Presentation outline

1. Project background
2. Proposed corridor design
3. Traffic analysis
4. Proposed SBS route and stations
5. Project benefits
Project background
Project background

Congested Corridor Study
• Initial safety and traffic improvements on Woodhaven Blvd 2011-2013
• 2014-2015 bus and safety improvements
• Long-term recommendation for Select Bus Service and capital project

Bus Rapid Transit (BRT) Phase II Plan
• Woodhaven Blvd identified as priority transit corridor at Public Meeting
• Chosen as a Phase II Select Bus Service (SBS) Corridor
Select Bus Service (SBS) is New York City’s brand name for a package of improvements that result in faster and more reliable service on high-ridership bus routes.

There are seven SBS routes currently operating in NYC.
Select Bus Service Features

- Improved fare collection
- Bus lanes
- Transit signal priority
- Passenger Information
- Stations & Amenities
- Branding
Select Bus Service Results

**Faster Bus Service**  
Speeds have increased by 15-23%

**Popular**  
Customer satisfaction of 95%+

**Increased Ridership**  
Trips increased by 10%

**Safer Roadways**  
Crashes reduced by over 20%

**Proven Success**  
7 SBS routes in operation, carrying over 200,000 passengers daily
Woodhaven / Cross Bay SBS corridor

• Based on the existing Q52/53 LTD bus route
• 30,000 daily bus riders
• 14 miles long from Woodside to the Rockaways
• Within a 15-minute walk of the corridor:
  – 400,000 residents
  – 43% of households do not own a car
  – 60% of residents commute by transit
Community outreach process

- Community Advisory Committee
- Public Open Houses and Workshops
- Community Board Meetings
- Stakeholder Meetings
Community feedback

1. **Bus service** is unreliable and slow during rush hour

2. **Transit improvements** are needed to better serve customers, especially in the Rockaways

3. **Pedestrian crossings** are long and dangerous

4. **Congestion** leads to long and difficult trips for buses and drivers

5. **Changing road widths and configurations** make the corridor difficult to navigate
Transit

• One-way travel time can vary by up to 30 minutes (varies between 55 and 85 minutes)
• Q53 LTD buses are stopped almost half of the time
• Many passengers are riding the bus long distances

All Q53 Northbound Trips

- 57% In Motion
- 25% Red Lights
- 18% Bus Stops

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Safety

• Vision Zero Priority Corridor
  – Over 3,000 injuries (2009-13)
  – 22 fatalities (17 ped) (2009-13)
    • 8 fatalities (6 ped) in CB6
• Difficult pedestrian crossings
• Challenging roadway geometry
Traffic

- High traffic speeds along some portions of the corridor
- Congestion is concentrated at key points
- Traffic flow is uneven (“hurry up and wait”)
Traffic – bottlenecks

- Pinch-points on the corridor limit capacity; merging at bottlenecks is inefficient and unsafe
- Curbside activity and double parking reduce capacity of 4th travel lane

**LIRR Overpass**
4-to-3 lane bottleneck

**Union Turnpike**
Effectively 3-to-2 lanes
SB due to left-turns

**Commercial Areas**
Effectively 3 lanes due to double parking
Project goal

Transform Woodhaven and Cross Bay Boulevards into a complete street where:

• Buses operate quickly and reliably
• Bus customers safely and easily access bus stations
• Pedestrians are comfortable walking on and crossing the street
• Drivers get where they need to go at a reasonable and safe speed
Design timeline

- Develop draft corridor design plan based on chosen design concept
- Public design workshops and stakeholder meetings
- Refine draft design through community feedback, technical analysis, and transportation goals for NYC
Proposed Corridor Designs
Screening process

Develop 3 Design Ideas

Concept 1: Offset Bus Lanes
Concept 2: Main Road Bus Lanes
Concept 3: Median Bus Lanes

Choose a preferred corridor design

Concept 2: Main Road Bus Lanes for Woodhaven Boulevard
Summary of chosen concept

Main Road Bus Lanes

• Significant transit improvement
• Most potential for pedestrian and safety improvements
• Calmed service roads provide vehicle accessibility for local businesses and residences
• Organizes thru and local vehicle travel
Corridor design summary

- **Roosevelt Av / Broadway Av**
  - No bus lanes
  - Improved curbside bus stops

- **Queens Blvd and Hoffman Dr**
  - Designated bus-only station areas
  - Improved bus stops / transfers

- **Woodhaven Blvd**
  - Main road bus lanes
  - All buses use median stations

- **Cross Bay Blvd (north of 165 Av)**
  - Offset bus lanes
  - SBS buses stop at bus bulbs
  - Local buses stop at the curb

- **Broad Channel / Rockaways**
  - No bus lanes
  - Targeted transit priority treatments
  - Improved curbside bus stops
Existing conditions - Woodhaven Blvd

- Long pedestrian crossing distance with no refuge
- Left turns create congestion and safety issues
- Wide roadway encourages speeding
- Bus stops lack amenities
- All lanes are mixed traffic; lack of organization
Proposed design - Woodhaven Blvd

- Calmed service roads with parking
- Curbside bus lanes in the mainline roadway
- SBS stations and Local bus stops on side median
- Medians with pedestrian refuges and greening
- Separates local and thru traffic
Proposed design - Woodhaven Blvd

- **All buses** stop at median stations
- **Left turns** at designated left-turn bays
- **Slip openings** allow vehicles to move between the main road and the service road
- **Right turns** from the service road
- **Buses and thru traffic** in the main roadway
- **Local access and parking** in the service roads
- **Left turns** at designated left-turn bays

*Sample plan for illustrative purposes*
Typical median station

2nd mid-block station access point (where feasible)

station access from intersection crosswalk

Local / Express Boarding Area

Maneuvering space

SBS Boarding area
Example median stations

- Avinguda Diagonal, Barcelona, Spain
- Pelham Parkway, Bronx
- EL Grant Highway, Bronx
Potential station amenities

- trees and greening
- benches and seating
- public art
- real-time information
- shelters / fencing / windscreens

Philadelphia, PA – 33rd & Dauphin Bus Loop (source: SEPTA)
San Bernardino, CA – Bus rapid transit station (source: Architectural Record)
Traffic analysis
Traffic analysis

• Analysis assumes all traffic that uses Woodhaven and Cross Bay Boulevards today will continue to do so (no assumed mode shift)
• Level of service and traffic delay calculations at all major intersections
• Traffic simulation model of Woodhaven Blvd between 68th Rd and 86th Rd
Proposed design - traffic benefits

- 3 lanes continuously along corridor reduces merging/diverging behavior
- Banning key left turns (particularly Union Turnpike SB) helps thru traffic flow
- Longer left-turn bays where left turns are allowed keep turns out of through traffic
- More consistent roadway design allows for better traffic signal timing and coordination
- Service road design separates thru traffic from local access / parking
Traffic simulation model

- During the concept screening analysis, initial results showed improved travel times due to signal timing improvements and traffic organization.

- Revised model is currently in development based on draft plans and community feedback.
SBS Route and Stations
Proposed SBS Stations

Changes from the Q52/Q53 LTD stops:

- SBS stops at 91 Av instead of Atlantic Av
  *(local bus will still stop at Atlantic Av)*
- New stop at 101 Av
- New stop at Pitkin Av
- Consolidated SBS stops in Broad Channel and the Rockaways
Bus stops in CB6

Legend

- Proposed SBS + Local Stop (Existing Q52/Q53)
- Proposed SBS + Local Stop (New)
- Proposed Local Stop (Existing)
- Proposed Local Stop (new)
- Proposed Local Stop Discontinuation

Sites:
- Queens Blvd
- Penelope Av
- Metropolitan Av
- Myrtle Av
- Wetherole St (new SB)
- 61 Rd / Alderton St
- 62 Rd
- 63 Av
- 899
- 64 Rd
- Furmanville Av
- 65 Rd (NB only, relocated to Furmanville)
- 66 Av / 66 Rd
- 67 Dr (NB only)
- 68 Av
- 81 Rd / 81 Av

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Fare collection

Q52/53 SBS
• Off-board fare collection
• Fare machines at every SBS stop
• Pay with a Metrocard or with coins (just like any NYC bus)
• Customers can board at any door

Local / Express Buses
• Pay on the bus (same as today)
• Will have separate bus stop poles from the Q52/53 SBS
Project benefits
Project benefits

**Faster bus service** – bus only lanes and off-board fare collection will making riding the Q52/Q53 25-35% faster

**Improved bus stops** – new median bus stations and bus bulbs featuring shelters, seating, and real-time bus arrival signs

**Better connections** to the subway and other bus routes at key transfer points
Project benefits

Simpler, safer streets – new roadway design will organize local and thru traffic and shorten pedestrian crossings

Greener, resilient streets – New trees and medians add greening to the corridor and improve stormwater retention

Traffic flow – a consistent roadway design with improved traffic signal timing will reduce bottlenecks and create a more predictable driving experience
Next steps

• **Spring 2015**: Present draft plans at public design workshops and stakeholder meetings to get feedback
  ➢ **Draft plans are available on the project website** ([nyc.gov/brt](http://nyc.gov/brt)) for further comment

• **Summer 2015**: Refine design plans based on community feedback and further technical review

• **Fall 2015**: Transfer project to NYC Dept. of Design and Construction for Final Design and engineering
Thank you!