L Tunnel Reconstruction
Reconstructing the L Tunnel

- Repairing 7,110 ft. of concrete lining
- Repairing fire protection system
- Replacing Cable:
  - Communication 176,000 ft.
  - Power 126,000 ft.
- Installing 14,400 ft. of new tracks and 15,800 ft. of third rail
- Reconstructing 30,126 ft. of concrete duct bank
- Installing new tunnel lighting system
- Replacing pumping equipment
- Rebuilding two circuit breaker houses
- Building a substation
Service During Tunnel Reconstruction
April 2019 through July 2020
Projected Cross River Travel Paths of Customers

The Service Plan:

Our modeling assumes 100% of trips will be accommodated by one of the following service options.
Projected Cross River Travel Paths of L Customers

By Subway:
More J M Z service

- 32% of L customers
- 14% capacity increase, accommodating an additional 3,480 riders
By Subway:

More G service and longer trains to/from Long Island City
- 28% of L customers
- 176% capacity increase, accommodating an additional 11,100 riders

More G service and longer trains to/from Downtown Brooklyn
- 7% of L customers
- 121% capacity increase, accommodating an additional 7,620 riders
Projected Cross River Travel Paths of L Customers

By Subway:
From the G in Queens:
• Additional E M service
  • 11% of L customers
  • 11% capacity increase, accommodating an additional 3,480 riders
• Additional 7 service
  • 15% of L customers
  • 7% capacity increase, accommodating an additional 2,420 riders
Projected Cross River Travel Paths of Customers

By Subway:

- 12% will transfer from the G and L lines.
- 7% capacity increase, accommodating 2,320 customers.
Projected Cross River Travel Paths of L Customers

By Subway:
3% of riders will take the 2 3 4 5
Projected Cross River Travel Paths of Customers

By Bus and Ferry:

Four interborough Select Bus Service Routes
- 17% of customers
- 80 buses per hour, accommodating 4,200 riders

New ferry service
- 4% of customers
- Eight ferries per hour, accommodating 1,190 riders
In Summary:

- 79% of riders will take other subway lines
- 17% of riders will take interborough buses
- 4% of riders will take the ferry
- 71% of riders will have no more than 10 minutes additional travel time in AM peak
Permanent Station Improvements

Prior to the tunnel closure, we are improving access to and capacity in stations along the G, J, M and Z lines, that will provide alternatives to L service. During the tunnel closure, we will also enhance stations along the L line.
14 St-Union Sq Station Permanent Improvements

We are improving and expanding stair circulation between the L line platform and the N Q R W platforms at Union Square, and adding an escalator between the mezzanine and L platform.
Interborough Select Bus Service

80 Buses Per AM Peak Hour will Travel Across the Williamsburg Bridge

- L1 SBS
- L2 SBS
- L3 SBS
- L4 SBS
Interborough Select Bus Service: L1 SBS

Service between Grand St and 1 Ave/15 St:

- Every 2½ minutes during AM peak hours
- Every 3½ minutes during PM peak hours
Interborough Select Bus Service: L2 SBS

Service between Grand St and SoHo:
- Every 2½ minutes during AM peak hours
- Every 3½ minutes during PM peak hours
Interborough Select Bus Service: L3 SBS

Service between Bedford Av and SoHo:
- Every 2½ minutes during AM and PM peak hours
Interborough Select Bus Service: L4 SBS

Service between Bedford Av and 1 Ave/15 St:

- Every 6 minutes during AM peak hours
- Every 6½ minutes during PM peak hours
Late Night Bus Service: L14 SBS
Bus Priority Plan

14th Street Busway
Buses and Local Access Only
Eastbound: Ninth Av to Third Av
Westbound: Third Av to Eighth Av
5 AM to 10 PM, every day

Proposed
- Williamsburg Bridge
  Buses, Trucks & HOV 3+ Only
- Busway
  Buses & Local Access Only
- Bus Priority
- SBS Route & Stop
- Shuttle Route & Stop

Existing
- Bus Lane

Williamsburg Bridge
Buses, Trucks & HOV 3+ Only
Manhattan-Bound & Brooklyn-Bound
5 AM to 10 PM, every day
L2 & L3 SBS Bus Stops – SOHO/ Little Italy Loop
L1, L2, L3 & L4 SBS Bus Stops – Delancey Street/ Essex Street
Williamsburg Bridge HOV 3+ Hours

HOV 3+ Policy:
5 AM to 10 PM, every day
• Buses, Trucks & HOV 3+ Only
• Manhattan- and Brooklyn-Bound
• All Lanes

Key benefits
• 5 AM start discourages early morning congestion before regulation goes into effect
• HOV supports period of highest projected bus ridership demand
• Weekend and evening HOV hours support non-commute trips

DOT coordinating with NYPD on enforcement staging, strategy
Interborough Buses in Soho/Little Italy Loop

- MTA adding L4 route reduces peak bus frequency on SoHo/Little Italy loop by 13%
- Slow or unreliable bus service would cause people to take car or taxi trips and increase traffic congestion
- HOV3 restriction on the Williamsburg Bridge is expected to reduce traffic along corridor by up to 75%

<table>
<thead>
<tr>
<th>Time</th>
<th>Buses per Hour in Soho/Little Italy Loop</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM Peak</td>
<td>48</td>
</tr>
<tr>
<td>PM Peak</td>
<td>39</td>
</tr>
<tr>
<td>Midday/Nights</td>
<td>14-25</td>
</tr>
<tr>
<td>Overnight</td>
<td>3</td>
</tr>
</tbody>
</table>
Delancey Street

From Williamsburg Bridge to Bowery

- Continues bus priority from Williamsburg Bridge
- All shuttle buses will stop at Essex St for Delancey/Essex F/J/M subway transfer
- Bus stops will be located on both sides of Essex St in both directions
- Provides a safe bike facility connecting the Williamsburg Bridge, Allen Street and Chrystie Street
- Bike lane approved by CB 3 and will be implemented in summer
- Ongoing analysis of traffic and curb regulations
Allen Street

From Delancey Street to Houston

- Maintains the existing bike lanes
- Southbound bus lane will be aligned to the left to accommodate left-turning buses at Delancey St (left turns for buses only)
- M15SBS/Local will be able to use the bus lanes
Kenmare Street

- Kenmare is a challenging street
  - Narrow street continuation of wide arterial (Delancey St)
  - High level of curb loading on several blocks
- MTA/DOT performed a traffic analysis of Kenmare and surrounding streets
- DOT conducted merchant surveys of businesses throughout Soho Loop
Kenmare Street Traffic

• Most vehicles on Kenmare St are going to or coming from the Williamsburg Bridge

• Around 35% of vehicles on Kenmare St are traveling to/from the Holland Tunnel

• Westbound traffic volumes are higher than Eastbound volumes all hours of the day
  • WB: 760 AM Peak, 750 PM Peak, 630 Sat. Peak
  • EB: 420 AM Peak, 615 PM Peak, 570 Sat. Peak

• Trucks make up approximately 10% of vehicles on Kenmare St

• During the L closure, the Williamsburg Bridge will be HOV3+ and truck only from 5am to 10pm 7 days a week

• Modeling predicts HOV3 policy will reduce traffic volumes on Kenmare St up to 75%
Option A

- Shifts existing travel lanes to accommodate an offset bus lane
- Full-time loading/parking in 8’ lane on the north curb (currently a part time loading lane)
- Convert lane against the south curb to Eastbound travel lane
- Eastbound through traffic would be constrained by any loading activity on south curb
- Right turns onto and off of Kenmare would be constrained and require stop bars to be set back significantly
- Traffic analysis indicates this option is feasible
Option B

- Convert Kenmare to one-way westbound from Bowery to Lafayette St
- Add an offset bus lane
- Maintains wide loading/parking lanes
- Provides more curb loading space than the two-way option and existing configuration
- Wider lanes would reduce traffic and bus blockages due to double-parking
- Eastbound traffic would be diverted to other streets
- Better accommodates the direction of travel with the highest traffic volumes
Comparing the Options

**Option A**
- Maintains bi-direction traffic
- Reduces amount of curb loading/parking
- Narrow loading lane may lead to bus blockages
- Curbside travel lane would be blocked by drop-offs and pick-ups
- Lane configuration creates more-difficult turns

**Option B**
- Increases curbside loading over existing
- Wider lanes would reduce blockages and improve turns
- One-way traffic reduces vehicle conflicts
- Eastbound traffic would divert to other streets

Proposed

South Sidewalk

12’ Travel Lane

11’ Travel Lane

11’ Bus Lane

8’ Parking/Loading Lane

North Sidewalk

42’
Kenmare at Petrosino Sq

- Westbound vehicles drive the wrong way to bypass queue making left turn from Kenmare St onto Lafayette St
- **In response to community concerns**, DOT proposes to convert the short block of Kenmare at Petrosino Sq to one-way westbound
- Low-volume left turn from Lafayette St onto Kenmare St would be banned
- Eliminates wrong-way movements and add pedestrian space next to Petrosino Sq
- Shortens pedestrian crossings
- Feasible with either of the broader Kenmare designs (Option A and Option B)
- Traffic analysis indicates this change would not significantly increase delay
Houston Street
from Lafayette Street to Mott Street

- L2 and L3 buses will make their first pick-up stop on Houston St between Mulberry St and Mott St
- Bus boarder will be installed to provide more space for pedestrians boarding the bus
- Painted pedestrian space will be added around subway entrance on Houston St between Lafayette St and Mulberry St
14th Street Transit Corridor
M14 SBS Bus Stops – 10th Ave & Stuyvesant Cove
14th Street Busway Hours

5 AM to 10 PM, every day

- Buses
- Emergency Vehicles
- Local access for deliveries, private parking garages, pickups and drop-offs

- Busway hours support period of highest traffic demand on 14th Street
- Bus lane camera enforcement and NYPD presence will deter through traffic
- Busway operation without a midday gap allows for clear messaging and enforcement
- DOT will monitor traffic conditions on 14th Street and wider traffic network throughout the closure period
14th Street Busway Design

Existing

Proposed (at stops)

Proposed (midblock)
Pedestrian Volume Increases

Pedestrian surges of over 2x existing volumes on a Vision Zero Priority Corridor

### 14th Street Projected Pedestrian Volume Changes

<table>
<thead>
<tr>
<th>Location</th>
<th>Existing Volume</th>
<th>New Volume</th>
<th>% changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Union Sq</td>
<td>7,500</td>
<td>11,500</td>
<td>53%</td>
</tr>
<tr>
<td>(4 Av, Union Square East, Broadway, University Pl, Union Square West)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Av</td>
<td>3,100</td>
<td>7,400</td>
<td>139%</td>
</tr>
<tr>
<td>8 Av</td>
<td>1,700</td>
<td>3,000</td>
<td>76%</td>
</tr>
</tbody>
</table>

### Location

<table>
<thead>
<tr>
<th>Location</th>
<th>14th St Projected Volume</th>
<th>Existing 34th St Volume</th>
<th>Existing 42nd St Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Av</td>
<td>7,400</td>
<td>8,000</td>
<td>9,100</td>
</tr>
</tbody>
</table>

Data Inputs: counts of current pedestrians, projected bus volumes, projected entrance and exit of subway stations by stairway
Busway between 5th and 6th Avenue

- Commercial Loading, Parking Garage & Local Access
- Pedestrian Area
- Shorter Ped Crossing
- Bus Boarder
- Commercial Loading & Local Access
- Bus Passing Lane
• Response to public and elected official feedback
• Local Access:
  • Turn right on to 14th Street
  • Exit at next right turn
• Left turns prohibited at most intersections
• Enforceable with bus lane cameras

• Most pickup/dropoff activity currently takes place on the avenues, not on 14th Street
• DOT will conduct outreach local businesses and residents about access policy
Bicycle Network Connections

2,000 – 3,500 cyclists projected to cross the Williamsburg Bridge during AM rush hour (8A-9A)
12th St & 13th Street Bike Lanes

Background

Original Design Typical: 13th St Two-Way Path

**Existing:** Wide travel lane

**Proposed:** Two-way bike path

Alternate Design Typical: 12th St & 13th St One-Way Pair

**Existing:** Wide travel lane

**Proposed:** One-way bike lane
Existing Condition: Wide travel lane
Blocks range from 29'-34' wide

Proposed Configuration: Curbside bike lane on left side (south side of 13th St, north side of 12th St)

Design Details
- Bike lane separated with flexible delineators and demarcated buffer
- Floating pickup & drop-off adjacent to bike lane may be feasible at some locations
- Parking spaces to be removed along
  - North side of 12th St (7th Ave – Ave C)
  - South side of 13th St (Greenwich Ave – Ave B)
Citi Bike Infill

Increasing docks and bikes in the existing service area

- 1,250 bikes, 2,500 docks
  - Manhattan: 59th Street – Canal
  - Brooklyn: Williamsburg area

- Expanded Valet Services
  - Staffed by Citi Bike, Valet Service allows Stations to operate at increased capacity

- Pedal-assist Shuttle Service
  - 1,000 pedal assist bikes
  - Available at key locations
    - 2 in Manhattan
    - 2 in Brooklyn

- Additional standard bike parking in key locations
Union Square West and University Place

- Reduce pedestrian congestion
- Strengthen SB bike connection

- Maintain circulation for Deliveries, Pick-up/ drop-off, Farmers Market trucks
- Improve pedestrian circulation
- Strengthen SB bike connection

- Expand bike parking options
  Ex: CitiBike Valet Service, Racks, Secure Bike Parking
Initiating Proposed Ferry Service

Ferry Will Operate 6 AM to Midnight on Weekdays, and 6 AM to 2 AM on Weekends

Between Brooklyn and Manhattan:

- Every 7½ minutes during AM and PM peak hours
- Every 10 minutes middays, evenings and weekends
### Weekend Preparatory Work on L Line

- Ensure reliable service for L riders during reconstruction
- Ensure project duration stays within 15 months
- No L service between Manhattan and either Myrtle-Wyckoff Avs or Broadway Junction

<table>
<thead>
<tr>
<th>Summer and Fall 2018</th>
<th>Winter and Spring 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 11-12</td>
<td>February 2-3</td>
</tr>
<tr>
<td>October 6-7</td>
<td>February 9-10</td>
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<tr>
<td>October 13-14</td>
<td>February 16-17</td>
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<tr>
<td>October 20-21</td>
<td>February 23-24</td>
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<tr>
<td>October 27-28</td>
<td>March 2-3</td>
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<tr>
<td>November 10-11</td>
<td>March 9-10</td>
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<td></td>
<td>March 16-17</td>
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<td>April 13-14</td>
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</tbody>
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Customer Service and Communications

Remaining Responsive:

- Hundreds of MTA staff will be deployed at subway stations, bus stops and ferry locations to manage crowding to ensure safety
- Actively communicate with customers in real time, in person and through all available channels
- MTA to work with DOT and other relevant City agencies to ensure responsive information dissemination and feedback
- Will make adjustments to the plan in response to feedback
Proposed Alternate Subway, Bus and Ferry Services