides)
- 21st St @ 30th Ave (north side)
- 21st St @ Astoria Blvd (north side)

Elements – Painted Curb Extension

Painted Curb Extension



21st St @ 31st Dr

Proposed Additional Painted Curb Extension Locations

- 41st Ave (NE corner)
- 40th Ave (NW corner)
- 38th Ave (All four corners)
- 14th St (NW corner)
- 35th Ave (SE, SW, and NW corners)
- 34th Ave (SE and NW corners)

Corridor Proposal



Bus Lane



Bus Boarder



Left Turn Lane



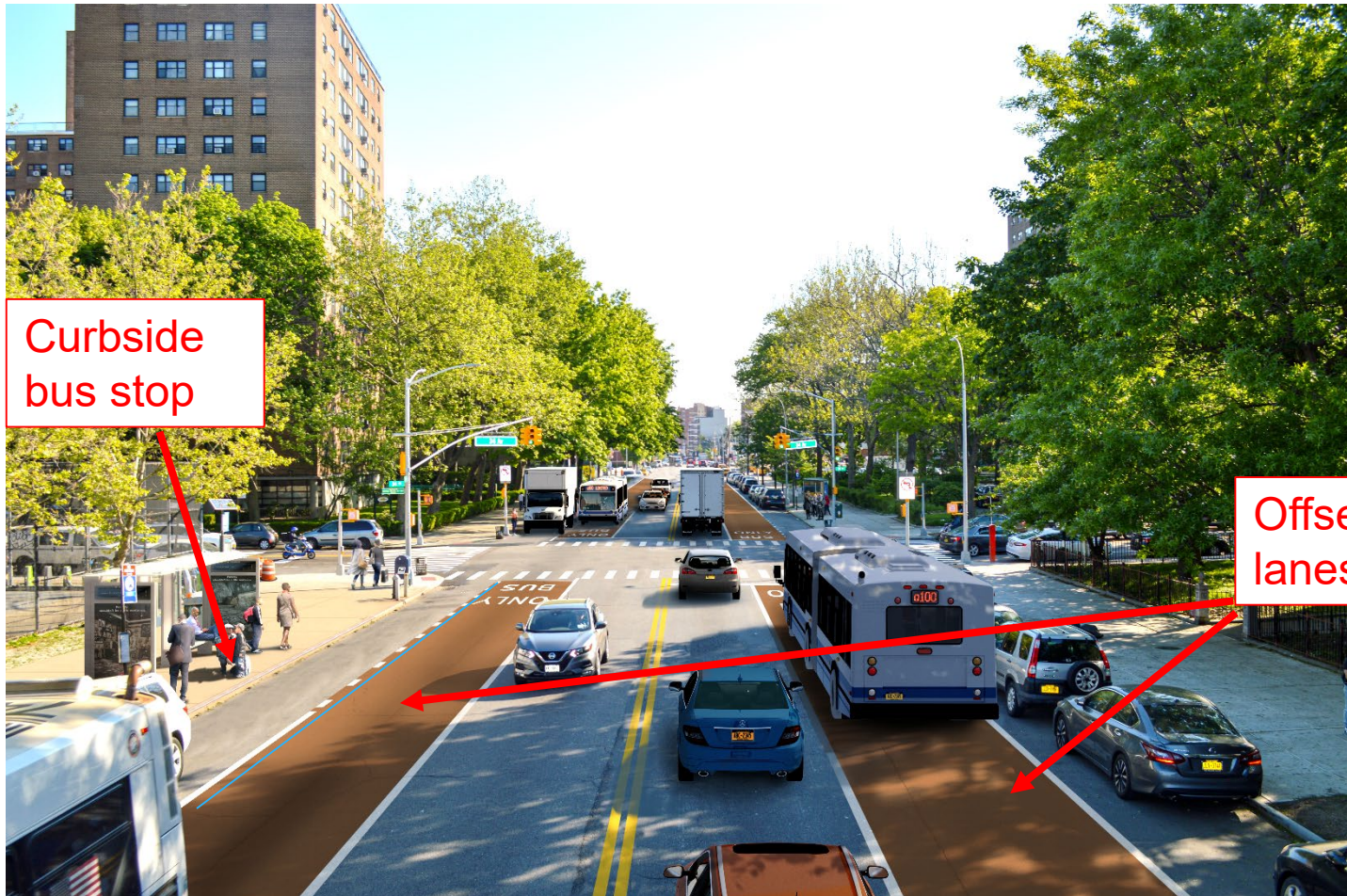
Pedestrian Refuge Island



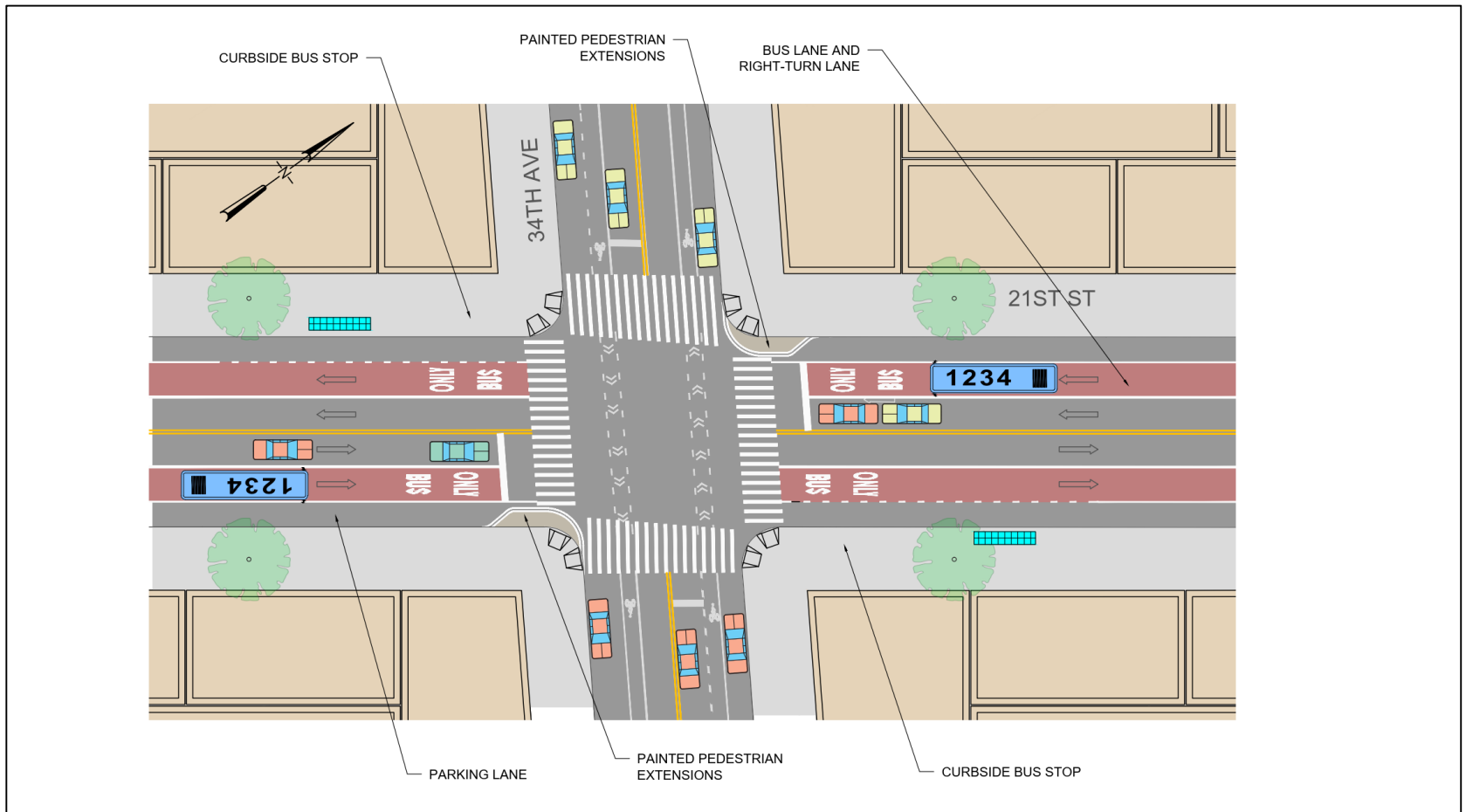
21st St @ 34th Ave - Existing



21st St @ 34th Ave – Proposed (3D Rendering)



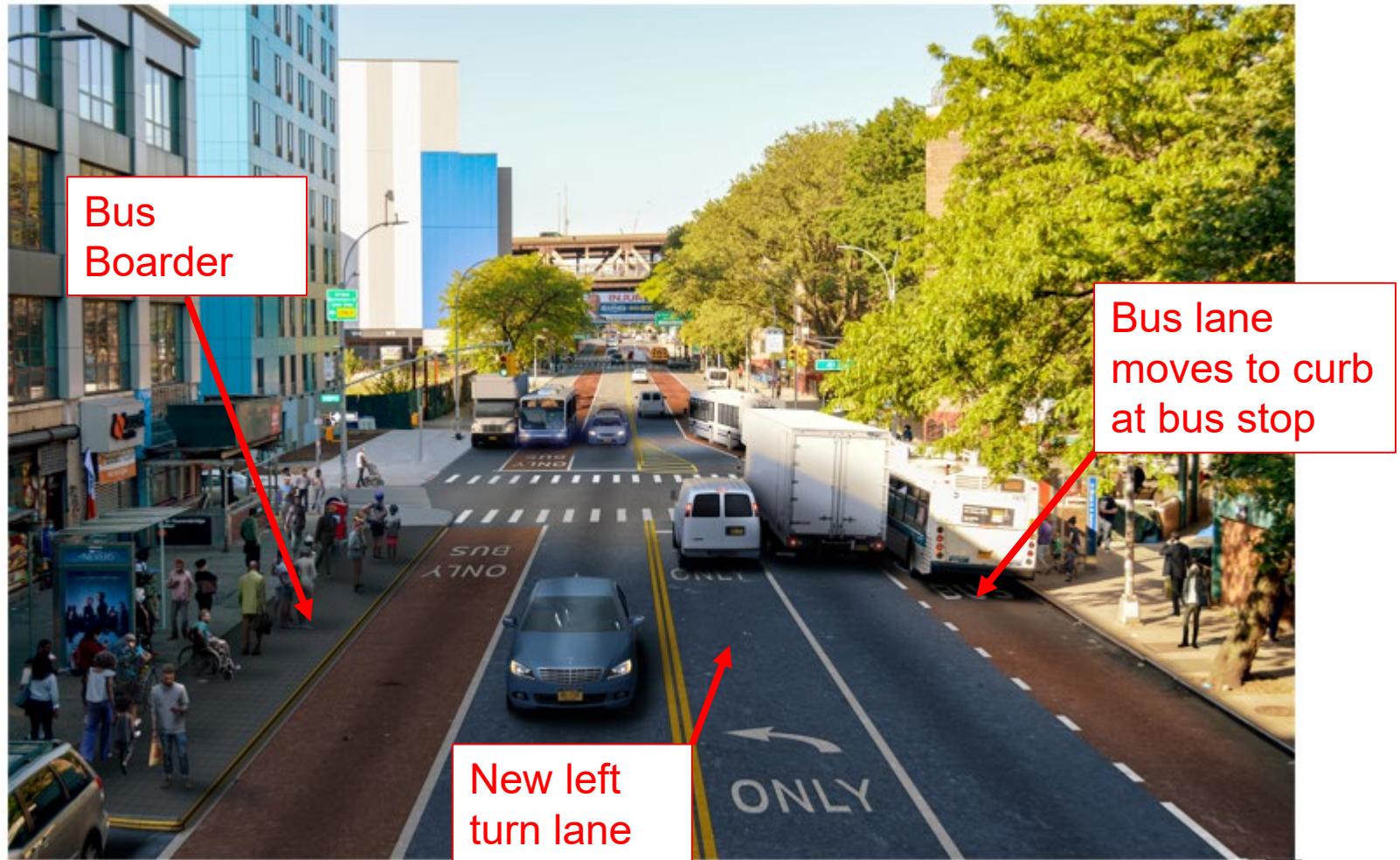
21st St @ 34th Ave - Proposed (Plan View)



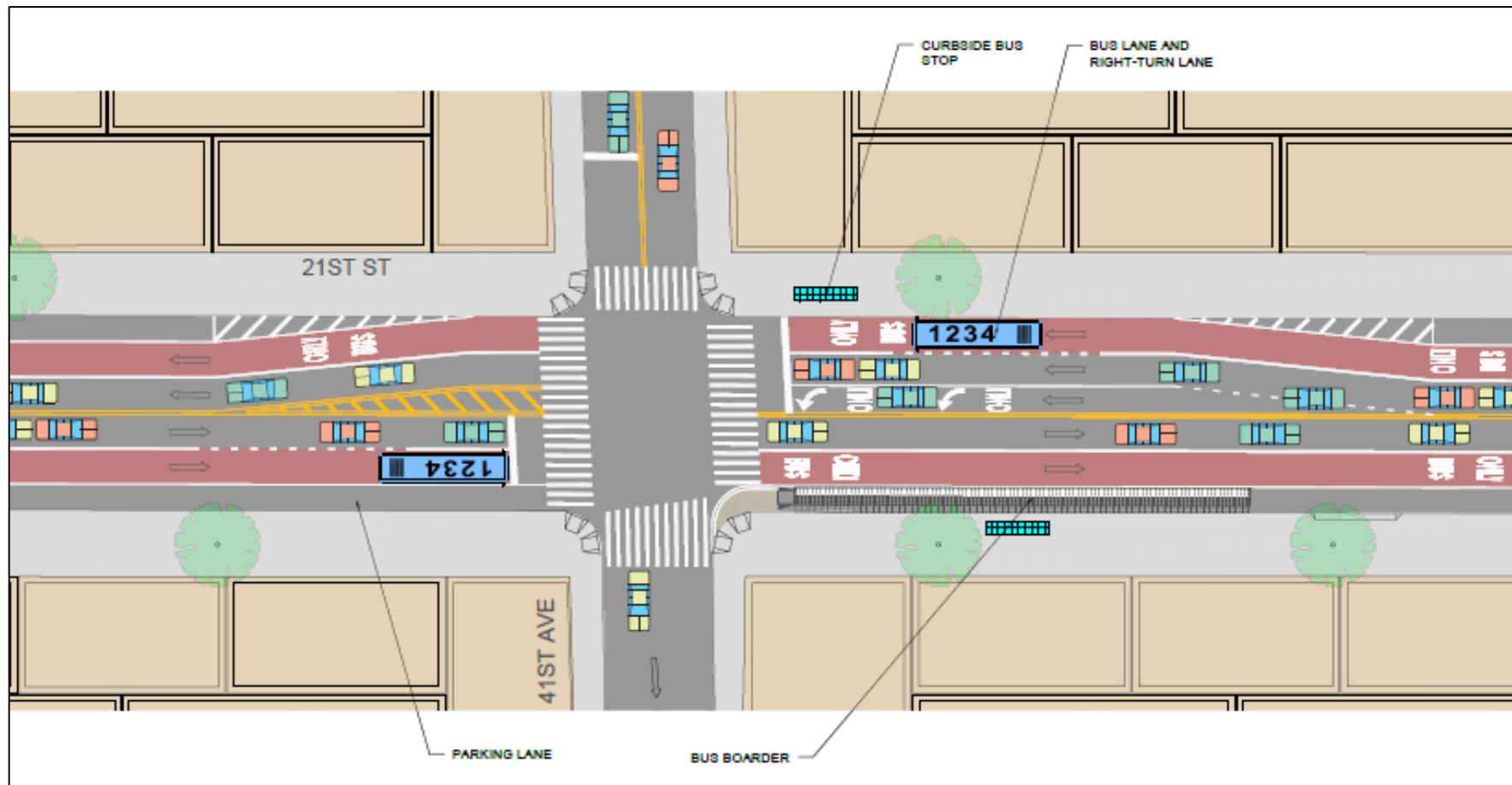
21st St @ 41st Ave - Existing



21st St @ 41st Ave - Proposed (3D Rendering)



21st St @ 41st Ave - Proposed (Plan View)

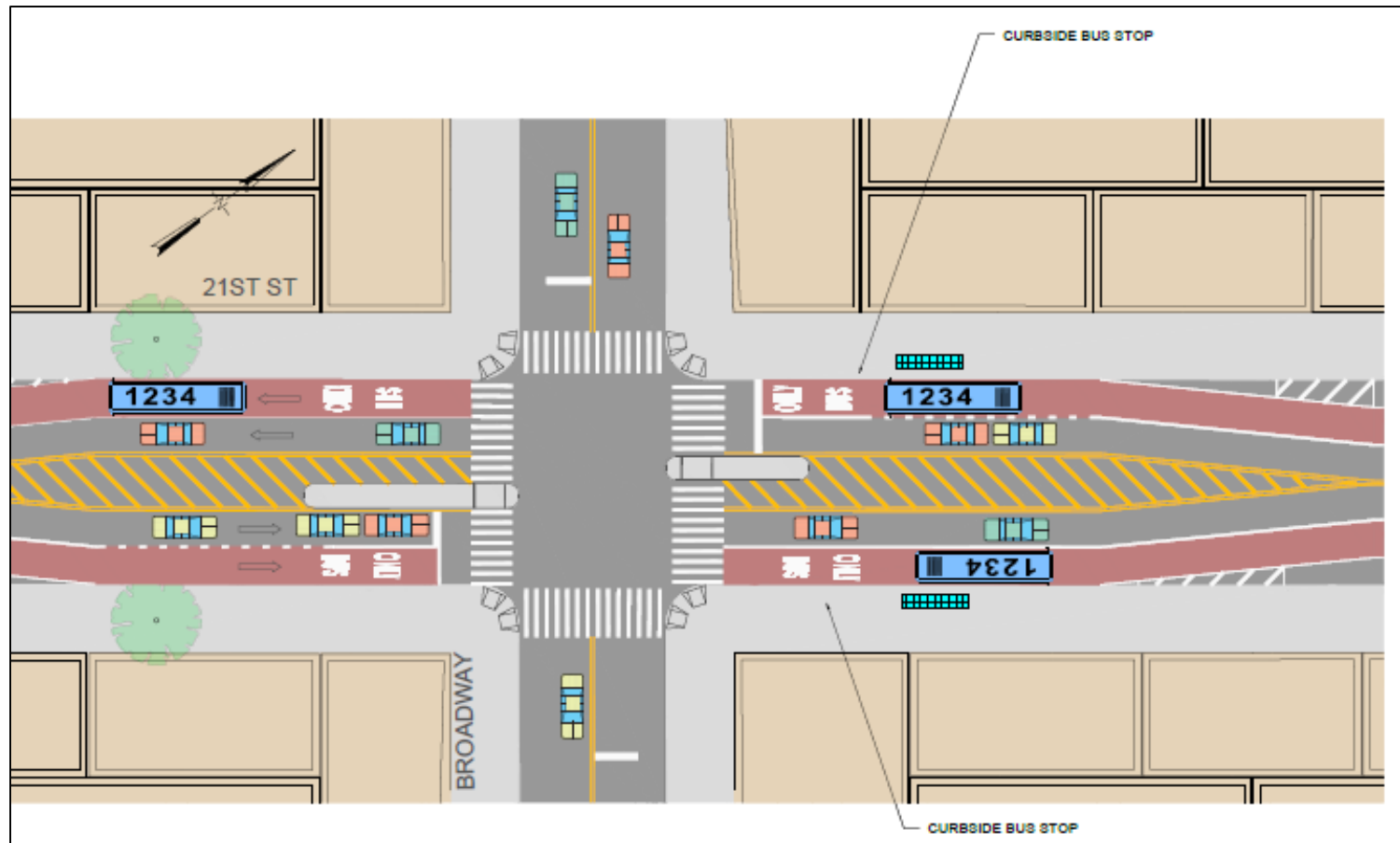


21st St @ Broadway - Existing



21st St @ Broadway - Proposed (Plan View)

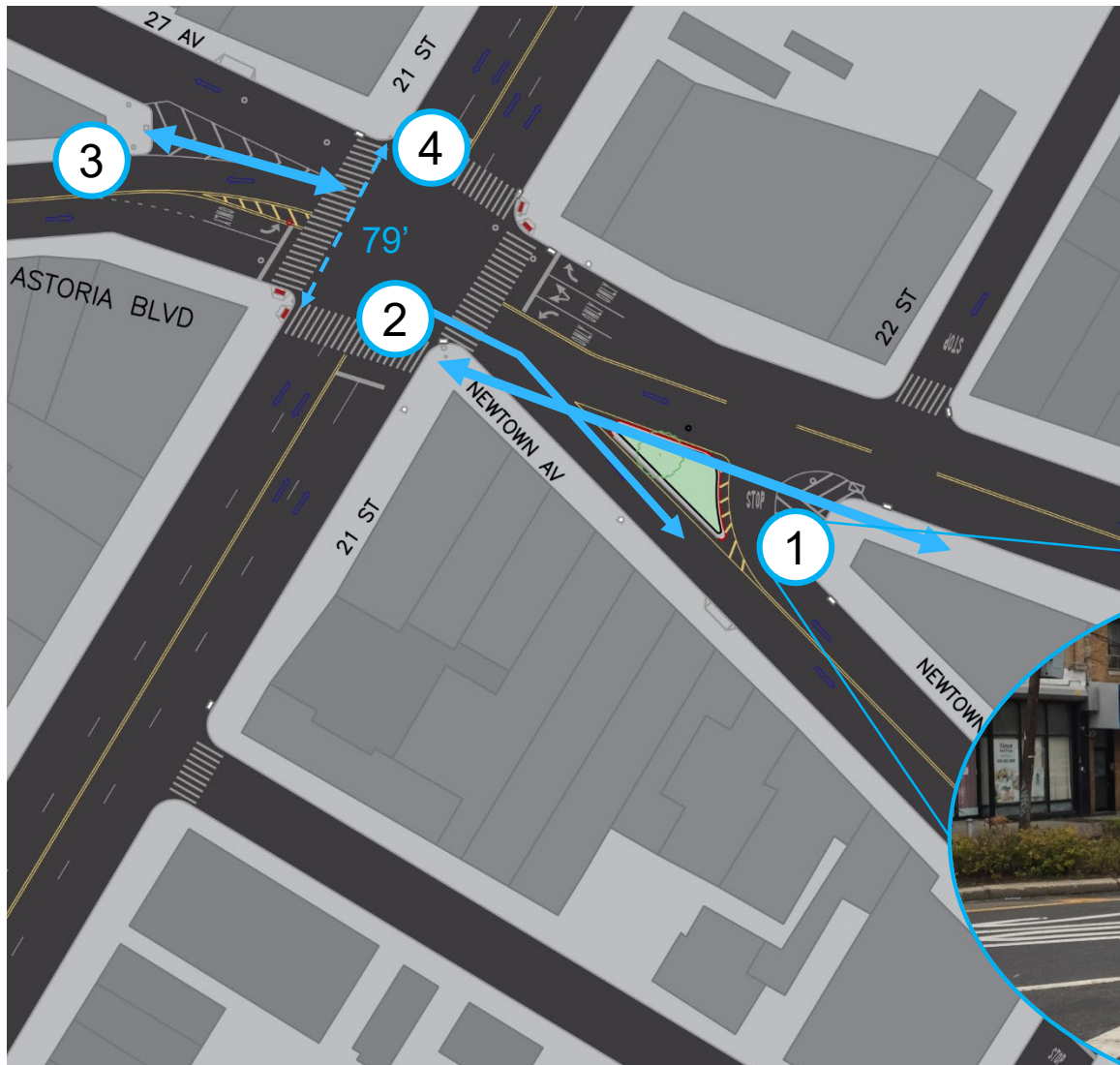
21st St @ Broadway - Proposed



21st St @ Astoria Blvd - Existing



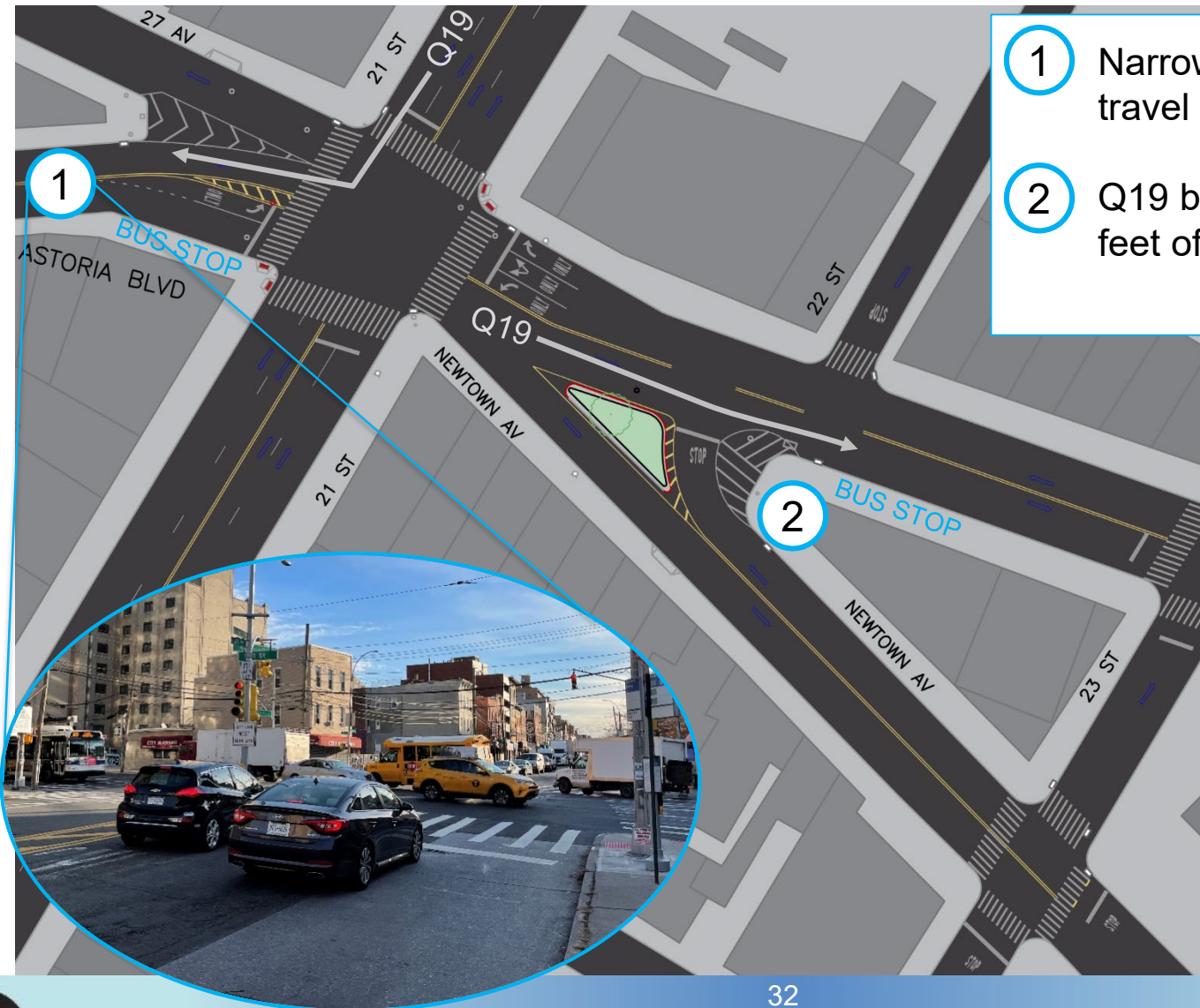
21st St @ Astoria Blvd – Pedestrian Concerns



- 1 No sidewalk or crosswalks at stop control
- 2 Soft vehicle turn
- 3 Sidewalk ends with no pedestrian connection to crosswalk
- 4 Long crossing distance

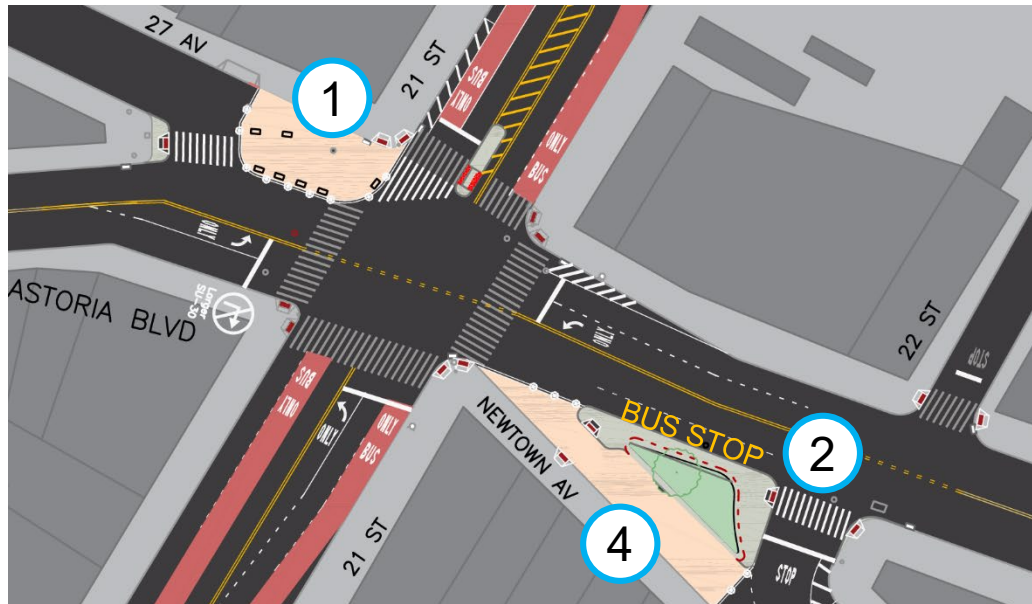


21st St @ Astoria Blvd – Bus Concerns



- 1 Narrow roadway with two travel lanes and a bus stop
- 2 Q19 bus stops are within 400 feet of each other

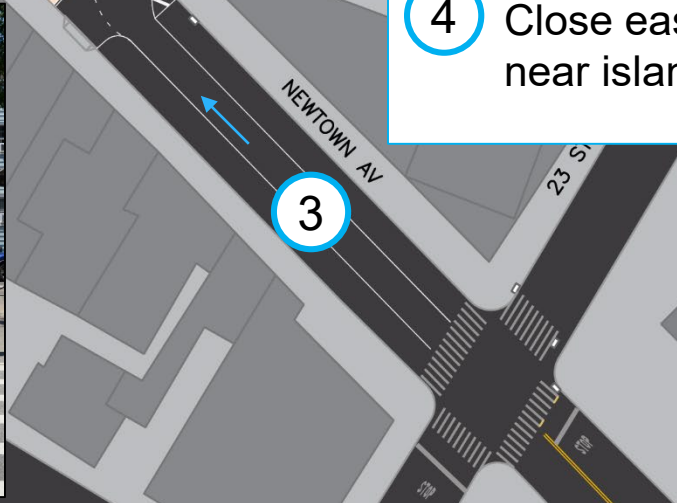
21st St @ Astoria Blvd - Proposed



- 1 Install painted curb extension with flexible delineators, granite blocks, and new crosswalk
- 2 Build new concrete sidewalk and relocate Q19 bus stop to island and add crosswalk
- 3 Convert Newtown Avenue to one-way westbound
- 4 Close eastbound Newtown Av near island with painted materials



Bedford Av and Nassau Av, Bk



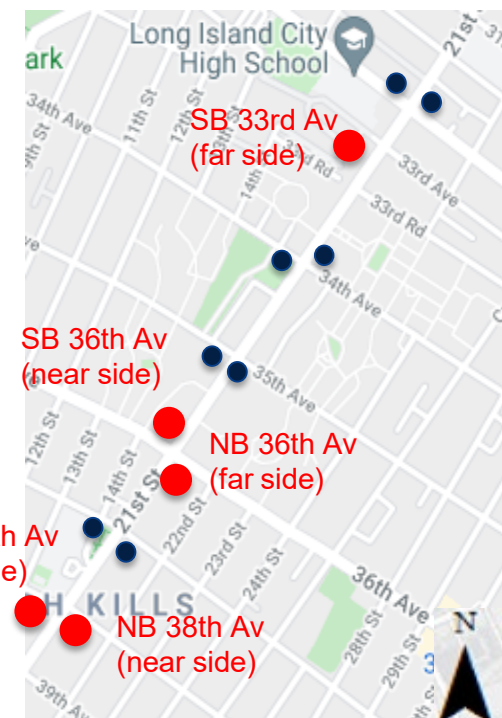
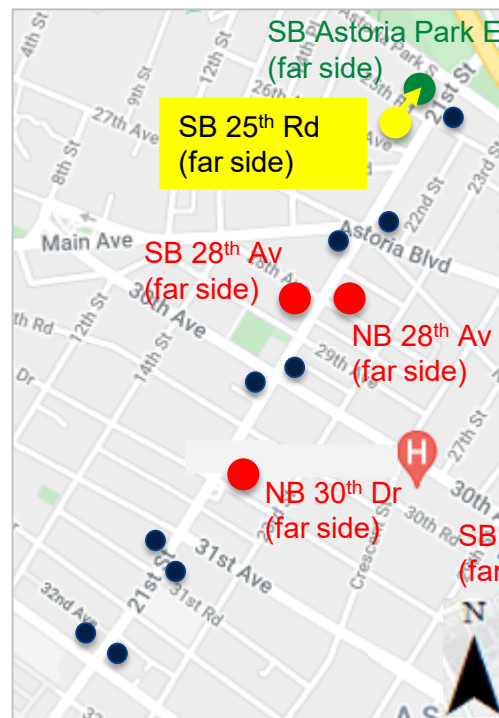
Corridor Proposal

Bus Stop and Route Improvements

Corridor Proposal

Bus Stop Balancing

- Bus stops on 21st Street often closer than MTA Guidelines (750')
- Very closely spaced stops reduce bus speed and reliability
- MTA and DOT proposing removal or move of nine stops
 - NB 30th Dr, SB 36th Ave, and SB 33rd Ave all had less than 100 daily passenger ons and offs
 - 28th Ave, 36th Ave, and 38th Ave stops less than 500' from adjacent stops
 - SB 25th Rd moved to locations with better bus stop conditions
- No changes to stops south of 38th Avenue



KEY:



Existing bus stop



Red stop removed



Bus stop moved

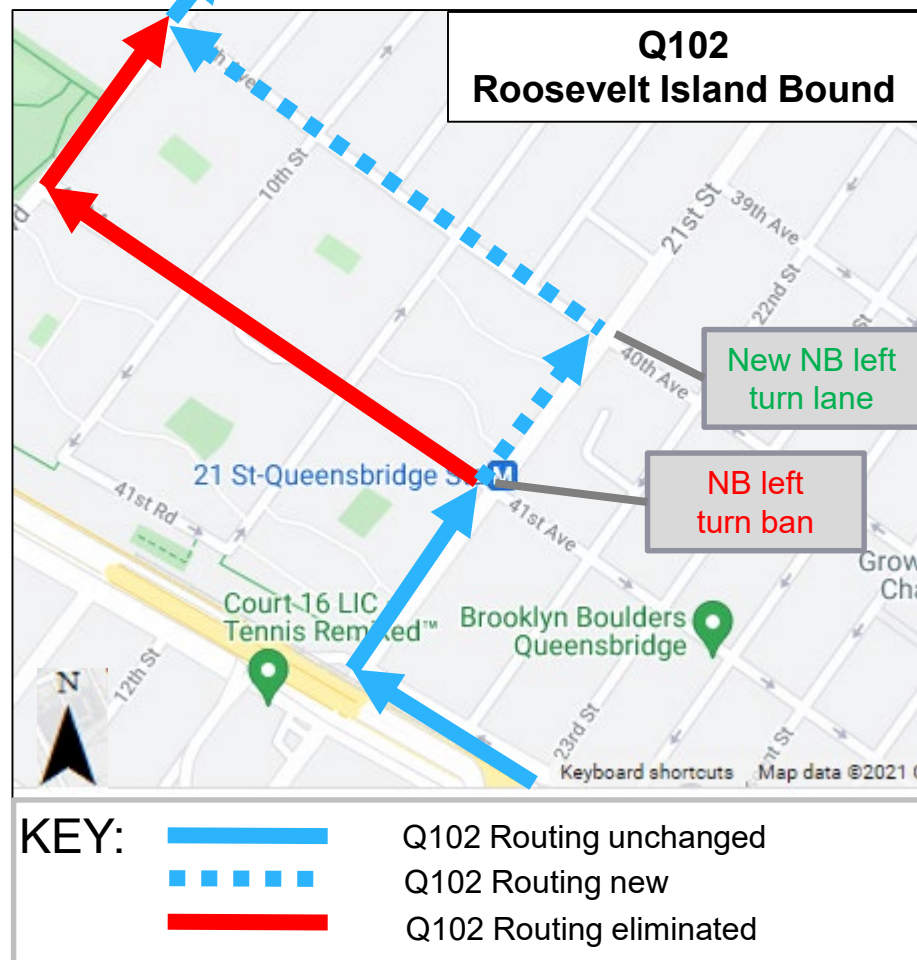


New bus stop

Corridor Proposal

Bus Route Change

- Roosevelt Island-bound Q102 bus currently turns left at 41st Avenue
- Proposed design provides dedicated northbound left turn lane at 40th Ave
- New routing uses 40th Ave instead of 41st Ave
- No changes proposed to Q102 in Astoria-bound direction
- No other bus route changes proposed



Corridor Proposal

Curb Management

Elements – Neighborhood Loading Zone

Neighborhood Loading Zone



75th St betw. 35th and 37th Ave , Jackson Heights

Proposed Neighborhood Loading Zone Locations

- Between 26th Rd and 27th Ave, west side
- Between Astoria Blvd and 28th Ave, west side
- Between 30th Dr and 30th Rd, west side
- Between 34th Ave and 33rd Rd, east side
- Between 35th Ave and 36th Ave, west side
- Between 36th Ave and 35th Ave, east side
- Between 40th Ave and 41st Ave, west side
- Between 41st Ave and Queens Plaza North, west side

Neighborhood Loading Zone - Overview

Goal:

Reduce the amount of delay and safety issues that stem from double parking by providing dedicated space for vehicles to load and unload goods and passengers, especially on residential streets.



Target Users:

- Personal vehicles for quick pickup/drop-off of passengers, groceries etc.
- Commercial delivery vehicles for residential and commercial delivery.
- Taxis and FHV for passenger pickup/drop-off

Current Locations:

142 NLZs throughout the city, **currently expanding into new neighborhoods throughout the five boroughs.**

Signage and Regulation:

'No Parking M-F, 7AM – 7PM' standard with slight adjustments depending on the location, with pedestrian level information sign with program overview.

Corridor Proposal

Other Improvements

Corridor Proposal

Sidewalk Tree Plantings

- Department of Parks and Recreation has completed tree survey
- Potential utility conflicts to be investigated
- Expect to plant 50-100 trees by end of year



Corridor Proposal

Camera Enforcement

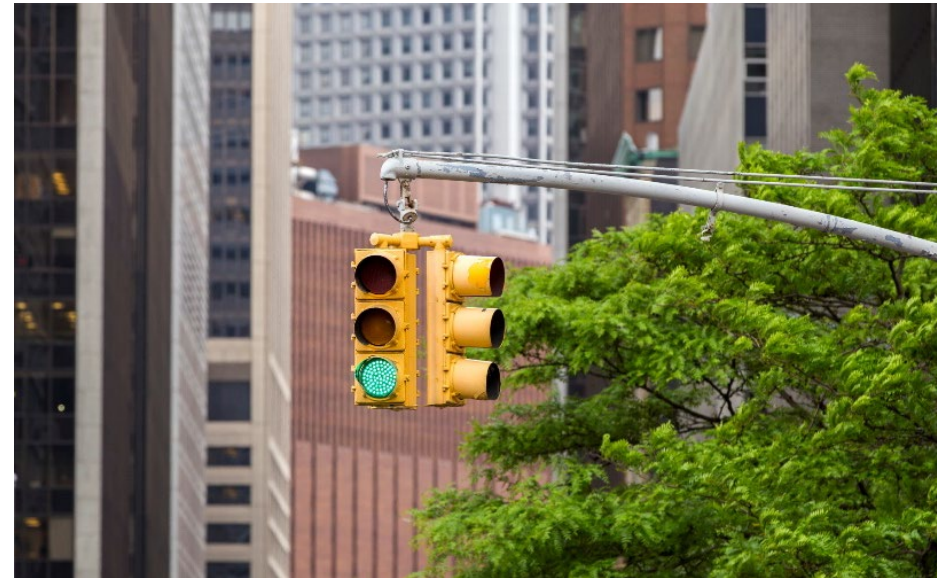
- Will investigate for 2022 installation of road side cameras
- MTA piloting cameras on buses – will eventually be citywide



Corridor Proposal

Signal Timing

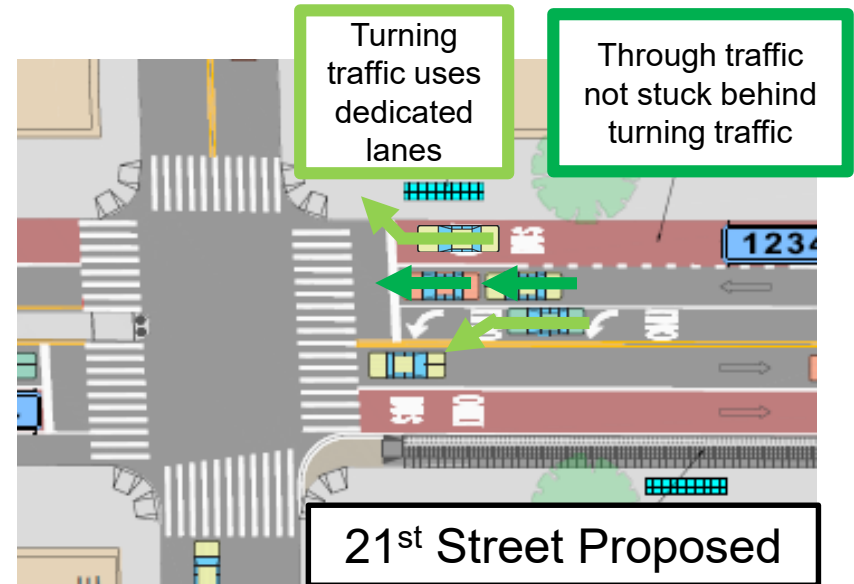
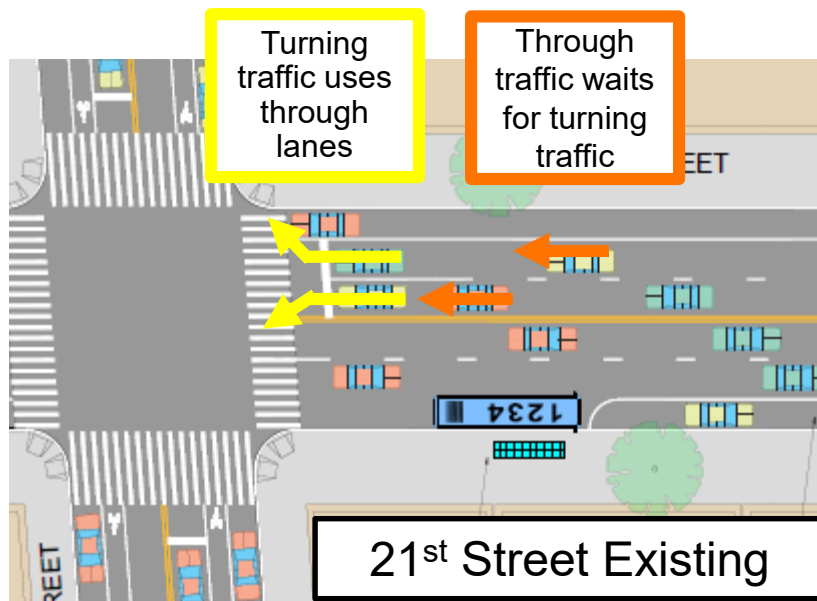
- DOT will adjust signal timing to optimize for new design
- In some cases, green time will be re-allocated to 21st Street from side streets
- DOT studying Transit Signal Priority for 2022 implementation
 - Advanced technology provides extra green signal time when buses are present



Traffic Considerations

Traffic Considerations

- To improve bus travel and pedestrian safety project reduces through travel lanes from two to one in each direction
- However, left turn bans, left turn lanes, and right turns made from bus lanes take turning traffic out of the through lane

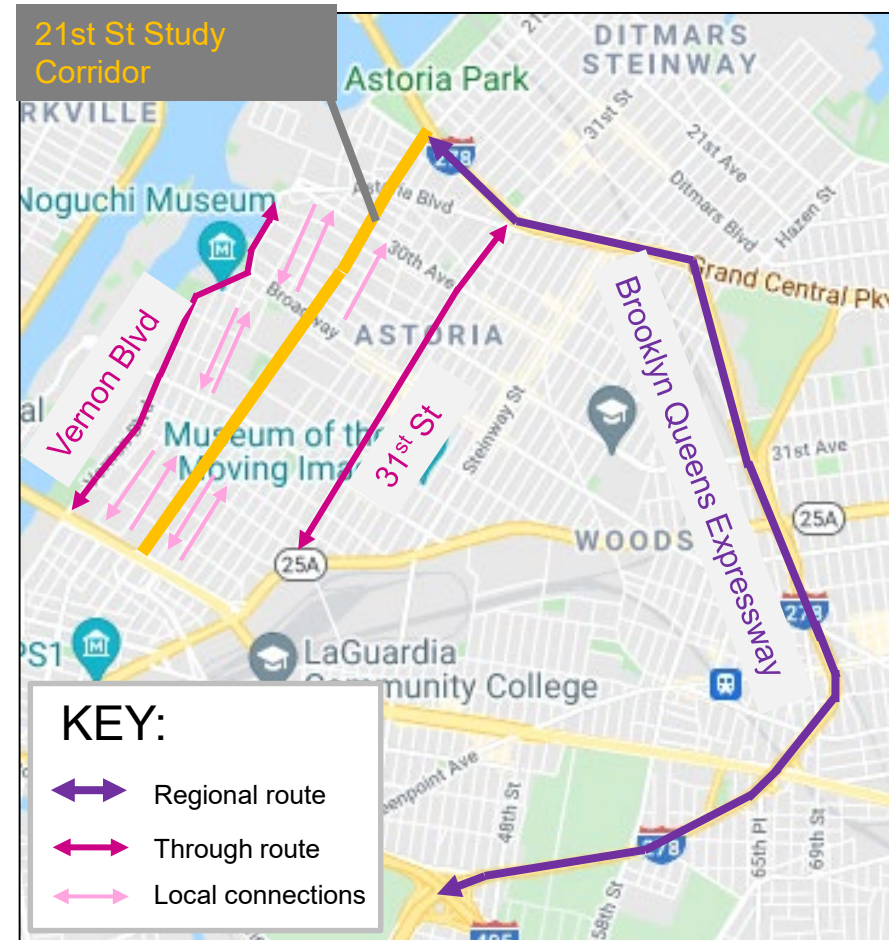


Traffic – What to Expect

- Initial congestion likely as drivers get used to new design of 21st Street
- Conditions will improve over time
 - Some drivers will shift to other means of travel. Increases in bus speed and reliability will make that mode more attractive
 - Some drivers will choose to travel at off-peak times.
 - Some drivers will use parallel streets to reach their destination.
- Traffic Analysis:
 - 10% fewer vehicles would result in traffic conditions slightly worse than existing conditions (with signal adjustments)
 - 20% fewer vehicles would result in traffic conditions slightly better than existing conditions (with signal adjustments)

Traffic Diversions

- The majority of current traffic volumes can be accommodated on 21st St
- Regional through traffic may use BQE
- Some traffic may divert to Vernon Blvd or 31st St
- Many local north-south alternatives for local trips



Next Steps

Next Steps

- **Spring/Summer 2022**
Project Implementation
- **Fall 2022**
Begin Monitoring and Evaluation



Please provide any additional thoughts and comments to DOT

– John O'Neill - joneill@dot.nyc.gov

For more information – nyc.gov/busprojects



Questions and Comments?



Thank You!



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