

The Nassau Hub Transit Initiative identifies and evaluates alternatives for the provision of bus rapid transit (BRT) service to address congestion and create enhanced connectivity between major destinations in the Nassau Hub area and the Long Island Rail Road (LIRR). The Nassau Hub area, which includes the Nassau Veterans Memorial Coliseum site, is home to multiple commercial, downtown, and institutional activity centers that will benefit from expanded transit access.

The County's current study, referred to as the Alternatives Analysis (AA) Update, examines opportunities for transit improvements within the study area and is conducted in continued cooperation with the Federal Transit Administration (FTA). The study will result in the selection of a Locally Preferred Alternative (LPA) that extends BRT service from the Rosa Parks-Hempstead Transit Center to the LIRR Main Line (referred to as the LIRR Main Line Connection). More information about this study and previous studies is available at the [Nassau Hub Transit Initiative Project Website](#).

This presentation provides an update on recent development of the Nassau Hub Transit Initiative and describes the process taken to develop a recommended LPA.



# Nassau County Nassau Hub Transit Initiative

## Public Presentation

October 4<sup>th</sup> – November 8<sup>th</sup>, 2024



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Nassau County Executive

**Michael Kwaschyn, P.E.**  
Acting Commissioner of Public Works

During this presentation, we will review the Short List of Alternatives evaluated for the connection to the LIRR Main Line and the criteria used to evaluate them. We will also review the process used to reach our recommended LPA and spend time reviewing the specifics of this LPA.

Finally, we will detail how each of you can provide final comments that will be documented for this current study.

## Agenda

- Update of the Nassau Hub Transit Initiative
- Short List of Alternatives for the LIRR Mainline Extension
- Short List Evaluation Criteria
- Recommended Locally Preferred Alternative
- How to Share Feedback



Included on the following pages are recent updates and activities that have occurred as part of the Nassau Hub Transit Initiative.

# Update of the Nassau Hub Transit Initiative



In January 2023, our project team held virtual meetings with the Nassau Hub Transit Initiative stakeholders and any interested members of the public. The virtual stakeholder meeting was held on January 10th and the virtual public meeting was held on the evening of January 18th.

At these meetings, we discussed the previous outcomes of the study identifying the Initial Operating System, (IOS), the proposed extension from the IOS to the LIRR Main Line, and the alternatives and evaluation processes used in the analysis of the LIRR Main Line Connection alternatives.

Each meeting included a question-and-answer section. Questions and comments were submitted via the Project's website or email address until February 1st, 2023. All feedback received was included in the Draft Nassau Hub Transit Initiative Alternatives Analysis Update Report. A draft of this report is [available here](#).

The map on the right shows the Nassau Hub Study Area.

## 2023 Nassau Hub Transit Initiative Public Meeting

- A virtual public meeting was held on January 18, 2023. At the meeting, the following was discussed:
  - Previous outcome identifying the Initial Operating System (IOS)
  - Proposed extension to the IOS, known as the LIRR Main Line Connection
  - Review of LIRR Main Line Connection alternatives and the evaluation process
- The meeting included a question-and-answer session, and questions or comments could be submitted via the Project's website until February 1, 2023. This feedback was included in the Nassau Hub Transit Initiative Alternatives Analysis Update Report.



In addition to outreach, there has been progress on advancing the implementation of IOS Phase 1 and Phase 2.

Phase 1 of the IOS is for near-term implementation and would include bus service in mixed traffic (no dedicated lanes) and would not require any right-of-way takings or easements. This phase has bus stops at major activity centers, including two termini and four stops along the route. Transit signal priority (TSP) would be implemented at up to five locations to modify a traffic signal's timing or phasing and give preference to transit vehicles, reducing the amount of time a vehicle would take go through an intersection. Design of IOS Phase 1 is complete.

Phase 2 of the IOS would implement the full IOS. This phase would include service in mixed traffic with dedicated bus lanes wherever possible. Bus stops would be located at two termini and seven stops along the route. TSP would be implemented more widely at 24 locations and there would be an option to enter the Coliseum site at Glenn Curtiss Boulevard. The map on the right shows the route and stops included in IOS Phase 2. The preliminary design of IOS Phase 2 was completed in Summer 2024.

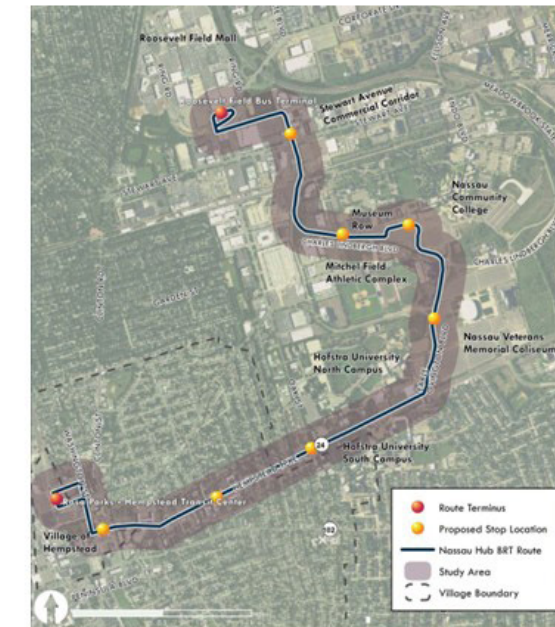
## Update on IOS Implementation – Phase 1 & Phase 2

### Phase 1 (Near-Term Implementation)

- Service in mixed traffic and no ROW takings/easements
- Bus stops at major activity centers (two termini plus four stops)
- Transit Signal Priority (TSP) at up to 5 locations

### Phase 2 (Implementation of Full IOS)

- Service in mixed traffic and dedicated lanes
- Bus stops as proposed (two termini plus 7 stops)
- TSP as proposed (24 locations)
- Option to enter the Coliseum Site at Glenn Curtiss Blvd

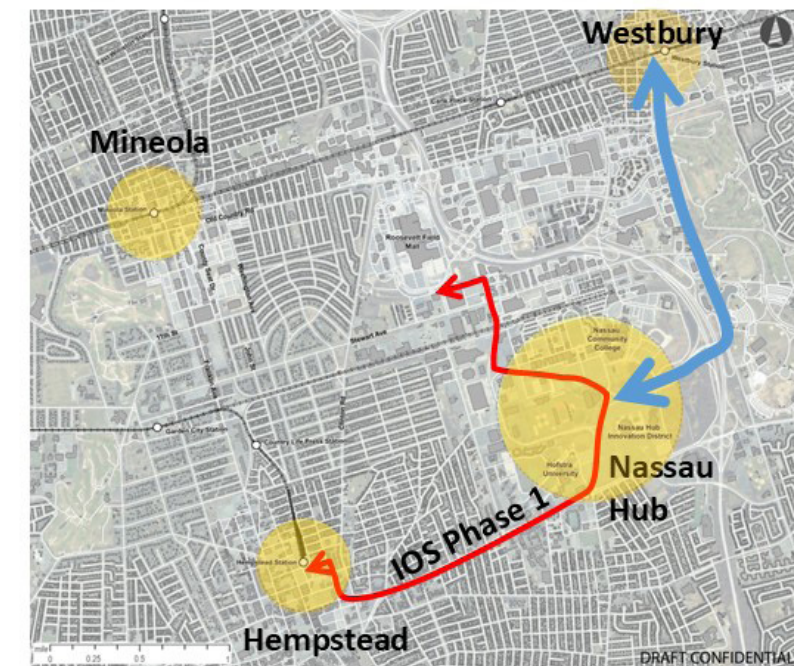


The subject of the current study is the LIRR Main Line Connection, which extends the IOS and maximizes the benefits of the new transit service for the area. Providing a direct connection between the IOS and the LIRR Main Line would aid the County's efforts to address congestion, create enhanced connectivity between major destinations and the LIRR, and provide increased service to vulnerable, underserved, and disadvantaged communities.

The alternatives discussed in this presentation focus on the LIRR Main Line Connection at the Westbury Station.

## Review of LIRR Main Line Connection

- Complement the IOS and maximize the benefits of a new transit system in the Nassau Hub area
- Provide a direct connection between the Nassau Hub, the LIRR Main Line, and other major activity centers



Eight alternatives connecting to the LIRR Main Line at Westbury were evaluated, and each of these alternatives are described in Section 4.1 of the Alternatives Analysis Update Report. Four alternatives satisfied the Goals and Objectives and were advanced to the Refined Long-List Alternatives and the next two-phase screening (described on Page 8).

The alternatives advanced to the Refined Long-List Alternatives include Alternatives 5, 6, 7, and 8. Alternatives 1, 3, and 4 were eliminated because they would not improve travel times, owing to their length and number of turns. Alternative 2 had institutional and physical flaws (low speed limits and narrow street width) that would prevent implementation of a successful BRT. Alternatives 5, 6, 7, and 8 satisfied the Goals and Objectives and provided a direct connection between the LIRR Main Line at Westbury and the Nassau Coliseum site.

## Long-List Evaluation Criteria

The evaluation was completed in two phases – the first phase quantitatively analyzed the alternatives to identify the fastest routes. The second phase qualitatively analyzed the alternatives for evaluation metrics 2 through 6.

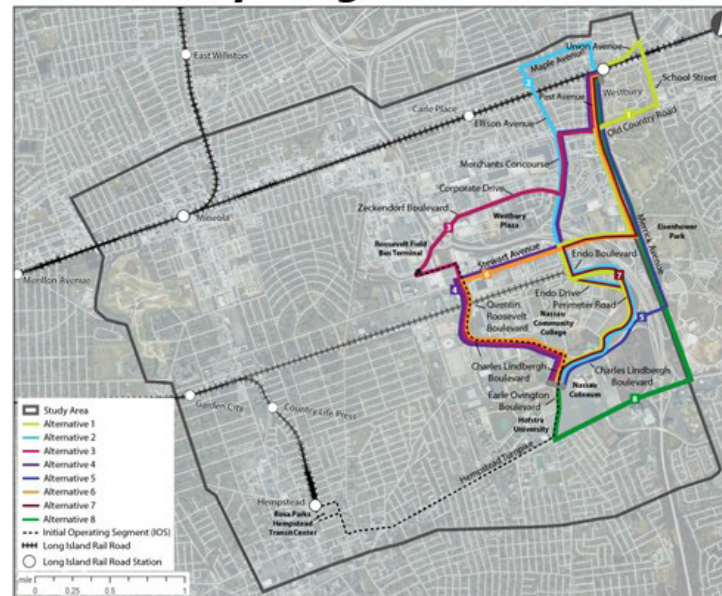
1. Quantitative analysis of travel time of proposed service. (Phase 1)
2. Does the BRT system have support from key local decision makers? (Phase 2)
3. Has the BRT system been designed to connect to Future Shared Mobility Services? (Phase 2)
4. Does the Alternative's alignment provide connections to most of the prioritized trip Attractors and Generators located within the Study Area? (Phase 2)
5. Does the alignment provide connections to LIRR and existing bus services? (Phase 2)
6. Will the alignment be supported by land use plans and policies such as TOD and infill development? (Phase 2)



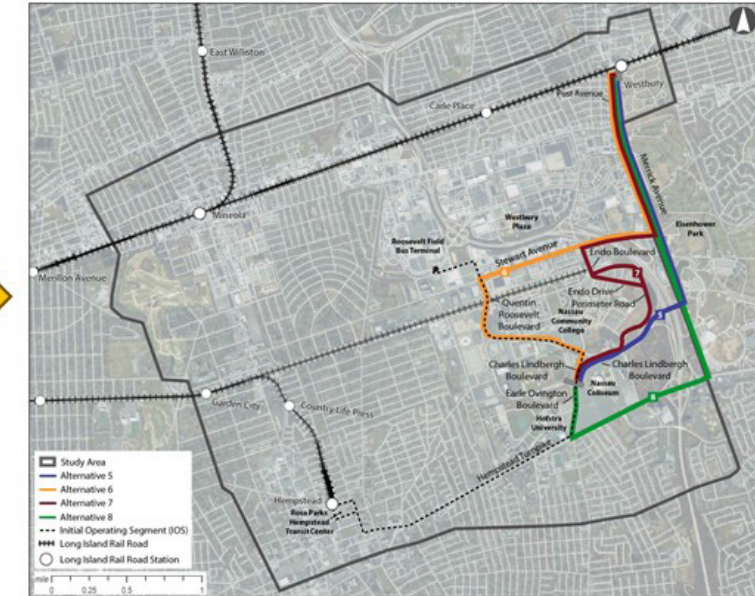
Evaluation of the Refined Long-List Alternatives included two phases. Phase 1 analyzed the alternatives quantitatively to determine which alternatives would offer the fastest travel time. Phase 2 was qualitative and analyzed the alternatives based on criteria that were developed to reflect the goals and objectives of the study. The specific criteria are shown in the image to the right, and additional details are available in Section 4 of the Alternatives Analysis Update Report.

# Westbury Alternatives for LIRR Main Line Connection

**Westbury Long-List Alternatives**



**Westbury Refined Long-List Alternatives**

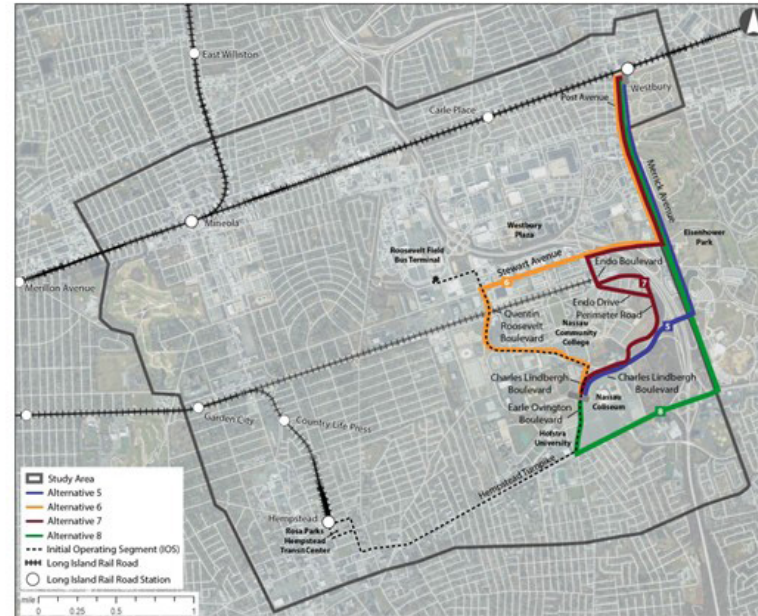




Alternatives 5, 6, and 7 were advanced to the Short-List of Alternatives. While all the remaining alternatives met the evaluation criteria, Alternative 8 did not advance because it had the slowest average travel time (15.4 minutes northbound, 14.2 minutes southbound) between the Rosa Parks-Hempstead Transit Center and the LIRR Westbury Station.

Alternative 5 had the quickest travel time (8.5 minutes northbound, 8.1 minutes southbound) to the LIRR Westbury Station and key destinations on Charles Lindbergh Boulevard and Merrick Avenue. Alternative 6 also had a fast travel time (11.6 minutes northbound, 12.5 minutes southbound) between LIRR Westbury Station and accessed key destinations along Charles Lindbergh Boulevard, Stewart Avenue, and Merrick Avenue. Alternative 7 had the same travel time as Alternative 6 and provided access to key destinations along Perimeter Road, Stewart Avenue, and Merrick Avenue.

## Westbury Alternatives for LIRR Main Line Connection: Refined Long-List Evaluation



**Alternative 5** – This alternative is **recommended** because it meets all evaluation criteria. The alignment provides a fast connection between LIRR Westbury Station and access to key destinations on Charles Lindbergh Blvd and Merrick Ave.

**Alternative 6** – This alternative is **recommended** because it meets all evaluation criteria. The alignment provides a fast connection between LIRR Westbury Station and access to key destinations along Charles Lindbergh Blvd, Stewart Ave, and Merrick Ave.

**Alternative 7** – This alternative is **recommended** because it meets all evaluation criteria. The alignment provides a fast connection between LIRR Westbury Station and access to key destinations along Perimeter Rd, Stewart Ave, and Merrick Ave.

**Alternative 8** – This alternative **did not advance** through Refined Long-List Evaluation because it has the slowest average travel time of the four remaining alternatives.



The next phase of the screening process was the evaluation to identify the Short List of Alternatives. Each of the three remaining alternatives was further developed and analyzed with regard to physical characteristics, land use and development, operations, capital cost, ridership, operating and maintenance costs, and environmental impacts.

## Evaluation Criteria for Short List of Alternatives



The Short-List evaluation criteria were quantitative and based on the Goals and Objectives. The Short-List evaluation also considered the stakeholder and public input from the past public meetings in January 2023. The specific Short-List evaluation criteria and measurements are shown in the image to the right and described in Section 14 of the Alternatives Analysis Update Report.

# Short-List Evaluation Criteria

Evaluation Criteria	Evaluation Measurements
Does the Alternative maximize capital work and transit benefits implemented in previous phases of the Nassau Hub Transit Initiative?	Percentage of route that utilizes the Initial Operating Segment (IOS) Phase Two alignment
Total transit trips to, from, and within the Study Area should be maximized.	Number of Transit Trips on the Project Number of New Transit Trips
Annualized Operations and Maintenance cost (2019\$)	Total Annualized O&M cost
Total capital cost (2019\$)	Total capital cost
Annualized Operations and Maintenance cost per trip should be minimized.	Annualized O&M cost per trip
Projected ratio of farebox recovery & operating subsidy should be maximized relative to projected operating costs.	Projected ratio of farebox recovery
Reduction in air pollutants, GHG emissions and annual energy consumption based on reduction in vehicle miles traveled (VMT) should be maximized.	Reduction in Private Automobile VMT compared to the No Build Scenario

The next pages describe the results of the Short-List Alternatives evaluation.

# Short List of Alternatives for the Mainline Extension



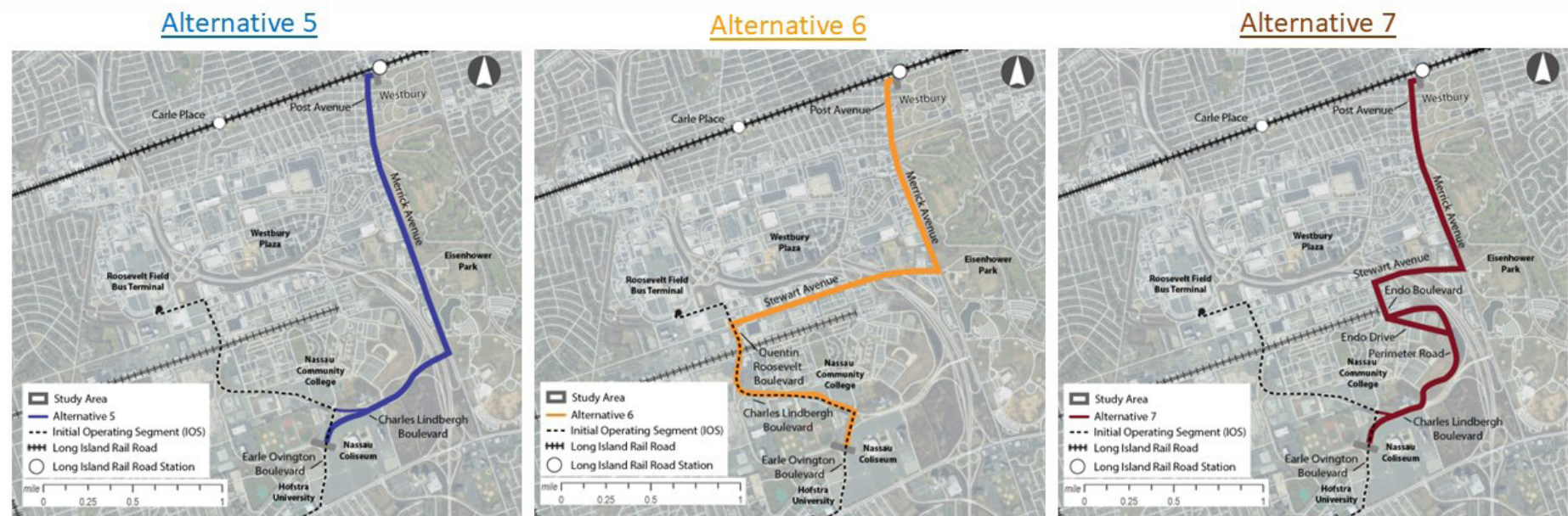
Alternatives 5, 6, and 7 were all evaluated, and their alignments are shown in the image on the right.

Alternative 5 runs along Post Avenue and onto Merrick Avenue. The alignment then makes a right turn onto Charles Lindbergh Boulevard. This Alternative connects the Nassau Coliseum, Eisenhower Park, and the LIRR Westbury Station.

Alternative 6 runs along Post Avenue and onto Merrick Avenue. The alignment then makes a right turn onto Stewart Avenue, and a left turn onto Quentin Roosevelt Boulevard, connecting onto Charles Lindbergh Boulevard. This Alternative connects the Nassau Coliseum, Nassau Community College, Museum Row, Eisenhower Park, and the LIRR Westbury Station.

Alternative 7 runs along Post Avenue and onto Merrick Avenue. The alignment then makes a right turn onto Stewart Avenue and a left turn onto Endo Boulevard, which connects into Perimeter Road. The alignment then connects into Charles Lindbergh Boulevard. This Alternative connects the Nassau Coliseum, Nassau Community College, Eisenhower Park, and the LIRR Westbury Station.

# Short List of Westbury Alternatives



The table on the right shows the level to which each of the remaining three alternatives satisfied the evaluation criteria.

## Short List Evaluation for Westbury Alternatives

Evaluation Criteria	Evaluation Measurements	Alternative 5	Alternative 6	Alternative 7
Does the Alternative maximize capital work and transit benefits implemented in previous phases of the Nassau Hub Transit Initiative?	Percentage of route that utilizes the Initial Operating Segment (IOS) Phase Two alignment	Alternative 5 utilizes 5 miles of the 7.4-mile 2014 Initial Operating Segment (67%). This includes utilization of dedicated right-of-way (ROW) and transit signal priority on Hempstead Tpk and Earle Ovington Blvd.	Alternative 6 utilizes 7 miles of the 7.4-mile 2014 Initial Operating Segment (95%). This includes utilization of dedicated ROW and transit signal priority on Hempstead Tpk, Earle Ovington Blvd, and Charles Lindbergh Blvd.	Alternative 7 utilizes approximately 5 miles of the 7.4-mile 2014 Initial Operating Segment (67%). This includes utilization of dedicated ROW and transit signal priority on Hempstead Tpk and Earle Ovington Blvd.
Total transit trips to, from, and within the Study Area should be maximized.	Number of Transit Trips on the Project Number of New Transit Trips	1,375,920 391	1,790,256 583	1,333,800 263
Annualized O&M cost (2019\$)	Total Annualized O&M cost	\$ 7.37 Million	\$ 7.37 Million	\$ 7.37 Million
Total capital cost (2019\$)	Total capital cost	\$1.742 Million	\$1.914 Million	\$1.914 Million
Annualized O&M cost per trip should be minimized.	Annualized O&M cost per trip (O&M cost/ Annual number of trips expressed in \$)	Approximately \$5.35 per rider	Approximately \$4.12 per rider	Approximately \$5.53 per rider
Projected ratio of farebox recovery & operating subsidy should be maximized relative to projected operating costs.	Projected ratio of farebox recovery (Fare Revenue / O&M cost expressed in a percentage)	51%	67%	50%
Reduction in air pollutants, GHG emissions and annual energy consumption based on reduction in vehicle miles traveled (VMT) should be maximized.	Reduction in Private Automobile VMT compared to the No Build Scenario	-49,353	-447,295	-33,072

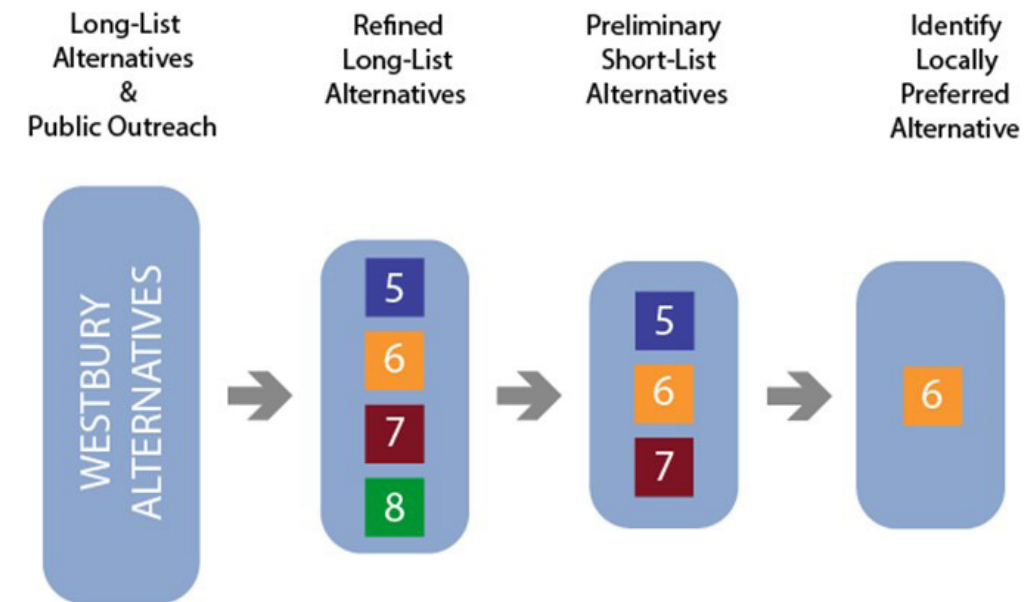
Based on the results of the screening of the Short-List Alternatives, a recommended LPA was selected based on how well each alternative met the criteria.

# Recommended Locally Preferred Alternative



This image shows the process used to arrive at the recommended LPA. Eight Westbury alternatives were developed and advanced through an initial screening to see how well each met the study's goals and objectives. The four remaining alternatives comprised the Refined Long-List Alternatives and were evaluated to determine which should advance to the Short-List Alternatives screening. Three of the four alternatives advanced and eventually Alternative 6 was selected as the recommended LPA.

# Summary of Short-List Evaluation Results





Alternative 6 is the recommend LPA because it provides the best balance between travel time savings, connections to Attractors and Generators, and maximization of existing County investment when compared to the other remaining alternatives.

Alternative 6 uses approximately 100 percent of the capital work that the County has committed for implementing the IOS alignment. Additionally, the Alternative serves five ridership Attractors and Generators, including two stops serving Nassau Community College on the north and south sides of the campus. This allows for rapid access to Nassau Community College from either the Westbury or Hempstead terminus. The alternative also has the potential to connect to four NICE Bus routes and serve four infill residential developments within the Study Area.

While it does not offer the fastest travel time of the three remaining alternatives, Alternative 6 has the highest projected ridership and total new riders compared to Alternatives 5 and 7. This translates to the lowest annualized Operations and Management (O&M) cost per trip and the highest farebox recovery ratio. Alternative 6 is projected to provide the highest reduction in vehicle miles traveled compared to the existing conditions (No Build Scenario).

## Recommended Locally Preferred Alternative



**Alternative 6 is recommended to be advanced as the LPA.** Alternative 6 provides the best balance between travel time savings, connections to Attractors and Generators, and maximization of existing County investment.

- Uses nearly 100 percent of the capital work being implemented for the IOS alignment
- Serves five ridership Attractors and Generators, including two stops serving Nassau Community College
- Projected to have the lowest annualized operations and maintenance cost per trip and the highest farebox recovery ratio.
- Projected to provide the highest reduction in private vehicle miles traveled compared to No Build Scenario.

Nassau County  
Department of Public Works



We would like any final comments to be documented in our study and the recommendation of Alternative 6 as the LPA.

# How to Share Your Feedback



To share your thoughts, you can send any questions or comments to our Project email at [info@nassauhubtransit.com](mailto:info@nassauhubtransit.com). Should you want to review the Draft Nassau Hub Transit Initiative Alternatives Analysis Update Report, it is available on the [Project's website](#).

We will be accepting questions and comments until Friday, November 8th, 2024.

All comments and questions received will be compiled in a summary that will be posted on the Project's website following the submission deadline. Additionally, all feedback will be incorporated into the final draft of the Nassau Hub Transit Initiative Alternatives Analysis Update Report.

## Share Your Thoughts!

- Please provide any additional comments for the Project at [info@nassauhubtransit.com](mailto:info@nassauhubtransit.com)
  - Submission deadline: Friday, November 8<sup>th</sup>, 2024
  - This presentation and the Draft Nassau Hub Transit Initiative Alternatives Analysis Update Report will be available at [nassauhubtransit.com](http://nassauhubtransit.com)
- All comments received will be incorporated into a Meeting Summary to be posted on the project website following the November 8<sup>th</sup> deadline
- Comments will also be incorporated into the final Nassau Hub Transit Initiative Alternatives Analysis Update Report



