MOVING FORWARD THE GATEWAY PROGRAM PHASE 1

HUDSON TUNNEL PROJECT & HUDSON YARDS CONCRETE CASING – SECTION 3

JULY 10, 2018

REQUEST FOR INFORMATION INDUSTRY SESSION & PROJECT OVERVIEW





TABLE OF CONTENTS

1	REQU	JEST FOR INFORMATION (RFI) AND INDUSTRY INFORMATION SESSION	3	
	1.1	Purpose of this RFI	3	
	1.2	Invitation to Respond	3	
	1.3	Industry Information Session (July 31, 2018)	3	
	1.4	One-on-One Meetings	4	
	1.5	RFI Participation Conditions	5	
	1.6	RFI Response Requirements and Format	6	
2	RFI Q	UESTIONS	7	
	2.1	Early Works	7	
	2.2	Civil Works Lifecycle Maintenance.	7	
	2.3	Ancillary Revenue	8	
	2.4	Geotechnical Information – Subsurface Geotechnical Conditions	8	
	2.5	Project Labor Agreement	9	
	2.6	Railroad Force Account	9	
	2.7	Procurement	9	
	2.8	Contracting 1	1	
INDUSTRY INFORMATION SUPPLEMENT. 12				
3	GATE	WAY PROGRAM OVERVIEW	5	
	3.1	Developing a Modern Rail Network Together – Gateway Program Overview 1!	5	
	3.2	The Need for Resiliency and Capacity in the Gateway Program Corridor 16	6	
4	THE	HUDSON TUNNEL PROJECT & HUDSON YARDS CONCRETE CASING -		
	SECTION 3: PLANNING FOR RESILIENCY AND REDUNDANCY		7	
	4.1	The New Hudson Tunnel: An Immediate Need and Time-Critical Project 1	/	
	4.2	About the Project Elements	8	
	4.3	Project Components	9	
	4.4	Program Funding Updates	2	



Hudson Yards pre-2016: Section 1 of the Hudson Yards Concrete Casing under construction.

DISCLAIMER

The information contained in this Request for Information (RFI) has been provided as general information only. Gateway Program Development Corporation (GDC), in coordination with the National Passenger Railroad Corporation (Amtrak), the New Jersey Transit Corporation (NJ TRANSIT), and the Port Authority of New York and New Jersey (Port Authority), collectively the "Project Partners," make no representation, warranty, or guarantee that the information contained in this RFI is accurate, complete, or timely, or that it accurately represents conditions that would be encountered, now or in the future. GDC and the Project Partners shall not be responsible for the accuracy, completeness, or pertinence of the information contained in the RFI and will not be responsible for an inferences or conclusions drawn from it. The furnishing of this information by GDC and the Project Partners does not create nor should be deemed to create any obligation or liability upon GDC or the Project Partners for any reason whatsoever. This RFI is being conducted separate and apart from any studies or assessments that are being conducted in accordance with the National Environmental Policy Act (NEPA). The Hudson Yards Concrete Casing – Section 3 (HYCC-3), included in this RFI for funding and financing purposes, is a separate, but related project to the Hudson Tunnel Project. The Hudson Tunnel Project is currently being studied in accordance with NEPA by the Federal Railroad Administration (FRA) and NJ TRANSIT.

1 REQUEST FOR INFORMATION (RFI) AND INDUSTRY INFORMATION SESSION

1.1 PURPOSE OF THIS RFI

The purpose of this RFI is receive additional feedback based on increased preliminary engineering since GDC's August 2017 RFI. As GDC and the Project Partners continue to progress towards procurement, this RFI solicits additional feedback from the market on certain important topics for progressing risk allocation and contract packaging activities, including early work, ancillary revenue opportunities, project site conditions, civil works lifecycle maintenance, procurement methodology and contracting, and labor and supplier diversity.

This RFI builds upon the August 2017 RFI to the market, which successfully sought private sector interest in and feedback on project risks, innovative financing methods, and procurement strategies for the construction of the new Hudson River Tunnel (HRT) and the rehabilitation of the existing North River Tunnel (collectively the Hudson Tunnel Project) and the construction of the Hudson Yards Concrete Casing – Section 3 (HYCC-3). GDC and the Project Partners were pleased with the quality and quantity of firms responding. The responses to the RFI were encouraging and insightful, and indicated an enthusiasm and robust interest from a diverse group of respondents, including heavy civil contractors, financial advisers, lenders, and equity funds that represented a broad cross section of the global infrastructure market. Of note were those responses provided by firms on such issues as early work and mitigation of cost and schedule, geotechnical risk, utility relocation, recommended approaches to the North River Tunnel rehabilitation work, and consideration of alternative project delivery methods that have directly contributed to the advancement of these elements.

1.2 INVITATION TO RESPOND

GDC invites firms to respond to this RFI regarding the project elements. Responses from a variety of firms and organizations are encouraged, including those firms with a record of accomplishment in the design and/or construction of major tunneling and rail construction projects, and firms who provide certain professional services, including geotechnical, financial, legal, and specialty engineering. GDC and the Project Partners will not preclude any firm who responds to this RFI from participating in future procurements for the Gateway Program.

1.3 INDUSTRY INFORMATION SESSION (JULY 31, 2018)

(a) Invitation to Attend

GDC extends an invitation to interested firms to attend an Industry Information Session on the Hudson Tunnel Project and Hudson Yards Concrete Casing – Section 3 on Tuesday, July 31, 2018 from 9:00 a.m. – 12:00 p.m. (the "Industry Information Session"). Firms interested in participating in the future project elements are highly encouraged to attend the Industry Information Session.

Information provided from the Industry Information Session may inform potential respondents to the RFI. We encourage, but do not require, firms interested in the project elements to attend this informative session.

(b) Industry Information Session Agenda

The purpose of the Industry Information Session is to update interested parties on the progress made to date with regards to the HRT design, project funding, and other pertinent information.

INDUSTRY INFORMATION SESSION AGENDA

9:00 a.m.	Welcome and Opening Remarks
9:15 a.m. – 11:00 a.m.	Presentation on the Hudson Tunnel Project Design
11:15 a.m. – 12:00 p.m.	Commercial Update

(c) Location: 4 World Trade Center, 150 Greenwich Street, New York, NY, 23rd Floor.

(d) **Registration:** Firms interested in attending the Industry Information Session must register online at GatewayProgram.org no later than July 27, 2018 at 2:00 p.m. Eastern. Each firm may send no more than four participants to the Industry Information Session. GDC anticipates a substantial turnout for the Industry Information Session and therefore encourages firms to register early.

1.4 ONE-ON-ONE MEETINGS

GDC and the Project Partners may hold one-on-one meetings with RFI respondents. The intent of these meetings is to promote an open exchange of information that, as noted, may assist GDC and the Project Partners with ongoing planning and development efforts. RFI respondents must clearly request a one-on-one meeting in their RFI submittal, if desired.

1.5 RFI PARTICIPATION CONDITIONS

(a) Inquiry Only – No Contract

This RFI is an inquiry only. Neither GDC nor the Project Partners will enter into an agreement or contract with a respondent as a result of this RFI. Neither GDC, the Project Partners nor any other entity guarantees that the project elements discussed in this RFI will advance to a public procurement, or that any subsequent procurement will follow the approaches described in this RFI or approaches described in any of the responses to this RFI.

(b) Changes to this RFI

GDC may, in its sole discretion, at any time, modify, amend, cancel or reissue this RFI through written addenda. GDC will post all addenda on GDC's website (www.GatewayProgram.Org).

(c) RFI Preparation Costs and Attendance Costs

GDC or the Project Partners are not liable for any costs incurred or related to the RFI preparation, response, revision or any other aspect of providing a response to this RFI. Similarly, GDC or the Project Partners are not liable to an organization, firm or respondent for any costs incurred or related to participation in the Industry Information Session or any potential one-on-one meetings that may arise subsequent to the Industry Information Session.

(d) Ownership of Responses

All materials submitted in response to or in connection with this RFI will become the property of GDC.

(e) Rights of GDC and the Project Partners

GDC and the Project Partners reserve their respective rights at law and equity with respect to this RFI. No respondent(s) will have any rights against GDC or the Project Partners arising from the contents of this RFI or the receipt of information in either a response or during a one-on-one meeting. GDC and the Project Partners make no representations, warranties, or guarantees that the information contained in this RFI, supporting documents, or any addenda hereto, is accurate, complete, or timely. Furthermore, no such representations, warranties or guarantees are made that the information in this RFI or other supporting documents accurately represent the conditions that would be encountered during the performance of any subsequent contract. The furnishing of such information by GDC does not create, nor should be deemed to create, any obligation or liability upon it for any reason whatsoever. Each respondent, by submitting their response, expressly agrees that it has not relied upon the foregoing information contained in this RFI and that it may not hold GDC or the Project Partners liable or responsible in any manner whatsoever.

(f) No Personal Liability

Neither GDC, the Project Partners, nor any Board of Trustees, Board of Commissioners, or Board of Directors, nor any of them, nor any officer, agent or employee thereof, may be charged personally with any liability by an organization, firm, respondent or held liable to a respondent under any term or provision of this RFI or any statements made in this RFI document or supporting documents, Industry Information Supplement, Industry Information Session, or during a one-on-one meeting with a respondent, as the case may be, or because of the submission or attempted submission of information or other response to this RFI.

1.6 RFI RESPONSE REQUIREMENTS AND FORMAT

(a) **RFI Response Requirements**

Each RFI Respondent must submit:

- (i) A cover letter that includes the following:
 - (A) The name and principal business of your organization or firm;
 - (B) A designated point-of-contact for future correspondence;
 - (C) A request to participate in a one-on-one meeting with GDC and Project Partners staff, if desired
- (ii) An Executive Summary presenting the major features of your responses;
- (iii) Your responses to the RFI Questions in the format described below.
- (b) RFI Response Format

Your response must be formatted on 8.5" x 11" single-sided paper and typed in clear black ink utilizing a minimum font size of 12. Your response shall be no longer than 30 pages.

All responses must be in portable document format (.PDF) (not scanned into .PDF). The PDF must not have any file protection or password protection applied.

Responses must be emailed to info@gatewayprogram.org no later than 2 p.m. Eastern on August 21, 2018. The Respondent's name and the RFI date must be conspicuously indicated on the cover of your PDF.

2 RFI QUESTIONS

2.1 EARLY WORKS

Background

GDC understands that there are significant "unknowns" for the HRT project that may be discerned and/or mitigated ahead of the advanced design and construction of the HRT, thereby de-risking these "now-knowns."

(a) Question: GDC may consider promising to deliver X amounts of power at Y locations by Z dates, and allow bidders to assume those deliveries in their bid. Would this type of early work save materially on cost and/or time? If so, please provide recommendations on quantities and locations of power.

(b) **Question:** The first RFI yielded significant information on early work opportunities. Given the level of preliminary engineering conducted since, are there other early work components that respondents recommend be considered to reduce costs and/or avoid delay?

(c) **Question – Materials:** Should there be consideration by the Project Partners to procuring certain materials or long lead-time materials or equipment?

2.2 CIVIL WORKS LIFECYCLE MAINTENANCE

Background

Given the critical nature of the HRT, GDC and the Project Partners may intend the asset to have a useful life of at least 100 years. Civil works lifecycle maintenance refers to the various influences on the lifetime of the tunnel and associated on-going maintenance requirements to ensure that the civil works are maintained in accordance with good industry practice.

(a) **Question:** What are the positive/negative impacts on procurement, including competitiveness, if any Design-Build contract includes a long-term lifecycle maintenance component with ongoing payments during the operating phase and handback requirements?

(b) **Question:** What strategies can be utilized to best ensure alignment of interests between a Design-Build contractor and the long-term owner of the civil works that may have a useful life in excess of 100 years.

2.3 ANCILLARY REVENUE

Background

GDC and the Project Partners are interested in opportunities for innovation while finding ways to generate and/or capture additional revenue to support construction and/or long-term maintenance costs.

(a) **Question:** Should GDC consider granting a concession/lease to developer(s) to develop ancillary opportunities, including, without limitation, power transmission or data transmission, in return for fixed payments and/or profit share?

(b) Question: Are there other ancillary revenue models GDC and the Project Partners should consider?

2.4 GEOTECHNICAL INFORMATION- SUBSURFACE GEOTECHNICAL CONDITIONS

Background

GDC recognizes that due diligence on, and risk allocation of, geotechnical conditions is an important factor in the successful procurement and construction of the new HRT. The Industry Information Session will describe geotechnical due diligence work undertaken so far, as well as excavation methodologies currently assumed in the 30% design of the HRT.

(a) **Question:** GDC may include a Geotechnical Baseline Report (GBR) in a Request for Proposals (RFP), and allow for requests from potential bidders for further borings after the issuance of a RFP, but prior to submission of bids, and then update the GBR. What, if any, additional information or steps are required for bidders to accept unknown ground condition risks different to the GBR. Please provide any feedback or recommendations on the approach to ground conditions, including the borings approach.

(b) **Question:** Please provide feedback on whether the best value for money is in allocating all ground condition risk to bidder, versus including an allowance in the contract or other cost-sharing approach.

(c) **Question:** What is the extent of contractor willingness to accept unknown hazardous material risk – whether on a capped or uncapped basis?

2.5 PROJECT LABOR AGREEMENT

Background

A Project Labor Agreement (PLA) is often used on large-scale projects that require a well-trained, experienced labor force to be available in sufficient numbers to complete the project elements within a given timeframe. A PLA establishes the ground rules for all contractors and workers engaged on a project for its entire duration enabling improved labor practices and risk mitigation benefits.

(a) **Question:** Please provide feedback on whether your firm prefers the contractor, or GDC and Project Partners, to negotiate a PLA?

(i) What is your firm's recommendation on the timing of entering that PLA?

2.6 RAILROAD FORCE ACCOUNT

(a) **Question:** How will you factor railroad force account requirements to perform certain work activities into your delivery approach?

(b) Question: What suggestions or concerns do you have about managing and integrating railroad force account work?

2.7 PROCUREMENT

Background

GDC and the Project Partners seek to utilize procurement processes that deliver best value for money and ensures the on-time, on-budget completion of a safe and reliable HRT project. GDC and the Project Partners want to encourage innovations in design and construction methods that will mitigate risks and accelerate project delivery.

(a) **Question:** GDC is contemplating an RFP period from issuance to bid of 6-8 months. Should this period be shortened or lengthened depending upon GDC's contract packaging decisions and Alternative Technical Concept (ATC) process?

(b) Question: What is the impact on procurement, including competitiveness, if GDC requires an early "not to exceed' bid price from shortlisted bidders, based on commodity and labor price inputs at that time (for purposes of illustration, assume halfway through RFP period)?

(c) **Question:** What are potential impacts on procurement, including competitiveness, of requiring a Design-Build bidder for the largest contract packages to obtain a minimum credit rating of its proposal?

(d) **Question:** Please provide any examples of bid requirements, RFP terms and conditions, or other specifications in previous large infrastructure procurements that you participated in, that in your view could have been modified to reduce proposal development and overall project pursuit costs, without compromising the competitiveness of the procurement.

(e) **Question:** The establishment of a Disputes Resolution Board (DRB) has been used on major capital infrastructure projects to provide special expertise and assist in and facilitate the timely and equitable resolution of disputes. Please provide feedback on the potential use of DRBs or other alternative dispute resolution methods.

(f) Question: GDC and the Project Partners anticipate incorporating a formal process for the evaluation and consideration of proposers' ATCs during the RFP phase of the procurement of the HRT project. From your firm's experience developing and providing ATCs during different RFP processes, what worked well, and what could be improved, in order to maximize the potential benefit of ATCs for these project elements?

(g) Question: Please provide your firm's experience with engaging in Collaborative Dialogue Meetings (CDMs) (one-on-one meetings) during the RFP phase in other procurements. In your firm's experience, what areas of collaborative dialogue can be improved or streamlined to reduce the RFP in-market phase, while ensuring best value to the project sponsor?

(h) Question – DBE/MWBE/SBE: Please describe how your firm would maximize DBE/ MWBE/SBE participation on the project.

2.8 CONTRACTING

(a) **Question:** Is there an approximate maximum contract size beyond which respondents, individually or as part of a Design-Build Joint Venture or similar, would not be willing to provide a fixed price, date certain Design-Build contract commitment?

(b) Question: What should be the priority objectives in determining the size and scope of contract packages, including: (i) geographically; (ii) lead construction trade; (iii) construction staging; (iv) construction sequencing; (v) trade interfaces; (vi) system integration; (vii) credit support capacity availability; or (viii) other priority?

(c) **Question:** What are positive and/or negative impacts on contract price of requiring interim (as distinct from final) liquidated damages (LDs) milestone(s).

- (i) Is your response affected by whether there are (1) LDs but not for termination for breach and (2) LDs and termination for breach?
- (ii) Would incentive milestones, which incentivize early completion of a milestone, be attractive?

(d) Question – Price Escalators: Are there inputs with variable prices that will require contractors to add material contingency if they take such price risk? If so, would such contractor welcome an input price escalator mechanism, or prefer to take that risk and price it?

(e) **Question:** Any Design-Build contract will include instrumentation and monitoring obligations imposed on the Contractor in order to mitigate and repair damage caused by the Contractor's work to existing structures and utilities. Please provide feedback on the best method of allocating this risk.

INDUSTRY INFORMATION SUPPLEMENT

THE GATEWAY PROGRAM

HUDSON TUNNEL PROJECT & HUDSON YARDS CONCRETE CASING – SECTION 3



Existing North River Tunnel in New Jersey

13

Gateway Program Development Corporation



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A MESSAGE FROM OUR BOARD OF TRUSTEES

We continue to advance efforts on the most critical transportation infrastructure program in the United States. As part of this effort, we want to continue our engagement with the private sector by sharing important technical and commercial progress made on the Hudson Tunnel Project and Hudson Yards Concrete Casing – Section 3. To this end, this Industry Information Supplement and the subsequent Industry Information Session will provide the private sector with the opportunity to learn about the Project's conceptual design as developed by the Project's design partnership team, and other pertinent information and updates.

Chairman Steven M. Cohen State of New York Vice Chairman Anthony R. Coscia Amtrak

Trustee Jerry Zaro State of New Jersey

ABOUT THE GATEWAY PROGRAM DEVELOPMENT CORPORATION

The Gateway Program Development Corporation (GDC) was formed on November 17, 2016 as a New Jersey non-profit corporation for the purposes of coordinating, developing, operating, financing, managing, owning or otherwise engaging in activities to effectuate the Gateway Program of rail infrastructure projects between Newark, New Jersey, and Penn Station New York, New York.

New Jersey Transit Corporation (NJ Transit), the National Railroad Passenger Corporation (Amtrak), and the Commissioner of the New York State Department of Transportation (NYSDOT) each appoint an individual to the Board of Trustees. The Chair of the Board rotates between the Trustee appointed by NJ Transit and the Trustee appointed by NYSDOT on an annual basis. The Vice Chair of the Board is the Trustee appointed by Amtrak.

GDC works closely with its local and federal partners, including NJ TRANSIT, the State of New York, the State of New Jersey, The Port Authority of New York & New Jersey (Port Authority), Amtrak, the United States Department of Transportation (USDOT), including the Federal Transit Administration (FTA) and the Federal Railroad Administration (FRA), and others, to advance and deliver the Gateway Program.

ABOUT THE GATEWAY PROGRAM PARTNERS

NJ TRANSIT was established in 1979 to "acquire, operate and contract for transportation service in the public interest." Its mission is to provide a safe, reliable, convenient and cost-effective transit service with a skilled team of employees, dedicated to serve customers' needs and committed to excellence. NJ TRANSIT currently operates rail service on 12 rail lines in New Jersey, with 6 entering New York City using the existing North River Tunnel.

Amtrak – America's Railroad® – is dedicated to connecting America in safer, greener and healthier ways. As the nation's intercity passenger rail service provider and high-speed rail operator, Amtrak has 21,000 route miles in 46 states, the District of Columbia and three Canadian provinces. Amtrak owns the majority of the 457-mile NEC, including the entire line south of New York City, and is responsible for its operations and maintenance.

Founded in 1921, the PANYNJ builds, operates, and maintains many of the most important transportation and trade infrastructure assets in the country. The agency's network of aviation, ground, rail, and seaport facilities is critical to the New York/New Jersey region's trade and transportation, supporting more than 550,000 regional jobs, and generating more than \$23 billion in annual wages and \$80 billion in annual economic activity.



Section 1 of the Hudson Yards Concrete Casing under construction in 2014.

3 GATEWAY PROGRAM OVERVIEW

For over 100 years, New York, New Jersey, and the Northeast have relied on rail infrastructure as the lifeblood of their economic and environmental well-being. Together, we're planning for the next 100 years and beyond.



3.1 DEVELOPING A MODERN RAIL NETWORK TOGETHER – GATEWAY PROGRAM OVERVIEW

The Gateway Program, one of the most urgent infrastructure programs in the United States, is a comprehensive rail investment program. Phase 1, which includes the construction of a new Portal North Bridge, the Hudson Tunnel Project, and Hudson Yards Concrete Casing – Section 3, would improve current services and add resiliency for a critical section of the Northeast Corridor (NEC) – the most heavily used passenger rail line in the country. GDC and the Project Partners are dedicated to focusing on, implementing, and constructing the Phase 1 projects to eliminate the most significant single points-of-failure. Because of the phased approach to the Gateway Program, the scopes and costs of projects in later phases will be evaluated in the future.

The 10-mile stretch of the NEC between Newark, New Jersey, and New York City handles approximately 450 trains per day and over 200,000 daily Amtrak and NJ TRANSIT passengers, and directly serves Pennsylvania Station New York (PSNY) – the busiest rail station in America. This segment of the NEC includes the North River Tunnel under the Hudson River, which has deteriorated due to age and intensive use. Additionally, in October 2012, Superstorm Sandy inundated the North River Tunnel and today the tunnel remains compromised. The North River Tunnel is currently safe for use. However, it is in poor condition as a result of the storm damage and has required emergency maintenance that disrupts service for hundreds of thousands of rail passengers throughout the region. Despite the ongoing maintenance, the damage caused by the storm continues to degrade systems in the tunnel and can only be addressed through a comprehensive rehabilitation of the tunnel.

3.2 THE NEED FOR RESILIENCY AND CAPACITY IN THE GATEWAY PROGRAM CORRIDOR

The trans-Hudson train tunnel crossing is important to the economic well-being of New York and New Jersey, the Northeast Region, the Northeast Corridor, and the nation. This critical link connects 800,000 daily riders across eight states and Washington D.C. and serves a region that is home to 17% of the U.S. population and 97 Fortune 500 company headquarters, and a corridor that contributes 20% of the national gross domestic product (GDP). A failure of this critical crossing would have a ripple effect on the entire U.S. economy.

Together, we have learned that resiliency and redundancy from major flooding events, service disruptions such as tunnel electrical and track failures, or disabled trains are essential to the regional and national economy. The Gateway Program's first priority is to ensure that the region has a trans-Hudson rail infrastructure network capable of withstanding extreme storms, such as Superstorm Sandy, and other service disruptions.

Superstorm Sandy continues to cause significant reliability and capacity constraints on the Northeast Corridor in our region. Amtrak's North River Tunnel, the only trans-Hudson rail tunnel serving NJ Transit and Amtrak, was inundated with saltwater during Superstorm Sandy, substantially damaging its already old and heavily used components.



Approximately 450 trains per day and over 200,000 daily Amtrak and NJ TRANSIT passengers travel between Newark, New Jersey and Penn Station New York.



4 THE HUDSON TUNNEL PROJECT & HUDSON YARDS CONCRETE CASING – SECTION 3: PLANNING FOR RESILIENCY AND REDUNDANCY

The new Hudson River Tunnel, Hudson Yards Concrete Casing – Section 3, and rehabilitation of the existing North River Tunnel will provide much needed resiliency and redundancy, while positioning the region for other future projects to expand rail capacity.

4.1 THE NEW HUDSON TUNNEL: AN IMMEDIATE NEED AND TIME-CRITICAL PROJECT

Since 1910, hundreds of millions of commuters and intercity rail travelers have relied on the two existing rail tubes of the North River Tunnel to cross the Hudson River between Penn Station New York and New Jersey. Decades of heavy use as the lifeblood of the Northeast Corridor, combined with the disastrous saltwater flooding during Superstorm Sandy in 2012, has led to significant reliability challenges.

After the saltwater was pumped out of the tunnel, chlorides remained in the concrete and electrical components responsible for operating train signals and providing power to trains. This damage leads to disabled trains and, ultimately, cascading delays not only between New York and New Jersey, but from Boston to Washington D.C.

Major repairs need to be undertaken in the existing North River Tunnel, but closure of one tube of this tunnel without a new tunnel could reduce capacity by up to 75% – that is a drop from 24 trains per hour to as few as six – a nightmare scenario for the region.



De-icing in the Existing North River Tunnel

ABOUT THE PROJECT ELEMENTS 4.2

In 2016, the Federal Railroad Administration (FRA) and NJ TRANSIT identified a Preferred Alternative for the Hudson Tunnel Project that consists of the construction of a new two-tube rail tunnel beneath the Hudson River, including tracks and other railroad infrastructure in New Jersey and New York connecting the new tunnel to the existing Northeast Corridor, and the rehabilitation of the existing North River Tunnel.

The Hudson Tunnel Project would make use of the Hudson Yards Concrete Casing, a rail right-ofway preservation project under the extensive mixed-use residential and commercial development known as "Hudson Yards," to access Penn Station New York. The Hudson Yards Concrete Casing - Section 3 (HYCC-3), the third and final section of a rail right-of-way preservation project would be constructed to complete the right-of-way preservation to access Penn Station New York.

Construction of the new tunnel would double the number of rail tracks under the Hudson River, allowing for the rehabilitation of the existing tunnel and providing critical system redundancy, while positioning the region for other projects to expand rail capacity that would be delivered through subsequent phases of the Gateway Program.





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Existing North River Tunnel Amtrak Right-of-Way Preservation



New Surface Tracks

Ventilation Shaft Site & Construction Staging Area Construction Staging Area In-Water Construction

New Ventilation Facilities

Preferred Alternative showing the Proposed Alignment of the new Hudson River Tunnel and Rehabilitation of the **Existing North River Tunnel**

21

4.3 **PROJECT COMPONENTS**

This RFI and Industry Information Supplement focuses on the three proposed major project components:

(a) New Hudson River Tunnel

The construction of a new two-track Hudson River rail tunnel (Hudson River Tunnel – HRT) from New Jersey to New York City that will directly serve Penn Station New York. The construction of a new Hudson River Tunnel and associated surface and rail system improvements is one of two components the preferred alternative identified in an Environmental Impact Statement ("EIS") being prepared by the FRA and NJ TRANSIT as joint lead agencies to evaluate the Hudson Tunnel Project in accordance with NEPA. The Notice of Availability for the Draft EIS was published in the Federal Register on July 7, 2017, with the Final EIS/Record of Decision under review by USDOT and expected shortly.

Construction elements of the Preferred Alternative, as defined in the Draft EIS, include tunnel boring, ground freezing cofferdams, sequential excavation method mining, fan plants, environmental considerations, and rail system infrastructure, among other components.



Rock and soil samples are being taken to better understand the underground conditions prior to tunnel construction.

(b) Hudson Tunnel Project Preliminary Engineering

Leveraging financial support for preliminary engineering from Amtrak and the Port Authority, the design for the new Hudson River Tunnel and rehabilitation of the existing North River Tunnel has advanced to support the environmental review. Important geotechnical work for the new rail tunnel has begun. Crews are taking rock and soil samples from several key locations to better refine the Project's engineering plans and reduce the likelihood of discovering unexpected soil and rock conditions during construction. Further information pertaining to specifics of the preliminary engineering activities conducted to-date will be provided during the Industry Information Session.



(c) Rehabilitation of the Existing North River Tunnel

The rehabilitation of the existing North River Tunnel is another component of the Preferred Alternative in the EIS currently being prepared by the FRA and NJ TRANSIT. Once construction of the new Hudson River tunnel is complete, operations would be shifted to the new Hudson River Tunnel and rehabilitation of the existing North River Tunnel could begin one tube at a time. The North River Tunnel consists of two tubes that require replacement of the corroded and aging elements inside, including the tracks, bench walls, catenary systems, conduits, utilities, ventilation, and signals.



The Hudson Yards Concrete Casing - Section 3 is the final section of the right-of-way preservation project to connect Penn Station New York to the proposed new Hudson River Tunnel. The Hudson Yards development project is rising and we are making sure trains will be able to travel between Penn Station New York and the new Hudson River Tunnel. Two of three phases of the HYCC, a big concrete box under the Hudson Yards, have been constructed by Amtrak to preserve a rail right-of-way.

The design of the third section has been completed, and once built, will be available for use for the Hudson Tunnel Project's Preferred Alternative. HYCC-Section 3 was a component of a Supplemental Environmental Assessment prepared by Amtrak in 2014. A Finding of No Significant Impact (FONSI) was issued by the FRA in 2014. HYCC-3 is separate and apart from the current EIS being prepared for the new Hudson River Tunnel and Rehabilitation of the existing North River Tunnel. HYCC-3 is a right-of-way preservation measure and is included in this RFI and Industry Information Supplement for funding and financing purposes.

At GDC's May 2018 meeting, the Board of Trustees endorsed the advancement of the relocation of the Long Island Rail Road (LIRR) Emergency Services Building (ESB) utilities in Hudson Yards in Manhattan out of the future tracks' right-of-way.



Sections 1 and 2 of the Hudson Yards Concrete Casing have been completed to preserve a right-of-way under Hudson Yards.

4.4 PROGRAM FUNDING UPDATES

GDC and the Project Partners seek to utilize both non-federal and federal resources to deliver the Hudson Tunnel Project and Hudson Yards Concrete Casing – Section 3 by pairing federal grants with federal financing programs supported by locally-generated funds. NJ TRANSIT, the State of New York, and the Port Authority have committed \$5.55 billion towards low-cost borrowing by GDC through USDOT's Railroad Rehabilitation & Improvement Financing (RRIF) program for the most urgent, time-sensitive elements of the project: the construction of a new tunnel and the HYCC-3, which together total \$11.1 billion. Amtrak has also committed resources to these project elements. The rehabilitation of the existing tunnel is not expected to begin until 2026, and will cost an estimated \$1.6 billion; the local share is \$800 million.

The Hudson Tunnel Project and HYCC-3 were accepted into the New Starts Project Development Phase of the FTA's Capital Investment Grant (CIG) Program. Grant funds from the FTA and FRA are anticipated to be utilized to implement the project elements, in addition to the local funding committed to-date. Furthermore, GDC, as described above, anticipates applying for and obtaining low-cost federal financing offered by the USDOT's Build America Bureau (BAB).

Funding for early work on the Hudson Yards Concrete Casing – Section 3 has been committed by the Port Authority and Amtrak. The relocation of the LIRR Emergency Services Building utilities in Hudson Yards in Manhattan out of the future tracks' right-of-way is 100% designed and construction will commence once it receives a FTA NEPA determination. This utility relocation is estimated to cost up to approximately \$25 million, with funding provided equally by the Port Authority and Amtrak. The relocation of the ESB is critical to ensuring that the Hudson Yards Concrete Casing – Section 3, and ultimately the entire Hudson Tunnel Project can move forward.

In addition to the \$12.5 million for the LIRR ESB utility relocation early work, on February 15, 2018, the Port Authority specifically made available, among other things, \$31.5 million for the provision of support to GDC. In consultation and coordination with GDC, the Port Authority and Amtrak have and will continue to provide dedicated staff, contracted services and funding to GDC for its direct obtaining of services. This support has been and will be in connection with program management expenses for the Hudson Tunnel and Portal North Bridge Projects as well as GDC operations, inclusive of GDC direct hiring of personnel.



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