2023 Interim Repairs: *Three Weekend Closures*
Agenda

Introductions
BQE 2023 Construction Project Overview
Need for BQE Interim Repairs
Weekend Closures/Detours
Discussions/Action Items
BQE Project Overview

• **Safety is our number one priority.**

• NYC DOT and outside engineering partners (C2Smart) are closely tracking the city-owned structure to ensure we stay ahead of potential safety issues.
  
  • **In-Person Inspections by DOT Engineers.** Quarterly visual inspections detect any localized cracking, concrete spalling, steel corrosion, and other visible flags
  
  • **Constant Monitoring via Sensors.** Sensors and specialized instruments monitor changes in global stiffness, concrete cracking, and vibrations
  
  • **Truck Weight Monitoring.** Weigh-In-Motion technology provides real-time measurement of truck loads. Automated enforcement starting by early 2023
  
  • **Analysis and Modeling:** DOT and outside engineering partners (C2Smart) are using data from monitoring to assess structure’s current condition and to model its future condition
BQE Project Overview

- Components require immediate attention
- Addressing immediate needs will allow us to maintain traffic flow
- **Components Requiring Immediate Attention**
  - Span 34 (Clark Street)/Clark Street Fan Plant
  - Span 4 (Grace Court)
  - Joralemon Street Garage
BQE – Interim Repair Area Context

- BQE QB Deck repair at Grace Court
- BQE QB Deck repair/Column and Beam repair at Clark Street
Hicks Street – Repairs

- Structural repair inside the chamber that houses the fan plant
- Work is concurrent with planned BQE closures
- Coordination with MTA, which owns fan plant
Joralemon Street Garage

- Structural repair inside the chamber that houses the garage
- Work can happen without BQE closures
- Crews can access work area via local street
**BQE Repair Challenges**

**Current BQE Condition**

- Remove deteriorated concrete and rebar

**Legend**
- **Existing Concrete**
- **Existing Rebar**

**Required BQE Repairs**

- Repair concrete and rebar

**Legend**
- **Concrete Repair**
- **Rebar Repair**

**BQE Atlantic to Sands**
Queens Bound Interim Deck Repair

Existing Condition

Legend
- Existing Asphalt
- Existing Rebar

Proposed Condition
Rebar added, not replaced

Legend
- Asphalt Overlay
- Supplemental Reinforcement
Queens Bound Interim Repairs at Clark Street

- Column & beam repair
- Furman Street
- Underdeck Repairs
- Column & Beam Repair
- MTA Conduits

BQE Atlantic to Sands
Construction Staging

**Preparation Work (Night-Time)**

- Remove deteriorated concrete
- Add steel plates for support in preparation
- No daytime work

*Two level highway restricts areas to shift traffic during construction*
First Weekend Closure

Full closure of all Queens-Bound lanes with BQE traffic to exit at Atlantic Ave

One lane open in the Staten Island Bound direction

Closures between Saturday 2AM to Monday 4AM
Second and Third Weekend Closures

Full closure of all Queens-Bound lanes with remaining BQE traffic to exit at Atlantic Ave

All travel lanes on the Staten Island-Bound direction will be open

Closures between Saturday 2AM to Monday 4AM
Weekend Closures (3 Total, Mar. - Oct.)

• **Weekend 1:** Queens-bound and Staten Island-bound closures
  - QB: Full Closure
  - SIB: 1 Lane Open

• **Preparation Work Continued**

• **Weekend 2:** Queens-bound closure only
  - QB: Full Closure
  - SIB: No Closure

• **Preparation Work Continued**

• **Weekend 3:** Queens-bound closure only
  - QB: Full Closure
  - SIB: No Closure

• **All Weekend Closures**
  - Entrance ramps along QB will be closed and detour routes will be provided
  - Traffic Enforcement Agents (TEA) and Pedestrian Managers will be provided
  - Variable message signs (VMS) will be provided in locations approved by EIC
  - Prospect Expressway Bus/HOV barrier
  - Extensive multi-agency coordination ongoing
Mitigation Measures During Closures

- Press blitz and dialogue w/ industry
- Encourage alternate modes of transportation where possible
- Traffic agents at key intersections
- Pedestrian managers at key locations
- VMS signs informing travelers of closures/detours
- Adjustments to lane configurations
- Turn restrictions at select intersections
- Emergency services stationed at BBP
- Coordination with FDNY/NYPD/EMS
- Noise mitigation
  - Sound blankets and monitoring sound levels
- Dust mitigation
Weekend 1 Only

Staten Island-Bound Closures
Staten Island Bound BQE
First Weekend Only
Mainline Lane Closures
Staten Island Bound BQE
First Weekend Only
Lane Configurations - Mitigation

Ramp Closure
Bus Stop Closure
NYPD Police Station
FDNY Fire Station
Hospital
Main Detour
Staten Island Bound BQE Partial Closure
Lane Configuration
Turn Restriction

Vine Street Entrance Ramp
Sands Street Entrance Ramp
Flushing Avenue Entrance Ramp
Staten Island Bound BQE
First Weekend Only
Lane Configurations - Mitigation

2 moving lanes (1 contra flow lane) on Furman St from Old Fulton St to Atlantic Ave

2 moving lanes on Atlantic Ave On Ramp from Columbia St to SIB BQE

HOV slip ramp open to Hugh L. Carey Tunnel

Main Detour
Staten Island Bound BQE
Partial Closure

Bus Stop Closure
NYPD Police Station
FDNY Fire Station
Hospital

Ramp Closure
Lane Configuration
Turn Restriction

Vine Street Entrance Ramp
Sands Street Entrance Ramp
Flushing Avenue Entrance Ramp
Staten Island Bound BQE
First Weekend Only
Turn Restrictions - Mitigation

Local Street Changes:
- Vine Street Entrance Ramp
- Sands Street Entrance Ramp
- Flushing Avenue Entrance Ramp

Ramp Closure
Bus Stop Closure
Lane Configuration
Main Detour
Staten Island Bound BQE Partial Closure
NYPD Police Station
FDNY Fire Station
Hospital

Miles
Staten Island Bound BQE
First Weekend Only
Transit Changes

Close bus stop at Columbia St/Atlantic Ave
Redirect to bus stop at Atlantic Ave/Henry St
Reroute via Congress St and Hicks St to Atlantic Ave

FDNY Fire Station
NYPD Police Station
Hospital

Ramp Closure
Bus Stop Closure
Main Detour
Staten Island Bound BQE Partial Closure
Staten Island Bound BQE
First Weekend Only
Flushing Avenue Entrance Ramp Detour

- Vine Street Entrance Ramp
- Sands Street Entrance Ramp
- Flushing Avenue Entrance Ramp Detour
- Ramp Closure
- Bus Stop Closure
- Lane Configuration
- Main Detour
- Staten Island Bound BQE Partial Closure
- Turn Restriction
- NYPD Police Station
- FDNY Fire Station
- Hospital

Map showing detours and closures for the Staten Island Bound BQE entrance ramp during the first weekend.
Staten Island Bound BQE
First Weekend Only
Sands Street Entrance Ramp Detour
Staten Island Bound BQE
First Weekend Only
Vine Street Entrance Ramp Detour

- Staten Island Bound BQE
- First Weekend Only
- Vine Street Entrance Ramp Detour

- Ramp Closure
- Bus Stop Closure
- Lane Configuration
- Main Detour
- Turn Restriction
- Staten Island Bound BQE Partial Closure
- NYPD Police Station
- FDNY Fire Station
- Hospital

Map showing detour routes and affected areas.
Staten Island Bound BQE
First Weekend Only
All Main Detours

- Vine Street Entrance Ramp
- Sands Street Entrance Ramp
- Flushing Avenue Entrance Ramp

- Staten Island Bound BQE Partial Closure
- Lane Configuration
- Main Detour
- Staten Island Bound BQE Partial Closure
- Bus Stop Closure
- Turn Restriction
- NYPD Police Station
- FDNY Fire Station
- Hospital

0 0.25 0.5 1
Miles

- Ramp Closure
- Bus Stop Closure
- NYPD Police Station
- FDNY Fire Station
- Hospital
Staten Island Bound BQE
First Weekend Only
Mainline Lane Closures
Staten Island Bound BQE
First Weekend Only
Furman St Closures

Close NB Furman St travel lane from Atlantic Ave to Old Fulton St
Staten Island Bound BQE
First Weekend Only
Furman St Closures

Open 2 SB travel lanes from Old Fulton St to Atlantic Ave
Staten Island Bound BQE
First Weekend Only
Lane Configurations - Mitigation

Localized Changes

Lane/Ramp Closure
Open Ramp
Bus Stop Closure
Lane Configuration
Turn Restriction
Staten Island Bound BQE Partial Closure
NYPD Police Station
FDNY Fire Station
Hospital
All 3 Weekend Closures

Queens-Bound Closures
Queens Bound BQE Weekend Full Closure
Lane Configurations - Mitigation
Queens Bound BQE Weekend Full Closure
Turn Restrictions - Mitigation

- Banned EB Atlantic Ave left turn to Hicks St except for buses
- Banned EB Atlantic Ave left turn to Clinton St except for buses

Legend:
- Ramp Closure
- Lane Configuration
- Lane Closure
- Turn Restriction
- Bus Stop Closure
- Main Detour
- Queens Bound BQE Full Closure
- NYPD Police Station
- FDNY Fire Station
- Hospital

North
Queens Bound BQE Weekend Full Closure
Transit Changes

Close Sands St/Pearl St bus stop
Reroute via High St to Jay St
Queens Bound BQE Weekend Full Closure
Atlantic Avenue Detour

All QB BQE vehicles must exit at Atlantic Ave
Queens Bound BQE Weekend Full Closure
3rd Avenue Entrance Ramp Detour
Queens Bound BQE Weekend Full Closure
All Main Detours
Queens Bound BQE Weekend Full Closure Ramp Closures
Queens Bound BQE Weekend Full Closure
Linden Boulevard Detour

Detour routes to Conduit Ave, which provides connections to Nassau Expy, Van Wyck Expy, and the Long Island Expy via the Van Wyck Expy.
Manhattan Lane Configurations - Mitigation

2 thru lanes, 1 right turn lane, and 1 right turn bay on NB Manhattan Bridge Upper Roadway from Manhattan Bridge Arch to Canal St

Close WB lane on WB Canal St from Pike St/Allen St to Eldridge St

1 thru lane and 1 right lane on EB Canal St from Eldridge St to Pike St/Allen St

Close WB lane on WB Canal St from Eldridge St to Canal St

2 thru lanes to SB Bowery, thru lanes to WB Canal St, and 1 thru lane to NB Bowery on NB Manhattan Bridge Lower Roadway from Manhattan Bridge Arch to Canal St

1 thru lane, 1 thru/right turn shared lane, and 1 right turn lane on EB Canal St from Chrystie St to Forsyth St

1 thru lane and 1 right lane on EB Canal St from Pike St/Allen St to Eldridge St

1 thru lane, 1 thru/right turn shared lane, and 1 right turn lane on EB Canal St from Chrystie St to Forsyth St

2 left turn lanes to SB Bowery, thru lanes to WB Canal St, and 1 thru lane to NB Bowery on NB Manhattan Bridge Lower Roadway from Manhattan Bridge Arch to Canal St

1 thru lane and 1 right lane on EB Canal St from Pike St/Allen St to Eldridge St

Close WB lane on WB Canal St from Eldridge St to Canal St

2 thru lanes, 1 right turn lane, and 1 right turn bay on NB Manhattan Bridge Upper Roadway from Manhattan Bridge Arch to Canal St

1 thru lane, 1 thru/right turn shared lane, and 1 right turn lane on EB Canal St from Chrystie St to Forsyth St

2 left turn lanes to SB Bowery, thru lanes to WB Canal St, and 1 thru lane to NB Bowery on NB Manhattan Bridge Lower Roadway from Manhattan Bridge Arch to Canal St
**BQE Interim Repairs Schedule**

**Information Distribution**

NYCDOT will develop and distribute tailored information materials including project one-pagers, presentations, brochures, and construction updates, and distribute them in a variety of ways including through the department website, mass electronic mailings, media posts, and at meetings.

- Last quarter of 2021 ......................................................... Completion of Contract Documents
- Third quarter of 2022 ......................................................... Contract Advertised
- Last quarter of 2022 ......................................................... Contract Award and NTP
Construction Duration for Spans 4 & 34

• Overnight closures between March – October 2023
• The 3 closure weekends spread out over construction season
• Joralemon Street garage repairs will occur concurrently – no BQE closures needed
• More specific schedule will be shared in future as information becomes available
Questions

Thank You!