



WASHINGTON HEIGHTS NEIGHBORHOOD TRANSPORTATION STUDY

Fall 2016

DRAFT DOCUMENT



Background

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BACKGROUND

- DOT initiated study in response to requests from community and elected officials
- No set agenda
- Focus on improving safety, mobility, and quality of life for all street users
- Study coordinated with ongoing Port Authority capital projects at the George Washington Bridge and Bus Station
 - Port Authority in-kind contribution of technical assistance through dedicated modeling and consultant support
- Study relied heavily on DOT staff resources with overall support from AECOM



Council Member Ydanis Rodriguez



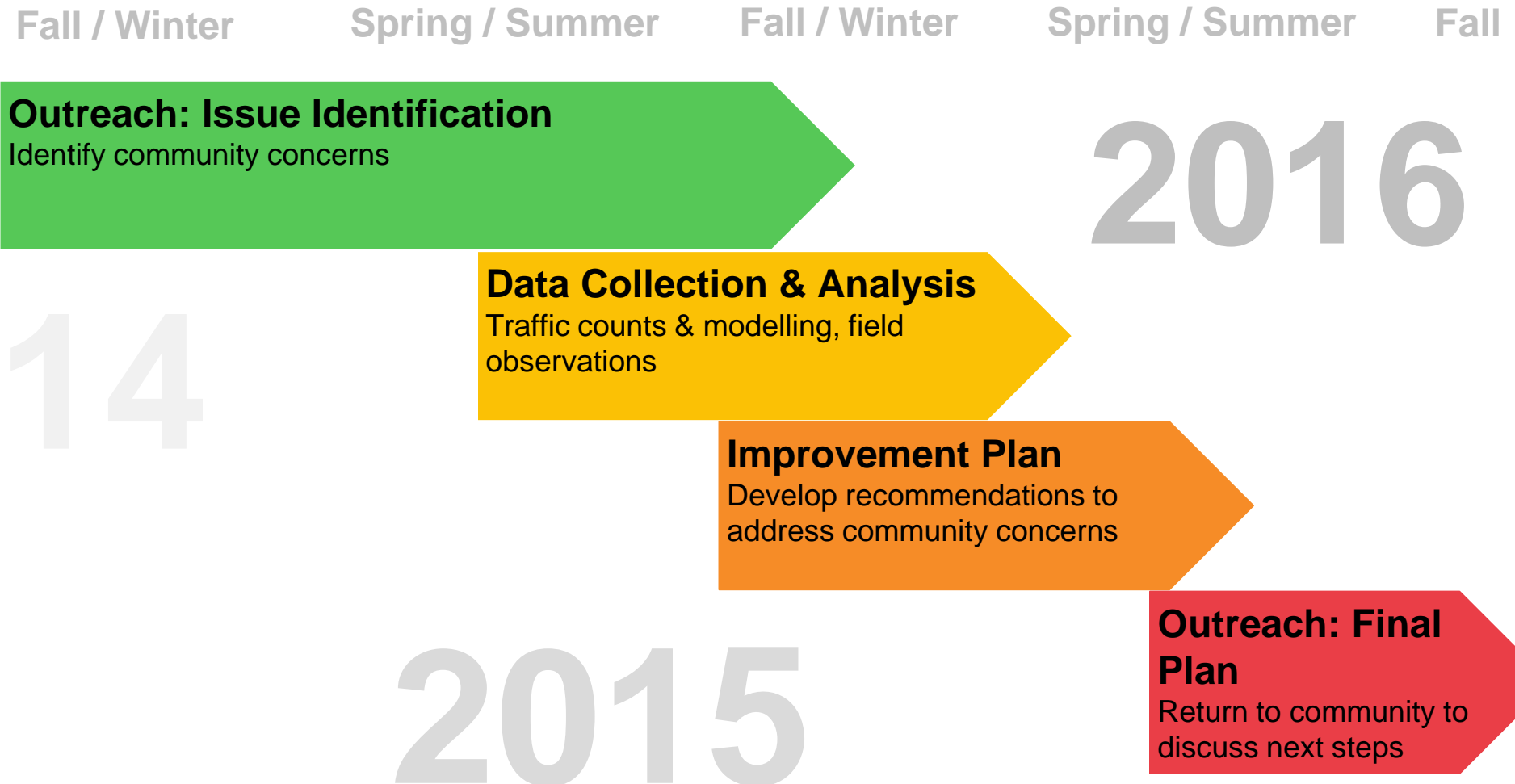
New bike lane in Washington Heights

STUDY APPROACH

- **Primary Goal: Develop a set of actionable improvement concepts that address community concerns**
- Step 1: Gather feedback from public on issues that affect them
- Step 2: Focus data collection and analysis on key issues identified by the public
- Step 3: Develop short and long-term improvement concepts
- Step 4: Model & analyze improvement concepts to determine feasibility
- Step 5: Present improvement concepts to public for feedback
- Step 6: Work with other DOT units to implement feasible projects



TIMELINE



PUBLIC WORKSHOPS

- Three public workshops in 2014-15
- Workshops sponsored by CM Ydanis Rodriguez, CB12 and other elected officials
- Simultaneous Spanish translation at all workshops
- Online feedback portal allowed visitors to tag and categorize issues on map
- Coordinated with Port Authority and New York Presbyterian Hospital



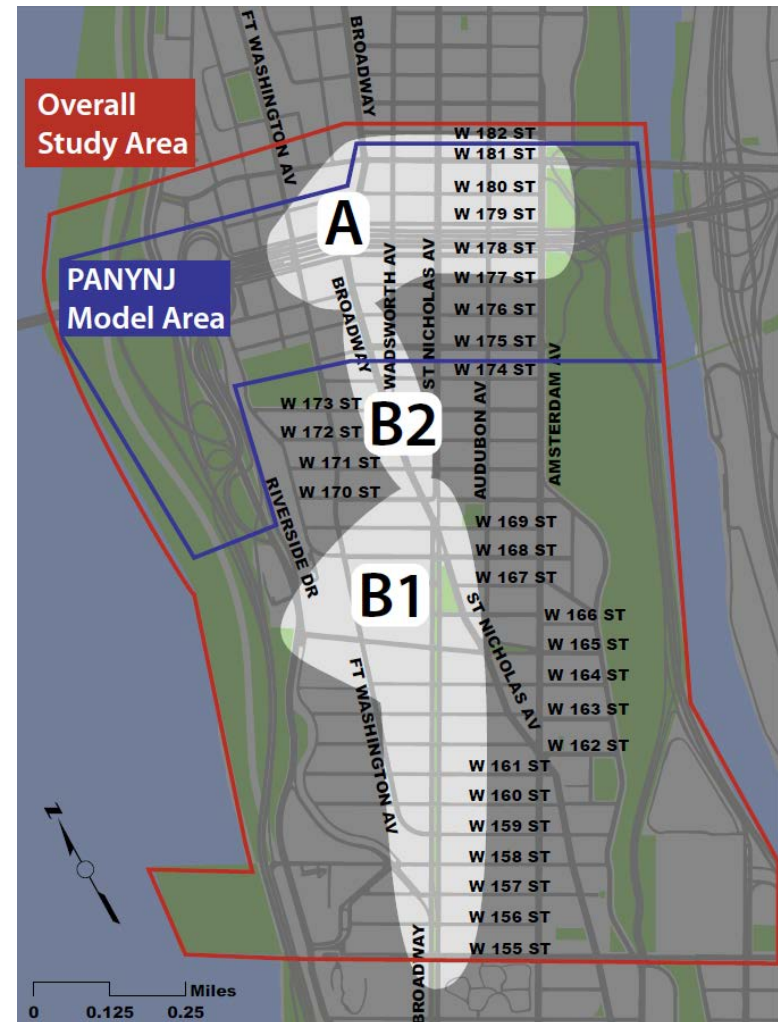
Washington Heights
Neighborhood Transportation Study



Map exercise from public workshop

DATA COLLECTION

- Study area divided into three focus areas based on concentration of issues raised at public workshops
- Area A encompassed by existing Port Authority microsimulation traffic model
 - Area A: PANYNJ collected new traffic counts and updated existing traffic model
- Area B1: Collected traffic and pedestrian counts and developed a new traffic model
- Area B2: Used time-lapse photography to generate curb-use dataset of 10 block faces

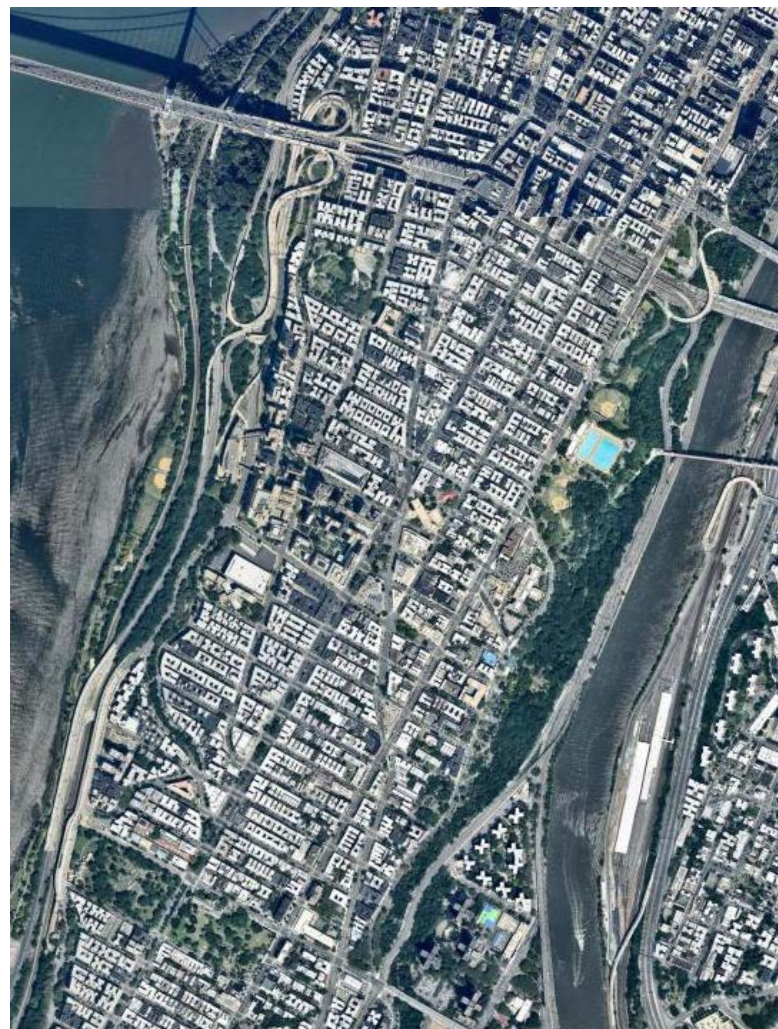


Neighborhood Context

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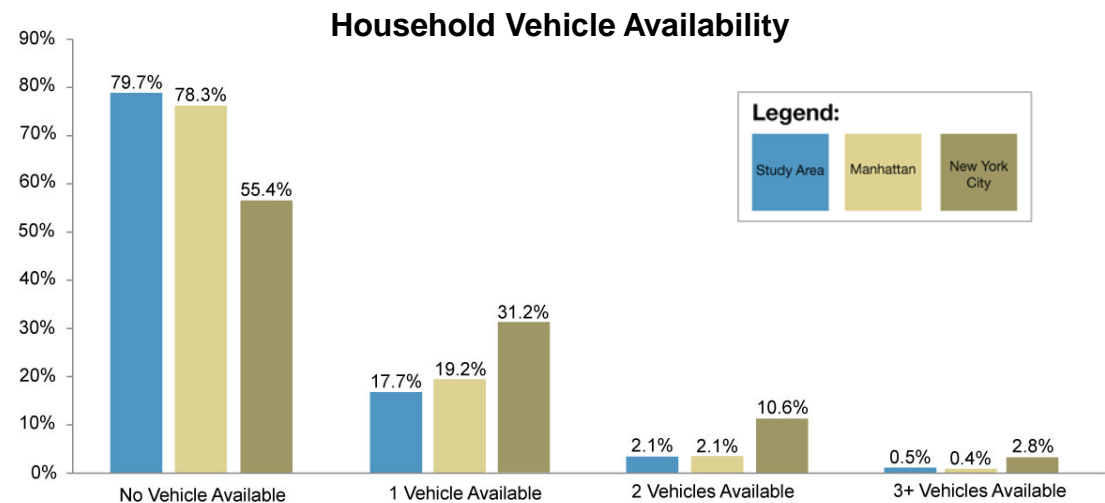
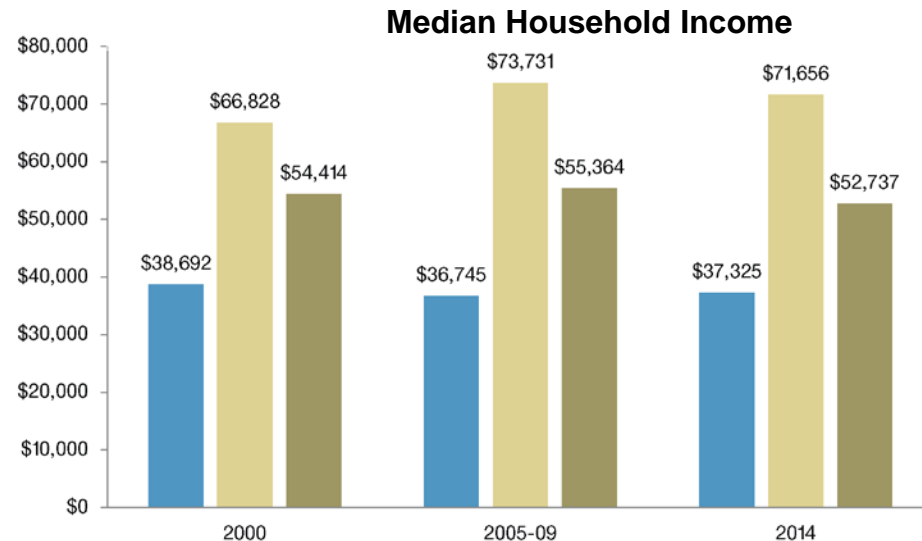
STUDY AREA

- All of study area is within Community District 12
- Represented in the City Council by Ydanis Rodriguez and Mark Levine
- Population of approximately 90,000, up 6% from 2010 Census
 - 72% Latino, compared to 29% of NYC population
 - 28% of households below poverty line, higher than citywide average of 21%
 - 93% of residents are renters, 6% vacancy is lower than the city average of 9%



HOUSEHOLD INCOME & VEHICLE AVAILABILITY

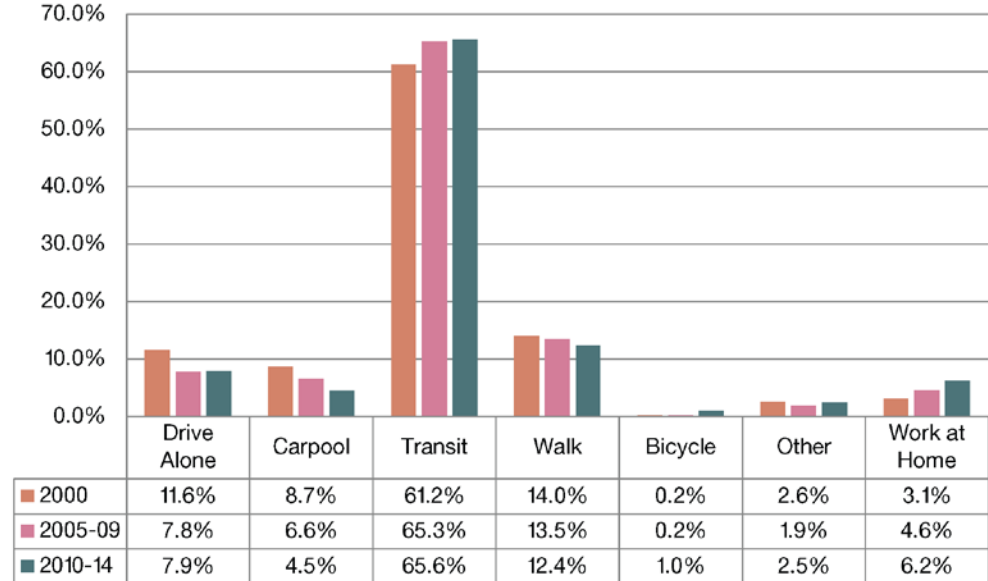
- Median household income of \$37,325
 - Roughly half that of Manhattan
 - \$15,000 below city average
- 80% of households are carless
 - Higher than Manhattan and citywide average



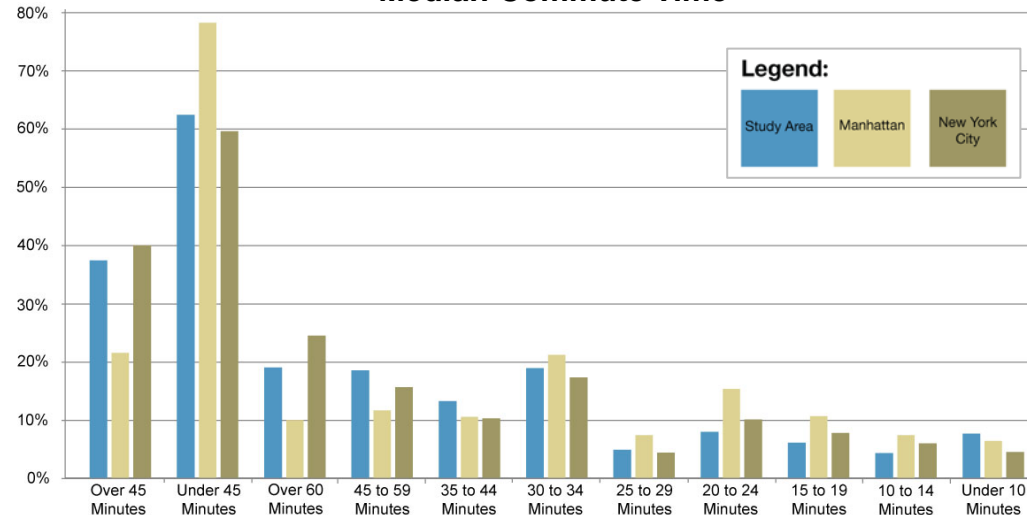
COMMUTE TO WORK

- Transit is the predominant commute mode
- Transit mode share has increased 4% since 2000
- Median commute time is 38 minutes
- Slightly shorter than the city average, but longer than the Manhattan average

Commute Mode



Median Commute Time

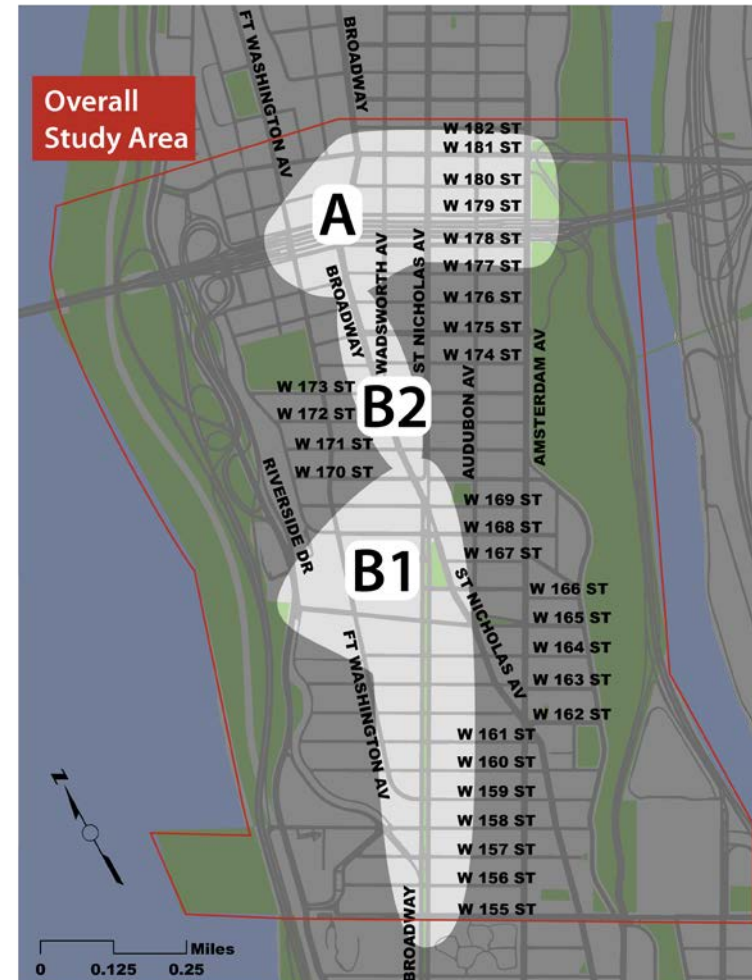


Existing Conditions

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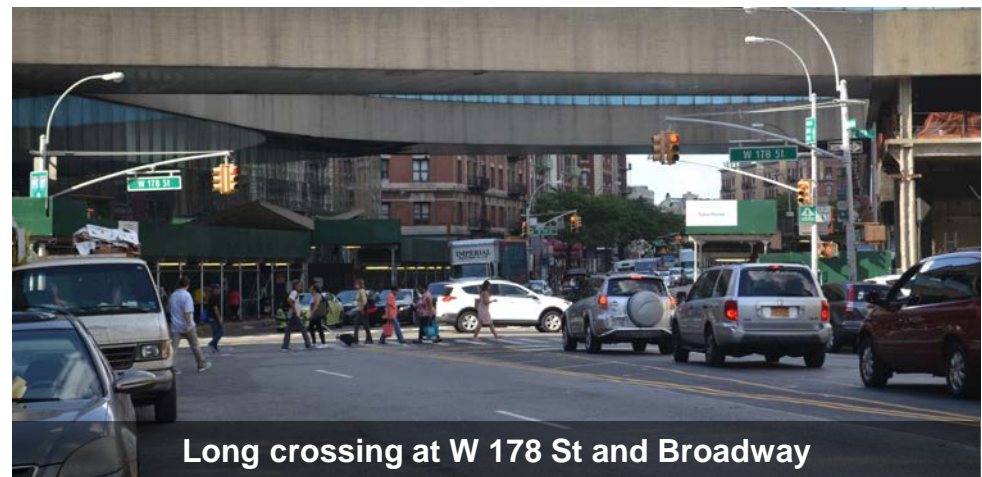
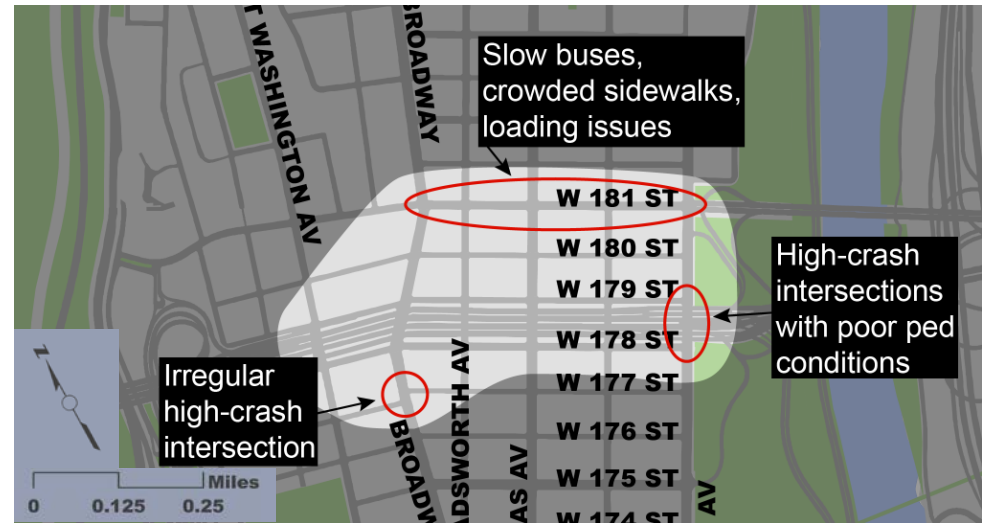
EXISTING CONDITIONS

- The study team conducted multiple site visits to each focus area to observe issues raised by the community
- Transit, traffic, and crash data were analyzed to better-define and prioritize existing issues
- Existing conditions analysis informed the development of improvement concepts



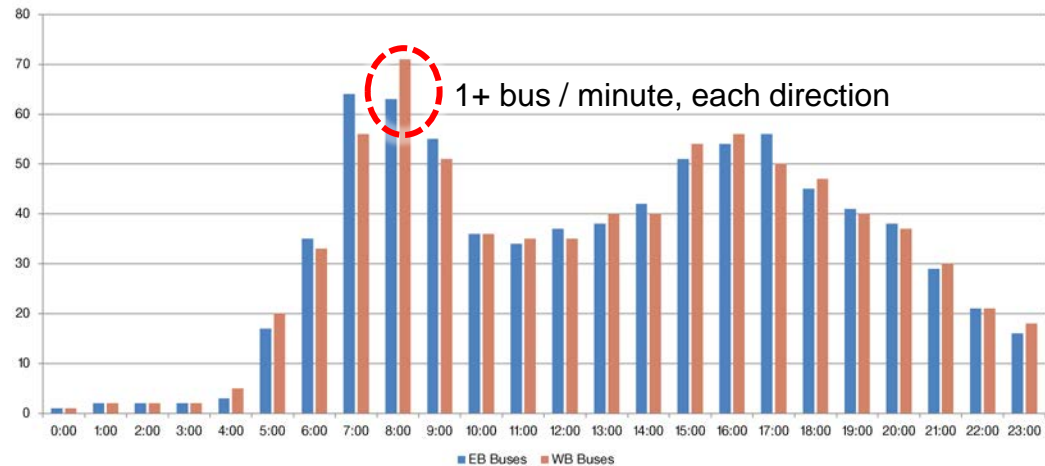
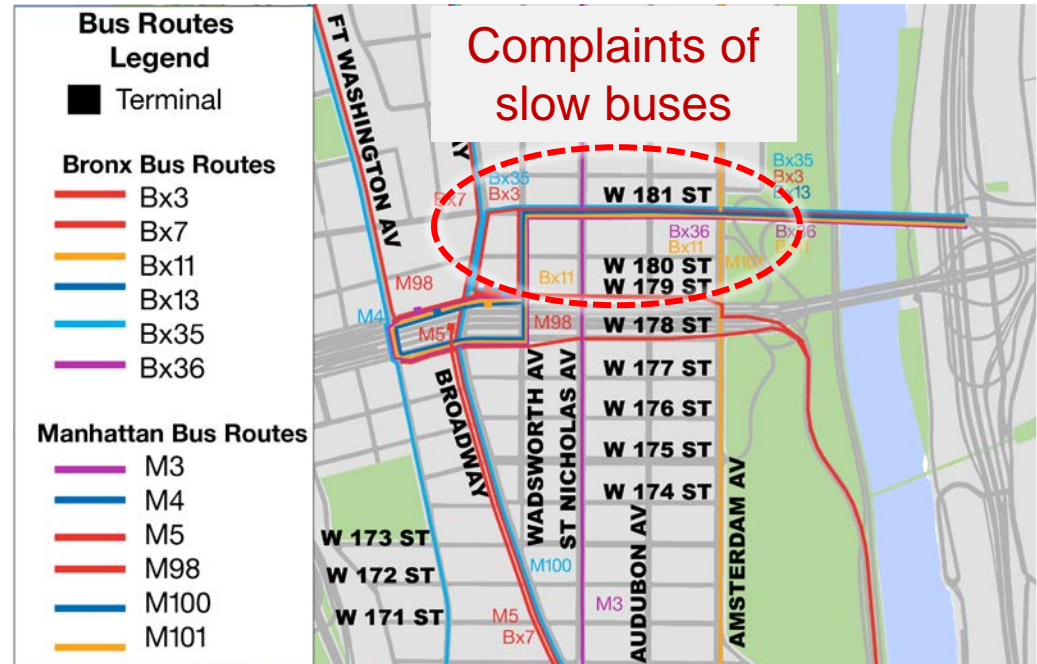
AREA A: OBSERVATIONS

- George Washington Bridge Bus Station / W 181 St
 - Slow, unreliable bus service on W 181 St
 - Busy bus stops with no shelters and/or benches
 - Poor access to the GWB for bicycles and pedestrians
 - Lack of pedestrian safety amenities
 - Traffic congestion



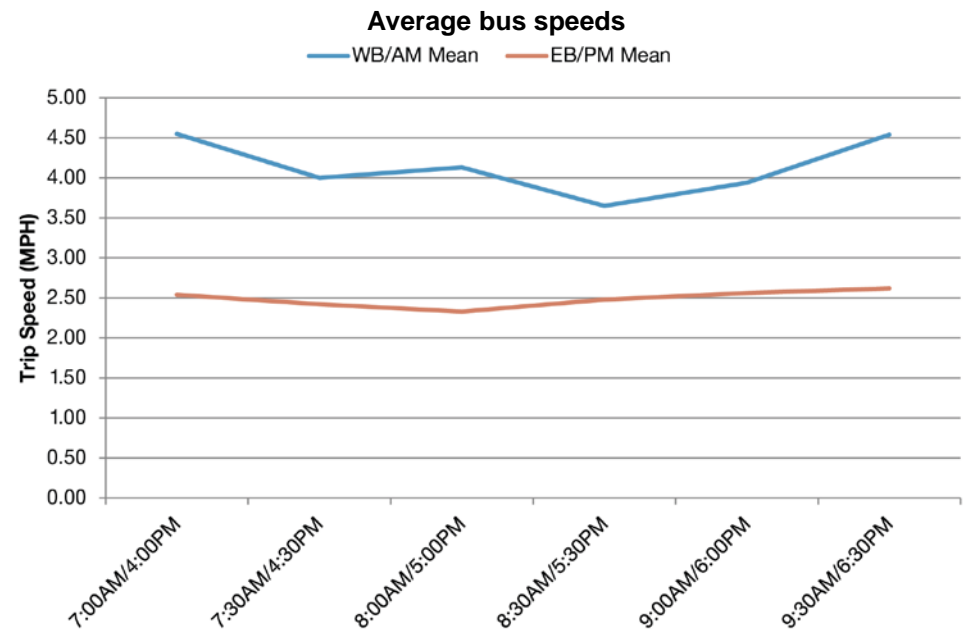
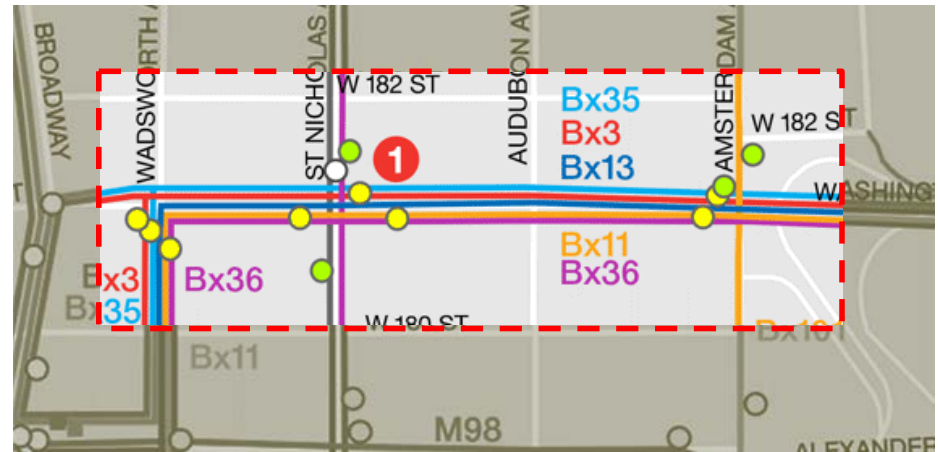
AREA A: BUS ISSUES

- 12 city bus routes serve area
- 6 Bronx, 6 Manhattan
- **Many members of the public complained of slow buses on W 181 St**
- 27,000 weekday bus passengers on W 181 St
- Bus frequency on W 181 St is greater than 1 bus per minute in each direction during the morning peak period
 - Greater bus frequency than Fulton Street transit mall in Brooklyn



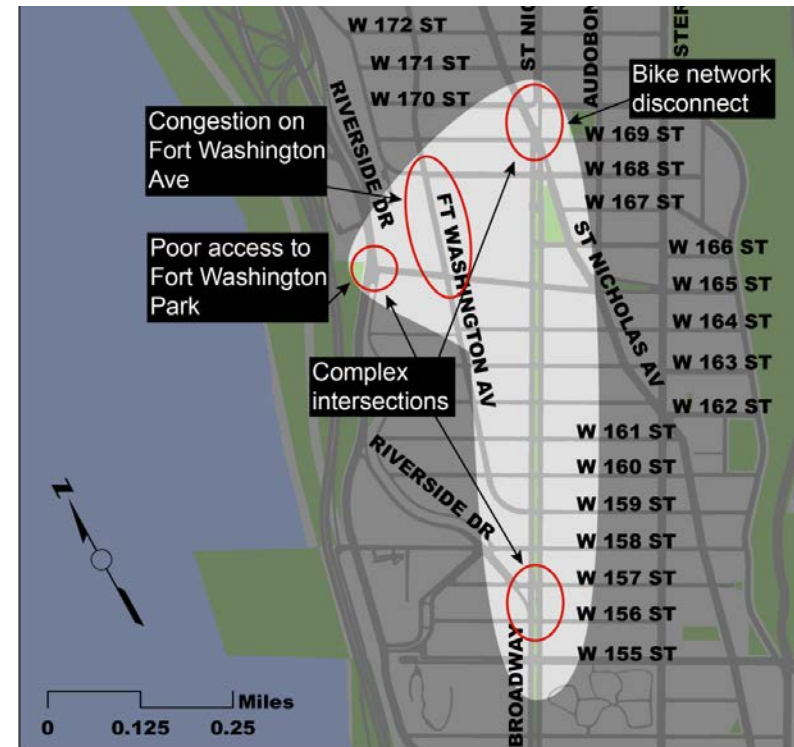
AREA A: BUSTIME ANALYSIS

- Analyzed MTA BusTime data to determine bus speeds along W 181 St
- AM Westbound speed average is 3.65 MPH
- PM Eastbound speed average is **2.49 MPH**
- Slow EB speeds despite bus lane in effect 4-7pm
- Likely factors contributing to slow speeds:
 - Frequent Bus lane blockages
 - High boarding volumes



AREA B1: OBSERVATIONS

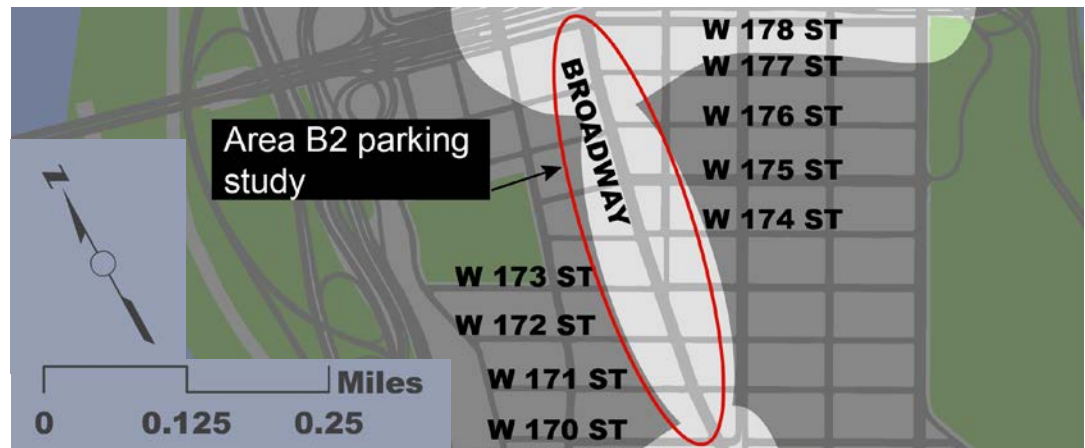
- Lack of pedestrian safety amenities at several locations
- Complex intersections with unpredictable traffic patterns
- Disconnect in the north-south bike network
- Poor access to Ft. Washington Park and other green spaces
- General traffic congestion around hospital



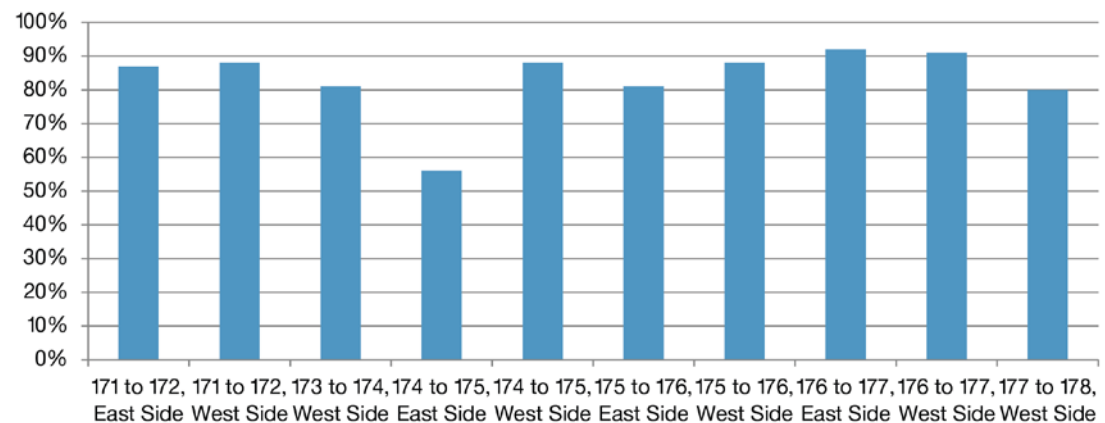
Disorganized merge at intersection of St. Nicholas Ave and Broadway

AREA B2: CURB-USE DATA

- Curb-occupancy data analyzed between 9am and 7pm
- Median parking duration is 21 minutes
- Average occupancy of 83%
- 9 of 10 block faces average above 80% occupancy
- 6 of 10 block faces average above 85% occupancy

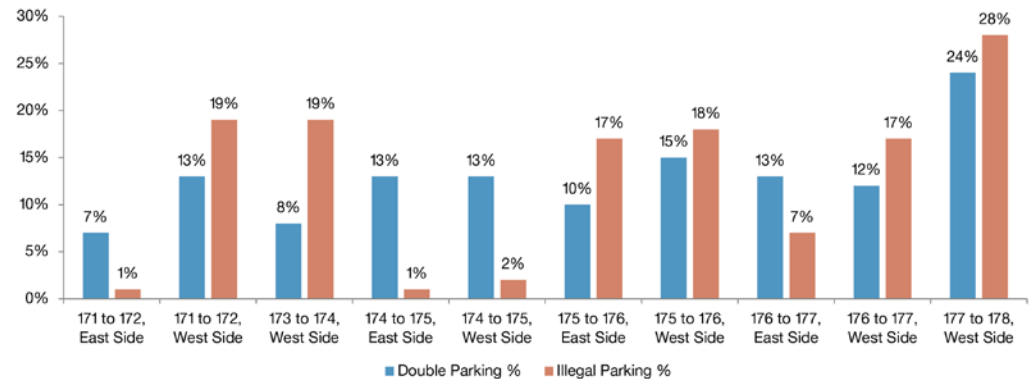


Average Curb Occupancy, 9am-7pm



AREA B2: DOUBLE & ILLEGAL PARKING

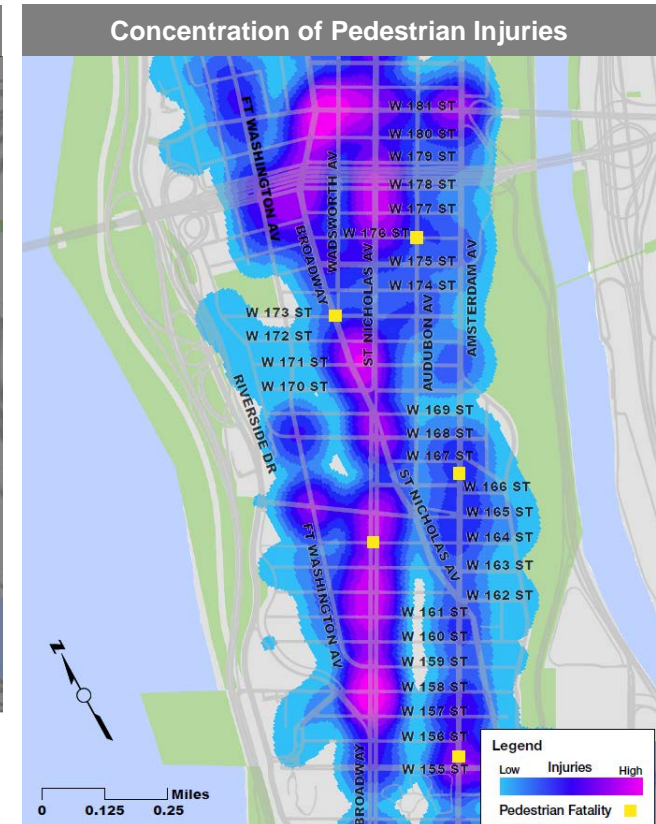
- Average of at least one double parked vehicle 13% of the time
- Average of at least one illegally parked vehicle 13% of the time
- West side of Broadway between W 177 St and W 178 St has highest prevalence of illegal and double parking
- Double-parked trucks on this block contribute to congestion exiting the George Washington Bridge



Double Parking on Broadway at W 178 St

STREET SAFETY

- Concentration of pedestrian injuries along Broadway and W 181 St
- Vision Zero priority corridor runs through study area
- Five Vision Zero priority intersections in area B1

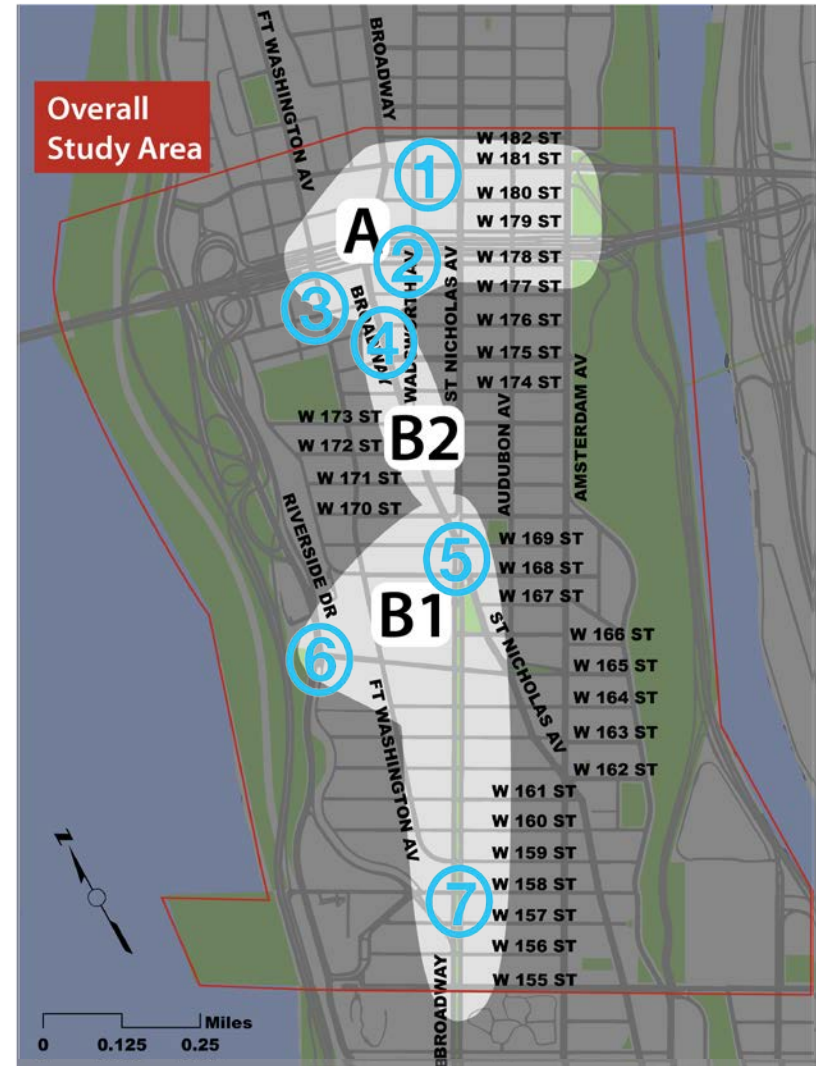


Improvements

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OVERVIEW OF IMPROVEMENT PLANS

- ① W 181 St Bus Improvements
- ② George Washington Bridge Bus Station Pedestrian Improvements
- ③ W 178 St and Ft. Washington Ave Pedestrian Improvements
- ④ Broadway Loading Windows/ Dynamic Parking Rates
- ⑤ Broadway/St. Nicholas Ave Pedestrian Additions
- ⑥ W 165 St and Riverside Dr Safety Improvements
- ⑦ Broadway Road Diet-Section

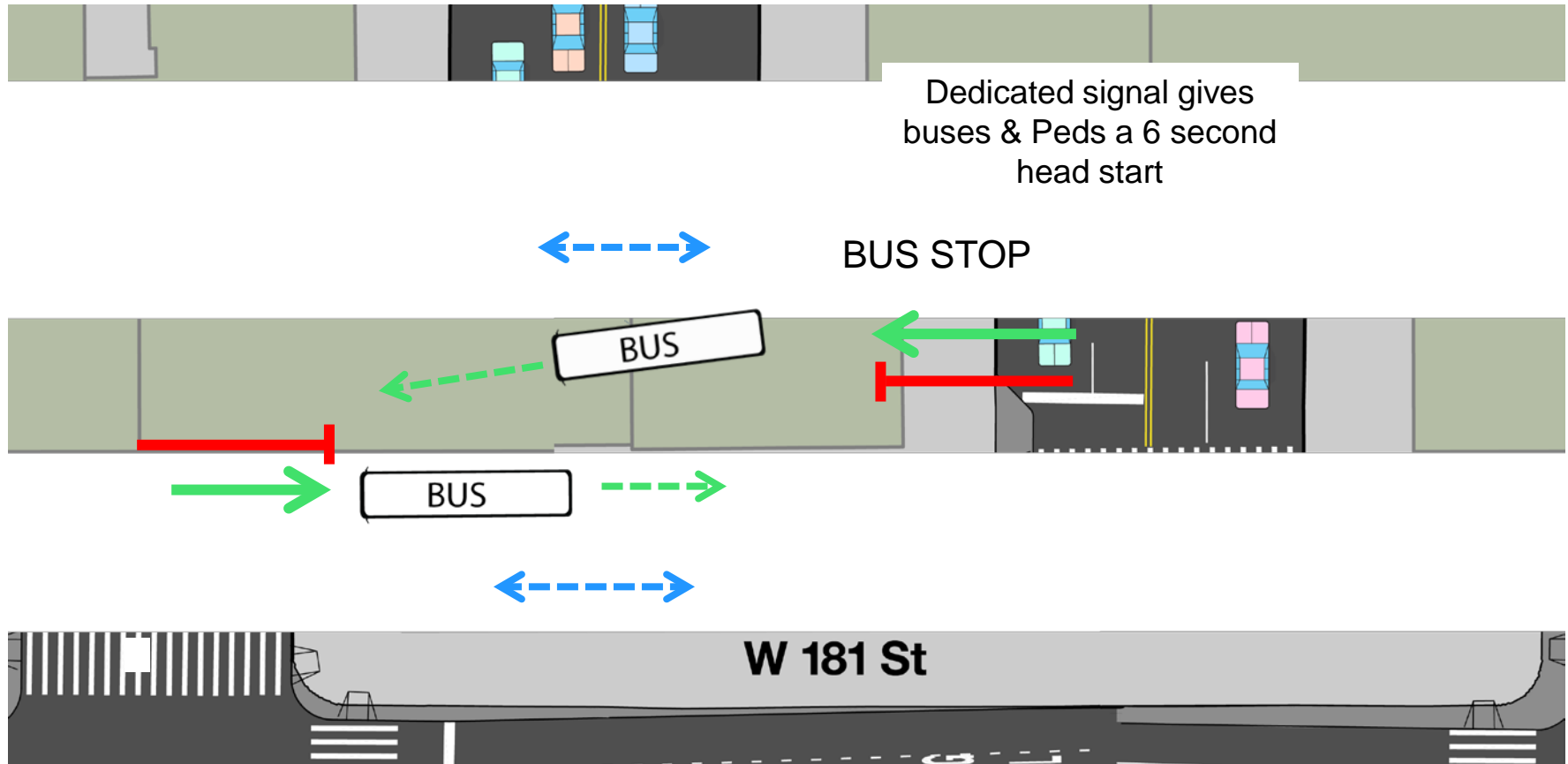


AREA A: W 181 ST BUS IMPROVEMENTS



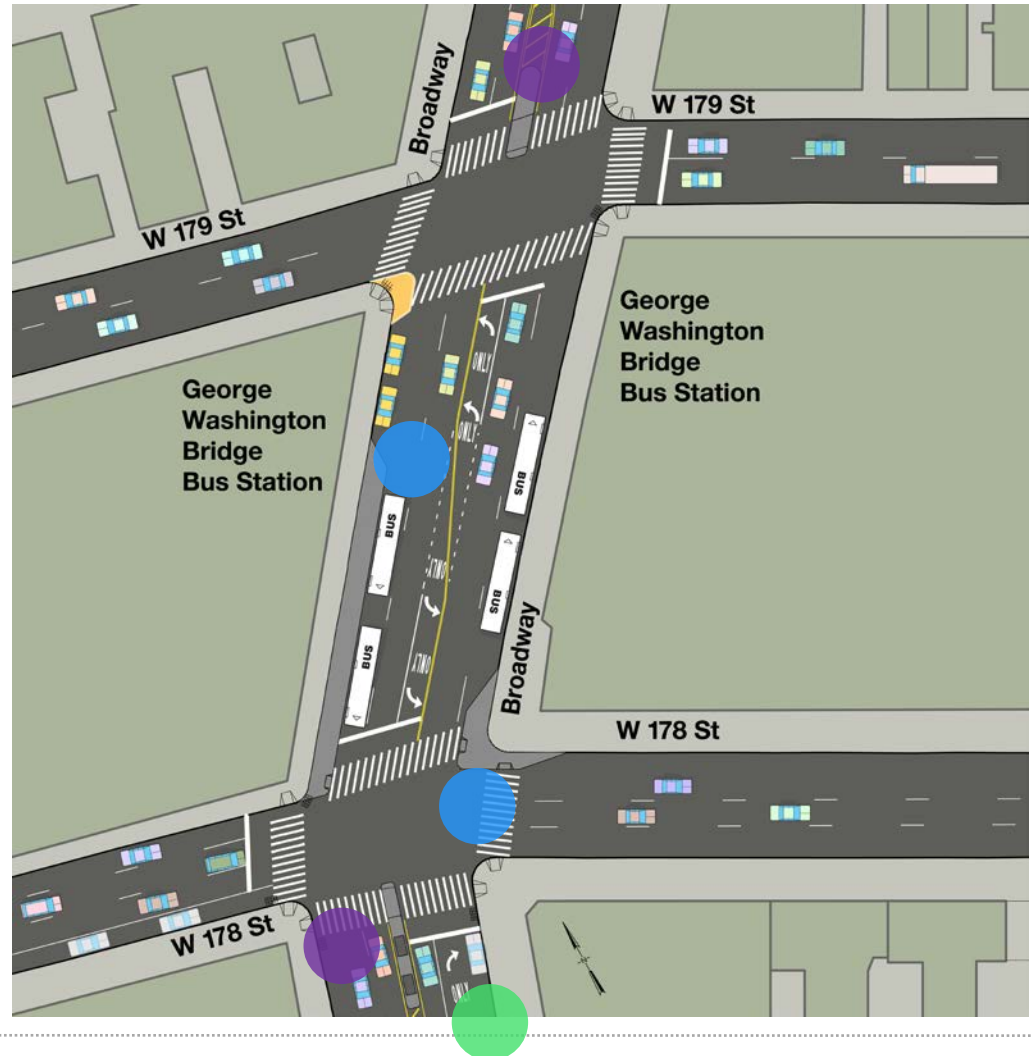
-  Red bus lane with expanded hours
-  Curb Extensions
-  Pedestrian island
-  Bus queue jump signal

AREA A: W 181 ST & ST NICHOLAS AVE BUS QUEUE JUMP



AREA A: BUS STATION PEDESTRIAN IMPROVEMENTS

- Bus bulb and curb extension
- Pedestrian safety islands
- Right turn only lane
- Broadway islands shorten crossing distance and slow turning vehicles
- Curb extensions on platform over the Trans-Manhattan Expressway require coordination with PANYNJ



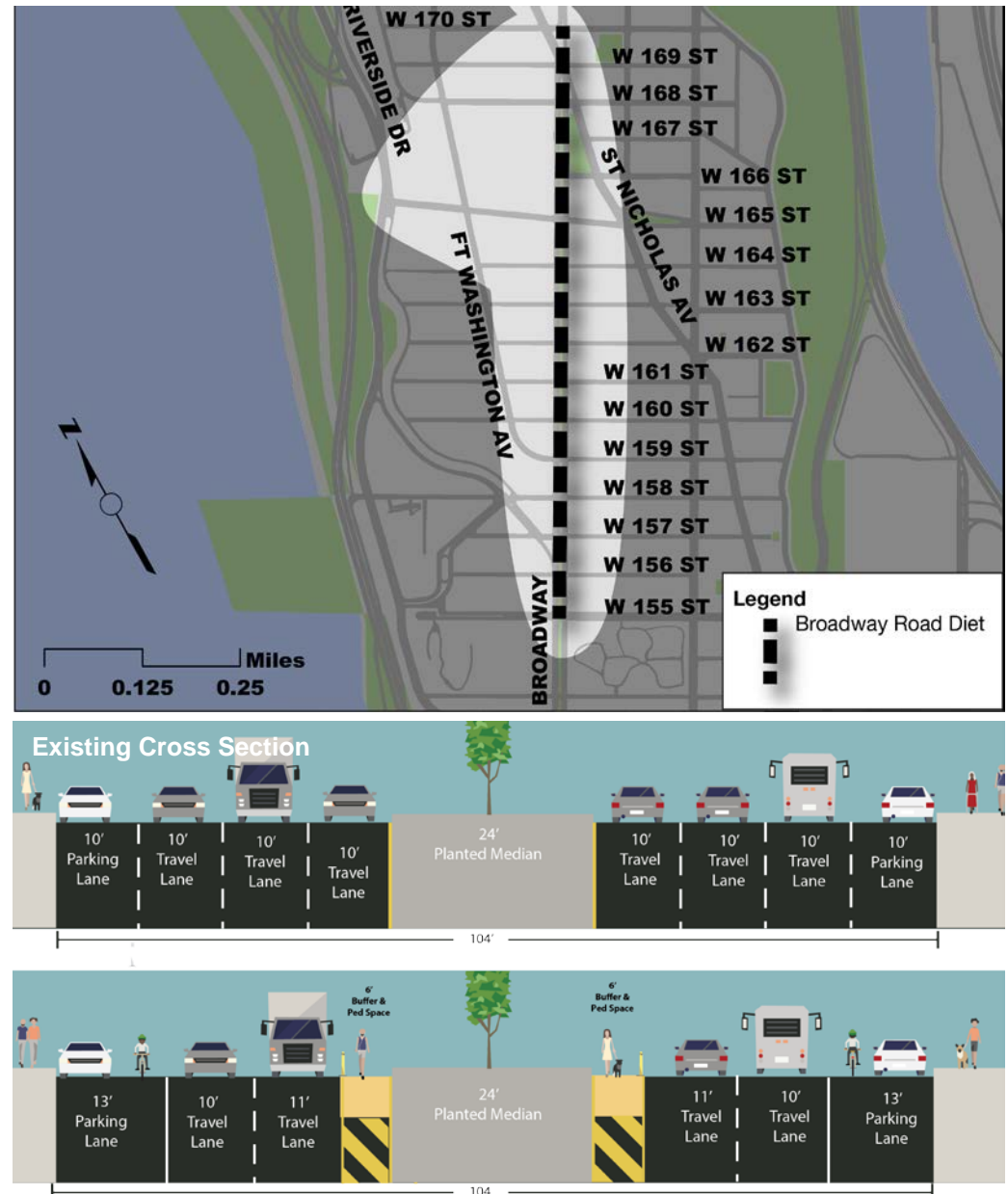
AREA A: W 178 ST AND FT. WASHINGTON AVE ISLAND

- Improved lighting conditions at the GWB bus station
 - Conversion to right-turn only lane
 - Pedestrian safety island
- Right turn only lane on W 178 St simplifies merge between W 178 and GWB ramp
 - Pedestrian island provides refuge from fast-moving traffic



AREA B1: BROADWAY ROAD DIET

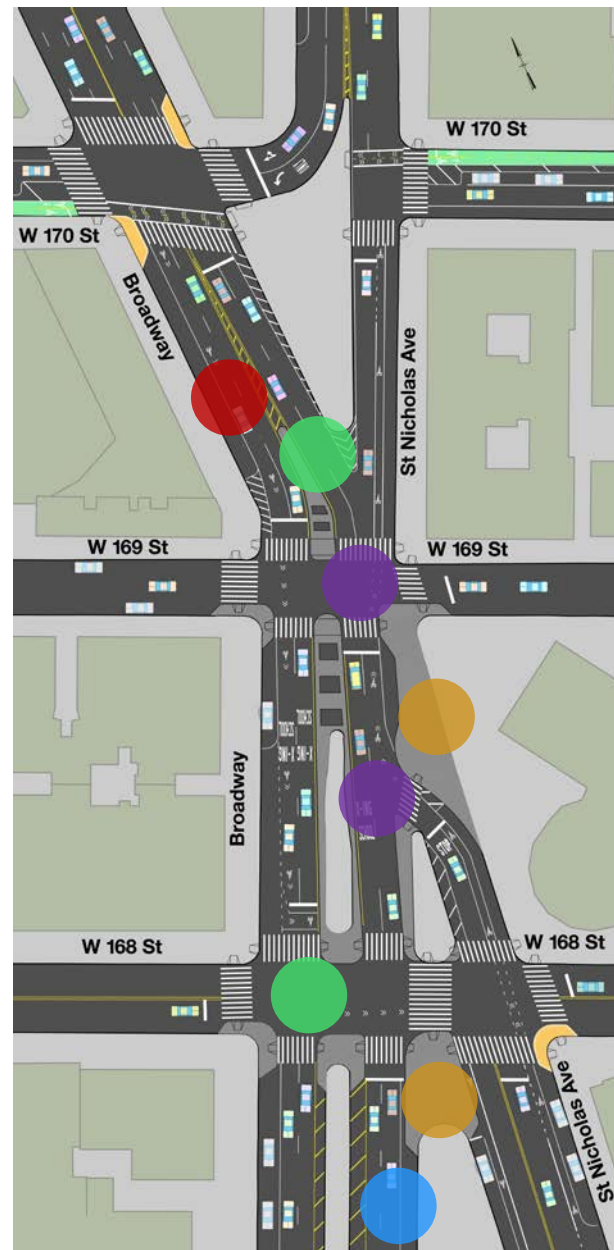
- Reduce travel lanes to calm traffic on Vision Zero priority corridor
- 2016 SIP project implemented road diet on Broadway south of study area; proposal extends same design to W 169 St
- Traffic analysis indicates road diet and LPIs will have minimal impact on traffic



AREA B1: BROADWAY & ST. NICHOLAS

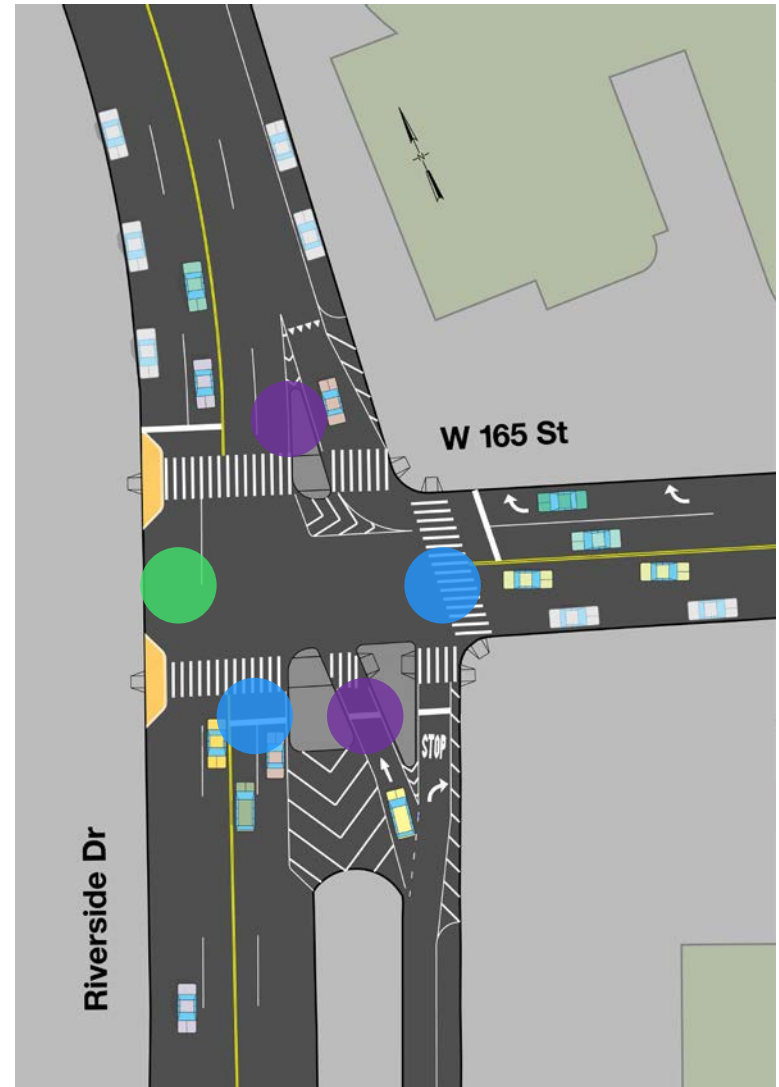
- Reduce travel lanes to slow traffic
- Curb extensions and pedestrian islands
- Traffic realignment
- New public space
- New bicycle facilities

- Proposal simplifies intersection of Broadway & St Nicholas Ave
- Several median extensions significantly shorten long pedestrian crossings



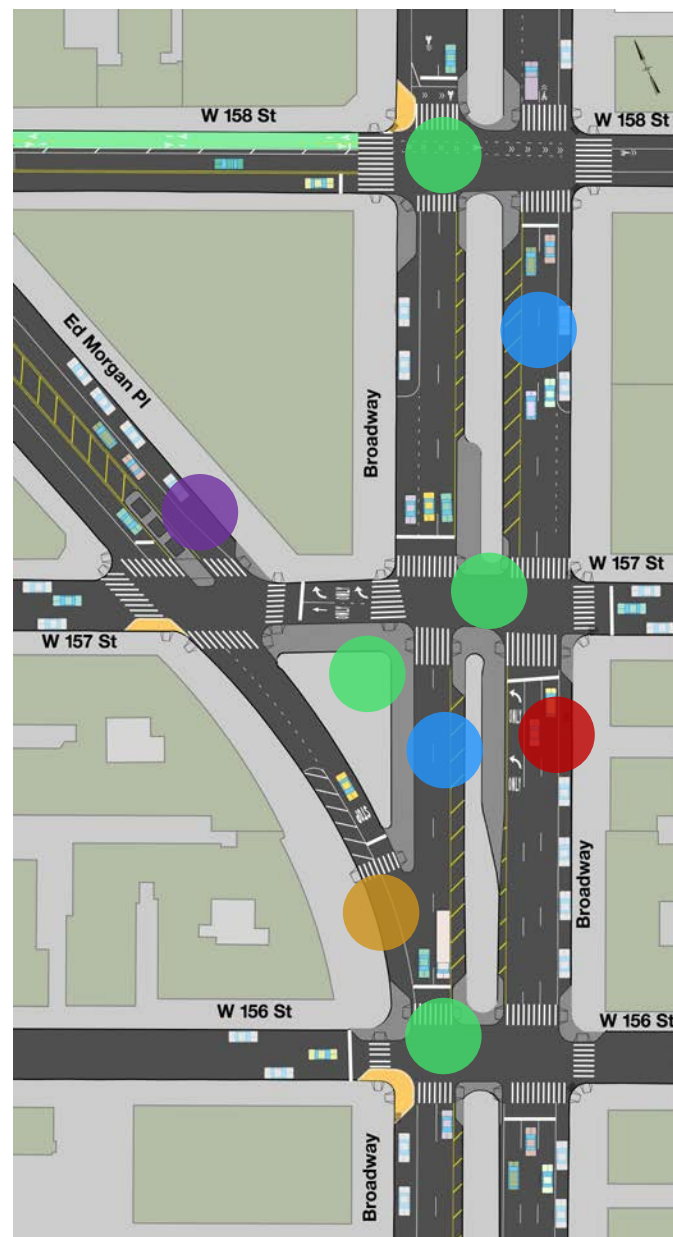
AREA B1: W 165 ST & RIVERSIDE DR SAFETY IMPROVEMENTS

- Painted curb extensions
 - New crosswalks
 - Pedestrian safety islands
- High volume westbound right turn from W 165 onto Riverside Dr conflict with only crosswalk
 - Right turn on red is permitted, meaning no conflict-free pedestrian crossing
 - New crosswalk on south side of intersection provides crossing with reduced conflicts



AREA B1: BROADWAY, 156-158 ST

- Reduce travel lanes to slow traffic
- Curb extensions & expanded pedestrian space
- Pedestrian safety island
- New crosswalk
- Expanded left turn lanes
- Remove one lane in each direction to calm traffic
- Median extensions shorten multiple long pedestrian crossings



B2: BROADWAY LOADING WINDOWS

- West side of Broadway between W 176 St and W 178 St
- Implement truck loading zone during AM hours
- Reduce lane blockages during AM peak period
- Improve flow of traffic from George Washington Bridge onto Broadway



Conclusion

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IMPROVEMENTS OPEN HOUSE

- January 12, 2017
- Shared study findings and recommendations with public and stakeholders
- Improvement concepts were generally well-received
- **Next Step: Work with DOT implementation groups to advance high-priority short and long-term proposals**



NEXT STEPS

Projects Already in Planning

Broadway Road Diet (2017 RIS SIP)

Broadway and St Nicholas Ave ped safety improvements (School Safety capital project)

Potential Short-Term Projects

Leading Pedestrian Intervals in areas A and B1

Commercial loading windows in area B2

Expanded bus lane hours on W 181 St

Bus Queue jump on W 181 St at St Nicholas Ave

Pedestrian safety improvements at Riverside Dr and W 165 St

Pedestrian safety islands in George Washington Bridge bus station area

Potential Long-Term Projects

Capital implementation of Broadway road diet

Capital curb extensions in area A

THANK YOU!

Questions?



NYC DOT



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