# Appendix 2.6-12

## Lighthouse Comparison and Additional Mitigation Analysis

**Task 2: Compare mitigation of the Lighthouse with mitigation of Sands New York.**

Key: anything highlighted in gray are locations that are mitigated as part of Sands New York mitigation plan.

| General Location | Location/Interchan | Location | Lighthouse Mitigation | Sands New York Mitigation | Why was Sands Mitigation Chosen? | General Reason |
|---|---|---|---|---|---|---|
| *MSP and Interchanges Mitigation* | *Meadowbrook State Parkway at Northern State Parkway* | Westbound NSP to southbound MSP | | Removal of the existing lane drop to widen to two full lanes the ramp. Remove existing shoulder. Add new lane and shoulder. | Mitigation was prioritized between NSP and Hempstead Tpke southbound on MSP because the trip generation showed almost double trips traveling from NSP than from SSP to the site. The Saturday evening combined trip assignment shows 1134 site generated trips traveling southbound from westbound NSP towards the site. While only 568 trips are estimated to be traveling northbound on MSP towards the site. | Capacity improvements on the MSP were chosen to address existing traffic related deficiencies and project-related increased. |
| | *Meadowbrook State Parkway Southbound Mainline* | MSP from NSP to Zeckendorf Blvd | | Widening to provide a fourth lane southbound. Remove existing shoulder. Add new lane and shoulder (approx. 7000 linear feet). | | |
| | *Meadowbrook State Parkway Northbound from Old Country to Northern State Parkway* | Old Country Rd to the NSP ramps | | Widening of northbound MSP to four lanes from Old Country Rd to the NSP ramps. Remove existing shoulder. Add new lane and shoulder (approx. 5000 linear feet). | Mitigation was prioritized between NSP and Hempstead Tpke northbound on MSP because trip generation showed almost double trips traveling from Hempstead Tpke to NSP than to SSP. The Saturday evening combined trip assignment shows 1191 site generated trips traveling northbound from the site to NSP. While only 665 trips are estimated to be traveling southbound away from the site on MSP towards SSP. | |
| | *Meadowbrook State Parkway at Northern State Parkway* | Ramp MSP to Eastbound NSP onto NSP | | Widening of the ramp to the eastbound NSP to two lanes all the way onto NSP. | | |
| | *Meadowbrook State Parkway Northbound at C-D Road from Lindbergh* | Northbound MSP C-D Rd, and connecting northbound MSP Mainline prior to Stewart Ave overpass | Install 4th Northbound Thru Lane on MSP from the CD road to Charles Lindbergh Blvd (approx. 400 linear feet). | Widening the northbound MSP C-D Rd to two lanes for its entire length and merging both lanes onto MSP Mainline. The existing third northbound MSP Mainline travel lane would be dropped prior to the C-D Rd merge to accommodate the additional merge lane prior to the Stewart Ave overpass (approx. 3000 linear feet). | | |
| | *MSP at Hempstead* | Ramp from eastbound Hempstead Tpke to southbound MSP | | An extension of the deceleration lane onto the ramp (approx. 500 linear feet). | Mitigation was prioritized at this ramp as it experiences 592 site generated trips during Saturday evening peak hour. | |
| | *MSP at Hempstead* | Ramp from eastbound Hempstead Tpke to southbound MSP | | An extension of the acceleration lane from the same ramp (approx. 400 linear feet) | | |
| | *MSP at Hempstead* | Ramp from eastbound Charles Lindbergh Blvd to southbound MSP | | An extension of the two lane section of the ramp (approx. 350 linear feet). | Mitigation was prioritized at this ramp as it sees 73 site generated trips during the Saturday evening peak hour. | |
| | *MSP at Hempstead* | Ramp from eastbound Charles Lindbergh Blvd to southbound MSP | | An extension of the acceleration lane from the ramp (approx. 450 linear feet). | | |
| | *MSP at Hempstead* | Hempstead Tpke interchange | Construct new interchange at Hempstead Tpke and Meadowbrook MSP ramps by installing new concrete ramps, remove conflicting ramps connecting ramps to single point Hempstead Tpke interchange. Widen, resurface, and restripe Hempstead Tpke. Install traffic signal at proposed intersection. Regrade ROW as necessary for relocated Roadway ramps. Relocate existing asphalt bike path. | | Mitigation was prioritized at Charles Lindbergh Blvd's connection to MSP northbound as it is estimated to gain 1191 site generated trips, while the interchange at Hempstead Tpke is expected to experience 630 added trips during the Saturday evening peak hour. | |
| | *MSP Southbound frmp Hempstead Tpke to SSP* | MSP from Hempstead Tpke to W/B SSP | Construct new 4th lane southbound from Hempstead Tpke to W/B SSP (approx. 10,000 linear feet). | | Mitigation was prioritized between NSP and Hempstead Tpke northbound on MSP because trip generation shows almost double trips traveling from Hempstead Tpke to NSP than to SSP. The Saturday evening combined trip assignment shows 1191 site generated trips traveling northbound from the site to NSP. While only 665 trips are estimated to be traveling southbound away from the site on MSP towards SSP. | |
| | | MSP-4 Southbound Ramp | Move and reconfigure ramp/ signalize intersection. | | The MSP-4 southbound ramp is only estimated to experience 73 added trips during the Saturday evening peak hour. | |
| *Bridge Replacement* | | Old Country Rd bridge over the MSP | | Replace with a longer span. | Mitigation was prioritized between NSP and Hempstead Tpke on MSP because trip generation showed almost double trips traveling to and from the site on this portion of MSP than from SSP to Hempstead Tpke. Only 1233 site generated trips are added to MSP between SSP and Hempstead Tpke during Saturday evening peak hour while 2,325 trips | |
| | | MTA LIRR bridge over the MSP | | Replace with a longer span. | | |
| | | Bridge carrying the MSP over Westbury Ave | | Widen along its length to accommodate a fourth lane on the MSP in each direction. | | |
| | | Glenn Curtiss Blvd bridge over the MSP | Lengthen Glenn Curtiss Blvd Bridge over the MSP for added lane. | | Mitigation was prioritized between NSP and Hempstead Tpke on MSP because site generated trips are almost double traveling to and from the site on this portion of MSP than from SSP to Hempstead Tpke. Only 1233 site generated trips are added to MSP between SSP and Hempstead Tpke during Saturday evening peak hour while 2,325 trips are added to MSP between Hempstead Tpke and NSP. | |
| | | Pedestrian bridge over MSP south of Glenn Curtiss Blvd | Lengthen pedestrian bridge over Meadowbrook MSP for added lane. | | | |
| | | MSP bridge over Front St | Widen MSP bridge over Front St for added Lane. | | | |
| | | Jerusalem Ave bridge at MSP | Lengthen Jerusalem Ave Bridge span over MSP for added lane. | | | |
| | | Hempstead Tpke (NY 24) at Glenn Curtiss Blvd/Site Access. | Widen/ increase capacity and optimize signal timing. | WB: Modify right-turn lane to eliminate uncontrolled movement SB: Restripe the southbound approach to provide two left turn lanes and a shared thru right turn lane NB: Restripe approach to provide two left-turn lanes, a shared thru-right lane and a right-turn lane Restrict WB U-Turns Optimize signal timing/ phasing (AM, PM, SAT MID, SAT EVE, FRI EVE). | Mitigation was prioritized at this intersection as 242 eastbound and 670 westbound site generated trips are expected during the Saturday evening peak hour. Mitigation is further expected to improve LOS past its existing conditions of having 7 E movements and 1 F, to having 5 E movements. | |

**Task 2: Compare mitigation of the Lighthouse with mitigation of Sands New York.**

Key: anything highlighted in gray are locations that are mitigated as part of Sands New York mitigation plan.

| General Location | Location/Interchan | Location | Lighthouse Mitigation | Sands New York Mitigation | Why was Sands Mitigation Chosen? | General Reason |
|---|---|---|---|---|---|---|
| *Site Access & Intersection Capacity Improvements* | | Hempstead Tpke and Cunningham Ave | Signalize intersection/ restripe pavement markings. | Optimize signal timing/ phasing/ Offsets (AM, PM, SAT EVE, FRI EVE, SAT MID). | Mitigation was prioritized at this intersection as 435 eastbound and 292 westbound site generated trips are expected during the Saturday evening peak hour. Mitigation is expected to improve LOS past its existing conditions of 1 F to having no movements scoring E or F. | Geometric and traffic signal operation improvements proposed at intersections on the local street network were chosen to address existing traffic related deficiencies and project-related increases. |
| | | Hempstead Tpke (NY 24) at MSC Entrance | | Optimize signal timing/ phasing/ Offsets (AM, PM, SAT EVE, FRI EVE, SAT MID). | Mitigation was prioritized at this intersection as 458 eastbound and 300 westbound site generated trips are expected during the Saturday evening peak hour. With 275 of the westbound trips expected to turn right into the MSC entrance. | |
| | | Hempstead Tpke at Earle Ovington Blvd/ Uniondale Ave Mitigation | Restripe pavement markings. | SB: construct additional right-turn lane. Restripe southbound approach to provide two left-turn lanes, at thru lane, a shared thru right lane, and a right-turn lane Optimize signal timing/ phasing (AM, PM, SAT EVE, FRI EVE, SAT MID). | Mitigation was prioritized at this intersection as 423 southbound site generated trips are expected to turn left onto Hempstead Tpke from Earl Ovington during the Saturday evening peak hour. Mitigation is expected to improve LOS past its existing conditions of 1 F and 6 E to having 1 F and 3 E movements. | |
| | | Earle Ovington Blvd at Charles Lindbergh Blvd (EB)/Site Access | Provide site access/ egress. Restripe pavement markings. | WB: Remove one left-turn lane, construct an additional channelized right turn lane. EB: Construct an additional left-turn lane SB: Construct an additional U-turn only lane (AM, PM, SAT MID, SAT EVE, FRI EVE). | Mitigation was prioritized at this intersection as 95 site generated trips are expected to turn out of the site onto Earl Ovington and 525 are expected to turn out of the site onto Charles Lindbergh during the Saturday evening peak hour. | |
| | | Earle Ovington Blvd and Charles Lindbergh Blvd at Site Access Bus Loop | Reconstruct geometry/ signalize intersection. | Construct Bus deceleration lane and off ramp from Earle Ovington Blvd. Construct a right out only from the site onto Charles Lindbergh Blvd. | The bus loop is expected to see 804 site generated trips during the Saturday evening peak hour, which will relieve stress on other intersections, and provide a direct path to the Parkway from Charles Lindbergh Blvd. | |
| | | Charles Lindbergh Blvd at Site Access (Sands Blvd.) | Provide site access/ egress. | Construct Intersection & Optimize signal timing/ phasing/offset (AM, PM, SAT MID, SAT EVE, FRI EVE). | Mitigation was prioritized at this intersection as it is expected to provide access to 932 site generated trips during the Saturday evening peak hour. | |
| | | Charles Lindbergh Blvd at James Doolittle Blvd | Signalize intersection and widen/ increase capacity. | EB: Remove right-turn lane NB: Remove right-turn lane. | Mitigation was prioritized at this intersection as it is expected to see high numbers of site generated trips traveling eastbound to the Parkway and high numbers traveling westbound to the site. It is also expected to see low numbers of turning traffic from James Doolittle Blvd, as a result the turn lanes are proposed to be turned into thrus to allow for more east and westbound traffic. | |
| | | Hempstead Tpke and Park Blvd /East Meadow Ave | Widen / lengthen/ increase capacity. | Optimize signal timing/ phasing (PM). | Mitigation was prioritized at this intersection as it is expected to see 50 site generated trips traveling eastbound, 91 traveling westbound and 15 traveling northbound during the Saturday evening peak hour. | |
| | | Hempstead Tpke (NY 24) at Hofstra Blvd/California Ave | | Optimize signal timing/ phasing/offset (AM, PM, SAT MID, SAT EVE, FRI EVE). | Mitigation was prioritized at this intersection as it is expected to see 64 site generated trips traveling eastbound, and 48 site generated trips traveling westbound during the Saturday evening peak hour. | |
| | | Hempstead Tpke (NY 24) at Oak St/Hofstra Blvd | | Optimize signal timing/ phasing/offset (AM, PM, SAT MID, SAT EVE, FRI EVE). | | |
| | | Fulton Ave at N. Franklin St | | Optimize signal timing/ phasing (PM). | | |
| | | Stewart Ave at Franklin Ave | | Optimize signal timing/ phasing (PM). | This intersection is expected to see 3 site generated trips southbound turning left from Franklin Ave onto Stewart Ave, and 4 turning right from Stewart Ave onto Franklin Ave during the Saturday evening peak hour. | |
| | | Merrick Ave at Corporate Drive | | Optimize signal timing/ phasing (PM, SAT MID). | Mitigation was prioritized at this intersection as it is expected to see 49 site generated trips traveling northbound on Merrick Ave, and 35 trips traveling southbound during the Saturday evening peak hour. | |
| | | Merrick Ave at Privado Rd | | Optimize signal timing/ phasing (PM). | Mitigation was prioritized at this intersection as it is expected to see similar site generated trips to Merrick Ave at Corporate Drive. | |
| | | Jericho Tpke at Post Ave | | Optimize signal timing/ phasing (PM, FRI EVE). | | |
| | | Oak St at Westbury Blvd/Meadow St | | Optimize signal timing/ phasing (PM). | | |
| | | Hempstead Tpke WB and James Doolittle Blvd | Signalize intersection/ restripe pavement markings/ widen/ increase capacity/ new access to RexCorp Plaza. | | Only 77 site generated trips are estimated to turn right onto James Doolittle Blvd from Hempstead Tpke westbound, while 658 are estimated to continue straight during the Saturday evening peak hour so mitigation was prioritized further down Hempstead Tpke where there are more turning movements. | |
| | | Merrick Ave and Stewart Ave/Park Blvd | Optimize signal timing. | | This intersection is expected to see only 35 site generated trips traveling southbound on Merrick Ave and 53 trips traveling northbound during the Saturday PM peak hour. This intersection has LOS of D and above for 2030 Build Condition, so mitigation was prioritized elsewhere. | |
| | | Old Country Rd and Merrick Ave/Post Ave | Widen/ increase capacity and optimize signal timing. | | This intersection is expected to see 28 trips traveling on Post Ave westbound turning left onto Merrick Ave and 37 turning right onto Post Ave. This intersection has 2030 Build LOS that is consistent with 2023 Existing Conditions, so mitigation was prioritized elsewhere. | |