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Attachment A  
Environmental Commitments

The following table is included as a list of Environmental Commitments showing the responsibilities for complying with the Final Environmental Impact Statement (FEIS).

The Environmental Commitments contained include those commitments represented in the Final Environmental Impact Statement as well as the Record of Decision (ROD).

Resource Code	Environmental Compliance Commitment
<b>Land Use</b>	
LU-1	The Authority shall provide just compensation of the private property owners in accordance with, and to the extent provided by applicable law. The Port Authority's Bridges and Tunnels legislation statute, found in New Jersey Statutes Annotated Section 32:1-132; and 65 McKinney's Unconsolidated Laws of New York Section 6516,
LU-2	Construction impacts to land uses (e.g., traffic, noise, vibration, fugitive dust) shall be minimized through the implementation of best management practices (BMPs) and standard procedures such as watering, dust covers for trucks, and protective barriers and equipment that minimize sound, vibration, and air emissions. Additionally, appropriate scheduling during daytime hours for the noisiest construction activities (e.g., pile driving, blasting) shall be implemented to particularly avoid disruptive effects to nearby residences.
LU-3	Coordination with NYCDOT shall be required ahead of the proposed bridge construction activities in order to avoid any direct business disruptions or indirect access impacts along Gulf Avenue.
LU-4	The proposed realignment of Gulf Avenue shall be constructed before the removal of the existing pavement and in a manner to prevent long-term road closures and to maintain vehicle access to all businesses and residences of the Goethals Garden Homes community.
LU-5	All efforts shall be taken to maintain the response times of emergency service providers during the construction phase of the project. Coordination between the design engineer, construction contractors, Port Authority officials and emergency response officials during construction shall serve to identify appropriate and acceptable traffic control and traffic maintenance procedures and plans that shall ensure that emergency response times and access are maintained at current levels.
LU-6	Construction activities shall be phased and scheduled to minimize potential impacts to business operations, particularly along Bay Way, South Front Street, Amboy Avenue and Relocated Bayway Avenue in the City of Elizabeth and along Goethals Road North, Forest Avenue and Gulf Avenue in Staten Island.
LU-7	Adequate staging and signage shall be established, and coordination shall be maintained with local authorities and the media in order to adequately inform businesses and motorists of detours or construction-impacted areas.
LU-8	Construction areas shall be graded at driveways and other access points to allow motor vehicle passage throughout the construction period.
<b>Community Facilities</b>	
CF-1	During construction, the Atlantic Avenue Westbound ramp shall be reversed so that vehicles, including emergency vehicles, could access Atlantic Avenue/Bayway Avenue directly from the bridge. Due to the potential construction closure of the ramps along Atlantic Avenue, vehicles coming from Elizabeth to the bridge shall have to first travel on I-278 westbound before taking the temporary U-Turn and traveling back on I-278 eastbound to access the bridge.
CF-2	The design, location and functions of the pedestrian and bicycle facility along the bridge shall be developed so as not to preclude access to existing and future planned transit modes and community facilities.
<b>Parklands</b>	
PL-1	During construction, access to the NYSDEC Old Place Creek Recreational Site may be interrupted due to temporary roadway closures and construction detour routes, notably along Gulf Avenue. Coordination of the location, timing and extent of the temporary roadway closures and construction detour routes shall be needed to limit adverse access impacts to parklands.
PL-2	Temporary access restrictions on Old Place Creek during construction of the Replacement Bridge and during the demolition of the existing bridge shall be limited to only a few days at the most; these temporary restrictions shall be well publicized and coordinated with the USCG in order to avoid the risk of human injuries.
<b>Historic Resources</b>	
HR-1	Replacement Bridge design documents shall be developed in consultation with SHPOs. The SHPOs review of design documents (plans and specifications) shall occur at 60% and 90% design review phases and shall be limited to compatibility of the proposed bridge design details (e.g., lighting, railing, color, etc.) with affected historic properties. The SHPOs shall respond within 30 calendar days of receipt of the documentation to any design submission pursuant to the Section 106 MOA, or it shall be concluded that the SHPOs are in agreement with the documents as submitted. Design issues identified by the SHPOs during the 60% design review shall be resolved in consultation with SHPOs, the Authority, and the USCG prior to submission of the 90% design document review.
HR-2	The Authority and the USCG shall locate within their respective collections, original design drawings and other drawings, photographs, and construction documents associated with the Goethals Bridge. To the extent that materials of the Authority were not destroyed on 9/11, these archival materials relating to the original construction and subsequent improvements to the bridge and toll plaza shall be made available to state and local repositories as outlined in 2.B, as originals and/or archival copies.
HR-3	The Authority shall coordinate with the New Jersey Division of Archives and Records Management and the New York State Archives and Records Administration to identify needs and requirements for

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	permanent curation and public accessibility. The Authority shall supply archivally stabilized originals or archival-quality copies of such archival materials to the New Jersey Division of Archives and Records Management and the New York State Archives and Records Administration for their repository. The Authority, for security reasons, shall supply such archival materials within six months subsequent to the demolition of the existing bridge. The materials or copies may be housed at the New York Historical Society, the Historical Society of Elizabeth, the Staten Island Historical Society and other repositories and/or libraries.
HR-4	Website application and availability shall be applied, as appropriate, to the Goethals Bridge webpage of the Authority website. For security purposes, additions to the Goethals Bridge webpage and other sites shall be at the discretion of Authority.
HR-5	The Authority shall provide HAER photographic documentation and accompanying narrative to supplement the HAER aerial photography (HAER NY-305), completed in 1991, in consultation with the National Park Service (NPS). The Authority shall defer to the NPS in determining the appropriate levels and standards of HAER documentation, which may include digital photography of the current structure, duplication of historic imagery and drawings, and a historical narrative.
HR-6	Distribution of HAER Documentation. The final HAER documentation shall be made available to the United States Library of Congress (LOC), SHPOs, New Jersey State Library, the Elizabeth Public Library, Rutgers University Special Collections, the New York State Library, and the New York Public Library. The Authority shall prepare a minimum of three (3) archivally stable copies of the final HAER recordation for distribution to the SHPOs and for submittal to the LOC. The Authority shall distribute non-archivally stable copies of the same documentation to the New Jersey State Library, the Elizabeth Public Library, Rutgers University Special Collections, the New York State Library, and the New York Public Library.
HR-7	The Authority shall commission a book on the Goethals Bridge. The book shall be produced in a similar format to the Authority publications on the George Washington Bridge (Darl Rastorfer, 2006) and the Bayonne Bridge (Darl Rastorfer, 2007).
HR-8	The Goethals Bridge Book shall be distributed, two (2) copies each, to the New Jersey State Library, the Elizabeth Public Library, the New York State Library, and the New York Public Library.
HR-9	The Authority shall commission a documentary film, 24 minutes in length, suitable for a half-hour general public broadcast on networks such as NJN Public Television or Thirteen/WNET New York. The content of the film may incorporate items such as the aspects of the existing Goethals Bridge and its development or history, and why a Replacement Bridge is needed. The documentary may include demolition of the existing bridge, oral histories by workers, and the existing bridge's impact on transportation and local development.
HR-10	A lesson plan, developed by a qualified curriculum developer, shall be produced in conjunction with the documentary film. The lesson plan shall satisfy the New York and New Jersey state curricula standards for fourth grade local and state history and/or an aspect of science and/or technology relating to bridge construction and transportation.
HR-11	Distribution of Documentary Film and Educational Materials. The Authority shall distribute one (1) copy of the documentary film and lesson plans on DVD (s) and CD(s) to the SHPOs, the New Jersey State Library, the Elizabeth Public Library, Rutgers University Special Collections, the New York State Library, and the New York Public Library as well as additional parties as appropriate
HR-12	If any major changes to the Replacement Bridge design occur, such that shall alter effects to historic properties other than those addressed in the Section 106 MOA, the USCG shall consult with the SHPOs in accordance with the provisions of 36 CFR 800.
HR-13	At any time during the implementation of the measures stipulated in the Section 106 MOA, should an objection to any such measure or its manner of implementation be raised by a signatory, the USCG shall notify all signatories to the agreement, take the objection into account, and consult as needed to resolve the objection. Disputes regarding the completion of the terms of the MOA, as necessary, shall be resolved by the signatories. If the signatories cannot agree regarding the dispute, the USCG shall then initiate appropriate actions in accordance with the provisions of 36 CFR 800.6(b) and 800.7, as necessary.
HR-14	Ninety days after issuance of the bridge permit and annually on that date until the Section 106 MOA expires or is terminated, the Authority shall provide all parties to this MOA a summary report detailing work undertaken pursuant to its terms. Such report shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in the Developer and the Authority's efforts to carry out the terms of this MOA.
HR-15	If potential historic properties are discovered other than those named in the Section 106 MOA, or unanticipated effects on historic properties found, the signatory parties shall consult in accordance with 36 CFR Section 800.13. In such instances, the terms of the MOA shall be reconsidered and may be amended in accordance with Administrative Condition 8.
HR-16	If any signatory to the Section 106 MOA, including any invited signatory, determines that its terms shall not or cannot be carried out or that an amendment to its terms must be made, that party shall immediately consult with the other parties to develop an amendment to the MOA pursuant to 36 CFR Sections 800.6(c)(7) and 800.6(c)(8). The amendment shall be effective on the date a copy signed by all of the original signatories is filed with the Advisory Council on Historic Preservation. If the signatories cannot agree to appropriate terms to amend the MOA, any signatory may terminate the agreement in accordance with the MOA.
<b>Archaeological Resources</b>	
AR-1	Any proposed staging/work areas beyond the limits of the New Jersey or New York archaeological Area of Potential Effect (APE) for which the Developer's Final Design plans are not currently available have not been investigated for the presence of archaeological resources. As such, these areas may also require an

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	archaeological assessment and/or investigation as well as continued consultation with the SHPOs if any work is performed outside of the respective archaeological APE that has been investigated to date.
<b>Soils</b>	
SO-1	The access roadway shall be located well above mean sea level to minimize erosion and to provide for operations under extreme tide conditions.
SO-2	Upon completion of demolition of the existing Goethals Bridge, all fingers from the construction access road shall be removed and the marsh soils shall be restored to their original grade and re-vegetated.
SO-3	All Approach Span piers located within wetlands or open water shall be constructed within sheet-pile cofferdams in order to keep earth and water from entering the excavation site so that Construction Work can be performed in dry conditions. Handling of the water pumped from the cofferdams during construction shall be coordinated with NJDEP, NYCDEP, and NYSDEC, as appropriate, and addressed in the Special Conditions of the SPDES permit.
SO-4	Excavated soils shall be trucked from the site and shall not be side-cast or otherwise exposed to erosion processes, in accordance with the Comprehensive Environmental Program .
SO-5	Several Approach Span piers and a Main Bridge tower shall be placed in the existing interpier basin on the New Jersey side of the Arthur Kill Waterway. This Work shall also take place within cofferdams, which shall be processed to manage sediment discharge, thus minimizing the release of suspended sediment to the Arthur Kill Waterway.
SO-6	Any excavated marsh soils shall be disposed of off-site or in borrow areas to be identified in the Developer's Final Design, except for that portion which can be used as topsoil for re-vegetation purposes.
SO-7	Soil erosion control measures shall be implemented as part of the Soil Erosion and Sediment Control Plan, to mitigate adverse impacts to erodible soils, which may include a combination of silt fences, hay bales, diversion ditches, temporary grading, and vegetative or other protective coverings for exposed soils.
SO-8	In New Jersey, a soil erosion and sediment control plan shall be prepared and implemented in accordance with the Soil Erosion and Sediment Control Act of 1975, as amended (N.J.S.A. 4:24-39 et. seq.).
SO-9	Mitigation to protect open waters along the construction, maintenance and security access road shall include the use of pile-supported trestles for water crossings.
SO-10	Erosion and sedimentation control measures shall be implemented during the construction of the access road to protect the adjacent wetlands and uplands.
<b>Surface Water Quality</b>	
SQ-1	Any material to be disposed of or to be placed on site during the construction of the Project shall be evaluated and conducted in compliance with the Comprehensive Environmental Program .
SQ-2	The sediment characterization plan and placement options for the material shall be coordinated with and approved by the NJDEP prior to project construction.
SQ-3	Stormwater treatment structures shall not be placed in wetlands.
<b>Aquatic Communities</b>	
AC-1	Prior to demolition of the existing bridge, an analysis of the hazardous materials present in the bridge shall be conducted, and measures shall be taken to avoid any potential releases to the Arthur Kill and Old Place Creek during demolition activities.
AC-2	Because Construction Work shall occur over water, techniques to avoid spills and limit the amount of debris falling into the river shall be employed. These may include special storage areas for fuel and oil and netting to catch falling debris.
AC-3	Demolition of in-water structures shall be performed within cofferdams in order to protect aquatic biota from pressure-related damage. Specific demolition methods shall be coordinated with the USACE prior to project construction.
AC-4	Per NMFS and NJDEP recommendations, in-water work should not be conducted between January 1 and June 30 in order to protect species habitats. Therefore, any work undertaken within tidal areas or the open waters of the Arthur Kill shall be performed within cofferdams (in dry conditions), which in turn shall only be constructed during the allowable July 1-December 31 work window.
AC-5	In accordance with the agreements set forth in the EFH Assessment, the developer shall develop and implementing a sound monitoring plan for pile driving and explosive demolition activities within the Arthur Kill during anadromous fish migration periods as a condition of the Bridge Permit.
<b>Wetlands</b>	
WL-1	After construction is complete, total wetland losses shall be reduced through the reduction in width of the access road from 36-feet wide to 20-24 feet wide. Further reductions shall be gained with the elimination of the access road finger extensions after the demolition of the existing bridge is complete.
WL-2	Demolition of the existing Goethals Bridge shall impact two wetland restoration sites (i.e., Pier D Wetland Restoration and NYCDPR Old Place Creek Marsh), but both sites shall be restored in-kind after demolition.
WL-3	Measures shall be taken to avoid dumping waste concrete in or near wetlands
WL-4	Standard construction practices and/or Best Management Practices (BMPs), including temporary cofferdams to contain dredging, construction and demolition activities; the use of vibratory pile drivers over impact drivers; and the construction of stormwater detention basins, shall be employed during project

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	construction to avoid and minimize the impacts to aquatic communities.
WL-5	The access road and security fence shall be designed so as to maintain a riparian corridor for aquatic and terrestrial wildlife along both shorelines of Old Place Creek, by minimizing the extent of security fences in wetlands and, if required by permits, installing culverts (for water and wildlife passage) underneath the access road shall
<b>Navigation</b>	
NG-1	The navigation channel shall be kept open during construction with the exception of some channel closures for barge-based material deliveries and construction activities.
NG-2	Except for periods during the channel closures, vessels shall be able to navigate without being adversely affected. These channel closures shall be coordinated with the USCG to minimize vessel navigation conflicts and allow for the appropriate timing of releases of a Local Notice to Mariners (LNM).
NG-3	Demolition of the existing bridge shall require a channel closure of approximately eight hours, which shall need to be carefully coordinated with the USCG to minimize potential impacts to vessels operating on the Arthur Kill and to allow for the appropriate timing of releases of a Local Notice to Mariners (LNM).
NG-4	The placement of construction barges and other equipment along the edge of the channel south of the southern protective dolphin should be avoided, since this is the portion of the channel where the vessels' sterns swing out while turning into the Bayway terminal.
<b>Solid Waste</b>	
SW-1	During construction and demolition, all practical efforts toward the beneficial reuse and recycling of waste material shall be taken. Where practical and feasible, most of the structural steel in the existing bridge shall be sold and recycled as scrap metal, in accordance with the Environmental Management Plan. (New Jersey Artificial Reef Program)
SW-2	Demolition debris shall be processed at area Construction and Demolition facilities, which shall remove reusable materials from the waste stream and process the material into usable components or products.
<b>Infrastructure</b>	
IF-1	The piers for the New York Approach Spans shall be located to avoid any existing or planned natural gas and petroleum pipelines operated by Texas Eastern, Colonial, Coastal, Exxon/Mobil and Spectra Pipeline that pass beneath the New York Approach Spans to the Replacement Bridge.
IF-2	Close coordination with the utility carriers shall be implemented during the construction phase to avoid long-term service disruption during the relocation of utility service lines.
<b>Contamination</b>	
CM-1	Due to the existing findings and history of contamination at the R.T. Baker & Son site in New York, remediation at these properties shall be necessary.
CM-2	Soil and groundwater investigation, not performed by the Authority may be necessary at properties within the right-of-way to evaluate the current concentrations and extent of contamination present on the property, as well as to evaluate and select appropriate remedial alternatives.
CM-3	Additional soil, sediment and groundwater sampling shall be necessary, for properties not sufficiently evaluated by the Authority, to assess the nature and extent of contamination, determine whether remediation is necessary, assess waste management or reuse options, and determine the level of worker and public health and safety necessary.
CM-4	The additional sampling locations, if required, shall focus on all or selected pier locations because much of the contaminated materials generated during construction shall be associated with the installation of the piers. However, other areas in which soil excavation and construction dewatering shall be required during construction should also be considered for additional investigation.
CM-5	Detailed construction specifications for excavation, management of contaminated soil/sediments and dewatering effluent, and health and safety procedures shall be documented in the Comprehensive Environmental Program , and coordinated between the Developer, the Authority, the various state and local agencies (NJDEP, NYSDEC and NYCDEP), and potentially other responsible parties (or affected parties).
CM-6	A Comprehensive Investigation Workplan shall be prepared that details the sampling objectives, locations, depths, procedures and analytical methods. The Workplan shall be prepared in accordance with the Comprehensive Environmental Program , and be consistent with applicable guidance and regulations including NJDEP's <i>Technical Requirements for Site Remediation</i> and NYSDEC <i>Draft DER-10</i> . The NJDEP's <i>The Management and Regulation of Dredging Activities and Dredged Material in New Jersey's Tidal Waters</i> and appropriate US Army Corps of Engineers' guidance documents may also be used to evaluate appropriate sediment sampling requirements.
CM-7	Once the contamination that shall be disturbed has been characterized, a Remedial Action Workplan (RAW) shall be prepared to address remediation of the contaminated sites and areas within the project corridor where contamination is present in excess of applicable state and federal guidelines, criteria or standards. The RAW shall be prepared after the subsurface investigations are completed and remedial alternatives have collectively been assessed. The workplans shall be prepared consistent with applicable guidance and regulations, including NJDEP's <i>Technical Requirements for Site Remediation</i> , NYSDEC <i>Draft DER-10</i> and New York City's <i>Environmental Quality Review Manual</i> (Chapter 3J). The RAW shall detail the nature and extent of contamination present and the specific mitigation requirements for contaminated sites in the project area. Mitigation of contaminated materials shall include remediating contaminated soils, groundwater and sediments through beneficial reuse, offsite disposal or treatment. The RAW shall need to be reviewed and approved by the Port Authority and by applicable state and local agencies.

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CM-8	A contaminated materials handling plan shall be developed for the management, handling, treatment and disposal of contaminated soils, sediments, groundwater and wastes encountered during construction. This plan shall include procedures for stockpiling, testing, loading, transporting, and disposing of contaminated materials. The material handling plans should incorporate the requirement of the RAW where applicable. The plan shall contain the general procedures and requirements for the contractor to manage contamination, soil sediment, groundwater, wastes and debris encountered during construction. Specific requirements for handling, dewatering and management of contaminated sediments shall be included. The plan shall detail the quantity and location of contaminated materials and shall direct the proper testing, documentation, handling, containment, reuse and/or remediation during construction.
CM-9	Construction shall require dewatering in some areas where contaminated groundwater may be encountered. A testing and monitoring program shall be developed as part of the project's dewatering permit(s), and documented in the Comprehensive Environmental Program . New Jersey Pollutant Discharge Elimination System (NJPDES) regulations (N.J.A.C. 7:14A) and New York State Pollutant Discharge Elimination System (SPDES), as well as local ordinances, prohibit the discharge of contaminated groundwater to the ground, surface water bodies or sewer systems without discharge permits that establish specific discharge limits. If groundwater limits exceed the local sewer use limitations, the water shall be treated prior to its disposal into local sewer systems.
CM-10	The contractor shall be required to obtain all applicable permits prior to discharge of any groundwater. Alternatively, the contractor may containerize the contaminated groundwater for transport and off-site disposal at a Port Authority-approved facility. Groundwater discharge procedures shall be documented in the Comprehensive Environmental Program .
CM-11	In order to mitigate potential worker and public exposure to asbestos and lead-based paint during the demolition of various buildings and structures, surveys of asbestos, lead-based paint and universal waste, not performed by the Authority, shall be conducted on buildings and other structures to be demolished. Any asbestos, lead-based paint and universal waste identified, as well as PCB-containing materials, shall be removed in accordance with all NYSDEC, NYSDOL, NJDEP, NJDCA, NJDOL, OSHA and USEPA regulations, as appropriate.
CM-12	Any underground storage tanks (USTs) identified during the demolition activities in impacted areas shall be removed in accordance with applicable local, NJDEP and NYSDEC regulations.
CM-13	In the case of the existing bridge, the approach spans and the New Jersey east approach ramp shall be surveyed for asbestos, lead-based paint and universal waste prior to demolition. If lead-based paint surfaces are present on the existing bridge structure, an exposure survey shall be conducted to assess whether lead exposure shall occur during construction of the Project.
CM-14	If the exposure survey indicates that there is the potential to generate airborne dust or fumes with lead levels exceeding health-based standards, a higher personal protection equipment standard shall be employed (in the developer's HASP). In all cases, appropriate methods to control dust and air monitoring, as required by OSHA, shall be implemented.
CM-15	Asbestos-containing materials (ACMs) may also be present on the existing bridge in materials such as caulks, gaskets, pipes, asbestos-cement pipes, packings, linings, insulation, etc. Proper handling, removal and disposal of asbestos-containing material are governed by both federal and state requirements, and shall be documented in the Comprehensive Environmental Program .
CM-16	Appropriate engineering controls, such as encapsulation, wetting and other dust control measures to minimize asbestos exposure, shall be implemented prior to and throughout the project's construction.
CM-17	Testing shall be conducted at locations where construction shall require demolition of structures having suspect materials to determine the presence of ACMs. Any confirmed positive materials shall be removed during construction using appropriately licensed abatement contractor(s), in accordance with applicable state and federal regulations.
CM-18	A Health and Safety Plan (HASP) shall be developed prior to conducting any subsurface investigations and construction activities associated with the project to reduce the potential for worker or public contact with contaminated materials. The HASP shall be the primary measure used to safeguard construction workers and nearby residents during construction. This document shall describe, in detail, air, soil, and water sampling and monitoring that shall take place during construction, planned responses to monitoring data, protective equipment to be used by workers, dust and vapor control measures and emergency procedures. These procedures shall include requirements to notify appropriate regulatory agencies, as well as procedures to quickly and safely address potential issues. The HASP may also include routine monitoring of both air and soil. The HASP shall be approved, signed and sealed by a certified Industrial Hygienist.
CM-19	The provisions of the HASP shall be required for all contractors engaged in any construction activities. On-site personnel shall comply with all applicable local, state, Port Authority and OSHA codes and regulations. The HASP shall require Port Authority and NJDEP and NYSDEC review and concurrence, as applicable.
<b>Traffic and Transportation</b>	
TT-1	Implement a managed-use lane (MUL) for buses and high-occupancy vehicles (HOVs) only, on the proposed Goethals Bridge Replacement during AM and PM peak periods. One lane in each direction shall operate as a MUL, and the remaining two lanes shall operate for all vehicles, with the MUL connecting to the Staten Island Expressway (I-278) in New York and the New Jersey Turnpike Interchange 13 complex in New Jersey.
TT-2	The following Traffic Mitigation Plan was developed and shall be implemented by the Port Authority. Agency consultation shall be necessary with New York State Department of Transportation (NYSDOT), the New Jersey Department of Transportation (NJDOT), the New Jersey Turnpike Authority (NJTA), the New York City Department of Transportation (NYCDOT), the New York Economic Development Corporation (NYCEDC) and the Cities of Elizabeth and Linden, that have authority over those impacted

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	roadway facilities.
<b>TSM Mitigation Measures for AM Peak Hour</b>	
TT-3	<p>Location 3 – South Elmora Avenue @ Edgar Road</p> <ul style="list-style-type: none"> <li>• Realign intersection to use the 36' of roadway to make 2 lanes, 12' wide NB &amp; SB and 1 12' receiving lane in each direction. NB goes from 1 lane (1 LTR) to 2 lanes (1 L &amp; 1 TR), SB goes from 1 lane (1 LTR) to 2 lanes (1 LT &amp; 1 R).</li> <li>• Remove stripped area in the westbound direction to make right turn lane.</li> </ul> <p>Take 6 seconds from WB only phase, give 1 second to EB/WB phase and 5 seconds to NB/SB Phase</p>
TT-4	<p>Location 6 – Bay Way Avenue @ South Broad Street ( LOS D to LOS E)</p> <p>Take 5 seconds from SB phase, give 5 seconds to EB/WB phase.</p>
TT-5	<p>Location 11 – Bay Way Avenue @ Atlantic Avenue/Off Ramp from New Jersey Turnpike</p> <ul style="list-style-type: none"> <li>• Change SB from 1 L &amp; 1 R to 1 L &amp; 1 LR</li> </ul> <p>Take 11 seconds from NB only phase, give 5 seconds to EB/WB phase and 6 seconds to SB only phase.</p>
TT-6	<p>Location 12 – Atlantic Avenue @ On/Off Ramps to/from Goethals Bridge</p> <p>Take 8 seconds from SB only phase and 11 seconds from NB/SB phase, give 19 seconds to WB only phase.</p>
TT-7	<p>Location 14 – Bay Way Avenue @ Clarkson Avenue</p> <ul style="list-style-type: none"> <li>• Remove parking from Bay Way Avenue EB/WB, EB goes from 1 lane (1 LTR) to 2 lanes (1 L &amp; 1 TR), WB goes from 1 lane (1 LTR) to 2 lanes (1 LT &amp; 1 R).</li> <li>• Remove parking from Clarkson Avenue NB/SB, NB goes from 1 lane (1 LTR) to 2 lanes (1 L &amp; 1 TR), SB goes from 1 lane (1 LTR) to 2 lanes (1 LT &amp; 1 R).</li> </ul> <p>Take 7 seconds from NB/SB phase, give 7 seconds to EB/WB phase. Overall Delay improves but intersection still fails.</p>
TT-8	<p>Location 33 – South Narrows Road @ Fingerboard Road</p> <p>Remove parking on South Narrows Road EB, EB goes from 2 lanes (2 LTR) to 3 lanes (3 LTR). Overall Delay improves but intersection still fails.</p>
TT-9	<p>Location 38 – Lily Pond Avenue @ McClean Avenue</p> <ul style="list-style-type: none"> <li>• Remove parking from McClean Avenue EB/WB, EB goes from 1 lane (1 LTR) to 2 lanes (1 L &amp; 1 LTR), WB goes from 1 lane (1 LTR) to 2 lanes (2 LTR).</li> <li>• Remove parking from Lily Pond Avenue NB/SB, NB goes from 3 lanes (1 L &amp; 2TR) to 4 lanes (1 L, 2 T &amp; 1 R), SB goes from 2 lanes (2 LTR) to 3 lanes (2 LT &amp; 1 R).</li> </ul> <p>Take 5 seconds from EB/WB phase, give 5 seconds to NB/SB phase. • Overall Delay improves goes from LOS F to LOS E.</p>
TT-10	<p>Location 86 – Bay Way Avenue @ Bay Way Circle</p> <p>Restripe the Circle, Circle goes from 2 lanes (2 TR) to 3 (2 T &amp; 1 R).</p>
TT-11	<p>Location 88 – South Elmora Avenue @ New York Avenue</p> <p>Remove parking on New York Avenue SB, SB goes from 1 lane (1 LR) to 2 lanes (1 L &amp; 1 R).</p>
TT-12	<p>Location 90 – Bay Way Avenue @ South Broad Street (NB approach)</p> <p>Remove parking on South Broad Street NB, NB goes from 1 lane (1 LR) to 2 lanes (1 L &amp; 1 R).</p>
TT-13	<p>Location 104 – Brunswick Avenue @ I-278 EB Off Ramp</p> <p>Make intersection signalized.</p>
<b>TSM Mitigation Measures for AM Peak Hour</b>	
TT-14	<p>Location 3 – South Elmora Avenue @ Edgar Road</p> <ul style="list-style-type: none"> <li>• Realign intersection to use the 36' of roadway to make 2 lanes, 12' wide NB &amp; SB and 1 12' receiving lane in each direction. NB goes from 1 lane (1 LTR) to 2 lanes (1 L &amp; 1 TR), SB goes from 1 lane (1 LTR) to 2 lanes (1 LT &amp; 1 R).</li> <li>• Remove stripped area in the westbound direction to make right turn lane.</li> </ul> <p>Take 6 seconds from WB only phase, give 1 second to EB/WB phase and 5 seconds to NB/SB Phase</p>
TT-15	<p>Location 5 – Bay Way Avenue @ Grier Avenue</p> <p>Remove parking from Grier Avenue WB, WB goes from 1 lane (1 LTR) to 2 lanes (1 LT &amp; 1 R)</p>
TT-16	<p>Location 6 – Bay Way Avenue @ South Broad Street (LOS E to LOS E)</p> <p>Take 5 seconds from SB phase, give 5 seconds to EB/WB phase.</p>
TT-17	<p>Location 12 – Atlantic Avenue @ On/Off Ramps to/from Goethals Bridge</p> <p>Take 6 seconds from SB only phase and 5 seconds from NB/SB phase, give 11 seconds to WB only phase.</p>
TT-18	<p>Location 14 – Bay Way Avenue @ Clarkson Avenue</p> <ul style="list-style-type: none"> <li>• Remove parking from Bay Way Avenue EB/WB, EB goes from 1 lane (1 LTR) to 2 lanes (1 L &amp; 1 TR), WB goes from 1 lane (1 LTR) to 2 lanes (1 LT &amp; 1 R).</li> <li>• Remove parking from Clarkson Avenue NB/SB, NB goes from 1 lane (1 LTR) to 2 lanes (1 L &amp; 1 TR), SB goes from 1 lane (1 LTR) to 2 lanes (1 LT &amp; 1 R).</li> </ul> <p>Take 7 seconds from NB/SB phase, give 7 seconds to EB/WB phase. Overall Delay improves but</p>

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	intersection still LOS E.
TT-19	Location 31 – Lily Pond Avenue @ South Narrows Road Take 10 seconds from WB only phase, give 10 seconds to NB/SB phase. • Overall Delay improves but intersection still LOS E.
TT-20	Location 32 – North Narrows Road @ Fingerboard Road Take 3 seconds from NB/SB phase, give 2 seconds to WB phase. • Overall Delay improves but intersection still LOS E.
TT-21	Location 34 – North Narrows Road @ Hylan Boulevard SB Take 9 seconds from NB/SB phase, give 9 seconds to WB phase.
TT-22	Location 35 – North Narrows Road @ Hylan Boulevard NB • Use same signal timing as Location 34 due to signal interface. Location 36 – South Narrows Road @ Hylan Boulevard SB Use same signal timing as location 35 due to signal interface.
TT-23	Location 37 – South Narrows Road @ Hylan Boulevard NB Use same signal timing as location 35 due to signal interface.
TT-24	Location 38 – McClean Avenue @ Lily Pond Avenue Take 5 seconds from EB/WB phase, give 5 seconds to NB/SB phase.
TT-25	Location 86 – Bay Way Avenue @ Bay Way Circle Restripe the Circle, Circle goes from 2 lanes (2 TR) to 3 (2 T & 1 R).
TT-26	Location 89 – Bay Way Avenue @ Bonnett Street Low volume only 25 vehicles on Bonnett Street. Bonnett Street has a very low peak hour factor which causes the failure.
TT-27	Location 90 – Bay Way Avenue @ South Broad Street (NB approach) Remove parking on South Broad Street NB, NB goes from 1 lane (1 LR) to 2 lanes (1 L & 1 R). • Overall Delay improves but intersection still fails.
TT-28	Location 97 – Bay Way Avenue @ Polonia Avenue Low volume only 50 vehicles on Polonia Avenue. MUL reductions shall mitigate
TT-29	Location 104 – Brunswick Avenue @ I-278 EB Off Ramp Make intersection signalized.
TT-30	Port Authority should continue interagency coordination with NJTA, NJDOT, NYSDOT, NYCDOT, and the Cities of Elizabeth and Linden regarding mitigation measures proposed for roadway facilities not owned/operated by the Port Authority. • Two traffic locations in New Jersey (in the New Jersey Turnpike Interchange 13 complex); Seven traffic locations in New York (along the Staten Island Expressway between the proposed Goethals Bridge and Richmond Avenue)
<b>2014 Traffic Mitigation Requirements</b>	
TT-31	Lily Pond Avenue @ McLean Avenue • Remove parking from McLean Avenue EB/WB; EB goes from 1 lane (1 LTR) to 2 lanes (1 L & 1 LTR) and WB goes from 1 lane (1 LTR) to 2 lanes (2 LTR). • Remove parking from Lily Pond Avenue NB/SB; NB goes from 3 lanes (1 L & 2TR) to 4 lanes (1 L, 2 T & 1 R) and SB goes from 2 lanes (2 LTR) to 3 lanes (2 LT & 1 R). Take 5 seconds from EB/WB phase, give 5 seconds to NB/SB phase.
TT-32	Victory Boulevard @ Richmond Avenue • Impact cannot be mitigated for the left turn impact in the PM peak hour because any improvement or change shall result in an impact to another lane group in the intersection. The addition of a MUL lane on the Goethals Bridge replacement shall reduce overall delay for the intersection; while this could be further improved with timing changes for the intersection, the left turn during the PM peak hour shall still fail and be considered to be impacted.
<b>Air Quality</b>	
AQ-1	In accordance with the General Conformity Determination, the PANYNJ shall mitigate construction related air quality impacts for the GBR project construction-phase years through the utilization of excess credits from the Harbor Deepening Project (HDP).
AQ-2	The Port Authority, as a contingency plan, subject to Port Authority Board authorization, shall implement an additional Marine Vessel Engine Replacement Program, if excess emission credits prove to be insufficient.
AQ-3	The Port Authority's sustainability design guidelines shall be followed during construction of the Proposed Project to minimize construction-phase emissions. In accordance with these guidelines, construction activities shall incorporate the following measures designed to minimize air quality impacts.
<b>Emission Control Measures for Diesel Equipment Exhaust</b>	
AQ-4	Ultra-low sulfur diesel fuel shall be used for construction vehicles and equipment;

<b>Resource Code</b>	<b>Environmental Compliance Commitment</b>
AQ-5	Engines for non-road construction equipment with a horsepower (HP) rating above 50 HP shall be in compliance with USEPA's Tier 2 standards;
AQ-6	Eighty percent of construction equipment with engines above 50 HP shall be retrofitted with best available control technology (BACT) verified by USEPA and/or the California Air Resources Board, which reduce PM emissions up to 90 percent (without increasing NOx emissions), using diesel particulate filters, diesel oxidation catalysts, flow through filter technology, etc.;
AQ-7	Idling of diesel-fueled vehicles shall be limited (maximum of 3 minutes per vehicle);
AQ-8	Diesel equipment exhausts shall be located away from sensitive land uses;
AQ-9	Electric compressors and pumps shall be used where possible, instead of diesel-powered equipment.
<b>Emission Control Measures for Fugitive Dust</b>	
AQ-10	Wet suppression, with or without approved binding agents, shall be used on-site on a routine basis with hoses or a sprinkler system during deconstruction and material-handling activities aimed at a 10-percent moisture content in the ground;
AQ-11	Wet spray power vacuum street sweeper shall be used on paved roadways;
AQ-12	Calcium chloride shall be used instead of wet suppression when freezing conditions exist;
AQ-13	Wheel-wash stations or crushed stone at construction ingress/egress areas shall be used;
AQ-14	Dump trucks during material transport on public roadways shall be covered;
AQ-15	Idling times on diesel-powered engines shall be limited to 3 minutes;
AQ-16	Truck speed within the construction sites shall be limited to less than 5 miles per hour (mph).
<b>Construction Noise</b>	
CN-1	The construction contract shall require the development and implementation of a <i>Construction Environment Plan</i> , consistent with the Port Authority's sustainable design guidelines, which reduces pollution, noise, and vibration from construction activities and vehicles to adjoining neighborhoods.
CN-2	The Port Authority and contractor shall conduct community and municipal outreach and notifications to advise affected residents about construction schedules and anticipated periods of higher level construction related noise.
CN-3	Work time restrictions shall be imposed on the Contractor requiring all construction activities to be conducted during daylight hours only, in accordance with local regulations, and any exception to this shall require special permits from the cities of Elizabeth and/or Linden.
CN-4	Coordination with local officials and community groups and/or street signage shall be employed to advise local residents of traffic detour routes and the periods of their duration, related to the closure of Atlantic Avenue EB on-ramp during the construction period.
CN-5	In New York, the construction of the Project could result in significant noise level increases on the Goethals Garden Homes community during a four month timeframe, as a result of work for the replacement of the Travis Bridge. To mitigate these impacts, the Port Authority shall follow its sustainability guidelines, comply with the New York City Noise Code, and coordinate with local officials and Community Board members during construction activities to notify residents within the Goethals Garden Homes about construction schedules and anticipated periods of higher level construction related noise.