NARROWS ROAD SOUTH IMPROVEMENTS

Presentation to Community Board 2

March 11, 2019
PRESENTATION OVERVIEW:

- Introduction
- Existing transportation issues
- Data collection and existing traffic operations
- Recent improvements
- Proposed improvements
- Proposed condition analysis results
- Findings
Introduction
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At the request of the Borough President, traffic operations and safety were evaluated in the vicinity of Narrows Road South/Hylan Blvd to address:

- Eliminating and re-timing traffic signals near on-ramp to SIE
- Reversing Hylan Blvd (east leg), between Narrows Road South and Olga Place
- Relocating bus stops and associated improvements
Existing Transportation Issues
Competing traffic flows destined to SIE on-ramp (AM peak)
Poor operations exacerbated by location of bus stops

- Bus stop with shelter S93, SIM3c, SIM35, SIM15
- Bus stop with shelter SIM1, SIM7, SIM10
- Bus stop (no shelter) S78, S79
Data Collection and Existing Traffic Operations
Data Collected: ATRs and Turning Movement/Class Counts

Legend:
- ATR count
- TMC/vehicle class count
Existing Traffic Volumes (Weekday AM Peak Hour)
## Existing Conditions Speed & Travel Time (Weekday AM Peak Hour)

<table>
<thead>
<tr>
<th>Approach to Staten Island Expressway on-ramp</th>
<th>From</th>
<th>To</th>
<th>Distance (feet)</th>
<th>EXISTING CONDITIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrows Road S eastbound</td>
<td>644' upstream of Hylan Blvd southbound</td>
<td>Hylan Blvd (east leg)</td>
<td>1,187</td>
<td>Speed (mph)</td>
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<tr>
<td>Hylan Blvd northbound (west leg)</td>
<td>323' upstream of W. Fingerboard Rd.</td>
<td>Narrows Road S</td>
<td>1,689</td>
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<tr>
<td>Hylan Blvd northbound (east leg)</td>
<td>390' upstream of Olga Place</td>
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Recent Improvements
Bus Stop Relocation: December 2018

LEGEND:
- Existing Bus Stops
- Relocated Bus Stop

New stop location:
- S78

Existing:
- S93
- SIM3c (off-peak/weekends)
- SIM15
- SIM35

Stop remains for:
- S79 only
- S79
Proposed Improvements
Proposed Improvements

• Traffic signal bagged:
  • Narrows Road South/Hylan Blvd (east leg) intersection

• Street direction conversion:
  • Hylan Blvd (east leg) between Narrows Road South and Olga Place: from northbound to southbound

• Signal phasing and timing modifications

• Roadway geometry & intersection traffic control improvements
Recommended Traffic Signal Bagged

Bag existing traffic signal
Proposed Improvements

• Traffic signal bagged:
  • Narrows Road South/Hylan Blvd (east leg) intersection

• Street direction conversion:
  • Hylan Blvd (east leg) between Narrows Road South and Olga Place: from northbound to southbound

• Signal phasing and timing modifications

• Roadway geometry & intersection traffic control improvements
Reverse direction of Hylan Blvd (east leg) to one-way southbound
Proposed Improvements

• Traffic signal bagged:
  • Narrows Road South/Hylan Blvd (east leg) intersection

• Street direction conversion:
  • Hylan Blvd (east leg) between Narrows Road South and Olga Place: from northbound to southbound

• Signal phasing and timing modifications

• Roadway geometry & intersection traffic control improvements
Existing Traffic Signal Arrangement
Existing Signal Phasing & Timing Plan (AM)

Phases

Northbound left-turns must...
1) Yield to pedestrians in crosswalk
2) Stop before reaching on-ramp

1
(30 sec)

1) Green for Hylan Blvd (both legs)
2) “WALK” across Narrows Rd S

2
(35 sec)

1) Green for Hylan Blvd (west leg only)
2) Green for Narrows Road S (middle segment only)

3
(55 sec)

1) Green for Narrows Road S
2) “WALK” along south side of Narrows Rd S

Cycle = 120 sec
Recommended Signal Phasing & Timing Plan (AM)

Phases

Eliminate Phase 1 (east signal removed)

1  
(65 sec)

30 SECONDS MORE GREEN TIME FOR:
1) Green for Hylan Blvd (no second stop)
2) “WALK” across Narrows Road S

2  
(55 sec)

MAINTAIN GREEN TIME FOR:
1) Green for Narrows Road S
2) “WALK” along south side of Narrows Rd S

Cycle = 120 sec
Proposed Improvements

• Traffic signal bagged:
  • Narrows Road South/Hylan Blvd (east leg) intersection

• Street direction conversion:
  • Hylan Blvd (east leg) between Narrows Road South and Olga Place: from northbound to southbound

• Signal phasing and timing modifications

• Roadway geometry & intersection traffic control improvements
Roadway Geometry and Intersection Traffic Control Changes

Striping:
- One exclusive lane to on-ramp
- One shared ramp/through lane

Merge from 2 lane to 1 lane on the ramp

One exclusive through lane

- Improved gore channelization
- Add vertical delineators to prevent “3rd lane cheaters”
Roadway Geometry and Intersection Traffic Control Changes

- Add new STOP sign for southbound traffic
- New curb extensions:
  - Reduce crossing distance
  - Channelize traffic movements
- Maintain on-street parking lane
- Free-flow movements around the corner
Proposed Condition Analysis Results
## Speed & Travel Time Comparison (Weekday AM Peak Hour)

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<td>5.9</td>
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<td>997</td>
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Findings
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• Improvements result in moderate benefits to traffic operations (including speed and travel time)

• On-ramp should be widened to provide two full lanes

• However, traffic congestion remains an issue along Narrows Road South and Hylan Boulevard due to diverted traffic from Staten Island Expressway mainline and presence of on-ramp

• Residents on east side of Hylan Boulevard (east leg) would be re-routed, due to street direction reversal from northbound to southbound
THANK YOU!

Questions?