Flagged Elements

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<tr>
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<td>PR311 - Movable Bearing</td>
<td>12</td>
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Flagged Condition Description

The expansion steel rocker bearings at Girders G2 and G5 at Pier 171 end side exhibit gaps up to 1/4" between rocker and bearing plate and are free to move slightly longitudinally (approx. 1/4" at G2 and approx. 1/4" at G5 bearings) by hand but are still restricted within the keeper box and pintels.

Spans 171 and 172 are simply supported with 2 rows of bearings at each pier; fixed bearings at begin side pier and expansion bearings at end side pier at each span.

This is a reflag with no significant change in the conditions since previous inspection.

Notes:
1. 20' Extension Ladder with access from Whitlock near East 165 street. Access was made through the 24” x 32” hole at the steel grating bar fence at left side Span 167.
**Flag Photographs**

<table>
<thead>
<tr>
<th>Photo Number:</th>
<th>1</th>
<th>Photo Filename:</th>
<th>Location sketch.jpg</th>
</tr>
</thead>
</table>

**FRAMING PLAN AT PIER 171**

**LEGEND**

- F - Fixed bearing
- E - Expansion bearing

**Attachment Description:** Location plan.jpg
Attachment Description: Pier 171, end side, Girder G2 bearing, looking begin: Loose bearing with 1/4" gap.
| Photo Number: | 3 | Photo Filename: | IMG_3299.JPG |

**Attachment Description:** Pier 171, end side, Girder G5 bearing, looking begin and right: Loose bearing with 1/4” gap.
New York State Department of Transportation
Yellow Flag NB16YYW002

By: Sheikh Shakil
Flag Date: July 08, 2016

Superseding Information:
This flag supersedes: YF NB156M021

Structure Information

BIN: 1066669
Feature Carried: 278I278IX1M53003
Feature Crossed: BRUCKNER BLVD
Orientation: 3 - EAST

Region: 11 - NEW YORK CITY
County: BRONX
Political Unit: City of NEW YORK
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.
Date: July 08, 2016 2:35:00 PM
Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: July 12, 2016
Reviewed By: Seth D. Medwick
Date: July 13, 2016

Attachments: 5
The expansion steel rocker bearings under Girders G2 and G4 at the end side of the Pier 170 exhibit gaps up to 3/8" between rocker and bearing plate and are loose and free to move slightly longitudinally (approx. 1/4" at G2 bearing and 1/8" at G4 bearing) by hand but are still restricted within the keeper box and pintels.

The expansion steel rocker bearing under Girder G3 is frozen and exhibits approx. 3/4" thick severe pack rust between its rocker surface and bearing plate. The underside of the rocker surface is lifted above the two pintels. Due to this condition the bearing is permanently in extended position (approx. 4 degrees).

The expansion steel rocker bearing under Girder G5 is loose and free to move slightly longitudinally approximately 1/8" by hand but no gap was noted between the rocker surface and bearing plate. The bearing is shifted approx. 3/4" to the right causing right keeper plate to bend slightly but is still restricted within the keeper box and pintels.

Spans 170 and 171 are simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the pier and expansion bearings at the end side of the pier at each span. This is a reflag with no significant change in the condition since previous inspection.

Notes:
1. 20’ Extension Ladder with access from Whitlock near East 165 street. Access was made through the 24” x 32” hole at the steel grating bar fence at left side Span 167.
Framing plan at Pier 170

LEGEND
F - Fixed bearing
E - Expansion bearing

Attachment Description: Location plan.jpg
| Photo Number: | 2 | Photo Filename: | IMG_3308.JPG |

Attachment Description: Pier 170. end side, Girder G2 bearing, looking begin and left: Loose bearing with gap.
Attachment Description: Pier 170. end side, Girder G3 bearing, looking begin and right: Pack rust and frozen rocker bearing.
Attachment Description: Pier 170. end side, Girder G4 bearing, looking begin and left: Loose bearing with gap.
**Attachment Description:** Pier 170. end side, Girder G5 bearing, looking begin and right: Loose bearing without gap.
New York State Department of Transportation
Yellow Flag NB16YYW003

By: Sheikh Shakil
Flag Date: July 08, 2016

Superseding Information:
This flag supersedes: YF NB156M022

Structure Information

BIN: 1066669
Flag Date: July 08, 2016

Region: 11 - NEW YORK CITY
County: BRONX

Political Unit: City of NEW YORK
Approximate Year Built: 1960

Feature Crossed: BRUCKNER BLVD
Orientation: 3 - EAST

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.
Date: July 08, 2016 2:35:00 PM

Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: July 12, 2016

Reviewed By: Seth D. Medwick
Date: July 13, 2016

Attachments: 3
The expansion steel rocker bearings under Girders G2 & G4 at the end side of the Pier 169 exhibit gaps for approx. 3/8" between the rocker surface and the bearing plate and are free to move slightly longitudinally approx. (1/8") by hand but are still restricted within the keeper box and pintels.

The expansion steel rocker bearing under Girder G3 is frozen and exhibits an approx. 3/4" thick pack rust between its rocker surface and bearing plate. The underside of the rocker surface is lifted above the two pintels. Due to this condition the bearing is permanently in extended position (4 degrees).

Spans 169 and 170 are simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span. This is a reflag with no significant change in the condition since previous inspection.

Notes:
1. 20' Extension Ladder with access from Whitlock near East 165 street. Access was made through the 24" x 32" hole at the steel grating bar fence at left side Span 167.
**Flag Photographs**

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<th>Photo Number: 1</th>
<th>Photo Filename: location_ske.jpg</th>
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</thead>
</table>

**Framing plan at Pier 169**

**LEGEND**

- F - Fixed bearing
- E - Expansion bearing

*Attachment Description: Location plan.jpg*
Attachment Description: Pier 169. end side, G2 bearing, looking begin and left: 3/8" gap btwn rocker and bearing plate.
| Photo Number: | 3 | Photo Filename: | IMG_3322.JPG |

**Attachment Description:** Pier 169. end side, G4 bearing, looking begin and left: 3/8" gap btwn rocker and bearing plate.
New York State Department of Transportation
Yellow Flag NB16YYW004

By: Sheikh Shakil
Flag Date: July 08, 2016

Superseding Information:
This flag supersedes: YF NB156M023

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.  
Date: July 08, 2016 2:30:00 PM
Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017  
Date: July 12, 2016
Reviewed By: Seth D. Medwick  
Date: July 13, 2016

Attachments: 3
The expansion steel rocker bearings under Girders G2 & G4 at the end side of Pier 168 exhibit gaps of approx. 3/8” between the rocker surface and the bearing plate and are free to move slightly longitudinally approx. 1/8” by hand but are still restricted within the keeper box and pintels.

Spans 168 and 169 are simply supported with 2 rows of bearings at each pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span.

This is a reflag with no significant change in the condition since previous inspection.

Notes:
1. 20’ Extension Ladder with access from Whitlock near East 165 street. Access was made through the 24” x 32” hole at the steel grating bar fence at left side Span 167.
Flag Photographs

Photo Number: 1
Photo Filename: Location plan.jpg

BIN: 1066669

Framing plan at Pier 168

Legend:
F: Fixed bearing
E: Expansion bearing

Attachment Description: Location plan.jpg
Attachment Description: Pier 168 end side, G2 bearing, looking begin and left: 3/8" gap between rocker and bearing plate.
Attachment Description: Pier 168 end side, G4 bearing, looking begin and left: 3/8" gap btwn rocker and bearing plate.
New York State Department of Transportation
Yellow Flag NB16YYW005

By: Sheikh Shakil
Flag Date: July 08, 2016

Superseding Information:
This flag supersedes: YF NB156M024

Structure Information
BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information
Person Notified: Thomas McAndrews, P.E.
Date: July 08, 2016 2:35:00 PM
Of: Long Island City in New York

Signature Information
Signature: Sheikh Shakil, P.E. 068017
Date: July 12, 2016
Reviewed By: Seth D. Medwick
Date: July 13, 2016

Attachments: 2
The expansion steel rocker bearing under Girder G2 at the end side of the Pier 167 exhibits an approx. 5 1/4" L x 1/4" gap on the left side between the rocker surface and the bearing plate and is free to move longitudinally approx. 1" by hand but is still restricted within the keeper box and pintels.

Spans 167 and 168 are simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span. This is a reflag with no significant change in the condition since the previous inspection.

Notes:
1. 20’ Extension Ladder with access from Whitlock near East 165 street. Access was made through the 24” x 32” hole at the steel grating bar fence at left side Span 167.

### Flagged Elements

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### Flagged Condition Description

The expansion steel rocker bearing under Girder G2 at the end side of the Pier 167 exhibits an approx. 5 1/4" L x 1/4" gap on the left side between the rocker surface and the bearing plate and is free to move longitudinally approx. 1" by hand but is still restricted within the keeper box and pintels.

Spans 167 and 168 are simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span. This is a reflag with no significant change in the condition since the previous inspection.

Notes:
1. 20’ Extension Ladder with access from Whitlock near East 165 street. Access was made through the 24” x 32” hole at the steel grating bar fence at left side Span 167.
**Flag Photographs**

<table>
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<th>Photo Number:</th>
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<tr>
<td>Photo Filename:</td>
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**Framing plan at Pier 167**

**LEGEND**

- F - Fixed bearing
- E - Expansion bearing

*Attachment Description: Location plan.jpg*
Attachment Description: Pier 167 end side, Girder G2 bearing, looking begin.
New York State Department of Transportation
Yellow Flag NB16YYW006

By: Sheikh Shakil
Flag Date: July 08, 2016

Superseding Information:
This flag supersedes: YF NB156M025

Structure Information
BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
Feature Crossed: BRUCKNER BLVD
County: BRONX
Orientation: 3 - EAST
Political Unit: City of NEW YORK
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information
Person Notified: Thomas McAndrews, P.E.  Date: July 08, 2016 2:35:00 AM
Of: Long Island City in New York

Signature Information
Signature: Sheikh Shakil, P.E. 068017  Date: July 12, 2016
Reviewed By: Seth D. Medwick  Date: July 13, 2016

Attachments: 3
The expansion steel rocker bearing under Girder G2 at the end side of the Pier 166 exhibits an approx. 4" L x 1/4" gap between the rocker and the bearing plate on the right side of bearing.

The expansion steel rocker bearing under Girder G5 at the end side of the Pier 166 exhibits up to 3/8" gap between the rocker surface and the bearing plate. Both bearings are free to move slightly longitudinally approx. 1/4" by hand but are still restricted within the keeper box and pintels.

Spans 166 and 167 are simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span. This is a reflag with no significant change in the condition since previous inspection.

Notes:
1. 35' Bucket Truck with access from Whitlock Ave near Longfellow Ave. No lane closure required.
Framing plan at Pier 166

LEGEND
F - Fixed bearing
E - Expansion bearing
Attachment Description: Pier 166 end side, Girder G2 bearing, looking begin.
Attachment Description: Pier 166 end side, Girder G5 bearing, looking begin. Bearing is free to move longitudinally.
New York State Department of Transportation
Yellow Flag NB16YYW007

By: Sheikh Shakil
Flag Date: July 08, 2016

Superseding Information:
This flag supersedes: YF NB156M026

Structure Information
BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information
Person Notified: Thomas McAndrews, P.E.
Of: Long Island City in New York
Date: July 08, 2016 2:30:00 PM

Signature Information
Signature: Sheikh Shakil, P.E. 068017
Reviewed By: Seth D. Medwick
Date: July 21, 2016
Date: July 21, 2016

 Attachments: 4
This is a reissued Yellow Flag for expansion rocker bearings at Piers 164 and 172.

The expansion steel rocker bearing under Girder G2 at Span 165 side of the Pier 164 exhibits a gap of approx. 3/8" between the rocker and the bearing plate and is free to move slightly longitudinally approx. 1/4" by hand but are still restricted within the keeper box and pintels.

The expansion steel rocker bearing under Girder G5 at Span 173 side of 172 exhibits a gap of approx. 1/4" to 1/2" between the rocker and the bearing plate and is free to move slightly longitudinally approx. 1/8" by hand but are still restricted within the keeper box and pintels.

Spans 164 and 165 are simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span. Similar set up at Spans 172 and 173. There is no significant change in the condition since previous inspection.

Notes:
1. 20’ Extension Ladder with access from Whitlock near East 165 street. Access was made through the 24” x 32” hole at the steel grating bar fence at left side Span 167.

2. 35’ Bucket Truck with access from Whitlock Ave near Longfellow Ave (Pier 164). No lane closure required.
Flag Photographs

Photo Number: 1
Photo Filename: Location plan.jpg

BIN: 1066669

Location plan.jpg

Legend:
F - Fixed bearing
E - Expansion bearing

Framing Plan at Pier 164

Attachment Description: Location plan.jpg
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**Framing Plan at Pier 172**

*Attachment Description: Location plan 2.jpg*
Attachment Description: Pier 164, G2 End Side, looking begin. 3/8" Gap betn. rocker and bearing pl.
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</table>

**Attachment Description:** Pier 172, G5 End Side, looking begin and right. 1/4” to 1/2” Gap betn. rocker and bearing pl.
New York State Department of Transportation
Yellow Flag NB16YYW008

By: Sheikh Shakil  
Flag Date: July 14, 2016

Superseding Information: 
This flag supersedes: YF NB156MW032

Structure Information
BIN: 1066669  
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003  
County: BRONX
Feature Crossed: BRUCKNER BLVD  
Political Unit: City of NEW YORK
Orientation: 3 - EAST  
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information
Person Notified: Thomas McAndrews, P.E.  
Date: July 14, 2016 3:00:00 PM
Of: Long Island City in New York

Signature Information
Signature: Sheikh Shakil, P.E. 068017  
Date: July 15, 2016
Reviewed By: Seth D. Medwick  
Date: July 18, 2016

Attachments: 5
The expansion steel rocker bearing below Girder G2 at Pier 36 on begin side (Span 36) is uplifted up to 3/8" and is free to move slightly longitudinally approximately 1/2" by hand but is still restricted within the keeper box and its pintels.

The expansion rocker bearing below Girder G3 at Pier 36 on begin side (Span 36) is tilted approximately 8° in expanded position at an ambient temperature of 92°F. The bearing is not loose at this time, however, it is corroded and frozen. Both pintels are exposed and corroded away at the point of contact with bottom of rocker.

Span 36 is simply supported with expansion rocker bearing at begin side of Pier 36 and fixed bearing at end side of Pier 35. This is a reflag with no significant change in the condition since previous inspection.

Notes:
1. Access to Pier 36 bearings and girders is using a 60' manlift with lane closure on Bruckner Blvd.
# Flag Photographs

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**Attachment Description:** Location plan.jpg
Bearing tilt angle.jpg

Attachment Description: Bearing tilt angle.jpg
Attachment Description: Pier 36, begin face, looking end: general view.
Attachment Description: Pier 36, begin side G2, looking end and left: bearing is loose.
<table>
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**Attachment Description:** Pier 36, begin side G3, looking end: bearing is tilted 8° in expansion at 92°F
New York State Department of Transportation
Yellow Flag NB16YYW009

By: Sheikh Shakil
Flag Date: July 14, 2016

Superseding Information:
This flag supersedes: YF NB156MW037

Structure Information

BIN: 1066669
Feature Carried: 278I278IX1M53003
Feature Crossed: BRUCKNER BLVD
Orientation: 3 - EAST

Region: 11 - NEW YORK CITY
County: BRONX
Political Unit: City of NEW YORK
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.  
Date: July 14, 2016 3:00:00 PM
Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017  
Date: July 15, 2016
Reviewed By: Seth D. Medwick  
Date: July 18, 2016

Attachments: 5
The expansion rocker bearings under Girders G4, G5 and G6 at Pier 36 on Span 37 side are frozen. As seen on the attached table for tilt angle measurements, the tilt angle readings have not changed significantly for various temperatures in the last 4 years.

Girders G4 & G5 expansion rocker bearings are tilted approx. 6.5° and 7°, respectively, in expansion at an ambient temperature of 92°F. According to previous inspection report, G4 & G5 expansion rocker bearings were tilted approx. 7° in expansion at an ambient temperature of 70°F.

The expansion rocker bearing under G6 at Pier 36 on Span 37 side under is tilted approx. 12.2° in expansion at an ambient temperature of 92°F. According to previous inspection report, G6 expansion rocker bearings was tilted approx. 11° in expansion at an ambient temperature of 70°F. This bearing is not on its outer quarter and both pintels are exposed with pack rust between the rocker and bearing surface.

Span 37 is simply supported with Expansion bearing at the end side of Pier 36 and Fixed bearing at the begin side of Pier 37. This is a reflag with no significant changes to bearings at G4 and G5 and G6 bearing is moved slightly with higher temp since previous inspection.

Notes:
1. A 60 foot man lift with lane closure on Bruckner Blvd is required to access the subject area.
Flag Photographs

Photo Number: 1
Photo Filename: Location plan.jpg

YELLOW FLAG NB16YYW009

FLAG LOCATION PLAN

LEGEND
E EXPANSION BEARING
F FIXED BEARING
----- DIRECTION OF TRAFFIC FOR FEATURE CROSSED

Attachment Description: Location plan.jpg
### Tilt angle

**SECTION**

**NOTE:** ANGLES WERE MEASURED WITH TILT METER.

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<th>Dim &quot;B&quot;</th>
<th>Dim &quot;C&quot;</th>
<th>Dim &quot;D&quot;</th>
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**Attachment Description:** Tilt angle.jpg
Attachment Description: Span 37 and Pier 36, looking left. Bearing 4 is frozen and expanded at 6.5° at 92°F.
**Attachment Description:** Span 37 and Pier 36, looking right. Bearing 5 is frozen and expanded at 7° at 92°F.
Attachment Description: Span 37 and Pier 36, looking right. Bearing 6 is frozen and expanded at 12.2° at 92°F.
New York State Department of Transportation
Yellow Flag NB16YYW010

By: Sheikh Shakil
Flag Date: July 18, 2016

Superseding Information:
This flag supersedes: YF NB156MW027

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.
Date: July 18, 2016 2:50:00 PM
Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: July 20, 2016
Reviewed By: Seth D. Medwick
Date: July 21, 2016

Attachments: 4
The expansion steel rocker bearings under Girders G3, G4 and G7 at Pier 26 end side (Span 27 side) exhibit gap up to 3/8" and are free to move slightly longitudinally approx. 1/4" by hand but are still restricted within the keeper box and pintels.

Span 27 is simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span. This is a reflag with no significant change in the condition since previous inspection.

Notes:
1. Access to Pier 26 bearings and girders is using a 60' man lift with lane closure.
Flag Photographs

Photo Number: 1
Photo Filename: Location plan.jpg

Attachment Description: Location plan.jpg
Attachment Description: Pier 26, End face, Girder G3 bearing, looking begin. Loose bearing.
Attachment Description: Pier 26, End face, Girder G4 bearing, looking begin: Loose bearing.
Attachment Description: Pier 26, End face, Girder G7 bearing, looking begin: Loose bearing.
New York State Department of Transportation
Yellow Flag NB16YYW011

By: Sheikh Shakil
Flag Date: July 18, 2016

Superseding Information:
This flag supersedes: YF NB156MW028

Structure Information

BIN: 1066669
Feature Carried: 278I278IX1M53003
Feature Crossed: BRUCKNER BLVD
Orientation: 3 - EAST

Region: 11 - NEW YORK CITY
County: BRONX
Political Unit: City of NEW YORK
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.
Date: July 18, 2016 2:50:00 PM
Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: July 20, 2016
Reviewed By: Seth D. Medwick
Date: July 21, 2016

Attachments: 2
The expansion steel rocker bearing under Girder G9 at Pier 26 end side (Span 28 side) exhibits gap up to 3/4” and is free to move slightly longitudinally approx. 1/4” by hand but is still restricted within the keeper box and pintels.

Span 28 is simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span. This is a reflag with no significant change in the condition since previous inspection.

Notes:
1. Access to Pier 26 bearing and girders is using a 60' manlift with lane closure.
Flag Photographs

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<thead>
<tr>
<th>Photo Number</th>
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<tbody>
<tr>
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**Attachment Description:** Location plan.jpg
*Attachment Description:* Pier 26, End face, Girder G9 bearing, looking begin and left. Loose bearing.
New York State Department of Transportation
Yellow Flag NB16YYW012

By: Sheikh Shakil
Flag Date: July 18, 2016

Superseding Information:
This flag supersedes: YF NB156MW029

Structure Information

BIN: 1066669
Feature Carried: 278I278IX1M53003
Feature Crossed: BRUCKNER BLVD
Orientation: 3 - EAST

Region: 11 - NEW YORK CITY
County: BRONX
Political Unit: City of NEW YORK
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.
Of: Long Island City in New York
Date: July 18, 2016 2:50:00 PM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Reviewed By: Seth D. Medwick
Date: July 21, 2016
Date: July 20, 2016

Attachments: 7
The Pier 27 end side (Span 28 side) expansion rocker bearings under Girders G2 to G7 are all frozen with severe pack rust which lift the rocker bearings up to 3/4" high off the rocking surface with gaps at bearings G3, G5, and G6. The gaps at bearings under G3 and G5 is approx. 10.5"L x ¾"H which results in roughly 60% loss of bearing area.

Bearing G6 is similar with approx. 4.5"L x 1/4"H gap for roughly 33% loss of bearing area.

Span 28 is simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span.

This is a reflag with no significant change in the condition since previous inspection.

Notes:
1. A 60 foot man lift with lane closure is required to access the subject areas.
Flag Photographs

Photo Number: 1

Photo Filename: Location plan.jpg

Attachment Description: Location plan.jpg
Photo Number: 2
Photo Filename: IMG_3524.JPG

Attachment Description: Pier 27, End face, Girder G2 bearing, looking begin and right: Uplifted rocker bearing.
Attachment Description: Pier 27, End face, Girder G3 bearing, looking begin and right: Uplifted rocker bearing.
**Attachment Description:** Pier 27, End face, Girder G4 bearing, looking begin and right: Uplifted rocker bearing.
<table>
<thead>
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<td>5</td>
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Attachment Description: Pier 27, End face, Girder G5 bearing, looking begin and left: Uplifted rocker bearing.
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<thead>
<tr>
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<tbody>
<tr>
<td>Photo Filename:</td>
<td>IMG_3610.JPG</td>
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</table>

Attachment Description: Pier 27, End face, Girder G6 bearing, looking begin: Uplifted rocker bearing.
| Photo Number: | 7  | Photo Filename: | IMG_3609.JPG |

**Attachment Description:** Pier 27, End face, Girder G7 bearing, looking begin: Uplifted rocker bearing.
New York State Department of Transportation  
Yellow Flag NB16YYW013

By: Sheikh Shakil  
Flag Date: July 18, 2016

Superseding Information:  
This flag supersedes: YF NB156MW030

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<tr>
<td>Feature Crossed: BRUCKNER BLVD</td>
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<td>Orientation: 3 - EAST</td>
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- Region: 11 - NEW YORK CITY
- County: BRONX
- Political Unit: City of NEW YORK
- Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

- Primary Owner: New York State Department of Transportation
- Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
- Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
- This Bridge is not a Ramp
- Number of Spans: 176

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<tr>
<td>Reviewed By: Seth D. Medwick</td>
</tr>
<tr>
<td>Date: July 21, 2016</td>
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</tbody>
</table>

Attachments: 3
The expansion rocker bearing under Girder G12 at Pier 37 on Span 39 side is tilted approx. 8.5° in the expanded position and does not sit within the outer quarter of the rocker bearing for the ambient temperature of 98°F.

Span 39 is simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span. The bearing appears to be frozen based on the tilt readings over the last few inspections. See attached table for tilt readings for previous inspections.

Notes:
1. A 60 foot manlift with lane closure is required to access the subject area.
Flag Photographs

Photo Number: 1  
Photo Filename: Location plan.jpg

Attachment Description: Location plan.jpg
Tilt angle.jpg

Attachment Description: Tilt angle.jpg
Attachment Description: Pier 37, end side, Girder G12 bearing, looking begin and right: Rocker Bearing is tilted.
New York State Department of Transportation
Yellow Flag NB16YYW014

By: Sheikh Shakil
Flag Date: July 18, 2016

Superseding Information:
This flag supersedes: YF NB156MW031

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY

Feature Carried: 278I278IX1M53003
County: BRONX

Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK

Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.
Date: July 18, 2016 2:50:00 PM

Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: July 20, 2016

Reviewed By: Seth D. Medwick
Date: July 21, 2016

Attachments: 3
The expansion steel rocker bearings under Girders G9 and G13 at Pier 39 end side (Span 40 side) exhibit gap up to 1/4" and are free to move slightly longitudinally approx. 1/8" by hand but are still restricted within the keeper box and pintels.

Span 40 is simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span. This is a reflag with no significant change in the condition since previous inspection.

Notes:
1. Access to Pier 39 bearings and girders was made using a 60’ man lift with lane closure.
Flag Photographs

Photo Number: 1  
Photo Filename: Location plan.jpg

Attachment Description: Location plan.jpg
Attachment Description: Pier 39, End side, G9 bearing, looking begin: loose rocker bearing.
Attachment Description: Pier 39, End side, G13 bearing, looking begin: loose rocker bearing.
New York State Department of Transportation
Yellow Flag NB16YYW015

By: Sheikh Shakil
Flag Date: July 18, 2016

Superseding Information:
This flag supersedes: YF NB156MW033

Structure Information

BIN: 1066669
Feature Carried: 278I278IX1M53003
Feature Crossed: BRUCKNER BLVD
Orientation: 3 - EAST

Region: 11 - NEW YORK CITY
County: BRONX
Political Unit: City of NEW YORK
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.
Of: Long Island City in New York

Date: July 18, 2016 2:50:00 PM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Reviewed By: Seth D. Medwick

Date: July 21, 2016
Date: July 21, 2016

Attachments: 6
In Span 39 at Pier 38 under Bruckner Expressway Southbound, the bottom portion of Girder G1 web over and adjacent to the bearing area is severely corroded up to 60% total thickness loss with two corroded holes for approximately 2” H. x 2” W over the bearing area and approximately 2.5” H. x 3.5”W adjacent to the bearing area.

Both bearing stiffener outstanding legs were observed to have approximately 40% thickness loss adjacent to the Girder bottom flange. The overall bearing area loss at this location is approximately 41%. Girder G1 web overall web (shear) loss at this location is approximately 20%. See attached sketches and photos for details.

This is a re-flag condition with no significant changes in condition since the previous inspection.

Notes:
1. The right side vertical bearing stiffener was torch cut at its upper half. Both bearing stiffeners are not touching the Girder G1 top flange and partially touching the bottom flange with moderate section loss. The adjacent Girder G2 is in good condition.

2. Span 39 is supporting Bruckner Expressway 278 IX Southbound which consists of six Girders G1 thru G6 and Bruckner Expressway Northbound which consists of six Girders G7 thru G12 and there is a longitudinal joint separating both roadways (NB & SB) along this span. The span is multi Girder - redundant type. Spacing between Girders is approx. 9 feet. There are no sign of depression and there are no other signs of distress on underside of deck or top of deck adjacent to pier 38 joint.

3. A 60’ manlift with lane closure on Bruckner Blvd. is required to access the subject area.
Flag Photographs

Photo Number: 1

Attachment Description: Location plan.jpg
YELLOW FLAG NB16YYW015

PIER 38, SPAN 39 AT GIRDER G1
LEFT ELEVATION
N.T.S

LEGEND:

- SECTION LOSS AREA
- D-METER READING

Attachment Description: Left elevation.jpg
Torch cut of upper half at the outstanding leg. Thickness at bottom portion is 0.375" (Average).

Bearing Area just above keeper box

Thickness at bottom portion is 0.375" (Average).

SECTION A - A
N.T.S

See next sheet for the overall bearing area loss in this condition

LEGEND:

SECTION LOSS AREA
THRU HOLE

Attachment Description: Section A-A.jpg
CONSERVATIVE BEARING AREA LOSS METHOD:

ORIGINAL BEARING AREA = WEB AREA JUST ABOVE THE BEARING KEEPER BOX + BEARING VERTICAL STIFFENER OUTSTANDING LEGS AREA

\[
= (9.0 \times 5/8) + (2 \times 5.0 \times 5/8) \\
= 5.625 + 6.25 \\
= 11.875 \text{ IN}^2
\]

REMAINING BEARING AREA = \([1.25 \times 0.508] + (3.5 \times 0.625) + (0 \times 2) + (2.25 \times 0.230) + (5 \times 2 \times 0.375)\]

\[
= 7.09 \text{IN}^2
\]

OVERALL BEARING AREA LOSS = \(\frac{(11.875-7.09)}{11.875 \times 100}\)

\[
= 40.29\% \\
\text{Say 41%}
\]
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Attachment Description: Span 39, Girder G1 at Pier 38, looking right: Section loss at the web.
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**Attachment Description:** Span 39, Girder G1 at Pier 38, looking left: Section loss at the web.
New York State Department of Transportation
Yellow Flag NB16YYW016

By: Sheikh Shakil
Flag Date: July 19, 2016

Superseding Information:
This flag supersedes: YF NB156MW035

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY

Feature Carried: 278I278IX1M53003
County: BRONX

Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK

Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.
Date: July 19, 2016 2:37:00 PM

Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: July 21, 2016

Reviewed By: Seth D. Medwick
Date: July 21, 2016

Attachments: 3
The steel expansion rocker bearing under Girder G13 at Pier 40 (Span 41) is corroded and with a tilt of 9° in contraction. The ambient temperature when inspected was 95°F. There is up to 3/4" thick pack rust present between the rocker and bearing plate.

Span 41 is simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span. The bearing appears to be frozen based on the tilt readings over the last few inspections. See attached table for tilt readings for previous inspections.

Notes:
1. A 60 foot man lift with lane closure on Bruckner Blvd is required to access the subject area.
Flag Photographs

Photo Number: 1
Photo Filename: Location plan.jpg

Attachment Description: Location plan.jpg
Photo Number: 2  Photo Filename: Tilt angle.jpg

SECTION

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<th>Ambient Temp</th>
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<th>Dim &quot;B&quot;</th>
<th>Dim &quot;C&quot;</th>
<th>Dim &quot;D&quot;</th>
<th>Dim &quot;E&quot;</th>
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Note: Angle was measured with digital tilt meter.

Attachment Description: Tilt angle.jpg
Attachment Description: Bearing under Girder G13 at Pier 40 Span 41 is tilted, looking begin and left.
New York State Department of Transportation
Yellow Flag NB16YYW017

By: Sheikh Shakil
Flag Date: August 01, 2016

Superseding Information:
This flag supersedes: YF NB156MW034

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.
Date: August 01, 2016 9:30:00 AM
Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: August 01, 2016
Reviewed By: Seth D. Medwick
Date: August 01, 2016

Attachments: 4
The steel expansion rocker bearings under Girders G2, G3, G4 and G5 at Pier 40 end side (Span 41) are uplifted up to 1/2" due to pack rust between the rockers and bearing plates. There are gaps between sections of pack rust, resulting in approx. 40-60% loss of bearing area for each of the bearing.

At Girder G2 bearing, both pintels are exposed and appear to no longer be in the rocker socket. Total loss of bearing is approx. 50%.

At Girder G3 and G4 bearings, both pintels are exposed. Total loss of bearing is approx. 40%.

At Girder G5 bearing, the right side pintel appears to have corroded off. Total loss of bearing is approx. 60%.

Span 41 is simply supported with 2 rows of bearings at each Pier; fixed bearings at the begin side of the Pier and expansion bearings at the end side of the Pier at each span. This is a reflag with no significant change in the condition since previous inspection.

Notes:
1. A 60 foot manlift with lane closure on Bruckner Blvd is required to access the subject area.


Flag Photographs

Photo Number: 1

Photo Filename: Location plan.jpg

Location plan.jpg

Partial Framing Plan

N.T.S

LEGEND
E Expansion Rocker Bearing
F Fixed Bearing

Attachment Description: Location plan.jpg
Attachment Description: Pier 40 Span 41 side, expansion rocker bearing under Girder G3, looking begin and right.
| Photo Number: | 3 | Photo Filename: | DSCN0356.JPG |

**Attachment Description:** Pier 40 Span 41 side, expansion rocker bearing under Girder G4, looking begin and right.
| Photo Number: | 4 | Photo Filename: | DSCN0358.JPG |

*Attachment Description:* Pier 40 Span 41 side, expansion rocker bearing under Girder G5, looking begin and right.
New York State Department of Transportation
Yellow Flag NB16YYW018

By: Sheikh Shakil
Flag Date: August 02, 2016

Superseding Information:
This flag supersedes: YF NB156MW040

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.
Of: Long Island City in New York
Date: August 03, 2016 3:00:00 PM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: August 04, 2016
Reviewed By: Seth D. Medwick
Date: August 04, 2016

Attachments: 8
The expansion rocker bearings under Girders G7 to G12 at the begin side of Pier 102 (Span 102 side) are tilted in the expanded position for up to 8.0° for the ambient temperature of 75°F.

Bearings 7 through 9, 11 & 12 exhibit pack rust up to 3/8" thick between the rocker and bearing plate. Bearing 10 exhibits up to 1/2" thick pack rust between the rocker and bearing plate.

All six bearings appear to be frozen. This is a re-flag with no significant change in condition since the previous inspection. Span 102 is simply supported with expansion rocker bearings at begin side of Pier 102 and fixed bearings at end side of Pier 101. See the attached sketches and photos for additional details.

Notes:
1. A 60 foot man lift with lane closure on Bruckner Blvd North Bound (near Leggett Ave) is required to access the subject area.
Flag Photographs

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<tbody>
<tr>
<td>Photo Filename:</td>
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</table>

**Flag Photographs**

**Location Plan**

**Legend:**

- ** önünde** - FLAGGED BEARINGS
- **length** - DIRECTION OF TRAFFIC FOR FEATURE CROSSED
- **f** - EXPANSION ROCKER BEARING
- **r** - FIXED BEARING

**Attachment Description:** Location Plan
## YELLOW FLAG NB156MW040

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<td>79 F</td>
<td>+ 6</td>
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<td>+ 5.5</td>
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<td>6/24/2014</td>
<td>P102, SP102, BRG11</td>
<td>79 F</td>
<td>+ 5.5</td>
</tr>
<tr>
<td>6/24/2014</td>
<td>P102, SP102, BRG12</td>
<td>79 F</td>
<td>+ 8</td>
</tr>
</tbody>
</table>

* *+* denotes tilt in expansion

<table>
<thead>
<tr>
<th>Date</th>
<th>Bearing Location</th>
<th>Temperature</th>
<th>Tilt Angle (Degrees)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/9/2015</td>
<td>P102, SP102, BRG7</td>
<td>70 F</td>
<td>+ 5</td>
</tr>
<tr>
<td>7/9/2015</td>
<td>P102, SP102, BRG8</td>
<td>70 F</td>
<td>+ 5</td>
</tr>
<tr>
<td>7/9/2015</td>
<td>P102, SP102, BRG9</td>
<td>70 F</td>
<td>+ 6</td>
</tr>
<tr>
<td>7/9/2015</td>
<td>P102, SP102, BRG10</td>
<td>70 F</td>
<td>+ 6</td>
</tr>
<tr>
<td>7/9/2015</td>
<td>P102, SP102, BRG11</td>
<td>70 F</td>
<td>+ 8</td>
</tr>
</tbody>
</table>

* *+* denotes tilt in expansion

<table>
<thead>
<tr>
<th>Date</th>
<th>Bearing Location</th>
<th>Temperature</th>
<th>Tilt Angle (Degrees)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/01/2016</td>
<td>P102, SP102, BRG7</td>
<td>75 F</td>
<td>+ 5</td>
</tr>
<tr>
<td>8/01/2016</td>
<td>P102, SP102, BRG8</td>
<td>75 F</td>
<td>+ 5</td>
</tr>
<tr>
<td>8/01/2016</td>
<td>P102, SP102, BRG9</td>
<td>75 F</td>
<td>+ 5</td>
</tr>
<tr>
<td>8/01/2016</td>
<td>P102, SP102, BRG10</td>
<td>75 F</td>
<td>+ 6</td>
</tr>
<tr>
<td>8/01/2016</td>
<td>P102, SP102, BRG11</td>
<td>75 F</td>
<td>+ 6</td>
</tr>
<tr>
<td>8/01/2016</td>
<td>P102, SP102, BRG12</td>
<td>75 F</td>
<td>+ 8</td>
</tr>
</tbody>
</table>

* *+* denotes tilt in expansion

Note: Angle was measured with digital tilt meter.

---

**Attachment Description:** Tilt angle
Attachment Description: Pier 102, Span 102 side, looking begin. Bearing under G7 tilted 5° in expansion at T = 75°F.
Attachment Description: Pier 102, Span 102 side, looking right. Bearing under G8 tilted 5° in expansion at T = 75°F.
Attachment Description: Pier 102, Span 102 side, looking begin. Bearing under G9 tilted 5° in expansion at T = 75°F.
Attachment Description: Pier 102, Span 102 side, looking right. Bearing under G10 tilt 6° in expansion at T = 75°F.
**Attachment Description:** Pier 102, Span 102 side, looking begin. Bearing under G11 tilt 6° in expansion at T = 75°F
Attachment Description: Pier 102, Span 102 side, looking right. Bearing under G12 tilt 8° in expansion at T = 75°F.
New York State Department of Transportation
Yellow Flag NB16YYW019

By: Sheikh Shakil  
Flag Date: August 02, 2016

Superseding Information:  
This flag supersedes: YF NB156MW041

Structure Information

BIN: 1066669  
Feature Carried: 278I278IX1M53003  
Feature Crossed: BRUCKNER BLVD  
Orientation: 3 - EAST

Region: 11 - NEW YORK CITY  
County: BRONX  
Political Unit: City of NEW YORK  
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation  
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party  
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder  
This Bridge is not a Ramp  
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.  
Of: Long Island City in New York  
Date: August 03, 2016 3:07:00 PM

Signature Information

Signature: Sheikh Shakil, P.E. 068017  
Reviewed By: Seth D. Medwick  
Date: August 04, 2016

Attachments: 6
Flagged Elements

<table>
<thead>
<tr>
<th>Parent Element</th>
<th>Element</th>
<th>Total Quantity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Span Number: 107</td>
<td>PR311 - Movable Bearing</td>
<td>12</td>
<td>each</td>
</tr>
</tbody>
</table>

Flagged Condition Description

The expansion rocker bearings under Girders G10 to G12 at the begin side of Pier 107 (Span 107 side) are tilted in the contracted position for up to 11 degrees for the ambient temperature of 70 F. The bearing tilts exhibit no significant change since 2015 (See attached table).

All three bearings exhibit up to 1/4” thick pack rust between the rocker and bearing plates. This is a re-flag with no change in condition since the previous inspection.

Span 107 is simply supported with expansion rocker bearings at the begin side of Pier 107 and fixed bearings at the end side of Pier 106. See the attached sketches and photos for additional details.

Notes:

1. 60 foot man lift with lane closure on Bruckner Blvd. North Bound is required to access the subject area.
Flag Photographs

Attachment Description: Location plan
<table>
<thead>
<tr>
<th>Date</th>
<th>Bearing Location</th>
<th>Temperature</th>
<th>Tilt Angle (Degrees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/02/16</td>
<td>P107, SP107, BRG10</td>
<td>70°F</td>
<td>-8</td>
</tr>
<tr>
<td>08/02/16</td>
<td>P107, SP107, BRG11</td>
<td>70°F</td>
<td>-8</td>
</tr>
<tr>
<td>08/02/16</td>
<td>P107, SP107, BRG12</td>
<td>70°F</td>
<td>-11</td>
</tr>
</tbody>
</table>

NOTE: (-) SIGN DENOTES CONTRACTION OF THE BEARING.

<table>
<thead>
<tr>
<th>Date</th>
<th>Bearing Location</th>
<th>Temperature</th>
<th>Tilt Angle (Degrees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/13/2015</td>
<td>P107, SP107, BRG10</td>
<td>77°F</td>
<td>-8</td>
</tr>
<tr>
<td>7/13/2015</td>
<td>P107, SP107, BRG11</td>
<td>77°F</td>
<td>-8</td>
</tr>
<tr>
<td>7/13/2015</td>
<td>P107, SP107, BRG12</td>
<td>77°F</td>
<td>-11</td>
</tr>
</tbody>
</table>

NOTE: (-) SIGN DENOTES CONTRACTION OF THE BEARING.

Attachment Description: Tilt angle
Attachment Description: General view of Bearing under G10 to G12, looking right.
Attachment Description: Pier 107, Span 107, G10 bearing, looking right. Bearing tilted 8° in contraction at T=70°F.
Attachment Description: Pier 107, Span 107, G11 bearing, looking right. Bearing tilted 8° in contraction at T=70°F.
Attachment Description: Pier 107, Span 107, G12 bearing, looking right. Bearing tilted 11° in contraction at T=70°F.
New York State Department of Transportation
PIA Safety Flag NB16YYW020

By: Sheikh Shakil
Flag Date: August 18, 2016

Superseding Information:
No Flags Superseded

Structure Information
BIN: 1066669
Feature Carried: 278I278IX1M53003
Feature Crossed: BRUCKNER BLVD
Orientation: 3 - EAST
Region: 11 - NEW YORK CITY
County: BRONX
Political Unit: City of NEW YORK
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information
Person Notified: Thomas McAndrews, P.E.
Date: August 18, 2016 3:40:00 PM
Of: Long Island City in New York

Signature Information
Signature: Sheikh Shakil, P.E. 068017
Date: August 23, 2016
Reviewed By: Seth D. Medwick
Date: August 26, 2016

Attachments: 10
Localized medium to large cracked, hollow sounding and loose concrete exits at the underside of deck along the deck joints at the following locations:
Pier 39, Span 39 and 40, Bay 1. Approximate total quantity at this location= 3SF  
Pier 51, Span 51 and 52, Bay 1, 2, 4, 5 and 8. Approximate total quantity at this location= 15 SF  
Pier 52, Span 52 and 53, Bay 1 and 5. Approximate total quantity at this location= 6 SF  
Pier 53, Span 53 and 54, Bay 3 and 4. Approximate total quantity at this location= 6 SF  
Pier 54, Span 54 and 55, Bay 1 and 3. Approximate total quantity at this location= 6 SF  
Pier 55, Span 55 and 56, Bay 1, 2 and 3. Approximate total quantity at this location= 9 SF  
Pier 56, Span 56 and 57, Bay 3 and 4. Approximate total quantity at this location= 6 SF  
Pier 58, Span 58 and 59, Bays 3 and 4. Approximate total quantity at this location= 6 SF  
Pier 59, Span 59 and 60, Bays 3 and 4. Approximate total quantity at this location= 6 SF

Notes:
1. A 60’ man lift with a lane closure on Brucker Boulevard was needed to access the subject areas.
2. Small to medium pieces of loose concrete above the closed lane were removed during this inspection.
3. Nylon netting was installed between the end diaphragms at some pier joints to catch the falling concrete. Note, delaminated concrete noted in this flag are not over the netting.
4. Delaminated concrete along the underside of deck joints are located above the right sidewalk below the bridge, traffic lanes and medians and are all delineated with red/orange spray painting.
5. East 140th street runs through Span 37 between Pier 36 and 37 and East 141st street runs through Span 43 between Pier 42 and 43.
## Flag Photographs

<table>
<thead>
<tr>
<th>Photo Number:</th>
<th>1</th>
<th>Photo Filename:</th>
<th>PLAN SPAN 39 TO 59_1.jpg</th>
</tr>
</thead>
</table>

### Partial Plan

**N.T.S.**

**Legend:**
- Cracked, hollow sounding and loose concrete at the highlighted bays along underside of Pier joints.

*Attachment Description: PLAN SPAN 39 TO 59_1.jpg*
Attachment Description: PLAN SPAN 39 TO 59_2.jpg
PELLI TUTS

LEGEND:

- Cracked, hollow sounding and loose concrete at the highlighted bays along underside of Pier joints.

Attachment Description: PLAN SPAN 39 TO 59_3.jpg
Attachment Description: Underside of Deck Joint at Pier 51, looking right. Loose, cracked and hollow concrete in Bay 1.
Attachment Description: Underside of Deck Joint at Pier 52, looking right. Loose, cracked and hollow concrete in Bay 1.
**Attachment Description:** Underside of Deck Joint at Pier 53, looking left. Loose, cracked and hollow concrete in Bay 4.
<table>
<thead>
<tr>
<th>Photo Number</th>
<th>Photo Filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>DSCN0565.JPG</td>
</tr>
</tbody>
</table>

**Attachment Description:** Underside of Deck Joint at Pier 54, looking right. Loose, cracked and hollow concrete in Bay 1.
Attachment Description: Underside of Deck Joint at Pier 56, looking left. Loose, cracked and hollow concrete in Bay 3.
| Photo Number: | 9     | Photo Filename: | DSCN0574.JPG |

**Attachment Description:** Underside of Deck Joint at Pier 56, looking right. Loose, cracked and hollow concrete in Bay 4.
**Attachment Description:** Underside of Deck Joint at Pier 59, looking left. Loose, cracked and hollow concrete in Bay 4.
New York State Department of Transportation
Yellow Flag NB16YYW021

By: Sheikh Shakil
Flag Date: August 18, 2016

Superseding Information:
This flag supersedes: YF NB156MW042

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY

Feature Carried: 278I278IX1M53003
County: BRONX

Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E. Date: August 18, 2016 3:40:00 AM

Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017 Date: August 23, 2016

Reviewed By: Seth D. Medwick Date: August 23, 2016

Attachments: 7
Pier 119 is comprised of two columns. The upper portion of Column 1 (left column) is severely deteriorated at all faces with cracked and spalled concrete with exposed main reinforcements and ties. The spalled concrete areas are up to 16’ H x 52” W x 5” D. The exposed main reinforcements and ties are partially debonded and exhibit approximately 20% section loss. Nine main reinforcements and five rows of ties are exposed and partially debonded. The lower portion of the column exhibits crack and hollow sounding concrete at the begin corners. The cross sectional area loss for this column is approximately 28%. The right side column is in good condition.

This is a re-flag condition with no significant change in condition since last inspection. See attached condition & plan sketches and photos for the locations and the extent of this column deterioration.

Notes:
1. A 60 foot man lift with lane closure on Bruckner Blvd North Bound is required to access the subject area.
Flag Photographs

| Photo Number: | 1 | Photo Filename: | PARTIAL PLAN.jpg |

![Diagram: PARTIAL PLAN.jpg]

Attachment Description: PARTIAL PLAN.jpg
BIN 1066659

YELLOW FLAG NB16YYW021

LEGEND:

- Spall W/Exposed Rebars
- Crack

Attachment Description: ELEV. VIEW.jpg
YELLOW FLAG NB16YYW021

PIER 119 LEFT SIDE COLUMN

CRACKED AND SPALLED CONCRETE COVER APPROX. 5" THICK

SECTION A-A
N.T.S

COLUMN ORIGINAL CROSS SECTIONAL AREA = 52 x .42 = 21.84 IN²
COLUMN LOSS AREA = (42+52+7+21) X .5 = 610IN²
COLUMN OVERALL CROSS SECTIONAL AREA LOSS = (B10/2140) X 100
≈ 28%
Attachment Description: Pier 119, Span 119, Left Column C1, looking end right. Large spall with exposed debonded rebars.
Attachment Description: Pier 119, Span 119, Left Column C1, looking end. Large spall with debonded vertical rebars & ties.
Attachment Description: Pier 119, Span 119, Column C1, looking end left. Large spalls with partially debonded rebars.
<table>
<thead>
<tr>
<th>Photo Number:</th>
<th>7</th>
<th>Photo Filename:</th>
<th>DSCN0633.JPG</th>
</tr>
</thead>
</table>

*Attachment Description:* Pier 119, Span 119, Left Column C1, looking begin. Large spalls with exposed rebars.
By: Sheikh Shakil  
*Flag Date: August 19, 2016*

**Superseding Information:**
This flag supersedes: YF NB156MW043

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### Structure Information

**BIN:** 1066669  
**Feature Carried:** 278I278IX1M53003  
**Feature Crossed:** BRUCKNER BLVD  
**Orientation:** 3 - EAST  
**Region:** 11 - NEW YORK CITY  
**County:** BRONX  
**Political Unit:** City of NEW YORK  
**Approximate Year Built:** 1960  

*Bridge Load Posting (Tons):* Not Posted for Load

*Primary Owner:* New York State Department of Transportation  
*Primary Maintenance Responsibility:* 12 - State - Subcontracted to another Party  
*Typical or Main Span Type:* 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder  

This Bridge is not a Ramp  
*Number of Spans:* 176

---

### Verbal Notification Information

*Person Notified:* Thomas McAndrews, P.E.  
*Date:* August 23, 2016 9:17:00 AM  
*Of:* Long Island City in New York

---

### Signature Information

*Signature:* Sheikh Shakil, P.E. 068017  
*Date:* August 29, 2016  
*Reviewed By:* Seth D. Medwick  
*Date:* August 29, 2016

---

**Attachments:** 6
Pier 122 is comprised of two columns. The upper portion of Column 1 (left column) is severely delaminated at its begin, end and right faces. At these faces the column exhibits spalled concrete with exposed main vertical reinforcements and ties adjacent to the underside of the concrete cap beam. The spalled concrete areas are up to 76" H x 149" Perimeter with exposed reinforcements. The exposed main reinforcements and ties are partially debonded and exhibit approximately up to 5% section loss. 14 main reinforcements and 1 row of ties are exposed and partially debonded. There is also a 4' x 3' hollow area (not loose) below the spalled area on the begin face. The concrete core within the spalled area is solid. The cross sectional area loss for this column is approximately 18%.

This is a reissued flag with no significant changes in condition since last inspection. The right side column is in good condition.

See attached condition and plan sketches and photos for the locations and the extent of this column deterioration.

Note: 1. A 60 foot man lift with lane closure on Bruckner Blvd North Bound is required to access the subject area.
## Flag Photographs

<table>
<thead>
<tr>
<th>Photo Number:</th>
<th>1</th>
<th>Photo Filename:</th>
<th>LOCATION PLAN.jpg</th>
</tr>
</thead>
</table>

### Attachment Description:
LOCATION PLAN.jpg
Yellow Flag NB16YYW022  BIN 1066669  Flag Date: August 19, 2016

Photo Number:  2  Photo Filename:  ELEVATION.jpg

PIER 122 LEFT COLUMN  
ELEVATION VIEW

**LEGEND**

- [ ] SPALL WITH EXPOSED REBAR +/- 5"
- H - HOLLOW AREA

*Attachment Description: ELEVATION.jpg*
PIER 122 LEFT SIDE COLUMN

SECTION A-A
N.T.S

COLUMN ORIGINAL CROSS SECTIONAL AREA = 85 x 43 = 3658 IN²
COLUMN LOSS AREA = [(43 x 5) + (76 x 5) + (10 x 5)] = 845 IN²
COLUMN OVERALL CROSS SECTIONAL AREA LOSS = (845/3658) x 100

= 17.5 %
≥18%

Attachment Description: SECTION A-A.jpg
<table>
<thead>
<tr>
<th>Photo Number</th>
<th>Photo Filename</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>DSCN0635.JPG</td>
</tr>
</tbody>
</table>

**Attachment Description:** General view of left column at Pier 122, looking end left.
| Photo Number: | 5 | Photo Filename: | DSCN0636.JPG |

**Attachment Description:** Severely spalled concrete with exposed rebar at top of left column at Pier 122, looking end left.
| Photo Number: | 6 | Photo Filename: | DSCN0637.JPG |

Attachment Description: Severely spalled concrete with exposed rebar at top of left column at Pier 122, looking left.
New York State Department of Transportation
PIA Safety Flag NB16YYW023

By: Sheikh Shakil  
Flag Date: August 26, 2016

Superseding Information:  
No Flags Superseded

Structure Information

BIN: 1066669  
Region: 11 - NEW YORK CITY

Feature Carried: 278I278IX1M53003  
County: BRONX

Feature Crossed: BRUCKNER BLVD  
Political Unit: City of NEW YORK

Orientation: 3 - EAST  
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.  
Date: August 26, 2016 2:28:00 PM

Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017  
Date: August 29, 2016

Reviewed By: Seth D. Medwick  
Date: August 29, 2016

Attachments: 9
Localized medium to large cracked, hollow sounding and loose concrete exits at the underside of deck along the deck joints at the following locations:

- Pier 71, Span 71 and 72, Bay 7,8,9,14,16 and 17. Approximate total quantity at this location= 18 SF
- Pier 74, Span 74 and 75, Bay 2 thru 11. Approximate total quantity at this location= 30 SF
- Pier 75, Span 75 and 76, Bay 5. Approximate total quantity at this location= 3 SF
- Pier 76, Span 76 and 77, Bay 6 and 7. Approximate total quantity at this location= 6 SF
- Pier 80, Span 80 and 81, Bay 1. Approximate total quantity at this location= 3 SF

Notes:
1. A 60’ man lift with a lane closure on Bruckner Boulevard was needed to access the subject areas.
2. Small to medium pieces of loose concrete above the closed lane were removed during this inspection.
3. Nylon netting was installed between the end diaphragms at some pier joints to catch the falling concrete. Note, delaminated concrete noted in this flag are not over the netting.
4. Delaminated concrete along the underside of deck joints are located above the right sidewalk below the bridge, traffic lanes and medians and are all delineated with red/orange spray painting.
5. East 149th street runs through Span 73 between Pier 72 and 73.
Flag Photographs

Photo Number: 1

Photo Filename: NB16YYW023 sketches_3.jpg

Attachment Description: NB16YYW023 sketches_1.jpg

Legend:
- Cracked, hollow sounding and loose concrete at the highlighted bays along underside of Pier joints.
LEGEND:

- Cracked, hollow sounding and loose concrete at the highlighted bays along underside of Pier joints.

Attachment Description: NB16YYW023 sketches_2.jpg
LEGEND:

- Red: Cracked, hollow sounding and loose concrete at the highlighted bays along underside of Pier joints.

Attachment Description: NB16YYW023 sketches_3.jpg
Attachment Description: Underside of Deck Joint at Pier 71, looking right. Loose, cracked and hollow concrete in Bay 9.
Attachment Description: Underside of Deck Joint at Pier 71, looking right. Loose, cracked and hollow concrete in Bay 17.
Attachment Description: Undeside of Deck Joint at Pier 74, looking right. Loose, cracked and hollow concrete in Bay 3.
Attachment Description: Underside of Deck Joint at Pier 74, looking right. Loose, cracked and hollow concrete in Bay 8.
Attachment Description: Underside of Deck Joint at Pier 76, looking right. Loose, cracked and hollow concrete in Bay 7.
**Attachment Description:** Underside of Deck Joint at Pier 80, looking right. Loose, cracked and hollow concrete in Bay 1.
New York State Department of Transportation
Yellow Flag NB16YYW024

By: Sheikh Shakil
Flag Date: August 30, 2016

Superseding Information:
This flag supersedes: YF NB156MW045

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Mike Henriquez
Date: August 30, 2016 2:35:00 PM
Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: September 01, 2016
Reviewed By: Seth D. Medwick
Date: September 02, 2016

Attachments: 5
At Pier 142, the underside of the concrete cap beam between Column C1 and C2 exhibits approx. 25'L x 4'-2"W x up to 6" deep spall with exposed 8 main reinforcements and 27 stirrups. 23 of the 27 exposed stirrups are fully debonded. All 8 main reinforcements are partially debonded. This spall represents approx. 60% of the cap beam spacing between the column C1 and C2. In addition, begin face exhibits 4' x 3' x 5"D spall with 4 exposed main reinforcements (fully debonded). The exposed reinforcements exhibit up to 10% section loss.

The above condition is located directly above all 3 express lanes of Northbound Bruckner Blvd. Spalled areas appears to be stable and the remaining cap beam is solid. This is a re-flag condition of the previous yellow flag NB156MW045. The condition has not significantly changed since last inspection.

Notes:
1. A 60 foot man lift with lane closure on Bruckner Blvd North Bound is required to access the subject area.
Flag Photographs

Photo Number: 1
Photo Filename: PARTIAL PLAN.jpg

Attachment Description: PARTIAL PLAN.jpg
2

ELEVATION and SECTION.jpg

Attachment Description: ELEVATION and SECTION.jpg
Attachment Description: Large spall w/exposed rebars at bot. of pier cap beam between C1 & C2 at Pier 142, looking right.
| Photo Number: | 4 | Photo Filename: | DSCN1086.JPG |

**Attachment Description:** Large spall w/exposed rebars at bottom of pier cap between C1 & C2 at Pier 142, looking right.
Attachment Description: Large spall w/exposed rebars at pier cap between C1 & C2 at Pier 142, looking right.
New York State Department of Transportation
PIA Safety Flag NB16YYW025

By: Sheikh Shakil
Flag Date: September 01, 2016

Superseding Information:
No Flags Superseded

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278i278iX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Mike Henriquez
Of: Long Island City in New York
Date: September 01, 2016 3:05:00 PM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: September 02, 2016
Reviewed By: Seth D. Medwick
Date: September 06, 2016

Attachments: 8
Localized medium to large cracked, hollow sounding and loose concrete exists at the underside of deck along the deck joints at the following locations:

- Pier 83, Span 83 and 84, Bay 1, 2, 3 and 7. Approximate total quantity at this location= 12SF
- Pier 86, Span 86 and 87, Bay 1 thru 5. Approximate total quantity at this location= 15SF
- Pier 89, Span 89 and 90, Bay 2, 3, 7 and 8. Approximate total quantity at this location= 12SF
- Pier 92, Span 92 and 93, Bay 4, 5 and 7. Approximate total quantity at this location= 9SF
- Pier 95, Span 95 and 96, Bay 4. Approximate total quantity at this location= 3SF

Notes:
1. A 60’ man lift with a lane closure on Bruckner Boulevard was needed to access the subject areas.
2. Small to medium pieces of loose concrete above the closed lane were removed during this inspection.
3. Nylon netting was installed between the end diaphragms at some pier joints to catch the falling concrete. Note, delaminated concrete noted in this flag are not over the netting.
4. Delaminated concrete along the underside of deck joints are located above the right sidewalk below the bridge, traffic lanes and medians and are all delineated with red/orange spray painting.
5. Leggett Avenue runs through Span 100 between Pier 99 and 100.
Flag Photographs

| Photo Number: 1 | Photo Filename: Location plan - 1.jpg |

Pier 82       Pier 83 Joint       Pier 84

Pier 85       Pier 86 Joint       Pier 87

**PARTIAL PLAN**

N.T.S

**LEGEND:**

- Cracked, hollow sounding and loose concrete at the highlighted bays along underside of Pier joints.

*Attachment Description: Location plan - 1.jpg*
LEGEND:

- Cracked, hollow sounding and loose concrete at the highlighted bays along underside of Pier joints.

Attachment Description: Location plan - 2.jpg
**Attachment Description:** Location plan - 3.jpg

**Partial Plan**

**N.T.S.**

**Legend:**

- Cracked, hollow sounding and loose concrete at the highlighted bays along underside of Pier joints.
Attachment Description: Underside of Deck Joint at Pier 95, looking right. Loose, cracked and hollow concrete in Bay 4.
Attachment Description: Underside of Deck Joint at Pier 89, looking left. Loose, cracked and hollow concrete in Bay 2.
Attachment Description: Underside of Deck Joint at Pier 86, looking left. Loose, cracked and hollow concrete in Bay 2.
Attachment Description: Underside of Deck Joint at Pier 86, looking right. Loose, cracked and hollow concrete in Bay 4.
Attachment Description: Underside of Deck Joint at Pier 83, looking right. Loose, cracked and hollow concrete in Bay 3.
New York State Department of Transportation
PIA Safety Flag NB16YYW026

By: Sheikh Shakil
Flag Date: September 08, 2016

Superseding Information:
No Flags Superseded

Structure Information

BIN: 1066669
Feature Carried: 278I278IX1M53003
Feature Crossed: BRUCKNER BLVD
Orientation: 3 - EAST

Region: 11 - NEW YORK CITY
County: BRONX
Political Unit: City of NEW YORK
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Mike Henriquez
Of: Long Island City in New York
Date: September 08, 2016 9:05:00 AM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Reviewed By: Seth D. Medwick
Date: September 12, 2016
Date: September 12, 2016

Attachments: 5
Localized medium to large cracked, hollow sounding and loose concrete exists at the underside of deck along the deck joints at the following locations:

Pier 102, Span 102, Bay 1 and 2. Approximate total quantity at this location= 6 SF

Pier 103, Span 103, Bay 2. Approximate total quantity at this location= 3 SF

Pier 105, Span 105, Bay 1. Approximate total quantity at this location= 3 SF

Pier 110, Span 110, Bay 7 and 8. Approximate total quantity at this location= 6 SF

Pier 116, Span 116, Bay 8. Approximate total quantity at this location= 3 SF

Notes:

1. A 60’ man lift with a lane closure on Bruckner Boulevard was needed to access the subject areas.

2. Small to medium pieces of loose concrete above the closed lane were removed during this inspection.

3. Nylon netting was installed between the end diaphragms at some pier joints to catch the falling concrete. Note, delaminated concrete noted in this flag are not over the netting.

4. Delaminated concrete along the underside of deck joints are located above the right sidewalk below the bridge, traffic lanes and medians and are all delineated with red/orange spray painting.

5. Longwood Avenue runs through Span 118 between Pier 117 and 118.
**Flag Photographs**

**Photo Number:** 1  
**Photo Filename:** Location plan - 1.jpg

---

**PARTIAL PLAN**

**N.T.S.**

**LEGEND:**

- Cracked, hollow sounding and loose concrete at the highlighted bays along underside of Pier joints.

---

**Attachment Description:** Location plan - 1.jpg
LEGEND:

- Cracked, hollow sounding and loose concrete at the highlighted bays along underside of Pier joints.

Expiration Date: September 08, 2016

Attachment Description: Location plan - 2.jpg
Attachment Description: Underside of Deck Joint at Pier 103, looking right. Loose, cracked and hollow concrete in Bay 2.
Attachment Description: Underside of Deck Joint at Pier 102, looking right. Loose, cracked and hollow concrete in Bay 1.
| Photo Number: | 5 | Photo Filename: | DSCN0585.JPG |

**Attachment Description:** Underside of Deck Joint at Pier 105, looking left. Loose, cracked and hollow concrete in Bay 1.
New York State Department of Transportation
Yellow Flag NB16YYW027

By: Sheikh Shakil
Flag Date: September 08, 2016

Superseding Information:
This flag supersedes: YF NB156MW050

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY

Feature Carried: 278I278IX1M53003
County: BRONX

Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK

Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Mike Henriquez
Of: Long Island City in New York

Date: September 08, 2016 9:00:00 AM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: September 12, 2016

Reviewed By: Seth D. Medwick
Date: September 12, 2016

Attachments: 3
The expansion steel rocker bearings under Girders G8 and G13 on Pier 157, Span 158 side are uplifted up to 3/8" and are loose and free to move slightly longitudinally approx. 1/4" by hand but are still restricted within the keeper box and pintels.

Span 158 is simply supported with expansion rocker bearings at Pier 157 end side and fixed bearings at Pier 158 begin side. This is a re-flag condition with no significant since the last inspection.

Notes:
1. Access to this location is by using a 35’ bucket truck with lane closure Bruckner Blvd Northbound (Approach to Bruckner Expressway Northbound).
**Flag Photographs**

<table>
<thead>
<tr>
<th>Photo Number:</th>
<th>1</th>
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<td>Photo Filename:</td>
<td>Location plan.jpg</td>
</tr>
</tbody>
</table>

**YELLOW FLAG NB16YYW027**

**Partial Framing Plan**

**Legend**

- **E**: Expansion Rocker Bearing
- **F**: Fixed Bearing

**Attachment Description**: Location plan
Attachment Description: Pier 157 Span 158 Bearing under Girder 8 is loose, looking begin.
Attachment Description: Pier 157 Span 158 Bearing under Girder 13 is loose, looking begin.
New York State Department of Transportation
Yellow Flag NB16YYW028

By: Sheikh Shakil
Flag Date: September 08, 2016

Superseding Information:
This flag supersedes: YF NB156MW051

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY

Feature Carried: 278I278IX1M53003
County: BRONX

Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK

Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp

Number of Spans: 176

Verbal Notification Information

Person Notified: Mike Henriquez
Date: September 08, 2016 9:05:00 AM

Of: Long Island City in New York

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: September 12, 2016

Reviewed By: Seth D. Medwick
Date: September 12, 2016

Attachments: 3
The expansion steel rocker bearings under Girder G13 on Pier 158, Span 159 side is uplifted up to 3/8” and loose and free to move slightly longitudinally approx. 1/4” by hand but is still restricted within the keeper box and pintels.

Span 159 is simply supported with expansion rocker bearings at Pier 158 end side and fixed bearings at Pier 159 begin side. This is a re-flag condition with no significant change since the last inspection.

Notes:
1. Access to this location is by using a 35’ bucket truck and lane closure Bruckner Blvd Northbound (Approach to Bruckner Expressway Northbound).
Flag Photographs

Photo Number: 1  Photo Filename: Location plan.jpg

Attachment Description: Location plan.jpg
Attachment Description: General view of Pier 158 end face, looking begin.
Attachment Description: Pier 158 Span 159 Bearing under Girder 13 is loose, looking begin.
New York State Department of Transportation
Yellow Flag NB16YYW029

By: Sheikh Shakil
Flag Date: September 08, 2016

Superseding Information:
This flag supersedes: YF NB156MW049

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Mike Henriquez
Of: Long Island City in New York
Date: September 08, 2016 9:05:00 AM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Reviewed By: Seth D. Medwick
Date: September 12, 2016
Date: September 12, 2016

Attachments: 6
The pedestal (34"L x 18"W x 8.5"high) under Girder G15 at Pier 160, on Span 160 side is severely deteriorated with spalls and hollow sounding concrete areas at all faces with exposed reinforcement and partially exposed three anchor bolts out of four due to the spalled concrete.

The overall pedestal cross sectional area loss is approx. 53%. The fixed bearing masonry plate (26"L x 10"W x 2"thick) at top of this pedestal is partially undermined for less that 5% at its begin right and left and end right corners due to the spalled cover. Girder G15 at Pier 160 on Span 160 side has slightly shifted to the left for approximately 3/4" and as a result the right side keeper plate broken off.

This is a reflag condition with no significant change since the previous inspection.

Notes:
1. Access to Pier 160 pedestals is using a 35’ bucket truck with lane closure at Bruckner Blvd Northbound.
Flag Photographs

Photo Number: 1  Photo Filename: Location plan.jpg

YELLOW FLAG NB16YYW029

Location of Yellow Flag NB16YYW029

Attachment Description: Location plan.jpg
YELLOW FLAG NB16YYW029

BEGIN FACE

END FACE

LEFT FACE

RIGHT FACE

LEGEND:

■ — Spall

H — Hollow

Attachment Description: Elevation.jpg
Yellow Flag NB16YYW029                              BIN 1066669                              Flag Date: September 08, 2016

Photo Number: 3            Photo Filename: Section A-A.jpg

YELLOW FLAG NB16YYW029

Spall & Hollow
Sounding Concrete
Cover (Approx. 4” Thick)

Bearing Plate
Undermining

SECTION A - A

Looking Ahead

N.T.S.

Note:
Bearing undermining is less than 5%
YELLOW FLAG NB16YYW029

PIER 160 - PEDESTAL # 15 AT SPAN 160 SIDE

Original Pedestal cross sectional area

34" x 18" = 612 SQ. IN

Section loss (Up to 4" spalled area)

(18" x 3") + (18" x 4") + [(27" x 3.5") x 2]
= 315 SQ. IN

Overall pedestal cross sectional area

= (315/612) x 100
= 52.47%

Say 53%
Attachment Description: General view of Pier 160 Begin face, looking end.
Attachment Description: Pier 160 Span 160 Pedestal under Girder 15, looking end.
New York State Department of Transportation
Yellow Flag NB16YYW030

By: Sheikh Shakil
Flag Date: September 08, 2016

Superseding Information:
This flag supersedes: YF NB156MW052

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Mike Henriquez
Of: Long Island City in New York
Date: September 08, 2016 10:05:00 AM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: September 16, 2016
Reviewed By: Seth D. Medwick
Date: September 16, 2016

Attachments: 7
The 18” high reinforced concrete pedestal under Girder G6 at the begin side (Span 157 side) of Pier 157 is spalled, with one out of four anchor bolts partially exposed for approx. 4” H at end left corner with minor section loss. The overall pedestal cross sectional area loss is approx. 18%. The left and begin faces of the pedestal are cracked and sounded hollow. The core of the spalled area and the remaining area of the pedestal sounded solid. The masonry plate is undermined for approx. 6% due to the spall.

There has been no significant change in condition since the previous inspection. However, calculation for the undermined area of pedestal has been revised from 2% (previous inspection) to 6%, taking into consideration hollow concrete area under the masonry plate.

Notes:

1. Span 157 is supporting Sheridan Expressway Southbound which consists of six stringers, G1 thru G6, and the Sheridan Expressway Northbound which consists of ten Stringers, G7 thru G16. Both Northbound and Southbound portions are separated at Span 147 and are jointed back at Span 160. Span 157 under the Sheridan Expressway Southbound is multi girder - with external redundancy.

2. Span 157 is simply supported; expansion rocker bearings at the end side of Pier 156 and fixed steel rocker bearings at the begin side of Pier 157. Spacing between girders is approximately 8’- 8”.

3. Access to Pier 157 pedestals is by 35’ Bucket Truck with lane closure at Bruckner Expressway Northbound.
Flag Photographs

Photo Number: 1
Attachment Description: LOCATION PLAN (1).jpg

LOCATION PLAN

LEGEND

- E - EXPANSION ROCKER BEARING
- F - FIXED BEARING

BRYANT AVE.

_Page 551 of 676_
<table>
<thead>
<tr>
<th>Photo Number:</th>
<th>2</th>
<th>Photo Filename:</th>
<th>PLAN VIEW.jpg</th>
</tr>
</thead>
</table>

Approximately 4" of anchor bolt exposed due to spall

2" Deep spalled area

Hollow area

2" Deep spalled area

End Face

Begin Face

Masonry Plate 29" x 14"

Spall

Undermined area

N.T.S

Attachment Description: PLAN VIEW
## DETAIL ELEVATION

**LEGEND:**
- H – Hollow
- – Spall

**PIER 157 (SPAN 157), PEDESTAL #6**

**ELEVATION VIEW**

**Note:** Right side is in good condition & sound.
UNDERMINING CALCULATIONS

Pedestal original cross sectional area = 18 x 34 = 612 in^2

Pedestal cross sectional area loss = 
(18 x 2) + (10 x 2.5) + (15 x 6)/2 = 106 in^2

Overall pedestal area loss =
(106/612) x 100 = 17.3% (Say 18%)

Masonry Plate area =
29 x 14 = 406 in^2

Masonry Plate undermining =
0.5 x 10.5 x 4 = 21 in^2

% of Masonry Plate undermined =
(21/406) x 100 = 5.17% (Say 6%)

Attachment Description: CALCULATION
Attachment Description: General view of begin face of Pier 157, looking end.
<table>
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<tr>
<td>6</td>
<td>DSCN1308.jpg</td>
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</table>

**Attachment Description:** Spalled pedestal under Girder 6 at Pier 157 of Span 157, looking end right.
| Photo Number: | 7 | Photo Filename: | DSCN1310.jpg |

Attachment Description: Spalled pedestal under Girder 6 at Pier 157 of Span 157, looking right.
**New York State Department of Transportation**

**Yellow Flag NB16YYW031**

**By:** Sheikh Shakil
**Flag Date:** September 08, 2016

**Superseding Information:**
This flag supersedes: YF NB156MW048

---

**Structure Information**

- **BIN:** 1066669
- **Region:** 11 - NEW YORK CITY
- **Feature Carried:** 278I278IX1M53003
- **County:** BRONX
- **Feature Crossed:** BRUCKNER BLVD
- **Political Unit:** City of NEW YORK
- **Orientation:** 3 - EAST
- **Approximate Year Built:** 1960

**Bridge Load Posting (Tons):** Not Posted for Load

**Primary Owner:** New York State Department of Transportation
**Primary Maintenance Responsibility:** 12 - State - Subcontracted to another Party
**Typical or Main Span Type:** 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

**Number of Spans:** 176

---

**Verbal Notification Information**

- **Person Notified:** Mike Henriquez
- **Date:** September 09, 2016 9:30:00 AM
- **Of:** Long Island City in New York

---

**Signature Information**

- **Signature:** Sheikh Shakil, P.E. 068017
  **Date:** September 12, 2016

- **Reviewed By:** Seth D. Medwick
  **Date:** September 12, 2016

**Attachments:** 3
The expansion steel rocker bearing under Girder 10 at Pier 161 (Span 162) end side exhibit gaps up to 4" W x 1/4" H at each side and is loose and free to move slightly longitudinally approx. 3/16" by hand but is still restricted within the keeper box and pintels.

Span 162 is simply supported with expansion rocker bearings at Pier 161 end side and fixed bearings at Pier 162 begin side. There are no visible signs of distress on underside of deck, top of deck, or girders at this location. This is a re-flag condition with no significant change since the last inspection.

Notes:
1. The bridge at this span is separated into two sections with a longitudinal joint. Spacing between girders is approx. 8’.
2. Access to this location is by using a 35’ bucket truck and lane closure Bruckner Blvd Northbound (Approach to Bruckner Expressway NorthBound).
Flag Photographs

<table>
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<tr>
<th>Photo Number:</th>
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<th>Photo Filename:</th>
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</table>

---

**PARTIAL PLAN**

**LEGEND**

E - EXPANSION ROCKE R BEARING
F - FIXED BEARING

*Attachment Description: 37234*
Attachment Description: General view of end face of Pier 161, looking begin.
Attachment Description: Uplifted and loose expansion rocker Bearing 10 at Pier 161, Span 162 side, looking begin.
New York State Department of Transportation
Yellow Flag NB16YYW032

By: Sheikh Shakil
Flag Date: September 09, 2016

Superseding Information:
This flag supersedes: YF NB156MW053

Structure Information

BIN: 1066669
Feature Carried: 278I278IX1M53003
Feature Crossed: BRUCKNER BLVD
Orientation: 3 - EAST

Region: 11 - NEW YORK CITY
County: BRONX
Political Unit: City of NEW YORK
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Mike Henriquez
Of: Long Island City in New York
Date: September 12, 2016 9:30:00 AM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Reviewed By: Seth D. Medwick
Date: September 16, 2016
Date: September 16, 2016

Attachments: 9
Flagged Elements

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<th>Element</th>
<th>Total Quantity</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Span Number : 158</td>
<td>PR852 - Pier Pedestal</td>
<td>24</td>
<td>each</td>
</tr>
</tbody>
</table>

Flagged Condition Description

Location: Pier 158 begin side (Span 158 side), pedestals under Girder 5 and Girder 6

The 13" high reinforced concrete pedestal under Girder 5 at Pier 158, begin side (Span 158 side) is spalled, with 2 out of 4 anchor bolts partially exposed for up to 6"H and corroded with no section loss. Pedestal reinforcement is also exposed and corroded up to 5% section loss. The overall pedestal cross sectional area loss is approx. 27%. The begin face at the left side of this Pedestal sounded hollow, however the core of the spalled area and the remaining areas of the pedestal sounded solid. The masonry plate is undermined for approx. 12% due to this spalling.

The 17" high reinforced concrete pedestal under Girder 6 at Pier 158, begin side (Span 158 side) is spalled, with 2 out of 4 anchor bolts partially exposed for up to 5"H and corroded with no section loss. Pedestal reinforcement is also exposed and corroded up to 5% section loss. The overall pedestal cross sectional area loss is approx. 11%. The core of the spalled area and the remaining area of the pedestal sounded solid. The masonry plate is undermined for approx.2% due to this spall.

There has been no change in condition since the previous inspection.

Notes:
1. Span 158 is supporting Sheridan Expressway Southbound which consists of six girders, G1 thru G6, and the Sheridan Expressway Northbound which consists of ten girders, G7 thru G16. Both Northbound and Southbound portions are separated at Span 147 and are jointed back at Span 160. Span 158 under the Sheridan Expressway Southbound is multi girders system.

2. Span 158 is simply supported; expansion rocker bearings at the end side of Pier 157 and fixed steel rocker bearings at the begin side of Pier 158. Spacing between girders is approximately 8'- 8".

3. Access to Pier 158 pedestals is by 35' Bucket Truck with left lane closure at ramp to NB Bruckner Expressway.
Flag Photographs

Photo Number: 1

Photo Filename: LOCATION PLAN.jpg

LOCATION PLAN

LEGEND

E - EXPANSION ROCKER BEARING
F - FIXED BEARING

Attachment Description: LOCATION PLAN.jpg
Photo Number: 2
Photo Filename: ELEVATION VIEW-PEDESTAL 5.jpg

LEGEND:

- H - Hollow
- S - Spall

Note: Right side is in good condition & soundly solid

Attachment Description: ELEVATION VIEW-PEDESTAL 5.jpg
UNDERMINING CALCULATIONS

![Diagram of Masonry Plate and Pedestal](_attachment: UNDERMINING CALCULATION- PEDESTAL 5.jpg)

**PIER 150, SPAN 168 SIDE**

**PEDESTAL 5**

**PLAN VIEW**

**Masonry Plate Area**

\[
14 \times 29 = 406 \text{ in}^2
\]

**Masonry Plate Undermining Area**

\[
(14 \times 0.5) + (24 \times 1) + (6 \times 1) + (2.5 \times 5.5 \times 0.5) + (2.5 \times 3.5 \times 0.5) = 48.3 \text{ in}^2
\]

% undermining of Masonry Plate =

\[
\frac{48.3}{406} \times 100 = 11.9\% \quad \text{SAY 12%}
\]

**Original Pedestal Cross Sectional Area**

\[
18 \times 34 = 612 \text{ in}^2
\]

**Pedestal Cross Sectional Area Loss**

\[
(18 \times 3) + (6 \times 3) + (28.5 \times 3) + (2.5 \times 5.5 \times 0.5) + (2.5 \times 3.5 \times 0.5) = 162.75 \text{ in}^2
\]

% of Pedestal Cross Sectional Area Loss =

\[
\frac{162.75}{612} \times 100 = 26.5\% \quad \text{SAY 27%}
\]

**Attachment Description:** UNDERMINING CALCULATION- PEDESTAL 5.jpg
Reference: BIN 1066669 Bridge Inspection Report
Inspection Date: September 23, 2016

Yellow Flag NB16YYW032
BIN 1066669
Flag Date: September 09, 2016

Photo Number: 4
Photo Filename: ELEVATION VIEW-PEDESTAL 6.jpg

---

**PIER 158 (SPAN 158 SIDE), PEDESTAL # 6**

**LEGEND:**

- H - Hollow
- - Spall

**ELEVATION VIEWS**

- **BEGIN FACE**
  - Dimensions: 34" x 17.5" x 8.5"
  - Note: Right side is in good condition & sound solid

- **END FACE**
  - Dimensions: 34" x 17.5" x 8.5"

- **LEFT FACE**
  - Dimensions: 34" x 17.5" x 8.5"

**Attachment Description:** ELEVATION VIEW-PEDESTAL 6.jpg
**UNDERMINING CALCULATIONS**

**PIER 158, SPAN 158 SIDE**

**PEDESTAL 6**

**PLAN VIEW**

N.T.S.

Masonry Plate Area = 
29 x 14 = 406 in^2

Masonry Plate Undermined Area = 
(0.5 x 2.5 x 2) + (0.5 x 3 x 3) = 7 in^2

% Undermining of Masonry Plate = 
(7/406) x 100 = 1.72%  
**SAY 2%**

Pedestal Original Cross Sectional Area = 
18 x 34 = 612 in^2

Pedestal Cross Sectional Area Loss = 
(18 x 2) + (6 x 2) + (6 x 2) + (2.5 x 2 x 0.5) + (3 x 3 x 0.5) = 67 in^2

% of Pedestal Cross Sectional Area Loss = 
(67/612) x 100 = 10.9%  
**SAY 11%**

---

**Attachment Description:** UNDERMINING CALCULATION- PEDESTAL 6.jpg
Attachment Description: General view of begin face of Pier 158, looking end.
Attachment Description: Spalled Pedestal 5 at Pier 158, Span 158 side, looking right.
<table>
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<tr>
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<th>Photo Filename:</th>
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</tr>
</thead>
</table>

**Attachment Description:** Spalled Pedestals 5 and 6 at Pier 158, Span 158 side, looking begin right.
Attachment Description: Spalled Pedestal 6 at Pier 158, Span 158 side, looking right.
BIN: 1066669 Bridge Inspection Report
Inspection Date: September 23, 2016

New York State Department of Transportation
Yellow Flag NB16YYW033

By: Sheikh Shakil
Flag Date: September 09, 2016

Superseding Information:
This flag supersedes: YF NB156MW054

Structure Information
BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information
Person Notified: Mike Henriquez
Date: September 12, 2016 9:30:00 AM
Of: Long Island City in New York

Signature Information
Signature: Sheikh Shakil, P.E. 068017
Date: September 16, 2016
Reviewed By: Seth D. Medwick
Date: September 16, 2016

Attachments: 5
Location: Pier 159 begin side (Span 159 side) reinforced concrete pedestal under Girder 6.

The reinforced concrete pedestal under Girder 6 at begin side (Span 159 side) of Pier 159 is spalled with partially exposed reinforcements and one of four anchor bolts is exposed for approx. 4"H with approx.5% section loss. The overall pedestal cross sectional area loss is approx.16%. The begin face exhibits minor hollow sounding area and approx.1/8"W vertical crack at the right side corner. The core of the spalled area and the remaining area of the pedestal sounded solid. The masonry plate is undermined for approx.4% due to this spall. This is a re-flag with no change since previous inspection.

Notes:
1. Span 159 is supporting Sheridan Expressway Southbound which consists of six girders, G1 thru G6, and the Sheridan Expressway Northbound which consists of ten girders, G7 thru G16. Both Northbound and Southbound portions are separated at Span 147 and are jointed back at Span 160. Span 159 under the Sheridan Expressway Southbound is multi girder system.

2. Span 159 is simply supported; expansion rocker bearings at the end side of Pier 158 and fixed steel rocker bearings at the begin side of Pier 159. Spacing between girders is approximately 8'- 8".

3. Access to Pier 159 pedestals is by 35' Bucket Truck with lane closure at Bruckner Expressway Northbound.
Flag Photographs

Photo Number: 1

Photo Filename: LOCATION PLAN.jpg

LOCATION PLAN

BRYANT AVE.

N.T.S.

Partial Plan

LEGEND
E Expansion bearing
F Fixed bearing

Bridge Inspection Report
Inspection Date: September 23, 2016

Flag Photographs

Photo Number: 1

Photo Filename: LOCATION PLAN.jpg

LOCATION PLAN

BRYANT AVE.

N.T.S.

Partial Plan

LEGEND
E Expansion bearing
F Fixed bearing

Attachment Description: LOCATION PLAN.jpg
Masonry Plate Area = 29 x 14 = 406 in^2

Masonry Plate Undermined Area = 
(14 x 0.5) + (5.5 x 3 x 0.5) = 15.25 in^2

% Undermining of Masonry Plate = 
(15.25/406) x 100 = 3.75%

   SAY 4%

Pedestal Originial Cross Sectional Area = 
18 x 36 = 648 in^2

Pedestal Cross Sectional Area Loss = 
(18 x 4) + (12 x 2) + (3 x 5.5 x 0.5) = 104.25 in^2

% Pedestal Cross Sectional Area Loss = 
(104.25/648) x 100 = 16.1%

   SAY 16%

Attachment Description: UNDERMINING CALCULATION.jpg
LEGEND:

H – Hollow

– Spall

PIER 159 (SPAN 159 SIDE), PEDESTAL # 6

ELEVATION VIEWS

Note: Right side is in good condition & sounded solid

Attachment Description: ELEVATION VIEW.jpg
Attachment Description: General view of begin face of Pier 159, looking end.
<table>
<thead>
<tr>
<th>Photo Number:</th>
<th>5</th>
<th>Photo Filename:</th>
<th>IMG_7981.JPG</th>
</tr>
</thead>
</table>

**Attachment Description:** Spalled Pedestal 6 at Pier 159, Span 159 side, looking begin right.
New York State Department of Transportation
Yellow Flag NB16YYW034

By: Sheikh Shakil
Flag Date: September 19, 2016

Superseding Information:
This flag supersedes: YF NB156MW055

Structure Information

BIN: 1066669
Feature Carried: 278I278IX1M53003
Feature Crossed: BRUCKNER BLVD
Orientation: 3 - EAST

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Thomas McAndrews, P.E.
Of: Long Island City in New York
Date: September 19, 2016 12:30:00 PM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Reviewed By: Seth D. Medwick
Date: September 21, 2016

Attachments: 14
## Flagged Elements

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<th>Total Quantity</th>
<th>Unit</th>
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</tr>
<tr>
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## Flagged Condition Description

Location: Pier 6 (Span 6 side), Bearing at G5; Pier 12 (Span 13 side), Bearing at G4; Pier 13 (Span 14 side), Bearing at G5; Pier 25 (Span 25 side), Bearing at G4; Pier 42 (Span 43 side), Bearing at G5; Pier 53 (Span 53 side), Bearing at G5; Pier 103 (Span 103 side), Bearing at G2; Pier 104 (Span 104 side), Bearing at G4; Pier 105 (Span 105 side), Bearing at...
G3; Pier 123 (Span 123 side), Bearing at G2; Pier 146 (Span 146 side), Bearing at G5; Pier 155 (Span 156 side), Bearing at G9; Pier 156 (Span 157 side), Bearing at G10; Pier 160 (Span 161 side), Bearing at G12; Pier 161 (Span 162 side), Bearing at G2 and Pier 165 (Span 166 side), Bearing at G5

The expansion rocker bearings at above locations are loose and free to move slightly longitudinally up to 1/4" by hand but are still restricted within the keeper box and pintels. In addition, these bearings exhibit pack rust up to 1/2" (H) and or gap up to 3/8" (H) between rocker and bearing plate

This is a reissued flag with no change from previous inspection.

Notes:
1. A 60 foot man lift with lane closure is required to access the subject locations.
2. Bearings under G1 to G6 support the SB traffic lanes of Bruckner Boulevard. Bearings under G7 to G12 support the northbound traffic lanes.
Flag Photographs

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Photo Filename:</td>
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Yellow Flag NB16YYW034

Location plan I.jpg

Attachment Description: Location plan I.jpg
YELLOW FLAG NB16YYW034
LOCATION PLAN

PARTIAL PLAN
N.T.S

LEGEND
E  Expansion bearing
F  Fixed bearing

Attachment Description: Location plan II.jpg
Attachment Description: Location plan III.jpg
YELLOW FLAG NB16YYW034

LOCATION PLAN

Location of Yellow Flag
NB16YYW034

PARTIAL PLAN
N.T.S

LEGEND
E Expansion bearing
F Fixed bearing

Attachment Description: Location plan IV.jpg
Photo Number: 5  Photo Filename: Location plan V.jpg

YELLOW FLAG NB16YYW034
LOCATION PLAN

Location of Yellow Flag NB16YYW034

LEGEND
E Expansion bearing
F Fixed bearing

Attachment Description: Location plan V.jpg
YELLOW FLAG NB16YYW034
LOCATION PLAN

LEGEND
E Expansion bearing
F Fixed bearing

Location of Yellow Flag NB16YYW034

Partial Plan
N.T.S.

Attachment Description: Location plan VI.jpg
YELLOW FLAG NB16YYW034
LOCATION PLAN

LEGEND
E  Expansion bearing
F  Fixed bearing

Attachment Description: Location plan VII.jpg
YELLOW FLAG NB16YYW034
LOCATION PLAN

PRIVATE PARKING
Lot Below

BRUCKNER BLVD
Southbound

BRUCKNER BLVD
Northbound

ROOSEVELT EXPWY NB

PARTIAL PLAN
N.T.S

LEGEND
E  Expansion bearing
F  Fixed bearing

Attachment Description: Location plan VIII.jpg
YELLOW FLAG NB16YYW034
LOCATION PLAN

attachment Description: Location plan IX.jpg
YELLOW FLAG NB16YYW034
LOCATION PLAN

Attachment Description: Location plan X.jpg
YELLOW FLAG NB16YYW034
LOCATION PLAN

RELIEF AREA BELOW

Location of Yellow Flag NB16YYW034

BRUCKNER BLVD
Westbound
(UNDER)

PARTIAL PLAN
N.T.S

LEGEND
E Expansion bearing
F Fixed bearing

Attachment Description: Location plan XI.jpg
Attachment Description: Pier 103 Span 103 Bearing under Girder 2 is loose, looking left.
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*Attachment Description:* Pier 160 Span 161 Bearing under Girder 12 is loose, looking begin.
Attachment Description: Pier 165 Span 166 Bearing under Girder 5 is loose, looking begin.
New York State Department of Transportation
Yellow Flag NB16YYW035

By: Sheikh Shakil
Flag Date: September 16, 2016

Superseding Information:
This flag supersedes: YF NB156MW058

Structure Information
BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information
Person Notified: Thomas McAndrews, P.E.
Date: September 19, 2016 12:28:00 PM
Of: Long Island City in New York

Signature Information
Signature: Sheikh Shakil, P.E. 068017
Date: September 21, 2016
Reviewed By: Seth D. Medwick
Date: September 21, 2016

Attachments: 5
The structural deck is 10" thick (7 1/2" thick reinforced concrete slab + 2 1/2" thick Latex Modified Concrete overlay). The underside of the concrete deck exhibits the following:

Span 140, Bay 10 between D3 and Pier 140: 50 SF x up to 3.5" deep spall with exposed and debonded primary reinforcements with up to 25% section loss due to corrosion. Span 141, Bay 10 between Pier 140 and D2: 16 SF x up to 3.5" deep spall with exposed and debonded reinforcements with up to 10% section loss due to corrosion.

The top of deck at these locations is presently in good condition, with no signs of depression. However, due to the depth and size of these spalls, they are still potential punch-thru locations and thus compromise the fabric of the deck structure.

There is no significant change in condition since last inspection.

Notes:
1. These conditions which are located above the Northbound lanes of Bruckner Boulevard are completely covered with nylon netting.
2. This flag was issued after the completion of top of deck inspection.
3. Access to these locations from below will require lane closure at NB Bruckner Boulevard and a 60’ man lift.
**Flag Photographs**

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<thead>
<tr>
<th>Photo Number:</th>
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<tbody>
<tr>
<td>Photo Filename:</td>
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</table>

**PARTIAL PLAN**

**Legend:**

- Spalled concrete with exposed and debonded reinforcements

**Attachment Description:** PARTIAL PLAN.jpg
| Photo Number: | 2   | Photo Filename: | IMG_8419.JPG |

**Attachment Description:** General view of underside of deck spall in Bay 10 at Span 140, looking end.
<table>
<thead>
<tr>
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<tr>
<td>Photo Filename:</td>
<td>DSCN1151.JPG</td>
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</tbody>
</table>

**Attachment Description:** Large Spall at underside of deck in Bay 10 at Span 140, looking end.
Attachment Description: General view of underside of deck spall in Bay 10 at Span 141, looking begin.
Attachment Description: Large spall at underside of deck in Bay 10 at Span 141, looking end.
New York State Department of Transportation
Yellow Flag NB16YYW036

By: Sheikh Shakil
Flag Date: September 20, 2016

Superseding Information:
No Flags Superseded

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Mike Henriquez
Of: Long Island City in New York
Date: September 20, 2016 3:20:00 PM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Reviewed By: Seth D. Medwick
Date: September 21, 2016
Date: September 21, 2016

Attachments: 6
Flagged Elements

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<td>Span Number: 105</td>
<td>PR311 - Movable Bearing</td>
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</table>

Flagged Condition Description

Location: Pier 43 (Span 44 side), Bearing at G8; Pier 52 (Span 52 side), Bearing at G2; Pier 105 (Span 105 side), Bearing at G2.

The expansion rocker bearings at above locations are loose and free to move slightly longitudinally up to 1/4" by hand but are still restricted within the keeper box and pintels. In addition, these bearings exhibit pack rust up to 1/2" (H) and or gap up to 3/8" (H) between rocker and bearing plate.

This is a new flag.

Notes:
1. A 60 foot man lift with lane closure is required to access the subject locations.
2. Bearings under G1 to G6 support the SB traffic lanes of Bruckner Boulevard. Bearings under G7 to G12 support the northbound traffic lanes.
Flag Photographs

Photo Number: 1  
Photo Filename: Location plan I.jpg

YELLOW FLAG NB16YYW036  
LOCATION PLAN

EAST 141st STREET

BRUCKNER BLVD  
SOUTHBOUND

BRUCKNER BLVD  
NORTHBOUND

PARTIAL PLAN  
N.T.S

LEGEND

E  Expansion bearing
F  Fixed bearing

Attachment Description: Location plan I.jpg
YELLOW FLAG NB16YYW036
LOCATION PLAN

Location of Yellow Flag NB16YYW036

PARTIAL PLAN
N.T.S

LEGEND
E Expansion bearing
F Fixed bearing

Attachment Description: Location plan II.jpg
YELLOW FLAG NB16YYW036
LOCATION PLAN

Location of Yellow Flag NB16YYW036

Attachment Description: Location plan III.jpg

Legend:
E Expansion bearing
F Fixed bearing
| Photo Number: | 4 | Photo Filename: | DSCN0334.JPG |

Attachment Description: Pier 43 Span 44 Bearing under Girder 8 is loose, looking begin.
<table>
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</tbody>
</table>

Attachment Description: Pier 52 Span 52 Bearing under Girder 2 is loose, looking end.
| Photo Number: | 6     | Photo Filename: | DSCN0460.JPG |

*Attachment Description:* Pier 105 Span 105 Bearing under Girder 2 is loose, looking end.
# Bridge Inspection Report

## PIA Safety Flag NB16YYW037

**By:** Sheikh Shakil  
**Flag Date:** September 20, 2016  
**Superseding Information:** No Flags Superseded

## Structure Information

<table>
<thead>
<tr>
<th>BIN: 1066669</th>
<th>Region: 11 - NEW YORK CITY</th>
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<tbody>
<tr>
<td>Feature Carried: 278I278IX1M53003</td>
<td>County: BRONX</td>
</tr>
<tr>
<td>Feature Crossed: BRUCKNER BLVD</td>
<td>Political Unit: City of NEW YORK</td>
</tr>
<tr>
<td>Orientation: 3 - EAST</td>
<td>Approximate Year Built: 1960</td>
</tr>
</tbody>
</table>

**Bridge Load Posting (Tons):** Not Posted for Load

**Primary Owner:** New York State Department of Transportation  
**Primary Maintenance Responsibility:** 12 - State - Subcontracted to another Party  
**Typical or Main Span Type:** 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder  
**This Bridge is not a Ramp**  
**Number of Spans:** 176

## Verbal Notification Information

**Person Notified:** Mike Henriquez  
**Of:** Long Island City in New York  
**Date:** September 20, 2016 3:25:00 PM

## Signature Information

**Signature:** Sheikh Shakil, P.E. 068017  
**Reviewed By:** Seth D. Medwick  
**Date:** September 22, 2016

**Attachments:** 3
Location: Span 62, Right concrete parapet along NB Bruckner Expressway.

The light pole 8BX4095SA exhibits 2 of 4 loose/untightened anchor bolt nuts at end side, thus creating a 3/4" gap between the light pole base and the elastomeric pad resting on top of the concrete parapet. The light pole is tilted approximately 7 degrees towards begin/opposite direction of traffic. The light pole can be slightly shaken by hand.

This is a new flag condition. PIA Safety Flag issued after QC review

Notes:
1) The light pole has a 2'-6" (W) x 3'-0" (D) sign panel attached to it.
2) Right lane closure at Bruckner Expressway Northbound will be required to access this location.
Flag Photographs

<table>
<thead>
<tr>
<th>Photo Number:</th>
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<th>Photo Filename:</th>
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Location of Safety Flag NB16YYW037

PARTIAL PLAN VIEW

Attachment Description: LOC. PLAN.jpg
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</table>

**Attachment Description:** General view of light pole at Span 62 at right parapet, looking end.
Attachment Description: Close up view of base of light pole at Span 62 at right parapet, looking right.
New York State Department of Transportation
PIA Safety Flag NB16YYW038

By: Sheikh Shakil
Flag Date: September 21, 2016

Superseding Information:
This flag supersedes: SF NB156MW059

Structure Information

BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder
This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information

Person Notified: Mike Henriquez
Of: Long Island City in New York
Date: September 20, 2016 3:28:00 PM

Signature Information

Signature: Sheikh Shakil, P.E. 068017
Date: September 22, 2016

Reviewed By: Seth D. Medwick
Date: September 22, 2016

Attachments: 4
No Flagged Elements

Flagged Condition Description

Locations: Top of right concrete parapet at Northbound Bruckner Expressway. Span 128 (Over Tiffany Street) and Span 130 (over Railroad property).

Light pole 8BX9034SB (Span 128) exhibits thru crack at the begin left corner of light pole base. Remaining 3 corners are in good condition.

Light pole 8BX91045A (Span 130) exhibits thru crack at the begin left corner of light pole base and one untightened anchor bolt nut at the begin right corner, thus creating ¼" gap between light pole base and elastomeric pad at top of concrete parapet. These light poles can be shaken slightly by hand.

This 2015 Safety Flag was reissued as a Safety PIA Flag after QC review.

Note:
1) Right lane closure at Bruckner Expressway Northbound will be required to access this location.
### Flag Photographs

<table>
<thead>
<tr>
<th>Photo Number</th>
<th>Photo Filename</th>
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<tbody>
<tr>
<td>1</td>
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**Legend:**
- • LOCATION OF FLAGGED LIGHT POLE

**Attachment Description:** LOCATION PLAN.jpg
Attachment Description: Span 130, LP 8BX91045A , right parapet, looking end.
| Photo Number: | 3 | Photo Filename: | IMG_8306 - SP. 130.JPG |

**Attachment Description:** Span 130, LP 8BX91045A, crack at the begin left corner, looking end and right.
Attachment Description: Span 128, LP 8BX9034SB, crack at the begin left corner, looking right.
New York State Department of Transportation
PIA Safety Flag NB16YYW039

By: Sheikh Shakil
Flag Date: September 21, 2016

Superseding Information:
This flag supersedes: SF NB156MW060

Structure Information
BIN: 1066669
Region: 11 - NEW YORK CITY
Feature Carried: 278I278IX1M53003
County: BRONX
Feature Crossed: BRUCKNER BLVD
Political Unit: City of NEW YORK
Orientation: 3 - EAST
Approximate Year Built: 1960

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation
Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party
Typical or Main Span Type: 4 - Steel (Continuous), 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp
Number of Spans: 176

Verbal Notification Information
Person Notified: Thomas McAndrews, P.E.
Of: Long Island City in New York
Date: September 22, 2016 10:40:00 AM

Signature Information
Signature: Sheikh Shakil, P.E. 068017
Reviewed By: Seth D. Medwick
Date: September 22, 2016

Attachments: 3
Location: Span 83, Left concrete parapet along SB Bruckner Expressway.

The light pole 8BX5635NC exhibits 3 of 4 loose anchor bolt nuts, thus creating 3/8” gap between the light pole base and the elastomeric pad at top of concrete parapet. The light pole tilted approximately 5 degrees toward opposite direction of traffic. The light pole can be slightly shaken by hand.

The condition has not changed significantly since last inspection. This 2015 Safety Flag was reissued as a Safety PIA Flag after QC review.

Notes:
1) Right lane closure at Bruckner Expressway Southbound will be required to access this location.
Flag Photographs

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**Attachment Description:** Span 83, left parapet along Southbound Bruckner Expwy, looking begin. General view of light pole.
Attachment Description: Span 83, left parapet, looking end. Close up view of loose anchor bolt nuts.
1066669_LOCATION_MAP.JPG

1066669_QUAD_MAP.JPG