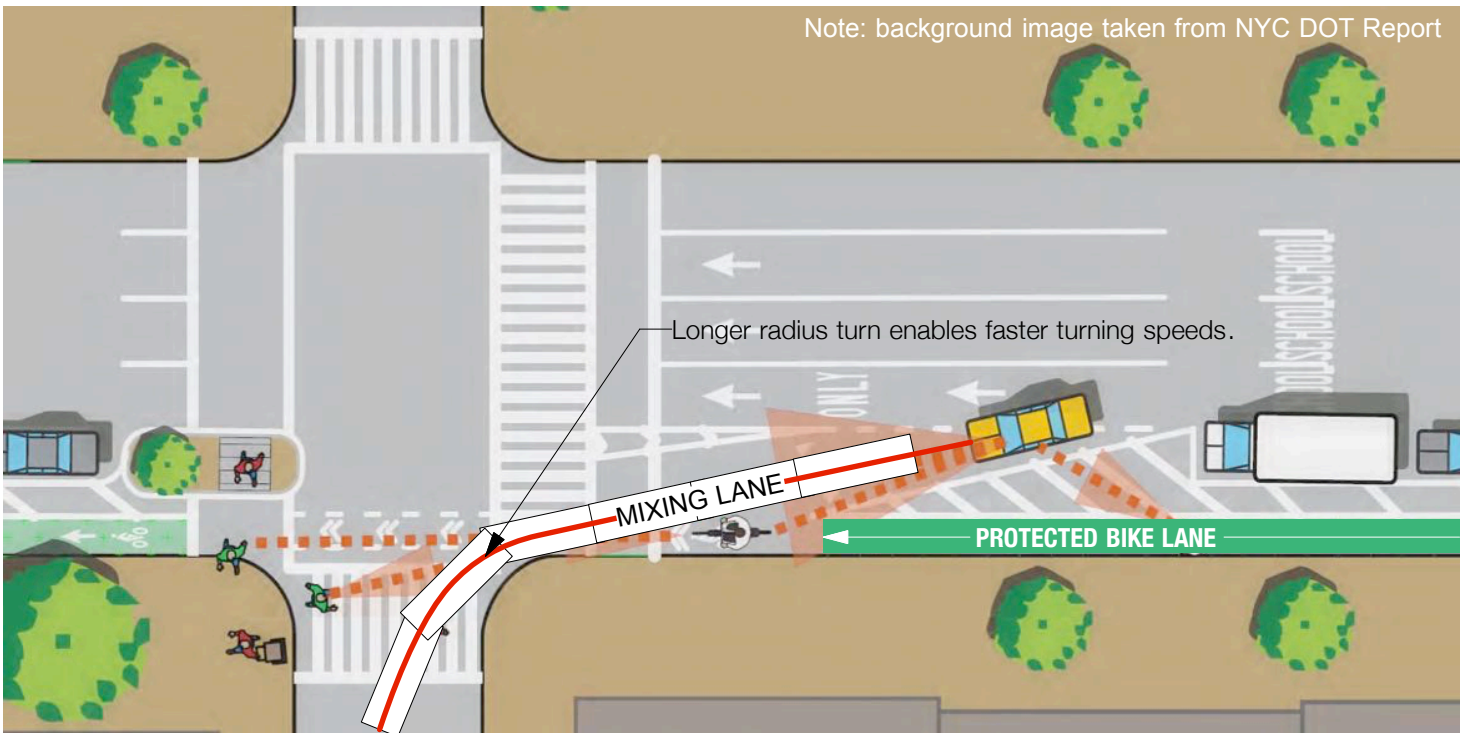


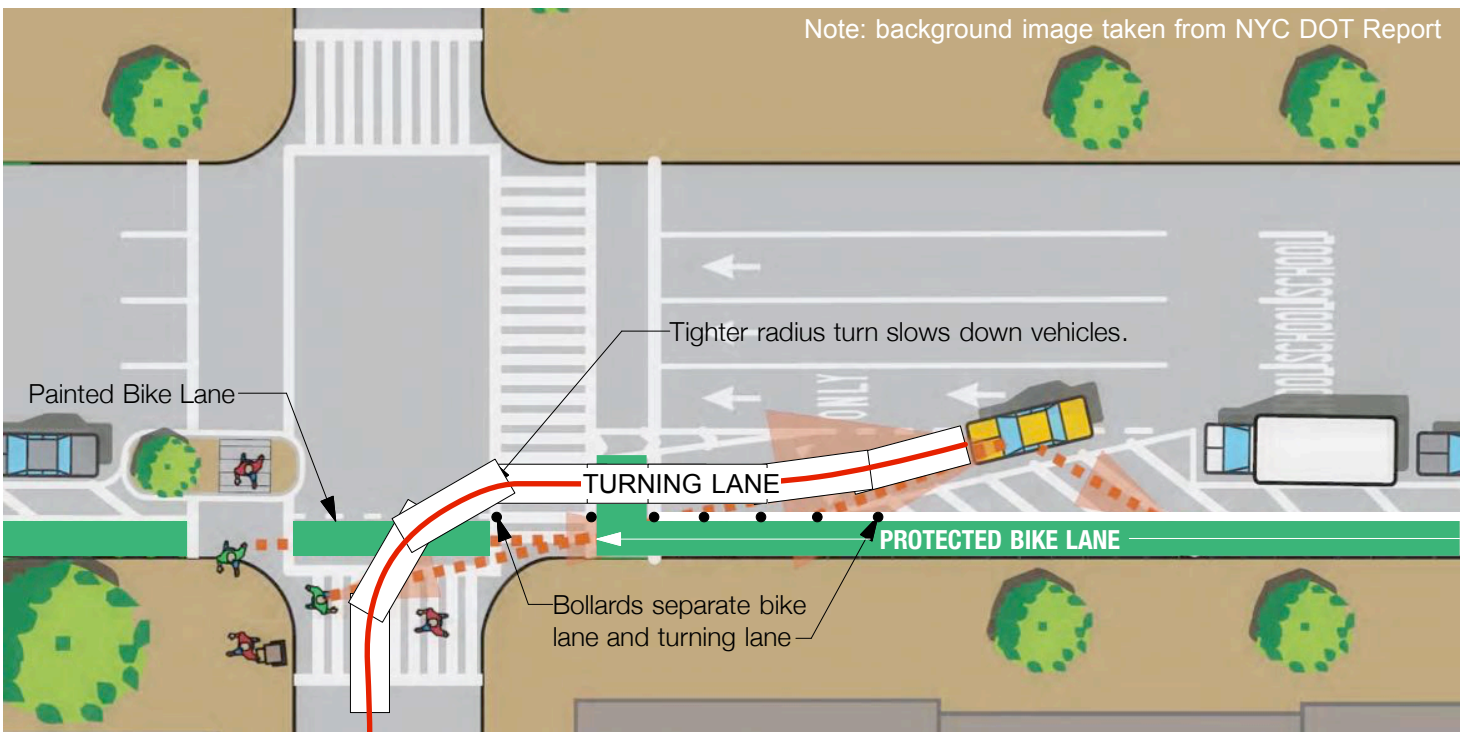
THIS IS NOT A NYC GOV AGENCY DOCUMENT

Note: background image taken from NYC DOT Report



**Existing Problem on Columbus and Amsterdam Avenue Safe Streets:
Mixing Zones Enable Crashes Between Left Turning Vehicles and Bicycles Traveling in Bike Lane**

Note: background image taken from NYC DOT Report



**Proposed Resolution: Request DOT to Improve Safety by Eliminating Mixing Zones and Installing Turning Lanes,
Slowing Turning Speed of Vehicles, Designating Bike Lanes at Street Crossings and Installing Physical Barriers to
Protect Bicycles in Bike Lane**



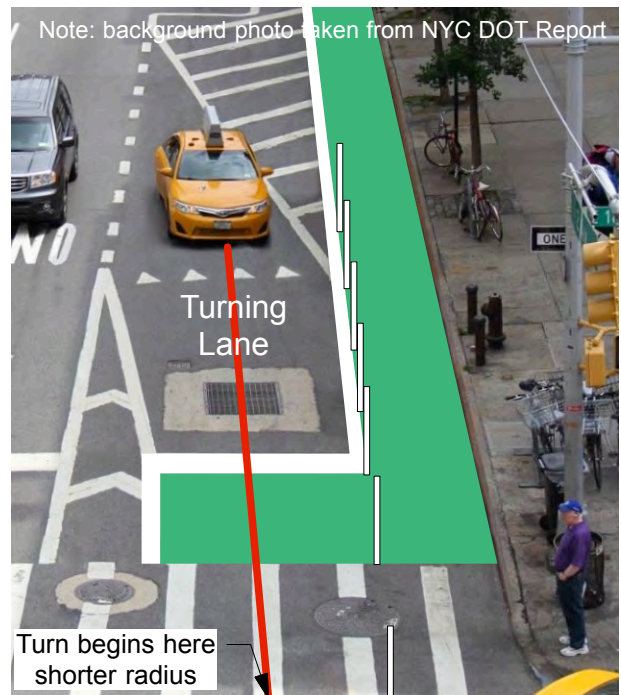
NACTO Turning Lane Scheme



Proposed Turning Lane Scheme
With Improved Protection for Cyclists



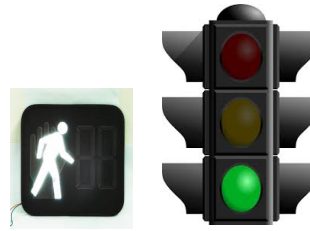
Existing DOT Mixing Zone Scheme



Proposed Turning Lane Scheme
With Improved Protection for Cyclists

Safer intersections

Illustration During Green phase



Mixing Zone Behavior: Current Problems and Hazards

Pedestrians crossing
prevent cars from
turning – vehicles
block the bike lanes

Cyclists pass vehicles in
pedestrian crossing,
dismount, or mix with
general traffic, nixing
the safety value of the
protected bike lane
every 500 ft.

While turning, drivers
focus on pedestrians
and not on the
cyclists in the lane,
putting them at risk

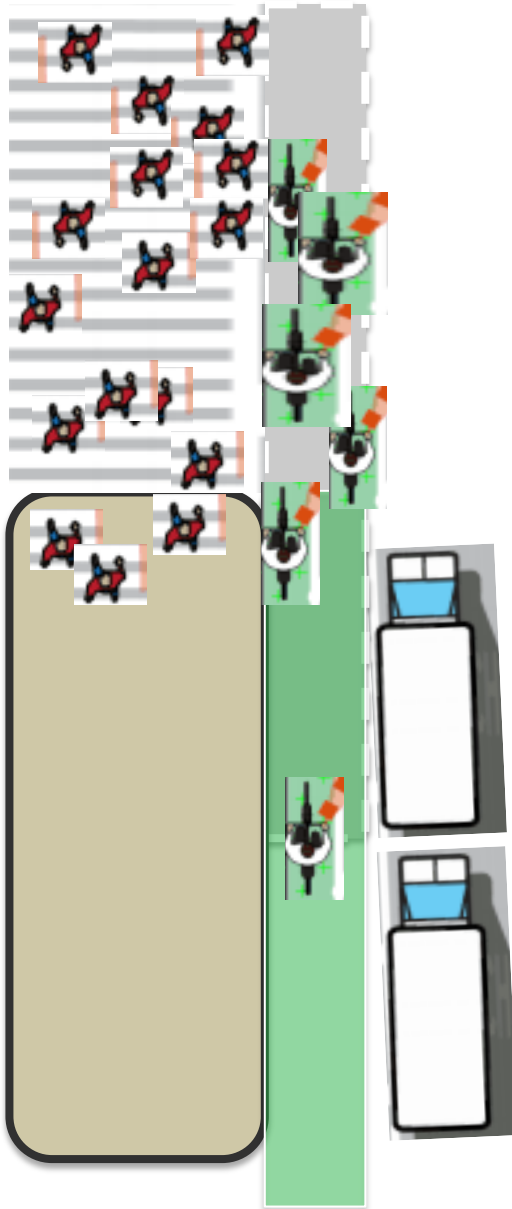
Vehicular flow is
severely constrained
during the green phase
because of pedestrians

The cycling flow is
severely constrained
during the green
phase because of
vehicles

Pedestrians fight for
crossing space with
turning cars and
cyclists

Safer intersections

Illustration During Red Arrow



25s fully protected crossing

During the red-arrow phase, pedestrians & bicyclists cross with NO conflicts. Per DOT study, 100% safer than mixing zones

Drawback: Shorter signal cycle for pedestrians, cyclists and turning drivers

Conventional Split Phase during green thru phase

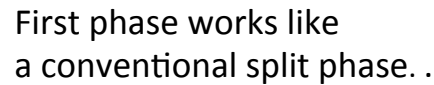


20s wait time for pedestrians & cyclists

Benefit for pedestrians: for 25s, no need to fight with turning cars and cyclists – Very safe

Benefit for cyclists: The flow is improved for 25 s , the green bicycle phase – no need to dismount because of conflicts with vehicles crossing the bike lanes
Benefit for drivers: unobstructed , faster turns and less risk of hitting a pedestrian or cyclist

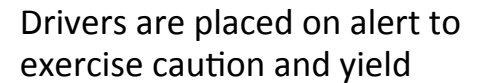
Illustration During Flashing Phase



In the second phase, instead of a green turning phase, the vehicles get a flashing yellow arrow;

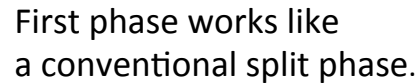
Split LPI

during green thru phase



The flow for cyclists is optimal during the protected phase when they can proceed without conflict. They can also proceed during the blinking yellow arrow, but may conflict with vehicles. This gives them the same 45" accorded thru vehicles.

Illustration During Flashing Phase

[illegible]

In the second phase, instead of a green turning phase, the vehicles get a flashing yellow arrow; the cyclists' red phase is replaced with a flashing cyclist yellow phase, and the walk signal is replaced with a flashing red "don't walk" signal.

Flexible bollards are added between bike lane and vehicular turn lane, extending to the perpendicular parking lane to slow turning vehicles, and green bike lane markings parallel the pedestrian crossing .

BLINKING

BLINKING

20s shared time
shared responsibility

Pedestrians, drivers and cyclists are placed on alert to exercise caution.

Vehicles and bicyclists are responsible for being careful and yielding

Pedestrians may cross against the light at their own risk

The flow for cyclists is optimal during the protected phase when they can proceed without conflict, and permitted during the blinking yellow cycle phase, giving them the same 45" accorded thru vehicles.