



DELANCEY ST

Protected Bike Lanes and Safety Improvements

Presented to Manhattan Community Board 3
April 5, 2017



Background

1

PROJECT LOCATION

Current gap in protected bike lane network

between Williamsburg Bridge path and Allen St - 1st Ave

No connection

from new two-way protected bike lane on Chrystie St to Williamsburg Bridge path

Delancey St

Chrystie St to Clinton St

Proposal:

- 2-way protected bike lane on eastbound Delancey St, between Allen St to Clinton St
- Eastbound bike lane on Delancey St from Chrystie St to Allen St



NEW YORK CITY MOBILITY

Growth in NYC (2010-2015)



+370,000
New York City
residents



+520,000
new jobs



+20%
growth
Tourists

Recent Travel Trends (2010-2015)



+10%
growth in
subway trips



+80%
growth in daily
cycling trips
Including 60,000
Citi Bike trips daily

Biking provides an efficient and affordable transportation option for a growing city

GROWTH IN CYCLING

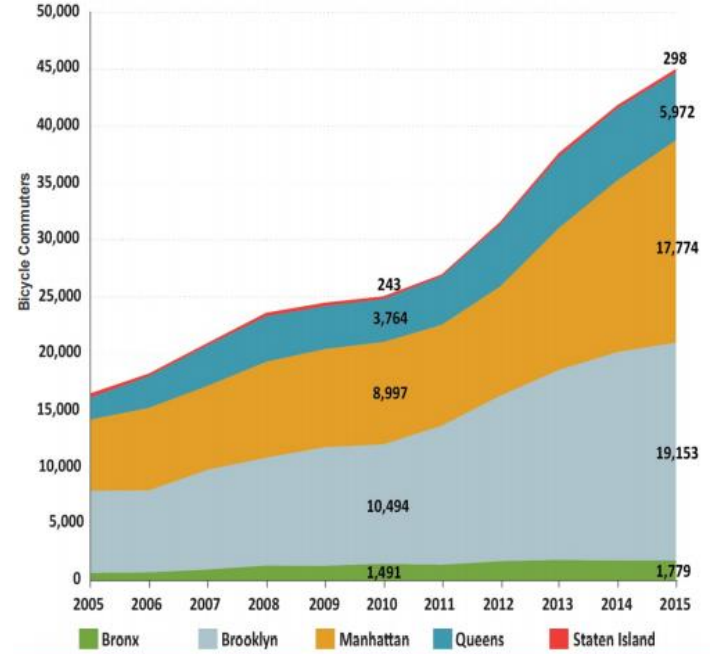
More and more New Yorkers are biking to work, 2010-2015:

+98% bike commuting in Manhattan

+83% bike commuting in Brooklyn

In 2016, an average of 7,580 cyclists used the Williamsburg bridge everyday, a 13% increase compared to 5 years ago

Commute to Work – Rolling 3 Year Average from ACS by Borough



GROWTH IN CYCLING – L Train Shutdown

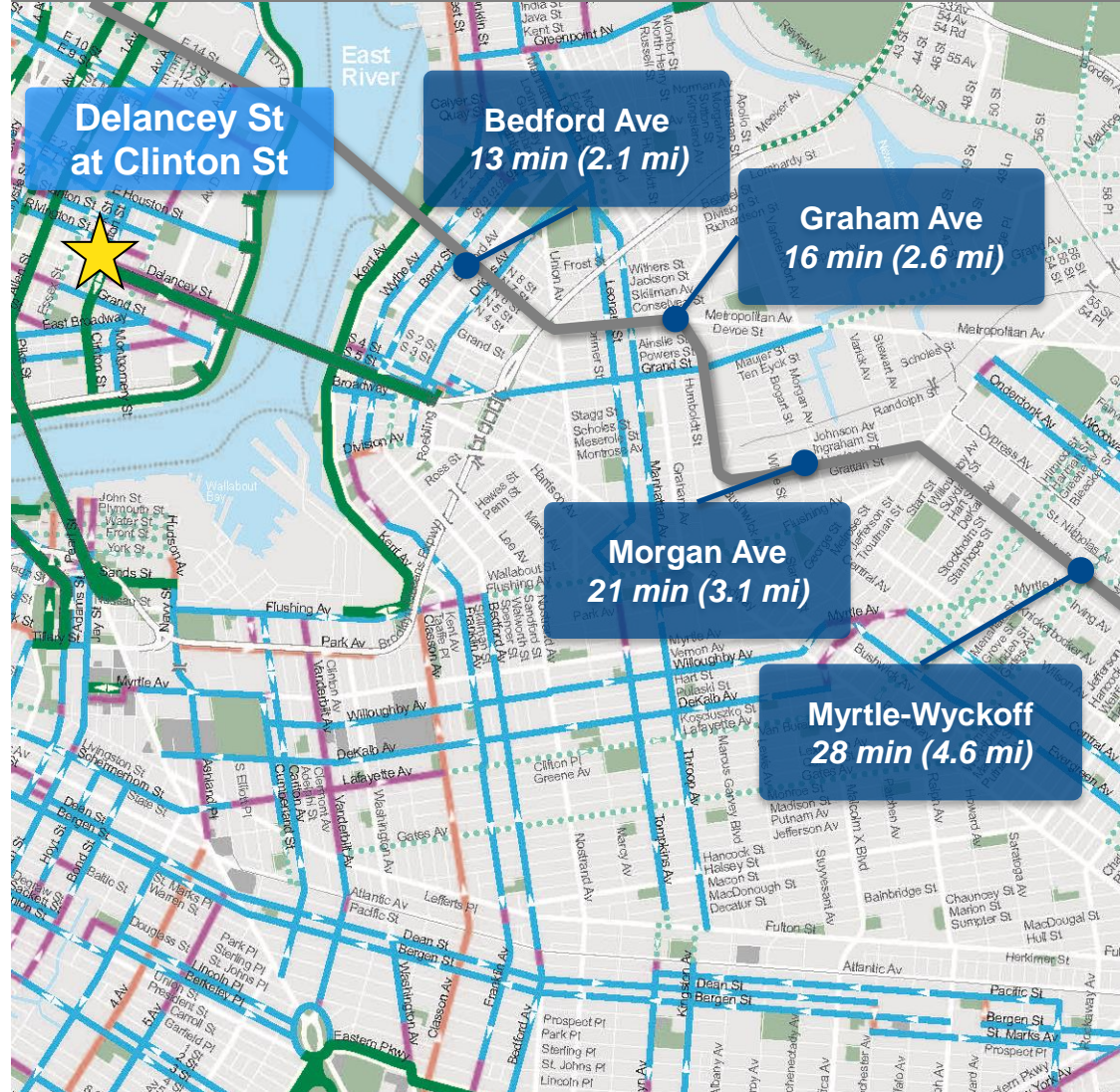
Substantial increase in bike ridership on Williamsburg Bridge expected with closure of L line

- During Hurricane Sandy, bike volumes on Manhattan Bridge increased **200-300%**
- During the 2005 transit strike, bike volumes on the East River bridges **more than quadrupled**

Biking will provide a convenient alternative to transit for regular L train riders

MTA will release a draft concept plan in the **Spring/Summer 2017**

Approximate Bike Travel Times to Manhattan from L Train Stations, via the Williamsburg Bridge



SAFETY

Delancey St, 2010-2014

Chrystie St to Clinton St

3 Pedestrian fatalities

1 Bicyclist Fatality

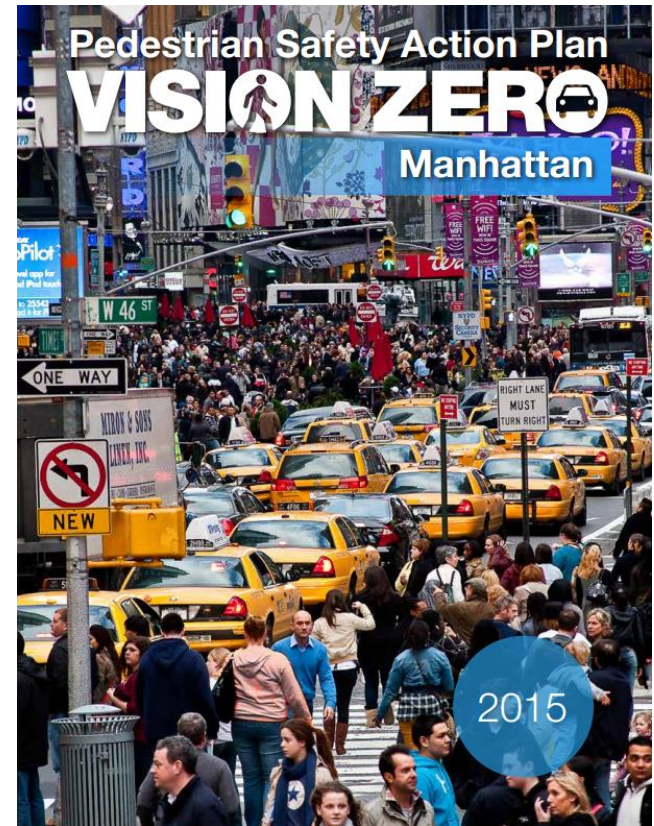
14 Pedestrians severely injured

11 Cyclists severely injured

**Delancey St at Essex St is a
Vision Zero Priority Intersection**

**Pedestrian Safety Project Installed
2012 – 2 year analysis**

- 48% drop in total crashes
- 39% drop in Crashes with injuries



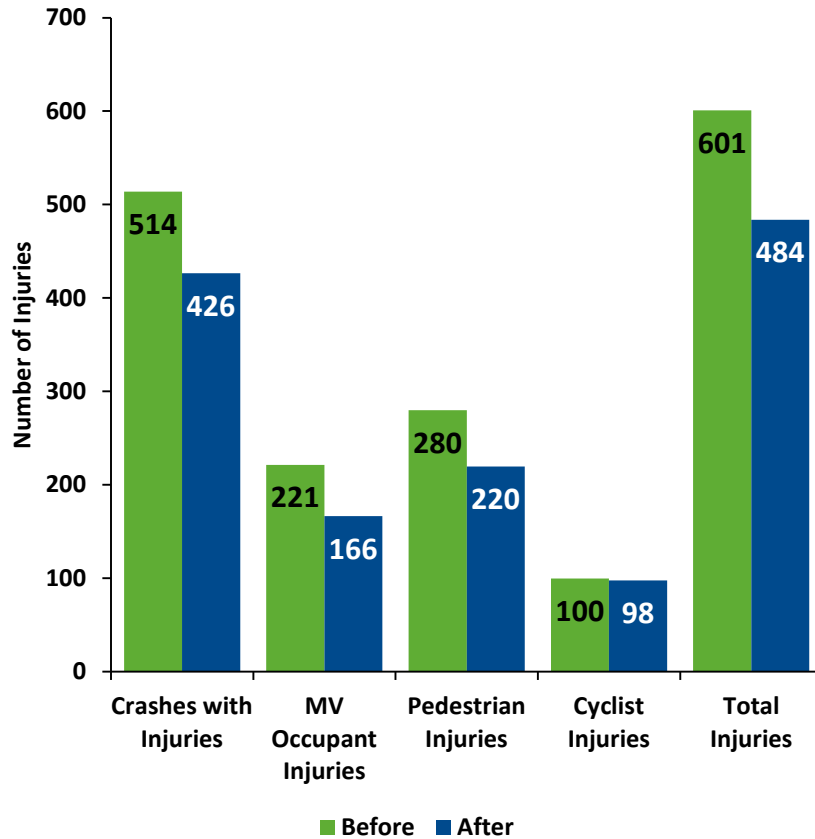
Delancey St (Chrystie St to Clinton St), MN
Injury Summary, 2010-2014 (5 years)

	Total Injuries	Severe Injuries	Fatalities	KSI
Pedestrian	83	14	3	17
Bicyclists	92	11	1	12
Motor Vehicle Occupant	468	24	0	24
Total	643	49	4	53

Source: Fatalities NYCDOT, Injuries: NYSDOT, KSI: Persons Killed or Severely Injured

SAFETY – Protected Bike Lanes

Protected Bicycle Lanes with 3 years of After Data: Before and After



Protected bicycle lane projects with 3 years of after data include the following: 9th Ave (16th-31st), 8th Ave (Bank-23rd, 23rd-34th), Broadway (59th-47th, 33rd-26th, 23rd-18th), 1st Avenue (Houston to 34th), 2nd Ave (Houston-34th), Columbus Ave (96th-77th) Note: Only sections of projects that included protected bicycle lanes were analyzed
Source: NYPD AIS/TAMS Crash Database

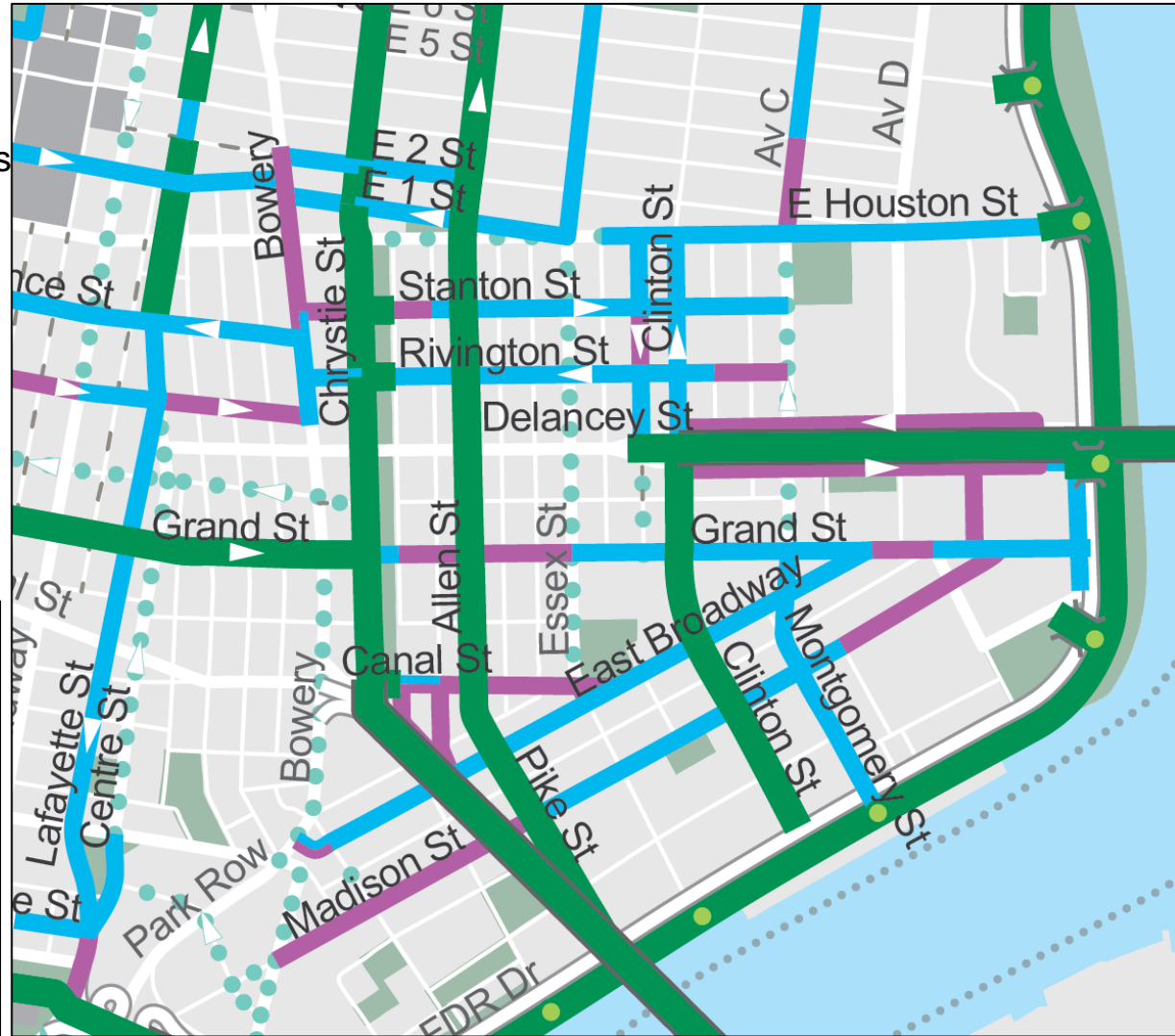


Proposal

2

Existing Conditions

- Williamsburg Bridge is currently accessed via Suffolk St, Clinton St
- Issues with existing routes, blocked lanes, double parking, narrow streets
- Typical weekday, 1,050 cyclist use Delancey St, currently lacks a bike facility
 - 580 EB
 - 457 WB

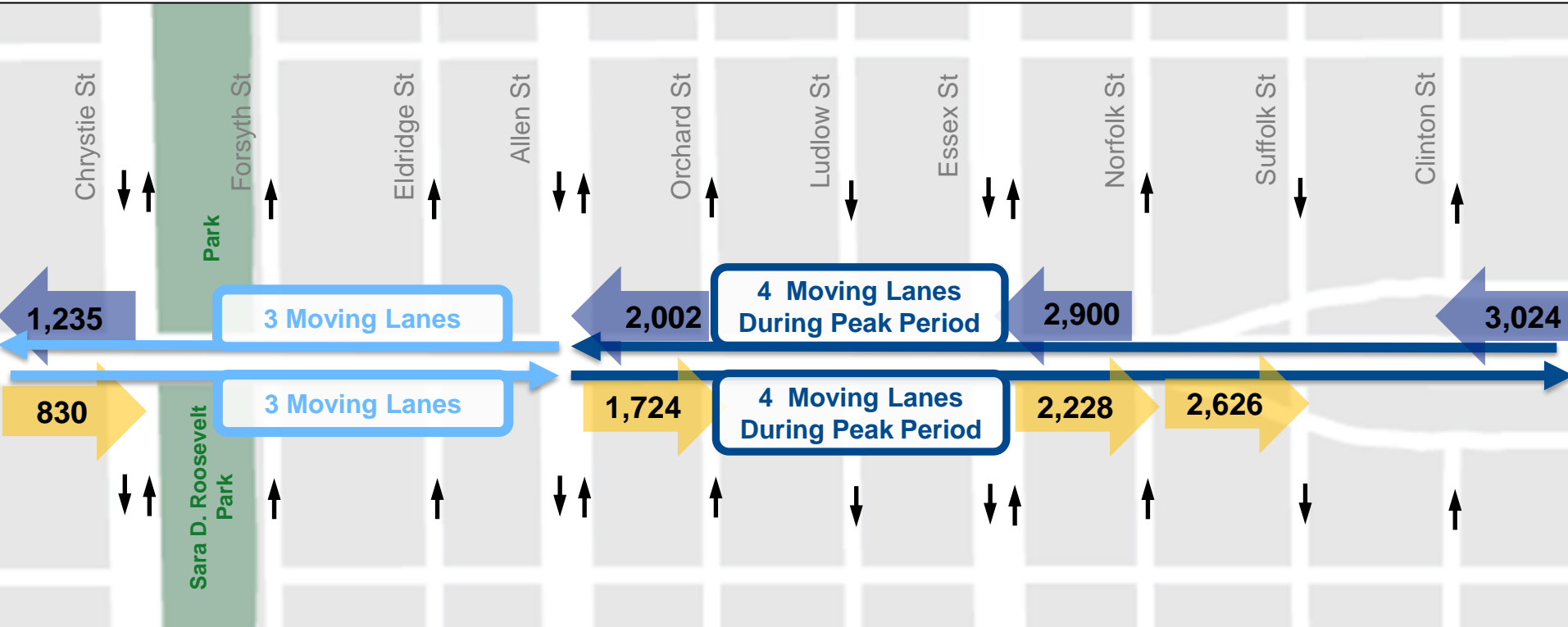


Existing Vehicular Volumes and Capacity

- 4 moving lanes in each direction during the peak period
- Peak volumes are substantially higher in the westbound direction
- Potential opportunity to add protected bike lanes in eastbound roadway

Peak Hour Volumes

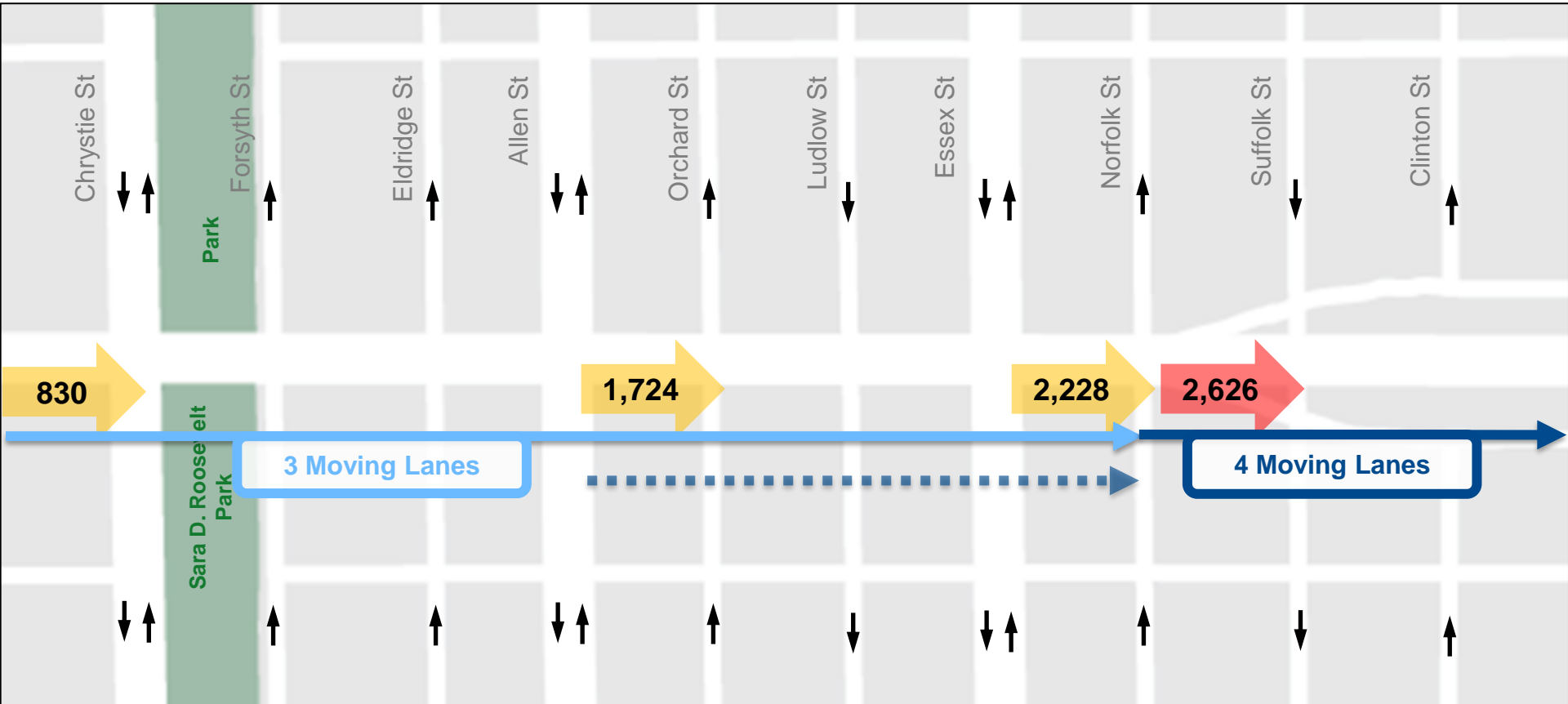
WB Peak (8-9am) EB peak (5-6pm)



Proposed Capacity Changes – Eastbound Roadway

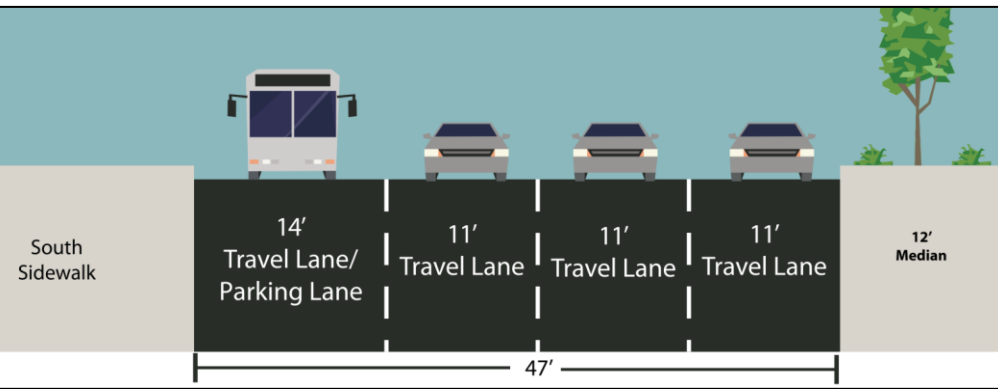
- Remove one lane between Allen St and Norfolk St
- Peak period traffic volumes exceed threshold for 3 lanes east of Norfolk St
- Maintain 4 moving lanes east of Norfolk St

Peak Hour Capacity



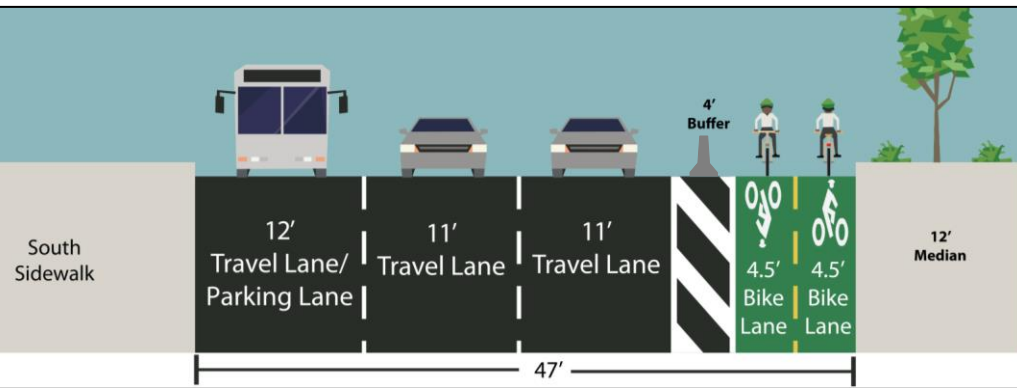
Existing Conditions: Eastbound, Allen St to Suffolk St

- 4 travel lane lanes during peak periods
- 3 travel lanes and 1 parking lane during off-peak periods
- No bike facilities



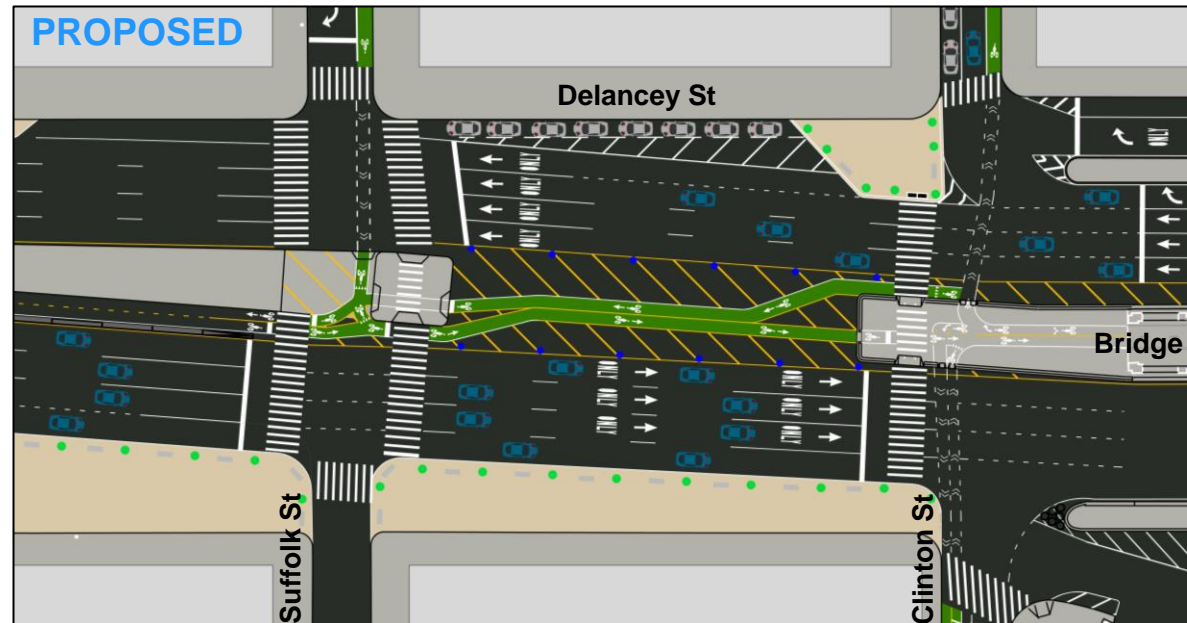
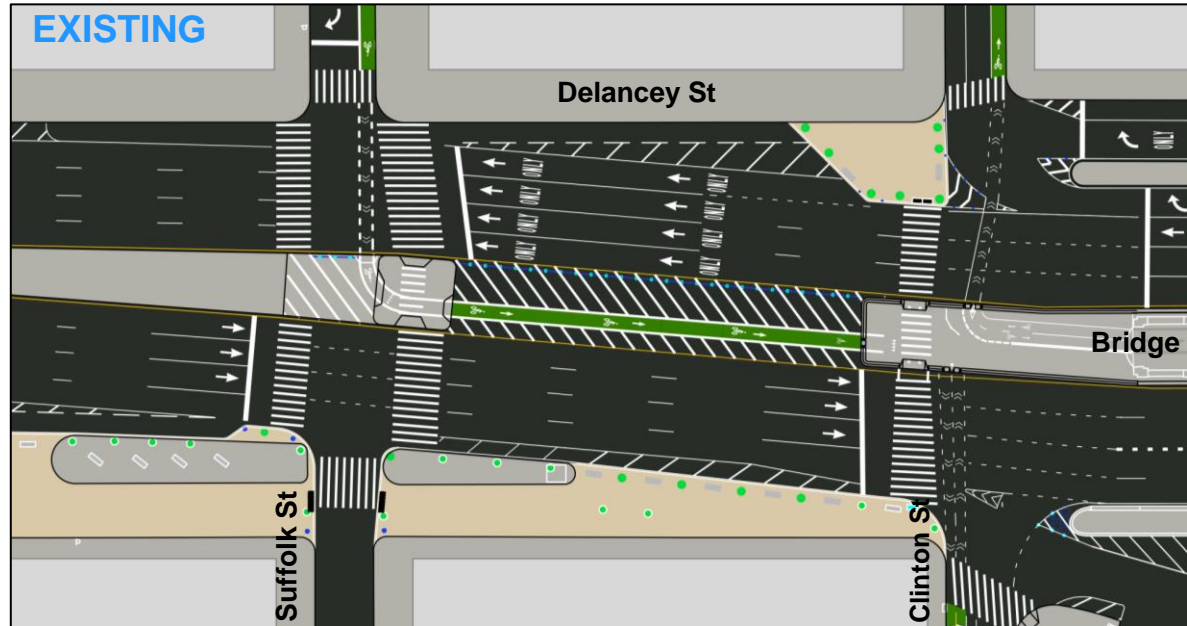
Proposed Conditions: Eastbound, Allen St to Suffolk St

- Remove 1 eastbound travel lane from Allen St to Norfolk St
- Add two-way Jersey barrier protected bike lane along south side of median
 - Creates direct, protected bike connection between bridge and Allen St protected lanes*
- Add painted median extensions
 - Increases pedestrian safety at intersections*



Suffolk St to Bridge

- Create two-way bike lane in striped median space
 - *Completes connection*
- Design slows fast moving cyclists coming off the bridge
 - *Reduces pedestrian conflicts*
- Slightly reduces plaza space but improves space by removing obsolete concrete islands
 - *Increases usable plaza space*

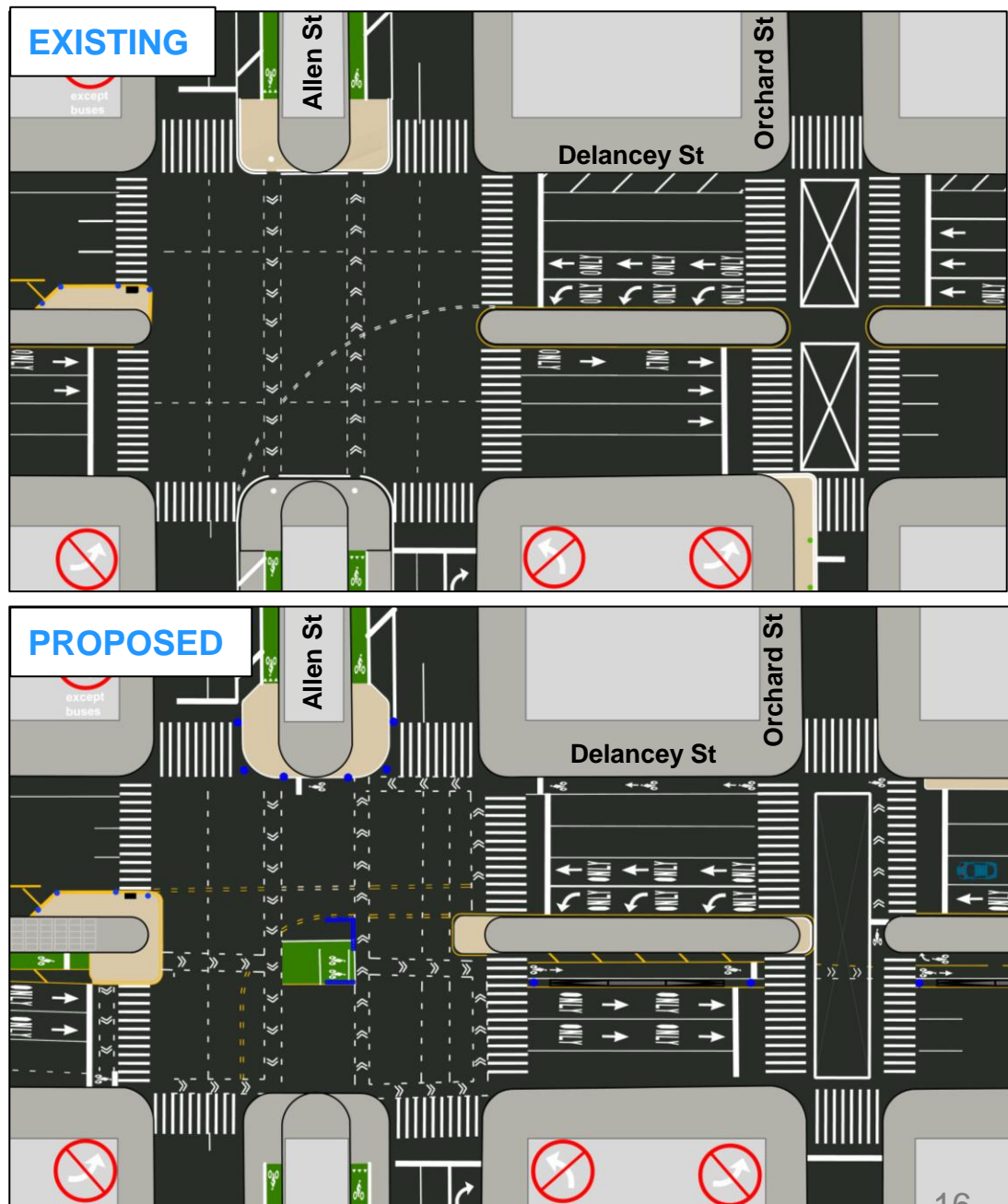


Allen St Intersection

- Add two-way Jersey barrier protected bike lane along south side of median
 - *Creates direct, protected bike connection between bridge and Allen St protected lanes*
 - *Feeds into northbound 1st Ave*

- Add protected bike box in the intersection
 - *Facilitates safe bike movements*

- Add painted median extension, improving pedestrian environment
 - *Shorter, safer crossings*



Traffic Analysis

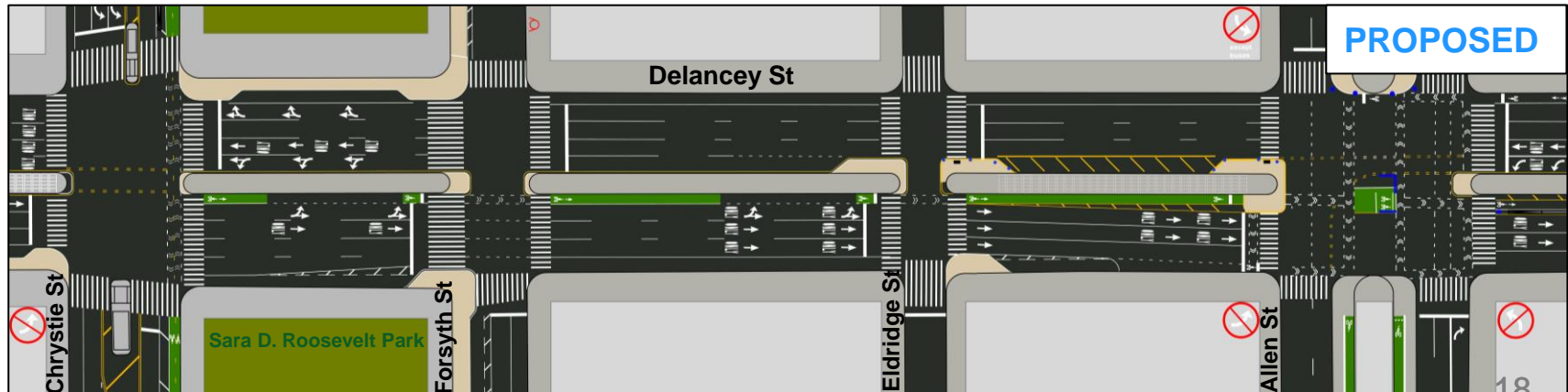
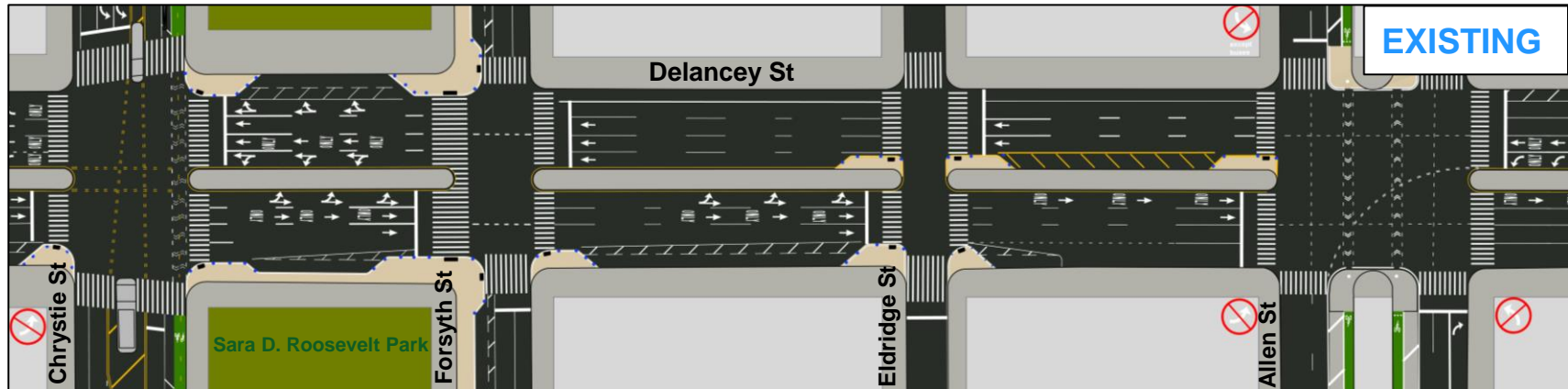
- **Allen St to Ludlow St:** Slight *increase* in delay, no change in level of service
- **Essex St to Norfolk St:** Minor impact on level of service
- **Suffolk St to Clinton St:** Slight *decrease* in delay, no change in level of service

Delancey St – e/b from Eldridge to Clinton St Traffic Analysis Summary

Intersection	Storage (ft.)	PM Peak (5-6P)					
		Existing			Proposed		
		V/C Ratio	Control Delay (seconds)	LOS	V/C Ratio	Control Delay (seconds)	LOS
Allen St	272	0.73	11.6	B	0.93	20.3	C
Orchard St	189	0.66	3.4	A	0.84	5.1	A
Ludlow St	217	0.69	3.3	A	0.87	6.7	A
Essex St	242	0.77	10.0	B	0.97	21.0	C
Norfolk St	245	0.76	7.1	A	0.96	13.5	B
Suffolk St	243	1.02	33.2	C	1.02	30.8	C
Clinton St	237	1.07	48.5	D	1.07	47.9	D

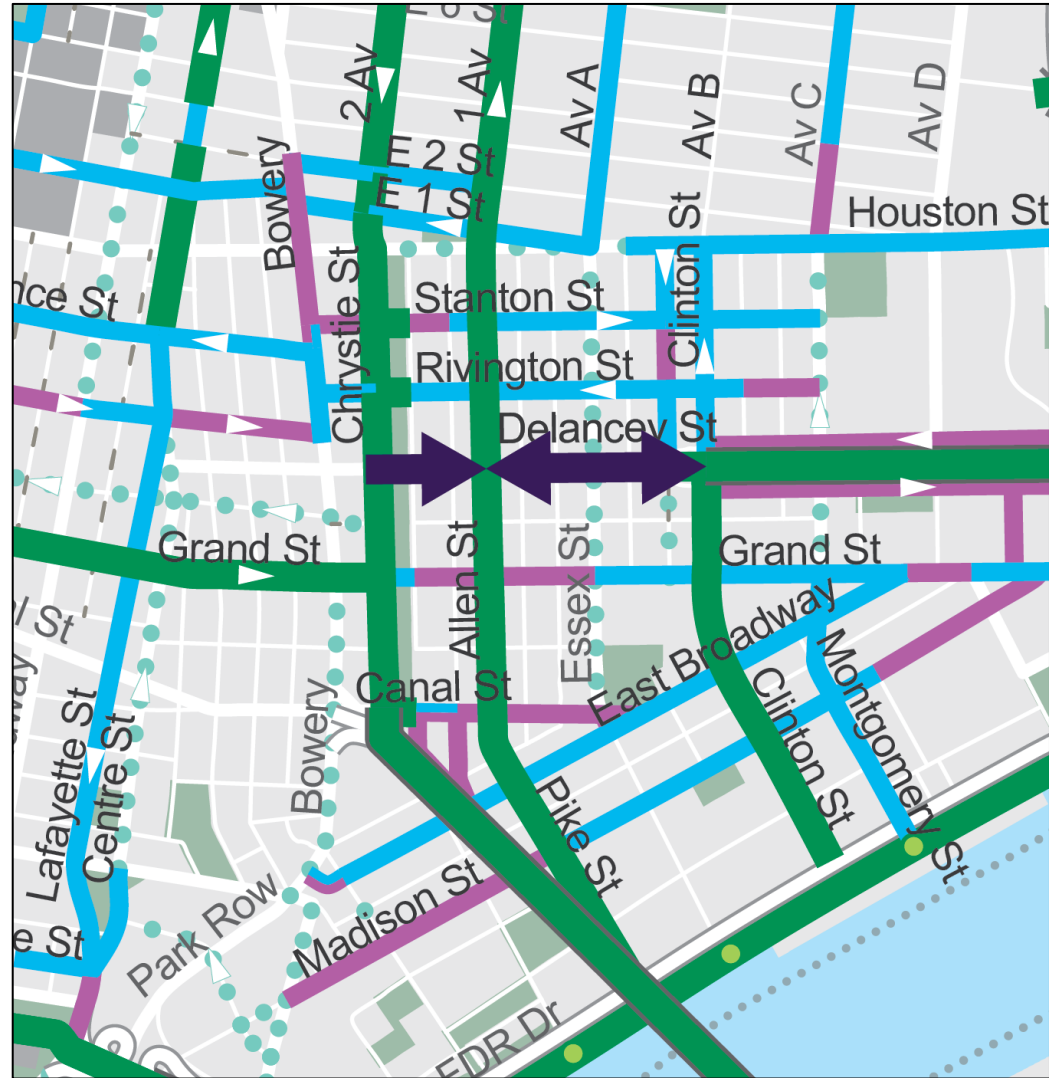
Chrystie St Connection

- Add eastbound bike lane along the median
 - *No impact to capacity or parking*
- Creates connection to new Chrystie two-way bike lane
 - *Via Chrystie connects to southbound 2nd Ave*
- Add painted median extension, improving pedestrian environment
 - *Shorter, safer crossings*



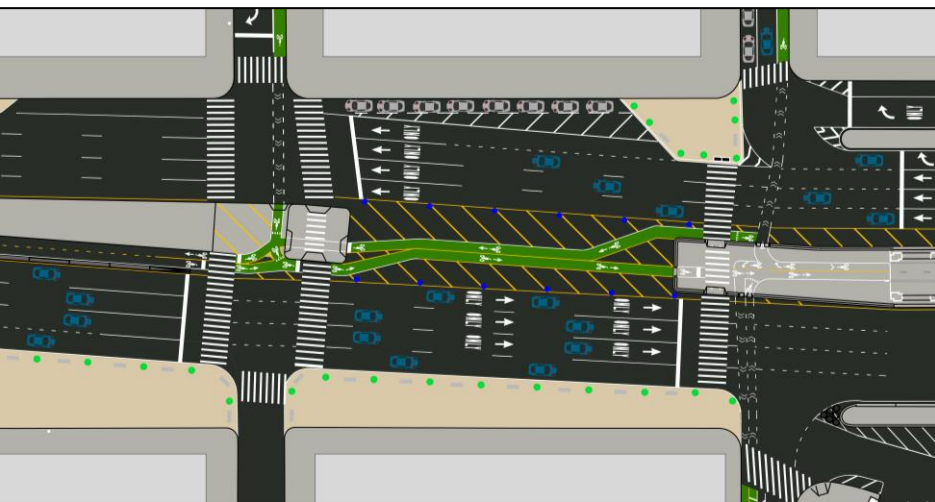
New Protected Bike Lane Connections

- Two-way bike lane on Delancey St between Clinton St and Allen St
 - *Creates direct, protected bike connection between bridge and Allen St protected lanes*
 - *Feeds into northbound 1st Ave*
- One-way bike lane on Delancey St between Chrystie St and Allen St
 - *Creates direct, bike connection from southbound 2nd Ave via Chrystie St to the Bridge*



SUMMARY

- Creates direct, connection between Williamsburg Bridge, Allen St and Chrystie St bicycle facilities
 - Feed Uptown 1st Ave and 2nd Ave protected bike lane network
 - Makes crosstown connections simpler and safer
- Provides dedicated, safe space for bicycles in advance of projected increase in ridership during L train shutdown
- Better accommodates high bike volumes
- Improves interaction between bicycles and pedestrians along at the base of the bridge
- Add painted median extension, creating shorter, safer pedestrian crossings
- No impact to parking



THANK YOU!

Questions?



NYC DOT



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