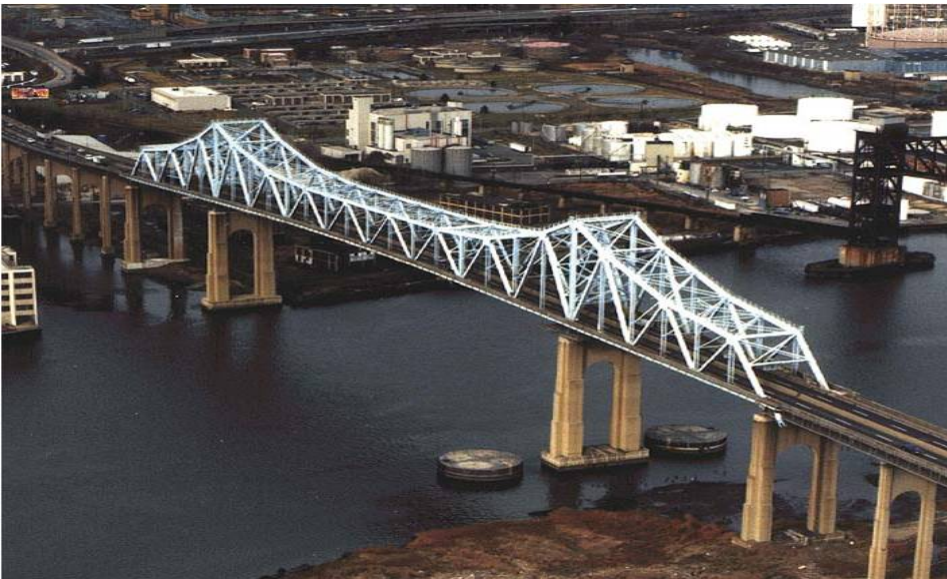


Goethals Bridge Replacement Program – Engineering O&M into P3 DBFM Projects



**Institute of Asset Management – NY Branch
April 20, 2018**

History of The Port Authority of NY & NJ



Established in 1921

Bridges and Tunnels
constructed in 1920's
and 1930's

Airports leased in 1940's

1950's & 1960's

- Bus Terminals
- PATH System
- Container port
- WTC



Assets

- 6 Airports
- 2 Tunnels
- 4 Bridges
- 3 Bus Terminals
- Trans-Hudson Rail System (PATH)
- WTC

Transportation Statistics



AIRPORTS

- 132.7 million passengers in 2017
- 1.3 million flights
- 2.2 million tons of cargo annually

PORT FACILITIES

- Approx. 39.0 million metric tons of cargo annually processed in 2017



Transportation Statistics



PATH

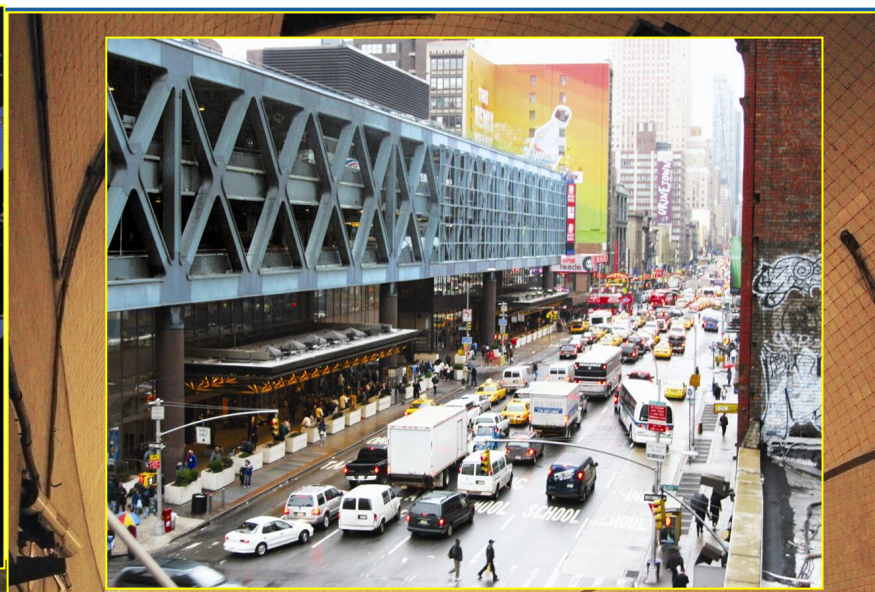
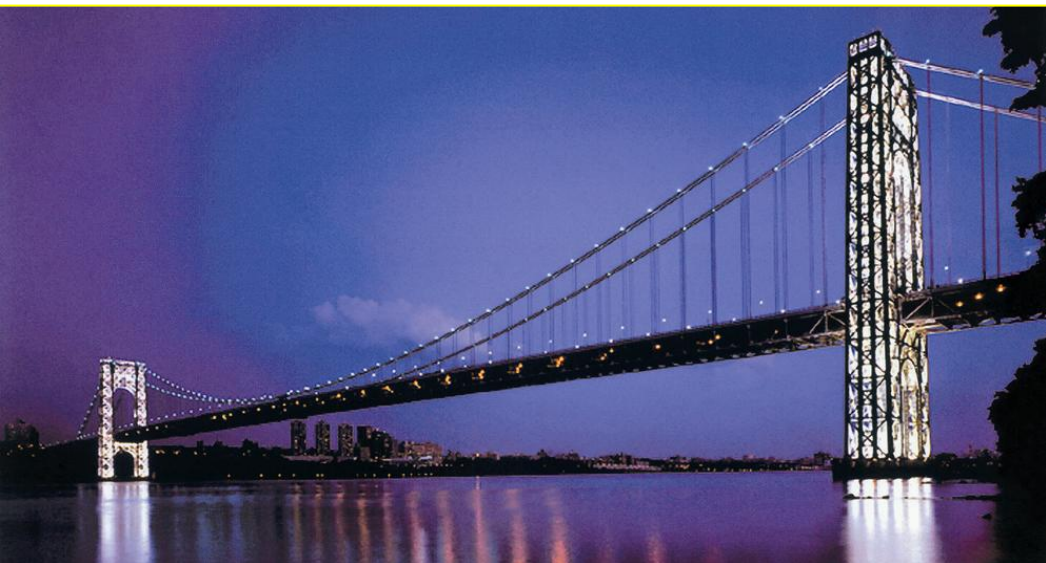
- Our PATH rapid transit system accommodated approximately 82.8 million passengers in 2017.

TUNNELS & BRIDGES

- Approximately 119.4 million eastbound vehicles used our 6 regional crossings in 2017.



Tunnels, Bridges & Terminals Department



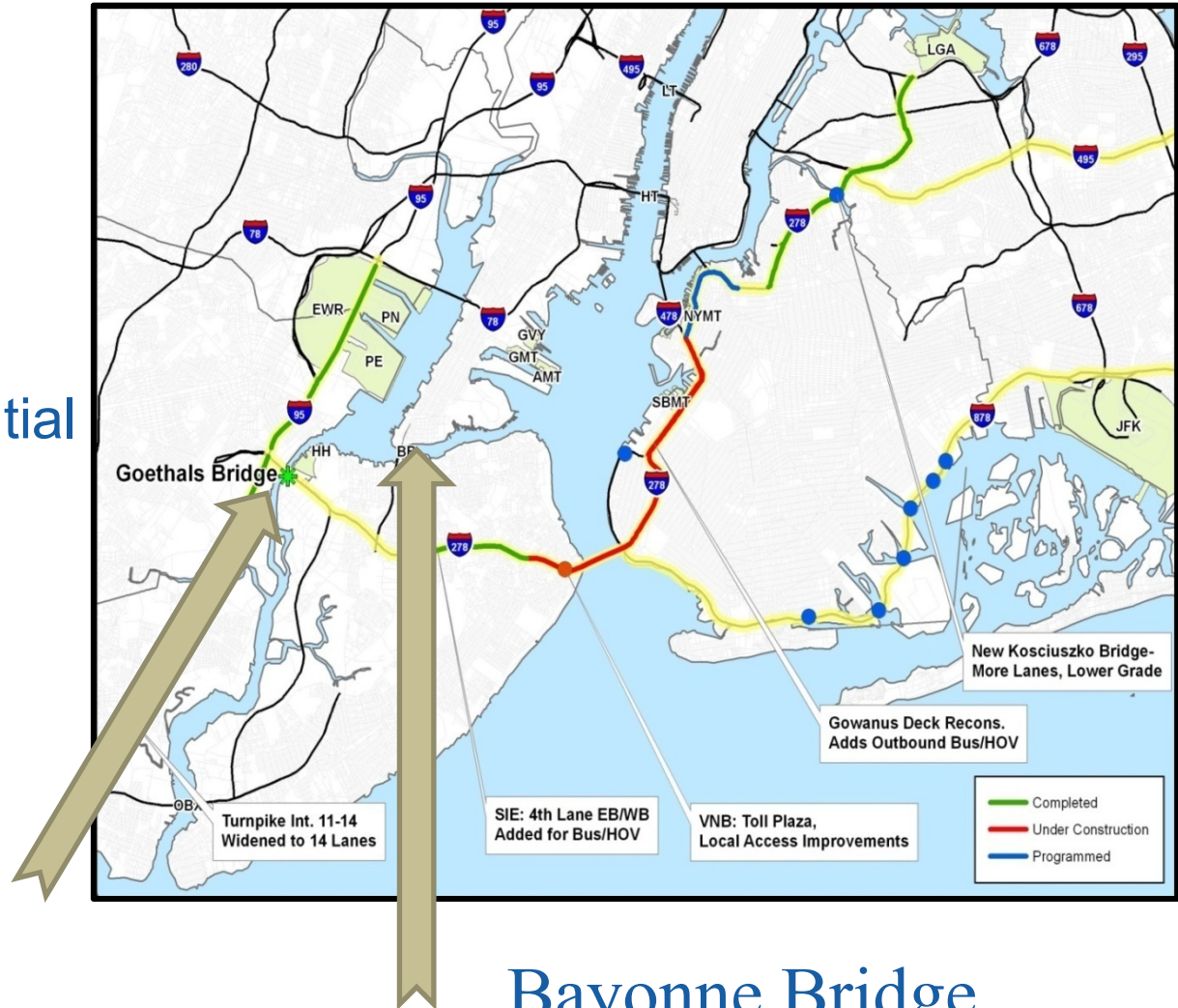


Goethals Bridge Replacement Program

Regional Significance

- Vital artery for goods movement
- Supports New York Container Terminal
- Links NY & NJ residential communities
- Critical link in I-278 southern corridor

Goethals Bridge



Bayonne Bridge

Goethals Bridge Replacement Program



Existing

- Four 10 ft Lanes
- Functionally Obsolete
- No Shoulders
- No Walkway



Proposed

- ✓ Six 12 ft Lanes with shoulders
- ✓ State-of-the-art Cable Stayed Design
- ✓ Up-to-date safety and security features
- ✓ Pedestrian/Bicycle Access
- ✓ Accommodation for future transit corridor
- ✓ Innovative Bridge Technology

Goethals Bridge Replacement Program



Program Status

- Award of Design-Build-Finance-Maintain (DBFM) Contract to NYNJ Link Partnership
 - Equity Member: Macquarie Infrastructure and Real Assets, Inc/Kiewit Development
 - Lead Contractor: Kiewit-Weeks-Massman, a Joint Venture
 - Lead Engineer: Parsons Transportation Group of New York, Inc.
 - Lead Maintenance: Macquarie Infrastructure and Real Assets
 - DBE Goals
- Construction Start – December 2013
- Service Commencement – June 2017
- Substantial Completion - June 2018

Key Aspects of Building O&M into the Project

- Port Authority maintains control of asset and revenue stream
- Customer experience/perception
- Procurement process
- Performance versus prescriptive specifications
- Total operating costs
- Robust maintenance provisions
- Hand-back regime
- Availability payment mechanism



Total Operating Cost Approach

- Avoid Redundancy with existing operations
 - ❖ Maintain PA Police functions
 - ❖ SIB Communications Desk to monitor operations
 - ❖ Oversee and operate ITS
 - ❖ Oversee and operate Access Control System
- PA handle customer complaints
- Port Authority coordinates all emergency response
- Developer responsibilities
 - ❖ Heavy Towing
 - ❖ Environmental - including spill mitigation

Procurement Process - Public-Private Partnership (P3)

- Access to low cost subordinated financing via USDOT TIFIA loan program and tax exempt Private Activity Bonds
- Cost predictability for PA over contract life
- Appropriate Construction/Performance Risk Allocation
- Developer's equity investment incentivizes performance
- RFP Approach
- Information exchange



Performance vs. Prescriptive Specifications

- Contract is primarily a performance based design specification
- Incorporated targeted prescriptive requirements
 - Design life for key bridge elements
 - Main-span stainless steel rebar
 - ITS components
 - Communications Network
 - Building & equipment elevations



Comprehensive Maintenance Program

- Maintenance plans
- Life cycle maintenance requirements
- Annual and five-year renewal work schedules
- Environment and regulatory compliance maintenance plan
- Maintenance manuals
- Full reporting, including:
 - ❖ Condition surveys
 - ❖ Biennial inspections
 - ❖ Routine Safety
 - ❖ ITS Performance



Hand-back Regime

- Clear process established in contract
- Inspection schedule and requirements
- Defined schedule of residual life elements
- Hand-back reserve account



Payments

- Milestone payments during design and construction
- Developer Financing Agreement
- Monthly operating payments
 - ❖ Operational Maintenance Payment
 - ❖ Capital Maintenance Payment
 - ❖ **Non-Compliance deductions**
 - ❖ **Monthly unavailability deductions**



QUESTIONS

