Coney Island Ave and Cortelyou Road

Community Board 14 Transportation Committee

June 4th, 2024

NEW YORK CITY DOT

Outline

1. Overview of location
2. Summary of past work
3. Existing conditions and issues
4. Proposal
5. Next steps

Overview of Location

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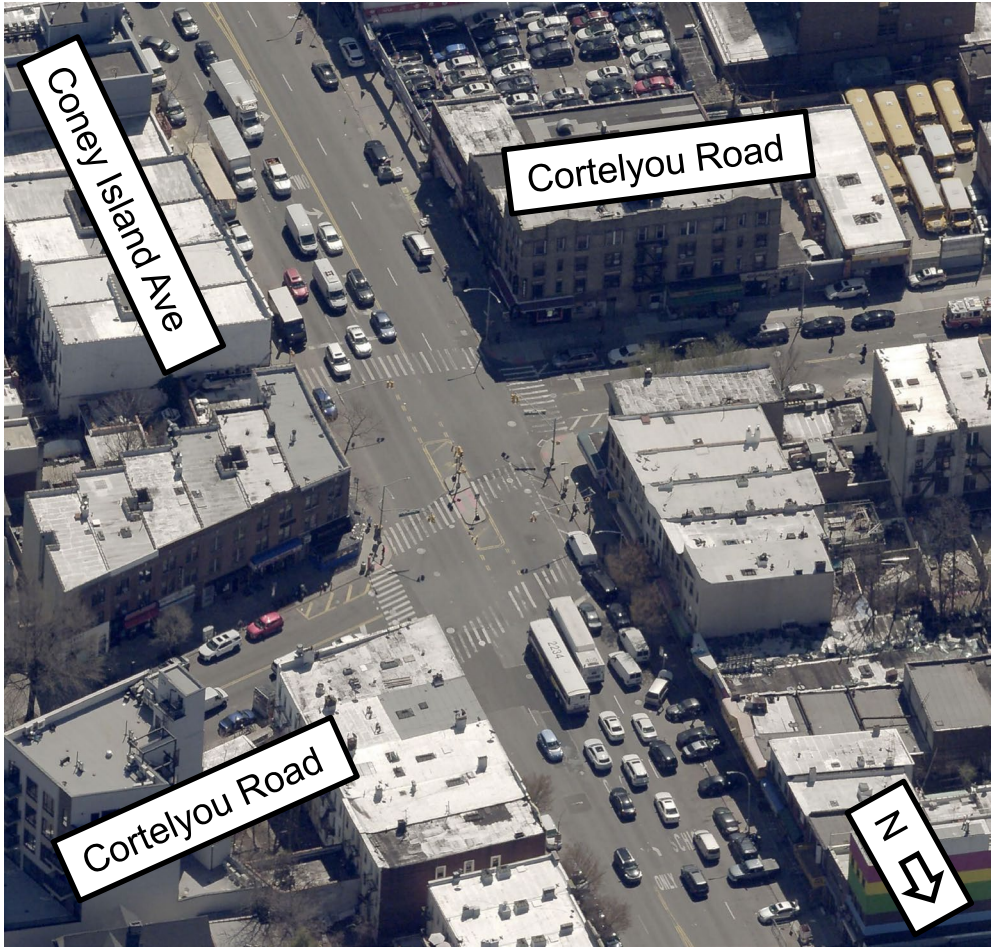
Location // Operations

- Complex intersection of Coney Island Avenue and Cortelyou Road
- Intersection is a “dogleg” intersection, meaning it is miss-aligned, resulting in complicated movements and signal timing
- Both corridors are commercial corridors
- B68 runs north and south on Coney Island Ave
- B103 and BM1, 2, 3, 4 run on Cortelyou Road and turn onto Coney Island Ave north of the intersection



Past Work

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2018 – In-house Safety Project

- DOT project added middle crosswalk and pedestrian island to accommodate pedestrians walking to Cortelyou Rd Q Station
- Project added a leading pedestrian interval and flashing yellow left turn arrows to prevent vehicles from “jumping the red” and conflicting with pedestrians at high speed

Before/After Safety Data

- In the three years after installation, crashes with injuries were reduced 30% and pedestrian injuries reduced 40%
- Safety data only accounts for reported injuries, and does not account for “perceived” safety issues such as near-misses or feeling unsafe

Crashes and Injuries
Three-Year After Analysis, Coney Island Ave at Cortelyou Rd

	Before				After				Change	
	'15/ '16	'16/ '17	'17/ '18	Average	'19/ '20	'20/ '21	'21/ '22	Average	Actual	Percent
Crashes w/ Injuries	4	9	4	**5.7**	2	4	6	**4.0**	-1.7	**-29%**
Motor Vehicle Occupant	5	6	3	**4.7**	3	1	6	**3.3**	-1.3	**-29%**
Pedestrian	1	4	0	**1.7**	0	2	1	**1.0**	-0.7	**-40%**
Cyclist	1	0	2	**1.0**	0	0	1	**0.3**	-0.7	**-67%**
Other Motorized	0	0	0	**0.0**	0	1	0	**0.3**	0.3	**N/A**
Total Injuries	7	10	5	**7.3**	3	4	8	**5.0**	-2.3	**-32%**

The 3-yr before period is October 01, 2015 to September 30, 2018.
The 3-yr after period is June 01, 2019 to May 31, 2022.
The implementation period of October 01, 2018 to May 31, 2019 is excluded.
Source: NYPD AIS/ TAMS Crash Database

Before/After Pedestrian Counts

- Middle crosswalk was the second most used crossing ***prior*** to the project being installed
- Pedestrians using the middle crosswalk increased ***140-260%*** following installation of the crosswalk and island

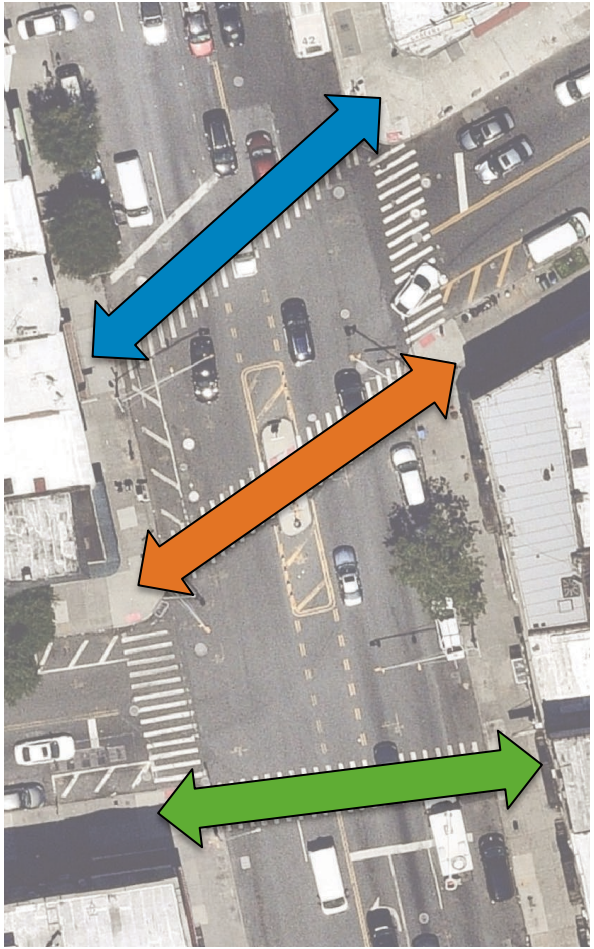
Before Data: May 2016
After Data: October 2019

Before: 160AM/155PM
After: 75AM/95PM

Before: 220AM/90PM
After: 535AM/330PM

140-260% Increase

Before: 330AM/140PM
After: 230AM/130PM



Existing Conditions

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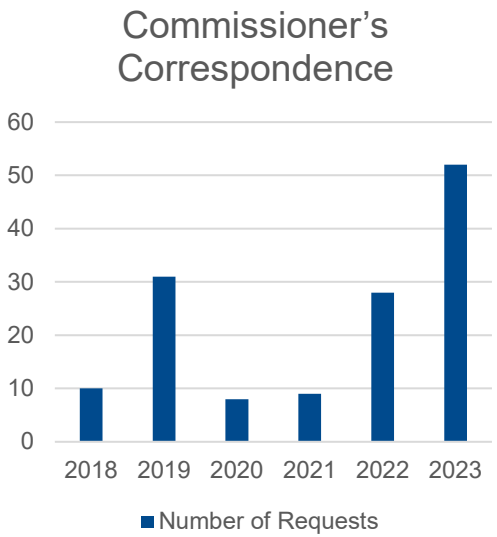
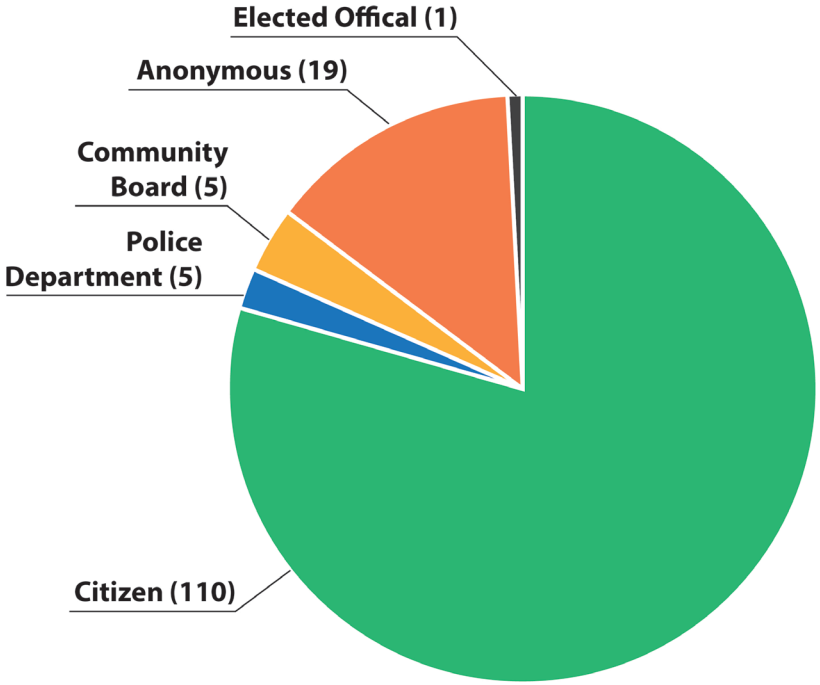
Requests for further Changes

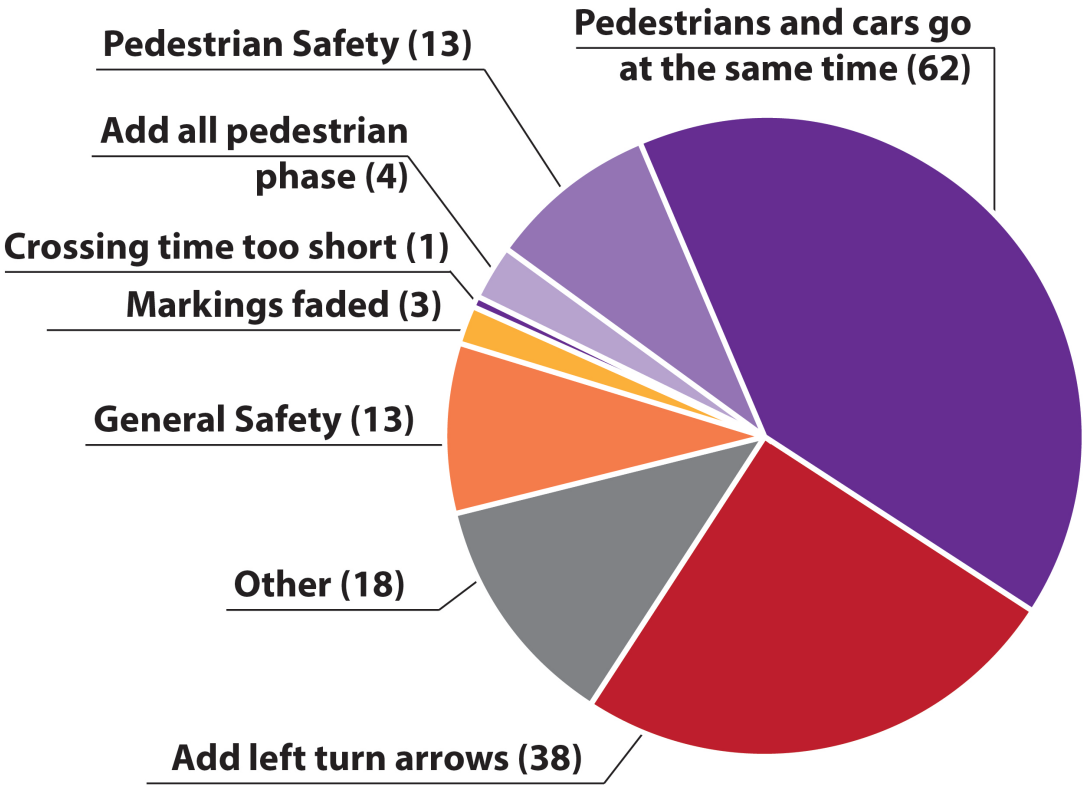
- 138 requests for improvements to the intersection since 2018
- Number of requests spiked after the project was installed in 2018/2019, and again in 2023 after a community led organizing effort





Requests for further Changes

- Pedestrian issues were 50% of the complaints, with pedestrians and vehicles going at the same time across Coney Island Avenue as the most identified issue
- Adding left turn arrows and general safety were frequently identified
- Other requests include:
  Turn bans, right turns only, crosswalk removals, congestion mitigation, and double-parking enforcement



Project Area

Non-standard Movements

- Thru movements are non-standard and cross multiple crosswalks
- By design, thru movements function as a left turn, followed by a right turn
- Non-standard operations leads to confusion and aggressive turns

Crosswalk Conflicts

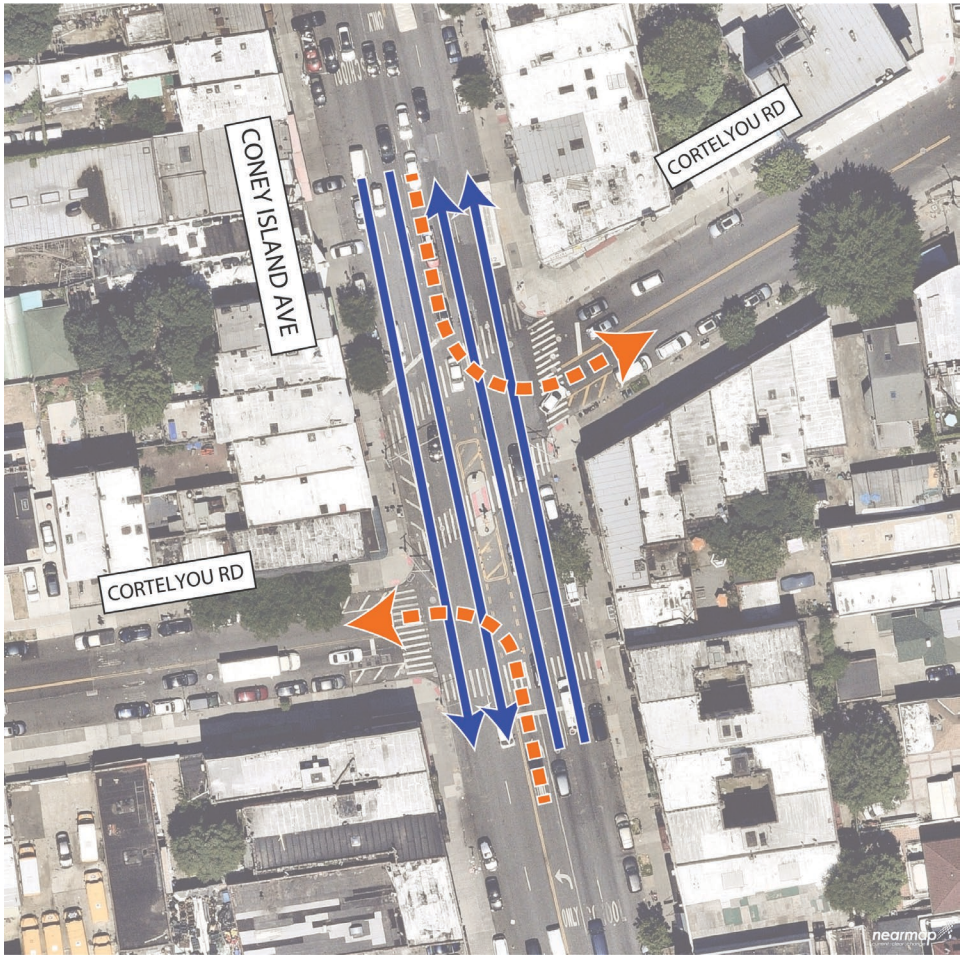
- Complex movement and middle crosswalk proceed at the same time
- Many vehicles do not fully yield to pedestrians with the right-of-way
- Pedestrians have no dedicated crossing time in the signal phasing, all crossing time is shared with turning vehicles

Stopping in Intersection

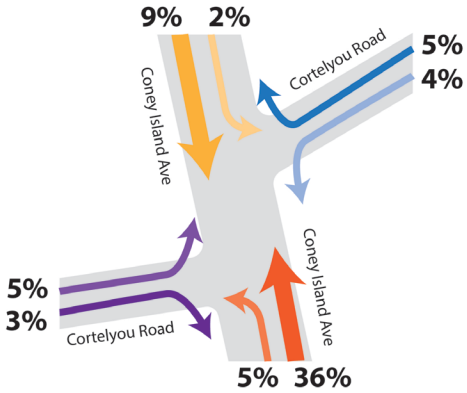
- Some drivers turn left and stop prior to the middle crosswalk, even when the is no pedestrian crossing
- Recently installed signals on north side of intersection have increased amount of stopping in the intersection

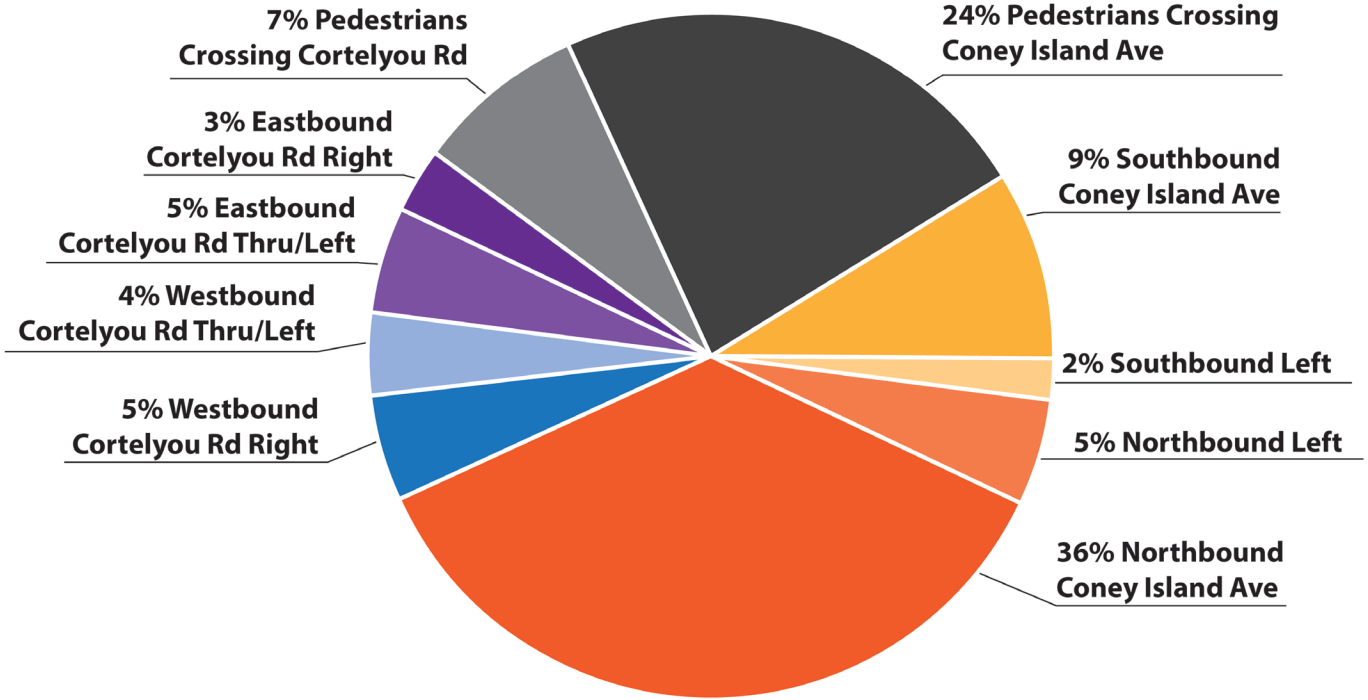
Difficult Left Turns

- Due to heavy thru volumes on Coney Island Ave, left turns onto Cortelyou Rd are difficult
- Difficult left turns is a driving factor for MTA to consider moving buses off Cortelyou Rd onto Beverley Rd
- Many left turning vehicles “turn on red” at the end of the signal phase or during pedestrian LPI, ignoring red turn arrow



People in the Intersection





*2023 AM period with 2,590 users in intersection

Project Proposal

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Explored Scenarios

- DOT analyzed three scenarios for improvements and presented to the community in Fall 2023
- Scenarios included:
    1. Protected Left Turns
    2. All Pedestrian Phase
    3. Minor markings/signage improvements

- Community spoke mostly in favor of the “All Pedestrian Phase” scenario

Explored Scenarios

Protected Left Turns:

- Alleviates left turn issue
- Severely delays thru traffic on Coney Island Ave
- Queue spillback would block access to left turn lanes, negating improvements
- Negatively affects bus speeds
- Does not solve/improve pedestrian issues at the intersection

Minor Markings/Signage Improvements:

- Does not solve left turn issues
- Does not improve bus operations
- Does not solve pedestrian issues at the intersection

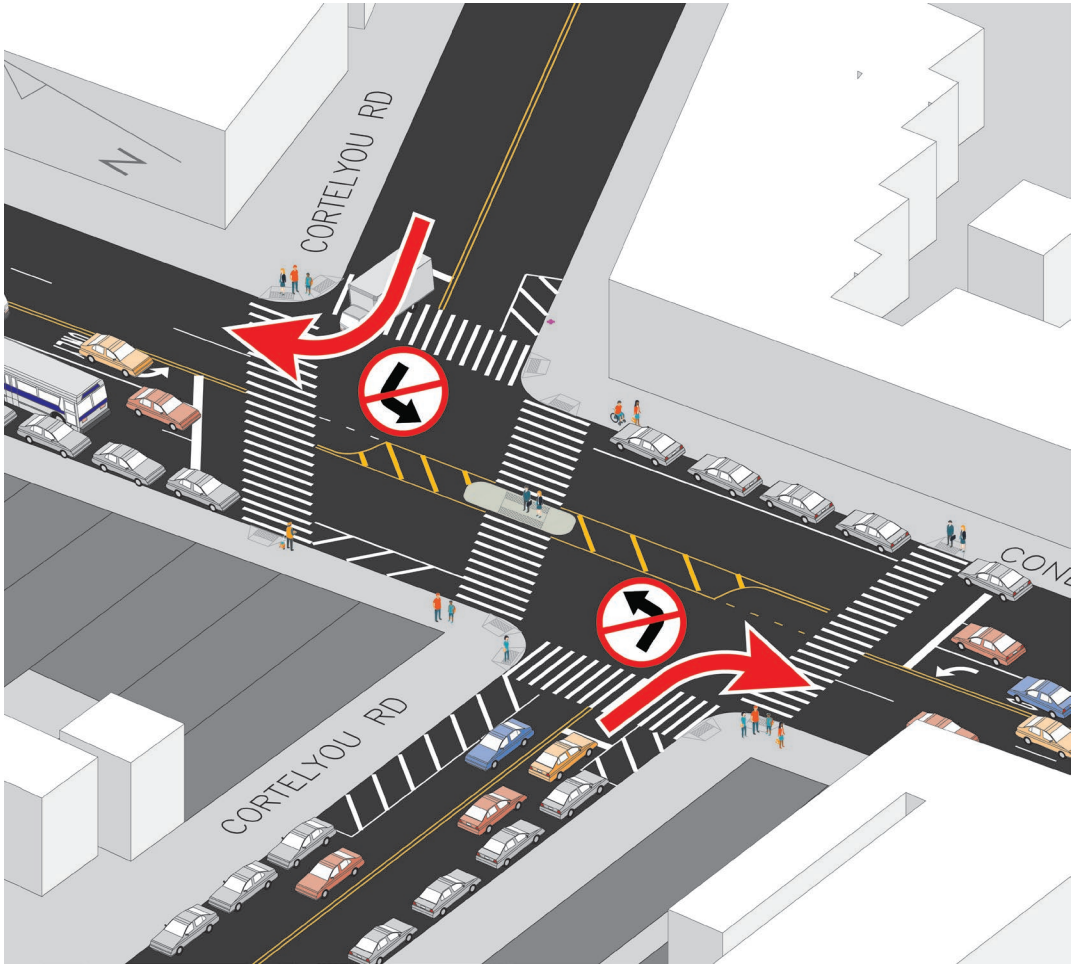
DOT analysis determined these options to be unfeasible.

Preferred Scenario: All Pedestrian Phase

- Add all pedestrian phase (Barnes Dance) to create conflict free crossings
- Add long, protected left turn phase for left turns on Coney Island Avenue without impacting thru traffic
- Requires all traffic on Cortelyou Road to turn right at Coney Island Avenue
- Allows for consolidation of both signal phases for Cortelyou Road as there are no turn conflicts

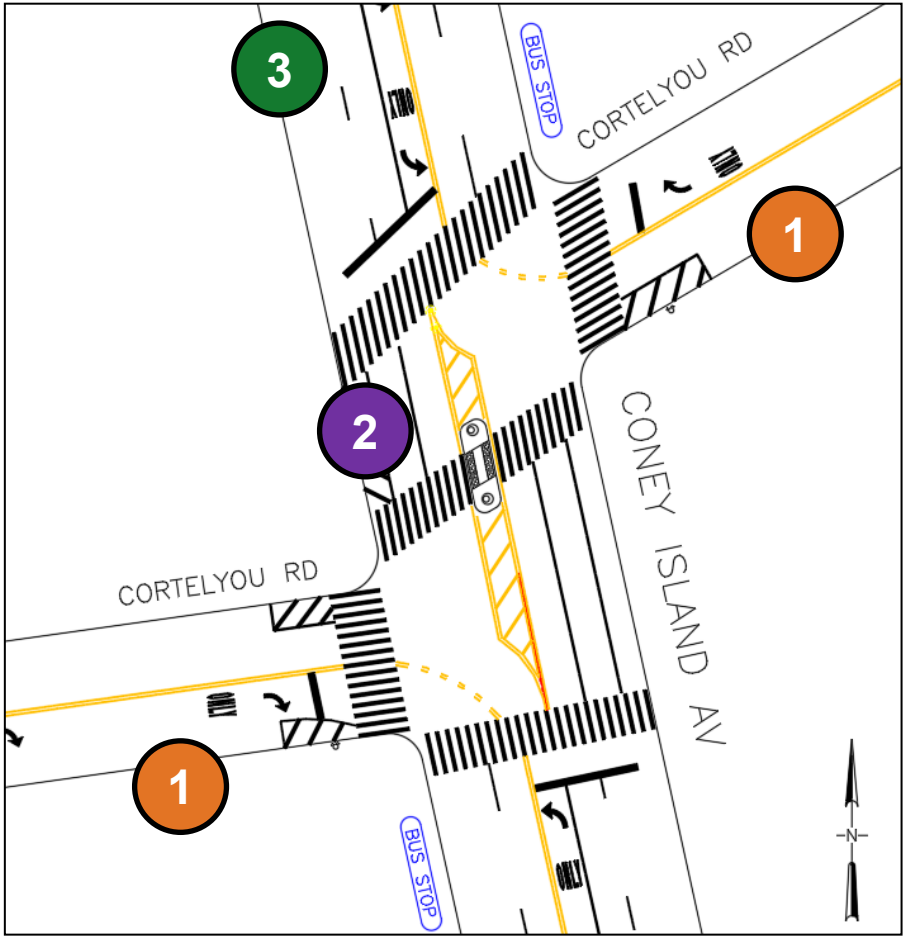
Making it Work

- To allow for new All Pedestrian Phase, both Cortelyou Rd signal phases must be consolidated
- This requires all traffic on Cortelyou Road approaching Coney Island Avenue to turn right, left and thru movements would be banned
- Turn restrictions would be reinforced with markings and signage
- FDNY operations would be maintained, and emergency vehicles would still be able to make all turns with sirens and lights activated



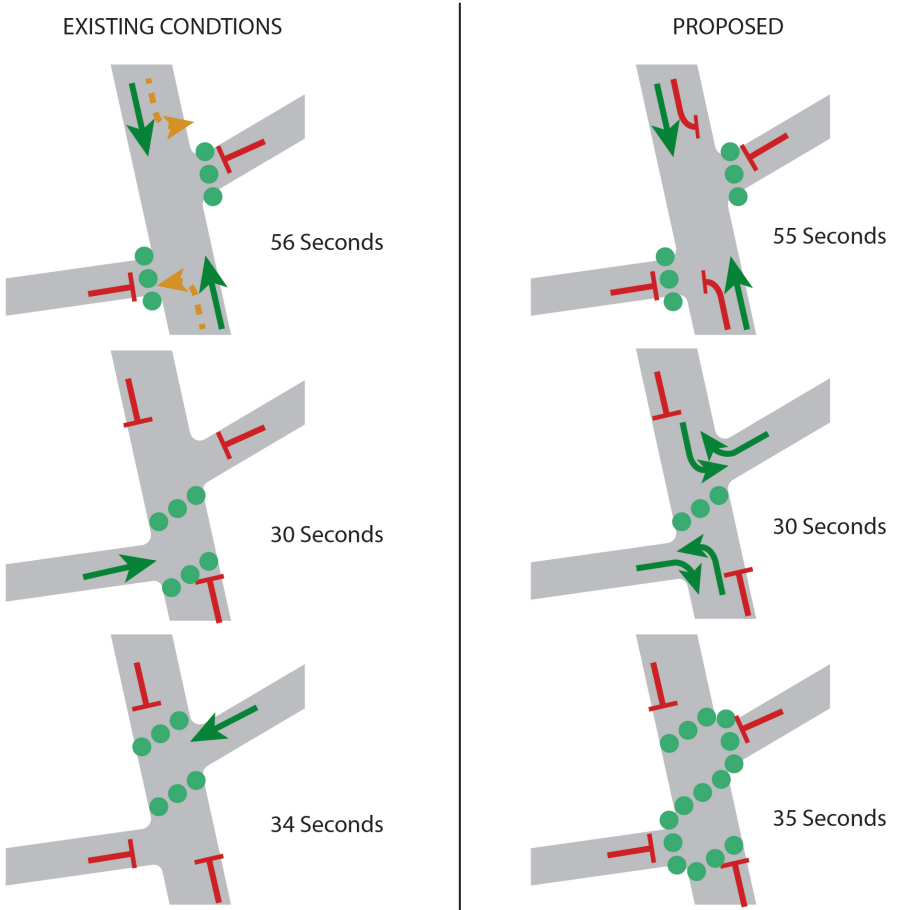
Physical Changes

1. Add right turn only markings
2. Lengthen median markings
3. Lengthen Left Turn Bay for southbound Coney Island Ave



Changing Signal Timing

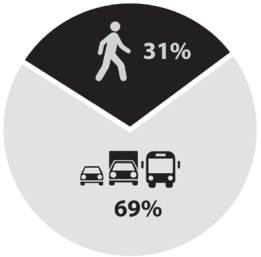
- Traffic diversions allow for consolidating the two Cortelyou Rd phases into one phase
- Coney Island Ave left turns could be paired with protected right turns on Cortelyou Rd, allowing for long period for left turns to occur
- New, all pedestrian phase would allow for conflict free crossings in all crosswalks in the intersection, giving 31% of intersection users 29% of the signal timing

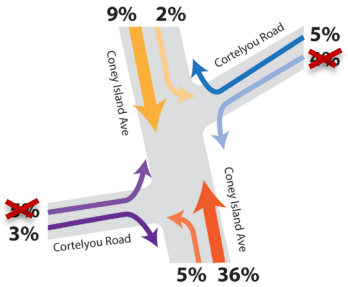


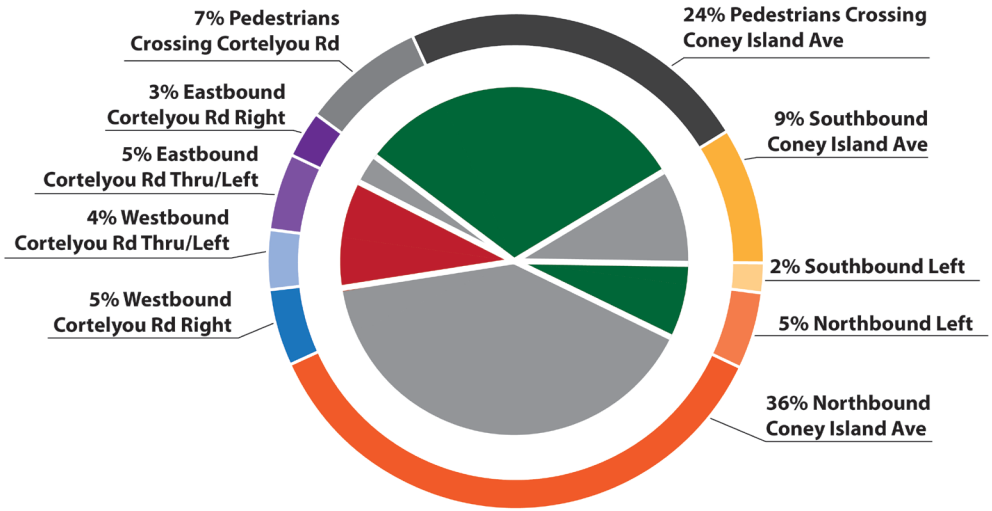
*Timing is draft and subject to change following detailed analysis

Who is affected?

- Diversions would worsen operations for **9%** of intersection users, who would have to find alternate routes
- Left turn phase would improve operations for **7%** of intersection users
- All pedestrian phase would improve operations for **31%** of users, by creating conflict free crossings
- The remaining **53%** of users would see limited improvements or no changes to operations







*2023 AM period with 2,590 users in intersection

Where do vehicles go?

Eastbound Cortelyou Road Diversion*

- **Thru traffic** towards Ocean Avenue would use Avenue C or Ditmas Avenue
  (~95 vehicles in the peak hour/4 cars per cycle)
- **Eastbound left turning vehicles** heading north could use Avenue C or Ditmas Ave to access Coney Island Ave
  (~30 vehicles in the peak hour/1 cars per cycle)

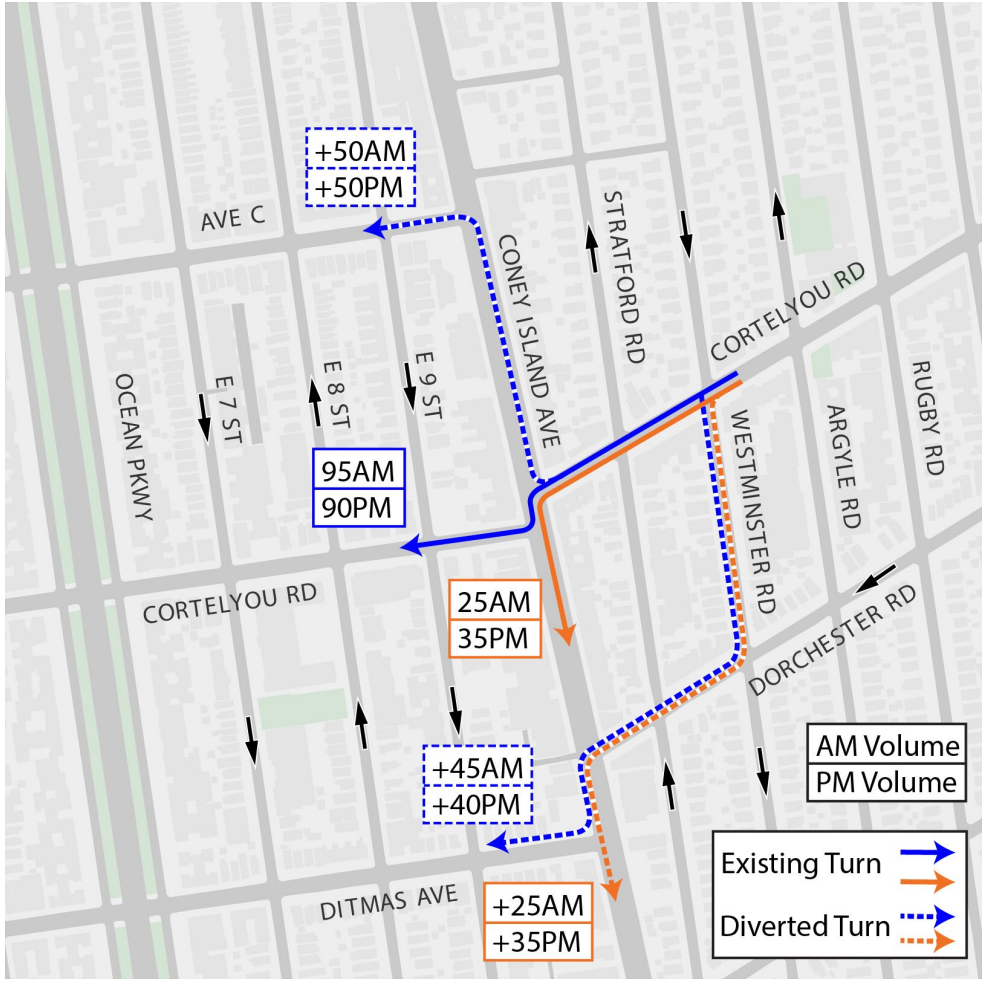
*Traffic diversion routes are estimates, some vehicles may take routes entirely outside the study area

Where do vehicles go?

Westbound Cortelyou Road Diversion*

- **Thru traffic** towards Ocean Parkway would use Avenue C or Dorchester Rd and Ditmas Avenue
  (~95 vehicles in the peak hour/3 cars per cycle)
- **Westbound left turning** vehicles heading south could use Dorchester Rd
  (~30 vehicles in the peak hour/1 car per cycle)

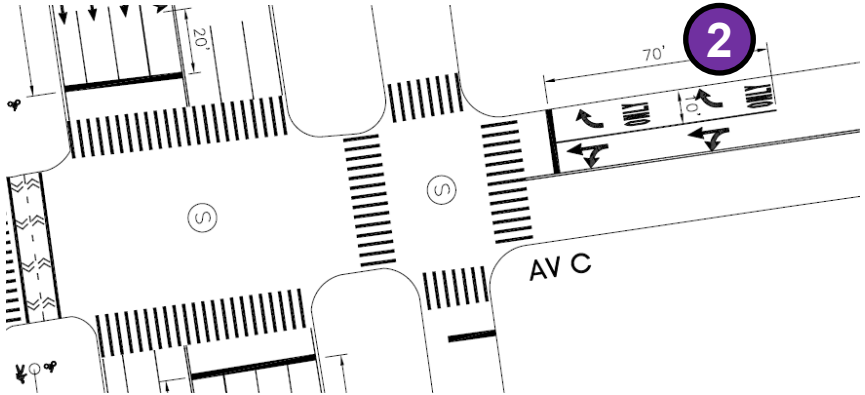
*Traffic diversion routes are estimates, some vehicles may take routes entirely outside the study area

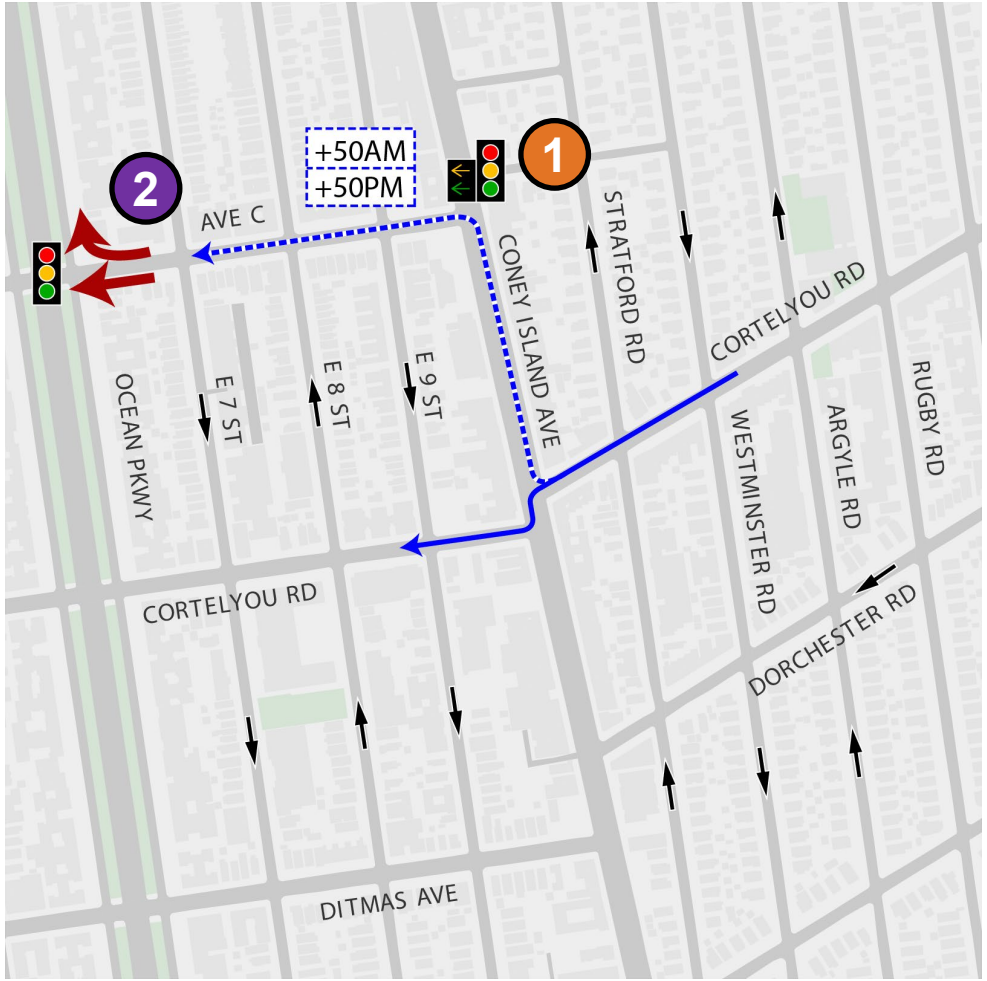


Additional Changes

Study of diverted westbound thru traffic requires additional improvements at other locations:

1. Add protected left turn arrow at Coney Island Ave and Avenue C for increased turn volume
2. Add additional lane for WB volume approaching Ocean Parkway (repurposes 4 parking spots)

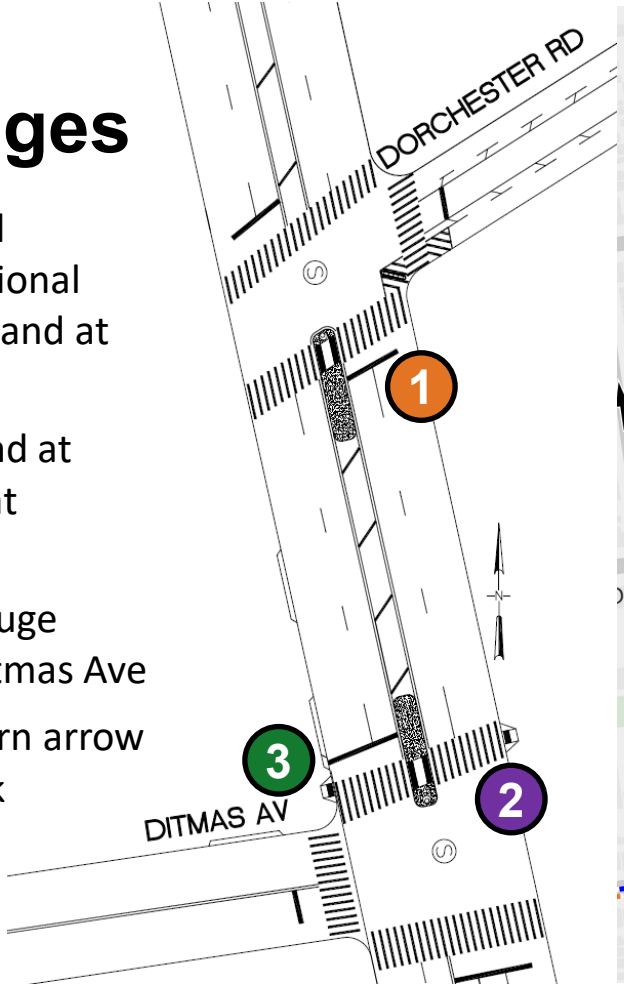


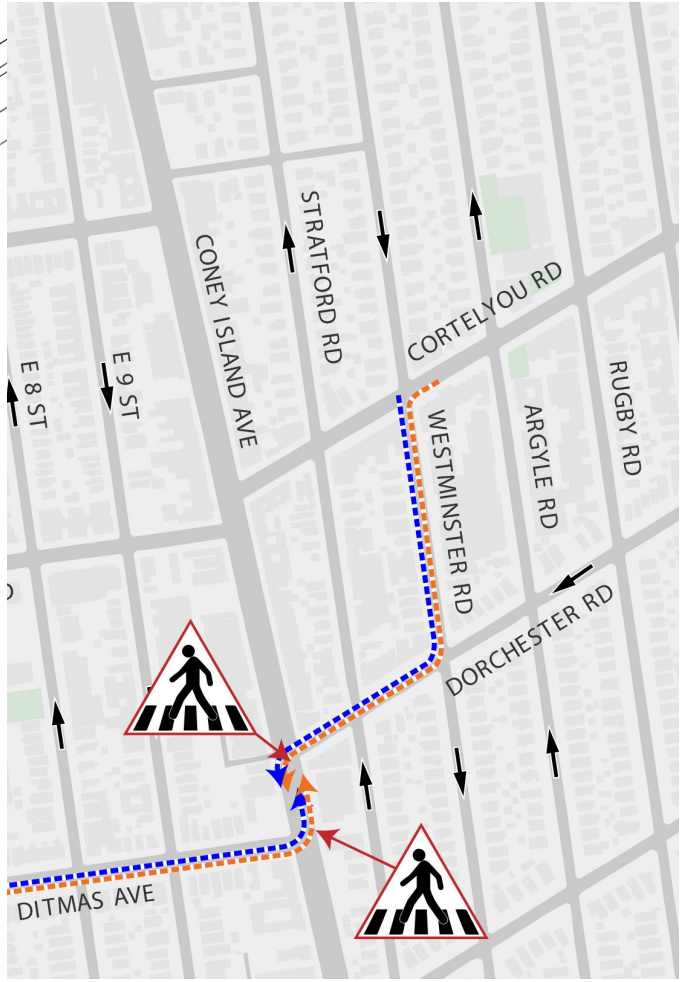


Additional Changes

Study of diverted eastbound and westbound traffic requires additional improvements at Dorchester Rd and at Ditmas Ave:

1. Install pedestrian refuge island at existing southern crosswalk at Dorchester Rd
2. Install new crosswalk and refuge island on northern side at Ditmas Ave
3. Remove southbound right turn arrow phase to add north crosswalk

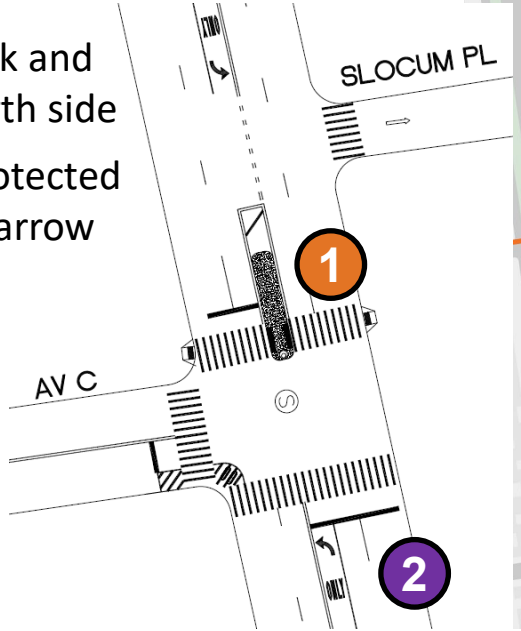




Additional Changes

Study of diverted eastbound left turning traffic requires additional improvements at Avenue C and Coney Island Ave

1. Install new crosswalk and refuge island on north side
2. Add northbound protected left turn phase and arrow (previously shown)



All Pedestrian Phase Summary

- Add all pedestrian phase and left turn arrows at Coney Island Ave and Cortelyou Rd
- Ban thru and left turns for Cortelyou Rd at Coney Island Ave
- Use markings and signage to reinforce turn bans
- Install new crosswalks and islands at Avenue C and Ditmas Ave
- Install new island at Dorchester Rd
- Install new travel lane approaching Ocean Parkway at Avenue C

Project Benefits

- Improves operations for a large percentage of users (38%)
- Alleviates left turn issue
- Alleviates pedestrian safety concerns by creating conflict free crossings
- Improves bus operations
- Enhances pedestrian safety at other locations along Coney Island Avenue
- Maintain emergency access

What comes next?

- September 2023 Community Presentation
- Spring 2024 FDNY Briefings
- **June 2024 Community Presentation**
- Final Design and Approvals
- Summer/Fall 2024 Installation

Thank You For Attending!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