VERRAZANO-NARROWS BRIDGE MASTER PLAN
OUTLINE

• Introduction
• Purpose of Study
• Master Plan Projects
  – Bridge Rehabilitation and Reconstruction
  – Traffic/Safety and Accessibility
• Shared–Use Access Study
• Next Steps
INTRODUCTION

- The Verrazano-Narrows Bridge (VNB) is an iconic, irreplaceable 50-year-old structure and a critical transportation link in the I-278 corridor (Staten Island Expressway/Gowanus Expressway).

- Many of the Upper Level approach structures and Belt Parkway ramps are the original construction from 1964.

- Since 1992 Triborough Bridge and Tunnel Authority (TBTA) has invested $927 Million in capital improvements.

- More than $1.5 Billion will be invested over the next 25 years.

- Reconstructing the Upper Level Approaches, Lower Level Suspended Span deck, and the connecting ramps and roadways are the next major elements in the long-term plan to reconstruct the VNB.
INTRODUCTION (Continued)

• These reconstruction projects are required to maintain the facility in a state of good repair and to improve access, safety and meet modern design standards.

• While planning these necessary upgrades, TBTA is also assessing the feasibility of possibly providing pedestrian and bicycle access across the bridge.

• In 2014 TBTA started this Master Plan Study to assess the best way to address the VNB’s long-term needs. This presentation reflects progress to date.
PURPOSE OF STUDY

GOALS AND OBJECTIVES

• Extend the lifespan and enhance the functionality of the Bridge and its approaches
• Improve traffic safety and operations for customers and Authority personnel
• Minimize adverse impacts on customers, environment and neighboring community
• Optimize capital and operating investments
• Optimize sequence of project implementation
MASTER PLAN SUMMARY

STATEN ISLAND

WB LILY POND AVE EXIT RECONSTRUCTION

U.L. APPROACHES & ANCHORAGE SPANS

SHARED USE PATHS

U.L. SUSPENDED SPAN DECK REPLACEMENT

BROOKLYN

BELT PKWY RAMPS

U.L. APPROACHES & ANCHORAGE SPANS

BELT PKWY EB MERGE

GOWANUS EXPWY / U.L. & L.L. MERGE
MASTER PLAN PROJECTS - STATEN ISLAND

STATEN ISLAND

WB LILY POND AVE EXIT RECONSTRUCTION

U.L. APPROACHES & ANCHORAGE SPANS
MAIN SPAN
MASTER PLAN PROJECTS - BROOKLYN
BROOKLYN RAMPS – CONSTRUCTION STAGING VIDEO PHASE 1 AND 2
BROOKLYN RAMPS - PHASE 3

- Reconstructed Ramps & Roadways (Phases 1 & 2)
- Widened Roadways (Phase 3)

Widened Belt Parkway Connector Ramps

Fort Hamilton Parkway

To VNB

To Gowanus

58’ West from Outfall Line
Outfall Line

Fort Hamilton Army Property
BELT PARKWAY EASTBOUND MERGE

EB Lane addition from VNB/Belt Pkwy merge to Bay Pkwy

Match A-A

EB Lane addition from VNB/Belt Pkwy merge to Bay Pkwy
GOWANUS EXPRESSWAY/UPPER LEVEL AND LOWER LEVEL MERGE

Existing Conditions – UL and LL Merge and 92nd Street Entrance Ramp

To VNB

Bus/HOV Lane

EB Gowanus Expressway

92nd Street On Ramp

Eastbound View - Gowanus Expressway

Dahlgren Place

92nd Street

EB Gowanus Expressway

Eastbound View - Gowanus Expressway
LOWER LEVEL SUSPENDED SPAN DECK REPLACEMENT

- First reconstruction of the LL suspended span deck since it opened for traffic in 1969
- Replacing concrete deck with a lighter deck will decrease the weight of the Bridge
- Wind and seismic improvements
- Challenging construction staging due to constraints with center median and columns
- Reconstructing Brooklyn approach ramps provides greater operational flexibility and minimizes traffic impacts when replacing the deck

➢ Because much advance planning and study are required, TBTA is starting preliminary design in the 2015-2019 Capital Program.
OPPORTUNITY FOR SHARED-USE ACCESS

• The Lower Level Suspended Deck Replacement project creates the opportunity to lighten bridge and possibly accommodate a shared-use path.

• Approximately 12,000 tons need to be removed to accommodate paths on both sides of the bridge.

• Similar to Upper Level Deck Replacement which lightened bridge to accommodate a Bus/HOV lane.
SHARED-USE ACCESS STUDY

Feasibility Considerations

• The VNB was not originally designed for bicycle/pedestrian access
• Retrofitting a long-span suspension bridge to accommodate a shared use path is rare
• Modifications must not:
  – diminish bridge safety and structural integrity
  – increase the weight of the bridge
  – reduce traffic capacity
• Requires significant engineering and testing of wind effects
CONCEPTUAL VIEW

Shared Use Paths Outboard of Lower Level
CONCEPTUAL VIEW

Shared Use Paths Outboard of Lower Level-Brooklyn Approach

View from JPP Park

Bike/Pedestrian Path Connections to Shore Park Path
CONCEPTUAL VIEW

Shared Use Paths Outboard of Lower Level-Staten Island Approach
CONCEPTUAL VIEW

Shared Use Paths Outboard of Upper Level

Fort Wadsworth

STATION ISLAND SIDE

TWO-WAY BIKE RAMP CONNECTION TO FORT WADSWORTH PROPERTY

TWO-WAY PEDESTRIAN PATH

EMERGENCY/MAINTENANCE VEHICLE ACCESS RAMP TO PEDESTRIAN PATH

VIEW FROM JPJ PARK

TWO-WAY BIKE PATH

PEDESTRIAN RAMP CONNECTION TO SIDEWALK ON NEW YORK AVE.

JPJ Park

View from JPJ Park

Fort Hamilton

UPPER LEVEL BROOKLYN SIDE

PEDESTRIAN RAMP (TWO-WAY)

SPIRAL RAMP (ONE LEVEL)

JPG PARK

Output Path (Two-Way)
POSSIBLE NEW PEDESTRIAN/BICYCLE CROSSING

Conceptual View
MTA New York City Transit Initiative

Bike & Ride Pilot Program

![Map of existing bike paths, bus routes, and stops.](image-url)

- Existing Bike Paths
- Existing Bus Routes
- Existing Bus Stops

![Bus with a bicycle on it.](image-url)
NEXT STEPS

Master Plan

State of Good Repair and Operational Improvements

- Complete Master Plan
- Proceed with design and construction of Phase 1
- Continue preliminary design of Phases 2 and 3
- Commence preliminary design of LL deck replacement
- Engage outside agencies for off-property, safety and traffic flow improvements
- Provide further updates as projects develop further

Shared-Use Path Study

- Engage Stakeholders: Fall/Winter 2015
- Conduct Focus Groups and Survey: Fall/Winter 2015
- Incorporate Feedback from Stakeholders