



NYC BICYCLE INTERSECTION DESIGN

Presentation to Manhattan Community Board 8 Transportation Committee

Office of Street Improvement Programs, New York City Department of Transportation

January 8, 2020

INTERSECTION DESIGN GOALS

Objectives and measures

Is it safe?

- » What's the crash rate and severity?
- » Near term: Are there many near misses or other conflicts?

Is it comfortable?

- » How does this affect behavior? Changes in who's using the facility?
- » How does this relate to empirical safety?

Is it effective?

- » Are speeds slow?
- » Are people yielding appropriately?
- » Are the sight lines clear?
- » Are conflicts eliminated or minimized?

Is it intuitive?

- » Are the designs applied consistently and systematically?
- » Are people behaving predictably?

PROTECTED BIKE LANE (PBL): INTERSECTION DESIGN

Typical Treatments in NYC

Mixing Zone

ORIGINAL PBL TOOLKIT



Fully Split Phase

ORIGINAL PBL TOOLKIT



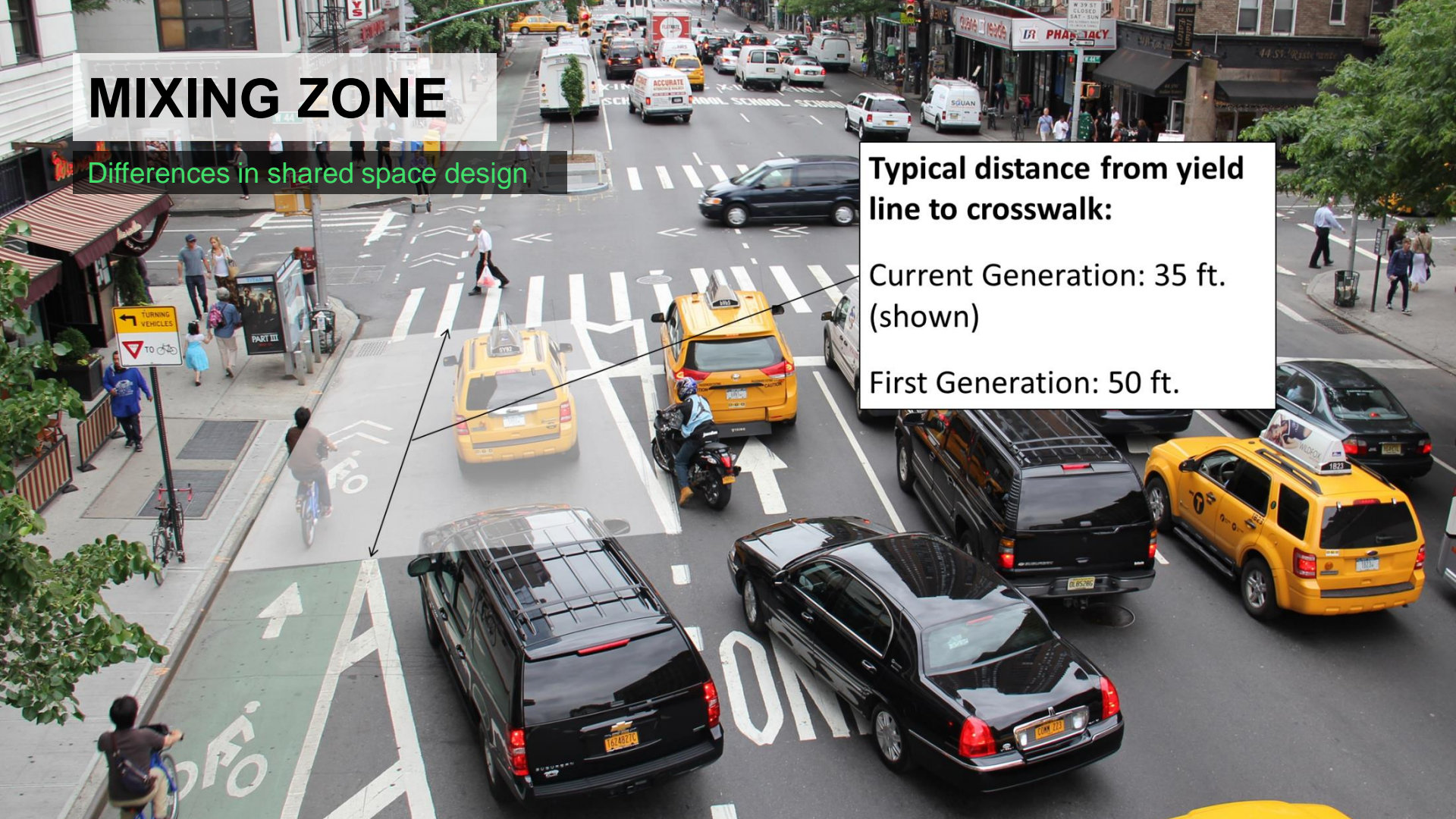
MIXING ZONE

Differences in shared space design

Typical distance from yield line to crosswalk:

Current Generation: 35 ft.
(shown)

First Generation: 50 ft.



PROTECTED BIKE LANES

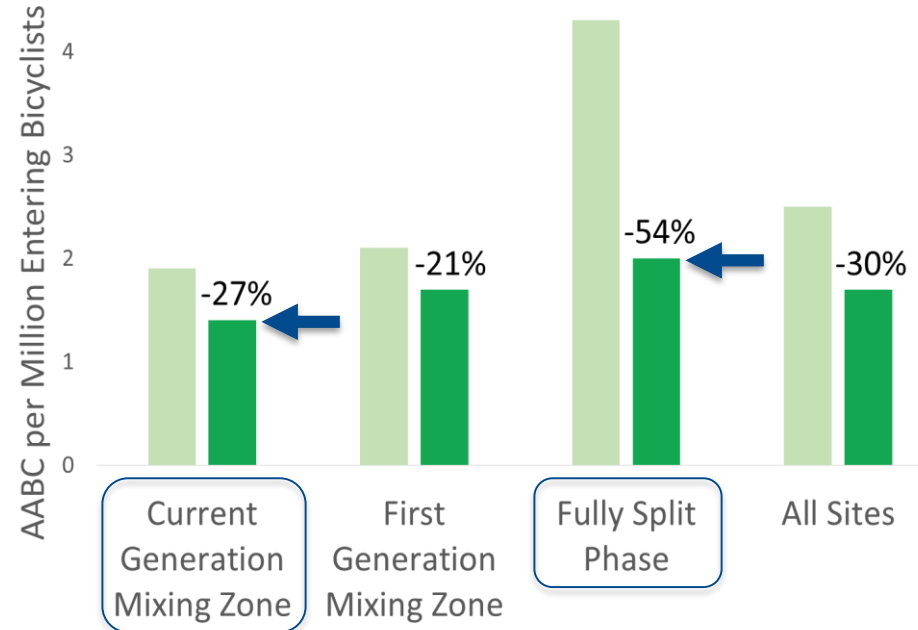
Intersection Study: Crash Rates

- » ↓ 30% reduction of intersection bicycle crashes per cyclist following PBL installation

Split phase has a lower crash rate at wider intersections

- » Need to balance comfort, safety and mobility

Average Annual Bicyclist Crashes (AABC) per Million Entering Bicyclists before and after PBL Installation



Source: Cycling at a Crossroads: The Design Future of New York City Intersections

OFFSET CROSSING

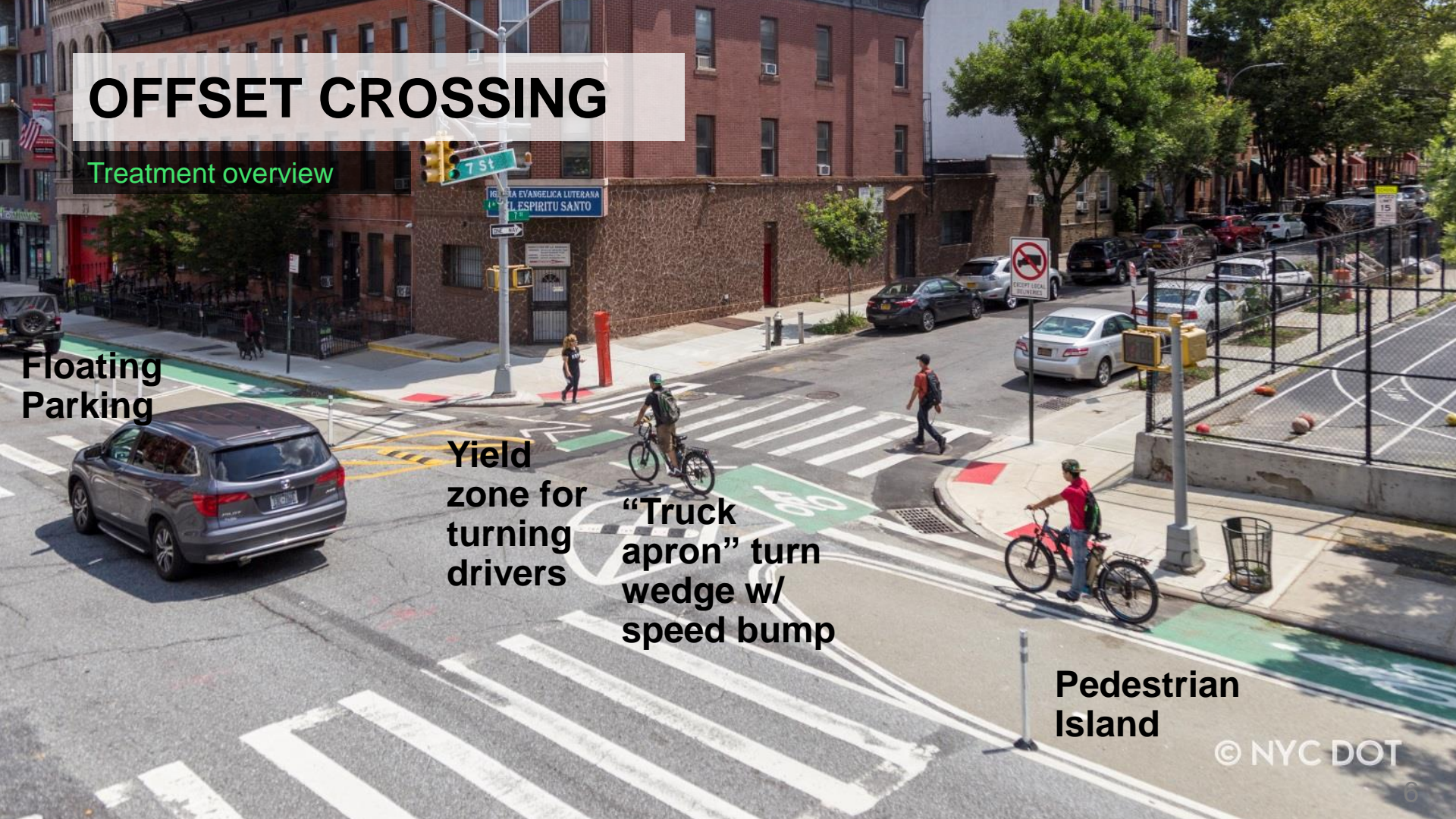
Treatment overview

Floating
Parking

Yield
zone for
turning
drivers
“Truck
apron” turn
wedge w/
speed bump

Pedestrian
Island

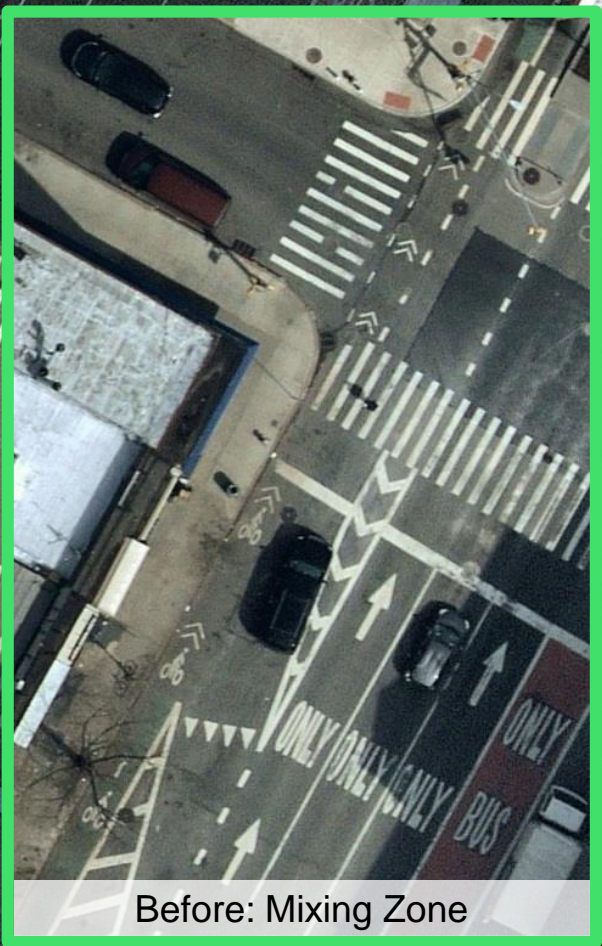
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OFFSET CROSSING

Street resurfacing retrofits

- » Mixing Zones are safe but we do have a retrofit program since Offset Crossings are preferred
- » Offset Crossings are also used on all new projects



Before: Mixing Zone

THANK YOU!

Questions?



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