NJ TRANSIT

H&H

REPLACEMENT OF THE BRIELLE DRAWBRIDGE

PROJECT UPDATE

- Public Outreach – Ongoing
- Preparation of Purpose and Need
- Recommendation of Preliminary Preferred Alternative
- Opportunities for Input

PROJECT LOCATION

PRIMARY OBJECTIVES

- Address deficiencies of the structure to provide a safer and more efficient crossing for NJ TRANSIT users
- Reliable, Durable Bridge with Improved Flood Resiliency and Safety Enhancements
- Evaluate 2-Track North Jersey Coast Line Service*
- Minimize Rail Operation and Marine Traffic Impacts
- Minimize Right of Way (ROW) and Grade Crossing Impacts
- Minimize Environmental and Historical Impacts

* NJ TRANSIT will evaluate ridership and the need to reestablish double track service during the next phase of design

PROJECT SHEET BRIELLE DRAW REPLACEMENT AND CAPACITY ENHANCEMENT

Resiliency
A raised bridge would reduce flood risk and flood scour resistant track would allow for quicker system recovery

Health & Safety
Mitigates risk of flood damage to the bridge while increasing safe speeds for trains

State of Good Repair
Replacing the bridge with modern, more reliable and efficient technology would improve state of good repair

Service Reliability
Increased vertical height would reduce bridge openings and allow higher speeds so trains can better meet their schedules

STRATEGIC GOALS MET

Deliver a high-quality experience for all our customers, with their entire journey in mind

Ensure the reliability and continued safety of our transit system

*A new bridge would be **reliable**, **increase rail capacity**, and **resilient to weather events** and **train breakdowns**.*

ENVIRONMENTAL CONSIDERATIONS

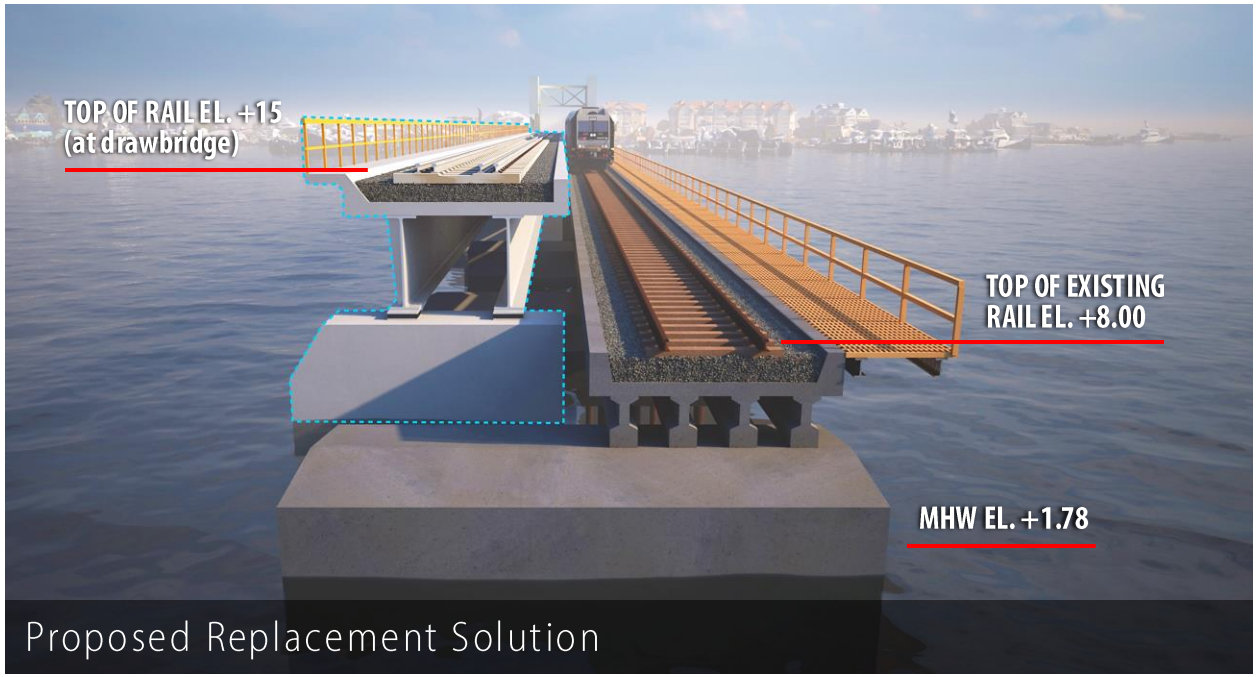
Compliance with the following laws is required to secure federal funding for the project:

- National Environmental Policy Act (NEPA)
- National Historic Preservation Act (NHPA)

The detailed process to achieve compliance with these laws ensures environmental and historical impacts are properly documented and/or mitigated.

RESILIENCY CHALLENGES

Existing Conditions



Proposed Replacement Solution

- Top of Rail 6' Above Mean High Water (MHW)
- Tops of Piers 6"+ above MHW *(submerged during high tide)*
- Counterweight partially submerged by tides
- Tracks completely submerged during Superstorm Sandy

- Raises Top of Rail to 13' above MHW at Drawbridge (above Design Flood Elevation)

CONCEPT DEVELOPMENT PHASE CONSIDERATIONS

- **Explored Profile, Alignment and Structural Options**
  - On-line alignment (preferred)
  - Off-line alignment
    - ROW and reverse curve concerns
- **Explore Bridge Types**
  - Drawbridge Types
    - Bascule Bridge
    - Vertical Lift bridge
  - Approach span types
    - Steel
    - Concrete

Looking North

Looking South

KEY PROJECT CONSIDERATIONS AND SOLUTIONS

	CONSTRAINT	SOLUTION
DESIGN	Flood Resiliency	Raised Profile by 7’ with Innovative Design Detailing
	Foundation Settlement	New Deep Foundations
CONSTRUCTABILITY	Vibration during Construction	Vibration Monitoring
	Maintain Construction Schedule	Coordinate GC and Division of Force Account Work
AGENCY & PUBLIC	Maintain Revenue Rail throughout Construction	Proven Drawbridge Float Out/In Process
	Maintain Navigation and Minimize Business Impacts	Early Coordination with NJT/USCG and Adjacent Businesses/Boat Slip Owners

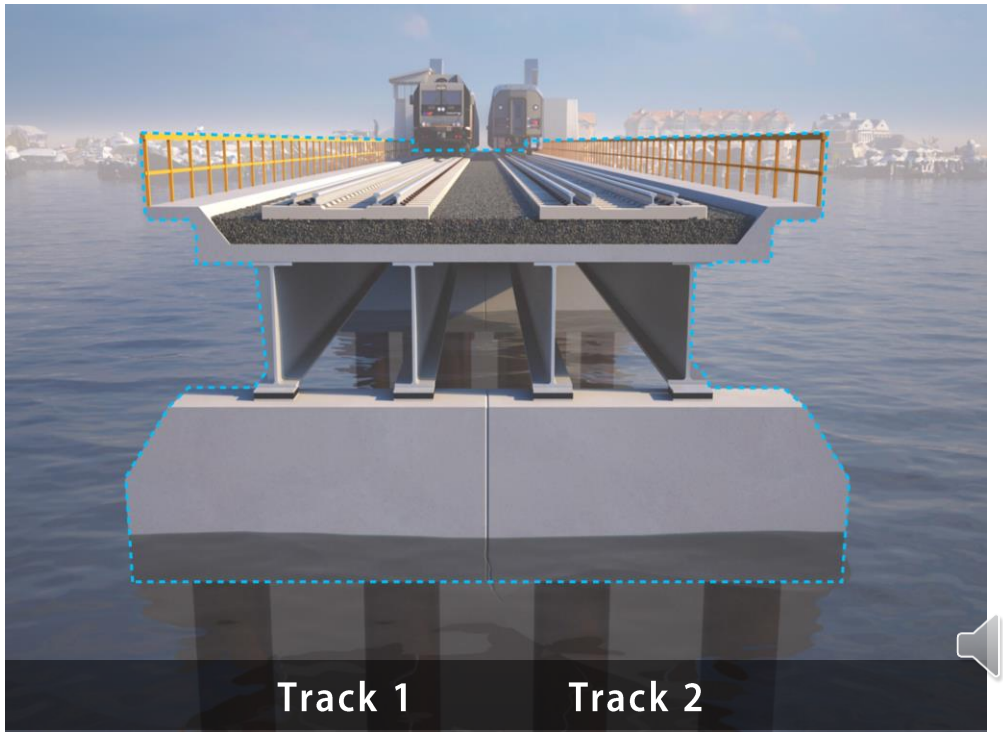
STAGING

Stage 1

- Maintain rail traffic on Track 2
- Construct new RR north half of bridge/Track 1

Stage 2

- Shift rail traffic to Track 1
- Construct new RR south half of bridge/Track 2



STRUCTURAL SOLUTIONS – APPROACH SPANS

- Investigated All Viable Structural Alternatives During Concept Development (CD)
- Revisit and Confirm
- NJ TRANSIT Preferences
  - Long-term maintenance
  - Durability/resiliency
- Evaluate Approach Superstructure Types
  - Steel and concrete beam options

Conceptual Rendering:
Steel Approach Spans and Bascule Span Shown

STRUCTURAL SOLUTIONS – MOVABLE SPAN TYPE

	Advantage	Constraint	Solution
TRUNNION BASCULE	Cost effective compared to Vertical Lift	Large counterweight	Utilize lead counterweight material to decrease size
	Repeatable/reliable movement compared to Rolling Lift	Requires attention to resiliency in span-open position	Lead/smaller counterweight increases distance above flood elevation
VERTICAL LIFT	Efficient structure with machinery well above flood elevation	Limited Vertical Clearance for Vessels; and Visual impact to surrounding businesses	Proactive community outreach during NEPA phase
	Simplified on-line construction, similar to Trunnion Bascule	Challenging access to machinery	Ship ladders for improved access

VIEW LOOKING EAST – EXISTING

VIEW LOOKING EAST – BASCULE ALTERNATIVE (OPEN)

VIEW LOOKING EAST – BASCULE ALTERNATIVE (CLOSED)

VIEW LOOKING EAST – VERTICAL LIFT ALTERNATIVE (OPEN)

VIEW LOOKING EAST – VERTICAL LIFT ALTERNATIVE (CLOSED)

HORIZONTAL TRACK ALIGNMENT

- On-line bridge replacement with improved track center spacing
- Double track movable span within existing footprint
- Movable Bridge in similar location

Conceptual Rendering: Bascule Span Shown

HORIZONTAL TRACK ALIGNMENT

Offline Alternatives Considered and Factors for Non-Selection

- Results in significant ROW impacts
- Requires realignment of private channel
- Requires curves which limits rail speed
- Grade crossing Impacts
- Marina slips in Brielle
- Private access channel to marina in Point Pleasant

PROPOSED CONSTRUCTION SCHEDULE

- Concept Development Underway
- Public Outreach Underway
- Design Completion – 2028
- Construction Begins – 2029
- Construction Completion - 2033

NEXT STEPS

- Receive Public and Stakeholder Input
- Finalize Preferred Alternative
- Receive Finding of No Significant Impact (FONSI)
- Begin Final Design

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THANK YOU