

Broadway and Dyckman Street/Riverside Drive Safety and Mobility Improvements

November
2013



Commissioner Janette Sadik-Khan New York City Department of Transportation



Existing Conditions

- Queue Spill Back and Turning Conflicts



Looking East at intersection

Looking North at intersection



Existing Conditions



Looking West at intersection

- Eastbound Riverside Dr. Queues and Turn Conflicts



Looking East at intersection

Existing Conditions

- Conflicts Between Northbound Left Turns/ Southbound Right Turns and Pedestrians



Looking South at intersection



Looking North at intersection



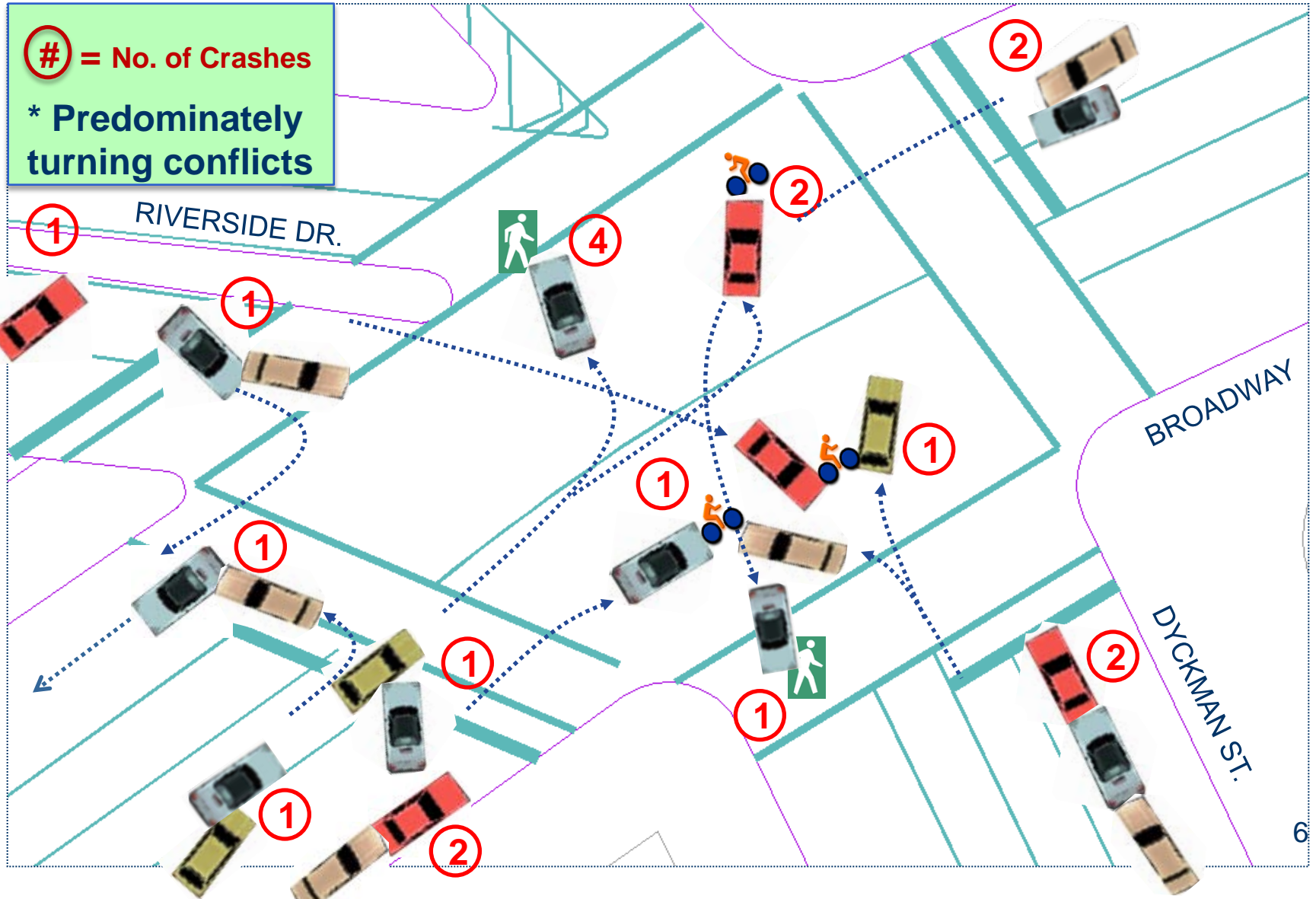
Safety

➤ Three-year Crash Data at Dyckman St and Riverside Dr/Broadway

| | 2010 | 2011 | 2012 | Total |
|----------------|------|------|------|-------|
| Total Injuries | 7 | 6 | 5 | 18 |
| Pedestrian | 3 | 0 | 2 | 5 |
| Bicyclist | 1 | 1 | 1 | 3 |
| Motor Vehicle | 3 | 5 | 2 | 10 |
| Total Crashes | 41 | 43 | 44 | 128 |

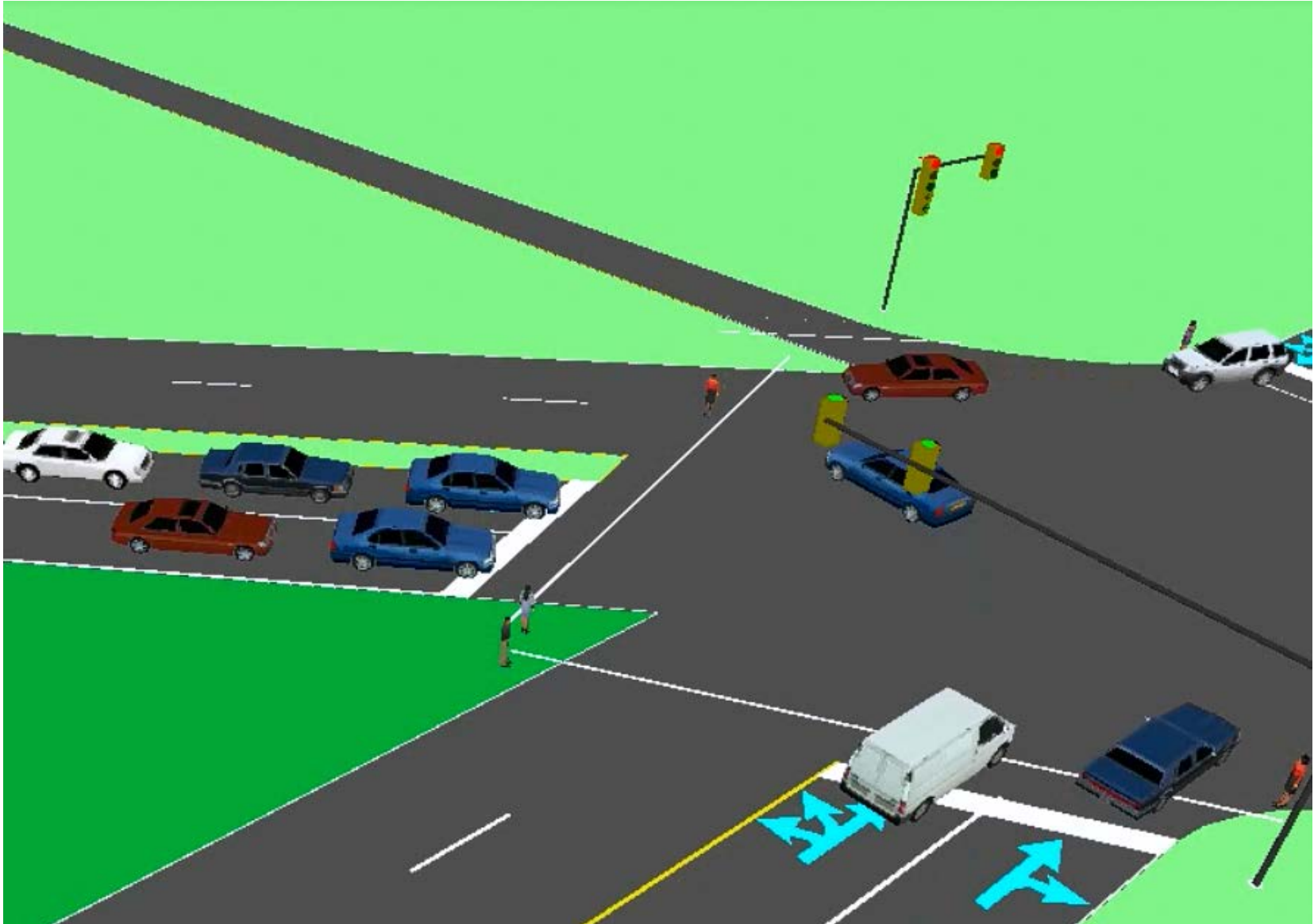
Data source: NYPD

Accident Pattern



Simulation Example (1)

Northbound Left Turn conflict with an Pedestrian



Simulation Example (2)

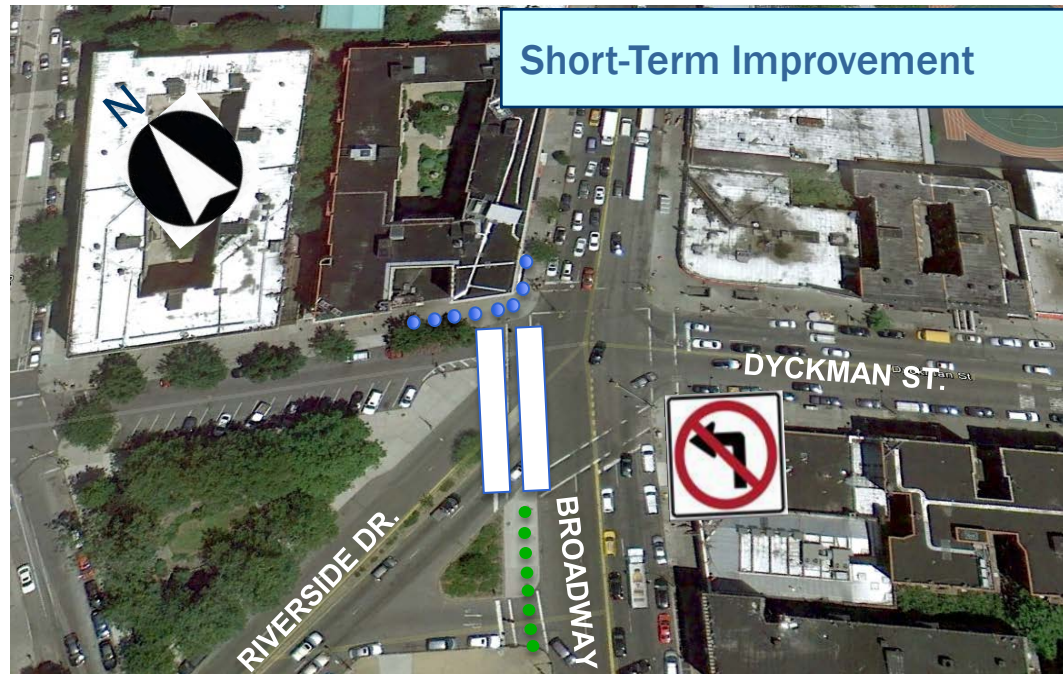
Pedestrians waiting for a gap because of left turns



Proposal

- Prohibit left turns
- Provide conflict-free crossings for pedestrians at West Crosswalk (32 seconds) and South Crosswalk (additional 26 seconds)
- Provide additional green time for Riverside Dr. and Broadway movements
- Shorten south and west crosswalks distances by 18 feet and 12 feet, respectively.
- Improve safety and mobility of all street users (pedestrians, cyclists and motorists)

Proposed Short-Term Improvements

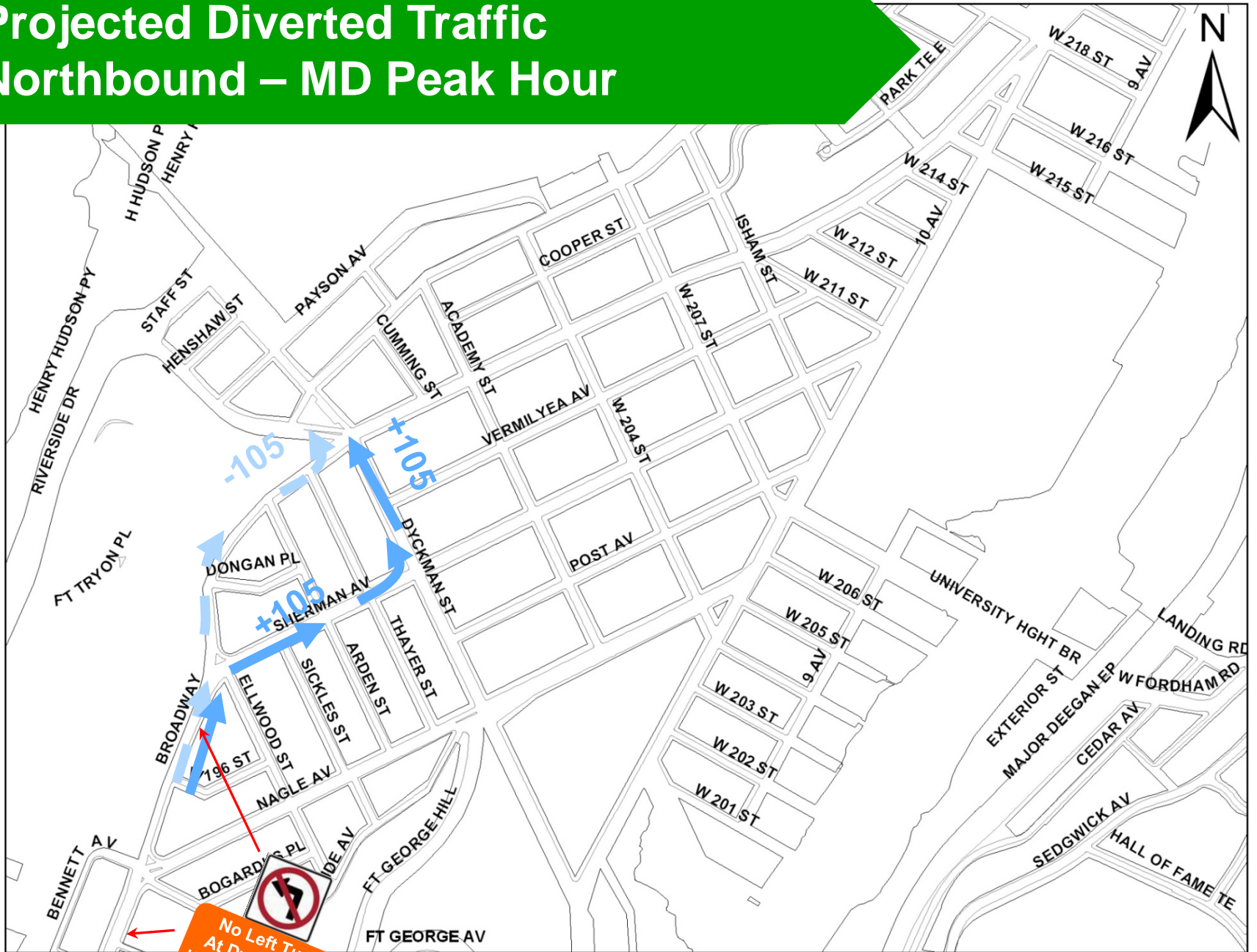


Northbound left-turn prohibition

Benefit

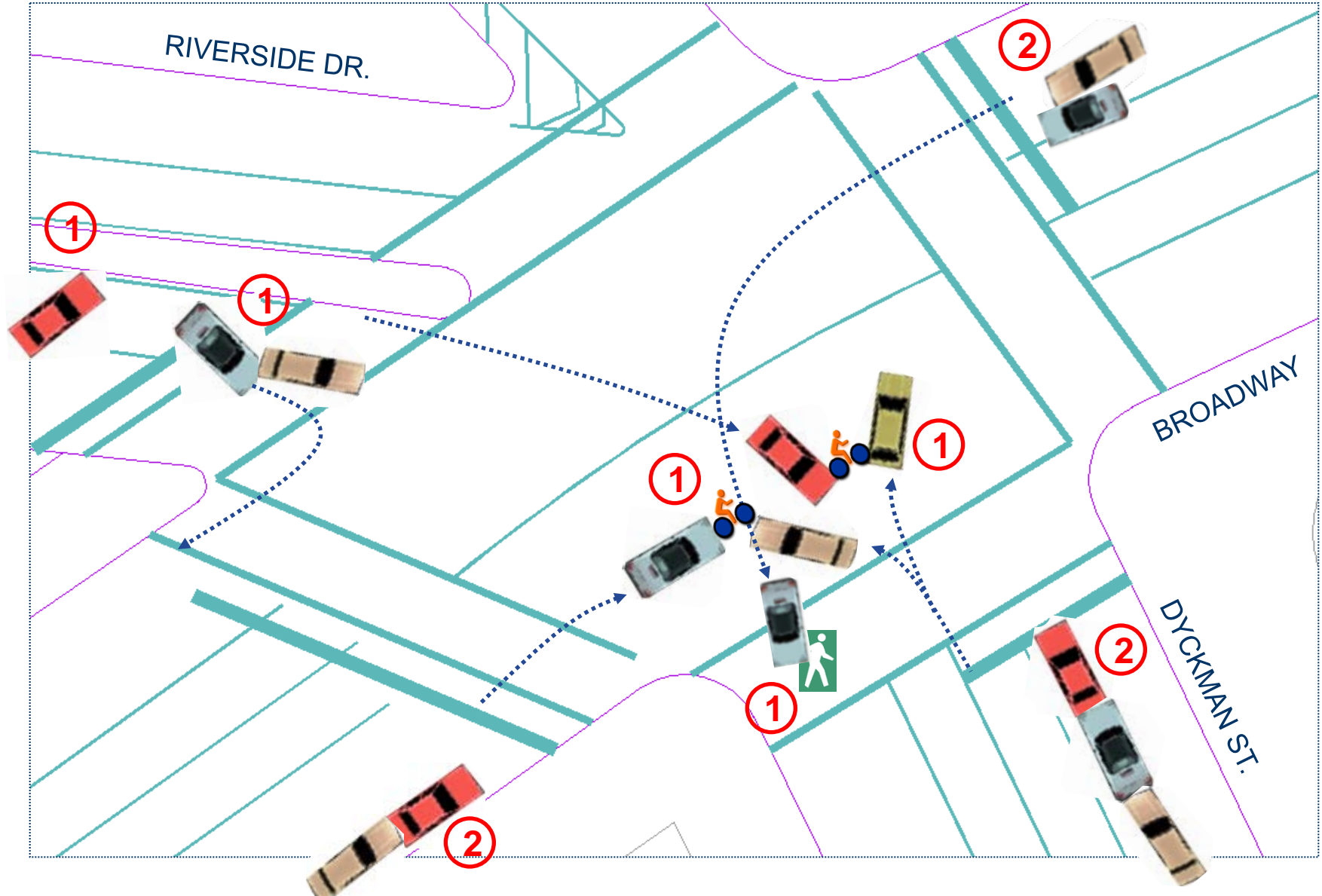
1. New **conflict-free** crossing
2. Improved traffic flow and reduction in congestion

Projected Diverted Traffic Northbound – MD Peak Hour

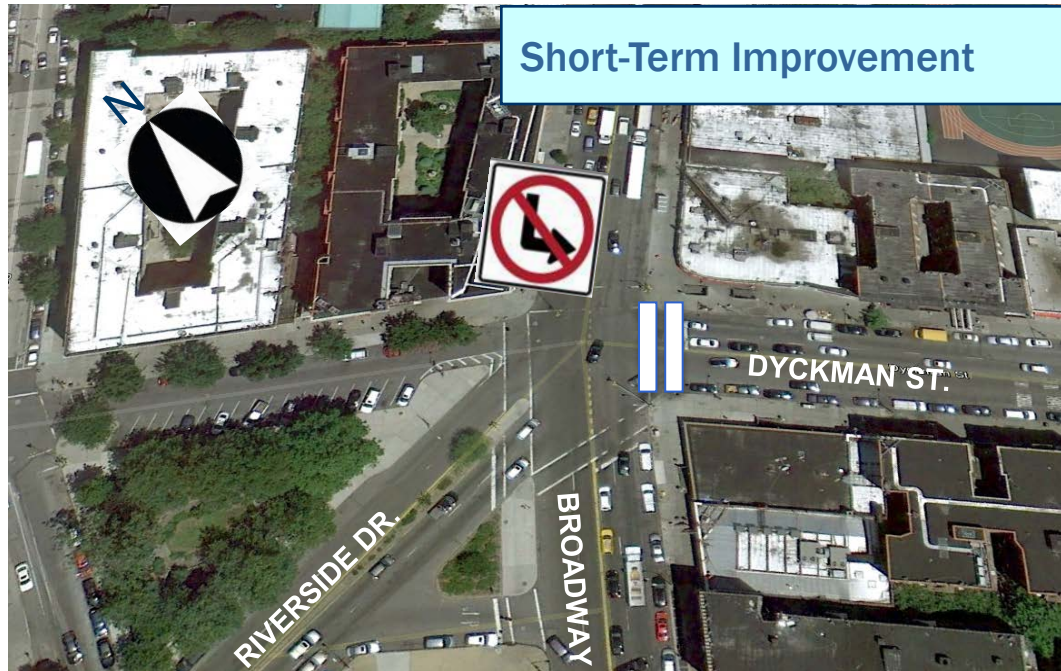


No Left Turns
At Dyckman St
Use Alternate Route

Potential Accident Reduction - Northbound Left turn Prohibition



Proposed Short-Term Improvements



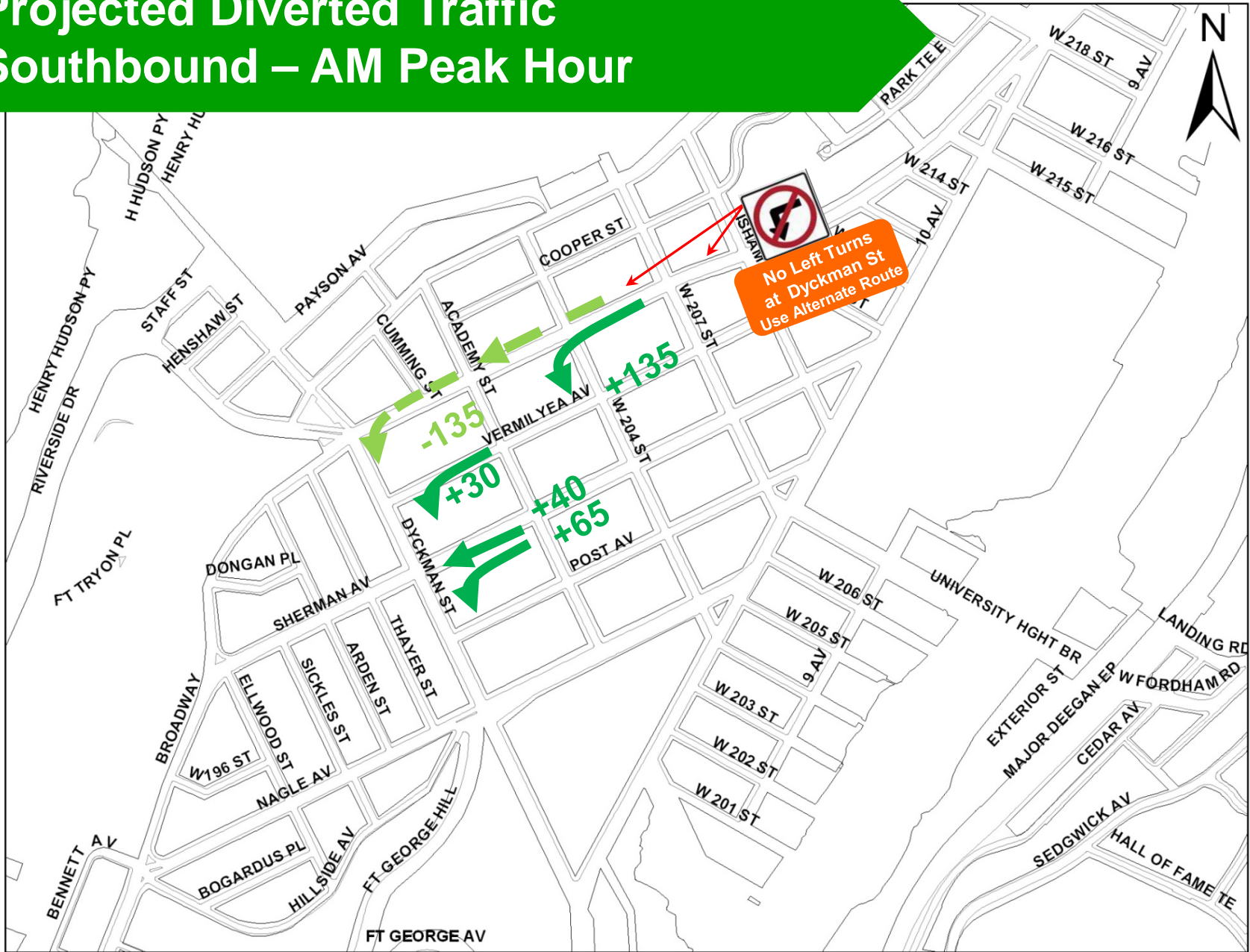
Short-Term Improvement

Southbound left-turn prohibition

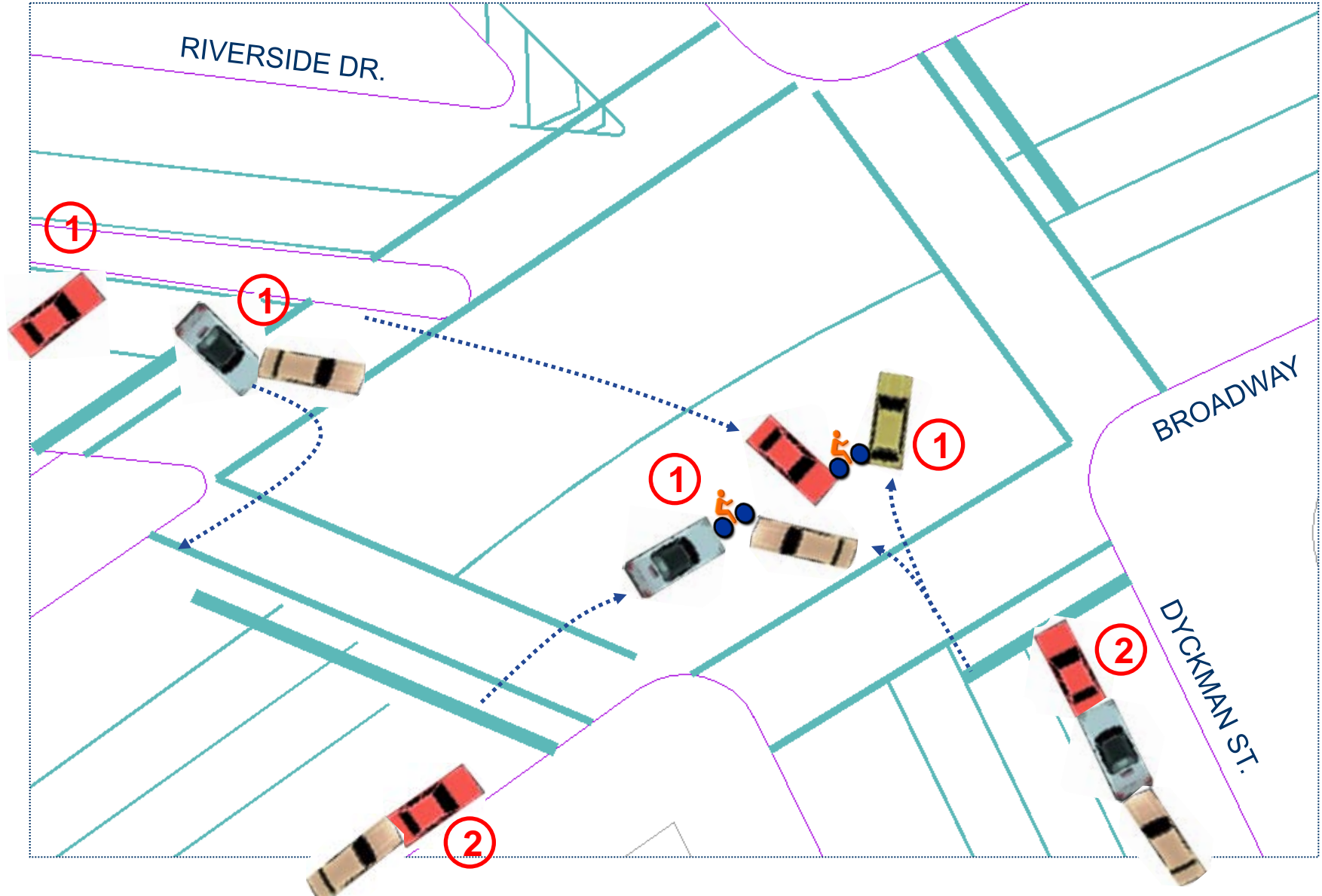
Benefit

1. Fewer pedestrian-vehicle conflicts
2. Improved traffic flow and reduction in congestion

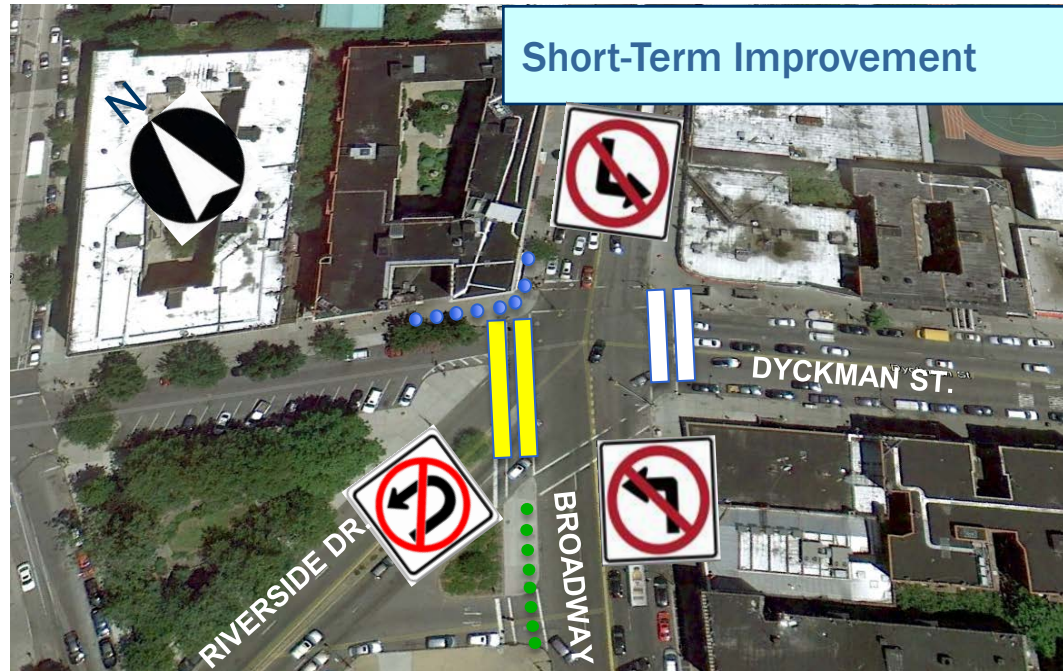
Projected Diverted Traffic Southbound – AM Peak Hour



Potential Accident Reduction - Southbound Left Turn Prohibition



Proposed Short-Term Improvements

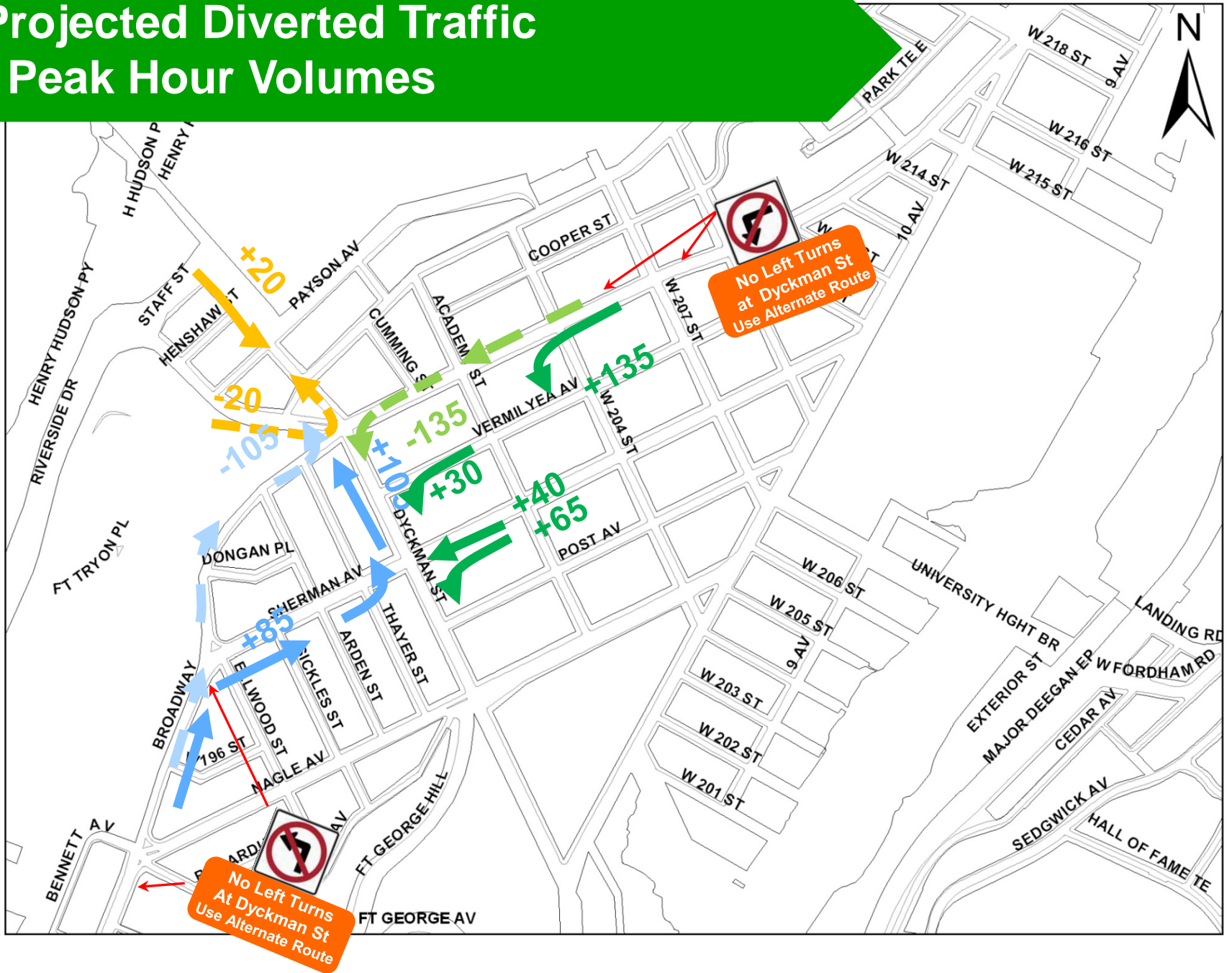


North & southbound left-turn prohibitions

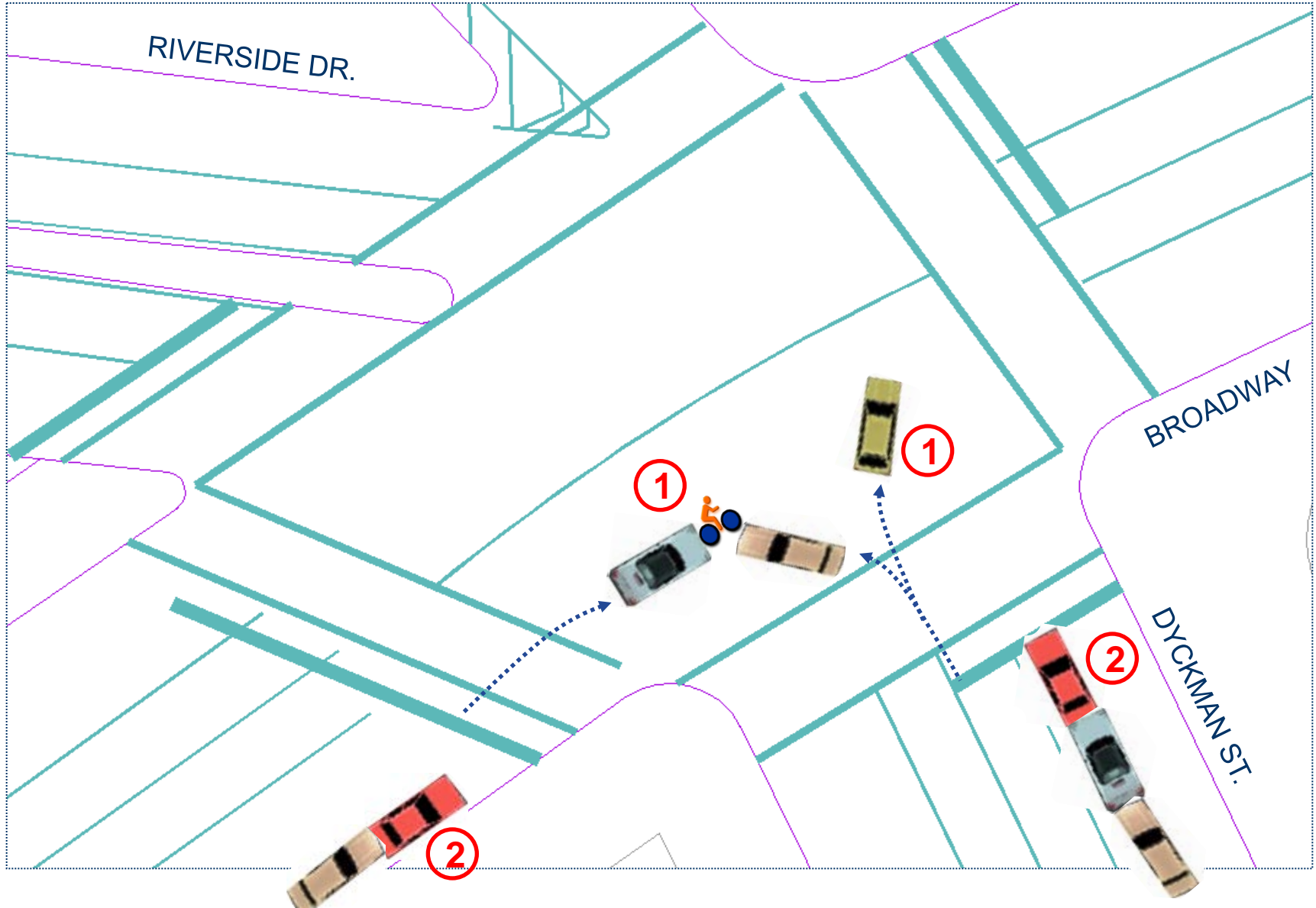
Benefit

1. New **conflict-free** & less conflict crossings
2. Improved traffic flow and reduction in congestion
3. Additional green time for pedestrians & traffic

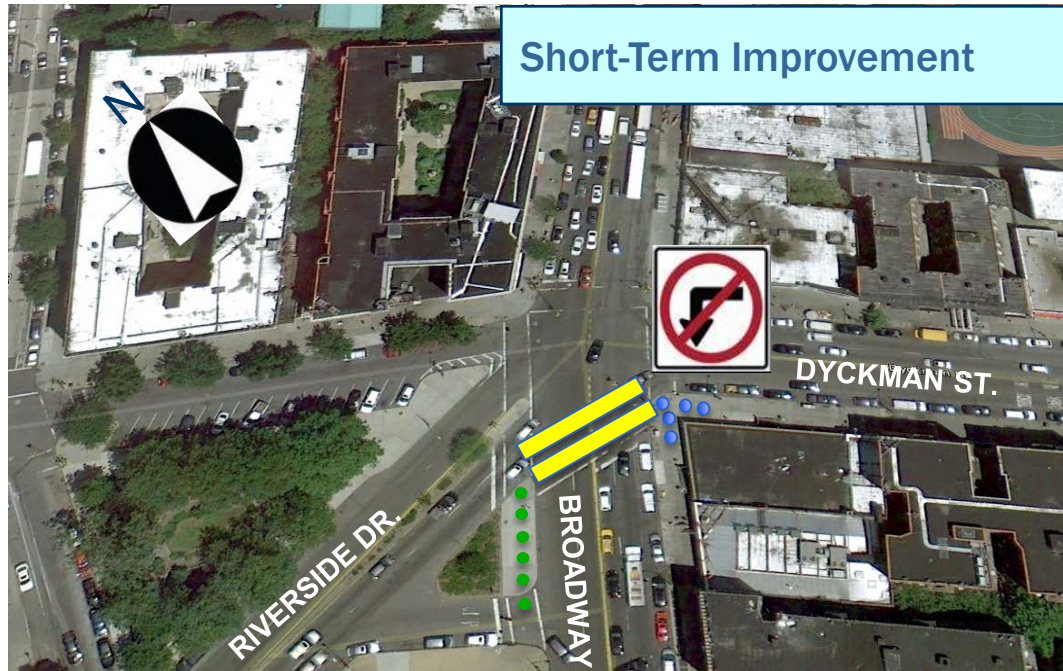
Projected Diverted Traffic - Peak Hour Volumes



Potential Accident Reduction - North/Southbound Left turn Prohibitions



Proposed Short-Term Improvements

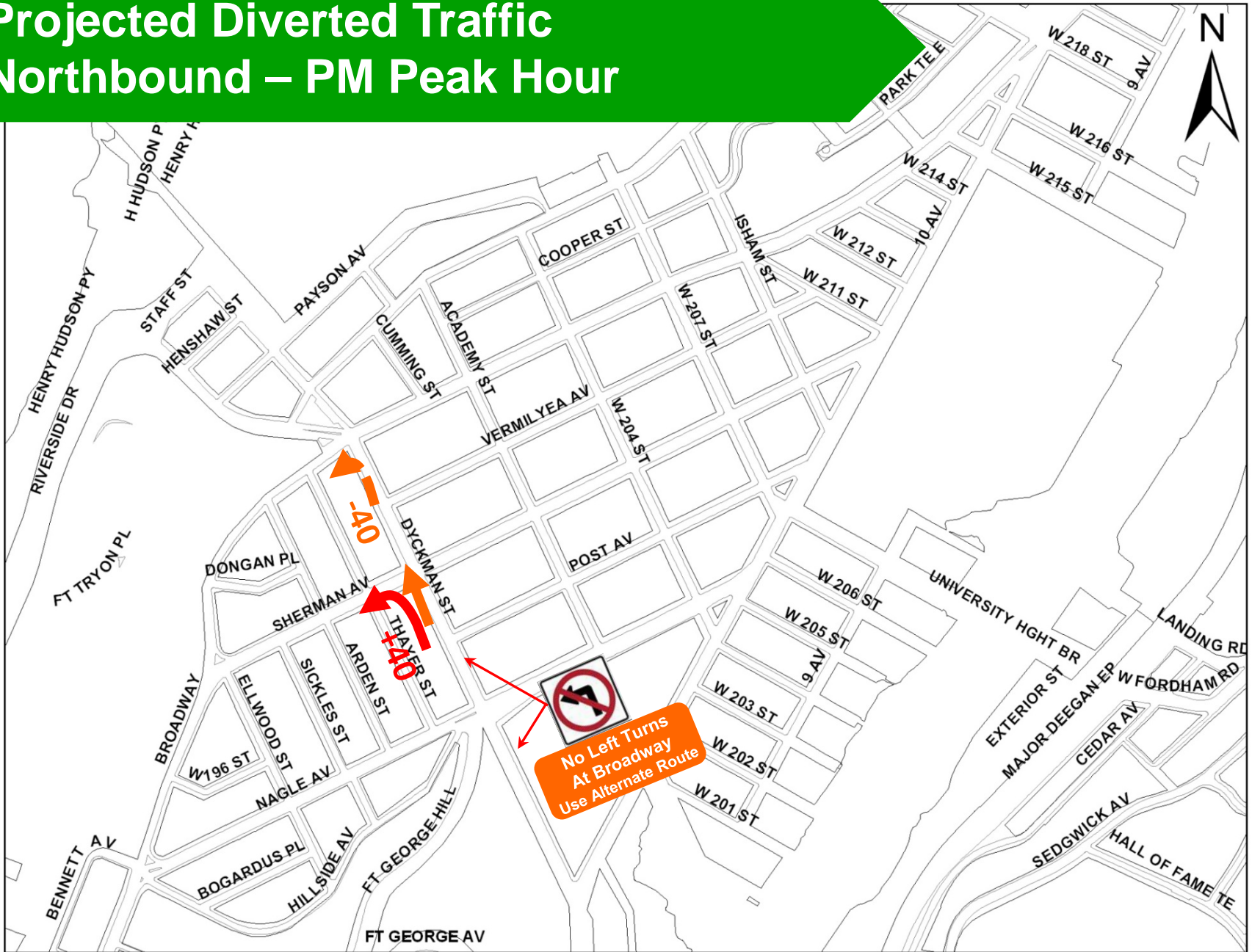


Westbound left-turn prohibition

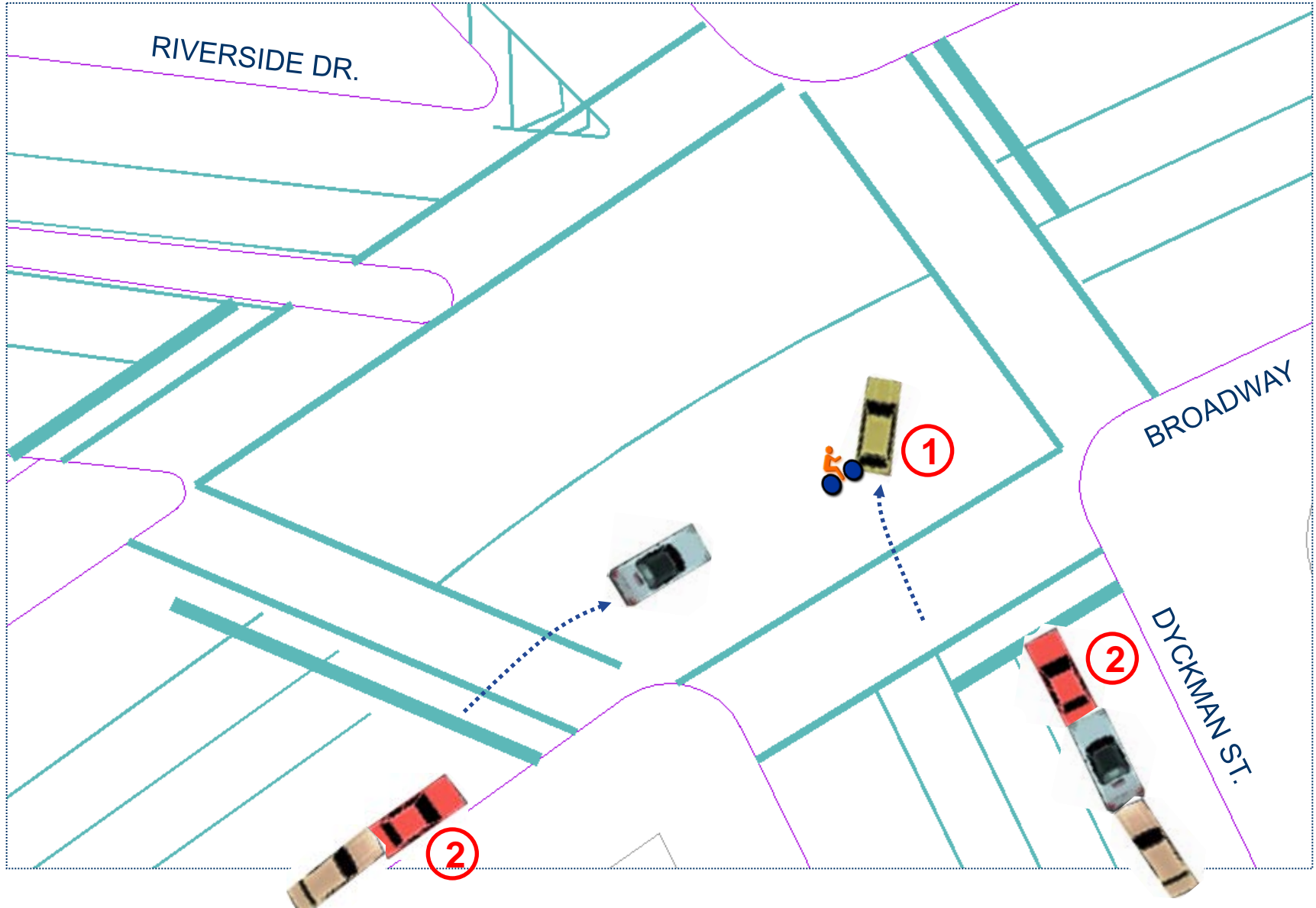
Benefit

1. New conflict-free crossing
2. Improved traffic flow and reduction in congestion

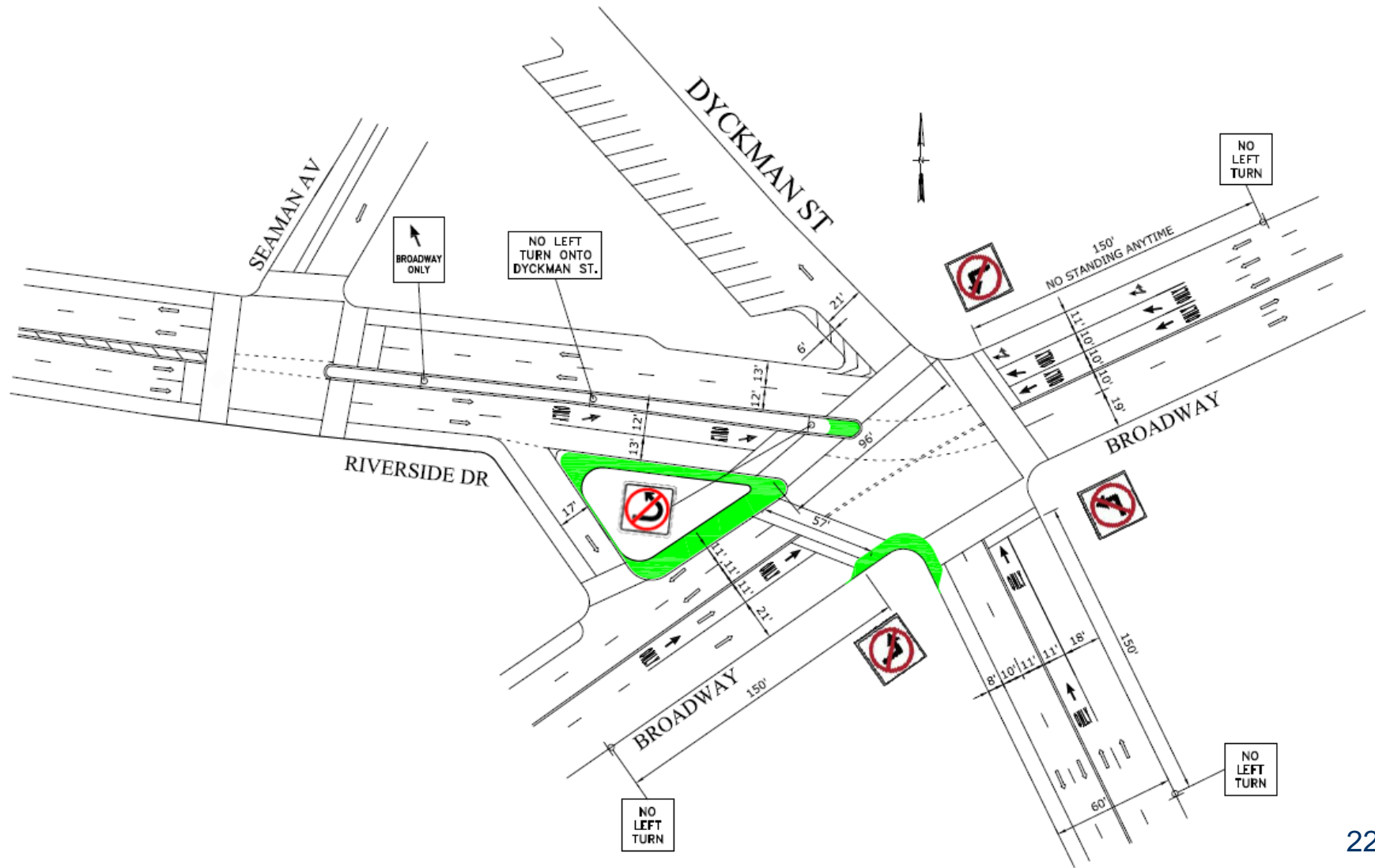
Projected Diverted Traffic Northbound – PM Peak Hour



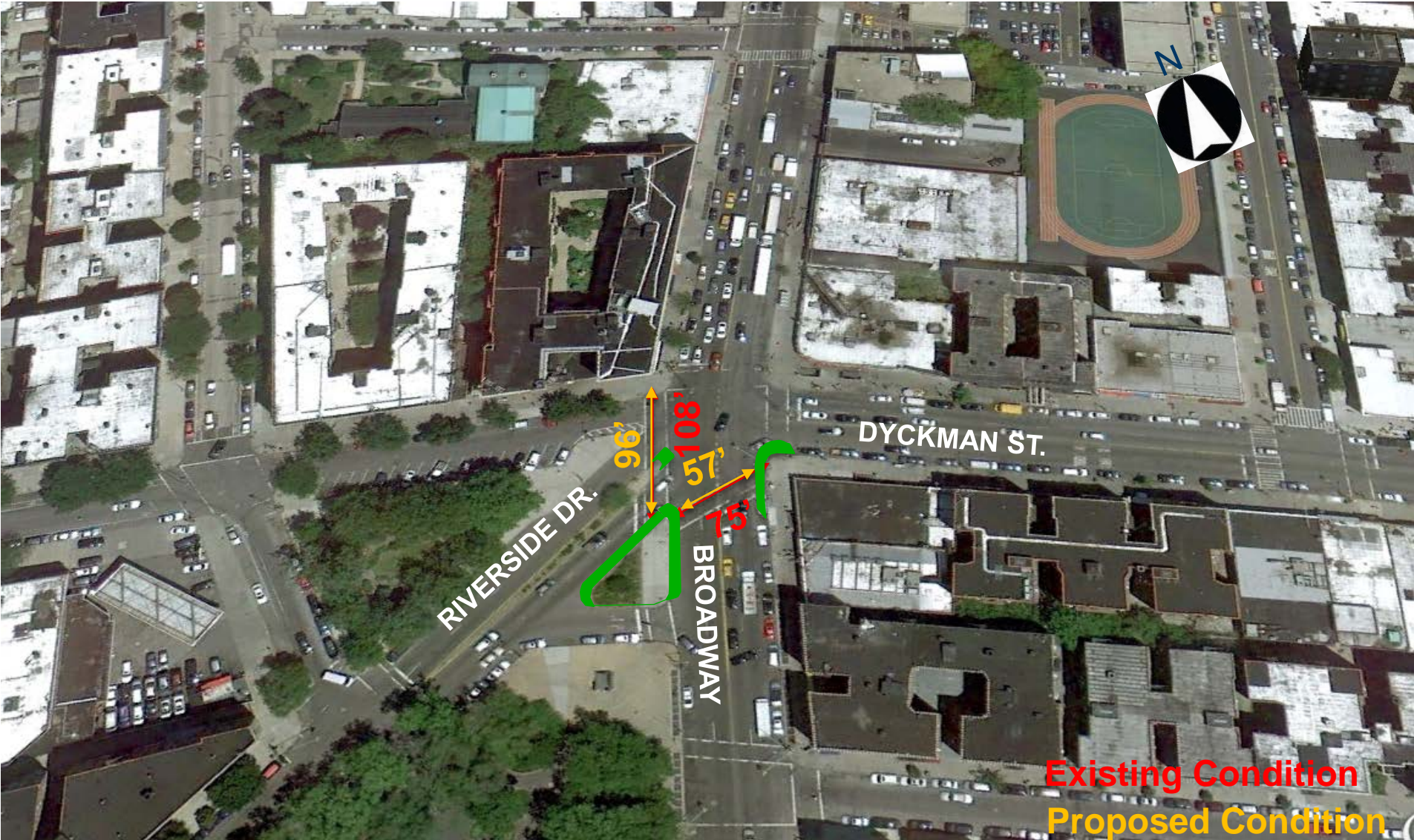
Potential Accident Reduction - Westbound Left turn Prohibition



Proposed Geometric Changes



Crosswalk Length Changes



Project Benefits

- Two new conflict-free crossings with reduced crossing distance
- Additional green time for pedestrians and traffic
- Improved safety and mobility for all street users (pedestrians, cyclists, and motorists)

Question?

Thank
You