

NYMTC REGIONAL TRENDS SERIES SUBURBAN MOBILITY STUDIES

NASSAU COUNTY



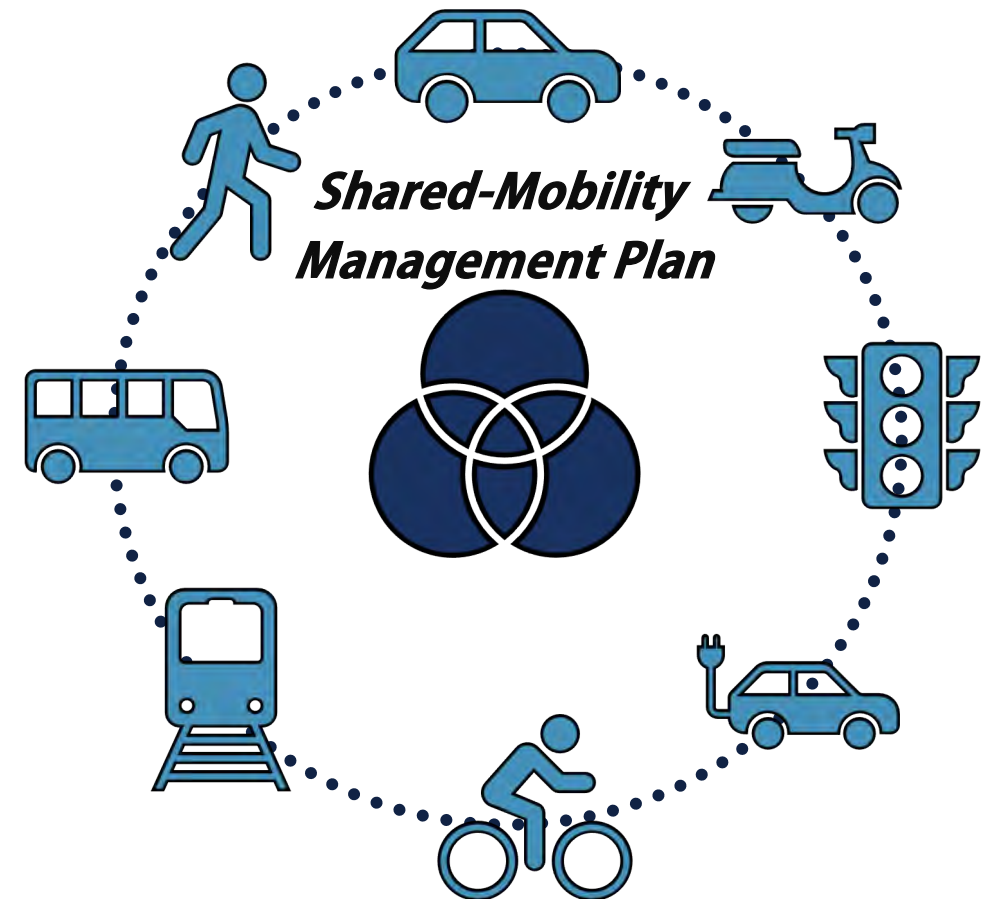
Sean E. Sallie, AICP
Deputy Commissioner, Nassau County Department of Public Works

April 28, 2021

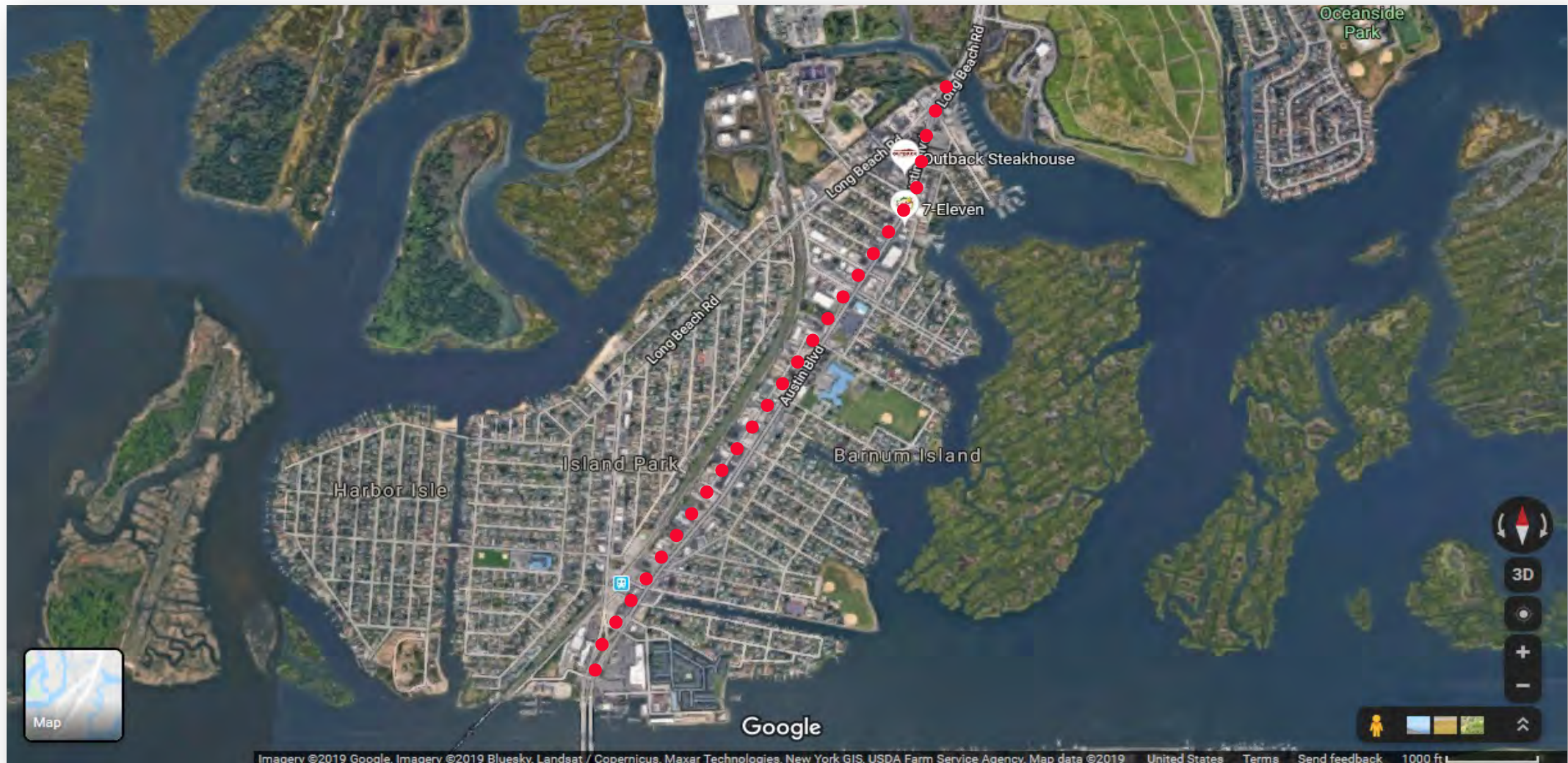
MOBILITY INFRASTRUCTURE

Ongoing Mobility/Complete Streets Capital Projects

- *Austin Boulevard, Barnum Island - Island Park*
- *Grand Avenue, Baldwin*
- *Park Street / Beech Street, Atlantic Beach*
- *Downtown Hicksville, Town of Oyster Bay*
- *Motor Parkway Mixed-Use Trail, County-wide*



AUSTIN BLVD, BARNUM ISLAND / ISLAND PARK



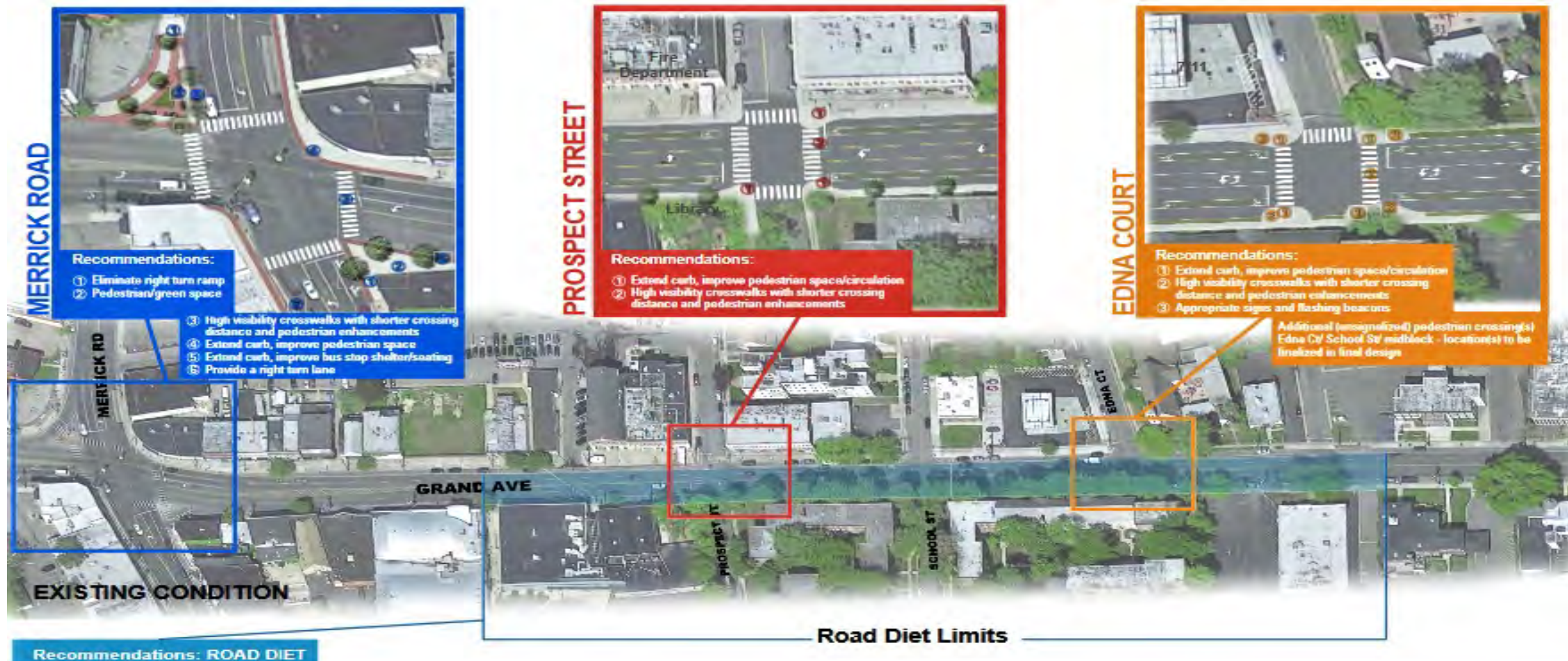
AUSTIN BLVD, BARNUM ISLAND / ISLAND PARK



GRAND AVENUE, BALDWIN (LOOKING NORTH)



GRAND AVENUE, BALDWIN (PROPOSED)



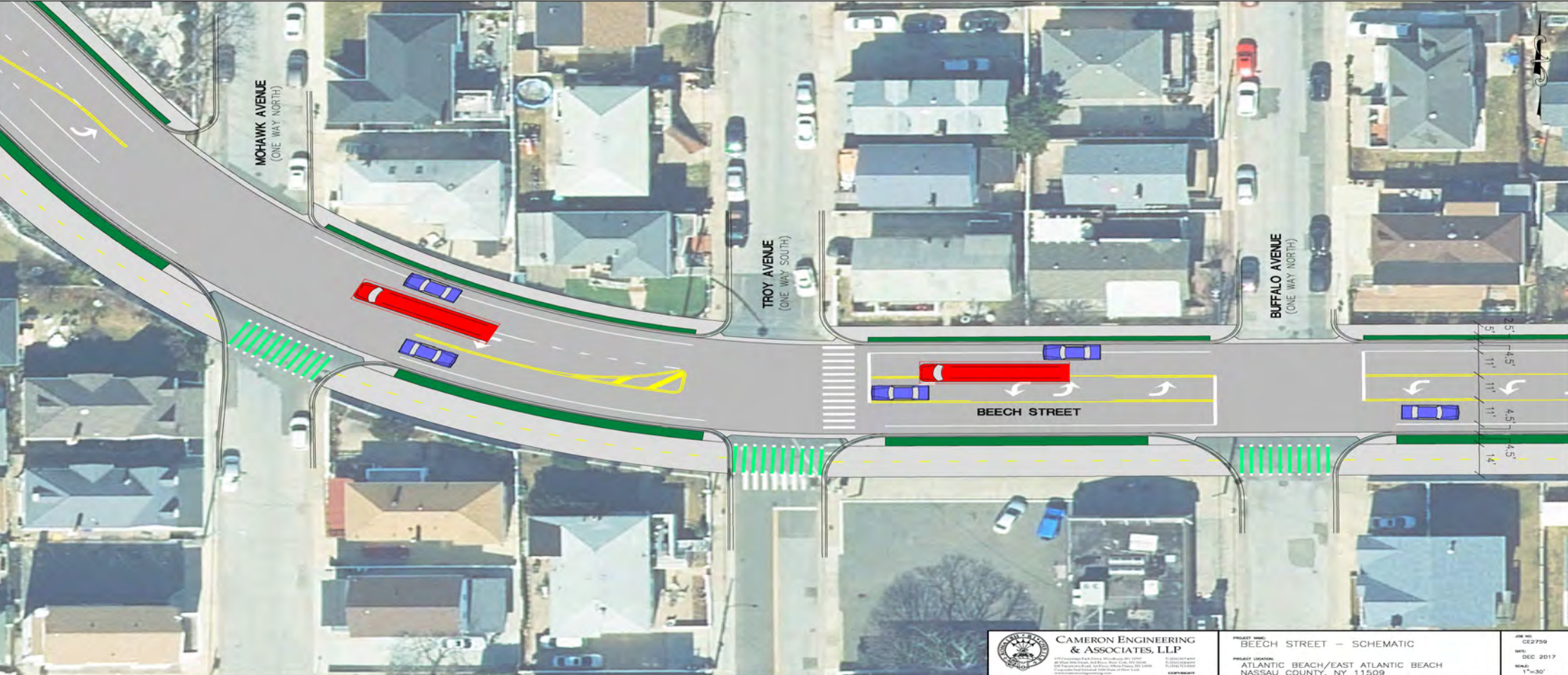
PARK-BEECH STREET, ATLANTIC BEACH / EAST ATLANTIC BEACH



PARK-BEECH STREET, ATLANTIC BEACH / EAST ATLANTIC BEACH



PARK-BEECH STREET (PROPOSED)



DOWNTOWN HICKSVILLE, NASSAU COUNTY



#2 Bicycle Network

Downtown Hicksville requires a network of bike lanes and bike parking areas, to improve access for cyclists to the station and throughout the downtown area. At the time of this study, only 250 feet of bike lane was in place, on Newbridge Rd southbound from the railroad overpass to Duffy Ave. This single block of bike lane does not connect to a larger network, but was included in a reconfiguration of this block, and is designed with a right turn lane weaving through it, lining cyclists up to continue southbound.

To develop a network of bike lanes that would connect the residential areas to the station and surrounding business, each roadway was evaluated for suitability to accommodate bike lanes, as well as the connections to the larger network of planned bike lanes.

The map on the next page shows the proposed bike network, based



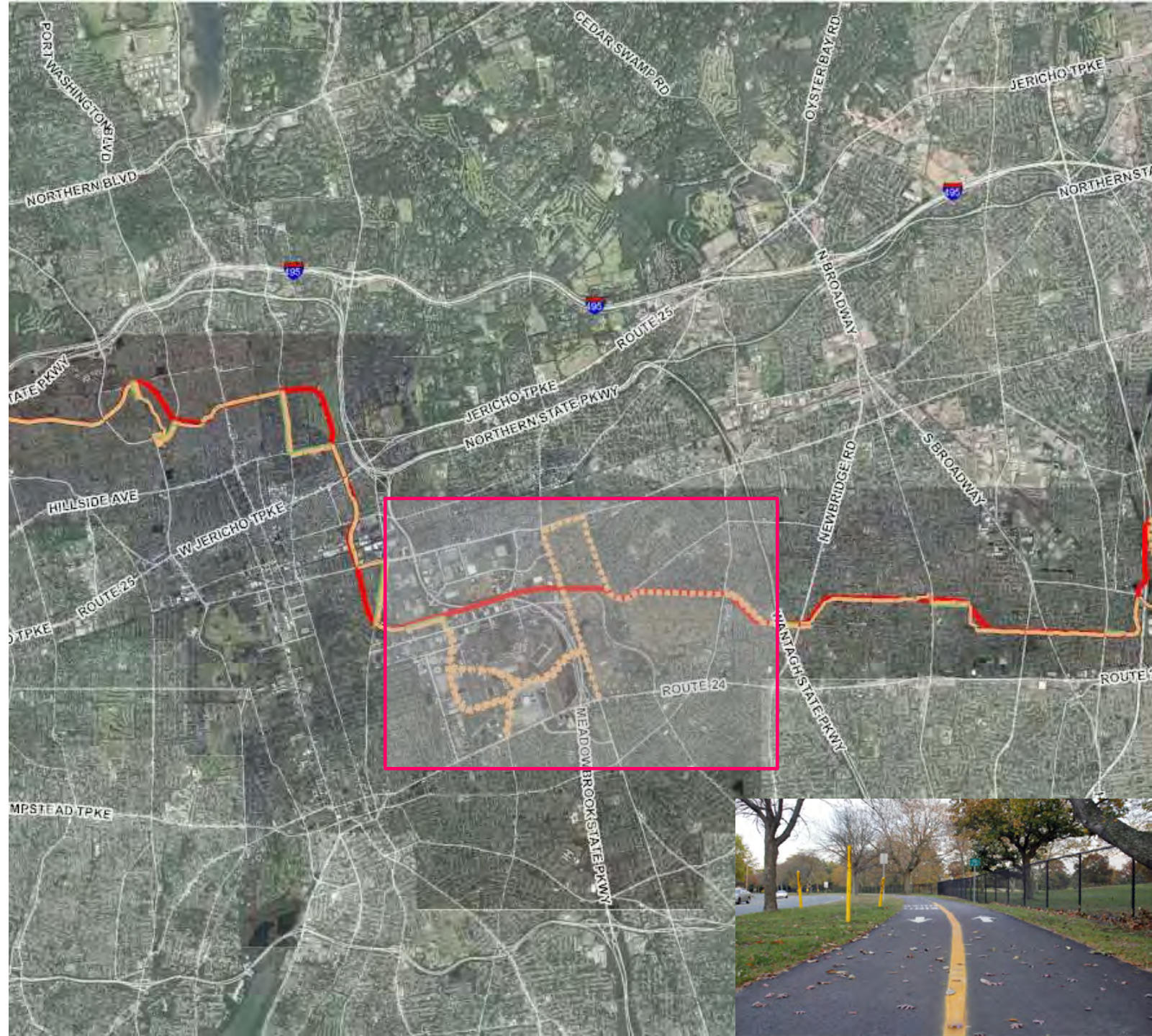
Involved Agencies: NYSDOT, Town of Oyster Bay, NCDPW, LIRR

Implementation Timeframe: 1 year

Total Project Cost Estimate: \$199,800

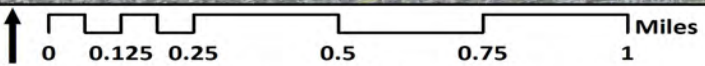
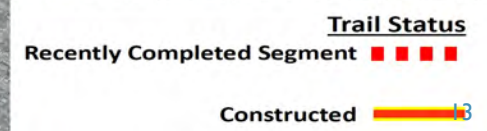
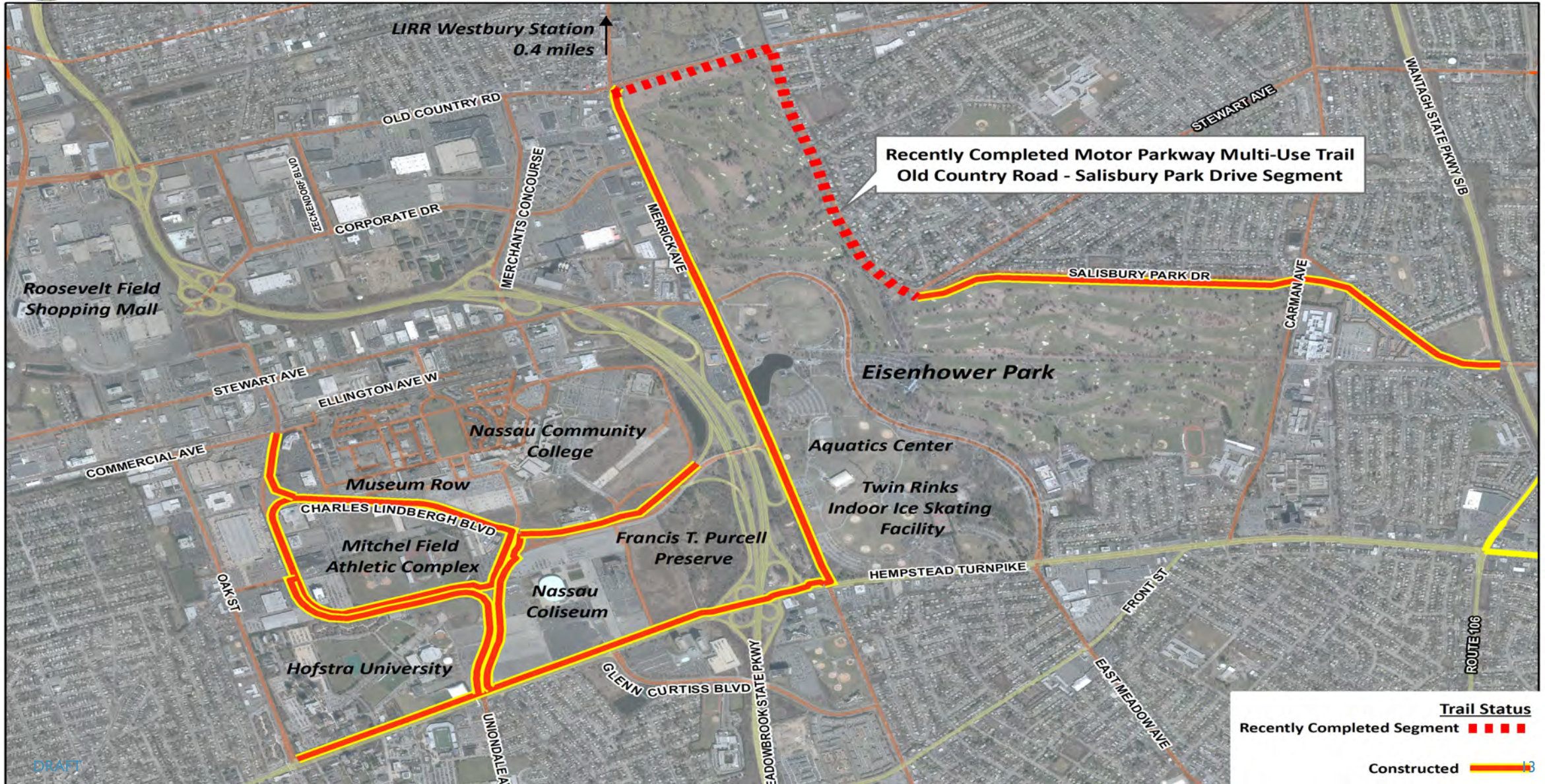


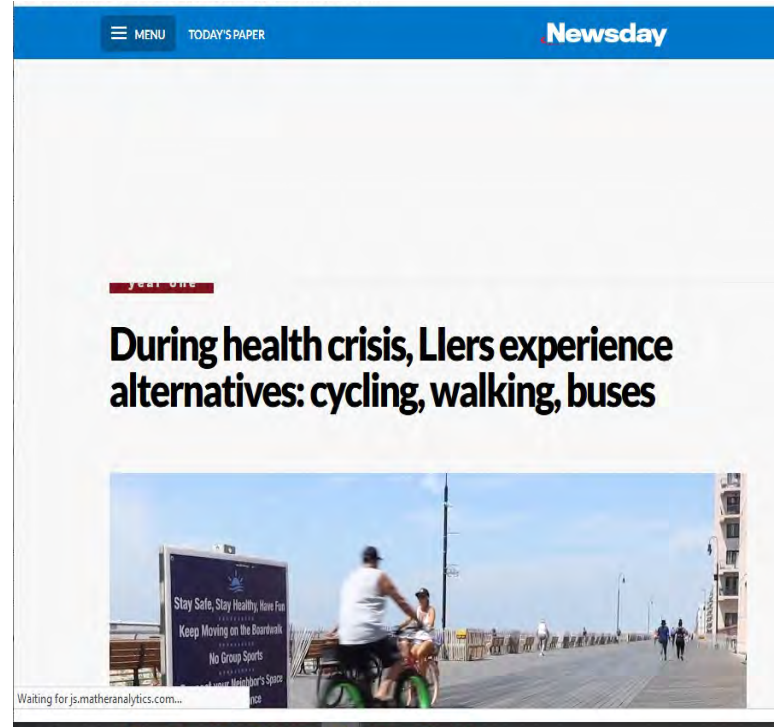
DOWNTOWN HICKSVILLE COMPLETE STREETS FINAL REPORT





Motor Parkway / Nassau Hub Trail Status





COVID-19 IMPACTS ON TRANSPORTATION & LAND USE IN NASSAU COUNTY





COVID-19 IMPACTS ON TRANSPORTATION & **LAND USE** IN NASSAU COUNTY

NASSAU COUNTY SHARED-MOBILITY MANAGEMENT PLAN

- Conduct **scenario planning analysis** to project transportation demands/needs post COVID-19 Pandemic
- Public Outreach: **Survey** large employers, business development agencies, real estate agents, etc.
- Identify opportunities to implement **mobility services to supplement and augment transit services (FIRST / LAST MILE)**
- Provide safe and convenience mobility options to **underserved communities and at-risk populations**



NASSAU COUNTY SHARED-MOBILITY MANAGEMENT PLAN

Tasks/Milestone Dates

- **Data Collection [Aug 2021]**
 - Surveys/Questionnaires
 - System Inventory
- **Data Analysis [October 2021]**
 - Hotspots for early action/equity evaluation
- **Economic Modeling [March 2022]**
- **Identify Pilot Projects [April 2022]**
- **Final Report [April 2022]**
- **Public Outreach**





Nassau Hub Transit

BACKGROUND: INITIAL OPERATING SEGMENT (IOS)

2014

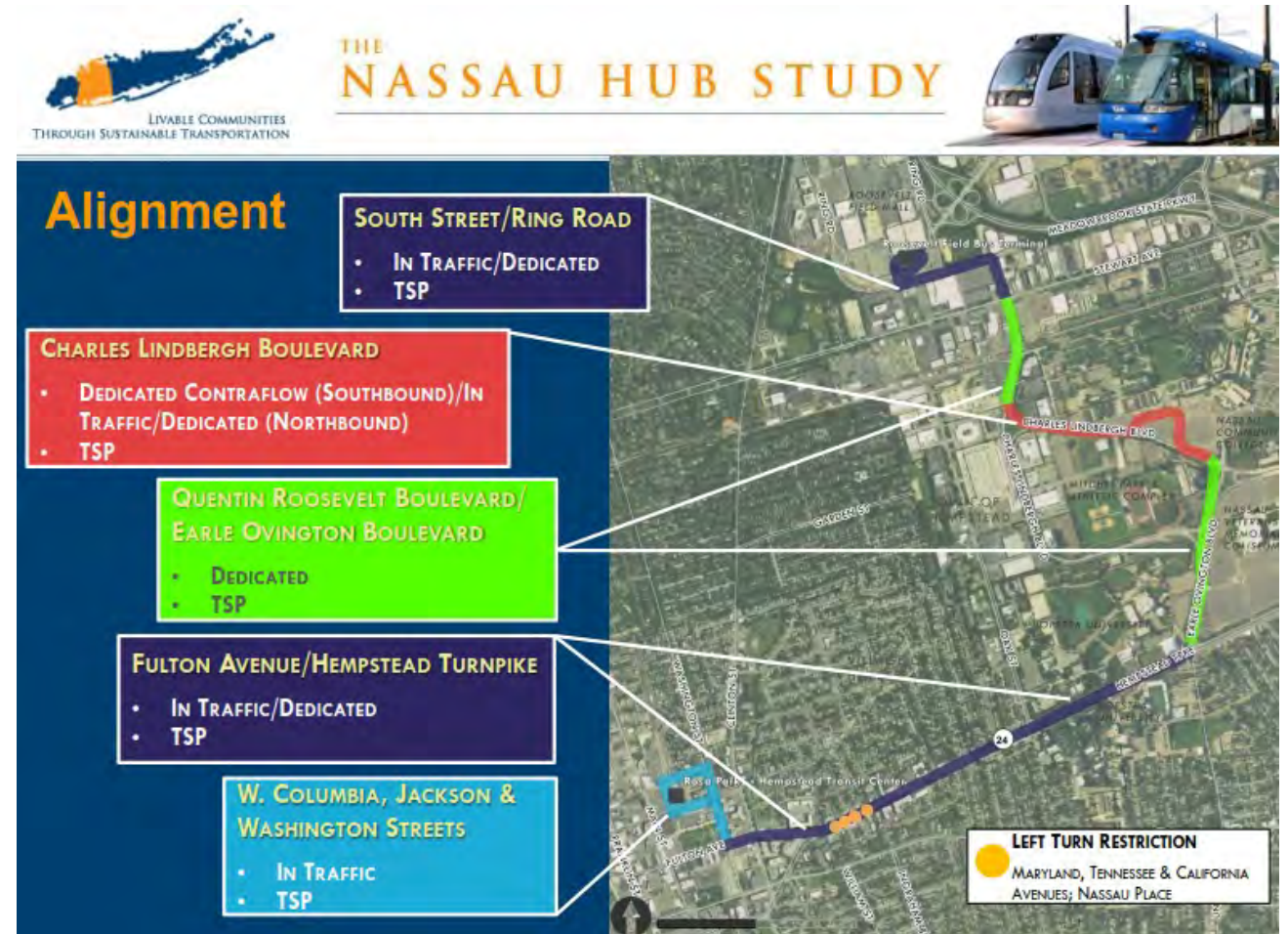
Nassau Finalizes Alternatives Analysis for Nassau Hub Transit Improvements.

Developed a Locally Preferred Alternative (LPA) for a Bus Rapid Transit (BRT) service and its Initial Operating Segment (IOS)

IOS alignment runs between Hempstead Transit Center and Roosevelt Field Mall Bus Terminal via Coliseum Site

2018

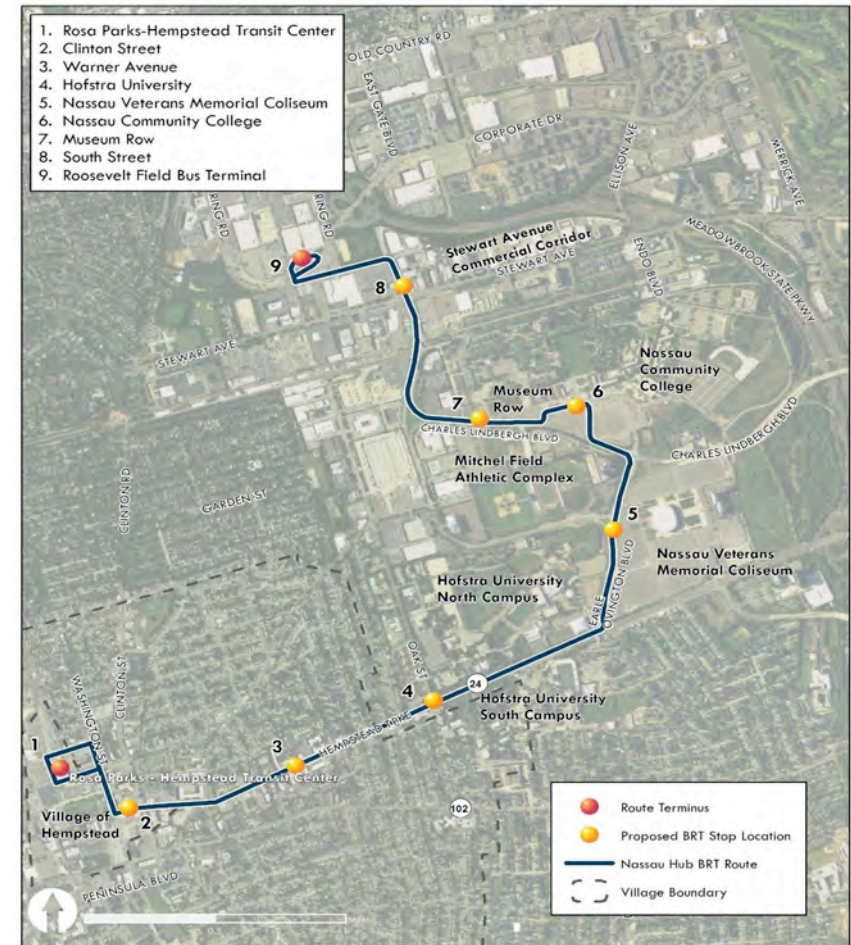
NEPA Categorical Exclusion Issued for IOS



PHASED IMPLEMENTATION FOR IOS

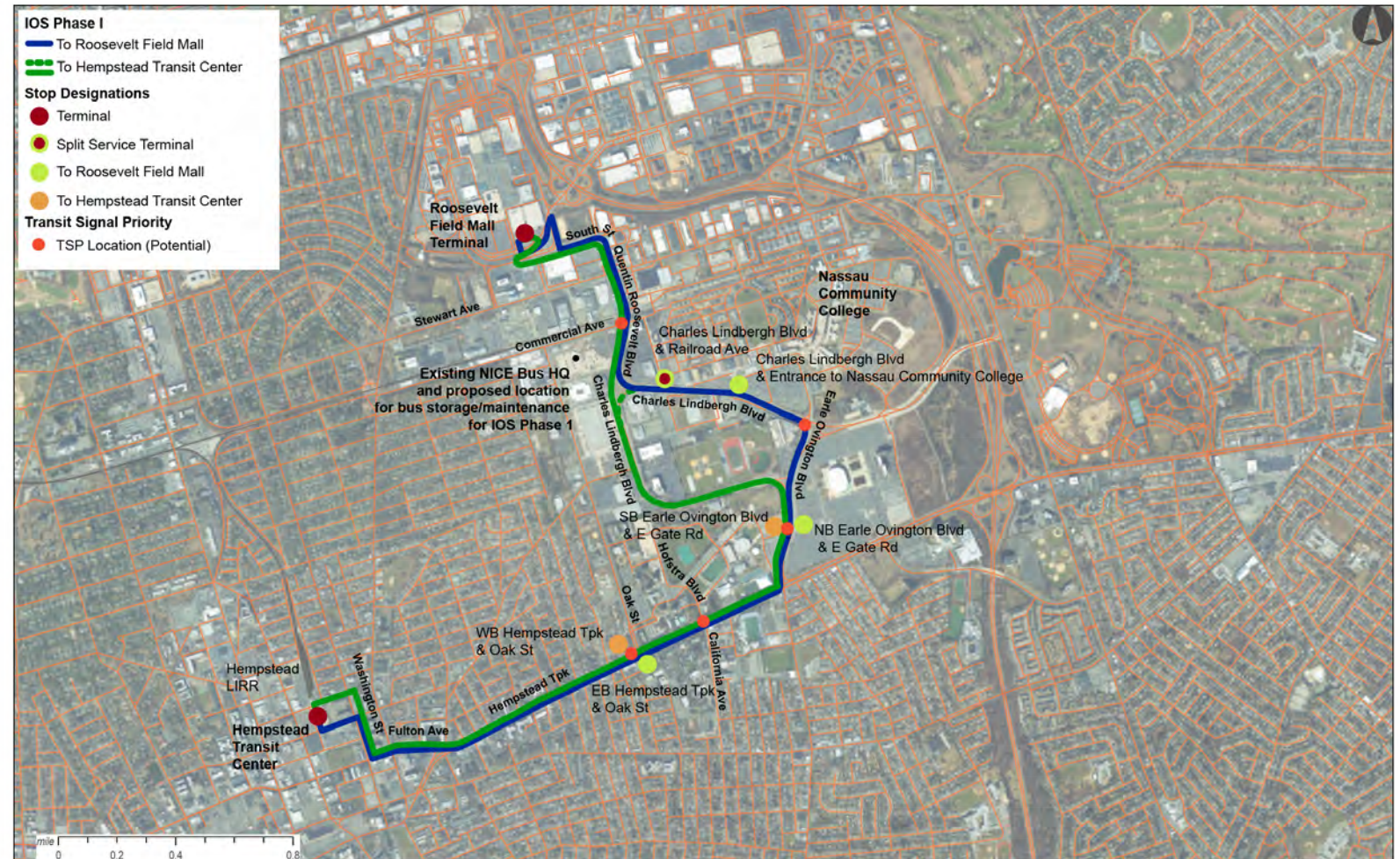
PHASES I & 2

- **Phase I** Near-term implementation to right-size the bus service to match growth in the area and to preserve federal funding opportunities
 - Service in mixed traffic and no right-of-way (ROW) takings/easements
 - Bus stops at major activity centers
 - Traffic Signal Priority (TSP) at 5 locations
- **Phase 2** Implementation of full IOS to accommodate development and growth
 - Service in mixed traffic and dedicated lanes with ROW takings/easements
 - Bus stops as proposed
 - TSP as proposed (24 locations)
 - Option to enter the Coliseum Site at Glenn Curtiss Blvd



IOS PHASE I OPERATING CHARACTERISTICS

- Branded as enhanced bus service
- Two termini plus four stops
- Five intersections with TSP
- Peak headways are 10 minutes (weekdays 7-9 AM and 4-6 PM)
- Non-peak headways are 15 minutes (all other times)



IOS PHASE I STOP SUMMARY

- Proposed stops include:
 - Existing transit centers (Hempstead Transit Center & Roosevelt Field Terminal)
 - Existing and new stop locations (see photos)
- Goals for IOS Phase I stops:
 - Create common appearance and aesthetic throughout all stops
 - Incorporate necessary BRT stop characteristics for Phase I
 - Maintain (if applicable) or allow for ADA accessibility
 - Minimize sidewalk width expansion



Hofstra University Eastbound (left), Westbound (right)



Innovation District Northbound (left), Southbound (right)



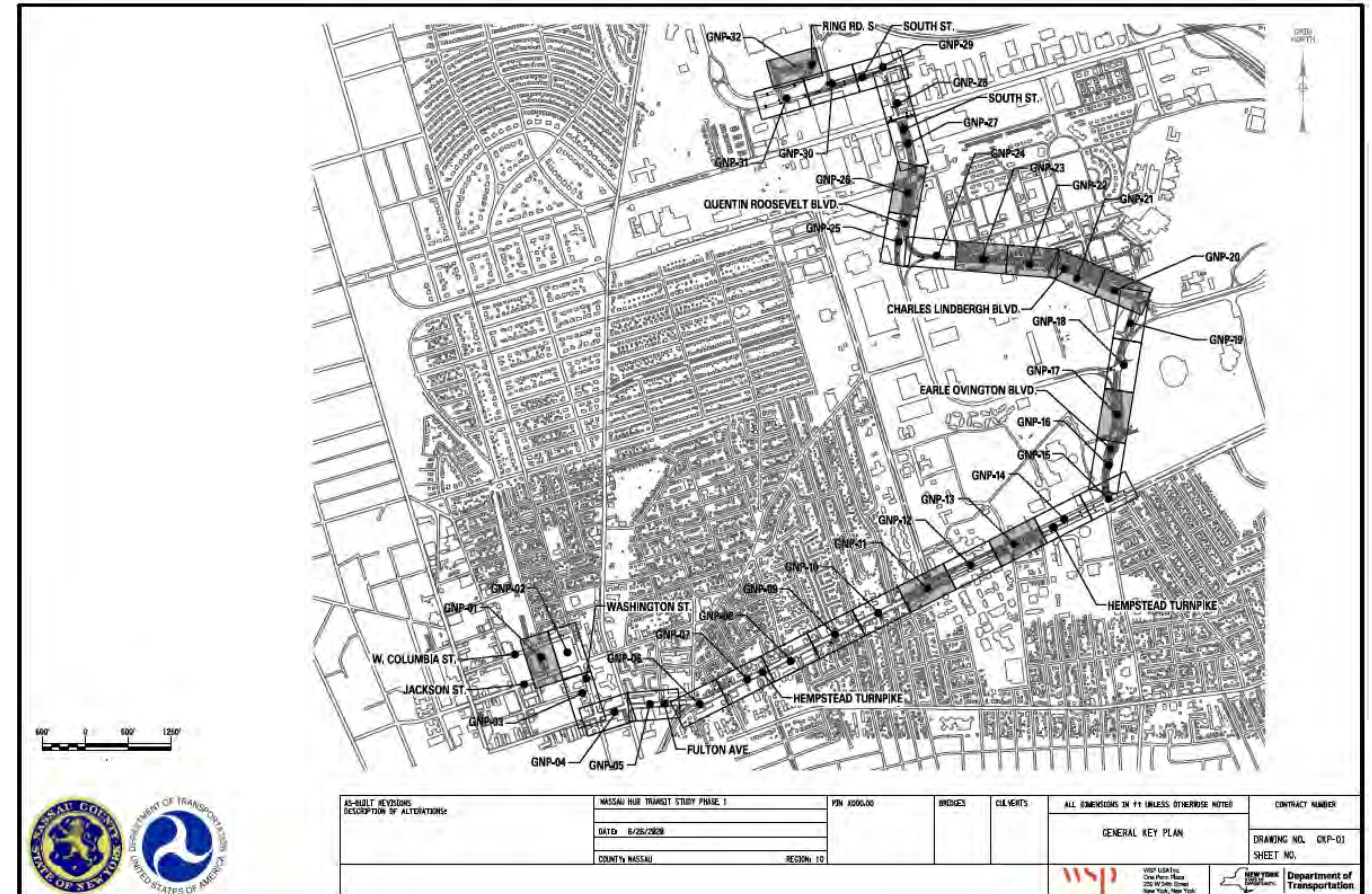
Nassau Community College



Museum Row

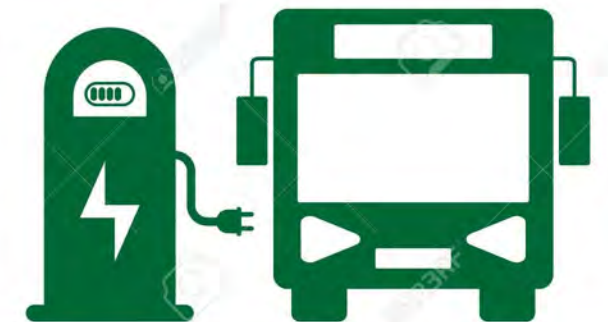
STATUS OF IOS PHASE I

- 90% Design plans prepared for Phase I station locations and TSP locations
 - Currently undergoing review by County DPW and NYSDOT Region 10
- Included traffic signal plans/tables for TSP locations, coordinated with traffic analysis
- Informed updated capital cost estimates
- **Next Steps:**
 - 100% Design and Construction Documents
 - Commence Permitting w/ NYSDOT Reg 10
 - Bid Construction (Summer 2021)





BATTERY-ELECTRIC BUS PILOT





Nassau County stakeholders are in the process of a comprehensive redevelopment of Nassau County's core, creating a major activity and employment center known as the Nassau HUB.

NICE has designed a pilot HUB Bus Rapid Transit (BRT) line to knit together these HUB attractions and activity centers - improving accessibility and connectivity to the rest of the county.

The first phase, 4.7-mile initial operating segment, would be anchored by Rosa Parks Hempstead Transit Center and Roosevelt Field Mall, with seven stations in between serving Hempstead Turnpike, Hofstra, the Nassau HUB at the Coliseum, Nassau Community College, Museum Row, and Stewart Avenue.

The new service is envisioned utilizing features such as signal priority and queue jumps, stations spaced every two-thirds of a mile, pre-paid fares allowing for all-door boarding and exiting, and level access for persons of all abilities. If successful, the BRT service will result in a significant decrease in travel time as compared to local fixed-route service.

NICE is currently in phase I of its HUB BRT effort - researching and issuing a Request for Proposals to purchase up to six battery-electric buses. NICE is currently reviewing BEB models from New Flyer, Proterra and GILLIG before advising Nassau County on the best choice for its BEB system.

This first-of-its-kind undertaking for Long Island will include system planning, optimization, and management, as well as a scalable infrastructure buildout for electric charging stations adding flexibility for future BEB efforts.

LOOK RIGHT TO LEARN MORE ABOUT BEB SUSTAINABILITY →



EMISSIONS:



An electric vehicle is 3 to 4 times better at converting energy to miles driven compared to a combustion engine. A typical CNG bus can emit up to 220,000 lbs of greenhouse gases annually. A switch to zero-emission buses, which emit no tailpipe pollution, helps to reduce fossil fuel dependence while making surrounding communities a cleaner place to live and grow.



NOISE REDUCTION:

Electric buses operate 5 to 9 decibel lower sound levels on average when compared to CNG-buses when accelerating, according to industry studies. This contributes to quieter communities, less sound pollution, and a more enjoyable rider experience.



RANGE: UP TO 350 MILES UP TO 8 HRS OF SERVICE

The storage capacity of batteries have increased greatly, extending the range that a bus can operate from a single charge. At up to 350 miles, they are approaching the typical scheduled "run" of a bus - the time from when a bus leaves the garage (pullout) to the time it returns (pull-in) - minimizing the need to purchase and maintain a higher number of buses than standard diesel or CNG vehicles to operate the same amount of service.



CHARGING TIME:



The efficiency of charging buses has improved to allow a full overnight charge in 4-8 hours, which is well within the non-service period for most agencies including NICE. Even routes that operate 24/7 - such as NICE Routes 4 and 6 - are scheduled to rotate buses so that most are fueled overnight. In addition, the installation of quick charge stations along bus routes is increasingly common, helping to extend the range of BEBs and avoid needing additional buses to maintain scheduled service.

COST: LIFESPAN SAVINGS

The capital cost of BEBs, along with their lithium-ion batteries, has decreased but remains higher than conventional vehicles. However, over their lifespan, BEBs are less costly to operate than fossil-fueled buses. Fewer moving parts mean easier maintenance and component replacement while the ability to charge overnight takes advantage of off-peak electricity rates.



PROCUREMENT:



BEB's are now manufactured by multiple companies, including New Flyer and Proterra, allowing agencies to competitively procure vehicles without dependence on the uncertain availability of parts and support from proprietary technologies. In addition, available BEB's on the market meet federal Buy America requirements.

COMPETITIVE MARKETPLACE



SEAN SALLIE, AICP
DEPUTY COMMISSIONER
NASSAU COUNTY DPW
(516)-571-9342
[SSALLIE@NASSAUCOUNTYNY.GOV](mailto:ssallie@nassaucountyny.gov)

THANK YOU