Outline

• Bridge History
• Existing conditions - Main Bridge and Ramp
• What will be done - Project Scope
• What we hope to achieve - Project Goals
• How work will be done - Project Approach
• Construction schedule
Bridge History

- Construction began in 1901, opened to traffic in 1909
- Over a mile long, five span, double decked cantilever truss
- Designated a National Landmark in November 1973
- Bridge cross section changed over the years
- Bridge has carried:
  - Trolleys until 1930’s
  - Subway trains until 1950’s
  - A vehicular elevator to Roosevelt Island until 1955
- Bridge currently carries vehicular traffic, pedestrians and bicycles
Existing Conditions

- Bridge is over 100 years old
- Heavy traffic volumes
- Bridge rating is 4.214 out of 7 as of 2018
- Changes in bridge use over the years caused
  - Changes in bridge cross section
  - Additional weight on the bridge trusses
  - Heavier loads causing overstress in truss members
## Existing Conditions – Current Traffic Volumes

<table>
<thead>
<tr>
<th></th>
<th>Weekday</th>
<th>Weekend</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manhattan-bound</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Daily Total Traffic</td>
<td>85,976 vehicles</td>
<td>83,021 vehicles</td>
</tr>
<tr>
<td>Average Peak Hour Traffic</td>
<td>5,944 vehicles</td>
<td>4,442 vehicles</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Weekday</th>
<th>Weekend</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Queens-bound</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Daily Total Traffic</td>
<td>84,498 vehicles</td>
<td>85,348 vehicles</td>
</tr>
<tr>
<td>Average Peak Hour Traffic</td>
<td>5,302 vehicles</td>
<td>5,498 vehicles</td>
</tr>
</tbody>
</table>

Note: Peak Hour Traffic is the number of vehicles per hour in the peak period. Peak period is from 5:00 a.m. to 9:30 a.m. and from 3:30 p.m. to 8:00 p.m.
### Average Daily Traffic Volume Comparison

**Ed Koch Queensboro Bridge**
- Inbound: 48,379
- Outbound: 51,607

**Mario Cuomo Bridge**
- Inbound: 43,999
- Outbound: 40,049

**Comparison with other Manhattan Bridges/Tunnels**

<table>
<thead>
<tr>
<th>Bridge</th>
<th>Inbound</th>
<th>Manhattan Bridge</th>
<th>Williamsburg Bridge</th>
<th>Hugh L. Carey Tunnel</th>
<th>Midtown Tunnel</th>
<th>Ed Koch Queensboro Bridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inbound</td>
<td>48,379</td>
<td>43,999</td>
<td>56,048</td>
<td>30,280</td>
<td>45,777</td>
<td><strong>84,347</strong></td>
</tr>
<tr>
<td>Outbound</td>
<td>51,607</td>
<td>40,049</td>
<td>55,527</td>
<td>23,252</td>
<td>38,851</td>
<td><strong>89,161</strong></td>
</tr>
</tbody>
</table>
Project Scope

• Upper deck replacement on main bridge
• Upper deck rehabilitation on both approaches
• Structural steel rehabilitation
• Deck joints and barrier replacement
• Lighting and drainage improvements
• Incidental bridge painting
• Fire standpipe system
Project Goals

• Extend Upper Deck Service Life
  Main bridge by minimum 50-75 years

• Lighter deck system

• Durable deck

• Increase Fire Suppression

• Limit public impacts
How work will be done

- One lane continuous closure (upper level only)
- Off peak limited two lane closures
- Crossover in Manhattan & Queens to maintain current ramp access operation
- South Outer Roadway & Lower Roadway open at all times during stages 1 – 6
- Reduce HOV operation by half hour (6:00 a.m. to 9:30 a.m.)
- 4 main construction stages & 2 cross over stages (6 total)
Pre-stage
(July 2018 to October 2020)
Duration – 28 months

- Mobilization
- Test panel fabrication, off-site installation & testing
- Installation of under deck shield
- Temporary lighting
- Single lane closures in both directions overnight only
Stages 1 & 2 (Oct 2020 to June 2021)
Duration - 9 months
North Upper Roadway (Manhattan-bound Lanes)
Deck replacement & fire standpipe installation

Stage 1

Stage 2
Stages 3 & 4 (August 2021 to April 2022)
Duration - 8 months
South Upper Roadway (Queens-bound lanes)
Deck replacement
Stage 5 (June 2022 to August 2022)
Deck Replacement at Crossover Locations – 3 months

Stage 5A

Ongoing single lane closure and Full ramp closure 8:00 pm to 5:00 am each night - Sunday nights to Friday mornings 8:00 pm to 2:00 pm Friday night to Saturday; Saturday night to Sunday
Stage 5 (June 2022 to August 2022)
Deck Replacement at Crossover Locations – 3 months
Stage 5B

Ongoing single lane closure and
Full ramp closure 8:00 pm to 2:00 pm Friday night to Saturday; Saturday night to Sunday
Stage 6A (September 2022 to October 2022)
Deck Rehabilitation at Approaches
Mainly overnight work

Ongoing single lane closure and
Full ramp closure 8:00 pm to 5:00 am each night
Stage 6B (September 2022 to October 2022)

Deck Rehabilitation at Approaches

Mainly overnight work

Ongoing single lane closure and
Full ramp closure 8:00 p.m. to 3:00 p.m. weekdays;
8:00 p.m. to 2:00 p.m. weekends
Summary of Project Schedule*

- Notice to proceed: July 2018
- Pre-stage period: July 2018 – October 2020
- Stages 1 to 6:
  - Alternate Continuous closures: October 2020 – October 2022

* Anticipated timeframe is subject to weather and field conditions
Mitigation for Lane Closures

• Traffic Agents up to 20 hours per day

• All ramp exits and entrances follow existing operation through crossovers

• 24 hour tow service on call in Manhattan and Queens

• Mitigation measures evaluated regularly and modified as required

• Contract has penalty and incentive/disincentive clauses for early closing and/or late opening of lanes
Community Outreach

• Maintain a notification network of stakeholders (local businesses, civic and community organizations, public service institutions, residents and travelling public)

• Social media – Twitter, Instagram, Facebook, Web Portals

• Public service updates – all media outlets

• Community liaison accessible via phone and email

• Information sharing with transportation partners

  TRANSCOM      NYSDOT      NYTA
  TBTA          PANYNJ
Thank you