





# CONNECT LONG ISLAI ONAL TRANSPORTATION & RIVERSIDE MASTIC SHIMLES RONKONKOMA HUB PATCHOGUE VILLAGE SPEONK Nicolls Road 14 Miles ilis a man Scale Comparison

# DEVELOPMENT PLAN



#### TRANSIT ORIENTED DEVELOPMENT

LIRR DOUBLE TRACK BUS RAPID TRANSIT LIRR ELECTRIFICATION

#### SELECTED REGIONAL ASSETS

- 1. Cold Spring Harbor Laboratory
- 2. Farmingdale State University
- 3. SCCC Brentwood Campus
- 4. MacArthur Airport
- 5. SCCC Ammerman Campus
- 6. Stony Brook University
- 7. Stony Brook Hospital
- 8. Brookhaven National Lab
- 9. Enterprise Park at Calverton
- 10. Hamptons Business District @ Gabreski Airport





# **CONNECT LONG ISLAND AND INNOVATION ZONE (I-ZONE)**

**Connect Long Island** - a regional transportation InnovationZone(I-Zone) – part of the larger Connect and development plan to create sustainable LongIslandinitiative, I-Zoneisa comprehensive plan economic growth through investments in housing, to construct a major innovation and transportation transportation and innovation.

# **Connect Long Island Goals**

- Align land-use and transportation plans.
- Make transit investments to connect existing and proposed developments.
- Develop public transit connections to increase mobility.
- Connect educational and research institutions and innovation zones.
- Connect new and existing recreational assets and downtowns.

The I-Zone and Connect Long Island plans are building a quality of life that is attractive to businesses and high skilled workers. It is necessary to retain these workers in Suffolk County to help grow our economy.





hub along the Nicolls Road corridor.

# **I-Zone Components**

- hiking and biking network.
- Station.
- Ronkonkoma LIRR and the Hub.
- Laboratory a few miles east.

• A multimodal corridor complete with Bus Rapid Transit (BRT) and an extensive

• The completion of the Ronkonkoma Hub adjacent to the Ronkonkoma LIRR

• A "train-to-plane" connection between Long Island MacArthur Airport and the

Relocation of the underutilized Yaphank LIRR Station to Brookhaven National



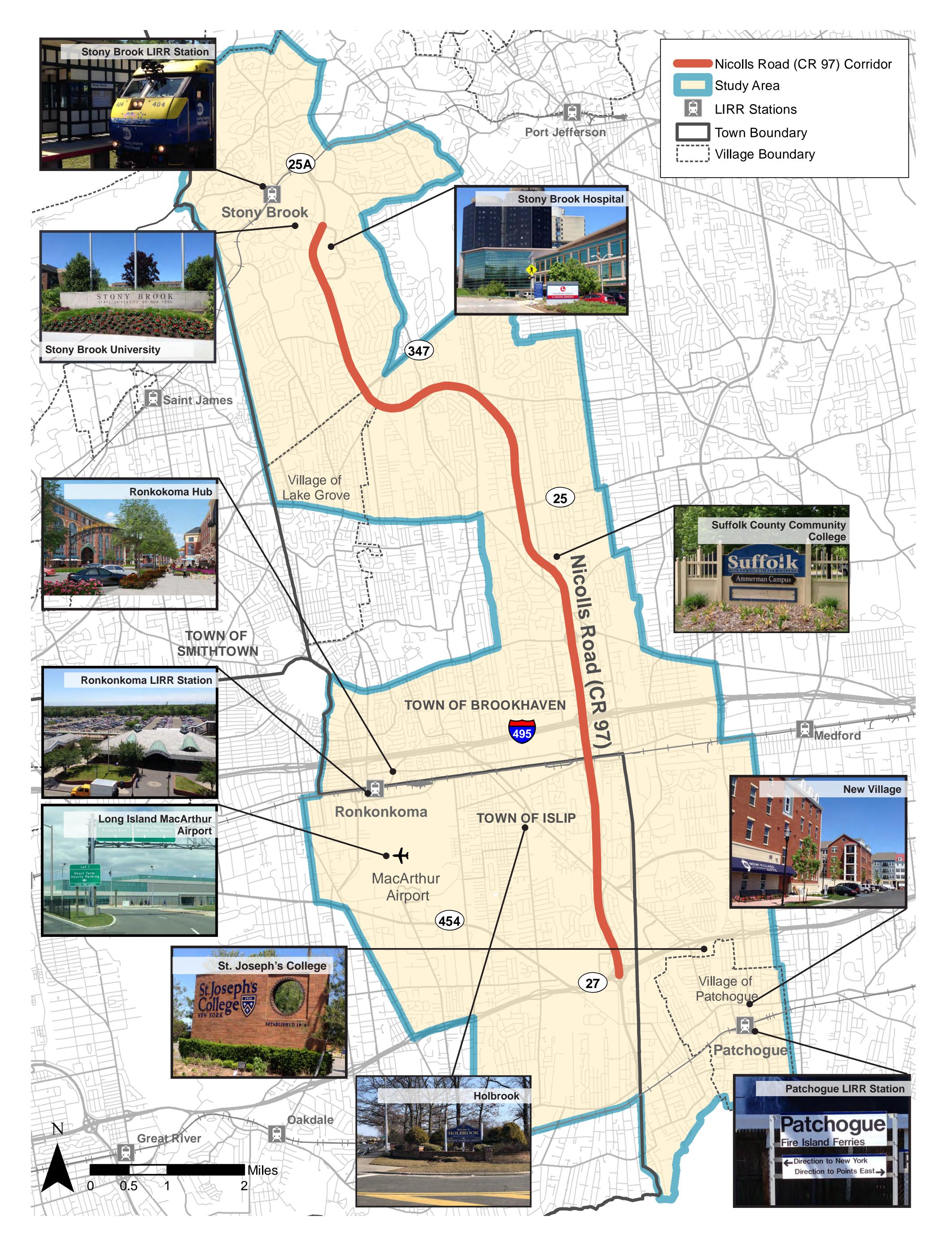
# **INNOVATION ZONE (I-ZONE) MAP**







## **STUDY AREA**







# **PROJECT DEVELOPMENT PROCESS**

#### 2014 Suffolk County BRT Feasibility Study

Explored 35 possible routes. Three potential projects were recommended:

- Nicolls Road
- Route 110
- Sagtikos Parkway

#### 2014-2016

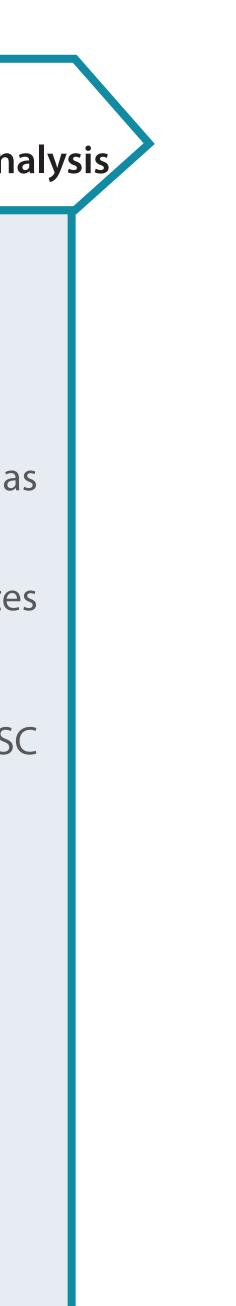
Nicolls Road Alternatives Analysis

This analysis resulted in the drafting of a Locally Preferred Alternative (LPA) that proposes:

- Bus Rapid Transit (BRT) as the mode of travel
- two recommended routes
- hiking/biking trail
- connectivity to LIRR, SC Transit, SBU Transit
- road alignment options
- station locations
- BRT service levels

The LPA will be moved through National Environmental Policy Act (NEPA) review and Preliminary Engineering in compliance with US Department of Transportation procedures.





#### 2016-2020 Preliminary Engineering and Design

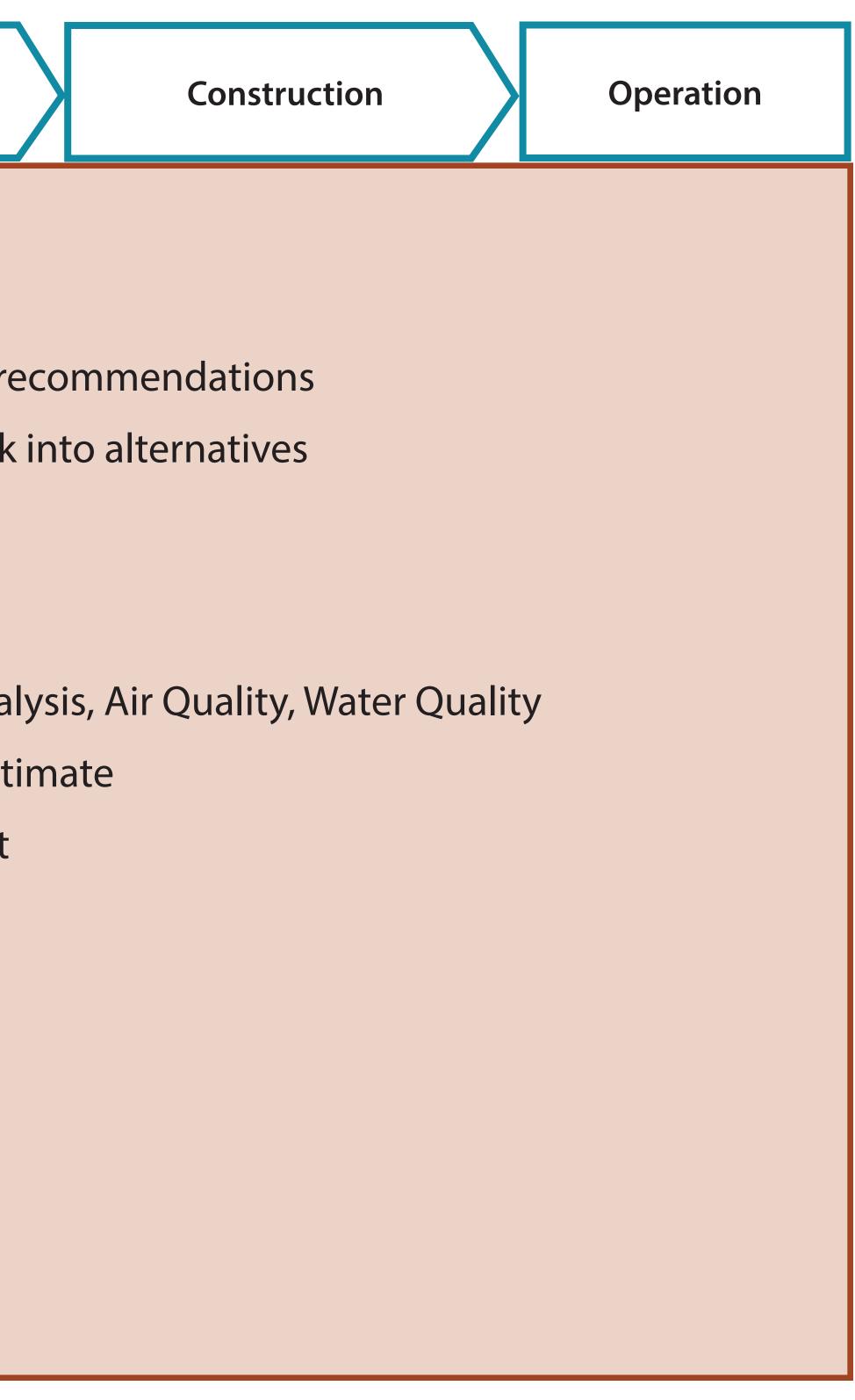
# Final Engineering and Design

# **Ongoing Work**

- Environmental Studies
- Assess effectiveness and consequences of recommendations
- Inform the public and incorporate feedback into alternatives
- Refine LPA and progress into Final Design

# Deliverables

- Environmental studies including: Noise Analysis, Air Quality, Water Quality
- Preliminary Plans and Construction Cost Estimate
- Design Report / Environmental Assessment
- Public Hearings





SUMMARY OF	STUDY	RECOMMENDATIONS
16		OF STATIONS SERVING AND FUTURE POINTS OF
53%		AGE INCREASE IN WEEKDAY RIDERSHIP BY 2040
16.5	•	DEDICATED LANES TO RAFFIC CONGESTION
<b>2,003</b>	(1,790 NE	BRT RIDES IN 2040 W TRANSIT BOARDINGS, D TO NO-BUILD CONDITION)

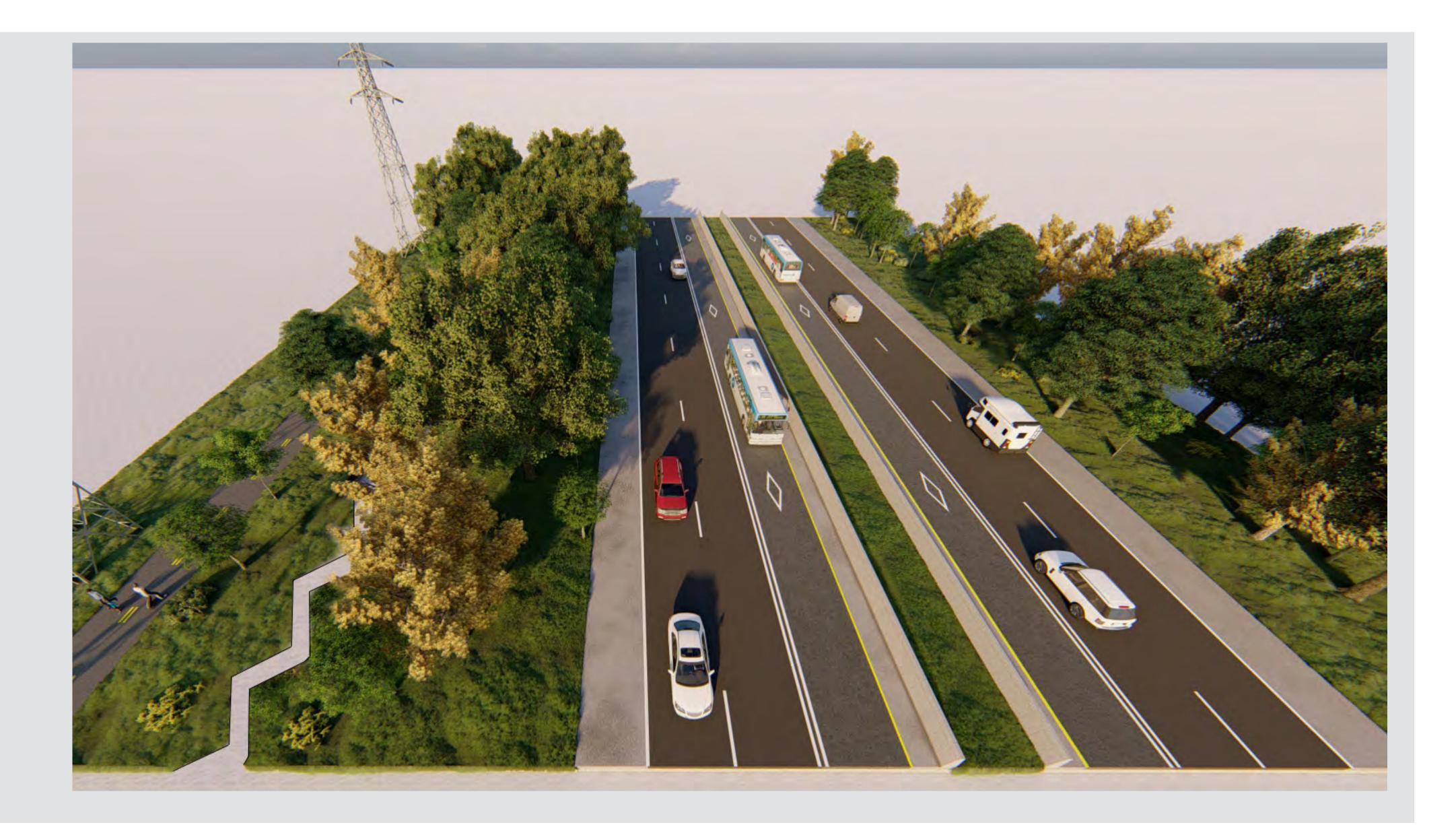
#### **PROPOSED BRT OPERATIONS**

	Weekday Peak	Every 10 minutes
SERVICE FREQUENCY ON EACH ROUTE: (MORE FREQUENT SERVICE ON OVERLAP- PING SEGMENTS)	Weekday Off-Peak	Every 15 minutes
	Weekends	Every 20 minutes









A multi-modal Nicolls Road Corridor would provide connectivity between points of interest in the I-Zone. The addition of a hiking/biking trail would offer another travel option and healthy alternative to reduce automobile usage.



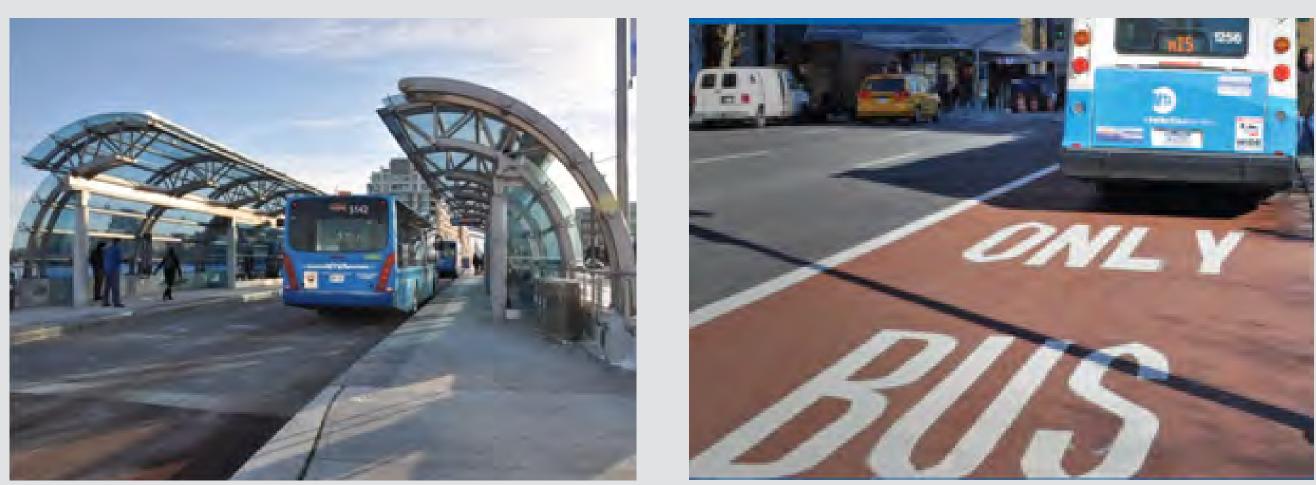
# WHAT IS BUS RAPID TRANSIT (BRT)?

Bus Rapid Transit (BRT) is an innovative public transportation solution that provides fast, reliable, comfortable and convenient service. BRT will significantly improve our County's mobility and overall quality of life by helping to ease road congestion, reduce stress and increase productivity. With BRT, commuters can easily access major points of interest, transportation hubs and experience improved north/south travel. Some of the unique features of a BRT system are:

#### **User-Friendly**

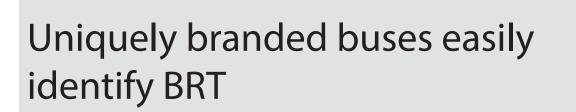


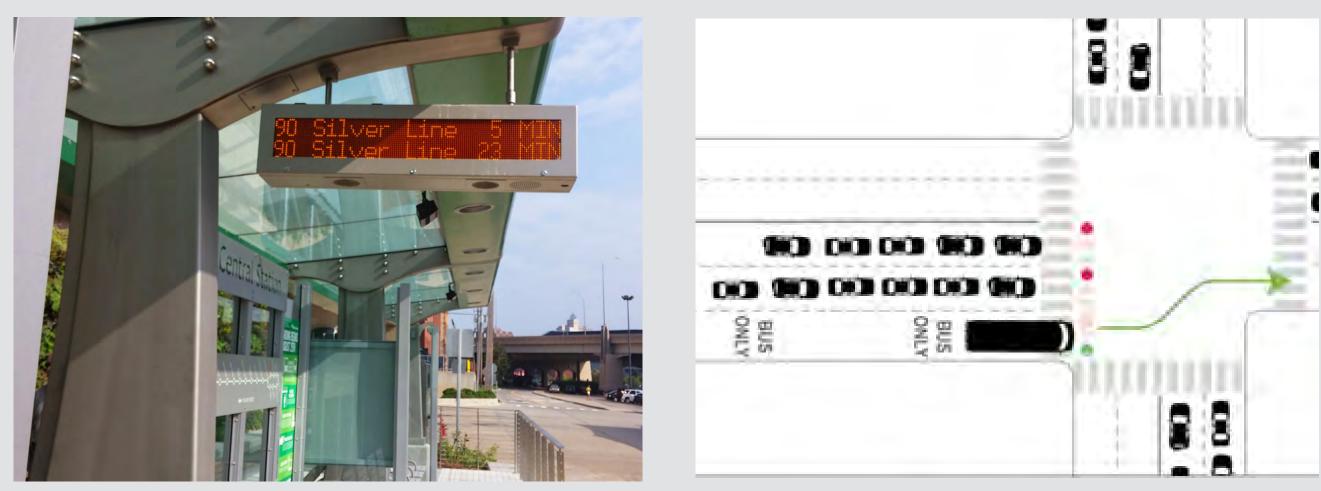
Vehicles equipped with Wi-Fi, multiple doors and level boarding make riding comfortable, enjoyable and fast



Modern, well-lit, safe and comfortable Stations







Convenient, real-time bus location and arrival times

Prepared by



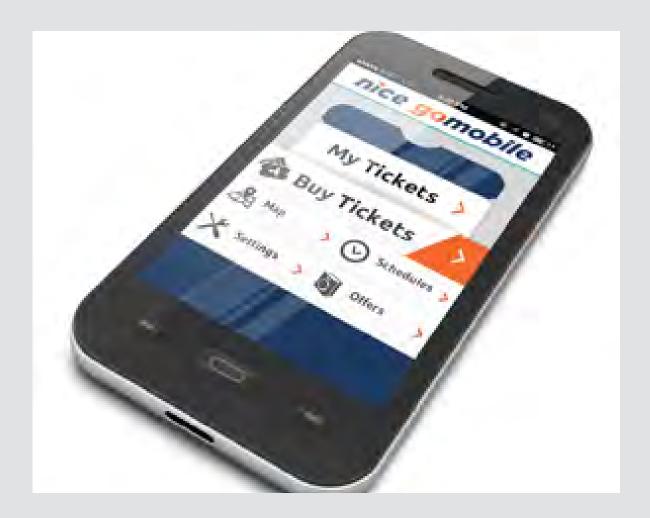


#### Faster Service



Bypass traffic in Designated Travel Lanes

More Frequent Service with Fewer Stops



Traffic Signal Priority and Queue Jumps put BRT first

Pre-paid and Electronic Passes speed you on your way

Options for Enhanced Bus Interiors for Customer Comfort and Convenience



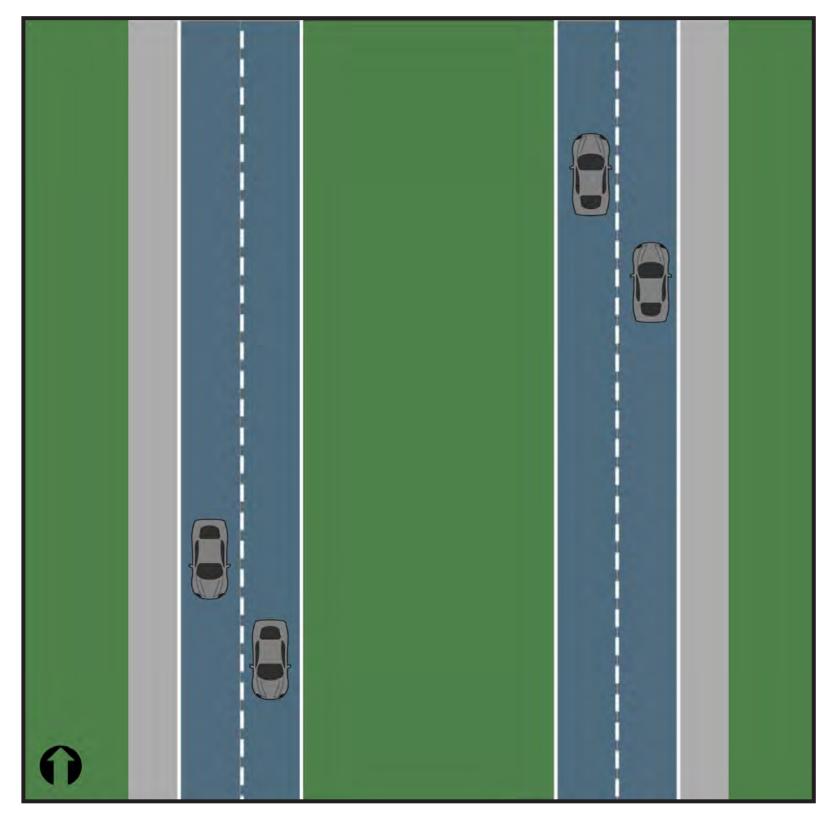




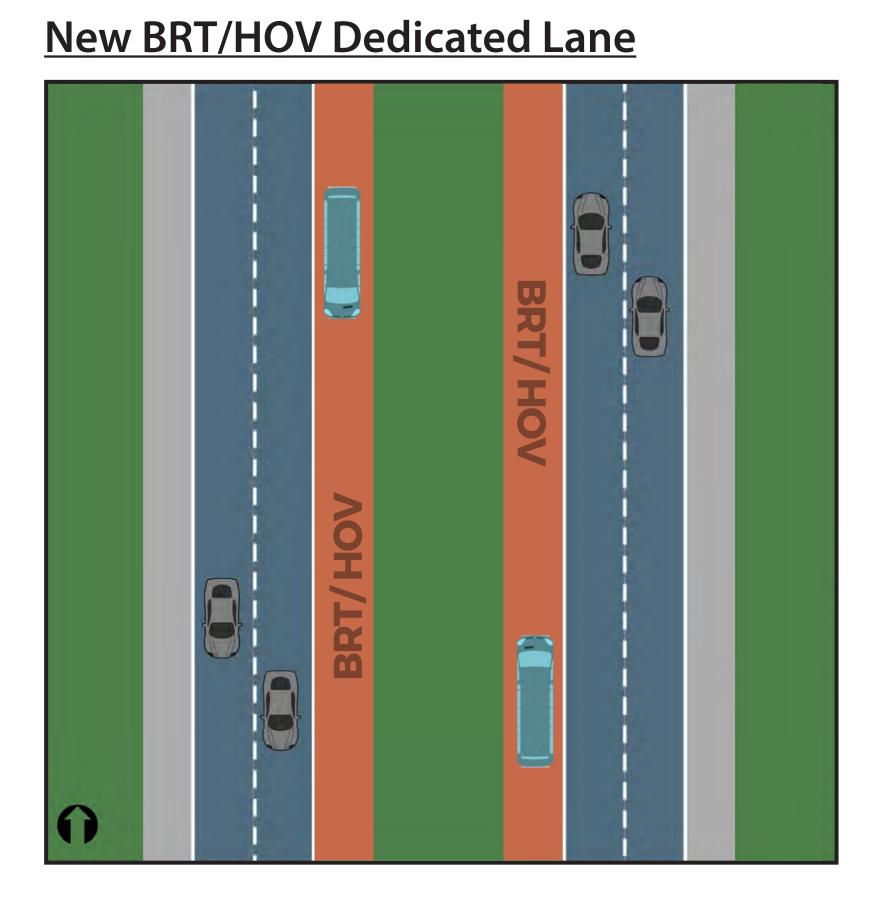
# **SCHEMATIC REPRESENTATION OF ALTERNATIVES**

An HOV Lane is proposed wherever it is feasible and needed to accommodate traffic demand. It is recommended between Sunrise Highway to the south and Mark Tree Road to the north. BRT Vehicles will use the BRT/HOV Lane to bypass traffic congestion. Between NY Route 347 and Hospital Drive, BRT Vehicles will operate in a new shoulder lane.

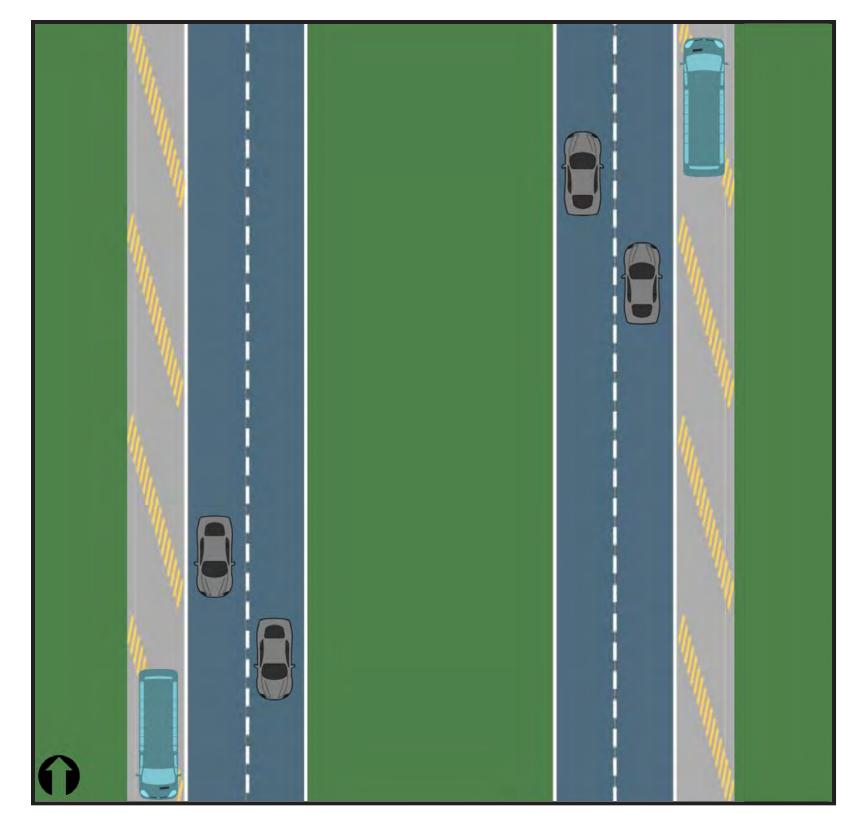
#### **Existing Conditions**







#### **BRT Shoulder-Running**

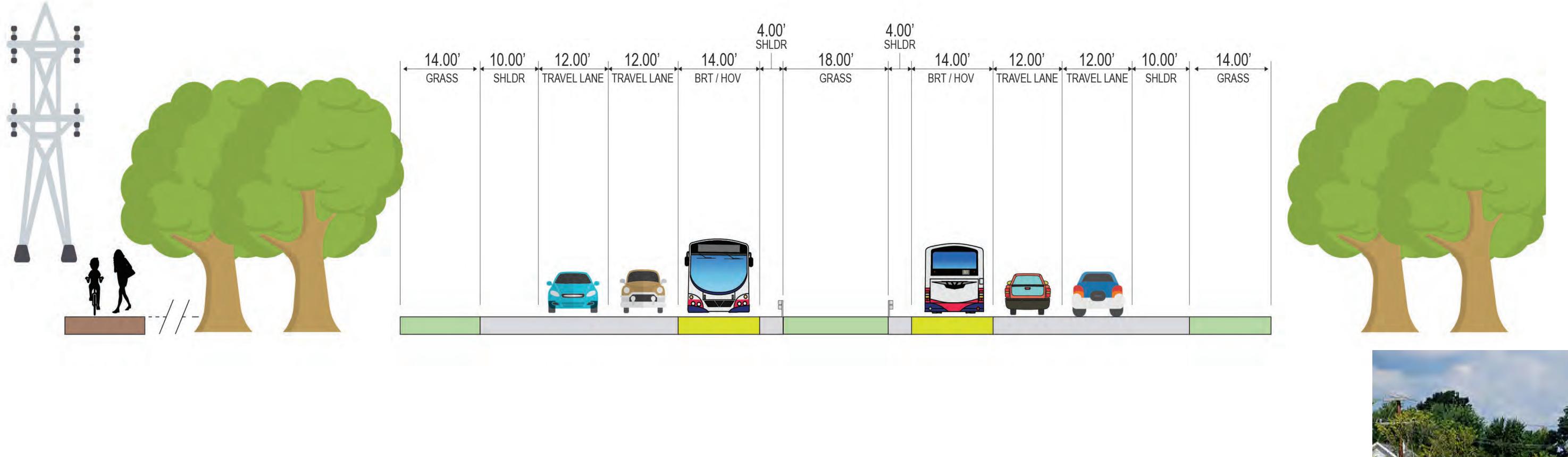




# **DEDICATED CENTER RUNNING BRT/HOV LANE**

Construction of bi-directional Bus Rapid Transit (BRT)/ High-Occupancy Vehicle (HOV) Lanes in the center of Nicolls Road

#### **Typical Section**





#### Public Meeting

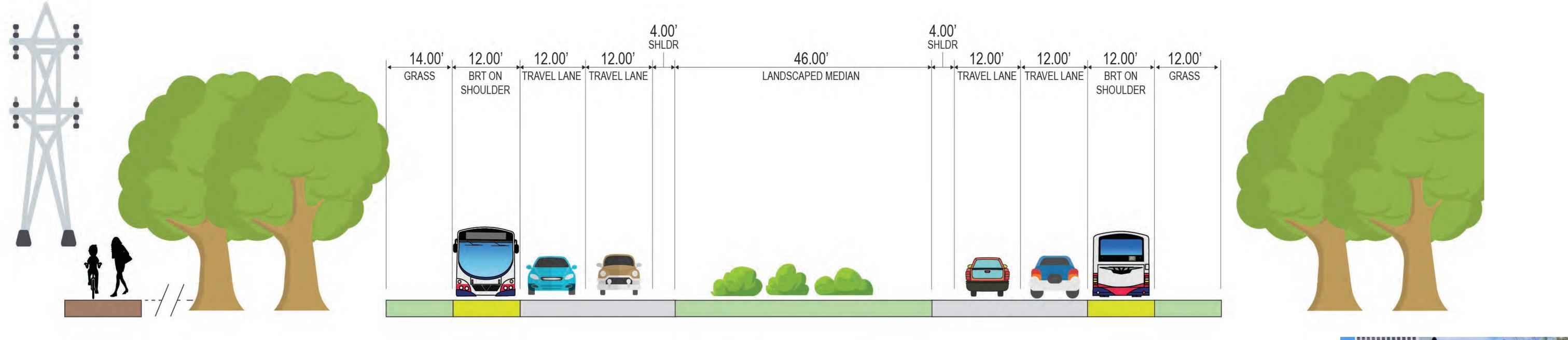


Metroway BRT, Alexandria, VA



# **BRT SHOULDER RUNNING**

Repurposing (i.e., reconstructing and widening) the existing shoulder on Nicolls Road to be a dedicated BRT lane in each direction







Wilshire BRT, Los Angeles, CA



# ALTERNATIVES: ROUTING, ALIGNMENTS & ROADWAY ELEMENTS

The two recommended BRT routes are (1) Stony Brook-Patchogue and (2) Stony Brook-Ronkonkoma-Patchogue.

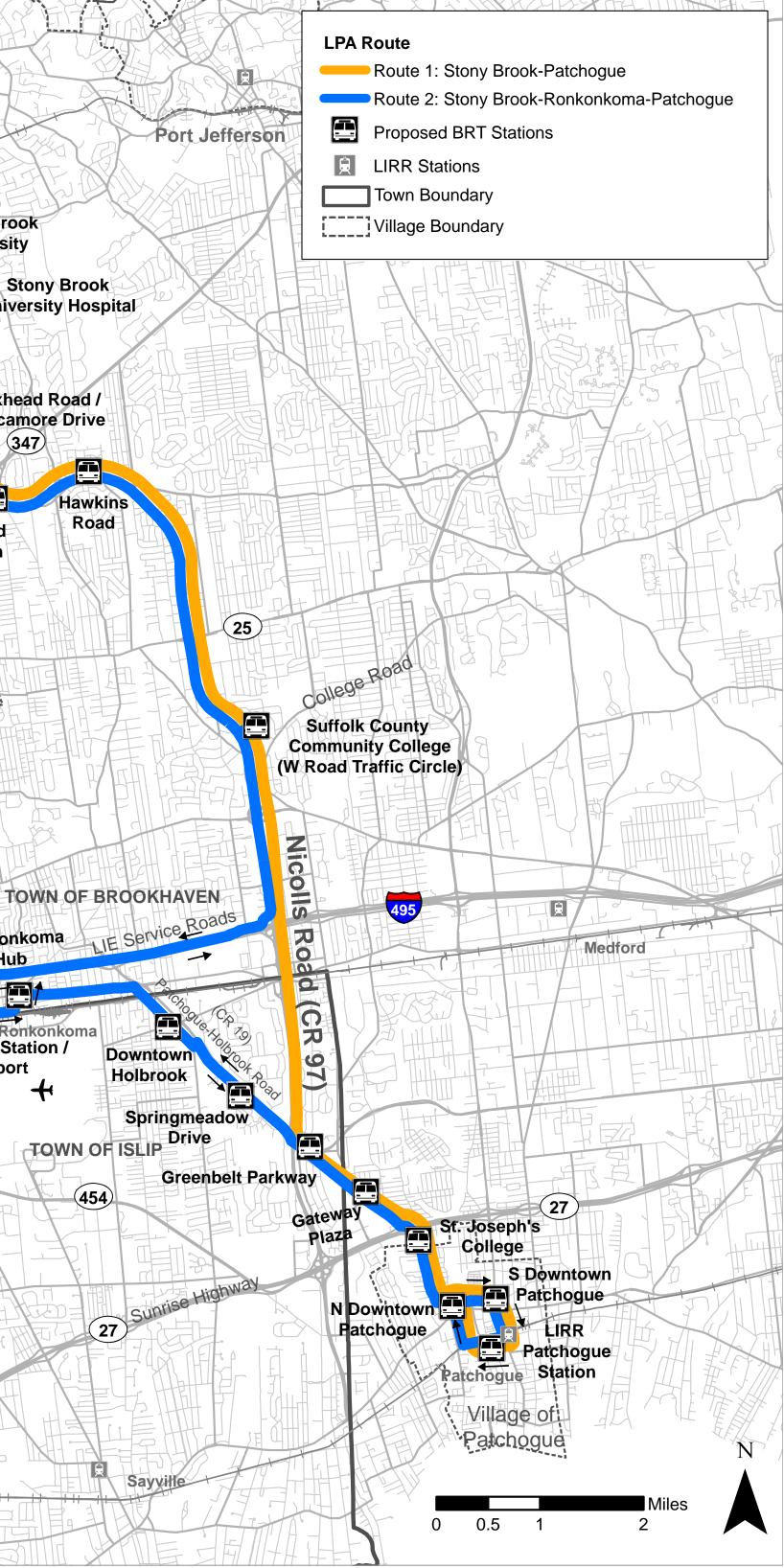
Each route will make use of the dedicated BRT/HOV lanes along significant portions of Nicolls Road, which would enable BRT to bypass traffic congestion. Traffic Signal Priority (TSP) is proposed at most signalized intersections, which would limit time spent waiting at red lights. Queue jumps are also proposed at a number of signalized intersections to allow BRT vehicles to proceed before the other vehicles on the road.





#### LPA Route 1 & 2

(25A) LIRR Stony Brook Station **Stony Brook** Universitv Stony Brook Village of University Hospital Head of the Harbor Oxhead Road / Sycamore Drive Hawkin Road Pond Village of Lake Grove (25) (347) TOWN OF SMITHTOWN Ronkonkoma 495 Village o LIRR Ronkonkoma Station / MacArthur Airport Islandia (454) (454) Oakdale 良 Great River





# **SHARED BRT/HOV LANE**



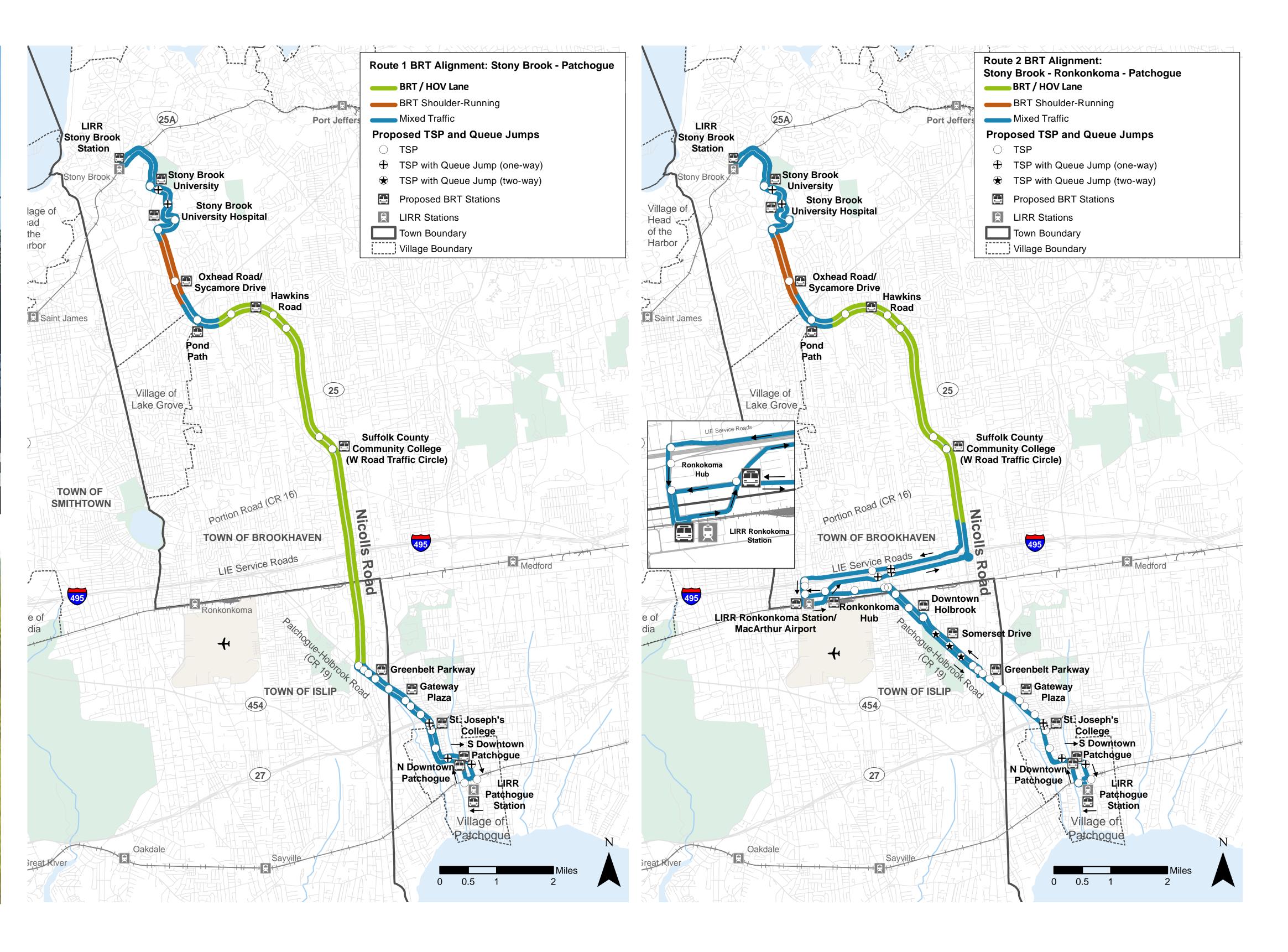
#### Long Island Expressway - Long Island NY



Shirley Highway - Washington DC



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# **HIKE - BIKE TRAIL**

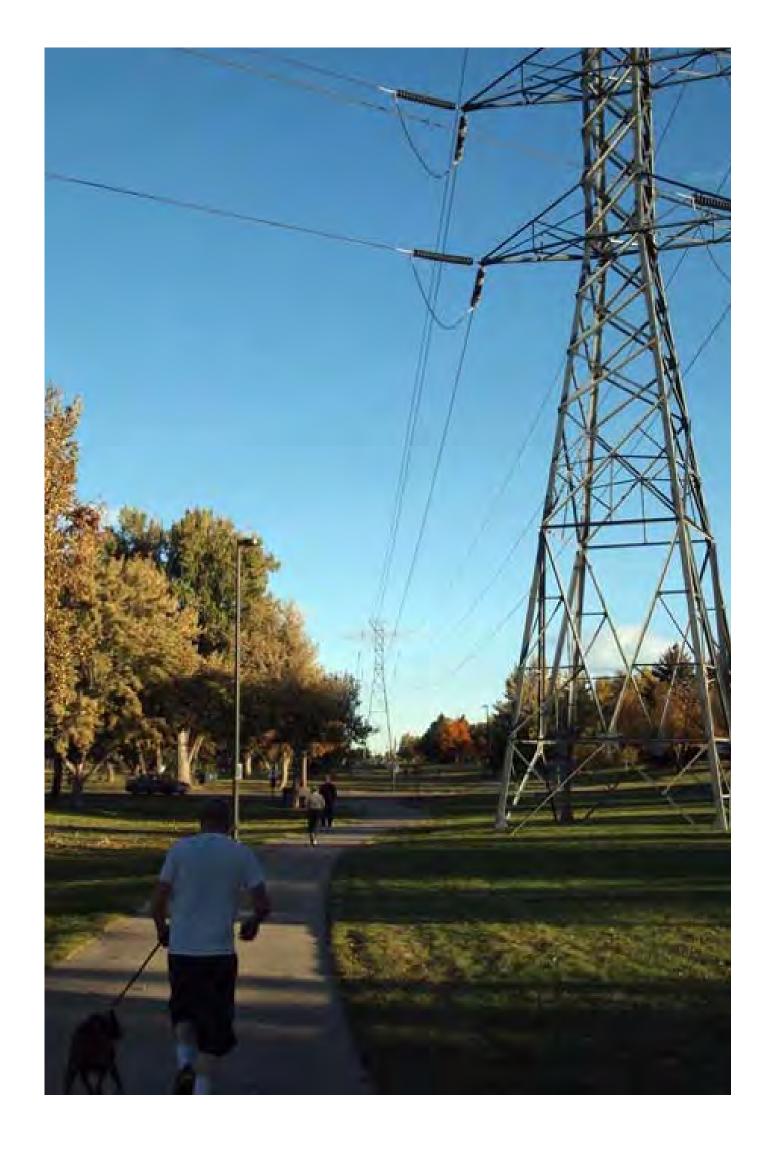


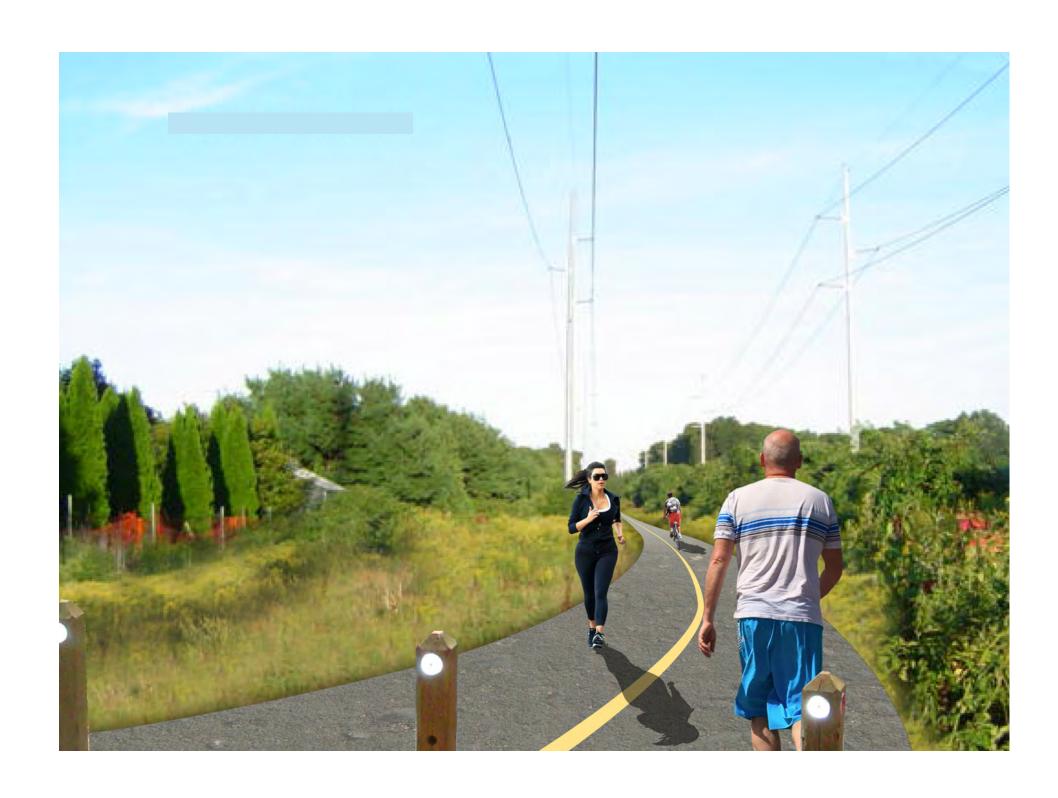




Prepared by

A multi-use north-south hiking biking trail generally parallel to Nicolls Road could look similar to these images.











## **HIKE-BIKE TRAIL APPROXIMATE ALIGNMENT AND LAYOUT**

