



6TH AVENUE 35TH ST TO CENTRAL PARK SOUTH

Complete Street Redesign

Presented to Community Board 5 on March 23, 2020



Background

1

6th Avenue Community Request

Community has requested complete street redesign of 6th Ave in Midtown

- Community Board 5
- Joint Letter from State and Local Elected Officials
 - NYS Senator Hoylman
 - Borough President Brewer
 - NYS Assemblymember Glick
 - NYS Assemblymember Gottfried
 - NYC Council Member Garodnick
 - NYC Councilmember Johnson

Heavy commercial activity, transportation hubs, tourist destinations cause congestion for all users

Direct connection to Central Park for motorists, pedestrians, cyclists



Safety Vision Zero

Vision Zero Priority Corridor

12.5 pedestrians killed or severely injured per mile

4 Vision Zero Priority Intersections

42nd St, 47th St, 57th St, Central Park South

2 Fatalities 2013-2019

1 Pedestrian, 1 Motor Vehicle Occupant



6th Avenue (34th Street – Central Park South)

2013 - 2017

	Total Injuries	Severe Injuries	Fatalities	KSI
Pedestrian	182	14	1	15
Bicyclists	111	12	0	12
Motor Vehicle Occupant	254	9	1	10
Total	547	35	2	37

Green Wave: A Plan for Cycling in New York City



Analysis of fatalities key factors (2014-Present):

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

Citywide Protected Bicycle Lane (PBL) Network

- **Build 30 miles of protected bicycle lane annually**, guided by a PBL vision document.

Better Design:

- Implement **new design** standards based on national & international best practices **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 the road campaign
- **Educate all street users** about safe truck operation on city streets
- Increase helmet giveaways and helmet use encouragement.

Safety Protected Bike Lanes

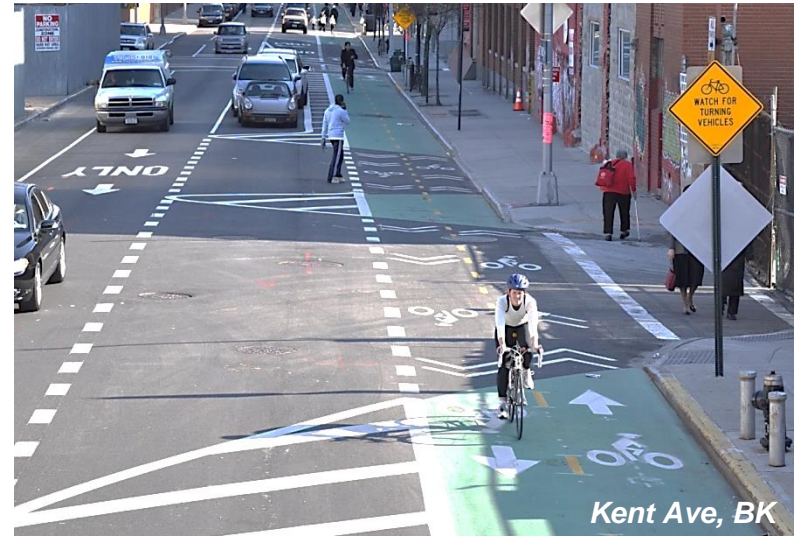
Street designs that include protected bike lanes increase safety for all users

-15% drop in all crashes with injuries

-21% drop in pedestrian injuries

on streets where protected bike lanes were installed 2007-2017

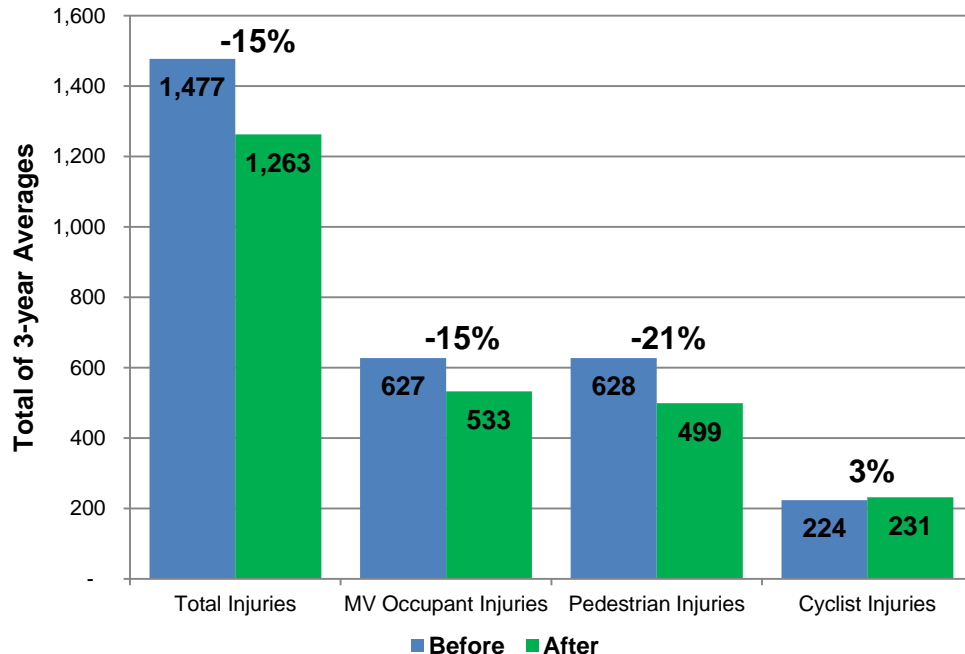
Injuries to cyclists increase only 3%, despite a 61% bike volume increase



Kent Ave, BK

Protected Bike Lanes

Before and After Crash Data, 2007 - 2017

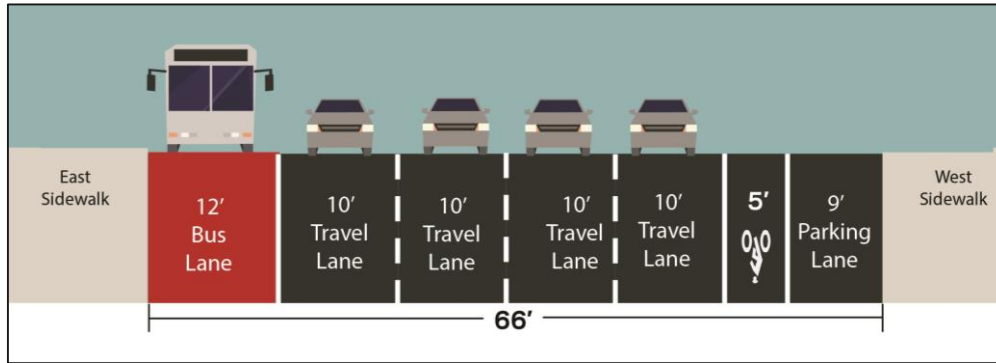


Prospect Park W, BK

Data from 25 separate protected bicycle lane projects installed from 2007-2014 with 3 years of after data. Includes portions of 1 Ave, 2 Ave, 8 Ave, 9 Ave, Broadway, Columbus Ave, Hudson St, Lafayette St / 4 Ave, Sands St, Allen/Pike St, Kent Ave, Prospect Park West, Flushing Ave, Bruckner Blvd & Longfellow Ave, Imlay St / Conover St, Paerdegat Ave. Only sections of projects that included protected bike lanes were analyzed. Source: NYPD AIS/TAMS Crash Database

Existing Conditions

35th St – 42nd Street

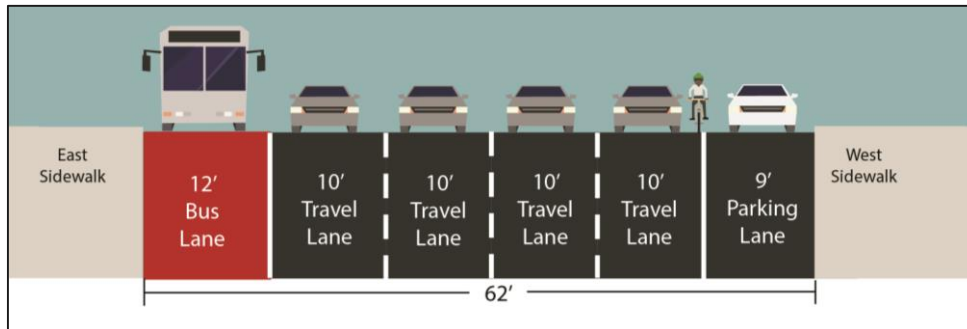


66' Wide Roadway

- 4 Moving lanes
- Bus lane
- Loading/Overnight parking lane
- Bike lane



42nd St – Central Park South



62' Wide Roadway

- 4 Moving lanes
- Bus lane
- Loading/Overnight parking lane



Issues Pedestrians

High pedestrian volumes

- Heavy commercial activity, transportation hubs, tourist destinations

Long crossing distances

- 62 – 66 feet

Turning conflicts

- 42% of pedestrian injuries result from turning vehicles while pedestrians cross with signal
- Back pressure from through vehicles increases risk of turning vehicles



Issues Cyclists

High bike volumes

- 3,487 cyclists, 18-hr count (50th St)
- 161% increase 2008-2019
- Citi Bike Core Zone
 - 10 stations within 400 ft of project
 - Citi Bike has committed to increasing station density in existing service area
- Feeds into Central Park
 - Rental shops and hotels cater to large number of tourists using 6th Ave to access park

Limited bike infrastructure

- Bike lane south of 42nd St vulnerable to being blocked
- No bike connection to Central Park



Citi Bikes in Midtown

Nearly **10,000 Citi Bike trips** start and end in Midtown each day (compared to 16,000 taxi trips)

For trips that begin and end in Midtown, Citi Bikes are **2 mph faster** and **\$6 cheaper** than taxis

Issues Traffic Flow

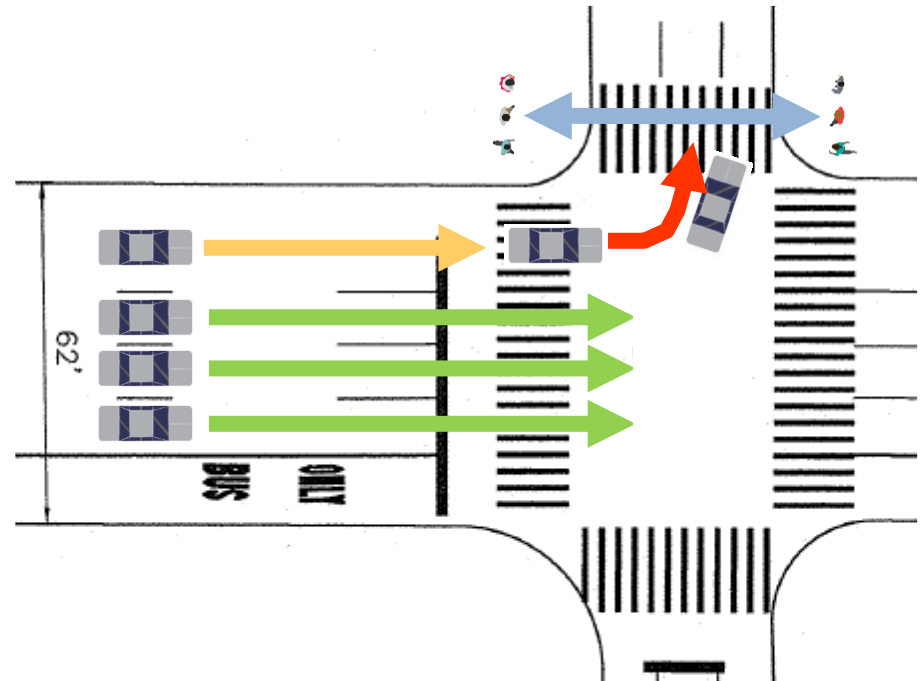
Through traffic flows best in center lanes

- 6th Avenue through traffic volumes vary between 1,000 and 1,200 in peak hours
- Through lanes are often clear of traffic



Through Traffic in Left Lane is Delayed by Left-Turning Vehicles

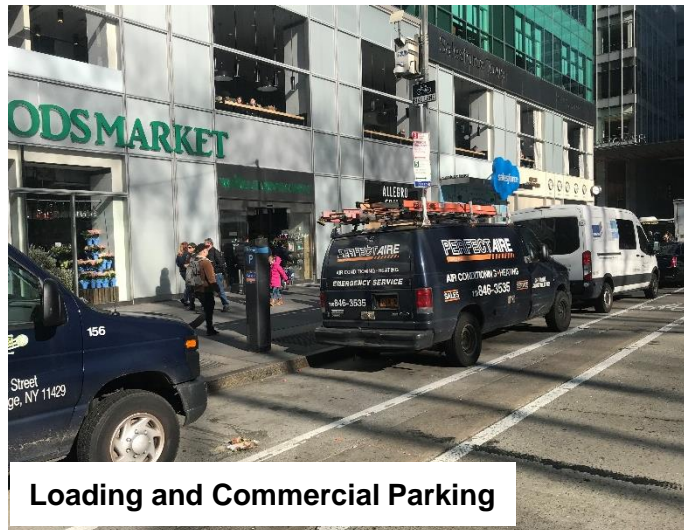
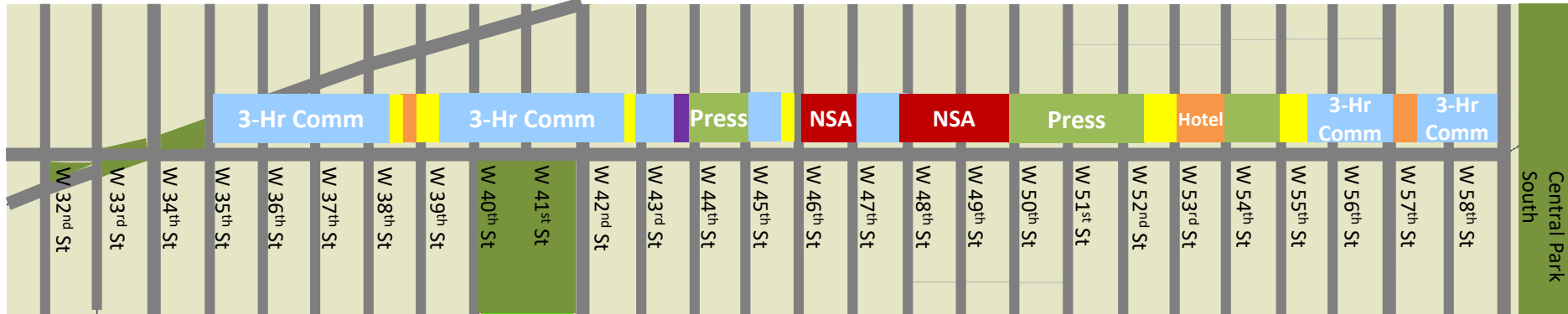
- Heavy pedestrian volumes impede efficient left turns
 - 3,830 pedestrians crossing 42nd St at 5pm
 - 1,250 pedestrians crossing 57th St at 5pm
- Thru traffic is delayed by left turning vehicles
 - Lack of left turn bays to separate turns from thru movements
 - PM peaks are typically ~125 VPH



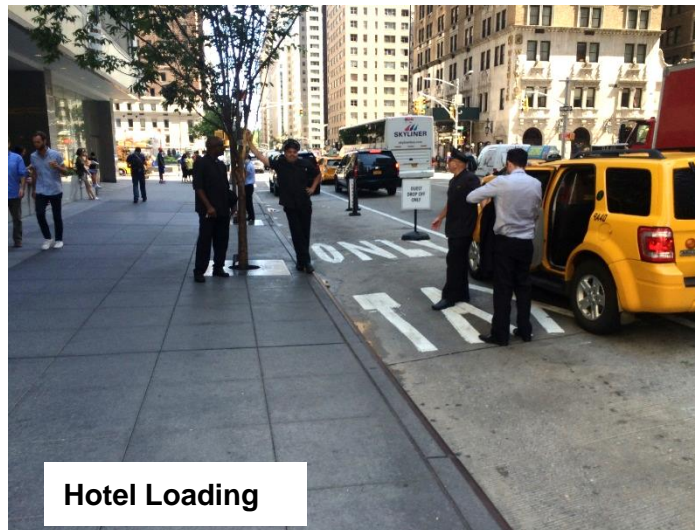
Issues Curb Use

Heavy curb use by commercial vehicles, press placard parking, TLC vehicles

6th Avenue West Curb – Primary Parking Regulations



Loading and Commercial Parking



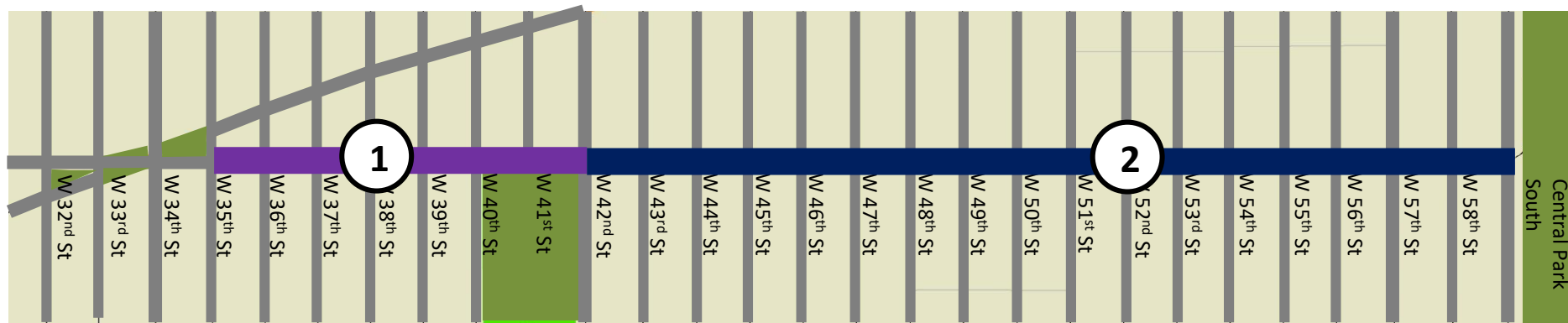
Hotel Loading



Proposal

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Proposed Improvements Overview

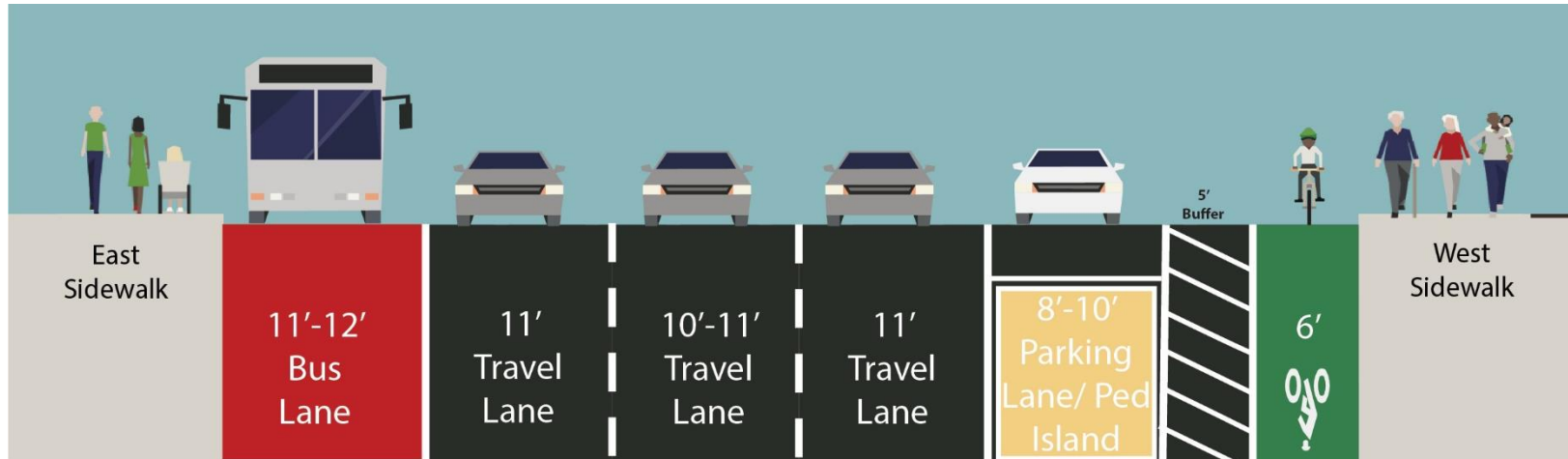


- 1** 35th St – 42nd St: Remove one lane of traffic
Relocate existing bike lane to curb
Add pedestrian islands

- 2** 42nd St – Central Park S Remove one lane of traffic
Install parking protected bike lane
Add pedestrian islands

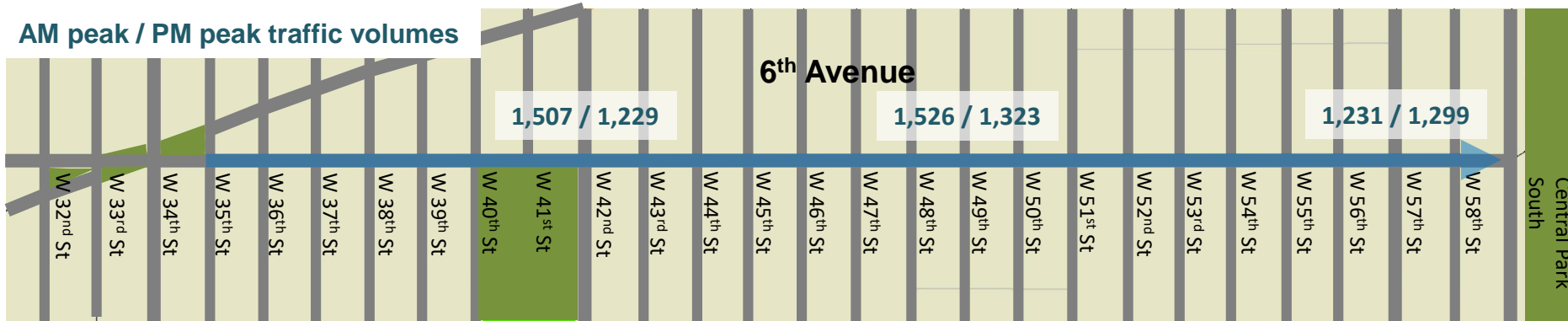
- 3** Signal Changes: Left turn lanes with split phase signals
Offset crossings
Leading Pedestrian Intervals

Proposed Improvements



- Install parking protected bike lane along curb
- Add painted pedestrian islands
- Remove one moving lane
- Mitigate capacity impacts, increase safety with turn treatments

Traffic Analysis



- Formal traffic analysis and observations at AM and PM peak periods assesses:
 - Traffic volumes
 - Turning vehicles
 - Pedestrian volumes
 - Trucks and buses
 - Parking turnover
- New turn bays and dedicated turn phases separate people walking and biking from vehicular traffic improving vehicular flow
- New Leading Pedestrian Intervals at 13 intersections reduce turning conflicts
- Analysis indicates that impact to vehicular flow will be minor

Design Precedent 2nd Avenue, Gramercy



2nd Avenue, Manhattan

Turn Treatments Split Phase Signal



9th Avenue, Manhattan

- Turning vehicles queue in turn lane
- Pedestrians and cyclists have protected phase
- Requires turn lane
- Used at high conflict locations:
 - 41st St.
 - 42nd St
 - 45th St
 - 49th St
 - 51st St
 - 53rd St
 - 55th St
 - 57th St
 - Central Park South



Turn Treatments Offset Crossings



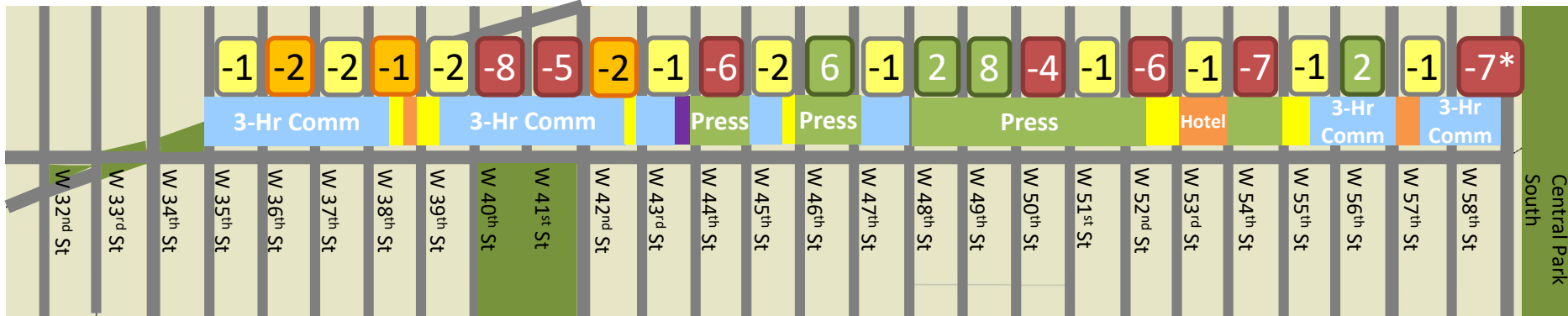
- Improve visibility of pedestrians and cyclists
- Reduce cyclist delay
- Provide space for left turning vehicles to help process thru traffic and reduce back pressure
- Used at lower conflict locations:
 - 37th St
 - 39th St
 - 43rd St
 - 47th St



Curb Access Parking/Loading Impacts

- **Split Phase Signals** at high conflict locations require turn lanes which reduce parking/loading capacity along these blocks
- **Offset Crossings** minimize impacts on curb access
- **New Curb Access** can be added at some locations

6th Avenue West Curb – Proposed Parking Regulations



3 Hour Commercial Loading	Taxi Stand	No Standing
Press Parking	Hotel Loading	Diplomat Parking

LEGEND

- Parking spaces lost to left turn lane (Red box)
- Parking spaces lost to offset crossing (Orange box)
- No left turns- parking spaces lost to pedestrian islands: (Yellow box)
- Parking spaces gained on block (Green box)

* Includes changes on east side of 6th Ave

- **43 net parking spaces are lost**
- **DOT will work with stakeholders to accommodate curb access needs**

Curbside Access Mitigation

NYC DOT will work with CB 5, property owners, and merchants to accommodate curb access needs on 6th Avenue and side streets including:

- Commercial loading
- Drop-off and pick-up
- Hotel loading zones
- Potential Citi Bike station adjustments

Updating from 3 hour to 1 hour parking regulations increases availability

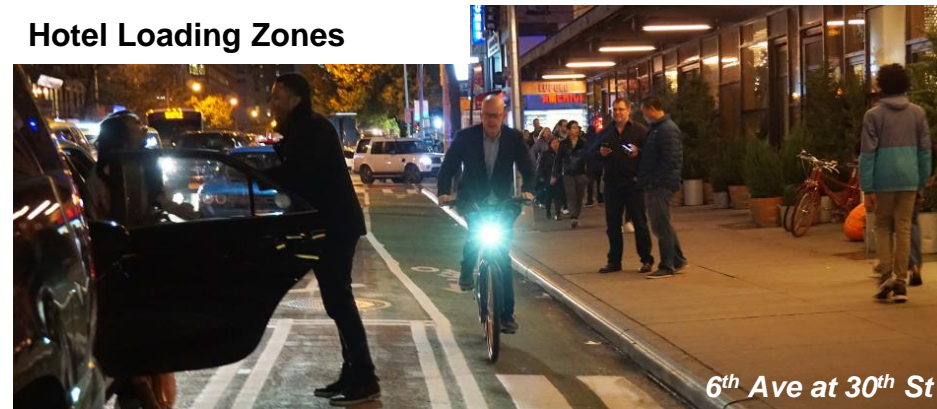
On crosstown protected bike lanes matched the loading demand

- 78% of vehicles stayed at new meters less than 1 HR (26th, 29th St, 2018)
- Most vehicles (72%) used 1 HR regs for 30 min or less (26th, 29th St, 2018)

Adjusted Loading Zones



Hotel Loading Zones



Taxi Stands



Summary

- **Pedestrian safety improved through shorter crossings (up to 20 ft shorter) and turn treatments**
Improves safety along a Vision Zero corridor
- **Safe, comfortable, continuous bike connection from 8th St to Central Park**
Accommodates growing number of riders, including less experienced riders and tourists accessing the park
- **Travel lane removed between 35th St and Central Park South**
Through volumes on 6th Ave can be accommodated by three lanes
- **Turn lanes and offset crossings added at left turns**
Removing turning vehicles from through lane will improve traffic flow and safety
- **Leading Pedestrian Intervals added at 13 locations**
 - *Reduces conflicts between vehicles turning from side streets and pedestrians crossing 6th Ave*
- **DOT will work with stakeholders to mitigate curb access impacts at high conflict locations**

THANK YOU!

Questions?



NYC DOT



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