

Bellmore Avenue Traffic Calming & Safety Improvements



Prepared by:





NELSON+POPE
engineers • architects • surveyors

Meet the Team

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- Christopher Liberti, PE, Nassau County Project Manager
 - Russell Z. Scott, PE – Senior Partner
 - Joseph DeLuca, PE – Senior Project Manager

Study, Analysis & Recommendations



Study

- Field Inventory of Existing Roadway characteristics
- Field Observations of Traffic Patterns
- Data Collection (both speed & volume)
- Crash History



Analysis

- Perform SYNCHRO Analysis of Bellmore Avenue Study Area
- Review Various Alternatives to Improve the Overall Corridor



Recommendations

- Develop Measures to Increase Pedestrian and Vehicle Safety
- Alternatives to Reduce Speeding
- Improvements to Walkability

Existing Conditions Bellmore Avenue Newbridge Road to N. Jerusalem Road

- Mostly residential
- 4 Lanes & on-street parking
- Posted Speed Limit of 40 MPH
- 4 existing signalized Intersections
- Sidewalk on both sides of roadway
- Asphalt roadway N. Jerusalem Avenue to Jerusalem Avenue
- Concrete pavement N. Jerusalem Avenue to Newbridge Road



Traffic Calming & Safety Study

OBJECTIVES

- Evaluate Safety along Bellmore Avenue
- Review Traffic Data and recommend Alternatives to provide safer pedestrian and vehicular environment
- Develop mitigation to reduce frequency and severity of crashes
- Improve walkability
- Meet ADA requirements



STUDY METHODOLOGY

- TRAFFIC VOLUMES
 - TRAVEL SPEEDS
 - CRASH ANALYSIS
 - SYNCHRO ANALYSIS
 - FIELD OBSERVATIONS
 - ANALYSIS OF GEOMETRIC CONDITIONS
 - HISTORY OF COMPLAINTS/CONCERNS
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Volume & Speed Study



Roadway Section	Speed Limit	85 th Percentile Speed		Average Annual Daily Traffic (AADT)
Bellmore Avenue between N Jerusalem Rd and Wilson Ave	40 mph	45 mph Northbound	43 mph Southbound	8,590 VPD
Bellmore Avenue between Wilson Ave and Monroe Ave	40 mph	47 mph Northbound	49 mph Southbound	9,482 VPD
Bellmore Avenue between Monroe Ave and Jerusalem Ave	40 mph	47 mph Northbound	44 mph Southbound	9,933 VPD
Bellmore Avenue between Jerusalem Ave and Redmond Rd	40 mph	44 mph Northbound	44 mph Southbound	10,410 VPD
Bellmore Avenue between Redmond Rd and Newbridge Rd	40 mph	43 mph Northbound	43 mph Southbound	12,018 VPD

Crash History

Location	Crash Type											
	Right Angle	Right Turn	Rear End	Head On	Left Turn	Parked	Fixed Object	Ped/Bicycle	Overtk	Backing	Side-swipe	Other/Unknown
Bellmore Ave*	9	3	9	-	8	3	6	-	14	-	2	-
Bellmore Ave at N Jerusalem Rd	9	1	6	-	9	-	2	1	4	-	-	-
Bellmore Ave at Spencer Ave	-	-	2	1	-	-	-	-	-	-	-	-
Bellmore Ave at Wilson Ave	-	-	2	-	-	-	-	1	5	-	-	-
Bellmore Ave at Waltoffer Ave	1	-	4	-	4	-	-	-	1	-	1	-
Bellmore Ave at Waltoffer Annex	1	-	-	-	-	-	-	-	1	-	-	-
Bellmore Ave at Monroe Ave	1	-	-	-	-	-	1	-	-	-	-	-
Bellmore Ave at State Pl/Stacey Court	3	-	-	-	-	-	-	-	-	-	-	-
Bellmore Ave at Jerusalem Ave	4	-	5	-	9	1	-	1	10	-	2	-
Bellmore Ave at Jerusalem Ave / Park Ave	1	-	4	-	-	-	-	-	1	-	1	-
Bellmore Ave at Hamilton Rd	1	-	1	-	-	-	-	-	-	-	-	-
Bellmore Ave at Kayron Ln	1	-	-	-	-	-	-	-	-	-	-	-
Bellmore Ave at Redmond Rd	1	-	2	-	2	-	-	-	-	-	-	-
Bellmore Ave at Broad St	1	-	-	-	2	-	-	-	2	-	-	-
Bellmore Ave at Newbridge Rd	3	3	29	-	6	-	-	-	13	1	3	-
Total	36 <i>16%</i>	7 <i>3%</i>	64 <i>28%</i>	1 <i>0.5%</i>	40 <i>18%</i>	4 <i>2%</i>	9 <i>4%</i>	3 <i>1%</i>	51 <i>23%</i>	1 <i>0.5%</i>	9 <i>4%</i>	0 <i>0%</i>

Accident Rate Type	Accident Rate for Facility Accidents per Million Vehicle Miles	Statewide Average Accidents per Million Vehicle Miles
All Types	13.31	5.81
Wet Weather	2.25	1.16



Recommendations

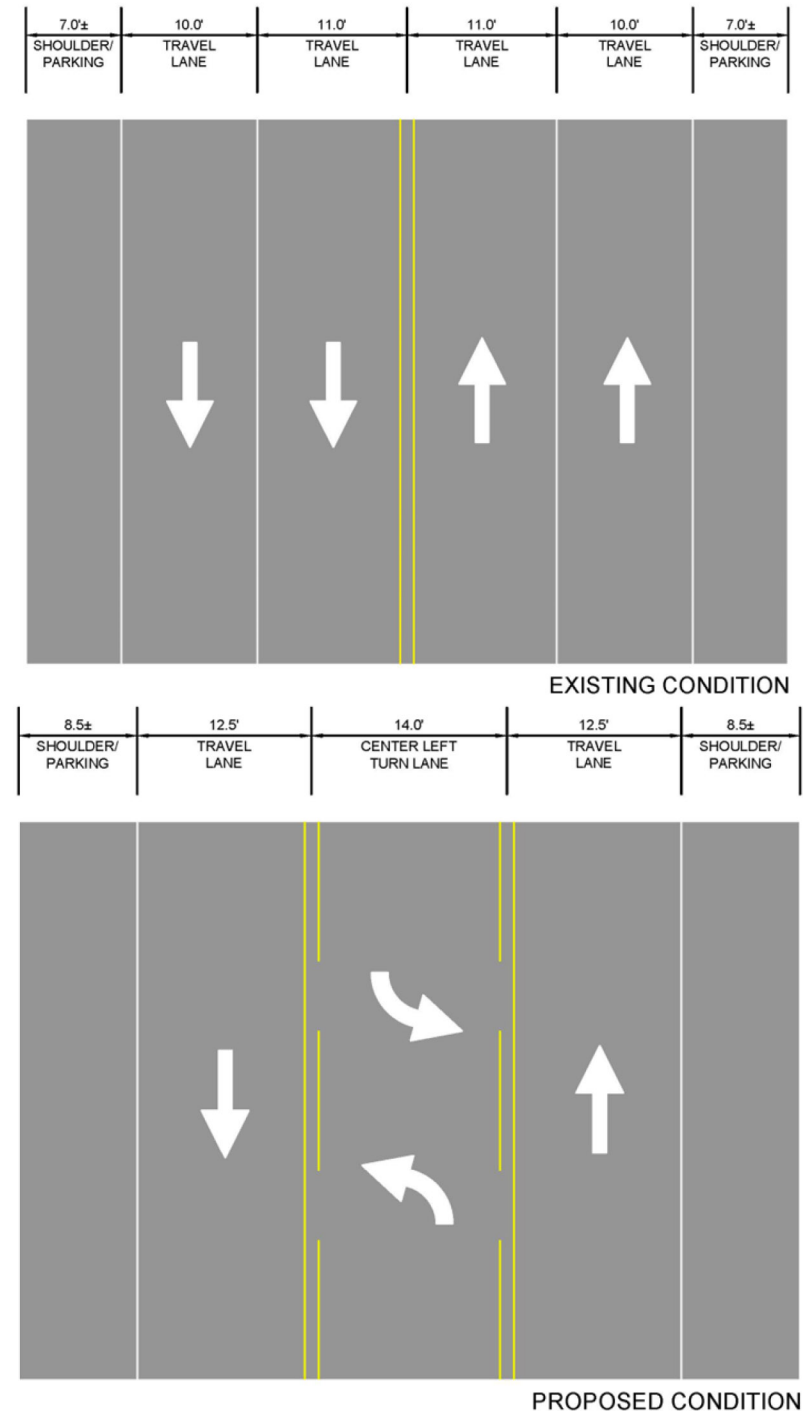
- Road Diet/Lane Diet
- ADA Compliant Pedestrian Accommodations
- Left Turn Lanes
- Curb Bulb-Outs
- Rebuild Outdated Traffic Signals (4)
- Install New Traffic Signals (2)
- Pedestrian Countdown Timers
- Speed Awareness Devices (4 Total)
- Resurfacing of Bellmore Avenue
- Installation of New Pavement Markings



Road Diet / Lane Diet

Benefits of Road Diet installations may include:

- Reduction of rear-end and left-turn crashes due to the dedicated center-turn lane.
- Reduced right-angle crashes as side street motorists cross less travel lanes.
- Fewer travel lanes for pedestrians to cross.
- Traffic calming and more consistent speeds.
- Complete Streets environment that better accommodates the needs of all road users.
- Resurface Concrete Roadway for Better Riding Surface
- New Pavement Markings





(IN FEET)
1 INCH = 40 FEET



MATCHLINE - SEE
DWG. NO. CP-1



MATCHLINE - SEE
DWG. No. CP-3



EXISTING ROADWAY



STREET SIGN



Road Diet / Lane Diet

LEGEND

- SPEED AWARENESS SIGNS
- EXISTING/PROPOSED TRAFFIC SIGNAL
- PROPOSED PAINTED MEDIAN
- PROPOSED BULB-OUT

MATCHLINE - SEE
DWG. NO. CP-1



PROPOSED CENTER TURN LANE

MATCHLINE - SEE
DWG. No. CP-3

PROPOSED BUMP-OUTS

PROPOSED DO NOT BLOCK THE BOX PAVEMENT MARKINGS



PROPOSED ROAD DIET

SIGN JURISDICTION INFORMATION	
NCDPW	NASSAU COUNTY DEPT. OF PUBLIC WORKS OWNERSHIP
T.O.H.	TOWN OF HEMPSTEAD
UNK.	UNKNOWN AND/OR NON-LABELED OWNERSHIP



Traffic Signal and Pedestrian Signal Improvements

- Traffic Signal Rebuild
- Bellmore Ave. at North Jerusalem
- Bellmore Ave. at Wilson Avenue
- Bellmore Ave. at Jerusalem Avenue
- Bellmore Ave. at Newbridge Road
- New Traffic Signal
- Bellmore Ave. at Waltoffer Ave.
- Bellmore Ave. at Redmond Road/Kayron Lane
- Pedestrian Countdown Timers
- All Signalized Intersections

Installation of Curb Bulb-Outs

Intersections of:

- Bellmore Avenue at Wilson Avenue
- Bellmore Avenue at Waltoffer Avenue
- Bellmore Avenue at Redmond Avenue/Kayron Lane

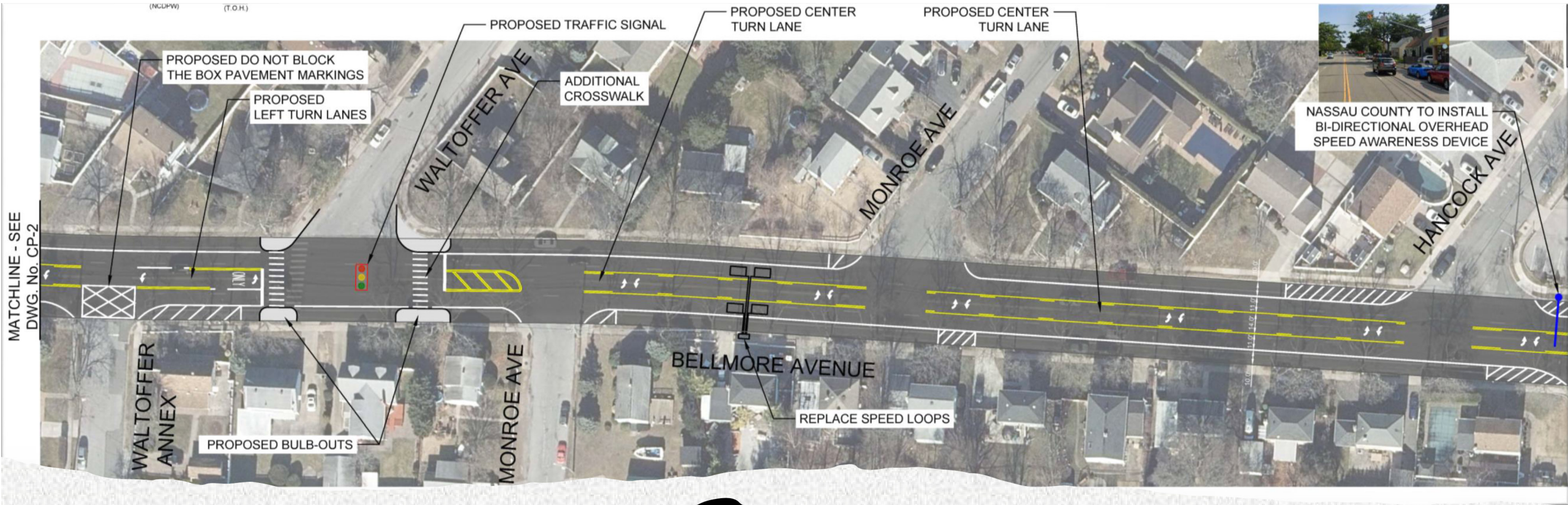


Speed Awareness Devices



Installed on Mast Arms at following locations:

- Bi-Directional near Hancock Avenue
- Bi-Directional near Waring Street & Garfield Street



PROJECT TIMELINE & ESTIMATED CONSTRUCTION COST

CONSTRUCTION PLANS FINALIZED SPRING 2025
 CONSTRUCTION START SPRING 2026

ESTIMATED COST OF CONSTRUCTION: \$4.9 MILLION

Summary

