CITY OF FORT LAUDERDALE

All-America City

LETTER TO THE COMMISSION

LTC No: 26-013

TO: Honorable Mayor and Members of the Fort Lauderdale City Commission

FROM: Rickelle Williams, City Manager RW

DATE: January 16, 2026

SUBJECT: **New River Crossing Tunnel Initiative Update – Request for Information (RFI) Responses**

The purpose of this Letter to the Commission (LTC) is to provide the City Commission with an update on the New River Crossing Tunnel Initiative. The most recent updates were provided on December 4, 2025, via LTC No. 25-261, October 29, 2025, via LTC No. 25-212, and on September 30, 2025, via LTC No. 25-191.

On October 27, 2025, the City released a Request for Information (RFI) to gather insights from subject matter experts in the tunneling industry. The RFI aimed to elicit formal responses for subsequent market analysis as a follow-up to the discussions held during Industry Day on July 28, 2025. While the RFI did not request proposals, it invited qualified firms to share feedback on project delivery methods, innovative technologies, financing mechanisms, and timelines to aid in developing future procurement strategies.

The RFI submission deadline was on December 1, 2025, and the City received a total of thirteen (13) responses. Ten (10) experienced private sector organizations, spanning global concession developers, major design-build contractors, and tunneling specialists, submitted detailed responses. Those are:

1. Aecon Infrastructure Development Inc.
2. Cintra US
3. Civil and Building North America
4. FCC Construction
5. Flatiron Dragados Constructors, Inc.
6. Ghella USA Corp.
7. Plenary Americas
8. Southland Contracting Inc. (with Sacyr)
9. Tikehau Star Infra (formerly Star America Infrastructure Partners)
10. VINCI Construction Grands Projects USA

Additionally, three (3) engineering consulting firms submitted responses showing their interest in supporting this initiative. Those are:

1. Hatch Associates Consultants, Inc.
2. Mott McDonald
3. Schnabel Engineering, LLC

Industry experts expressed a high level of interest in pursuing delivery of the tunnel for the New River Crossing. Each respondent addressed the RFI questionnaire and provided perspectives based on their respective experience delivering comparable tunnel and rail infrastructure projects. A summary of the combined responses is included below with the RFI detailed responses included as Attachment 1.

Procurement Model
Respondents expressed interest in Public-Private Partnership (P3) delivery models, including Design, Build, Finance, Maintain (DBFM) and Design, Build, Finance, Operate, Maintain (DBFOM) structures, to integrate design, construction, financing, and long-term performance. Several highlighted progressive procurement approaches (e.g., Pre Development Agreement (PDA), Construction Manager at Risk (CMAR), Construction Manager General Contractor (CMGC), and Progressive Design-Build) to enable early collaboration, transparent pricing, and risk refinement prior to final pricing.

Geotechnical
Respondents emphasized data-driven Tunnel Boring Machine (TBM) selection based on site-specific conditions such as porous limestone and high groundwater. Advancing geotechnical investigations and baseline assumptions during early project phases was cited as a key strategy to mature subsurface risk before final pricing.

Design
The RFI responses recommended design development prior to procurement which generally ranged from ten percent (10%) to thirty percent (30%), depending on the delivery approach, with thirty percent (30%) being more favorable. Key considerations included maintainability-by-design, durable material selection, and use of digital tools to support long-term asset performance and monitoring.

Environmental
Respondents cited examples where bored tunneling reduced environmental impacts compared to immersed tube approaches by minimizing bay or river bottom disturbance. Suggested mitigations included continuous water-quality monitoring and control of construction-related noise and vibration.

Right-of-Way / Third-Party Interfaces
Tunneling was viewed as an effective means of minimizing surface-level and property impacts in the downtown area. Respondents emphasized early utility investigations and disciplined construction staging, including coordination with rail operations.

Maintenance
Many respondents recommended bundling operations and maintenance with design and construction to align lifecycle incentives. Use of real-time monitoring, digital asset management tools, and predictive maintenance was commonly cited, with referenced terms generally on the order of twenty (20) to thirty (30) years.

Cost Savings
Potential efficiencies were associated with early contractor involvement, value engineering, and constructability reviews during pre-development. Additional strategies included equipment standardization, modular construction, and use of refurbished or multiple TBM's to support schedule acceleration.

Financing
Respondents referenced financing structures combining private equity with Transportation Infrastructure Finance and Innovation Act (TIFIA) loans and Private Activity Bonds (PABs), typically repaid through an availability payment mechanism. Some noted the use of construction milestone payments to reduce financing costs.

Scheduling
Total construction durations were estimated to range from approximately three and a half (3.5) to six (6) years, depending on complexity and station integration. TBM procurement and delivery were identified as critical-path activities, generally requiring fourteen (14) to twenty-four (24) months.

Risk Transfer and Risk Management
P3 delivery structures were cited as a means of allocating construction, geotechnical, and long-term performance risks to the private sector. Progressive procurement was noted as enabling collaborative risk and cost refinement prior to transitioning to a fixed-price or availability-based structure.

Key risks included geotechnical uncertainty, unmapped utilities, permitting complexity, and third-party coordination. Common mitigation measures included enhanced subsurface investigations, targeted ground improvement, continuous monitoring, and proactive stakeholder coordination.

Note that in response to then Broward County Mayor Furr's letter, staff will be preparing a response which will be shared with the City Commission, prior to Broward County's deadline of February 13, 2026.

For further information, please contact Milos Majstorovic, PE, Director of Transportation and Mobility, at 954-828-5216 or mmajstorovic@fortlauderdale.gov.

Attachments:
1. RFI report

c: Shari McCartney, City Attorney

David R. Soloman, City Clerk
Patrick Reilly, City Auditor
City Manager's Office
Department Directors

New River Crossing Tunnel

Request for Information Report

This report is issued on January 09, 2026 and prepared as a summary after compiling feedback received on RFI from all the participants post the Industry Day

Executive Summary

The City of Fort Lauderdale issued a Request for Information (RFI) on October 27, 2025, to evaluate market interest, delivery approaches, and private-sector perspectives on advancing the New River Crossing Rail Tunnel. The response from industry was strong and unequivocal. Ten highly experienced private-sector organizations, including global concession developers, major design-build contractors, and specialized tunneling firms, submitted comprehensive responses, along with several engineering consulting firms. Collectively, these teams bring decades of experience delivering large-diameter bored tunnels, complex urban rail infrastructure, and long-term public-private partnership concessions across North America and internationally. The breadth and depth of participation demonstrate that the New River Crossing Tunnel is viewed by the market as both technically feasible and commercially financeable under established alternative delivery frameworks.

The RFI sought feedback on procurement, risk allocation, financing, design development, geotechnical considerations, schedule, and long-term maintenance. Across responses, there was broad alignment in support of integrated delivery models, including Public-Private Partnerships (P3) and progressive design-build approaches. Respondents emphasized the importance of owner led predevelopment prior to procurement, particularly completion of environmental clearance, robust geotechnical investigations with a geotechnical baseline report, and advancement of design to approximately 20 to 30 percent. Utilities, right-of-way, and major third-party approvals were consistently identified as risks best managed by the public sector before or early in procurement.

Most respondents recommended bundling long-term maintenance with design and construction to support lifecycle performance and accountability, typically over a multi-decade term. Availability payment–based financing structures supported by federal credit programs such as TIFIA loans and private activity bonds were commonly cited. Indicative schedules generally reflected a 12 to 18 month procurement period followed by approximately 3.5 to 5 years of design, construction, and commissioning, with geotechnical conditions and Tunnel Boring Machine procurement identified as key schedule drivers.

In summary, the RFI confirms that the New River Crossing Rail Tunnel is well positioned for delivery using established alternative delivery and financing models. The private sector has articulated a clear roadmap for success centered on early risk reduction, integrated lifecycle delivery, disciplined risk allocation, and availability-based financing. By incorporating these market insights, the project can be advanced with confidence, attract strong competition, and position the New River Crossing Tunnel as a resilient, long-term infrastructure investment that supports both regional mobility and marine navigation objectives.

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I. Introduction

The City of Fort Lauderdale issued a Request for Information (RFI) on October 27, 2025, with responses due from interested parties on December 1, 2025, to gauge industry interest and gather expert input on delivering a proposed New River Crossing Rail Tunnel. The City of Fort Lauderdale, working with its partners, will utilize this information to drive the development of this important project.

II. Background on the Project

The existing Florida East Coast Railway (FEC) Railroad Bridge crosses the New River in Broward County, Fort Lauderdale, Florida and is located within the 100-foot FEC Right-of-Way (ROW). The bridge carries two parallel tracks that extend approximately 11.5 miles from Miami Dade County to Broward County. The FEC Railroad Bridge is a bascule bridge, built in the 1970s currently used for freight transportation by FEC and passenger trains operated by Brightline. A bascule bridge is a movable bridge with a counterweighted section that pivots upward to allow boats to pass underneath. When not being used by train traffic, the bridge is left in the open position to allow recreational boaters and commercial vessels in the New River to pass below. The need for the New River Crossing improvements is driven by the anticipated introduction of new passenger rail service in Broward County and expected growth in existing intercity service. The proposed BCR system will significantly increase the number of trains operating along the FEC Railway corridor, while Brightline's intercity service is expected to experience additional growth over time. The bridge remains a vital link for freight and passenger rail operations; however, as passenger rail service expands, its limited capacity and low clearance are expected to result in more frequent bridge openings and increase conflicts with marine navigation. Therefore, additional rail infrastructure is needed to increase capacity, enhance reliability, and reduce rail and marine delays.

III. Responses to the RFI

Ten experienced private sector organizations, spanning global concession developers, major design-build contractors, and tunneling specialists, submitted detailed responses. The organizations that submitted responses were:

1. Aecon Infrastructure Development Inc.
2. Cintra US
3. Civil and Building North America (Bouygues)
4. Flatiron Dragados Constructors, Inc.
5. FCC Construcción
6. Ghella USA Corp.
7. Plenary Americas
8. Southland Contracting Inc. (with Sacyr)
9. Tikehau Star Infra (formerly Star America Infrastructure Partners)
10. VINCI Construction Grands Projects USA

Each respondent addressed the RFI questionnaire and provided perspectives based on their respective experience delivering comparable tunnel and rail infrastructure projects. This report summarizes each individual response and also presents synthesis of combined responses. Overviews of the individual responses are available within Appendix A of this report; detailed responses are included as Appendix C.

In addition to private-sector delivery teams, a few engineering consulting firms submitted responses. These teams preference for progressive and Construction at Risk (CMAR) for flexibility and risk

management. They placed emphasis on robust geotechnical investigations and early design milestones and advocacy for innovative financing. A summary of these responses is provided in Appendix B.

IV. Common Themes from Within the Responses

Across these submissions, several common themes emerged. All responders strongly emphasize the importance of integrating long-term maintenance and lifecycle considerations into the project delivery model. Most firms advocate either a Public-Private Partnership structure or a progressive design-build approach that bundles design, construction, and maintenance to optimize lifecycle performance as the procurement method.

A. Procurement Model

There was broad consensus that the project's public sector owner ("Owner") should complete significant pre-development work, notably environmental clearance and a robust geotechnical baseline investigation, before procurement, to reduce uncertainty and attract strong proposals. Nearly all respondents recommend that the Owner provide at least a 30% preliminary design, or indicative design, as the basis for procurement, enabling bidders to price and innovate reliably. Industry sentiment is unified that maintenance should be bundled with the project's delivery (whether via a long-term concession or included in a progressive contract) to ensure the tunnel is designed for durability and cost-effective operations. Respondents cite the benefits of considering maintenance needs from the outset – from material selection to provisions for inspections – in order to minimize lifecycle costs and improve performance.

Another prevailing theme is risk management through collaborative delivery. Several contractors favor a progressive development model (e.g. Progressive Design-Build or Pre-Development Agreement (PDA)) to allow early contractor involvement in design and risk mitigation. Concessionaire-led teams likewise express confidence in assuming project risks under a P3, provided that the contract includes clear performance standards, and that sufficient up-front information (geotechnical data, design definition) is available to price those risks. Geotechnical conditions are universally highlighted as the primary project risk, and all participants stress the need for thorough geotechnical investigations and a well-defined Geotechnical Baseline Report (GBR) before or during procurement to reduce contingencies.

In terms of financing, the developer-led teams strongly support an availability payment P3 model, wherein the private partner finances design and construction in exchange for stable long-term payments from the Owner. These teams note that availability-based concessions align public and private interests by incentivizing quality upkeep and on-time performance. Most respondents indicate that federal credit programs (e.g. USDOT's TIFIA loans) and tax-exempt Private Activity Bonds should be leveraged to minimize financing costs. Several also suggest supplementing availability payments with creative revenue sources or public contributions (such as tolls, "shadow toll" usage payments, utility co-location fees, or value capture from development) to improve the project's funding strategy.

It is worth noting that all the major concessionaire-led teams actively promoted a DBFOM P3 model as they have the internal capability to finance and operate and see this as the optimal way to deliver the tunnel while ensuring long-term performance. On the other hand, pure contractors, while able to

participate in a P3 as part of a consortium, put slightly more emphasis on progressive or integrated DB approaches where they can collaborate early without bearing full financing responsibility. This divergence is natural given their business models, but importantly, no respondent suggested a standard Design-Bid-Build. The unified message is that the Owner should use an integrated delivery method that bundles services and allows early contractor involvement, rather than a fragmented low-bid approach.

The bundling of services and collaborative risk-sharing was emphasized by all responders, while the traditional design-bid-build model was rejected. The Owner was advised to structure the procurement to allow interaction with proposers (e.g. confidential meetings) and to favor quality and technical strength over lowest price in selection; all respondents implicitly or explicitly advocate a best-value competitive process. Furthermore, given the complexity, industry feedback suggests the Owner engage in open dialogue and draft agreement reviews during the RFP.

B. Geotechnical

There is broad consensus that the Owner should undertake significant preliminary work before the project is bid – especially in terms of geotechnical investigations, baseline reporting, and environmental/third-party approvals. Every respondent stresses the importance of a reliable understanding of subsurface conditions and a clear definition of project scope to enable accurate pricing and risk management.

All responding teams believe that the Owner should commission a full geotechnical investigation and Geotechnical Baseline Report (GBR) prior to procurement. This was unanimous. In practice, this means the Owner should perform extensive borings along the alignment, lab testing of soil/rock samples, hydrogeologic studies (groundwater levels, pressures), and possibly probe drilling or geophysical surveys in advance. Many respondents call for specific Geotech data: borehole logs at appropriate spacing, lab test results, for examples, strength of limestone, abrasively, permeability, groundwater monitoring, etc., all to be provided. The consensus spacing for bores isn't quoted, but typically tunnel contractors look for boreholes roughly every 200–300 feet; it's likely some indicated a desired spacing in the RFI form.

C. Design Milestone Before Procurement

There is a strong industry preference for the Owner to advance the design to at least an indicative or preliminary stage, approximately 20% - 30% design, prior to bidding. Several respondents explicitly call for a "30% design" to be provided. The only nuance is if a progressive/PDA approach is taken, in that case, some respondents are comfortable starting with a slightly lower design maturity, 10% - 15%, since the selected partner will complete the design collaboratively.

In practice, respondents expect the Owner's Reference Design to include alignment plans and profile, preliminary tunnel cross-section and diameter, tunnel approach structures (portals/shafts) layout, basic structural design criteria, initial environmental mitigation measures from the EIS, and interface points with existing rail lines, stations, etc. Many responders explicitly choose 30% design as a preferred milestone in the RFI options. None suggested providing a 60% or higher design as that would leave too little room for innovation. Conversely, none said 5% was acceptable either as the project is too complex to start from a low-level design at RFP stage. Thus, approximately 30% indicative design is the sweet spot cited by the majority.

D. Environmental Clearance and Approvals

Every respondent either explicitly or implicitly indicates that the Owner should handle major permitting and third-party approvals prior to the P3/DB procurement. They view tasks like Environmental Impact Statement (EIS) completion and Record of Decision (ROD), coastal/noise permits, and agreements with stakeholders, for example, Brightline/FEC for rail integration, U.S. Coast Guard for waterway navigation requirements, utility company consents, as ideally being resolved or substantially advanced by the Owner. In the RFI's scope responsibility matrix, multiple respondents checked that the Owner should take responsibility for Environmental Clearance, EIS development, and ROD. No private team wants to take on full NEPA risk or eminent domain risk – doing so would introduce unbounded uncertainty that would inflate costs or delay the project.

The consensus is that the Owner should obtain high-level approvals prior to full NEPA approval. The private partner can then focus on implementing within those constraints and obtaining construction-phase permits. This approach also ties into design maturity – if an EIS is completed, a certain reference concept must have been analyzed, which becomes the baseline design. Respondents want assurance that the reference concept has environmental clearance so that major scope changes (due to permitting) won't occur mid-project.

E. Utility and Right-of-Way (ROW)

Many responses highlight utilities as a major risk. The general expectation is that the Owner should conduct thorough utility investigations and ideally relocate major utilities out of the tunnel path before or during the early stages of the project. In the scope matrix, several indicated Owner to assume responsibility for Utility Investigations and possibly Property Acquisition. The industry recognizes the Owner's better position to negotiate with local utility owners, such as water, sewer, telecom, electric, beforehand. Private teams will handle utility relocations as part of their work, but they want known utility mappings and, where possible, clearance of conflicts in the planning phase. Similarly, any required ROW or easements, for shafts or staging areas, should be secured or in process by the Owner to avoid delays later. The P3 proponents note that property acquisition risk often stays with the public sector in P3s for this reason.

F. Design for Future Operations

Another theme is ensuring the design provided aligns with future operational requirements. Respondents highlight tailoring the project to public objectives, such as, capacity for more trains, ease of maintenance, etc. Industry feedback suggests the Owner's preliminary design should incorporate input from rail operators on operational needs. If the Owner handles that coordination upfront, it becomes part of the reference design, making bids more consistent.

In summary, shared expectations are that the Owner must lay a strong groundwork, which should include initiation of the environmental process, obtain a GBR with extensive geotechnical data, and furnish an approximately 30% complete design package as the basis of procurement. This approach promotes apples-to-apples bids and reduces contingencies. Industry sentiment warns that without such Owner-led groundwork, the project would face either higher bids or diminished private interest. Conversely, by investing in preliminary design and investigations, the Owner will attract more confident proposals and likely better pricing. The respondents uniformly applaud the City's current efforts on early planning,

especially noting that the RFI itself and Industry Day as positive steps and encourage continuing on that path to "de-risk" the project prior to formal procurement.

G. Maintenance and Lifecycle Considerations

There is unanimous industry support for bundling maintenance and generally operations with the design-build scope, as opposed to procuring maintenance separately. Every respondent who addressed Question 7 indicated that maintenance should be integrated into the project delivery, typically via a long-term maintenance term included in a P3 or extended DB contract. The rationale across the board is that a bundled design-build-maintain (DBM or DBFM) approach produces a tunnel optimized for lifecycle cost, durability, and performance.

H. Improved Lifecycle Outcomes

Respondents articulate that when maintenance is bundled, the designers and builders account for long-term needs from the outset. This clearly demonstrates the industry belief that maintenance bundling leads to design innovations that reduce future costs and improve safety. Many mention concepts like designing with "easy access for inspections and repairs", "selecting durable materials", and incorporating technologies during design to aid in maintenance. These features are unlikely to be prioritized in a scenario where the contractor has no operations and maintenance ("O and M") responsibility.

I. Accountability and Performance Standards

Another theme is that bundling maintenance provides a single point of responsibility for the tunnel's condition over its life. Responders stress the importance of clear performance standards, availability requirements, and hand-back criteria when maintenance is included. They argue that a concessionaire or DBFM contractor will be contractually bound to meet these standards or face payment deductions. This ensures the facility is kept at a high level of service. For the Owner, this means less risk of lapses in maintenance or unexpected costs, since the private partner must plan and budget for all upkeep as part of their bid.

J. Risk Transfer

Many respondents highlight that including a long-term maintenance term effectively transfers asset condition risk to the private sector for the duration. One responder explicitly said one of the advantages of a P3 is transferring long-term condition risk and presumably cost risk to the private partner. Under a DBFM, if maintenance or rehabilitation needs are more extensive than anticipated, the private partner cannot simply claim change orders. The private partner will absorb or manage those as part of their contract. This motivates the private partner to do quality work upfront and institute proactive maintenance. This goes hand-in-hand with the concept of handback, where the private partner must hand the tunnel back in specified condition, driving them to perform proper maintenance throughout.

K. Lifecycle Cost Savings

Respondents also mention the potential for long-term cost savings when maintenance is considered early. They also mention the possibility of leveraging a digital twin from design through operation to optimize maintenance and catch issues early, an innovation feasible when one entity is responsible for both design and O and M. No respondent claimed that separate procurement of maintenance would yield a better outcome; on the contrary, the sentiment is that separate maintenance contracts often lead to finger-pointing. Bundling avoids that by giving one party end-to-end accountability. All respondents who discussed Q7 recommended bundling maintenance, and some explicitly discouraged separating it. The only minor nuance is that if the project were delivered as a pure publicly funded design-build with no private finance, a few contractors might accept that maintenance would then be the public sector's responsibility. But even in such a scenario, they advise integrating maintenance considerations into the design.

Therefore, the industry message to the city is unequivocal. Bundle maintenance with the initial project procurement. Whether via a long-term P3 or a DBM contract, doing so will ensure the tunnel is built to a higher standard, with maintainability in mind, and will relieve the Owner of technical maintenance burdens while locking in predictable costs via availability payments. Additionally, many note that bundling maintenance facilitates innovation in asset management. These capabilities would come as part of a bundled package.

Finally, maintenance term length was addressed: most suggest a term of about 30 years as acceptable to industry. In fact, several indicated 30 years as a minimum, with willingness to go longer if it suits the project financing or lifecycle. The consensus is that a multi-decade maintenance term is expected, and even 20 years is on the short side for such a major asset as longer terms helps in spreading lifecycle costs. The Owner can take from this that offering a robust maintenance term is not only acceptable but indeed favored by the market, as it allows them to plan major renewals and recover their investment over a sufficient period.

L. Financing Structures and Risk Allocation Innovations

All respondents in favor of P3 delivery converge on a common financing model. Use of private financing with availability payments, supported by federal loan programs and potentially creative blending of funding sources. In general, the industry expresses confidence in financing the tunnel through a combination of equity investment and low-cost debt, such as USDOT's TIFIA loans and tax-exempt Private Activity Bonds, repaid over time by the Owner via availability payments. Key points across responses include:

- **Availability Payment (AP) Structure:** Every P3-oriented respondent recommends an availability payment mechanism rather than revenue-risk tolling or other models for this project. All assume an AP-based P3 given this is a rail/transit infrastructure with no direct user fees that the private sector can capture. They reference multiple projects, namely, Purple Line, Silvertown, and Waterloo LRT, that successfully used AP structures. Thus, the expected financing framework is one where the private partner raises all necessary upfront capital, and the public sector makes annual performance-linked payments for a longer defined time period post-construction. The Owner is advised to adopt this approach to leverage private capital, especially considering the fact that no direct revenue is available from farebox revenues of the transit systems.

- **Federal Financing Tools (TIFIA and PABs):** There is near-universal intent to utilize Transportation Infrastructure Finance and Innovation Act (TIFIA) loans and Private Activity Bonds (PABs) to minimize financing costs. Overall, respondents view TIFIA loans, which can cover up to 33% of project costs at low interest and tax-exempt PABs as key components of a competitive financing package. They encourage the Owner to pursue these. Some also mention private bank loans or private placements as supplements if needed, but the consensus is to maximize TIFIA and PABs because of their cost advantage. The advantage of these tools is reduced interest rates and long tenors, which translate to lower availability payments for the Owner.

- **Private Equity and Sponsor Commitment:** The developer respondents all convey their readiness to contribute equity capital and structure deals. This assures the Owner that there is plenty of private capital appetite for a sound tunnel project – multiple consortia will likely form, each bringing on strong equity sponsors. They all likely agree the typical equity portion would be around 10% - 20% of capital. No issues were raised about raising the needed funding for a project of this scale as all assume it's in the realm that is fundable and financeable.

- **Blending Funding Sources ("Stacking payments"):** A notable innovative suggestion from several is to supplement availability payments with other revenue or public contributions to reduce the payment burden. In plain terms, while the main repayment would be project owners' budget allocations, if there are any ancillary revenues, those could offset part of the AP. For instance, if Brightline or freight rail companies pay a track access fee for using the new tunnel, that money could go towards the availability payments. Another example: leasing space in the tunnel or alongside it to utilities for fiber optic cables or pipelines. FCC mentioned "utility corridor rentals" as a possible revenue stream. Transit-Oriented Developments (TODs) was also listed, perhaps capturing some land value increase around stations or portals. The industry seems to remain positive and open to creative funding mechanisms to improve affordability.

- **Public Contributions and Milestone Payments:** Several respondents imply that a public subsidy during construction or at completion can enhance project finance ability. While not explicitly stated, "maximize low-cost public investment" is a typical theme where majority responded that Owner could use some grant or upfront funds to pay for early works or at construction completion, thus lowering the private debt.

- **Risk Allocation in Financing:** The respondents underscore that with a proper AP P3, many project risks, such as construction cost overruns, schedule delays and long-term maintenance costs, are transferred to the private partner, which is a major advantage for the Owner. However, they also implicitly delineate certain risks that should remain with the public side to get best pricing. Mainly risks related to revenue/ridership risk and force majeure or governmental risks. By structuring payments not tied to ridership, the Owner keeps ridership risk. The private side takes construction and O and M risk but will price in unknowns. Many suggested mitigating those unknowns via proactive Owner actions like design and geotechnical studies and perhaps contract mechanisms. While not explicitly spelled out in the summary, it's understood that the developers expect that the contract should clearly allocate risks to whichever party is best able to manage them. For instance, permitting and ROW should be Owner risks because the Owner controls those processes, whereas design, construction means/methods risk goes to private partner. Many respondents requested transparency in contract terms on such allocations.

- **Long Term and Refinancing:** Most P3 teams assume a financing term matching the concession, typically 30-year debt whereas some note that it could be even 40-50 years if project economics

require. The benefit of a longer tenor is lower annual payments. Additionally, some respondents proposed a refinancing share, which is if interest rates drop and they refinance the debt in 5-10 years, savings could be shared with the Owner.

Overall, industry sentiment is very positive that financing can be arranged for this project under an AP P3 structure, and they all have strategies to minimize cost of capital. They encourage the Owner to engage with federal and state funding programs early, to consider contributing grants or milestone payments to improve affordability, and to craft a contract that fairly allocates risk, as these factors will influence the availability payment size and the attractiveness of the project to bidders.

No respondent indicated that financing availability is a problem. The caution was more on making sure the Owner's payment commitments are creditworthy and secure. Thus, they advise the Owner to line up the appropriate revenue streams or appropriations pledge for the AP because private lenders will price based on the perceived security of the payment source.

In conclusion, the recommended financing structure is a long-term availability-payment concession leveraging TIFIA and PABs, with around 30–35-year debt, backed by the Owner credit, and possibly augmented by small user fees or public contributions to lower costs. All teams stand ready with equity and financing plans to implement this, assuming the contract allocates risks sensibly and the Owner's commitments are solid. The industry sees this approach as financially sustainable and indeed the norm for similar tunnel projects.

M. Schedule Expectations and Tunnel Boring Machines ("TBM") Procurement/Construction Timeline

While each respondent provided its own schedule estimates and breakdowns, a coherent picture emerges for a realistic project timeline. The consensus is that, from financial close to the start of rail service, the project will take on the order of 3.5 to 5 years to including design, construction and commissioning, depending on assumptions about parallel activities and risk occurrences. Key shared expectations include:

- **Procurement Duration:** A traditional P3 procurement (RFQ + RFP + bid evaluation + commercial close) is expected to take roughly 12–18 months, whereas a procurement including a PDA phase might be structured slightly differently. Some respondents cite 18-24 months for a traditional P3 from shortlisting to finalizing the contract. On average, expecting about 1.5 years from RFQ issuance to financial close is reasonable, given the project's complexity and need for proposal development, one-on-one meetings, and possibly governmental approvals of the concession agreement.

- **Design Development (if Progressive):** If a progressive approach is taken, respondents consistently estimate on the order of 12–18 months for the joint design phase before full construction. In general, the industry expects about a one-year intensive design period to take the project from 30% to final, including detailed geotechnical baseline updates, final drawings, and permitting.

- **TBM Procurement Timeline:** There is near unanimity that obtaining a custom TBM will take roughly 12–18 months from order to delivery. On average, expect 15 months fabrication + logistics, which aligns with global experience for a large TBM. Many respondents plan to mitigate this by overlapping TBM procurement with design phase. Some mentioned "including design, logistics" in a 18-24 month timeline up to TBM start, meaning they'd start TBM design while finalizing

project design under a PDA, to shorten the critical path. All acknowledge that TBM lead time is a critical path item, so early order is recommended.

- **TBM Assembly and Launch:** Once delivered, assembling the TBM on site is expected to take about 3–4 months. This suggests perhaps 4 months for a typical assembly and additional time if reassembling for a second drive or if site is congested. Many respondents indirectly hint at possibly deploying multiple TBMs to expedite schedule. The Owner should be aware of this trade-off, one TBM vs two, and it may appear in proposals.

- **Tunneling Duration:** For the tunnel excavation itself, responses cluster around approximately 18–24 months of TBM mining if one TBM is used sequentially, or 8–12 months if two TBMs are used concurrently. The industry sees 2-3 years as sufficient for all tunneling depending on approach. There is a consensus that geotechnical conditions will significantly influence advance rates, hence schedule risk is tied to ground risk, which can be mitigated by thorough GBR and possibly intermediate shafts or additional TBMs if needed.

- **Fit-out, Testing, Commissioning:** After excavation, the tunnel requires track and systems installation. Respondents who addressed this add approximately 9–12 months for fit-out and commissioning. So, expecting about 1 year for equipping and testing seems reasonable. This phase can overlap partially with late stages of civil work, for example start installing track behind the TBM once one bore is done, while the second bore is finishing. Many respondents hint at overlapping activities to compress schedule, such as launching second TBM before first finishes, starting fit-out in completed sections while other sections are still being excavated. These concurrency strategies align with a design-build approach and are expected by industry to meet aggressive timelines.

- **Total Construction Duration:** Summing the pieces: the consensus for total construction (from groundbreaking to revenue service) is on the order of 3 to 4 years, not counting the procurement/design phase. A realistic planning assumption would be 4 years of construction and commissioning after financial close, with the possibility to shorten it if multiple fronts are used and no major delays occur.

- **Pre-Revenue Testing:** Some respondents noted the importance of integrating the schedule with any operational testing/handover. The expectation is that the concessionaire would assist with systems integration testing and safety certifications as part of their scope, ensuring a seamless handover to the operating entity.

N. Key Schedule Risks and Mitigations

The respondents uniformly identify geotechnical conditions as the foremost schedule risk for an urban tunnel. If the ground behaves worse than anticipated, tunneling could slow or stop, affecting schedule. To mitigate this, they all stress thorough Geotech and techniques like probe drilling and ground improvement during construction. Another common risk is utility conflicts or relocation delays, hitting an unmarked utility can cause work stoppage, so mapping them and relocating early is a mitigation recommended. Permit and approval delays, such as Coast Guard bridge permits or environmental permit conditions, are cited. These can be mitigated by Owner handling those ahead. Stakeholder coordination is a risk identified by some. Contractual or regulatory risks like lawsuits or funding delays also can affect schedule.

The industry suggests mitigating schedule risks through a combination of detailed planning, early works, and flexible contracting. Conduct advance utility relocations or incorporate a utility allowance in the contract so relocations can proceed concurrently without change orders. Build in some float in the schedule for critical path activities. Continuous monitoring and active risk management can assist in avoiding major delays. Strong project management and communication with agencies assist in scheduling necessary outages or permissions well in advance.

O. Realistic vs. Optimistic Outlook

It's noteworthy that some respondents provided optimistic times which assumes everything goes ideally, and they indicated “depending on advance rates, geology” acknowledging uncertainty. A more conservative aggregated view might be 4-6 months procurement (RFQ/RFP) + 2 months negotiation = 8 months to reach PDA, if progressive. 12-18 months PDA/design period with TBM on order after 6-8 months of that. 42-48 months construction/commissioning with efforts to compress it to maybe 36 if dual TBMs. Total from RFQ in this scenario would be operations 5 to 6 years. Many respondents, however, think it can be done in 5 years or slightly less if aggressively managed. The key is that no one expects a mega project decade-long scenario, every respondent believes the project can be completed by 2031 if executed via best practices and we start today. The schedule is tightly coupled with risk management and nearly every team said effectively, “we can meet a reasonable timeline if the project is set up right”.

P. Parallel Work Fronts

A notable insight is that multiple teams likely will propose parallel tunneling or multiple launch shafts to accelerate delivery. The RFI responses didn't explicitly ask how many TBMs they would use, but it can be assessed based on feedback and schedule projections. The Owner should anticipate that some proposals may include two TBMs working from opposite ends, cutting total tunnel boring time roughly in half at the expense of higher upfront cost. Industry seems prepared for that trade-off if schedule is a high priority and the budget allows. This is something for the Owner to consider in weighting schedule vs. cost in procurement.

In summary, realistic expectations for timeline among respondents are:

- Procurement and financial close: 12-18 months
- Design/final engineering (if PDA): 12-18 months (so construction NTP perhaps in 2028)
- TBM manufacturing and site setup: 15-18 months (some overlapping design)
- Tunneling and civil construction: 24-36 months (with two TBMs or parallel work to lean toward lower end)
- Track and systems fit-out: 6-12 months
- Overall construction commissioning: 3 to 4 years after design, so potentially tunnel open by 2031.

These timelines assume no major unforeseen catastrophes. Respondents noted key schedule risks and urged mitigations for each:

- Geotech: thorough GBR + contingency plans (ground improvement, additional shifts if needed)
- Utilities: early relocations and contingencies in contract
- Permits: complete NEPA and secure necessary regulatory approvals in advance; maintain proactive communications with agencies
- Stakeholders (rail operations, marine traffic): schedule certain disruptive work in off-peak or provide temporary alternatives to avoid long halts.

Q. Risk Allocation and Contract Terms

Beyond the specific categories above, the responses reveal common views on optimal risk allocation and contract provisions:

- Owner to retain or share uncontrollable risks: Many implicitly assign certain risks to the Owner, including, unforeseen contaminated sites, undisclosed historical artifacts, force majeure events should be clearly spelled out as relief events in the contract. None want to take unlimited environmental clearance or ROW acquisition risk; these should be Owner risks.
- Private sector to take performance and delivery risks: All assume the private partner will take the core risks of delivering the project on time and on budget and of meeting performance standards in the operations phase. The contract should include strong performance monitoring and deduction regimes to enforce this.
- Transparency and collaboration in contract: Several mention that the contract should promote transparency to attract bidders. A Respondent calls for “clear description of delivery method, details of evaluation, and opportunities to discuss draft contract”. This implies the RFP process should allow industry to review and comment on the Project Agreement drafts. They also want clarity on how proposals will be evaluated (technical vs. financial weighting) to tailor their bids accordingly.
- Key contract terms to address: Some respondents flagged the need for robust change order mechanisms, dispute resolution procedures, and clear handback requirements. Star specifically mentions handback criteria. With a 30-year maintenance term, the contract must define the condition in which the tunnel must be returned to the Owner. The industry expects those metrics to be in the contract and they are fine with that as it gives them target standards to plan for.
- Cap on geotechnical baseline risk: A couple of respondents may support inclusion of a Geotechnical Baseline Report with defined compensation events if actual conditions differ materially. This is a typical clause in heavy civil P3s now, it limits the private partner’s risk to what can be foreseen from the GBR, anything beyond can trigger a change event.

In essence, no respondent raised any red flags that would prevent the project from proceeding under the recommended models, as long as the Owner follows these best practices.

The cumulative advice is that the Owner should:

- Choose a delivery model that attracts both contractors and developers, likely a best-value P3 with potential progressive element.

- Prepare the site by completing design to 30%, a full GBR, and necessary approvals, which will significantly de-risk the procurement.
- Bundle O and M in the contract to ensure lifecycle performance and allow private innovation in maintenance.
- Use an availability payment financing with federal loan support, and ensure the payment mechanism is solid and creditworthy, possibly backstopped by state or dedicated funds, to secure low-cost financing.
- Provide a clear, fair draft Project Agreement for industry review, allocate risks sensibly with Owner retaining those it can manage like environmental, and private partner taking construction/maintenance risks within defined limits.
- Maintain a collaborative posture through procurement and execution, treating the private entity truly as a partner in delivering a “world-class” infrastructure.

By applying these aggregated insights, the Owner can structure the New River Crossing Tunnel project in a manner that is highly attractive to the market and positioned for success in both delivery and long-term operation. Each of the ten respondent teams has expressed strong interest in participating under such conditions, and their collective recommendations form a roadmap for the Owner to achieve a well-delivered, well-maintained rail tunnel project that meets stakeholder expectations for years to come.

V. Summary Table

The table below provides a summary of the responses received. Overall, industry experts expressed high level of interest in pursuing delivery of the tunnel for the New River Crossing and find it feasible from the standpoint of design, permitting, financing, construction, operation, and maintenance.

Feedback Category	**Aggregated Industry Recommendations and Insights**
Procurement Model	Respondents expressed interest in P3 delivery models, including DBFM/DBFOM structures, to integrate design, construction, financing, and long-term performance. Several also highlighted progressive procurement approaches (e.g., PDA, CMAR/CMGC, Progressive Design-Build) to enable early collaboration, open-book pricing, and risk refinement prior to final pricing.
Geotechnical	Respondents emphasized data-driven TBM selection based on site-specific conditions such as porous limestone and high groundwater. Advancing geotechnical investigations and baseline assumptions during early project phases was cited as a key strategy to mature subsurface risk before final pricing.
Design	Recommended design development prior to procurement generally ranged from approximately 10% to 30%, depending on delivery approach. Key considerations included maintainability-by-design, durable material selection, and use of digital tools to support long-term asset performance and monitoring.
Environmental	Respondents cited examples where bored tunneling reduced environmental impacts compared to immersed tube approaches by minimizing bay or river bottom disturbance. Suggested mitigations included continuous water-quality monitoring and control of construction-related noise and vibration.
Right-of-Way / Third-Party Interfaces	Tunneling was viewed as an effective means of minimizing surface-level and property impacts in the downtown area. Respondents emphasized early utility investigations and disciplined construction staging, including coordination with rail operations.
Maintenance	Many respondents recommended bundling operations and maintenance with design and construction to align lifecycle incentives. Use of real-time monitoring, digital asset management

	tools, and predictive maintenance was commonly cited, with referenced terms generally on the order of 20 to 30 years.
Risk Transfer	P3 delivery structures were cited as a means of allocating construction, geotechnical, and long-term performance risks to the private sector. Progressive procurement was noted as enabling collaborative risk and cost refinement prior to transitioning to a fixed-price or availability-based structure.
Cost Savings	Potential efficiencies were associated with early contractor involvement, value engineering, and constructability reviews during pre-development. Additional strategies included equipment standardization, modular construction, and use of refurbished or multiple TBMs to support schedule acceleration.
Financing	Respondents referenced financing structures combining private equity with TIFIA loans and PABs, typically repaid through an availability payment mechanism. Some noted the use of construction milestone payments to reduce financing costs.
Scheduling	Total construction durations were estimated to range from approximately 3.5 to 6 years, depending on complexity and station integration. TBM procurement and delivery were identified as critical-path activities, generally requiring 14 to 24 months.
Risks / Mitigation	Key risks included geotechnical uncertainty, unmapped utilities, permitting complexity, and third-party coordination. Common mitigation measures included enhanced subsurface investigations, targeted ground improvement, continuous monitoring, and proactive stakeholder coordination.

APPENDIX A: Individual Response Summaries

Aecon Infrastructure Development Inc.

Company Profile and Tunneling Experience

Aecon Infrastructure Development Inc. is a subsidiary of Aecon Group, a Canadian infrastructure firm with over 150 years of operating history. Aecon reports participation in 36 Public-Private Partnership (P3) projects and over 70 years of tunneling experience. According to the response, this experience includes tunnels ranging from approximately 2.5 meters to 15.5 meters in diameter across a variety of ground conditions. Aecon cited recent work on projects such as the Toronto Yonge North Subway Extension, which includes twin tunnels delivered under a design-build-finance contract, as well as large-diameter water tunnel projects. The company identified experience with Earth Pressure Balance (EPB), slurry, and multi-mode tunnel boring machines (TBMs), along with in-house capabilities related to TBM operations, shaft construction, and geotechnical risk management. Aecon also referenced established relationships with TBM manufacturers and internal project management systems.

Preferred Delivery Model

Aecon indicated a preference for delivery models that allow early contractor involvement and collaboration with the owner. The response identified Construction Manager at Risk (CMAR) and Progressive Design-Build approaches as suitable for tunnel projects, citing the ability to advance design incrementally and refine risk and pricing during early phases. Aecon stated that it would be willing to take responsibility for multiple scope elements under a single contract, including design, engineering, civil works, systems, and select maintenance activities. The response also noted that Aecon has experience with DBFOM and P3 structures, though the discussion focused primarily on progressive delivery models.

Design and Geotechnical Development Prior to Procurement

Aecon indicated that an indicative design level of approximately 20–30 percent prior to procurement would support an effective proposal process. The response noted that conceptual design at this level, covering the full project scope, would assist bidders in developing pricing and technical approaches. Aecon emphasized the importance of comprehensive geotechnical investigations conducted prior to procurement, including borehole data, laboratory testing, and groundwater characterization. The response stated that such information informs TBM selection and construction methodology and supports risk identification and mitigation. While specific investigation parameters were not provided, Aecon's response assumes the availability of a well-developed geotechnical baseline to support procurement and early design development.

Maintenance Integration

Aecon expressed support for integrating maintenance considerations into the design and construction phases. The response stated that early consideration of maintenance requirements can influence design decisions related to access, materials, durability, and long-term performance. Aecon noted that bundling maintenance with design and construction may reduce future costs and operational disruptions and support long-term asset performance. The response also referenced the potential use of digital tools, such as digital twins, to support monitoring and maintenance activities when maintenance responsibilities are included within the delivery model.

Financing Tools and Structures

Aecon reported experience participating in P3 financing arrangements, including raising project debt and investing equity across multiple infrastructure projects. The response cited the use of various financing instruments, including construction loans, long-term bonds, equity bridge loans, tax-credit bridge financing, and federal credit programs such as TIFIA loans and Private Activity Bonds. Aecon indicated that availability-payment structures may be appropriate for long-term contracts and noted that usage-based mechanisms, such as shadow tolls, could be considered where direct tolling is not feasible. The response also referenced financing terms extending up to several decades and highlighted the importance of early coordination for federal financing programs with longer lead times.

Schedule Considerations

Aecon provided indicative schedule ranges for key project phases. The response suggested that a procurement process could require approximately 4–6 months, including interactive discussions and negotiations, potentially leading to a pre-development agreement. Aecon estimated that design development under a progressive or pre-development phase could take approximately 12–15 months prior to construction. For tunneling activities, the response indicated that TBM design, fabrication, and delivery may require 14–16 months, with launch shaft construction occurring in parallel. Aecon estimated approximately 3–4 months for TBM assembly, followed by roughly 19 months of tunneling and excavation of the receiving shaft, and an additional 3–5 months for demobilization and tunnel completion. Track installation and commissioning were estimated at approximately 9–12 months following completion of civil works. Overall, Aecon's response indicates a construction and commissioning duration of approximately 39–44 months, excluding earlier design and pre-development phases. For long-term operations and maintenance, Aecon noted that contract terms of 20–30 years or longer may be feasible, depending on the delivery and financing structure.

Risk Management, Design Approach, and Innovation

Aecon described an approach centered on using geotechnical data to inform TBM selection and construction methodology along the alignment. The response referenced conducting risk assessments to identify areas of higher construction risk and developing corresponding mitigation measures, such as ground improvement or modified excavation methods. Aecon also described the use of safety management systems incorporating real-time monitoring of construction conditions, environmental factors, and workforce safety metrics. From a design perspective, the response emphasized evaluating materials and systems based on long-term performance and lifecycle cost considerations, including durability, maintainability, waterproofing, drainage, and the use of modular components. Aecon also referenced the potential incorporation of embedded sensors to support structural health monitoring over the life of the asset.

Cintra US

Company Profile and Tunneling Experience

Cintra US is the North American subsidiary of Ferrovial, a global transportation developer and operator. Through its parent company, Cintra reports over 70 years of experience developing, financing, operating, and maintaining transportation infrastructure. According to the response, Cintra has developed and operates 18 major projects worldwide, including six in North America, spanning toll roads, managed lanes, tunnels, and bridges. Cintra reported closing 11 North American transactions utilizing approximately $2.8 billion in Private Activity Bonds (PABs), $3.5 billion in TIFIA loans, and approximately $1.9 billion in private equity. Referenced projects include the Silvertown Tunnel in London and multiple managed lanes projects in the United States, such as I-66 and I-77.

Cintra identified Ferrovial Construction, its affiliated construction arm, as the primary design-build contractor on its P3 projects. Ferrovial Construction reports delivery of over 211 miles of tunnels and 158 underground stations globally, using tunnel boring machine (TBM), New Austrian Tunneling Method / Sequential Excavation Method (NATM/SEM), and cut-and-cover techniques across a range of geologic conditions. The response referenced experience delivering urban tunneling projects in cities such as London, Sydney, Paris, Toronto, and Madrid, and noted Ferrovial's role across the full project lifecycle from design through operations.

Preferred Delivery Model

Cintra indicated a preference for delivering the project through a Public-Private Partnership (P3) structure. The response identified DBFM or DBFOM concession models as preferred delivery approaches, with Cintra acting as the developer and investor and partnering with a design-build contractor such as Ferrovial Construction. Cintra's response emphasized integration of design, construction, financing, and operations within a single contractual framework. As an example, Cintra referenced the Silvertown Tunnel project, which was delivered as a DBFM P3 and involved coordinated participation among the developer, design-build contractor, and public owner. Cintra also noted its interest in long-term concession arrangements that include operations and maintenance responsibilities. The response indicated openness to a preliminary development agreement (PDA) as part of the procurement process, while maintaining a preference for a long-term P3 structure.

Design and Geotechnical Development Prior to Procurement

Cintra emphasized the importance of sufficient design definition and geotechnical information prior to procurement to support risk pricing and allocation under a concession model. The response stated that detailed geotechnical investigations and baseline information are critical inputs for construction methodology selection and risk management, particularly for TBM-driven tunnels. Cintra referenced Ferrovial Construction's practice of tailoring TBM selection and design based on geotechnical analysis. While specific percentages were not cited, the response suggests that an owner-provided reference concept and defined project parameters would be expected prior to final proposals. Cintra also noted the importance of early consideration of interfaces and systems integration on complex urban projects.

Maintenance Integration

Cintra indicated that long-term operations and maintenance are integral components of its P3 delivery approach. The response referenced projects where Cintra's involvement as operator during the design

phase informed decisions related to monitoring systems, traffic management, and asset performance. Cintra stated that integrating maintenance responsibilities from the outset supports lifecycle accountability and alignment with performance requirements under long-term agreements. The response also referenced experience operating and maintaining tunnel facilities through dedicated operating entities, including large urban tunnel networks.

Financing Tools and Structures

Cintra reported extensive experience structuring and arranging project financing for P3 projects. The response referenced the use of availability-payment concession models and identified financing tools previously utilized across its portfolio, including TIFIA loans, Private Activity Bonds, private equity, and other forms of project debt. Cintra noted that availability-payment structures require reliable long-term payment commitments and appropriate credit support from the public sector or other backing entities. The response emphasized Cintra's ability to provide equity investment and coordinate financing through established relationships with lenders and investors.

Schedule Considerations

Cintra provided indicative timelines based on prior P3 project experience. The response noted that a competitive P3 procurement process, from RFQ through financial close, may require approximately 18 to 24 months. For TBM delivery, Cintra identified approximately 4–5 months for procurement and contracting, 12–15 months for fabrication and factory testing, and 3–4 months for on-site assembly, resulting in an overall TBM readiness timeframe of approximately 19–24 months. The response indicated that enabling works, such as shaft construction, could occur concurrently with TBM procurement and fabrication. For tunneling activities, Cintra stated that individual TBM drives could take approximately 8–10 months per bore, depending on configuration and sequencing. While no single overall construction duration was provided, the response indicates a multi-year construction period following financial close. Cintra referenced long-term concession structures and did not identify concerns with extended operations and maintenance periods.

Risk Management, Design Approach, and Technical Considerations

Cintra's response highlighted technical approaches derived from prior tunneling projects, particularly those delivered through Ferrovial Construction. The response referenced the Silvertown Tunnel as a comparable case study, noting construction under a river in an urban environment using a large-diameter EPB TBM and logistics strategies intended to reduce surface impacts. Cintra also described construction monitoring practices, including settlement monitoring and mitigation measures to protect adjacent structures. The response emphasized managing construction and third-party risks through monitoring, instrumentation, and controlled excavation methods. From an operational perspective, Cintra noted the importance of integrating systems and designing facilities to meet long-term performance requirements under availability-based contracts.

Civil and Building North America (Bouygues Construction)

Company Profile and Tunneling Experience

Civil and Building North America, LLC (CBNA) is the U.S. subsidiary of Bouygues Travaux Publics. Bouygues reported delivery of more than 370 miles of tunnels across over 85 projects worldwide, including the Channel Tunnel. CBNA reported operating in North America since 2002 and referenced projects such as the Port of Miami Tunnel (Florida) and the Pawtucket CSO Tunnel (Rhode Island). The response noted Bouygues' role on the Port of Miami Tunnel, a twin-bore highway tunnel delivered as a P3 in soft-ground conditions. CBNA also referenced current work on projects including DC Water's Potomac River Tunnel (Washington, DC) and the Great Lakes Tunnel (Michigan). The response described Bouygues' internal technical resources, including a technical department based in Paris providing support in areas such as tunnel design, geotechnical analysis, hydrogeology, and seismic design. Bouygues also noted internal development of specialized tunneling equipment and TBM modifications through research and development.

Preferred Delivery Model

CBNA indicated experience across multiple delivery approaches, including Design-Build, Progressive Design-Build, and CM/GC. The response referenced use of collaborative delivery models, including alliance-style contracting on prior projects. CBNA also referenced experience on P3 projects, including the Port of Miami Tunnel, where Bouygues served in a design-build role within a P3 structure. The response emphasized the value of integrating major scope elements under a single delivery approach and noted interest in early involvement during design development. The response did not position CBNA as the lead concessionaire; rather, it described participation in structures where Bouygues acts as the design-build contractor within a broader delivery team.

Design and Geotechnical Development Prior to Procurement

CBNA emphasized the importance of geotechnical understanding and referenced internal capabilities supporting geotechnical and hydrogeologic analysis. The response described the use of subsurface information to inform tunneling approach and equipment selection across varied ground conditions. While specific design completion percentages were not cited, the response indicates that defined project parameters and baseline information would support pricing and delivery planning. CBNA also referenced the importance of advancing certain early works to reduce delivery risk, including items such as utilities and right-of-way readiness, where applicable.

Maintenance Integration

CBNA referenced experience on projects that include long-term maintenance responsibilities as part of P3 structures, as well as projects delivered without bundled operations and maintenance. The response did not present a single approach as required across all delivery models; instead, it described maintenance integration as dependent on the selected procurement structure. CBNA noted that design decisions can influence long-term maintainability and lifecycle performance.

Financing Tools and Structures

CBNA's response described participation in P3 project teams and familiarity with projects delivered using private financing in combination with public-sector commitments. The response did not present CBNA as

the primary financing arranger, and it generally framed financing as led by concession or investment partners where applicable. CBNA referenced experience on large-scale projects delivered under financed structures and indicated an ability to participate in delivery teams operating under availability-based contractual frameworks.

Schedule Considerations

CBNA provided schedule observations based on prior tunnel project delivery experience. The response discussed procurement sequencing and indicated that delivery timelines depend on the procurement model, including whether a progressive or pre-development phase is used. The response also referenced typical TBM procurement and manufacturing lead times and noted the importance of ordering long-lead equipment early. While a single total construction duration was not stated in the summary text provided, the response indicates a multi-year construction period consistent with major bored tunnel projects, with schedule risk influenced by subsurface conditions, permitting, and constraints related to construction staging and adjacent operations.

Risk Management, Design Approach, and Technical Considerations

CBNA described technical and risk management practices applicable to tunneling projects, including emphasis on subsurface characterization, construction monitoring, and approaches to manage settlement and third-party impacts. The response referenced experience applying specialized construction methods and equipment adaptations in challenging ground and groundwater conditions. CBNA also referenced measures to minimize impacts in constrained urban environments, including planning for construction logistics and maintaining operations during construction. The response noted the importance of clear allocation of geotechnical and differing site condition risk within contract terms and the use of baseline information to support risk management during delivery.

Flatiron Dragados Constructors, Inc.

Company Profile and Tunneling Experience

Flatiron Dragados is a joint venture between Flatiron and Dragados, both subsidiaries of ACS Group. The response referenced recent large-diameter tunneling work, including the Hampton Roads Bridge-Tunnel (HRBT) Expansion in Virginia, delivered as a design-build project using 46-foot diameter TBMs. The response also referenced the Parallel Thimble Shoal Tunnel in Virginia, described as a bored tunnel project completed in 2024, and the Eglinton Crosstown West Extension tunnel in Toronto (twin tunnels), delivered in joint venture with Ghella. Flatiron Dragados noted access to ACS Group resources and technical capabilities, including support from affiliated companies. The response also stated that Flatiron Dragados has partnered with Prince Contracting to provide local Florida experience, including for surface works and utilities.

Preferred Delivery Model

Flatiron Dragados described experience with alternative delivery methods, including Progressive Design-Build and CM/GC, and emphasized delivery approaches that support early collaboration and transparency. The response indicated interest in participating as a design-build delivery partner and referenced supporting the owner's evaluation of delivery strategies and risk allocation. The response did not present Flatiron Dragados as a lead concessionaire; however, it noted familiarity with projects that include private financing components and referenced the need for appropriate risk allocation if a P3/DBFOM structure is pursued.

Design and Geotechnical Development Prior to Procurement

Flatiron Dragados emphasized the importance of robust geotechnical information and a clear baseline to support design development, pricing, and risk management. The response indicated that geotechnical investigations and baseline documentation should be advanced prior to procurement. The response also described a preference for an owner-provided reference design or baseline level of design definition prior to competitive procurement, particularly for a design-build or P3 approach. In discussing delivery sequencing, the response referenced time needs for design development and stated that achieving design and construction certainty would require a defined preconstruction/design period under a progressive approach.

Maintenance Integration

Flatiron Dragados discussed maintenance considerations in the context of delivery structure. The response recognized that operations and maintenance responsibilities are typically included under P3/DBFOM structures, while under design-build or progressive design-build structures, long-term maintenance may remain with the owner or a separate entity. The response emphasized the importance of aligning contractual requirements with long-term performance expectations when maintenance is not included within the design-build scope.

Financing Tools and Structures

The response indicated that Flatiron Dragados can participate in delivery teams that include project financing, referencing access to ACS Group capabilities. The response did not describe Flatiron Dragados as the primary financing arranger, but it referenced familiarity with P3 delivery and financing structures,

including availability-based frameworks. The response generally framed financing approach as dependent on the procurement model selected by the owner.

Schedule Considerations

Flatiron Dragados provided indicative schedule ranges across procurement, design development, TBM procurement/fabrication, and construction. The response included a total project duration estimate to reach revenue service and also provided component durations for TBM design/fabrication, shipping, assembly, tunneling production, and disassembly. The response noted that overall schedule is influenced by factors such as tunneling configuration (one TBM versus two), advance rates, geotechnical conditions, and site constraints. The response also identified potential schedule drivers related to permitting and construction staging in a constrained urban environment.

Risk Management, Design Approach, and Technical Considerations

Flatiron Dragados described use of internal technical and means-and-methods support resources and referenced instances where construction approach changes were implemented on prior projects to address constraints and reduce impacts. The response emphasized construction safety systems, monitoring, and risk management practices applicable to subaqueous and urban tunneling. The response also noted that construction logistics and third-party interface management are key considerations and referenced the role of Prince Contracting in supporting local coordination and enabling works.

FCC Construcción (FCC Construction) / FCC Concesiones

Company Profile and Tunneling Experience

FCC Construcción is the infrastructure construction arm of FCC (Fomento de Construcciones y Contratas), and FCC Concesiones is its concessions division. The two entities submitted a joint response. FCC referenced experience delivering urban tunnel projects internationally, including rail tunnels, and cited the Atocha–Chamartín high-speed rail tunnel in Madrid as an example. The response also referenced participation in concession projects involving tunnel assets, including the RV555 Sotra Connection in Norway and Lima Metro Line 2 in Peru, which FCC described as including long-term operations and maintenance responsibilities.

Preferred Delivery Model

FCC's joint response indicated interest in a delivery structure that includes private-sector participation beyond construction. The response emphasized experience with public-private partnership and concession models and referenced FCC's capability to deliver projects that include construction and long-term operations and maintenance under a single contract.

Design and Geotechnical Development Prior to Procurement

FCC emphasized the importance of geotechnical information and baseline data to support project pricing and delivery planning, particularly for tunneled works. The response indicated that a defined scope and sufficient preliminary design information are needed to support procurement and execution while allowing for contractor innovation in final design and means and methods. The response also referenced the importance of advancing key pre-development items (e.g., approvals and third-party interfaces) to support procurement and delivery.

Maintenance Integration

FCC described operations and maintenance as a core component of its concession experience and referenced projects where FCC performs long-term operations and maintenance for tunnel and rail assets. The response indicated that integrating operations and maintenance within the delivery model supports lifecycle accountability and long-term performance management.

Financing Tools and Structures

FCC recommended an availability-payment approach within a DBFM/DBFOM structure and referenced combining availability-based payments with other potential funding or revenue sources. The response also identified potential supplementary sources such as user fees, utility corridor rentals, and transit-oriented development-related revenues. FCC indicated familiarity with federally supported financing tools and structured project finance approaches used in similar infrastructure transactions.

Schedule Considerations

FCC provided schedule observations for early-phase contracting and project development activities, including indicative timeframes for negotiating a preliminary development agreement. The response also referenced typical TBM-related lead times, including design/fabrication, shipping, and assembly, and noted that overall delivery timelines are influenced by procurement structure, project complexity, and

subsurface conditions. FCC also described long-term contract terms as typical in concession arrangements and referenced a minimum contract length in the context of DBFM structures.

Risk Management, Design Approach, and Technical Considerations

FCC emphasized integrated delivery across design, construction, and long-term performance, supported by experience delivering and operating tunnel assets under concession agreements. The response highlighted the importance of baseline geotechnical information to manage subsurface risk and support allocation of differing site condition risk under contract terms. FCC also referenced the need for clear performance requirements to support long-term operations, including availability and maintenance expectations.

Ghella USA Corp.

Company Profile and Tunneling Experience

Ghella is an international tunneling contractor and stated it has more than 130 years of experience in underground works. Ghella USA Corp., based in Coral Gables, Florida, was identified as Ghella's U.S. subsidiary. The response reported that over the last 45 years, Ghella has completed more than 200 miles of tunnel using 24 TBMs across 12 projects worldwide. Ghella stated that it has experience operating multiple TBM types and maintains relationships with major TBM manufacturers. The response also reported that, over the past eight years, Ghella purchased 34 TBMs and two pipe-jacking machines from Herrenknecht and described this as making Ghella Herrenknecht's largest customer during that period. Ghella stated that it maintains an internal TBM technical department with capability to support TBM design and modifications in coordination with suppliers. The response referenced current work on major transit tunnel projects in Canada, including the Eglinton Crosstown West Extension and Yonge North Subway Extension in Toronto and the Broadway Subway Project in Vancouver. The response indicated that Ghella is prepared to team with local firms for project delivery.

Preferred Delivery Model

Ghella described experience with collaborative procurement and progressive delivery approaches and referenced alliance-style contracting as an example of delivery methods it has used. The response emphasized collaborative delivery structures that allow contractor involvement during project development and design refinement. The response did not position Ghella as a concessionaire-led proposer; instead, it framed Ghella's role primarily as a construction and tunneling partner within a collaborative procurement framework.

Design and Geotechnical Development Prior to Procurement

Ghella emphasized the importance of comprehensive geotechnical information for tunneled projects. The response indicated that a robust subsurface investigation and baseline information are key inputs for selecting and optimizing tunneling methods and TBM configuration. The response also described the need for an owner-provided project definition and design baseline sufficient to support procurement and delivery planning, with additional refinement occurring during subsequent design development under a collaborative delivery approach.

Maintenance Integration

The response addressed maintenance considerations primarily as a function of the selected procurement model. Ghella did not present itself as a long-term operations and maintenance provider. The response emphasized designing with long-term performance and maintainability in mind, regardless of whether operations and maintenance are included within the primary delivery contract or procured separately.

Financing Tools and Structures

Ghella's response did not position the firm as a lead project financier. The response referenced the company's financial capacity and indicated readiness to participate in delivery teams under a range of procurement models. Financing approach was generally framed as dependent on the owner's selected delivery structure and the composition of the overall project team.

Schedule Considerations

Ghella provided indicative timeframes for certain project phases, including early contracting and TBM procurement readiness. The response stated that TBM procurement and readiness can require an extended lead time from order through delivery and assembly. Ghella also identified schedule risk associated with subsurface uncertainty and emphasized the role of early investigation and collaborative planning in supporting schedule reliability.

Risk Management, Design Approach, and Technical Considerations

Ghella's response emphasized technical capabilities related to TBM selection, customization support, and mechanized tunneling delivery. The response described the use of geotechnical information to inform tunneling approach and risk management, including measures to address ground conditions and groundwater. The response also referenced coordination with local partners and noted the importance of safety, environmental management, and construction monitoring for complex urban tunneling works.

Plenary Americas

Company Profile and Relevant Experience

Plenary Americas described itself as a North American P3 developer and equity investor focused on public infrastructure. The response stated that Plenary has operated since 2005 and has closed or managed 66 infrastructure projects totaling more than $41 billion in value. Plenary referenced a Tampa headquarters and additional offices in the United States and Canada. The response described Plenary's role across the project lifecycle, including project structuring, financing, delivery oversight, and long-term asset management. Plenary cited experience on transportation and transit P3 projects and referenced examples including the Ontario Line RSSOM project (Toronto), Waterloo LRT, and the US-36 Express Lanes (Colorado). The response noted that Plenary typically partners with contractors and operations providers to deliver complex civil works, including projects that involve tunneled elements.

Preferred Delivery Model

Plenary recommended delivery through a Public-Private Partnership structure, including a DBFOM model supported by an availability-payment framework. The response also discussed the use of a preliminary development stage as part of the procurement approach for complex projects, with the intent of advancing design, pricing, and delivery planning prior to finalizing long-term contractual commitments.

Design and Geotechnical Development Prior to Procurement

Plenary emphasized that geotechnical and design baseline information is necessary to support risk pricing, lender due diligence, and long-term performance commitments under a P3 structure. The response indicated that sufficient subsurface information and project definition should be available before finalizing the commercial and financing structure. The response also described a phased development concept in which design maturity increases during a development period prior to financial close.

Maintenance Integration

Plenary indicated support for bundling long-term maintenance responsibilities within the delivery model as part of a DBFOM structure. The response referenced the use of defined performance requirements, payment mechanisms, and handback standards to support lifecycle quality and long-term accountability.

Financing Tools and Structures

Plenary recommended an availability-payment model as the core repayment structure for a DBFOM project and described availability-based funding markets as a primary approach for long-term infrastructure delivery. The response referenced consideration of supplementary funding sources in addition to availability payments. Plenary also described internal capability for financial structuring and noted access to institutional backing through its ownership structure.

Schedule Considerations

Plenary provided schedule observations for procurement and development sequencing, including the use of a preliminary development period prior to financial close. The response also described overall schedule as dependent on design development needs, procurement structure, and construction sequencing to be proposed by delivery partners.

Risk Management, Contract Approach, and Technical Considerations

Plenary emphasized contract and program-level approaches to risk and lifecycle performance, including clear performance standards, payment/deduction frameworks, and handback requirements. The response discussed the role of early development activities in identifying and managing key risks prior to establishing final pricing and long-term contractual commitments.

Southland Contracting Inc. (with Sacyr)

Company Profile and Tunneling Experience

Southland Contracting Inc. identified itself as a U.S. tunneling contractor with offices in Texas and Orlando, Florida, with experience in soft-ground tunneling and shaft construction. Southland responded as a joint venture with Sacyr Infrastructure USA LLC, the U.S. branch of Sacyr. The response described the team as combining Southland's U.S. tunneling experience with Sacyr's international tunnel and concession experience. Sacyr reported delivery of more than 250 miles of tunnels using TBM and NATM methods and referenced metro tunnel experience, including Guadalajara Metro Line 3 in Mexico. The response also described Sacyr's concessions platform and reported a portfolio of P3 assets under management, including highways, rail, and tunnels.

Preferred Delivery Model

The joint venture emphasized Sacyr's experience developing, financing, constructing, and operating infrastructure under concession models. The response indicated interest in delivery structures that align with that capability, including P3/DBFOM approaches. The response also described openness to working with the owner as procurement advances and referenced progressive procurement concepts in addition to traditional P3 approaches.

Design and Geotechnical Development Prior to Procurement

The response emphasized the importance of subsurface characterization and baseline information for tunnel delivery and risk management. The joint venture described the need for geotechnical information sufficient to inform tunneling approach and support procurement and pricing. The response also indicated that a defined project concept and preliminary design basis are needed to establish scope and support proposal development, with additional refinement occurring during subsequent design development depending on the procurement model.

Maintenance Integration

The response described long-term operations and maintenance as a core component of Sacyr's concessions model and referenced Sacyr's experience operating infrastructure assets over extended terms. The joint venture indicated that bundling long-term maintenance within the delivery structure supports lifecycle accountability and performance management, consistent with concession-based delivery.

Financing Tools and Structures

The response referenced Sacyr's experience raising project financing for concession projects and indicated capability to participate in project finance structures. The joint venture described availability-based concession models as an applicable approach for projects without direct user-fee toll revenue and referenced the use of established infrastructure finance tools typically associated with P3 delivery.

Schedule Considerations

The joint venture provided indicative timeframes for procurement and delivery phases and described schedule as dependent on the selected procurement approach and construction sequencing. The

response also identified subsurface uncertainty as a key schedule risk and discussed the role of early investigation and defined scope in supporting schedule reliability.

Risk Management, Design Approach, and Technical Considerations

The response described technical capability across mechanized tunneling, mined tunneling, and cut-and-cover approaches. The joint venture referenced tailoring tunneling approach to local ground conditions and emphasized construction planning to manage third-party interfaces and minimize impacts in constrained environments. The response also discussed risk management in the context of subsurface variability and the value of baseline information and monitoring during delivery.

Star America Fund II GP, LLC (Star America Infrastructure Partners)

Company Profile and Relevant Experience

Star America Infrastructure Partners (branded as TSI following acquisition by Tikehau Capital) described itself as a U.S.-based infrastructure developer and fund manager focused on mid-sized P3 projects. The response stated that Star America's team has experience financing and managing 18 infrastructure projects totaling more than $10 billion. Star America referenced participation in U.S. transportation P3s, including the Maryland Purple Line Light Rail project, the Portsmouth Bypass (Ohio) P3, and the SH-288 Express Lanes (Texas) P3. The response emphasized Star America's role in financing, underwriting, development, and long-term asset management, and noted that Star America partners with construction and operations firms rather than self-performing construction.

Preferred Delivery Model

Star America recommended a P3 delivery structure, including a DBFOM model supported by an availability-payment framework. The response also indicated openness to incorporating a preliminary development phase within the procurement approach, as part of progressing design and commercial terms prior to finalizing long-term commitments.

Design and Geotechnical Development Prior to Procurement

Star America emphasized the importance of sufficient design definition and geotechnical baseline information to support risk pricing and attract long-term private capital. The response indicated that baseline information should be advanced to a level that supports proposal development and lender due diligence, with additional refinement occurring through the development phase depending on the procurement approach.

Maintenance Integration

Star America supported bundling long-term maintenance responsibilities within the delivery model as part of a DBFOM structure. The response emphasized lifecycle accountability and referenced the use of defined performance standards, payment/deduction mechanisms, and handback requirements to support long-term asset condition and service availability.

Financing Tools and Structures

Star America recommended an availability-payment repayment structure and referenced its experience in availability-based funding markets. The response indicated familiarity with project finance structures used for P3 delivery and described Star America's role as an equity investor and developer that arranges long-term capital through partnerships and funding markets.

Schedule Considerations

The response provided indicative views on procurement and development sequencing, including a preliminary development phase and subsequent design development prior to major construction. Schedule was described as dependent on delivery structure, design development requirements, and construction approach proposed by delivery partners. The response also identified subsurface uncertainty and third-party coordination as key considerations for schedule reliability.

Risk Management, Contract Approach, and Technical Considerations

Star America's response focused on program and contract-level mechanisms, including clear performance standards, deduction regimes, and handback criteria intended to support lifecycle quality. The response framed risk management primarily through project structuring, defined requirements, and early development work to identify and manage key risks before finalizing long-term delivery commitments.

VINCI Construction Grands Projects USA

Company Profile and Relevant Experience

Global leader in large-scale infrastructure projects, operating in 50+ countries. Subsidiary of VINCI Group, with strong U.S. presence (projects include Chicago Red Line Extension and Hampton Roads Bridge-Tunnel Expansion). Over 600 miles of tunnels delivered worldwide; expertise in TBM, NATM, and cut-and-cover methods. Recent projects include Ontario Line (Toronto), Grand Paris Express, and Hampton Roads Tunnel.

Preferred Delivery Model

VINCI prefers a Design-Build-Finance-Maintain (DBFM) or Public-Private Partnership (PPP) models. They believe that these models offer integrated lifecycle services: design, construction, financing, and long-term maintenance. VINCI advocates bundling maintenance with design and construction for accountability and efficiency.

Technical & Design Recommendations:

VINCI suggested including performance-based design milestones (indicative design for flexibility) in any agreement. They also stated that resiliency measures for flood-prone environments should be included. This would include using of advanced waterproofing, corrosion-resistant materials, and modular components for a 125-year design life.

Innovations

VINCI would utilize a Tunnel Factory R&D platform with automated segment installation, predictive maintenance, digital diagnostics. They would also use low-carbon concrete segments and advanced safety systems.

Financing Strategies

VINCI suggested the use of an availability-based payments tied to key performance indexes. They also suggested the use of Federal/state grants (USDOT programs), TIFIA loans, private equity/debt. Blended finance models and risk-sharing frameworks.

Timeline Estimates

The proposed timeline would include an Pre-Development Agreement of 8 months; Design development of 18 months; TBM procurement and assembly of 24 months. The full construction term would be 5–6 years and the maintenance term 50 years.

Key Risks

Ground conditions, utility conflicts, permitting delays, urban logistics, and stakeholder coordination.

APPENDIX B: Additional Individual Response Summaries

Mott MacDonald – New River Tunnel RFI Response

Company Profile & Expertise

Global engineering consultancy with 130+ years of tunneling experience; delivered over 9,000 km of tunnels worldwide. Expertise spans TBM, NATM, cut-and-cover, and advanced delivery models (P3, DBFM, Progressive Design-Build).

Approach for New River Crossing

Emphasizes risk-based geotechnical investigations, LeapFrog modeling, and robust instrumentation plans. Advocates for 30% design milestone before procurement and transparent, open-book cost sharing. Suggests innovative financing models (availability payments, dynamic tolling, ESG-linked financing).

Key Recommendations

Progressive procurement with clear design "guardrails." Separate maintenance procurement for cost efficiency. Innovative design features: fiber-reinforced linings, safety-in-design principles, BIM for coordination.

Hatch Associates Consultants, Inc. – New River Tunnel RFI Response

Company Profile & Expertise

Global EPCM firm with 70+ years in infrastructure; engineered 1,550 miles of tunnels across five continents. Strong presence in Florida and experience with urban and subaqueous tunnels.

Vision for Fort Lauderdale

Advocates tunnel as best alternative for congestion relief and marine traffic compatibility; highlights benefits for urban livability, resilience, and economic growth.

Recommendations

Progressive Design-Build or CMAR procurement. Maintenance bundled with construction for lifecycle accountability. Geotechnical data: boreholes every 250–500 ft, GBR, groundwater monitoring. Financing: TIFIA/RRIF loans, P3 models, transit-oriented development revenue capture. Schedule: 3.5–4 years for construction; TBM procurement 12–18 months.

Schnabel Engineering, LLC – New River Tunnel RFI Response

Company Profile & Expertise

60+ years in tunneling and geotechnical engineering; specializes in Owner Advisor and Program Management roles. Experience with major U.S. tunnel projects (Hampton Roads Bridge-Tunnel, DC Clean Rivers, Amtrak Frederick Douglas Tunnel).

Key Insights

Strong advocacy for progressive delivery models (PDB, CMAR) with robust program management. Design milestone: minimum 30% before procurement; include conceptual alignment and risk register. Maintenance should be bid separately to avoid limiting contractor pool. Geotechnical: boreholes at 400-ft spacing, permanent instrumentation, waterproofing systems. Financing: long-term bonds (e.g., 100-year bonds used for DC Clean Rivers), P3 structures. Schedule: 7 years total; TBM procurement 15 months; design development 18 months.

Risks Identified

Utility relocation, property acquisition, permitting delays, unforeseen ground conditions, and urban site constraints.

APPENDIX C: Individual Responses

Response For Supplier: Aecon Infrastructure Development Inc

Event # : 538-1

Name: New River Crossing Tunnel (Request for Information)

Description: The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the planning, design, engineering, construction and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes.

Date created: December 1, 2025 1:27:26 PM EST	Date submitted: December 1, 2025 1:30:08 PM EST
Preview date:	Q & A open date: October 27, 2025 10:30:00 AM EDT
Open date: October 27, 2025 10:00:00 AM EDT	Q & A close date: November 21, 2025 5:00:00 PM EST
Close Date: 12/01/2025 02:00:00 PM EST	Dispute close date:

Responded To: 1 Out of 1 Lines

Response Currency: USD

Response Attachments

Attachment
Aecon_New River Crossing_RFI_Response.pdf

Line Responses

Line 1: Request for Information - New River Crossing Tunnel

Description: **This is a Request for Information (RFI); it is not a request for pricing, commitment to purchase, or an**

Event # 538-1: New River Crossing Tunnel (Request for Information)

obligation to provide products or services described in this notice. Please see the attached forms for response details.

Request for Information - New River Crossing Tunnel

Commodity Code: 913-55 Construction, Tunnel

Quantity: 1.0000 **Unit of Measure:** EA

Bid Quantity: 1.0000

No Charge: Yes **No Bid:** No

Request for Information - New River Crossing Tunnel

Comments: RFI Response

Client:
City of Fort Lauderdale

AECON

Fort Lauderdale New River Crossing

Designated Point of Contact:
Contact: Chris Deane, Vice President Operations
Mailing Address: 240-19020 33rd Avenue, Lynnwood, Washington 98036
Phone Number: 416.297.2600
Email: cdeane@aecon.com

Company Profile and Relevant Experience

Aecon Infrastructure Development Inc. is a wholly owned subsidiary of Aecon Group Inc. (together, "Aecon"), a publicly traded (TSX: ARE) global leader in major infrastructure construction and development. **With a track record of success extending back over 150 years**, Aecon is focused on efficient delivery of projects across 5 operating sectors: **Civil, Urban Transportation, Utilities, Nuclear, and Industrial. With average annual revenues of $4.2 billion over the last five years and a current backlog of $10.8 billion**, Aecon is positioned to drive transformative and landmark infrastructure across the United States, Canada, Central and South America, the Caribbean, and beyond.

A pioneer in award-winning Public-Private Partnerships (P3), Aecon has played on integral role in **36 P3 mega projects**, bringing unmatched value, innovative financing solutions, and design-build and operations and maintenance expertise to our partners and clients. Aecon is consistently selected as a preferred partner in these domains because of its track record of success and its uncompromising commitment to safety, quality, sustainability, efficiency, and innovation in all its work.

Aecon brings more than 70 years and hundreds of kilometres of tunneling experience. We have delivered tunnels for utilities, specialized systems, and transportation **with diameters ranging from 2.5 m to 15.5 m**. Our experts have deep practical knowledge of both tunnel and launch and extraction shaft construction and experience with a wide range of geological formations and soil and pressure conditions. Our personnel are adept with tunnels executed via Tunnel Boring Machine (TBM), the New Austrian Tunnelling Method (NATM) / Sequential Excavation Method (SEM), and Cut-and-Cover. Our tunnelling equipment operators and support staff are equally adept at managing scheduled benchmarks and unexpected and challenging conditions that may be encountered safely and with efficiency. They also excel with muck conveyance and spoil management and disposal and logistical analyses, assuring that all of projects are set-up to optimize performance from the start. Our expertise, relationships with TBM manufacturers, world-class project management systems and tools, and track record of safe, efficient, innovative, and quality assured tunnel execution has made Aecon a world-class tunnel provider and in-demand partner.

Sample Project and Methodology Experience Over The Last 10 Years

Yonge North Subway Extension – Advanced Tunnel
Years: 2025 – Present
Location: Toronto, Ontario, Canada
Contract Model: Design-Build-Finance
Value: ~$1.4 billion

6.3 km, 5.6 m internal diameter twin tunnels

Scope: This project involves all tunnelling activities necessary to build twin 5.6 m internal dia. tunnels along the 6.3-km underground portion of an extension of Toronto's subway system. Scope includes: design and procurement of two Multi-Mode Variable Density (MMVD) TBMs; design, manufacturing, and procurementsof Pre-Cast Tunnel Lining (PCTL); design and construction of the launch and extraction shafts; design and construction of headwalls and support of excavation for emergency exit buildings, headwalls for underground stations, and utilities protection, support, and relocation. The launch shaft and two other segments of the tunnel alignment are in close proximity to a CN heavy rail line and therefore require close coordination with the rail provider as well as construction of separation barriers from the CN rail right-of-way to expedite safe rail corridor access and construction. Ground improvement / replacement under and adjacent to CN rail tracks, and noise and vibration monitoring and mitigation during tunnel construction are also required.

Darlington New Nuclear Project – Condenser Cooling Water Tunnel
Years: 2025 – Present
Location: Clarington, Ontario, Canada
Contract Model: Integrated Project Delivery
Value: $Confidential

Scope: Part of the Darlington New Nuclear Project to deliver North America's first grid-scale Small Modular Reactor (SMR), a new class of nuclear reactors that provide up to 300 megawatts of electicity – enough to power over 300,000. As part of the Condenser Cooling Water (CCW) system to deliver cooling water to the reactor, Aecon is constructing a 3.4 km, 6.05 internal diameter tunnel ring and intake structure beneath Lake Ontario. The excavation is being performed primarily by a Slurry TBM and scope also includes construction of a, 6 m diameter intake shaft to 12 m below the lakebed, a 30 m deep launch shaft, and a 50 m deep pump station shaft, and PCTL design, procurement, and installation. The shafts are constructed using an interlocked secant pile system with pile toes anchored into bedrock.

Eglinton Crosstown West Extension – Advanced Tunnel
Years: 2022 – 2025
Location: Toronto, Ontario, Canada
Contract Model: Design-Build-Finance
Value: $730 million

Scope: Part of a 9.2-km extension for Eglinton Crosstown Light Rail Transit (the future Line 5), going westward from Mount Dennis to Renforth Drive, this project involved the design, construction, and financing of 6.3-km, 6.5 m diameter twin tunnels using two Earth Pressure Balance (EPB) TBMs. Additional scope included includes launch and extraction shafts, 10 transversal tunnels (Cross Passages), headwalls for 4 future subway stations, all support of excavation scope, design, procurement, and installation of PCTL, as well as a large-scale program for the transfer and protection of existing services in a dense urban area. Tunnel construction was in mixed ground conditions through rock with converging conditions and about

2.3 km of granular soils, with two stretches of a mix face of rock soil. In general, 40% tunnelling was within the soil overburden, with the remaining 60% through the bedrock. The project was delivered on time and on budget and has been commended by the Contracting Authority as the fastest ever alternative financing project in jurisdiction, progressing from financial close to issuing and start of construction in under 3 weeks.

Annacis Water Supply Tunnel
Years: 2022 – Present (tunneling complete)
Location: Metro Vancouver, British Columbia, Canada
Contract Model: Design-Bid-Build
Value: $288 million

Scope: This critical infrastructure project will enhance the reliability and seismic resilience of the region's potable water distribution system. The project involved the construction of a 2,350-m-long water supply tunnel under the Fraser River between the cities of New Westminster and Surrey using a 3.87 m diameter EPB TBM, selected for its ability to safely manage the soft ground and high-pressure conditions (up to 6.9 Bar was encountered). Scope of work also included: site preparation; construction of a 50 m deep, 16 m diameter launch shaft and 56 m deep, 8.5 m diameter extraction shaft using slurry wall and secant pile methods; PCTL installation; construction of valve chambers and surface piping; excavation logistics and support including for muck removal using a crane

hoisted muck box system; site restoration, stakeholder engagement, environmental management, and coordination with archeological authorities.

Second Narrows Water Supply Tunnel
Years: 2019 – 2025
Location: Metro Vancouver, British Columbia, Canada
Contract Model: Design-Bid-Build
Value: $267 million

Scope: The Second Narrows Water Supply Tunnel project is part of Metro Vancouver's regional plan to upgrade the existing potable water distribution infrastr ct re. When complete, t e new water supply tunnel will meet current seismic standards and will help ensure the continued reliable delivery of clean, safe drinking water to the growing region. Scope centred on construction of a 6.3 m diameter, 1.1 km long tunnel 30 m below the bottom of Burrard Inlet in North Vancouver using a Slurry TBM under operating pressures reaching as much as 6.5 Bar. Construction involved a 65 m deep, 16 m diameter shaft using the slurry wall method with a cast-in-place concrete final lining, and a 110 meter deep, 10 m diameter extraction shaft using a combination of slurry wall pannels and shotcrete and ring set ground support. Additional scope included installation of steel water pipes and near-surface valve and metering chambering at each shaft location.

Réseau Express Métropolitain
Years: 2018 – Present (tunneling complete)
Location: Montréal, Québec, Canada
Contract Model: Engineering, Procurement, Construction
Value: $7.1 billion

Scope: The REM involves the design and construction of a 67 km, double-track, fully automated light rail system which will connects downtown Montréal with its suburbs in North Shore, West Island, and South Shore, as well as branch to the Montreal Trudeau International Airport. Scope includes reconfiguring and reconstructing 32 km of existing track; design and construction of 26 light rail stations, including the 2nd deepest transit station in North America; 11 bus terminals and 14 park-and-ride facilities; 5 new river bridges and 25 new overpasses; 21 km of elevated guideway, 3 new maintenance and storage facilities; design and integration of overhead catenary and traction power systems; rehabilitation of 5 km of existing transit tunnel, design and construction a new 3.5 km, 7 m diameter tunnel using an EPB TBM, a 20 m deep launch shaft, and 40 m deep extraction shaft; and design, procurement, and installation of fiber-lined PCTL. The tunnel was partially excavated in saturated soft ground requiring advanced freezing treatment to facilitate TBM advance and karstic rock conditions under protected wetlands. Part of the alignment also passed beneath runways at Montréal's Pierre Elliot Trudeau International Airport, requiring careful monitoring and constant coordination with the Airport Authority.

Eglinton Crosstown Light Rail Transit – Eastern Tunnels
Years: 2013 – 2017
Location: Toronto, Ontario, Canada
Contract Model: Design-Bid-Build
Value: $202 million

Scope: Part of the $7 billion, 19 km Eglinton Crosstown Light Rail Transit (LRT) project, the Eastern Tunnels scope included construction of 3.25 km of 6.5 m

diameter twin tunnels using EPB TBMs in soft ground conditions and within one of the densest urban areas in Canada. Scope also included three cross passages, a launch shaft and extraction shaft, two emergency exit buildings, head walls for three underground stations and relocation of utilities. Across the entire alignment, 10 underground stations were excavated using a variety of methods that were determined by the specifics of each site's condition, including open cut-and-cover, enclosed (decked over) cut-and-cover, NATM/SEM, cut-and-cover combined with SEM; and retaining structures. SEM was used for the Oakwood, Avenue, and Laird Stations due to alignment depth and dense utility networks.

Sheppard West Station & Southern Tunnels
Years: 2010 – 2017
Location: Greater Toronto Area, Ontario, Canada
Contract Model: Design-Bid-Build
Value: $318 million

Scope: This project for the Toronto Transit Commission to expand its Yonge-University-Spadina subway line included excavation of 2.73 km of 6 m diameter twin tunnels using EPB TBMs, complete with 2 emergency exit buildings, and 4 cross passages. The project also included a 220 m of section of excavation using NATM/SEM and 2 sections of cut-and-cover. One of the challenges on this complex project was that it had several sections that included deep, vertical walled excavations, ranging from 18m to 21m deep and shored using soldier piles and/or timber lagging with internal steel strut supports. Noting the depth of the shafts, the shoring systems were designed to limit horizontal movements along the shaft walls and minimize surface subsidence surrounding the shaft installation. Scope of work also involved the construction of the 10,200-m^2 station Downsview Park Station, including below grade structures, site access, ventilation shafts, a traction power substation, and associated landscaping.

Seymour Capilano Twin Tunnels
Years: 2009 – 2015
Location: Metro Vancouver, British Columbia, Canada
Contract Model: Design-Bid-Build
Value: $220 million

Scope: This project involved the construction of 7.1-km-long, 3.8-m diameter twin tunnels in rock (from Class 1 to Class 5), under Grouse Mountain in Capilano River Regional Park. The tunnels ranged in depth between 160 m and 640 m and work included 6.34 km of hard rock tunnel boring through granite using Gripper TBMs. The two TBMs operated simultaneously from the same shaft were used to complete the tunnels. Work also included drill and blast excavation of underground chambers, excavation of twin 270-m-deep by 4-m-diameter raised bored shafts, 1.4 km of backfill, grouting and installing a steel liner at the end of each tunnel, and interconnecting pipes from the shafts to nearby watermains. Upon completion, the internal diameter of the tunnels measured 3 m. Special noise mitigation efforts were implemented for sensitive neighbourhoods near the project site, allowing for collaboration between all stakeholders to share their concerns during construction.

December 1, 2025
City of Fort Lauderdale
290 NE 3 Avenue
Fort Lauderdale, FL 33301

Attn: Milos Majstorovic, Director of Transportation and Mobility

Dear Director Majstorovic,

Aecon Infrastructure Development Inc., a wholly owned subsidiary of Aecon Group Inc. (together, "Aecon"), is delighted to express its interest in the New River Crossing Tunnel Project. Aecon is one of the largest providers of tunneling and rail projects on the continent. We bring full life-cycle capability — encompassing project financing, development, construction, operations, and maintenance — backed by a proven record of high performance across tens of billions of dollars worth of urban rail and tunneling programs.

Our expert teams thrive on complexity. With more than 70 years and hundreds of kilometers of both tunnelling and rail projects in our portfolio, Aecon's teams are comfortable managing challenging geotechnical conditions and regularly deploy Tunnel Boring Machines (TBMs), the New Austrian Tunneling Method (NATM), and cut-and-cover techniques to deliver major subsurface scope on time and on budget. Our excellent relationships with leading TBM suppliers and world-class risk management and safety practices underpin our success.

Aecon also excels at both light and heavy rail project delivery with over $20 billion worth of work in the urban and suburban geographies. Beyond construction, we are highly active in rail operations and maintenance and bring a nuanced understanding of the full lifecycle and "day-in-the-life" of rail systems and their associated infrastructure assets. This comprehensive experience allows us to provide our clients with turnkey solutions that integrate designs, methods, materials, and systems refined for long-term efficiency, durability, and optimal net present value.

Aecon has successfully delivered 36 major Public-Private Partnership (P3) projects. We embrace the collaborative spirit that P3 structures and progressive delivery models foster, driving innovation, integrated decision-making, and best-value solutions. Through these partnerships, we achieve balanced risk-sharing and create outcomes that deliver lasting value for all stakeholders. With over 2,500 personnel in the USA and a presence in 30 states, Aecon is a poised to deliver this landmark project for the City of Fort Lauderdale.

We greatly appreciate the early market engagement the City has undertaken to this point, and we look forward to learning about next steps. Please feel free to contact me at your convenience for further information or discussion.

Regards,

Signed by:
Chris Deane
74D76B5A1004459...

Chris Deane
Vice President, Operations
Aecon Infrastructure Development Inc.
Email: cdeane@aecon.com

Attachment 1 – Project Information

1.0 Purpose

The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the design, engineering, construction, and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes. All submissions become City property and will not be returned.

2.0 Background

The New River Crossing is a two-track bascule bridge constructed in 1978. The bridge, at only 4 feet above the water level, must be opened numerous times a day to allow marine traffic to navigate the New River but remain down for both freight rail and passenger trains. Currently, approximately 60 trains traverse the New River Crossing rail bridge daily. That number is estimated to more than double with the addition of Broward Commuter Rail (BCR) Service. Recognizing the current challenges with the existing bridge, in 2019 the Florida Legislature directed the Florida Department of Transportation (FDOT) to evaluate long-term crossing solutions over the New River.

The City believes a tunnel would accommodate future commuter rail service while minimizing impacts on marine traffic, adjacent real estate, and the downtown environment. The tunnel alternative supports the City's vision of developing a world-class residential, commercial, and oceanfront destination community.

The City is assessing the current market to gauge interest of potential proposers and their capabilities to deliver this project. As part of that effort, the City hosted the New River Crossing Industry Day on July 28, 2025. The event included presentations from the City of Fort Lauderdale, Broward County, FDOT, and the United States Department of Transportation (USDOT) Build America Bureau.

Afternoon breakout sessions were held with the City and private-sector firms to provide an opportunity to further discuss the project, gauge interest, gain industry feedback on potential next steps, and associated timelines. For more information, project updates, and Industry Day materials, refer to the New River Crossing Project website.

Attachment 2 – Response Guidance

Interested parties are requested to respond to this RFI by uploading responses to the Infor portal. Responses shall be limited to 12 pages total and divided into three sections.

Section 1 *(4 pages max; provided by respondent)*

Section 1 of the response shall provide a company overview, administrative information, and the following at a minimum:

- Name, mailing address, phone number, and e-mail of designated point of contact
- Company profile and relevant experience with large-scale tunnel or similar infrastructure projects.
- Experience with tunneling technologies and methodologies (e.g., TBM, NATM, cut-and-cover)
- Examples of tunnel design, construction, operations, or maintenance projects completed within the past 10 years.

Section 2 *(2 pages max; provided by respondent)*

Respondents are encouraged, not required, to submit a brief Letter of Interest (LOI) along with their RFI response. The LOI should indicate the company's preliminary interest in participating in the New River Crossing project, highlight relevant experience, and outline any potential strategic or technical value the organization may bring. The LOI should be addressed to the City of Fort Lauderdale, is limited to two pages, and should be signed by the company's point of contact.

Section 3 *(6 pages max; included in RFI)*

Respondents are requested to provide detailed answers to the questionnaire included in this RFI as *Attachment 3 – Response Form*. These questions are designed to gather insights on the recommended technical approach, preferred delivery methods, and a realistic project timeline. Please ensure that responses are complete, accurate, and submitted in the fillable PDF format provided in the attached response form. While not all questions are mandatory, comprehensive responses will support the City's planning process for potential future procurement activities.

Space is provided to input additional observations and insight that would be beneficial to share with the City's project team.

Proprietary information, if any, should be minimized and must be clearly marked. To aid the City, please segregate proprietary information. Please be advised that all submissions become City property and will not be returned.

Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☒ Public-Private Partnership (PPP/P3)

   ☒ Preliminary Development Agreement (PDA)

   ☐ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ☐ Design-Build-Finance-Maintain (DBFM)

   ☒ Other: Construction Manager at Risk; Construction Manager General Contractor; or any progressive project development model would be preferred

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

   We believe all the scope associated with the design, engineering, civil and systems construction, and potentially some maintenance of the New River Crossing Tunnel should be considered as part of this project, and Aecon would be interested in leading completion of all scope elements.

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	☐	☑
EIS Development	☐	☑
Obtaining the Record of Decision (ROD)	☐	☑
Utility Investigations	☑	☑
Utility Coordination	☑	☐
Geotechnical Investigations	☑	☑
Property Acquisitions	☐	☑
	☐	☐
	☐	☐
	☐	☐
	☐	☐

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

The draft contract should provide a clear description of the delivery method selected, as well as the details of the procurement process and associated timelines. This should include details on the proposal evaluation process (including technical, financial, and interview weighting), 1 or more opportunities to discuss and provide feedback on the draft contract in a confidential forum, and a well-defined negotiation period in advance of award.

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- (●) 30% Design
- ( ) 60% Design
- ( ) 90% Design
- ( ) 100% Design
- ( ) Other (specify): _____

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

A 20% - 30% indicative design for the full scope is appropriate.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

Integrating the maintenance phase with design and construction will ensure the tunnel is built for long-term cost efficiency, reliability, and ease of maintenance. By considering maintenance needs early, designers can incorporate features to allow easy access for inspections and repairs, select durable and innovative materials that may be prohibitive when assessed in the short term, and plan for predictive maintenance strategies. This approach reduces future operational costs, minimizes disruptions, enhances safety, and supports compliance and sustainability goals, ultimately extending the asset's functional lifespan and improving overall performance. An integrated approach can also facilitate digital twin creation for real time asset monitoring and predictive maintenance, leveraging seamless data flow from design through operation.

Attachment 3 – Response Forms

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

Full lifecycle modeling of design options should be performed to assess impact of the best available materials and technology on cost, quality, risk, and performance. Durability, accessibility for maintenance, sustainability, and resilience of key components should be priorities. Best-overall-value options for waterproofing, drainage, easy-to-access inspection and maintenance points, ventilation and power systems, concrete design and reinforcement, modularity, and monitoring sensors for structural health and environmental conditions and impact should all be considerations. Selection of a progressive delivery model will assure ongoing performance of these evaluations, clear decision-making, and integration into the final design, resulting in an asset with an optimal net present value.

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ■ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

■ Borehole logs every _____ feet (please specify spacing)

■ Geological baseline report (GBR)

■ Laboratory soil/rock test data

■ Groundwater monitoring data

☐ Other: _____

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

Aecon uses a rigorous, data-driven approach for tunnel construction, beginning with detailed geological and geotechnical investigations to determine the optimal Tunnel Boring Machine (TBM) configuration for each section of the project alignment. The choice of an Earth Pressure Balance, Slurry, Hard Rock, or multi-mode TBM will be guided by the specific ground conditions along the alignment. The appropriate TBM selection will ensure face stability, minimize settlement and environmental impact, and deliver efficiencies in both cost and schedule, while simultaneously prioritizing safety.

In addition, a comprehensive risk assessment will be carried out to identify all potential hazard zones ("black points") along the tunnel route. Each critical area will be assigned tailored protocols and contingency measures, including ground reinforcement and adjusted excavation sequences to proactively manage anticipated challenges and optimize safety, cost, and schedule performance.

To further enhance safety for both personnel and the public, an integrated safety management system will be deployed, combining automated real-time monitoring of ground movement, environmental condition, and worker locations. Early-warning alarms and well-defined intervention protocols will be established for critical operations, supported by continuous training to ensure readiness across all teams and emergency services.

Our integrated methodology incorporates TBM selection, proactive geotechnical risk management, and robust safety systems to deliver a safer, more efficient, and more predictable tunneling process, achieving industry-leading safety outcomes and significant reductions in unplanned disruptions or costly incidents.

Attachment 3 – Response Forms

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

$150 Million

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

Aecon is one of Canada's largest and most diverse construction and infrastructure development companies. In the last 12 years, Aecon has obtained debt funding commitments over $32 billion in project financing for a total of 34 projects. This amount reflects Aecon’s strength to raise and secure debt to submit a fully compliant bid. This committed debt amount includes $5.3 billion from closed project financings. From the projects that Aecon has been selected as preferred proponent and achieved financial close, six of them required equity.

14. Which financing tools should be considered?

On the New River Crossing project the financing structure will depend on the underlying contract envisioned for the projects. Assuming this will be an availability long term contract, then the financing could be structured to match the term of the contract. Long term financing can be structured to as much as 50 years. a longer term contract will allow longer term financing. In any event, once the basic commercial construct is defined, we will aim to run a comprehensive

15. Please advise of innovative ways for a repayment model for this Project.

See above for further detail - in general the sources for repayment of costs (capital, O&M and returns) could either follow an availability model or a toll model or some combination or hybrid of the two. for example if a toll in not a viable option but, usage is still an element that is intended to be promoted by the proponent, then shadow tolling could be used.

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

A 4 to 6 month RFP process that includes Confidential Commercial Meetings

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

12 - 15 months.

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

14 - 16 months will be required for the design, fabrication, and delivery of the

19. How long should full construction, including TBM work, be expected to take?

39 - 44 months total (not including finishes). The breakdown is as follows: 14-16

20. What length of maintenance term is acceptable to the industry?

20 to 30 years at a minimum - or longer if a longer contract term is desirable.

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

(1) Geotechnical Uncertainty (ground conditions, groundwater, contaminated soils, settlement, water ingress, etc.)

(2) Utility conflicts due to unknown or inaccurately mapped utilities.

(3) Efficient obtainment of necessary permits and approvals from Authorities Having Jurisdiction.

(4) Regulatory constraints (e.g., noise/vibration restrictions that limit work hrs) and third party stakeholder challenges (e.g. proximity to sensitive structures such as hospitals or schools)

(5) Logistical challenges including: delivery of long lead items such as the TBM and PCTL; limited staging areas for muck pits and equipment and material storage; traffic management for hauling spoils, etc.

(6) Coordination with rail service providers

(7) Labor availability

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

In order to prepare the best possible team to deliver the project, we would appreciate any efforts to update interested parties on the project status and timeline.

Name:	Chris Deane	Title:	Vice President, Operations
Company:	Aecon Infrastructure Development Inc.	Phone:	4162972600
Address:	240-19020 33rd Avenue, Lynnwood, Washington 98036	Email:	cdeane@aecon.com
Signature:	Signed by: Chris Deane 74D78F541084450...	Date:	December 1, 2025

Response For Supplier: Cintra US

Event # : 538-1

Name: New River Crossing Tunnel (Request for Information)

Description: The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the planning, design, engineering, construction and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes.

Date created: November 26, 2025 6:53:46 PM EST	Date submitted: November 26, 2025 7:02:33 PM EST
Preview date:	Q & A open date: October 27, 2025 10:30:00 AM EDT
Open date: October 27, 2025 10:00:00 AM EDT	Q & A close date: November 21, 2025 5:00:00 PM EST
Close Date: 12/01/2025 02:00:00 PM EST	Dispute close date:

Responded To: 1 Out of 1 Lines

Total Bid Amount: 1.00 **Response Currency:** USD

Response Attachments

Attachment
Section 1 - RFI Response New River Crossing - Cintra US - 12.01.2025.pdf
Section 2 - RFI Response New River Crossing - Cintra US - 12.01.2025.pdf
Section 3 - RFI Response New River Crossing - Cintra US - 12.01.2025.pdf

Line Responses

Line 1: Request for Information - New River Crossing Tunnel

Event # 538-1: New River Crossing Tunnel (Request for Information)

Description: **This is a Request for Information (RFI); it is not a request for pricing, commitment to purchase, or an obligation to provide products or services described in this notice. Please see the attached forms for response details.**

Request for Information - New River Crossing Tunnel

Commodity Code: 913-55 Construction, Tunnel

Quantity: 1.0000 **Unit of Measure:** EA

Bid Quantity: 1.0000 **Unit Price:** 1.0000 **Extended Amount:** 1.00

No Charge: No **No Bid:** No

Request for Information - New River Crossing Tunnel

SECTION 1. COMPANY OVERVIEW AND EXPERIENCE

Contact Information

- **Name of Respondent:** Cintra US, along with its sister company Ferrovial Construction
- **Mailing Address:** 9600 Great Hills Trail, Suite 250E, Austin TX 78759
- **Authorized Representative:** Alberto Gonzalez Lalueza, Global Head of Business Development
- **Designated Point of Contact:** Luis Enrique Cruz Rodriguez, Business Development Project Manager
- **Phone Number:** 512-468-0377 | **E-mail:** ecruz@cintra.us

Company Profile and Relevant Experience

Cintra US Services LLC ("Cintra") is pleased to present our response to the Request for Information No. 538-1 ("RFI Response") for the New River Tunnel Crossing ("Project"). **Cintra** is a U.S.-based subsidiary of **Ferrovial SE** ("Ferrovial"), a globally recognized infrastructure Developer and Contractor with +70 years of experience delivering complex and sustainable solutions across the mobility and energy sectors. Ferrovial is known for its innovation, operational excellence, and long-term investment strategies, leveraging vertically integrated business units to manage the full lifecycle of major civil transportation infrastructure assets — from planning, to design, construction, operation, and maintenance, including alternative finance. Ferrovial is publicly listed in three markets (NASDAQ NYC, Euronext Amsterdam, and Spain's IBEX 35 stock exchanges) and it's public U.S. headquarters is in Austin, TX with over 1,300 employees nationwide.

Cintra is a global leader in the development, design, construction, financing, operations and maintenance of transportation infrastructure solutions. Cintra has developed and operates 18 mega-projects in 10 countries, including six in North America — five in the U.S. and one in Canada. These include in priced roadways (e.g. toll roads, managed/express lanes), tunnels, and bridge crossings. Cintra brings extensive experience in alternative financing mechanisms using available federal credit programs such as Transportation Infrastructure Finance and Innovation Act ("TIFIA") and Private Activity Bonds ("PABs"), having successfully closed 11 projects in North America with +$2.8Bn in PABs, $3.5Bn TIFIA loans, and $1.9Bn in private equity. Cintra's value proposition includes managing all Project phases through public-private partnerships (P3) agreements while considering a holistic lifecycle approach that maximizes value to our public partners such as transportation agencies, cities, counties and states. Cintra's flagship P3 projects includes toll roads such as 407 ETR in Ontario, Canada, managed/express lanes such as I-66 Outside the Beltway, in VA, TEXpress Lanes Network in DFW, and I-77 Express Lanes in NC, as well as the Silvertown tunnel in London, UK.

Cintra's sister business unit within Ferrovial is **Ferrovial Construction US Corp. ("Ferrovial Construction")**, a global expert in the design and construction of complex heavy civil infrastructure such as tunnels as part of highway, rail and water networks. Ferrovial Construction has been the lead Design-Build ("DB") Contractor on all of Cintra's successful projects and has developed over 211 miles of tunnels and 158 underground stations in varied and challenging subgrade conditions (e.g. remote mountainous, beneath the world's most densely populated cities, environmentally sensitive areas, etc.). As described below, Ferrovial Construction has successfully developed bored tunnels in London, Madrid, Barcelona, Toronto, Paris, Santiago de Chile and Sydney while maintaining high standards of environmental stewardship and protecting high value assets both above and below ground during construction. Ferrovial Construction has also developed successful cut and cover tunnels for Cintra P3 projects such as in Dallas-Ft Worth as part of the TEXpress Lanes Network.

Extensive Experience With All Tunneling Techniques

Ferrovial Construction has extensive experience in delivering complex underground infrastructure projects using a wide range of tunneling techniques and methodologies, including **tunnel boring machines ("TBMs"), Sequential Excavation Method ("SEM")**, also known as the **New Austrian Tunnelling Method ("NATM"), and cut-and-cover**. SEM is applied not only for tunnel drives but also for the construction of large underground spaces such as station caverns, where precise control over excavation and ground support is essential.

Ferrovial Construction's expertise includes the deployment of TBMs adapted to a **variety of geological conditions**, including Earth Pressure Balance ("EPB") machines for soft ground and mixed face environments, and hard rock shield TBMs for abrasive and high-strength formations. Ferrovial Construction selects and customizes the TBM type based on detailed geotechnical analysis, ensuring optimal performance, safety, and minimal impact on surrounding structures.

Ferrovial Construction takes a holistic view of tunneling operations, starting with detailed geotechnical and site investigation interpretation, followed by efficient TBM launch strategies, optimized logistics, and spoil removal using conveyors, rail, or river transport. Ferrovial Construction has a strong track record of minimizing ground settlement and movement across varied geological conditions, employing advanced ground stabilization techniques and continuous monitoring to protect sensitive and high-value assets. A centralized Engineering Services team works in close coordination with tunneling construction specialists to bring global best practices to each project, driving improvements in program efficiency, cost control, and delivery certainty.

Selected Credentials In Tunnel Projects Within the Past 10 Years.

Silvertown Tunnel (UK) | DB Duration: 2019-2025, O&M Duration: 2026– 2050 | Contract Value: $1.25 Bn[1] | Delivery Method: DBFM P3

This project was delivered through a DBFM P3, enabling early and continuous collaboration among the Developer (Cintra), the DB Contractor (Ferrovial Construction), and the Owner (Transport for London). This P3 project includes the **DBFM** of a major road **beneath the River Thames** in East London. The concession features a 0.62 miles twin-bore tunnel excavated using a **39.04 ft diameter TBM,** designed to operate in challenging ground conditions. A total of 21.19 Mn cf of material was excavated and transported entirely by river, significantly reducing environmental impact and road congestion. Project successfully opened for services in April 2025.

The involvement of Cintra as the long-term maintenance provider from the outset allowed for lifecycle-driven design decisions that optimized Opex and maintenance strategies. Ferrovial Construction implemented advanced settlement mitigation techniques, including daily monitoring of 250 leveling devices across fifteen transects to protect surrounding assets. Systems integration included traffic management and tolling infrastructure, with design adjustments, such as multi-circuit lane closure signals, to ensure KPIs could be met reliably. The Silvertown Tunnel is a strong reference for the Project in Fort Lauderdale, FL, as both involve tunneling beneath a river in dense urban environments. Notable technical achievements include the innovative rotation of the TBM using nitrogen skates and the production of tunnel lining segments with submillimeter precision, demonstrating Ferrovial's commitment to engineering excellence, sustainability, and long-term asset performance.

Ontario Line – Southern Civil, Stations and Tunnel (Canada) | DB Duration: 2022-2030 | Contract Value: $4.38Bn | Delivery Method: DBF

The Ontario Line – Southern Civil, Stations and Tunnel project is a major component of the new 9.7-mile Ontario Line Rapid Transit System in Toronto. This project demonstrates our ability to deliver complex, large-scale urban infrastructure in a dense and highly regulated Canadian environment.

Scope of Work includes the construction of 3.73 miles **of twin-bore TBM tunnels** through downtown Toronto, reaching depths of up to 131 ft. Delivery of **seven new stations**, including one above-ground station integrated with GO Transit (rail transit authority), Ontario's railway system. Two underground stations connected to the existing Toronto Transit Commission subway system. Four new underground stations in high-density urban areas. Extensive civil and groundworks, utility relocations, and preparatory works for the future Rolling Stock, Systems, Operations, and Maintenance (RSSOM) Contractor.

Key features and innovations include the first large-scale use of road headers and SEM in Toronto for cavern construction, minimizing surface disruption and enhancing safety. Implementation of the Transforming Safety Together program, a proactive, award-winning health and safety initiative focused on leadership, engagement, and continuous improvement. Integration of heritage preservation strategies, including the relocation and reintegration of historic building facades into new station infrastructure. This project highlights Ferrovial Construction's

[1] Contract values in USD converted from original local currencies using market exchange rates as of October 31, 2025.

expertise in managing complex stakeholder environments, navigating urban constraints, and delivering innovative, sustainable solutions in the Canadian infrastructure sector.

Sydney Metro West (Australia) | DB Duration: 2023-2032 | Contract Value: $1.28 Bn | Delivery Method: DB (Early Contractor Involvement)

Contract to deliver the Central Tunnelling Package of the Sydney Metro West project, a major infrastructure initiative in New South Wales. The scope of work includes the design and construction of twin 6.84 miles metro railway tunnels connecting The Bays Station to Sydney Olympic Park Station, a highly urbanized area in Sydney. In addition to tunnelling, the project encompasses excavation and civil works for five new metro stations located at The Bays, Five Dock, Burwood North, North Strathfield, and Sydney Olympic Park.

The work involves the deployment of **two double-shield, hard rock TBM**, construction of a crossover cavern at Burwood North, and access shafts at both Burwood North and The Bays. The project also includes a TBM launch site at The Bays and a retrieval site at Sydney Olympic Park, as well as the production of over 70,000 precast concrete segments at a dedicated facility in Eastern Creek. This package forms a central part of the broader Sydney Metro West program, which will deliver a 14.91 miles metro line connecting Greater Parramatta with Sydney's central business district, significantly enhancing public transport capacity and urban connectivity.

Thames Tideway Tunnel (UK) | DB Duration: 2015 – 2025 | Contract Value: $987 Mn | Delivery Method: DB, (Optimized Contractor Involvement (OCIP))

This project comprises the design and construction of a **7.89-mile sewer tunnel beneath the river Thames**, with an internal diameter of approximately 23.6 ft, using two EPB TBM with diameters of 29.1 ft, reaching depths of up to 197 ft. It includes eight shafts and six combined sewer overflow (CSO) connections. A total of approximately 6.28 Mn short tons of spoil were removed by barge, eliminating around 344,000 heavy goods vehicles trips. Settlement mitigation was carefully managed, with Letters of No Objection secured for tunnelling beneath iconic structures such as the Tower Bridge, a 100-year-old bascule bridge over the Thames, considered a public landmark for its historic and architectural significance. The project involved complex stakeholder coordination across multiple zones and notably achieved the first **Health and Safety Executive ("HSE") exemption** to work above 50.8 psi, enabling advanced hyperbaric interventions under the most strict and controlled health and safety measures, which required design and implement a strict safety protocol to progress the works while keeping all teams under safe working conditions.

Northern Line Extension (UK) | DB Duration: 2014 – 2021 | Contract Value: $980 Mn | Delivery Method: DB (Net Target Cost)

The Northern Line Extension project included **2 miles** of twin-bore TBM tunnels (**19.7 ft diameter**), five cross passages, and two new underground "cut and cover" stations. Spoil logistics were managed via river transport, removing approximately **931,000 U.S. short tons** of material and avoiding **450,000 truck movements**. Settlement mitigation was achieved through a redesign that eliminated the need for compensation grouting. Systems integration was led through SCADA, coordinating eleven contractors from Transport for London. The project was delivered ahead of schedule with full operational integration.

Crossrail – Western Running Tunnels (UK) | DB Duration: 2011 – 2016 | Contract Value: $930 Mn | Delivery Method: DB (Net Target Cost)

This project involved the construction of **3.98 miles** of twin-bore tunnels using two **900 U.S. short ton** Earth Pressure Balance (EPB) Tunnel Boring Machines (TBMs), each with an external diameter of **29.07 ft**. Spoil logistics were efficiently managed, with **2.2 Mn U.S. short tons** of material removed by rail, avoiding over **50,000 heavy goods vehicle (HGV) journeys**. Settlement mitigation included the installation of **1,225 piles** beneath the **100-year-old Lords Hill Bridge**, achieving **zero out-of-tolerance settlement**. Systems integration required coordination with **ten systemwide contractors**. The project was successfully delivered in a **densely populated urban environment**, such as central London, without any disruption or impact to surface infrastructure.

Montcada i Reixac Railway Underground Relocation (Spain) | DB Duration: 2024-2030 | Contract Value: $577 Mn | Delivery Method: DBB

Ferrovial Construction is currently executing the underground relocation of the railway corridor in Montcada i Reixac, Barcelona, Spain, a strategic infrastructure project aimed at improving urban integration and railway capacity along the R2 Railway line of Rodalies.

The work involves the construction of a **2.49-mile tunnel** and a new underground station, replacing the existing surface alignment. The project begins with a "cut and cover" section, where over **1.08 million sf** of diaphragm walls are being constructed using hydro mill technology to ensure precision and stability in densely urbanized areas. As the alignment progresses and reaches depths of up to **115 ft** beneath an active aquifer, conventional tunneling methods are employed, including the NATM, which allows for controlled excavation and ground support in complex geological conditions. Ground improvement techniques such as jet grouting are applied to ensure soil stability and water tightness, particularly in sensitive zones.

One of the main challenges of the project is the proximity to the existing railway line, which remains in operation during construction. Continuous train service must be maintained throughout construction, requiring detailed planning, phasing, robust safety measures, and complex temporary traffic and utilities diversions. Additionally, the urban density and closeness of residential structures necessitate advanced ground consolidation works with the extensive use of jet-grouting techniques, micro piling protection walls and real-time structural and vibration monitoring ahead of tunneling works to mitigate risks of settlement or damage to existing structures and minimize disruption to rail services.

Grand Paris Express – Line 18 (France) |Duration DB: 2022-2030 | Contract Value: $468 Mn | Delivery Method: DBB

Ferrovial Construction is currently constructing a section of Line 18 of the Paris Metro, which will connect Orly Airport with Versailles Chantiers. The contract is part of the Grand Paris Express program, the largest infrastructure initiative in Europe, aimed at transforming the metropolitan transport network of the French capital. The scope includes the excavation of **4.16 miles** of TBM tunnel with an external diameter of **30.18 ft** and an internal diameter of **25.59 ft**, along with the construction of three stations and eight ancillary structures between Guyancourt and Versailles – Chantiers, located west of Paris.

Construction began with preparatory works in 2022, followed by major civil works from 2023 to 2027. Final finishes and commissioning are scheduled for completion by 2029. Tunnel boring operations commenced in mid-2024 and are expected to conclude in 2026. The project incorporates sustainable practices, including an agreement with Électricité de France (EDF) to ensure that the entire electricity supply—**25 GWh (gigawatt-hours)**—is sourced from renewable energy. Of this, **13.5 GWh** is allocated to TBM operations, with the remainder powering auxiliary construction systems. This initiative will prevent the emission of approximately **8,155 U.S. short tons of CO_2**.

Tunnel Operations & Maintenance Madrid Calle30 (Spain) | Status: In operations since 2008 | Contract Value: N/A | Delivery Method: N/A

Madrid Calle 30, a mixed P3 with participation from Ferrovial through its affiliate EMESA, is responsible for **the operation and maintenance of Madrid's M-30 urban ring road and its extensive tunnel network, the largest in Europe**. The tunnels, spanning over 6.2 miles, feature advanced technical specifications including unidirectional three-lane cross sections, state-of-the-art ventilation, fire protection, and continuous automated safety systems. Tunnel construction involved large-diameter TBMs with earth pressure balance shields, robust fire-resistant concrete segment linings, and sophisticated real-time monitoring.

EMESA is a specialized maintenance and operations company certified in road traffic safety and environmental management. From permanently staffed 24/7 control centers, it ensures top safety and asset integrity standards, achieving average incident response times under six minutes with intervention teams at all tunnel entrances. Serving over 1.5 million daily users (487.5 million annual trips), EMESA leverages automated traffic and safety systems with near 100% uptime, proactive structural inspections, rigorous maintenance schedules, and AI-driven traffic management. Real-time monitoring of fire protection, ventilation, and air quality supports rapid incident clearance and comprehensive reporting. Madrid Calle 30 and EMESA exemplify industry-leading capability in comprehensive tunnel asset management, integrating advanced engineering solutions, reliable operational models, and robust performance metrics.

cintra
A Ferrovial company

9600 Great Hills Trail,
Suite 250E,
Austin, TX 78759

December 1st, 2025

City of Fort Lauderdale
290 NE 3rd Avenue, Fort Lauderdale, FL 33301
ATTN: Milos Majstorovic, MSCE, PE.

RE: Letter of Interest on The New River Crossing Tunnel Project

Dear Mr. Majstorovic;

It is my pleasure, on behalf of Cintra US Services, LLC, to express interest in the New River Crossing Tunnel (the "Project") being analyzed by the City of Fort Lauderdale (the "City"). We appreciate that the City had given us the opportunity to respond to the Request for Information ("RFI") for the Project, as we believe that such Project represents an innovative solution to meet the City's transportation needs and considering the perspectives of the industry is key to developing it successfully in the near future.

Cintra, together with its affiliates, is part of Ferrovial SE, a globally recognized infrastructure Developer and Contractor with +70 years of experience delivering complex and sustainable solutions across the mobility and energy sectors. Cintra has successfully delivered multiple complex mobility projects in the U.S. and worldwide. Cintra is vertically integrated with its sister company Ferrovial Construction US Corp. ("Ferrovial Construction"), being able to provide solutions over the lifecycle of infrastructure projects, from development, design and construction to operations and maintenance. We have studied the Project, and we are excited to participate in its continued development.

Cintra has experience with large scale transportation projects in the U.S. on the full lifecycle of these projects, from design and construction to operations and maintenance, including financing capabilities through long term public-private partnership agreements. Relevant examples include the projects of I-66 Outside the Beltway in VA, TEXpress Lanes network in TX, and I-77 Express Lanes in NC.

Cintra's experience in structuring complex financing structures to deliver these types of projects includes financing instruments such as TIFIA, PABs, taxable bonds and private equity. Our track record in the US includes +$2.8Bn in PABs, $3.5Bn TIFIA loans, and $1.9Bn in private equity.

Cintra's sister company, Ferrovial Construction has extensive experience in delivering complex tunnel projects through several delivery methods like DB, DBF and P3s. Tunneling techniques and methodologies include including tunnel boring machines (TBMs), Sequential Excavation Method (SEM), also known as the New Austrian Tunnelling Method (NATM), and cut-and-cover. Relevant experience include projects such as the Ontario Line –

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Southern Civil (Canada), Silverton Tunnel (UK), Sydney Metro West (Australia), Thames Tideway Tunnel (UK), Montcada i Reixac Railway Underground Relocation (Spain), Grand Paris Express – Line 18 (France), Northern Line Extension (UK), Crossrail – Western Running Tunnels (UK), and Tunnel Operations & Maintenance Madrid Calle30 (Spain). As lead DB contractor for Cintra's P3 projects, Ferrovial Construction has also made complex construction in cut and cover in TEXpress Lanes network in DFW.

Section 1 of our RFI response includes additional details of Cintra and Ferrovial Construction credentials and capabilities. We are certain that our capabilities in delivering complex projects with alternative delivery methods such as P3s and our expertise in delivering tunnels with similar complexity as the Project through innovative technologies, along with our vertical integration, would bring potential strategic and technical value to the City and the public.

We hope that the City continues to procure the Project and as it progresses, together with the City, we anticipate devoting time, resources, and our expertise to develop it. We are looking forward to continuing to participate in any upcoming steps planned by the City for this Project.

Should you have any questions, please reach out to the Designated Point of Contact included in Section 1 of our RFI response.

Sincerely,

Alberto Gonzalez Lalueza,
Authorized Representative
Global Head of Business Development
Cintra US Services, LLC

Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ▣ Public-Private Partnership (PPP/P3)

   ▣ Preliminary Development Agreement (PDA)

   ▣ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ▣ Design-Build-Finance-Maintain (DBFM)

   ▣ Other: Design-Build-Finance (DBF)

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

We consider that a DBFM P3 that is competitively-procured under a best-value regime (including committed pricing) would offer the best value for the Project, the City and the public. We believe a Developer scope reflective of a DBFM P3 model would maximize value for the City through competition and enable the strongest commitments to deliver the Project on-schedule and on-budget.
As discussed in Question 12 and 13, we consider that a DBFM P3 model could be structured best around Availability Payments ("APs") funded by the City. However, we are open to exploring with the City other funding structures to generate additional revenue streams for the Project, for example, Transit Oriented Developments ("TODs").
The scope elements selected under Question 3 reflect how we could participate as a Developer in a DBFM P3 model. This preference assumes that the risks associated with such elements will be allocated to the party best suited to manage them (e.g. Developer, City or 3rd Party) and include key commercial terms akin to those in market precedents for other successful U.S. P3s. We consider that for all environmental aspects of the Project, the City should ultimately be responsible for obtaining such permits. However, the Developer would remain available to support the City in any analysis or study needed to help obtaining these permits. For scope elements of investigations for utility, geotechnical and archeological aspects, including contaminated ground, we consider the City should also be the ultimate responsible, as these typically are aspects that a public entity could address better than a private Developer. Yet, we could support the City in coordination for these scope elements. Right-of-Way ("ROW") is an element that could be shared, as a Developer could help coordinating the efforts to identify parcels and appraising them. However, the City should collaborate to exercise its eminent domain powers when needed. Financing and Maintenance of Infrastructure are scope elements a Developer could typically perform.
On another note, we consider that a DBFM P3 approach provides many benefits that other delivery methods may not offer, including but not limited to:
• Efficient Risk Allocation: Shifting risks to the party that can best handle them over the full project lifecycle (not just during construction or during O&M), such as design, construction, environmental, financing and maintenance risks over the full useful life of the asset.
• Greater City Budget Flexibility: A DBFM P3 with AP-based payments regime would allow the City to maximize its budget flexibility, as the model would allow to make fixed payments over the term of the Project instead of making larger milestone payments upfront.
• Project Delivery Certainty: Under a DBFM P3, the Developer would only be compensated if the Project successfully achieves certain key defined milestones by the Owner, therefore the Developer is heavily incentivized to complete the Project on-budget and on-time to maximize value in the long term for the Owner. Furthermore, a DBFM P3 or a DBF requires Lenders and Investors to provide capital at risk to the Project which requires them to perform significant diligence and put into place additional performance regimes that maximize the Developer's ability to receive payment and in-turn make required debt and investor repayments. This adds an additional layer of performance incentives and quality to the benefit of the Owner which is unique to P3s.
• Optimized Lifecycle: Enabling lifecycle-driven design decisions at the outset of the Project that optimize maintenance expenditures and strategies over the term – this is only achievable through the involvement of the same Developer in both the design, construction and maintenance periods.
• Incentivized Long-term Performance: Receiving a firm commitment from Proposers, making them retain financial "skin in the game" in the form of their own equity from the beginning of the Project through the end of the term to incentivize

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	☐	✔
EIS Development	☐	✔
Obtaining the Record of Decision (ROD)	☐	✔
Utility Investigations	☐	✔
Utility Coordination	☐	✔
Geotechnical Investigations	☐	✔
Property Acquisitions	✔	✔
Archeological Investigation	☐	✔
Contaminated Ground	☐	✔
Financing	✔	☐
Maintenance of infrastructure	✔	☐

Attachment 3 – Response Forms

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

Regardless of the delivery method chosen, a draft contract should clearly state the scope of the Project and the risk allocation across the different phases of it. This risk allocation should be clear and objective, and should define City and Developer roles, responsibilities, obligations, remedies, conflict resolution processes, default and termination clauses. Specific and realistic milestones and procedures should also be set. Additionally, the draft contract should include the performance requirements, the payment mechanisms and the handback requirements. Should any other stakeholder relevant to the Project exist, the draft contract should establish clear interfacing requirements with such parties. Under a turnkey delivery approach such as a DBFM P3, these issues would be explored and defined at the outset in a single agreement which would be beneficial to the City and maximize value for the public as minimizes opportunities for claims or contractor interface issues under traditional disaggregated delivery models (e.g. DBB, DB, DBF, PDA).
We consider transparency is also important during the procurement process. We recommend the procurement documents (i.e., RFQ, RFP, etc.) to accommodate an innovation and value engineering process during the procurement that incentivizes new ideas by the proposers for City consideration that result in improved delivery, better risk allocation or more competitive pricing. These are typically considered as "Alternative Technical Concepts", or ATCs, in other P3 procurements and created significant value for Owners in many precedent projects. Additionally, these ATC processes could help inform any changes needed by the City to any environmental approvals granted during procurement to ensure that any innovations are fully implemented by the awarded proposer. Procurement documents should also outline a clear procurement process, with an objective evaluation criterion that allows for a consistent and fair comparison of the proposals across all technical and financial components.

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- (●) 30% Design
- ( ) 60% Design
- ( ) 90% Design
- ( ) 100% Design
- ( ) Other (specify): _____

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

In a PDA, the "Indicative Design" would serve as a framework of the main intent of the City to be reflected in the full design of the Project and should be clear enough to outline the scope of the Project but not as rigid to limit innovations later in the development. It should include clearly and at minimum the requirements of the City, the performance requirements, the key constraints, operational goals, quality benchmarks, and durability requirements.
This "Indicative Design" should be part of a clear and well-defined PDA period process which outlines the terms of collaboration between the Developer and City to finalize the design and generate a price. At a minimum, this process should include a defined set of milestones as well as time-constrained development and review periods to be achieved while progressing the design without delay, and a mechanism for milestone payments as they are achieved and received by the Developer, as well as a compensation mechanism in case the City decides to terminate the PDA. The process should also include the terms associated with offramps/termination for convenience rights available to both parties (City and Developer) during the term if the PDA process is not evolving towards the shared objectives by both parties.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

As discussed in question 2, we consider that maintenance should be bundled with design and construction in a DBFM P3 model, as this approach ensures early involvement of the long-term maintenance provider and promotes lifecycle-driven design decisions that optimize operational expenditure and maintenance strategies. Bundling maintenance with design and construction under a single Project agreement reduces risks and improves coordination. Separating them into different contracts could create significant interface challenges between different parties (e.g. DB Contractor and O&M Provider) as it is likely they do not align a lifecycle view on the Project. This results in inefficiencies and potential conflicts placing the City at the center of every dispute as the counterparty to both entities (interface risks retained by the City). Separating the DB and the maintenance responsibilities could result in the construction of an asset is not optimized for maintenance functions, increasing the potential for defects or higher maintenance costs by the Owner, as well as deferred maintenance which can cause poor facility operations or failure. Bundling the DB and the maintenance responsibilities under a single contract would avoid this.
For instance, in the Silvertown Tunnel project (see Section 1), having a single contract allowed to simplify maintenance, as the design considered elements to simplify the access to the tunnel for performing regular maintenance, allowing an optimization in overall project costs. Also, the Developer was able to commit to higher KPIs, allowing the Owner to achieve a higher performance during the life of the asset and deliver a more resilient cost-effective solution.
In a DB or DBF contract, the City would need to ensure the maintenance provider is involved early in the process to account for any lifecycle approaches. Failing to bring the maintenance provider from the design stage could create opportunities for claims and delays in the future.

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

As discussed in Question 7, to reduce long-term maintenance costs and risks, we recommend the incorporation of lifecycle considerations into the design process, ensuring that improvements are made to facilitate easier and more efficient maintenance over the asset's lifespan. We think this is only achievable under a DBFM P3 approach where all the design, construction and maintenance responsibilities are performed by the same entity and governed under a single turnkey agreement with the City.
Specifically for a tunnel, we believe the following design considerations could reduce long-term maintenance costs and risks:
• Design should consider access to the infrastructure for maintenance works. This would allow to reduce the costs of maintenance during the long-term, as well as reducing the maintenance periods.
• Design should consider the process to provide maintenance. An efficient design should ensure that maintenance could be provided without closing the tunnel for maintenance works, minimizing the closure periods.

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ■ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

■ Borehole logs every 100-300 feet (please specify spacing)

■ Geological baseline report (GBR)

☐ Laboratory soil/rock test data

■ Groundwater monitoring data

■ Other: Detailed Utility Services Maps. Archeology Surveys (if required), Contaminated ground surveys. Closer spacing ma

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

Here the summary of the innovative methods we have applied in previous projects (See also details in Section 1).
Silvertown Tunnel (UK).
• Safety improvements. One single 1,400-ton TBM was used for both tunnel drives under the river Thames. The TBM was rotated 180° over nitrogen skate system in a circular shaft. This significantly reduced safety risks and improved project schedule overall. This could be directly applicable to the Project.
Thames Tideway Project (UK).
• Safety Improvements. A digital twin was developed for both TBMs. Virtual Reality Technology program provided increased health and safety awareness, training and project induction for personnel, emergency services and stakeholders.
• Efficiency Improvements. Digital construction management for planning, logistics and clash detention). Additionally, both 900-ton TBMs were delivered by river as well as all muck-away and precast segments transport.
Crossrail Tunnel (UK).
• Efficiency and Cost Improvements. Real time fiber optics monitoring system for Sequential Excavation Methods (SEM, NATM).
• Safety Improvements. Construction of stations caverns by expanding a pilot tunnel previously constructed with the TBMs. This significantly reduced the safety risk of open face excavation, settlement risks, additional shafts and the possibility of removing the spoil through the tunnel by reducing lorry movements. This could be directly applied to this Project.

Attachment 3 – Response Forms

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

We consider that on a PDA, the Owner typically should at least fund payments

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

In North America, Cintra has achieved financial close and successfully operated 11 P3 projects using complex financing structures including, but not limited to, $2.78 Bn in tax-exempt bonds, $3.45 Bn in TIFIA Secured direct loans, and commercial bank loan facilities. These financing tools were used to optimize capital costs, create value for Owners and minimize project funding gaps. These innovate financing structures were deployed for many different types of transportation assets including express lanes (e.g. NEXpress Lanes Network

14. Which financing tools should be considered?

Several financing tools could be considered for the Project available for the Owner:
a. TIFIA Program secured direct loan: it provides credit assistance for eligible transportation projects. Applicants could be state and local governments, transit agencies, railroad companies, special authorities, districts, and private entities. This loan offers flexible repayment terms and combines construction and

15. Please advise of innovative ways for a repayment model for this Project.

As mentioned in Questions 2 and 12, an innovative repayment model for this Project under a DBFM P3 model could be best structured around Availability Payments (“APs”), ensuring budget certainty for the City and predictable cash flow for the Developer over the term of the Project agreement while incentivizing performance and compliance with KPIs. This approach would also allow the City to develop or pool revenue streams to fund the APs through strategic agreements with stakeholders that will benefit from the infrastructure. For

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

The timeframe for negotiating and finalizing a PDA could be 1-3 months post

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

Considering a Progressive Desing-Build method, and that the DB Contractor

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

Based on our experience in past tunnel projects of similar magnitude, we

19. How long should full construction, including TBM work, be expected to take?

The duration for the initial site establishment and enabling works construction

20. What length of maintenance term is acceptable to the industry?

The length of an acceptable maintenance term in the industry is generally 25

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

Key schedule risks that we consider critical factors for tunnel projects in urban or constrained environments include:
• Securing timely access to the right-of-way (ROW) and managing complex logistics in densely populated areas.
• Waste material management: as excavation generates large volumes that require efficient removal potentially leveraging waterways like rivers for transport. Supply chain reliability for tunnel segments and other critical components must be ensured to avoid delays.
• Utility relocation and reinforcement often pose significant challenges, requiring detailed planning and sometimes structural stabilization of adjacent buildings.
• Permitting processes, which could also delay timelines, especially when multiple agencies are involved.
• Monitoring campaigns for surrounding structures must be established early, with a robust baseline to track and control settlement risks.
• Maintaining existing rail services during construction, as successfully achieved in the Silvertown project with the Docklands Light Railway, adds complexity and requires innovative solutions to minimize disruption.

Attachment 3 – Response Forms

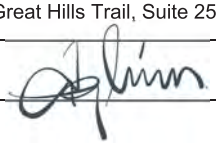
ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

Please, see that text in the boxes of this Attachment 3 need to be scrolled up/down to see our full responses.

Also, in the signature block below, notice that this Section is executed by the Authorized Representative of Cintra, while the contact information is for the designated point of contact for this Project:

Luis Enrique Cruz Rodriguez
Business Development Project Manager
Phone: 512-468-0377
Email: ecruz@cintra.us

Name:	Alberto Gonzalez Lalueza	Title:	Authorized Rep. | Global Head of Business Development
Company:	Cintra US Services, LLC	Phone:	512-468-0377 (See Additional Comment Box Above)
Address:	9600 Great Hills Trail, Suite 250E, Austin, TX 78759	Email:	ecruz@cintra.us (See Additional Comment Box Above)
Signature:		Date:	December 1st, 2025

Response For Supplier: Civil & Building North America

Event # : 538-1

Name: New River Crossing Tunnel (Request for Information)

Description: The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the planning, design, engineering, construction and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes.

Date created: December 1, 2025 8:36:31 AM EST	Date submitted: December 1, 2025 11:47:55 AM EST
Preview date:	Q & A open date: October 27, 2025 10:30:00 AM EDT
Open date: October 27, 2025 10:00:00 AM EDT	Q & A close date: November 21, 2025 5:00:00 PM EST
Close Date: 12/01/2025 02:00:00 PM EST	Dispute close date:

Responded To: 1 Out of 1 Lines

Total Bid Amount: 1.00 **Response Currency:** USD

Response Attachments

Attachment
RFI - FLL New RIver - CBNA Response - Section 1.pdf
RFI - FLL New RIver - CBNA Response - Section 3.pdf
RFI _ FLL New RIve - CBNA_Response - Section_2.pdf

Line Responses

Line 1: Request for Information - New River Crossing Tunnel

Event # 538-1: New River Crossing Tunnel (Request for Information)

Description: **This is a Request for Information (RFI); it is not a request for pricing, commitment to purchase, or an obligation to provide products or services described in this notice. Please see the attached forms for response details.**

Request for Information - New River Crossing Tunnel

Commodity Code: 913-55 Construction, Tunnel

Quantity: 1.0000 **Unit of Measure:** EA

Bid Quantity: 1.0000 **Unit Price:** 1.0000 **Extended Amount:** 1.00

No Charge: No **No Bid:** No

Request for Information - New River Crossing Tunnel

Comments: Please find the response to the expression of interest for this project, in attachments.
We are readily available to address any questions you may have.
Thank you for this opportunity,

Section 1: Company Overview, relevant experiences, administrative information

Name, mailing address, phone number, and e-mail of designated point of contact

- **Name and designation**: Alexandre Ducamp, Bid Director
- **Address:** Civil & Building North America LLC, 2 S. Biscayne Blvd. Suite 2000, Miami FL 33131
- **Phone number:** +1 305-374-5383
- **Email:** cbna@cbna-constuction.us

Company profile and relevant experience with large-scale tunnel or similar infrastructure projects

Civil & Building North America LLC ("CBNA") is the US subsidiary of Bouygues Travaux Publics, which is a member of Bouygues Construction. CBNA carries out major heavy civil projects. With our main office in Miami, Florida, we have been operating in North America since 2002 with landmark achievements such as the Port of Miami Tunnel (PPP twin-tunnel project in Miami under very challenging ground conditions) and as well as the recently handed over design-build Pawtucket CSO Tunnel Project in Rhode Island. CBNA is also working on the Potomac River Tunnel Project in Washington DC, Great Lakes Tunnel Project in Michigan and is actively pursuing other heavy-civil projects in the US. CBNA brings in unique project experiences, capabilities and seasoned key personnel team.

CBNA's parent company Bouygues Travaux Publics (BYTP) (through Bouygues Construction) has consistently ranked among ENR's Top 10 International Contractors year after year. The successful completion of their projects relies on strong project teams, in-house project management capabilities and extensive technical expertise with significant emphasis on innovation and R&D. BYTP boasts 370 miles of successful tunnel experience (including the historic Channel Tunnel in Europe) on more than 85+ projects in the five continents, through some of the most challenging geologies and sensitive environments. This experience comprises mining through hard rock, soft ground, and mixed face conditions. We have the experience and expertise in all aspects of tunnel and other associated underground structures design, construction, and project management. We have completed new builds, remediation projects, and other studies related to every stage of project development.

Port of Miami Tunnel

The depth of engineering expertise also includes access to and continuous support from the unique pool of 700+ technical personnel in our Technical Department based out of the Paris Area headquarters and the use of sophisticated tools and techniques related to tunnel design, structural design, civil design, geotechnical investigation and analysis, seismic analysis and design, hydrogeology, stability and foundation analysis and design. We also deploy in-house engineered TBM tools developed and tested over many years and across many projects for tunnel construction.

Our collective technical ingenuity to tackle the various project challenges will be demonstrated through meaningful input and collaboration during procurement phase one-on-one meetings and will continue throughout the Project delivery.

CBNA's diverse transportation project experience includes the design and construction of tunnels for major subway/metro, high-speed rail, road and other projects delivered to the satisfaction of clients in locations as diverse as North America, Europe, Africa, the Middle East and Australia. A few relevant tunnel project experiences are detailed below.

Metro tunnels and associated underground stations: In the past five years, BYTP has successfully delivered 20 km of tunnels with six TBMs, including two variable-density TBMs that were used for the first time in France for tunneling, adjacent to the Seine River in mixed face ground conditions, for **the Grand Paris Metro** T3A, T2A and for other mass rapid transit in Paris area **Lines** 14, Eole (France); 35.4 km of TBM tunnels for the mass rapid transit with stations for the **Cairo Metro Project** Line 2, Line 3 Phases 1, 2, 3, 4A (Egypt) where an innovative dual-mode TBM was used for tunneling under the Nile for overcoming challenging ground conditions; 16.38 km long underground section and stations forming part of the 80km mass rapid network for the **Gautrain Rapid Rail Link Tunnel** (South Africa); 6.21 miles of metro project (3.42 miles of TBM tunnel, 1.37 miles of road header tunnel, 2,362 ft of cut and cover tunnel) and four stations for the **Sydney Airport Link** (Australia) procured under a P3 model; 9 km of twin tunnel and five stations in the CBD area of Melbourne for the $5.5B USD **Melbourne Metro** (Australia) also procured under P3 model; and the **Hong Kong mass rapid transit**, which consists of the legacy work of delivering 14 projects for Mass Transit Railway (MTR) in Hong Kong since the 1970s in very dense urban environment. Many of these projects included underground stations.

High-speed rail tunnels: CBNA and its parent company are proud of its project achievement on the recently handed over design and build of **HS2 – C1 package** (13.42 miles) section in England, including 9.94 miles of twin TBM tunnels (29.86 ft internal diameter) under a collaborative procurement model; and the **XRL 820 Project** (Hong Kong) consisting of two parallel 2.24 miles long TBM tunnel (26.74 ft diameter). The project achieved daily progress of up to 129.9 ft of tunnel works in a sensitive and very dense urban environment.

Road tunnels: CBNA and its parent company Bouygues Travaux Publics have successfully completed the following landmark road tunnel projects:

- **Port of Miami Tunnel (Florida)** is an award winning Design Build Finance Operate (DBFO) project which consisted of a 4200 ft long twin-tunnel used the largest diameter soft ground tunnel boring machine (42ft bored diameter) in the U.S. during construction beneath Biscayne Bay, five cross passages, other associated works and man-made overburden that was built to accommodate inadequate overburden at the launching shaft;
- **Tuen Mun-Chek Lap Kok Link Tunnel (Hong Kong)** which includes 2x 3.08-mile-long subsea road tunnels that holds the Guinness World record for the largest diameter TBM (57 ft 10 in);
- **West Connex M4- M5 Link tunnels (Australia)** which includes 2 x 4.66 miles long road tunnels in Sydney commissioned in February 2023 and it was delivered two months ahead of schedule.
- **Immersed tunnel projects** include Rostock tunnel (Germany) and New Tyne Crossing (England). We are also working on the design and early works phase of the Fraser River Tunnel Project.

Experience with tunneling technologies and methodologies (e.g., TBM, NATM, cut-and cover)

CBNA's tunnel design and construction experience with over 370 miles has made them leaders in tunnel-boring machine (TBM) technology.

We have used all tunnel excavation methods, including various types of TBMs in diverse geology and in five continents, drill-and-blast, cut-and-cover, road-header excavation, New Austrian Tunneling method (NATM) and sequential excavation methods (SEM). The tunnels were built in soft and hard ground conditions. CBNA's project approach is adapted to project specific interfaces, constraints/challenges and underground features. We have installed all types of temporary support (grouted and non-grouted forward spilling, lattice girders, steel sets, canopy tubes, rock bolts and shotcrete) and permanent lining technologies, including, shotcrete, pre-cast concrete and cast-in-place concrete. The following table provides a short summary of a few recent key project references mapped onto the various tunneling methodologies.

	TBM	NATM / SEM / Traditional Drill and blast	Cut and cover
Projects	✓ Port of Miami Tunnel (Florida) ✓ Pawtucket CSO Tunnel (Rhode Island) ✓ Tuen Mun-Chek Lap Kok Link Tunnel (Hong Kong) ✓ HS2-C1 package (England) ✓ Grand Paris Express, Line 14, Eole, Line 15 (France) ✓ Liantang tunnel (Hong Kong) ✓ Sydney Airport Link (Australia)	✓ Port of Miami Tunnel (Florida) ✓ Pawtucket CSO Tunnel (Rhode Island) ✓ WestConnex M4- M5 Link tunnels (Australia) ✓ Melbourne Metro (Australia) ✓ Sydney Airport Link (Australia) ✓ CKR Project (Hong Kong) ✓ Liantang tunnel (Hong Kong)	✓ Port of Miami Tunnel (Florida) ✓ Tuen Mun-Chek Lap Kok Link Tunnel (Hong Kong) ✓ Melbourne Metro (Australia)
Key elements	✓ Design and build including progressive design build ✓ Single-pass PCTLs ✓ Diverse TBM types (slurry, variable density, EPB, dual mode) ✓ Many urban transit tunnel projects included cross passages ✓ In-house developed TBM tools such as Mobydic, Pyxis, Catsby, were deployed	✓ Design and build including P3 and progressive design build ✓ Road headers, traditional drill and blast techniques ✓ In many cases cross passages were delivered by NATM/traditional tunneling methods involving the use of grouting and ground freezing	✓ Design and build including P3 and progressive design build projects ✓ Innovative ideas such as caterpillar shaped shafts, optimized SOE approaches and associated structures have been deployed

Examples of tunnel design, construction, operations, or maintenance projects completed within the past 10 years.

In addition to the various projects listed on the pages above, we have detailed our experience on the only bored tunnel project successfully delivered in Florida.

PORT OF MIAMI TUNNEL

Location: Miami, Florida, United States of America

Client: Florida Department of Transport (FDOT)

Project status & project cost: Completed and commissioned in 2014 (part of concession

The Port of Miami Tunnel (POMT) included the design, construction, financing, and operations of twin 4200ft long, 37ft internal diameter tunnels constructed using a 42ft hybrid Tunnel Boring Machine (TBM), each carrying two highway traffic lanes, between two man-made islands of Watson and Dodge, underneath Government Cut shipping channel in Biscayne Bay, a state-designated aquatic reserve. CBNA was part of the concessionaire and the sole design-build contractor. In addition to the tunnels, the project included approximately 2.49 miles of roadway and

access improvements on Dodge Island and the widening of the MacArthur Bridge and Causeway on Watson Island. The tunnel systems and the maintenance yard were also part of the scope.

POMT Project Plan for tunnel works

The POMT tunnelling works were carried out in an urban setting, with highly involved and active stakeholders, including an operating port and a highway. The tunnels required approximately 12,000 PCTL segments. Each ring was made up of 8 segments. There were 5 standard segments, 2 counter keys and 1 key. The works also included five cross passages (CPs) involving extensive ground improvement such as deep soil mixing & grouting for three CPs and ground freezing for two CPs and the junctions associated with the bored tunnel.

POMT's project challenges were unique, complex and key challenges are presented below.

- **Limited overburden for TBM operation:** A 17ft thick temporary overburden had to be constructed in the portal for the first 328 ft of the tunnels to provide safe launching configuration.
- **Large diameter tunnelling in complex heterogenous geology:** The tunnel was carried out in extremely porous, soft coralline limestone, found during construction, which after an extensive ground investigation effort of 98,425 ft of boreholes required 50,000 cubic meters of grouting.
- **Construction activities in busy urban, marine, and road, environment:** This P3 tunneling project was carried out close to an operating cruise terminal (with no interference to the cruise ship schedule) and water body, and the Mac Arthur Causeway. The work involved significant maintenance of traffic (MoT) and interfacing for grouting works, MoT and utilities diversions.
- **Limited underground space for construction activities:** The footprint of the portal was limited in an urban setting. To create more space, a turntable was used for relaunching the TBM from within the first portal and the two separate launch shafts were integrated into one.
- **Comprehensive Permitting Process:** CBNA employed a robust process and efficient procedures for stakeholder management (Florida Department of Transportation (FDOT), Miami Dade County and the City of Miami, Concessionaire, USACE, Port authorities, O&M contractors, neighboring commercial facilities) to capture all requirements to be integrated into the project schedule. More than 50 permits were obtained at four different levels of permitting authorities (Federal, State, County, City). CBNA also employed a local permits consultant and managed an Analysis Allocation and Traceability Matrix which helped to expedite consents, stakeholder requirements, and environmental permits. POMT required protection of the "Outstanding Florida Waters" designation during construction; and required the enforcement of "Standard Manatee Conditions for In-Water Work" for conserving this endangered species, which CBNA complied with successfully.

Channel ground improvement works on marine mode

Attachment 1 – Project Information

1.0 Purpose

The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the design, engineering, construction, and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes. All submissions become City property and will not be returned.

2.0 Background

The New River Crossing is a two-track bascule bridge constructed in 1978. The bridge, at only 4 feet above the water level, must be opened numerous times a day to allow marine traffic to navigate the New River but remain down for both freight rail and passenger trains. Currently, approximately 60 trains traverse the New River Crossing rail bridge daily. That number is estimated to more than double with the addition of Broward Commuter Rail (BCR) Service. Recognizing the current challenges with the existing bridge, in 2019 the Florida Legislature directed the Florida Department of Transportation (FDOT) to evaluate long-term crossing solutions over the New River.

The City believes a tunnel would accommodate future commuter rail service while minimizing impacts on marine traffic, adjacent real estate, and the downtown environment. The tunnel alternative supports the City's vision of developing a world-class residential, commercial, and oceanfront destination community.

The City is assessing the current market to gauge interest of potential proposers and their capabilities to deliver this project. As part of that effort, the City hosted the New River Crossing Industry Day on July 28, 2025. The event included presentations from the City of Fort Lauderdale, Broward County, FDOT, and the United States Department of Transportation (USDOT) Build America Bureau.

Afternoon breakout sessions were held with the City and private-sector firms to provide an opportunity to further discuss the project, gauge interest, gain industry feedback on potential next steps, and associated timelines. For more information, project updates, and Industry Day materials, refer to the New River Crossing Project website.

Attachment 2 – Response Guidance

Interested parties are requested to respond to this RFI by uploading responses to the Infor portal. Responses shall be limited to 12 pages total and divided into three sections.

Section 1 *(4 pages max; provided by respondent)*

Section 1 of the response shall provide a company overview, administrative information, and the following at a minimum:

- Name, mailing address, phone number, and e-mail of designated point of contact
- Company profile and relevant experience with large-scale tunnel or similar infrastructure projects.
- Experience with tunneling technologies and methodologies (e.g., TBM, NATM, cut-and-cover)
- Examples of tunnel design, construction, operations, or maintenance projects completed within the past 10 years.

Section 2 *(2 pages max; provided by respondent)*

Respondents are encouraged, not required, to submit a brief Letter of Interest (LOI) along with their RFI response. The LOI should indicate the company's preliminary interest in participating in the New River Crossing project, highlight relevant experience, and outline any potential strategic or technical value the organization may bring. The LOI should be addressed to the City of Fort Lauderdale, is limited to two pages, and should be signed by the company's point of contact.

Section 3 *(6 pages max; included in RFI)*

Respondents are requested to provide detailed answers to the questionnaire included in this RFI as *Attachment 3 – Response Form*. These questions are designed to gather insights on the recommended technical approach, preferred delivery methods, and a realistic project timeline. Please ensure that responses are complete, accurate, and submitted in the fillable PDF format provided in the attached response form. While not all questions are mandatory, comprehensive responses will support the City's planning process for potential future procurement activities.

Space is provided to input additional observations and insight that would be beneficial to share with the City's project team.

Proprietary information, if any, should be minimized and must be clearly marked. To aid the City, please segregate proprietary information. Please be advised that all submissions become City property and will not be returned.

Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☒ Public-Private Partnership (PPP/P3)

   ☒ Preliminary Development Agreement (PDA)

   ☒ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ☐ Design-Build-Finance-Maintain (DBFM)

   ☐ Other: _____

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

Aligned with similar successful developments/projects in North-America market, we recommend to split between a "Civil Works" scope (tunnel, portals, station) and a "Rail & System" scope (ballast, rails, signage, systems). CBNA is interested in completing the "Civil Works" scope.

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	☐	✔
EIS Development	☐	✔
Obtaining the Record of Decision (ROD)	☐	✔
Utility Investigations	✔	✔
Utility Coordination	☐	✔
Geotechnical Investigations	✔	✔
Property Acquisitions	☐	✔
Rail Interface Agreement	✔	✔
Integrated Project Team office	☐	✔
Insurance program	✔	☐
Prepare the final Geotechnical Baseline Report (GBR-C)	✔	✔

Attachment 3 – Response Forms

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

If Progressive Procurement Phase 1 (Project Development Agreement): open-book pricing, shared incentives/disincentives, shared risks & opportunity matrix.

If Design-Build (DB): sufficient time to allow for vetting of Alternate Technical Concepts (ATCs), fair risk allocation related to rail interface, utility relocation, permit acquisitions, design approvals - recognizing a limited Design-Builder responsibility to Good Industry Practice and collaborative Third Party engagement

Pricing:
a. if too many uncertainties remain at the end of Phase 1 or the RFP Phase, Target Price mechanism is preferred
b. If design is sufficiently advanced in Phase 1 or the RFP Phase, then a Lump Sum (LS) pricing model could be acceptable if proper relief mechanisms are agreed to.

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- ○ 30% Design
- ○ 60% Design
- ○ 90% Design
- ○ 100% Design
- ● Other (specify): 30% or less to allow for contractor to implement constructability efficiencies and innovation

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

Specific elements and a level of design are not prerequisites to a successful Progressive Procurement, however, we recommend a 30% or less Indicative Design to allow for contractors to implement construction efficiencies and innovation.

That said, to ensure price certainty and comparable proposals between bidders, the expected scope of works & responsibilities should be clearly stated and delineated in the bid documents before bidding a progressive procurement.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

We recommend to bid maintenance works separately from design & construction (or Design-Build). Maintenance and Design-Build (DB) are two separate and distinct disciplines, each requiring different skill sets and responsibilities.

The Maintenance and DB disciplines also employ two different business models. DB requires engaging large construction firms with strong financial capacities, whereas Maintenance obligations may be satisfied with mid-sized or smaller firms.

Additionally, bundling DB and Maintenance would most surely necessitate two firms with those different business models entering into a joint agreement. It would be difficult to establish joint liabilities and risk sharing for the contract because the Maintenace partner will not want to take on any risks associated with the construction work and vice versa. We believe that bundling two different disciplines could discourage DB firms and Maintenance firms to bid the project.

Attachment 3 – Response Forms

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

Allowing for the early involvement of the Maintenance contractor in the design process will provide valuable input as to what materials should be incorporated to allow for reduced long-term maintenance costs. The early involvement will also allow for a proper RAMS analysis to be performed.

The project Evaluation criteria should recognize flexibility for DB firms to propose long-term durability solutions, potentially at the expense of having a more expensive project upfront but eventually providing a long term overall gain in project's lifecycle maintenance costs (ex: concrete mix). The Design should also specify a "water infiltration criteria", measured in gallons per square feet per day.

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ☐ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

- ■ Borehole logs every 100 feet (please specify spacing)
- ■ Geological baseline report (GBR)
- ■ Laboratory soil/rock test data
- ■ Groundwater monitoring data
- ■ Other: Owner issues a GBR-B and collaboratively works with contractor to develop a GBR-C used for pricing the project

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

This information is considered proprietary but may be discussed during confidential meetings.

Attachment 3 – Response Forms

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

Conceptual design/Target Price: $40M. If 100% Design/ATC/LS price: $125M

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

This information is considered proprietary but may be disussed during confidential meetings.

14. Which financing tools should be considered?

This information is considered proprietary but may be discussed during confidential meetings.

15. Please advise of innovative ways for a repayment model for this Project.

This information is considered proprietary but may be discussed during confidential meetings.

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

RFQ: 3mths. RFP: 5mths. Evaluation and Contract Closing: 3mths.

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

Typically 18 months, incl. Early Procurement of Long Lead items (ex: TBM)

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

Proc.+Del.=18months from ordering. Use:18-24mths in total for both tunnels

19. How long should full construction, including TBM work, be expected to take?

Projects of this scale usually require around 5-6 years to complete (incl. design).

20. What length of maintenance term is acceptable to the industry?

We are a Design-Builder and not in a position to properly respond to this.

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

Key schedule risks for tunnel construction in urban environment are listed below: - Delay at arriving to a consensus during collaborative review with the client and other stakeholders and validation of project requirements, design, constructibility studies and interface management aspects. - Spoil storage within a limited construction staging area and disposal management. - Coordination with rail owner and rail operator, for site specific constraints related to works adjacent to rail operations (working hours limitations, stringent safety requirements during construction, settlement criteria). - Approval from and coordination with environmental agencies for project specific requirement and coordination with stakeholders for noise, vibration and dust. - Potential delays in procuring long lead items. - Disruptions due to construction co-activities in constrained spaces (for heavy lifting, within the tunnel) and due to Health & Safety reasons. - Traffic management in and around the project area for site access and for project' s truck traffic (material supply and tunnel muck). - Utility owner's relocation schedules, permitting and approval processes - Absence of clear framework for testing and commissioning process of the project. General Project Risks: Other project risks to be addressed which are not tied to urban or constrained environments such as weather, geotechnical uncertainties, 3rd party coordination, 3rd party authorization delays (like utility owners), and permitting approval delays.

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

The tunneling project will be a major procurement undertaking for the City's project team with many project challenges. To identify and implement the best for project solutions and to enhance project outcomes, here are a few key considerations:
A. This type of tunnel work/project is very specialized and has only been performed once before in South Florida. We believe that the project will benefit if the City can ensure that its personnel involved in this procurement have the requisite experience in delivering similar procurement model and type of project.
B. Further, the City team needs to ensure that the selected contractor/partner possesses the requisite similar project experience and the relevant expertise. Having evaluation criteria with higher weightage on aspects such as Key personnel, previous similar project experiences, Technical & Project Management approach (including DBE/MBE and local workforce approach) will help in making the right choice of the contractor.
C. The city could meet/organize a workshop with FDOT to review lessons learned from the prior South Florida tunnel procurement and incorporate the best practices for this procurement.
D. Early identification and preparation for additional property acquisition at locations of very limited RoW could significantly improve the project's schedule certainty.
E. To achieve an optimal risk balance on contractual aspects, the following are key considerations:
(i) Early involvement of the contractor, collaboration and engagement through PDA with reasonable targets (such as commitment on price and schedule at the right maturity level of design and other key project aspects).
(ii) Identity and prioritize early works/long lead items procurement during the PDA phase.
(iii) During the procurement phase /RFP, adequate visibility of the head of terms and conditions for the main works would be important.
(iv) A rail interface agreement clearly detailing the interfaces and integration management requirements (including delineation of responsibilities).
(v) Early and continued involvement of a seasoned delivery partner (such as FDOT).
(vi) A market relevant payment mechanism for inflation such as escalation formula for key goods and services.
(vii) Also refer to Ref. Q.10: depending of the delivery model, if DB then Owner should develop a GBR-B and then the GBR-C collaboratively with proponents. If PDA, then the GBR may be developed and finalized collaboratively in the PDA phase.

Name:	Alexandre Ducamp	Title:	Bid Director
Company:	Civil & Building North America LLC	Phone:	305-374-5383
Address:	2 S. Biscayne Blvd. Suite 2000, Miami FL 33131	Email:	cbna@cbna-constuction.us
Signature:		Date:	December 1, 2025

December 01, 2025

City of Fort Lauderdale

Address: City Manager's Office, 101 NE 3rd Ave, Fort Lauderdale FL 33301

Subject: Section 2 - CBNA's Letter of Interest (LOI) for New River Crossing Project

Dear John Torrenga,

Civil & Building North America (CBNA) is delighted to submit this Letter of Interest (LOI) for the New River Crossing project. We thank the City of Fort Lauderdale for providing the RFI documents and for the opportunity to submit our RFI submission and share the company profile, relevant experiences and our comments on the proposed project procurement in Section 1, this Section 2 and in Section 3.

CBNA represents the US business of Bouygues Travaux Publics, which is a member of Bouygues Construction. CBNA carries out major heavy civil projects. With our main office located in Miami, Florida, we have been operating in North America since 2002, delivering large-scale projects such as the groundbreaking Port Miami Tunnel, Pier Sixty-Six in Fort Lauderdale and the Brickell City Centre. We (along with our sister companies) currently have operations in Florida, Washington DC, Rhode Island, the Caribbean and USVI. Our expertise extends throughout underground works (including tunneling), river and maritime works, linear projects, signature bridges, industrial civil engineering and other special projects. Our service package covers the whole process, from design right through to the construction, maintenance and development of all types of heavy civil infrastructure.

We have carefully chosen a few project references to reflect our relevant tunneling projects experience. The **relevant experience** is detailed in **Section 1** of this submission. We also bring the following **strategic and technical value additions** to the project.

- **Diverse local and global relevant experience**
  Our diverse local and global experience especially on tunneling has enabled landmark achievements such as the Port of Miami Tunnel (PPP twin-tunnel project in Miami under very challenging ground conditions) and the historic Channel Tunnel in Europe, recently handed over HS2 – C1 package (England), Tuen Mun-Chek Lap Kok Link (TMCLKL)Tunnel (Hong Kong) creating a the Guinness world record for the TBM diameter, as well as the recently handed over design-build Pawtucket CSO Tunnel Project in Rhode Island. Section 1 provides further details of the relevant experiences. The lessons learnt and the best practices from these projects will be applied on the New River Crossing Project.
- **Unique capabilities in alternative procurement models**
  We have experience successfully delivering major heavy civil projects on alternative procurement models such as P3 (Port of Miami Tunnel, Sydney airport link, Melbourne Metro), progressive design build (HS2-C1 package), integrated project delivery and other tailored collaborative forms. The early contractor involvement in the design development phase and for constructability studies have delivered the best project outcomes through enhanced value engineering, interface management and collaboration. These experiences have also strengthened the working relationship with clients, professional services consultants and stakeholders.

CIVIL & BUILDING NORTH AMERICA LLC
Registered under the Laws of the State of Delaware
2, South Biscayne Blvd - Suite 2000, Miami, FL. 33131 USA
Tel: +1 (305) 374 5383

- **Seasoned relevant key personnel and project team**
  CBNA has fully resourced the ongoing projects across the US with tunnel experts, project management teams, TBM crews and other key personnel who have developed their expertise on global and local projects. CBNA is also fully supported by the technical team of engineers and other staff resources from their Paris office. The key personnel team is committed and, in many cases, involved in projects from an early bid phase. This strengthens our project understanding, shortens the learning curve and results in consistent teamwork of project teams.
- **Tunneling and underground works supply chain capabilities**
  We have established strong ties with the supply chain for tunneling over the last few decades. This includes the TBM manufacturers, SOE works specialized subcontractors and associated accessories suppliers. We keep ourselves abreast of the technological development in this niche market and update our practices, methods and plant & equipment.
- **Our constant strive for technical excellence shapes tailored best for project solutions**
  We are result driven and constantly strive for technical excellence in proposing project solutions. CBNA's project approach is a method led and risk-based approach. This has resulted in landmark projects recognized with project awards, records and credible market recognition for our commitment to technical excellence (a few are listed in Section 1 of the RFI submission). We also apply the key learnings and the best project from past project to continuously improve our project solutions on other prospective projects. We have also developed the capability of self-performing a major scope of tunneling works, which provides better project control, schedule and cost certainty.

Together with our proven track record as a trusted and design-build integrated partner and our ability to work collaboratively with the client and other stakeholders, we believe that our Team is best suited to deliver the New River Crossing project. We look forward to the next procurement steps and the further project details sought in Section 3 of our submission.

Sincerely,

Civil & Building North America (CBNA)

Giuseppe Folco

Giuseppe Folco

Vice President

CIVIL & BUILDING NORTH AMERICA INC.
Incorporated under the Laws of the State of Florida License # CGC1519973
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Tel: +1 (305) 374 5383

Response For Supplier: Flatiron Dragados Constructors, Inc.

Event # : 538-1

Name: New River Crossing Tunnel (Request for Information)

Description: The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the planning, design, engineering, construction and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes.

Date created: November 18, 2025 10:46:40 AM EST	Date submitted: December 1, 2025 11:26:19 AM EST
Preview date:	Q & A open date: October 27, 2025 10:30:00 AM EDT
Open date: October 27, 2025 10:00:00 AM EDT	Q & A close date: November 21, 2025 5:00:00 PM EST
Close Date: 12/01/2025 02:00:00 PM EST	Dispute close date:

Responded To: 1 Out of 1 Lines

Total Bid Amount: 0.01 **Response Currency:** USD

Response Attachments

Attachment
Attachment 3_vFinal.pdf
FD Response - New River Crossing Tunnel_vFINAL.pdf

Line Responses

Line 1: Request for Information - New River Crossing Tunnel

Event # 538-1: New River Crossing Tunnel (Request for Information)

Description: **This is a Request for Information (RFI); it is not a request for pricing, commitment to purchase, or an obligation to provide products or services described in this notice. Please see the attached forms for response details.**

Request for Information - New River Crossing Tunnel

Commodity Code: 913-55 Construction, Tunnel

Quantity: 1.0000 **Unit of Measure:** EA

Bid Quantity: 1.0000 **Unit Price:** 0.0100 **Extended Amount:** 0.01

No Charge: No **No Bid:** No

Request for Information - New River Crossing Tunnel

Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☒ Public-Private Partnership (PPP/P3)

   ☒ Preliminary Development Agreement (PDA)

   ☒ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ☐ Design-Build-Finance-Maintain (DBFM)

   ☒ Other: CMGC or CMAR

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

   FlatironDragados Constructors in association with Prince Contracting would be interested in the tunneling, tunnel finishes, station work, track work and civil infrastructure. For ease of management the City should consider letting a single contract for the entire scope of work.

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	☐	✔
EIS Development	☐	✔
Obtaining the Record of Decision (ROD)	☐	✔
Utility Investigations	☐	✔
Utility Coordination	✔	☐
Geotechnical Investigations	✔	✔
Property Acquisitions	☐	✔
	☐	☐
	☐	☐
	☐	☐
	☐	☐

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

Under the assumption that this will be a two part contract (Preconstruction-Construction) similar to a PDB project the following items should be considered in each contract.
Preconstruction - Method of compensation (LS, T&M, Billable rates, etc), defined scope regarding meetings, coordination with 3rd parties, deliverables, definitions for cost of the work. Additionally, level of design completeness for GMP negotiation, limits of liability, insurance requirements, and off ramping details (not termination for convenience)

Construction - Schedule of payments, limit of liability, compensation events, insurance requirements, painshare/gainshare (LDs vs incentives).

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- ○ 30% Design
- ○ 60% Design
- ○ 90% Design
- ○ 100% Design
- ◉ Other (specify): _____

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

The benefit of PDB delivery is that minimal design development needs to be completed. In order to take benefit of the PDB delivery model we would recommend that an alignment be finalized and the NEPA process begun including community outreach and feedback.

A progressive procurement allows the Owner to sit down with the Design Builder SMEs to evaluate options and associated Cost Order of Magnitude to assist in finalizing the preferred design option

Additional items that would be nice to have but not necessary include preliminary geotechnical investigation, a SUE Level A report, and a memo of understanding from the railroad regarding the project.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

Most public tunnel contracts include a 1-year warranty period after substantial completion. Typically, if a long-term maintenance period is wanted, it is more cost effective for the Owner to perform the maintenance with its own forces. We as a contractor are not favorable to a long-term maintenance contract although it would not deter us from bidding. We would prefer it issued as a separate contract.

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

Several elements should be considered including: flood protection (storms & river); waterproofing for the station SEM areas/cut & cover section; double gaskets for precast tunnel segments; sump pump considerations for tunnel leakage and stromwater; material selection for tunnel/station finishes.

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ■ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

■ Borehole logs every 50 feet (please specify spacing)

■ Geological baseline report (GBR)

■ Laboratory soil/rock test data

■ Groundwater monitoring data

■ Other: Depending on delivery method, contractor could perform some of these

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

Our recommendation on all PDB projects is that the funding for the

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

The following are some of the innovative financing methods used by ACS on its P3 Projects:

For SH288, the finance team led by ACS implemented the innovative concept of leveraging monoline bond insurance to deliver a highly competitive financing package. Assured Guaranty Municipal Corp., a leading monoline insurer, was introduced to the deal, and ACS led the team through a significant financial

14. Which financing tools should be considered?

ACS has structured and closed financings using the debt capital markets, including short-term and long-term bank financings, private placement and rated bond markets, TIFIA loans, and hybrid solutions involving multiple markets. The current terms of the relevant debt markets are below:

- PABs: Tenor is up to 50 years, amortization is Sculpted, from bullet for shorter

15. Please advise of innovative ways for a repayment model for this Project.

The Project's financial plan will set out a comprehensive framework for funding, financing, and payment mechanisms under a P3 delivery model. It will define how capital and operating costs are financed, how revenue and performance risks are allocated, and how the debt and equity structure can best support long-term financial sustainability, innovation, and value for money.

Under a typical P3 structure, the developer finances design and construction,

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

4-6 months

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

Assuming concept design provided at 30% allow 12-18 months to reach 100%

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

Typical Duration for TBM design, fabrication and shipping to site is between 12

19. How long should full construction, including TBM work, be expected to take?

Contract duration including design and full scope of construction to get trains

20. What length of maintenance term is acceptable to the industry?

Typically, these types of contracts include a 12-month warranty period. No

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

The greatest risk on any tunnel project is geotechnical. This risk can be reduced by a number of approaches including: commissioning a complete Geotechnical Baseline Report (GBR), setting up a contingency for changed conditions, using a delivery method where the geotechnical investigation can be completed prior to commitment to a price.

Additional schedule risks include: ROW acquisition, Utility identification and relocations, global supply chain, site access and logistics, and restrictions from live trains. Some lesser considered impacts include: local restrictions due to noise, vibration, community and proximity to existing structures, and impacts from storms or flooding.

Finally, some tunnel specific risks in this type of project include: limited cover at launch and retrieval of TBMs, and limited cover at river crossing (ground improvements may be needed which could have utility impacts or other rail or structure impacts).

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

Please see the following additional considerations:
• Selecting the most suitable TBM type to minimize impacts such as settlement / being able to mine through karstic ground / avoiding groundwater lowering etc. TBM needs to be equipped with probing and multi point pre-excavation grout injections and innovative measures for pre-excavation detection of major features such as large voids.

• Cross Passage construction needs to be considered as well - following the FTA requirements (assume approx. each 800 ft of tunnel). Depending on the ground condition, these cross passages may require pre-excavation measures such as jet grouting (if possible, from ground surface) or ground freezing (can be done entirely from withing the new rail tunnels). Once these measures are in place, SEM method can be used to safely excavate and line these cross passages without major schedule impact.

• Should consider excavating the Station Box in Top-Down Method. Road closures would only be required during weekends to install decking which would be used to keep the traffic flow open and enable excavation under it. This would require installation of support of excavation (SOE) measures such as slurry walls. This method was used on all stations on LA Metro Purple Line extension and many other examples around the world in dense urban areas. SEM is considered costly and challenging depending on the ground conditions (especially if karstic ground is present like on the Port of Miami Tunnel). If SEM is used, it is likely that pre-excavation grouting campaigns may be required. A specific challenge would be encountering large voids which are typical for South Florida geology.

• As for the dimension of the Station Box (SEM or Top Down), this should be minimized based on the requirements of the station platform width (FTA or other train requirements). It is proposed to adjust the TBM tunnel horizontal alignment to bring the tunnels closer together at the point of station entry and exit. A study should be conducted to design the minimum station configuration and then adjust the horizontal alignment of the TBM tunnels accordingly. The passing of the existing bridge piers need to be considered here as well to avoid radii that are below the minimum requirement.

• For cost and schedule efficiency, we would evaluate if one or two TBMs are needed to meet schedule requirements. One TBM would be preferred to minimize the number of highly qualified craft and staff required.

• The April 2024 Tunnel Alternative Report includes cross sections of the new tunnel alignment. The proximity of the new structures (box and cut and cover structure) to the existing tracks and bridge piers looks very challenging. During final design, a detailed analysis of impacts of new construction to existing infrastructure needs to be undertaken and a comprehensive monitoring program with alert and trigger values developed to avoid disruptions or damages to the existing infrastructure including the rail lines.

Name:	David M. Pupkiewicz, FDBIA	Title:	VP Business Development
Company:	Flatiron Dragados Constructors, Inc.	Phone:	404-721-5050
Address:	4004 Summit Blvd NE, Ste 1600, Brookhaven, GA 30319	Email:	dpupkiewicz@fdcorp.com
Signature:		Date:	12/01/2025

1. COMPANY OVERVIEW

POINT OF CONTACT

DAVID PUPKIEWICZ, FDBIA
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Brookhaven, GA 30319
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COMPANY PROFILE

FlatironDragados is part of the ACS Group, one of the world's largest and most financially stable infrastructure organizations. ACS develops, builds, operates, and invests in major civil, transportation, water, environmental, and advanced-technology projects worldwide through its leading companies, including FlatironDragados and Hochtief Europe. This global platform provides FlatironDragados with the financial capacity, technical depth, and resources necessary to successfully deliver large, complex infrastructure projects across North America.

Operating in the United States and Canada, FlatironDragados brings industry-leading engineering, major tunnel and bridge-tunnel delivery experience, and a strong commitment to safety, quality, and innovation. We are proud to have contributed to some of North America's most notable tunneling projects. Together with our Florida-based affiliate Prince Contracting, LLC (Prince), we combine national expertise with local market knowledge and established relationships positioning us to effectively support the City of Fort Lauderdale's evaluation of long-term solutions for the New River Crossing Tunnel Project

Large-Scale Tunnel Infrastructure

FlatironDragados is a recognized leader in tunnel, bridge-tunnel, and large-scale infrastructure construction, with extensive tunneling technologies and methodologies experience applying Tunnel Boring Machine (TBM), Sequential Excavation Method (SEM), and cut-and-cover construction across marine and urban environments. Representative projects include:

Hampton Roads Bridge-Tunnel Expansion, Hampton/Norfolk, Virginia: A 3.5-mile bridge-tunnel expansion connecting the Peninsula and Southside Hampton Roads. The project includes construction of new twin bored tunnels using TBM methods beneath the James River, along with replacement or improvement of more than 25 bridge structures. Land and tunnel work are being executed concurrently to maintain traffic flow through one of Virginia's most heavily traveled corridors.

Parallel Thimble Shoal Tunnel, Virginia Beach, Virginia: A 42-ft-diameter, 5,738-ft-long TBM-mined tunnel carrying two lanes of US 13 traffic 105-ft below the Chesapeake Bay. The work includes excavation of 500,000 cubic yards and installation of 9,000 precast concrete segments lined with 42,000 cubic yards of concrete.

Exposition Light Rail Transit Phase 2, Los Angeles, California: A 9.6-mile twin-track light rail line incorporating ballasted and embedded track, elevated guideways, a cut-and-cover tunnel, passenger stations, and system-wide

traction power and communications. The project demonstrates FlatironDragados' ability to deliver complex urban rail infrastructure within constrained rights-of-way.

Eglinton Crosstown West Extension, Toronto, Ontario: Design and construction of 3.9 miles of 21.3-ft-diameter twin tunnels beneath urban Toronto using dual TBMs. The work includes launch and extraction shafts, nine cross-passages, and end walls for four future subway stations.

Local Market Experience

Prince Contracting (Prince), headquartered in Tampa, brings nearly four decades of experience delivering major transportation, bridge, drainage, and utility infrastructure projects throughout Florida and the Southeast. As an affiliate of FlatironDragados, Prince has become a trusted partner to the Florida Department of Transportation and numerous local municipalities. Prince's self-perform capabilities, including earthwork, drainage, utilities, bridge, and concrete construction provide direct control over quality, schedule, and cost. Its long-standing relationships with local subcontractors, suppliers, and permitting agencies strengthen project delivery and add value to major marine and urban infrastructure efforts such as the New River Crossing Tunnel.

FlatironDragados and Prince share a Project-First mindset built on collaboration, transparency, and innovation. Our combined experience across Design-Build, Progressive Design-Build, and CM/GC, and Bid-Build delivery methods enables us to offer informed perspectives on contracting strategies, risk management, and constructability at this RFI stage.

TUNNEL TECHNOLOGIES AND METHODOLOGIES

FlatironDragados has extensive experience applying advanced tunneling technologies and methodologies across North America's most complex marine and urban environments. Our teams have successfully delivered projects using a variety of excavation methods each selected and optimized to address specific geotechnical, hydraulic, and logistical conditions. This depth of experience allows us to tailor constructability and risk mitigation strategies to the unique challenges of projects like the New River Crossing Tunnel.

HAMPTON ROADS BRIDGE-TUNNEL EXPANSION

Tunneling Technologies

The Hampton Roads Bridge-Tunnel Expansion is one of North America's most complex bored tunnel projects, featuring twin two-lane tunnels excavated with a 46-foot-diameter Variable Density Tunnel Boring Machine (VDTBM), the largest of its kind used in the U.S. The project required 980,000 CY of TBM excavation from North and South Island portals, through mixed ground conditions of marine sediments, fill, and the Yorktown and Eastover formations.

TBM launch and retrieval occurred from artificial islands supported by slurry walls extending 170 feet deep, installed using hydro mills and a closed-loop slurry recycling system to maintain excavation stability. To manage soft soils, shallow cover, and high face pressures, the team implemented an innovative ground-improvement system using deep-soil-mix barrettes, reducing settlement risk and maintaining tunnel alignment.

Complementary cut-and-cover construction for the Tunnel Approach Structures utilized specialized waterproofing, dewatering, and base-slab buoyancy control systems, with real-time instrumentation and monitoring limiting deflections to under one inch near existing immersed-tube tunnels. This project demonstrates FlatironDragados' technical expertise integrating advanced TBM operations, soil improvement, and marine tunneling technologies within a constrained and environmentally sensitive corridor.

PARALLEL THIMBLE SHOAL TUNNEL

VIRGINIA BEACH, VIRGINIA

FlatironDragados, together with its affiliate company Schiavone (now SPC), managed the design and construction of a 42-foot-diameter, 5,738-foot-long TBM-mined tunnel that carries two lanes of southbound U.S. Route 13 traffic beneath the Thimble Shoal Channel of Chesapeake Bay. The tunnel lies approximately 105 feet below the water surface. Construction involved excavating about 500,000 cubic yards of material and installing approximately 9,000 concrete segments to form the tunnel lining, which contains 42,000 cubic yards of concrete. Deep foundation work created the TBM launch and reception pits, which were later converted into the tunnel's open approaches.

Environmental Impacts and Mitigation

The Owner originally considered an immersed tube tunnel that would have required expanding the portal islands and dredging across the federal navigation channel. During design-build delivery, FlatironDragados identified that a bored tunnel beneath the bay floor was a feasible and environmentally preferable alternative. This change in construction method reduced bay bottom disturbance from 59 acres to 13.8 acres. Further design refinements mitigated environmental impacts by reducing soil disposal quantities, minimizing noise during pile driving, and protecting water quality through continuous monitoring.

Excavation and Ground Improvements

The deep foundation system employed slurry panels and concrete struts to ensure stability during excavation. The soils along the TBM alignment were strengthened through soil mixing and jet grouting to prevent settlement or sinkholes above the machine. All work was completed while maintaining safe and uninterrupted traffic through the adjacent existing tunnel.

Relevance to the New River Crossing Tunnel

The successful completion of tunneling operations in December 2024 demonstrates FlatironDragados' capability to execute large-scale, technically complex, and environmentally sensitive marine tunneling projects.

COMPLETION
Anticipated 2027

DELIVERY METHOD
Design-Build

OWNER
Chesapeake Bay Bridge & Tunnel District

PROJECT ELEMENTS

- Concrete Structures
- Underground Connections *(Tunnel to Shaft)*
- Excavations: Rock and Soft-ground
- TBM Excavation
- Geotechnical Instrumentation
- Mechanical, Electrical and Instrumentation Construction
- Ground Improvement
- Pile Driving
- Erosion and Sediment Control
- Pavement Restoration
- Tunnel System Commissioning
- Maintenance of Traffic

EGLINTON CROSSTOWN WEST EXTENSION ADVANCE TUNNEL (ECWE)

TORONTO, CANADA

FlatironDragados, in joint venture with Ghella, design and constructed 3.9 miles of twin tunnels for Toronto's Eglinton Crosstown West Extension (future TTC Line 5). The work includes nine cross passages, large launch and retrieval shafts, the east portal, and headwalls for future stations and emergency exits. The scope also encompassed extensive utility protection, roadway realignment, 24/7 monitoring, settlement control, and coordination with adjacent contracts within the city's dense urban corridor.

Accelerate Delivery. To meet an accelerated schedule, the team collaborated with Metrolinx and the designer to initiate tunneling early. Two 21.6-ft-diameter Earth Pressure Balance (EPB) TBMs were assembled and launched less than 10 months after award, achieving key milestones up to two months ahead of schedule.

Complex Ground Condition & Innovative Solutions

The tunnels advance through highly variable conditions, shale, dolomitic siltstone, and saturated alluvial soils, requiring specialized ground improvement techniques such as 120° consolidated steel-pipe umbrellas and secant-pile modifications that minimized hyperbaric interventions. Cross passages were excavated using Sequential Excavation Method (SEM) and remote-controlled equipment, ensuring worker safety and precision under mixed-face conditions.

Stakeholder and Traffic Coordination. The team coordinated over 160 permits, maintained two-way traffic on Eglinton Avenue through real-time signal control and off-peak work, and implemented robust public communication to reduce disruption to residents and businesses.

Relevance to the New River Crossing Tunnel

This project parallels the City of Fort Lauderdale's vision of deep tunneling in complex ground conditions, strict schedule constraints, and heavy stakeholder coordination. FlatironDragados' ability to integrate design, permitting, construction in an active urban setting, and bring project financing, demonstrates the proven expertise required to safely and efficiently deliver the New River Crossing Tunnel.

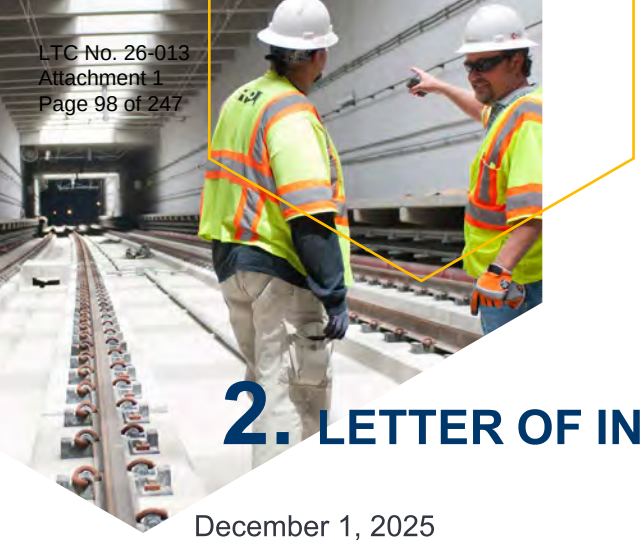
COMPLETION
2025

DELIVERY METHOD
Design-Build-Finance

OWNER
Metrolinx

PROJECT ELEMENTS

- Concrete Structures
- Underground Connections *(Tunnel to Shaft)*
- Excavations: Rock and Soft-ground
- TBM Excavation
- SEM Tunnelling
- Geotechnical Instrumentation
- Mechanical, Electrical and Instrumentation Construction
- Ground Improvement
- Erosion and Sediment Control
- Pavement Restoration
- Safety Program
- Permitting
- Public Outreach Support



FlatironDragados℠

2. LETTER OF INTEREST

December 1, 2025

City of Fort Lauderdale
100 North Andrews
Fort Lauderdale, FL 33301

RE: New River Crossing Tunneling Project

Dear City of Fort Lauderdale Selection Committee,

FlatironDragados, together with our Florida-based affiliate Prince Contracting, LLC (Prince), is pleased to express our strong interest in participating in the City's evaluation of long-term crossing solutions for the New River Crossing Tunnel Project. We recognize the transformative potential this project holds for Fort Lauderdale's multimodal transportation network and urban environment.

Our team offers a powerful combination of international tunneling and bridge-tunnel expertise and Florida-based delivery experience, positioning us to contribute meaningful insight during the City's market analysis. We are interested in supporting the City's assessment of feasible tunnel alternatives, contracting strategies, and risk allocation approaches that balance marine navigation, rail operations, and community access.

Integrated Expertise for Complex Tunnel Delivery

FlatironDragados is an industry leader in large-scale tunneling and marine infrastructure, with extensive experience applying Tunnel Boring Machine (TBM), Sequential Excavation Method (SEM), and cut-and-cover techniques across urban and underwater environments. Our portfolio includes the ***Hampton Roads Bridge-Tunnel Expansion for the Virginia Department of Transportation***, a 3.5-mile TBM-driven marine tunnel currently under construction and the ***Parallel Thimble Shoal Tunnel for the Chesapeake Bay Bridge and Tunnel District,*** a 42-foot-diameter bored highway tunnel beneath the Chesapeake Bay. In Canada, our team delivered the ***Eglinton Crosstown West Extension Advance Tunnel in Toronto,*** 3.9 miles of twin EPB tunnels beneath dense urban infrastructure, achieving critical milestones ahead of schedule through proactive collaboration with Metrolinx. These projects demonstrate our ability to integrate design, construction, and risk management to deliver technically demanding tunnels safely and efficiently.

Local Market Strength through Prince Contracting

Headquartered in Tampa, Prince brings nearly four decades of successful delivery across Florida's transportation and utility sectors. With deep relationships with FDOT, local municipalities, and regional subcontractors, Prince offers proven self-perform capabilities in earthwork, drainage, bridge, and utility construction, providing direct control of schedule, quality, and cost. Together, FlatironDragados and Prince unite world-class tunneling expertise with Florida-specific execution experience to deliver projects that strengthen communities and protect long-term mobility investments.

Innovative Engineering Capabilities

FlatironDragados' success in technically complex tunneling projects is supported by two specialized in-house engineering groups that bring unparalleled value during both planning and delivery:

- **Technical Services Group (TSG):** Focused on permanent infrastructure elements, TSG provides risk-informed design optimization, constructability reviews, and value engineering to enhance project feasibility and cost efficiency. TSG's independent expertise helps identify and mitigate geotechnical and hydraulic risks early, ensuring alignment between design intent and construction reality.
- **Construction Engineering Group (CEG):** Concentrating on field-engineered solutions and construction means and methods, CEG delivers customized solutions for support of excavation (SOE), access trestles, and lifting operations, ensuring safe and efficient construction staging in constrained environments. Together, these groups protect our projects, enhance innovation, and ensure safe, constructible solutions that advance owner goals.

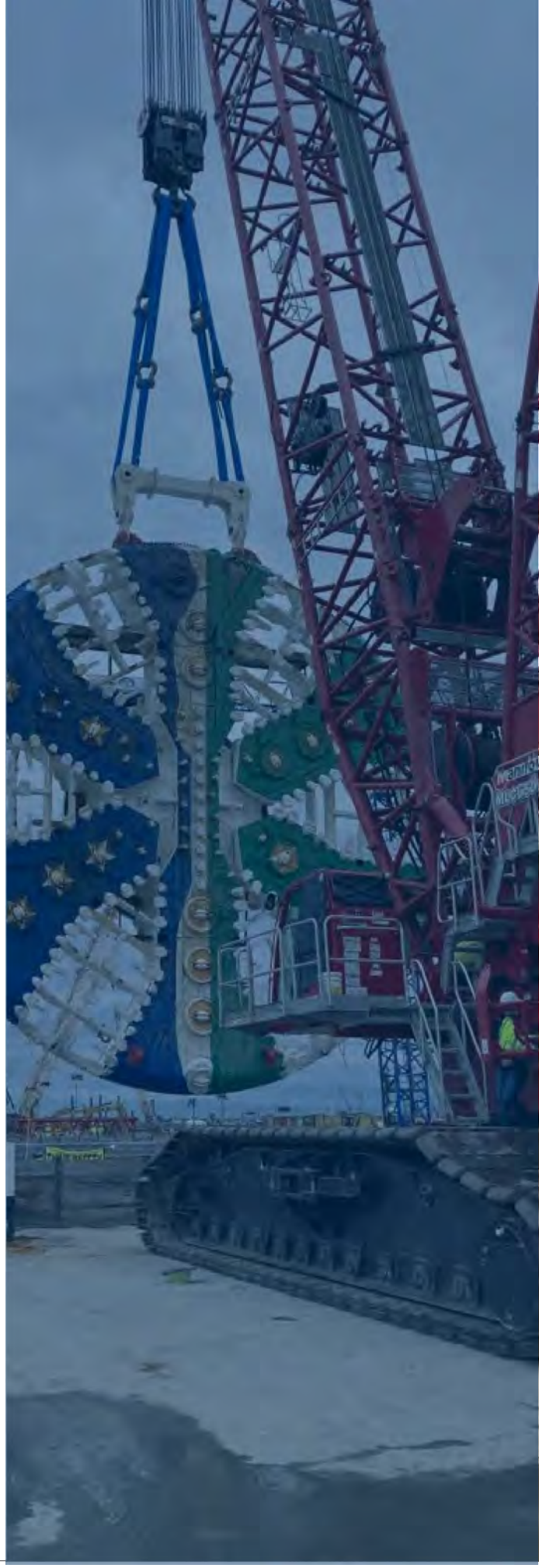
Commitment to the City's Vision

FlatironDragados and Prince share the City's commitment to advancing sustainable, multimodal transportation solutions. We are particularly interested in supporting the City's evaluation of tunnel feasibility, delivery strategies, and risk allocation frameworks, leveraging our experience across Progressive Design-Build, CM/GC, and traditional Design-Build contracts. Our integrated team is ready to collaborate with the City of Fort Lauderdale, FDOT, and regional partners to develop a constructible, cost-efficient, and community-centered solution for this transformative project.

We appreciate the opportunity to participate in this important market analysis and look forward to contributing our expertise to the City's continued success.

Sincerely,

David M Pupkiewicz, FDBIA
Vice President, Business Development
404.721.5050 | dpupkiewicz@fdcorp.com



Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☒ Public-Private Partnership (PPP/P3)

   ☒ Preliminary Development Agreement (PDA)

   ☒ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ☐ Design-Build-Finance-Maintain (DBFM)

   ☒ Other: CMGC or CMAR

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

   FlatironDragados Constructors in association with Prince Contracting would be interested in the tunneling, tunnel finishes, station work, track work and civil infrastructure. For ease of management the City should consider letting a single contract for the entire scope of work.

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	☐	✔
EIS Development	☐	✔
Obtaining the Record of Decision (ROD)	☐	✔
Utility Investigations	☐	✔
Utility Coordination	✔	☐
Geotechnical Investigations	✔	✔
Property Acquisitions	☐	✔
	☐	☐
	☐	☐
	☐	☐
	☐	☐

Attachment 3 – Response Forms

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

Under the assumption that this will be a two part contract (Preconstruction-Construction) similar to a PDB project the following items should be considered in each contract.
Preconstruction - Method of compensation (LS, T&M, Billable rates, etc), defined scope regarding meetings, coordination with 3rd parties, deliverables, definitions for cost of the work. Additionally, level of design completeness for GMP negotiation, limits of liability, insurance requirements, and off ramping details (not termination for convenience)

Construction - Schedule of payments, limit of liability, compensation events, insurance requirements, painshare/gainshare (LDs vs incentives).

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- ◯ 30% Design
- ◯ 60% Design
- ◯ 90% Design
- ◯ 100% Design
- ◯ Other (specify): _____

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

The benefit of PDB delivery is that minimal design development needs to be completed. In order to take benefit of the PDB delivery model we would recommend that an alignment be finalized and the NEPA process begun including community outreach and feedback.

A progressive procurement allows the Owner to sit down with the Design Builder SMEs to evaluate options and associated Cost Order of Magnitude to assist in finalizing the preferred design option

Additional items that would be nice to have but not necessary include preliminary geotechnical investigation, a SUE Level A report, and a memo of understanding from the railroad regarding the project.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

Most public tunnel contracts include a 1-year warranty period after substantial completion. Typically, if a long-term maintenance period is wanted, it is more cost effective for the Owner to perform the maintenance with its own forces. We as a contractor are not favorable to a long-term maintenance contract although it would not deter us from bidding. We would prefer it issued as a separate contract.

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

Several elements should be considered including: flood protection (storms & river); waterproofing for the station SEM areas/cut & cover section; double gaskets for precast tunnel segments; sump pump considerations for tunnel leakage and stromwater; material selection for tunnel/station finishes.

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ☐ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

- ☒ Borehole logs every 50 feet (please specify spacing)
- ☒ Geological baseline report (GBR)
- ☒ Laboratory soil/rock test data
- ☒ Groundwater monitoring data
- ☒ Other: Depending on delivery method, contractor could perform some of these

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

Attachment 3 – Response Forms

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

Our recommendation on all PDB projects is that the funding for the

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

The following are some of the innovative financing methods used by ACS on its P3 Projects:

For SH288, the finance team led by ACS implemented the innovative concept of leveraging monoline bond insurance to deliver a highly competitive financing package. Assured Guaranty Municipal Corp., a leading monoline insurer, was introduced to the deal, and ACS led the team through a significant financial

14. Which financing tools should be considered?

ACS has structured and closed financings using the debt capital markets, including short-term and long-term bank financings, private placement and rated bond markets, TIFIA loans, and hybrid solutions involving multiple markets. The current terms of the relevant debt markets are below:

- PABs: Tenor is up to 50 years, amortization is Sculpted, from bullet for shorter

15. Please advise of innovative ways for a repayment model for this Project.

The Project's financial plan will set out a comprehensive framework for funding, financing, and payment mechanisms under a P3 delivery model. It will define how capital and operating costs are financed, how revenue and performance risks are allocated, and how the debt and equity structure can best support long-term financial sustainability, innovation, and value for money.

Under a typical P3 structure, the developer finances design and construction,

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

4-6 months

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

Assuming concept design provided at 30% allow 12-18 months to reach 100%

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

Typical Duration for TBM design, fabrication and shipping to site is between 12

19. How long should full construction, including TBM work, be expected to take?

Contract duration including design and full scope of construction to get trains

20. What length of maintenance term is acceptable to the industry?

Typically, these types of contracts include a 12-month warranty period. No

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

The greatest risk on any tunnel project is geotechnical. This risk can be reduced by a number of approaches including: commissioning a complete Geotechnical Baseline Report (GBR), setting up a contingency for changed conditions, using a delivery method where the geotechnical investigation can be completed prior to commitment to a price.

Additional schedule risks include: ROW acquisition, Utility identification and relocations, global supply chain, site access and logistics, and restrictions from live trains. Some lesser considered impacts include: local restrictions due to noise, vibration, community and proximity to existing structures, and impacts from storms or flooding.

Finally, some tunnel specific risks in this type of project include: limited cover at launch and retrieval of TBMs, and limited cover at river crossing (ground improvements may be needed which could have utility impacts or other rail or structure impacts).

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

Please see the following additional considerations:

• Selecting the most suitable TBM type to minimize impacts such as settlement / being able to mine through karstic ground / avoiding groundwater lowering etc. TBM needs to be equipped with probing and multi point pre-excavation grout injections and innovative measures for pre-excavation detection of major features such as large voids.

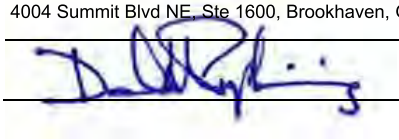
• Cross Passage construction needs to be considered as well - following the FTA requirements (assume approx. each 800 ft of tunnel). Depending on the ground condition, these cross passages may require pre-excavation measures such as jet grouting (if possible, from ground surface) or ground freezing (can be done entirely from withing the new rail tunnels). Once these measures are in place, SEM method can be used to safely excavate and line these cross passages without major schedule impact.

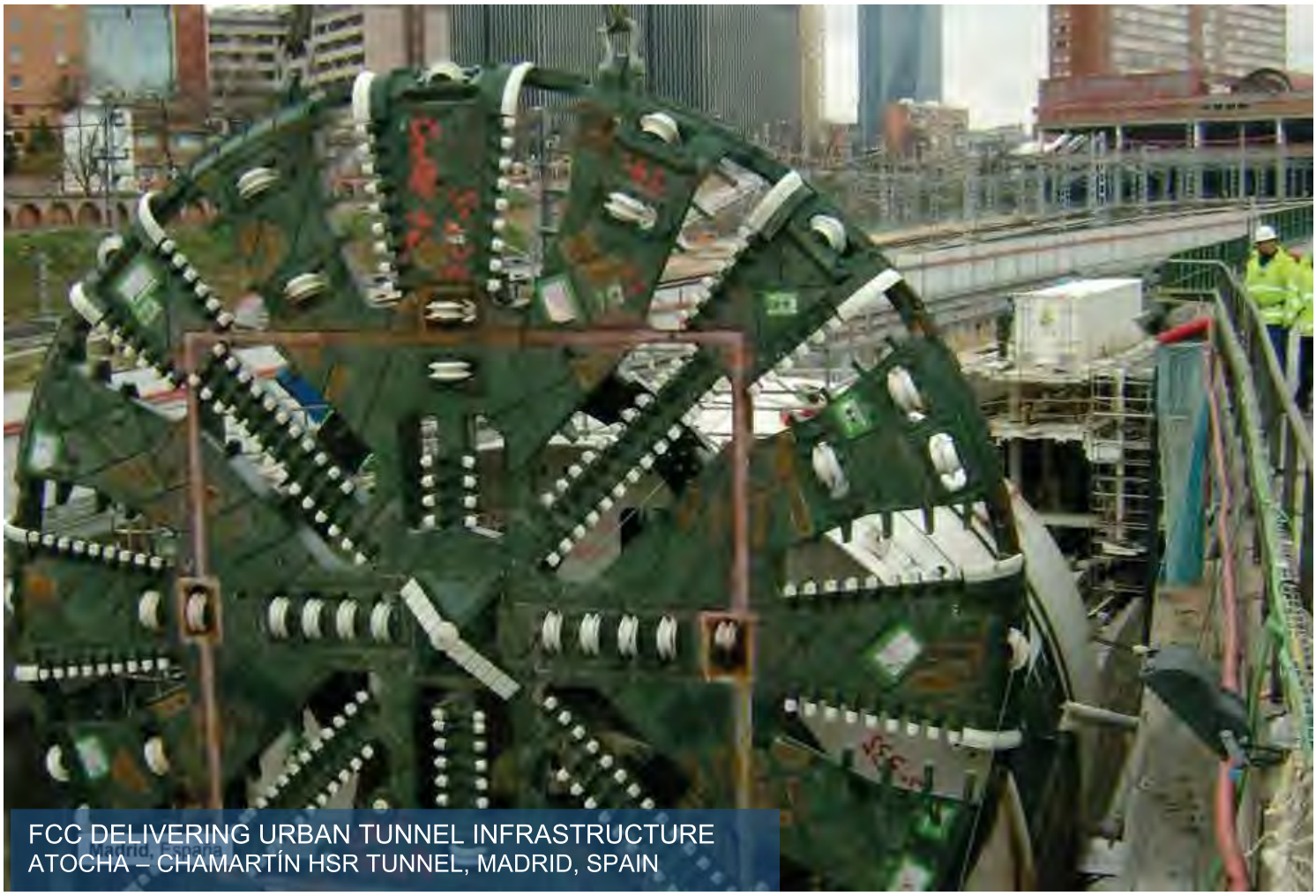
• Should consider excavating the Station Box in Top-Down Method. Road closures would only be required during weekends to install decking which would be used to keep the traffic flow open and enable excavation under it. This would require installation of support of excavation (SOE) measures such as slurry walls. This method was used on all stations on LA Metro Purple Line extension and many other examples around the world in dense urban areas. SEM is considered costly and challenging depending on the ground conditions (especially if karstic ground is present like on the Port of Miami Tunnel). If SEM is used, it is likely that pre-excavation grouting campaigns may be required. A specific challenge would be encountering large voids which are typical for South Florida geology.

• As for the dimension of the Station Box (SEM or Top Down), this should be minimized based on the requirements of the station platform width (FTA or other train requirements). It is proposed to adjust the TBM tunnel horizontal alignment to bring the tunnels closer together at the point of station entry and exit. A study should be conducted to design the minimum station configuration and then adjust the horizontal alignment of the TBM tunnels accordingly. The passing of the existing bridge piers need to be considered here as well to avoid radii that are below the minimum requirement.

• For cost and schedule efficiency, we would evaluate if one or two TBMs are needed to meet schedule requirements. One TBM would be preferred to minimize the number of highly qualified craft and staff required.

• The April 2024 Tunnel Alternative Report includes cross sections of the new tunnel alignment. The proximity of the new structures (box and cut and cover structure) to the existing tracks and bridge piers looks very challenging. During final design, a detailed analysis of impacts of new construction to existing infrastructure needs to be undertaken and a comprehensive monitoring program with alert and trigger values developed to avoid disruptions or damages to the existing infrastructure including the rail lines.

Name:	David M. Pupkiewicz, FDBIA	Title:	VP Business Development
Company:	Flatiron Dragados Constructors, Inc.	Phone:	404-721-5050
Address:	4004 Summit Blvd NE, Ste 1600, Brookhaven, GA 30319	Email:	dpupkiewicz@fdcorp.com
Signature:		Date:	12/01/2025



CITY OF FORT LAUDERDALE

New River Crossing Tunnel

Request for Interest (538-1)

FCC Construction & **FCC Concesiones** Response

December 1, 2025

Section1 – Respondent Information

This document has been jointly prepared by **FCC Construcción S.A.** ("**FCC Co**") and **FCC Concesiones de Infraesctructuras S.L.U.** ("**FCC Concessions**") in response to the **City of Fort Lauderdale** ("**CITY**") invitation to respond the Request for Information (**"RFI"**) for the NEW RIVER CROSSING TUNNEL PROJECT (the "**Project**"). FCC Co and FCC Concessions are the construction and the infrastructure developer arms of **FCC Group** ("**FCC**"), respectively.

We have included our feedback on the discussion topics and questions from the RFI in **Section 3** of this document.

We would like to take this opportunity and present our company as follows:

- Company Name: **FCC CONSTRUCCION, S.A.** and **FCC Concesiones de Infraestructuras S.L.U.**
- Mailing Address: **1101 Brickell Ave, Suite 1601-North. Miami, FL, 33131**
- Company Phone Number: **+1.305.372.2536**
- Company Web Site: **www.fccco.com**
- Person point of contact:
    - Name: **Jesus M. de la Fuente**
    - Title: **SVP Alternative Delivery North America**
    - Direct Phone Number: **+1.305.775.0133**
    - Email: **jmfuente@fccco.com**

An Overview of FCC

We would like to take this opportunity to introduce **FCC**.

- ✓ Headquartered in Spain, **Fomento de Construcciones y Contratas S.A.** ("FCC") was founded in 1900 and is the parent company of one of the world's leading infrastructure and citizen services groups. FCC established its operations in the U.S. in 2005.
- ✓ FCC´s majority shares are owned by the family of Mr. Carlos Slim, who is considered a highly influential global investor.
- ✓ FCC Group generated over $10.5 billion in revenues in 2024, of which 45% came from international markets, mainly Europe and America. We have a footprint in more than 30 countries worldwide with more than 71,000 staff.
- ✓ Our business portfolio is highly diversified: **construction**, **environmental services**, **water management**, and **development of concessions for large infrastructure projects**.

- ✓ **FCC Construccion** is the FCC group's entity responsible for construction business activities, including transit and highway infrastructure development. In 2024 FCC Construction's turnover was $2.92 billion.
- ✓ Throughout our 125-year history, FCC has been involved in all aspects of the rail sector. We have international expertise that extends from creating high-speed railways to underground metro lines and new trams, stations, and major city landmark terminals. We have been instrumental in the development of many facets of Spain's rail network, both interurban and urban. We have also built an impressive international metropolitan rail portfolio, which includes sections of the Toronto Metro, Bucharest Metro, Lima Metro, Panama City Metro, Riyadh Metro, Doha Metro, Barcelona Metro and Madrid Metro.
- ✓ FCC has a strong presence in North America, through both its construction and environmental services business. A summary of some relevant projects of interest is presented below:
  - **FCC Construction** completed in 2020 the $1B **Gerald Desmond Bridge DB project** in Long Beach, California. The project consists of the replacement of the Gerald Desmond Bridge, constructed in 1968 over the Back Channel of the Port of Long Beach with a new cable-stayed bridge, the reconfiguration and improvement of two junctions, complex utility diversions and new bicycle lane facilities along the length of the route.


Gerald Desmond Bridge, California

  - **FCC Construction** completed the $355 million **Toronto-York Spadina Subway Extension** project in 2017. The project entailed the construction and commissioning of an extension of the subway line with 2 TBM built tunnels, each 5.33 miles long and 3 intermediate stations.


407 Station. Toronto Metro

  - **FCC Construction** is currently delivering six bridges in Pennsylvania as the Design–Build contractor under the **PennDOT Pathways Major Bridge P3 Initiative**, a public-private partnership that successfully reached financial close in December 2022.
  - In addition, **FCC Construcción** is presently delivering several **major tunnel projects** in North America, including the Second Avenue Subway Phase 2 in New York City, NY; the Yonge North Subway Extension – Advance Tunnel Project in Toronto, Canada; the Pape Tunnel and Underground Stations in Toronto, Canada; and the Fraser River Tunnel Project in Vancouver, Canada.
  - **FCC Construction** has been selected for the **GO Expansion On-Corridor** contract in Toronto, Canada, to transform the GO rail network from a commuter service into an all-day rapid system, converting the network from a diesel-powered commuter railway to a primarily electric regional express system, and will include system-wide upgrades to deliver

all-day service every 15 minutes on the core rail network in the Greater Toronto and Hamilton Area (GTHA).

- **FCC Environmental**, with Headquarters in Houston, TX offers for the US market a complete range of **environmental services**, from domestic and industrial waste collection to the most advanced waste treatment and recycling systems, holding **contracts for the next 10 years in Texas, California, Florida, Louisiana, Nebraska, and Alabama,** including two P3 projects.
- **FCC Concesiones** is the division responsible for the development of concessions of transportation and social infrastructures and has a strong track record in developing innovative financing and technical solutions for over 60 concession projects in the last 30 years. FCC has developed 10 metropolitan railway projects under a DBFOM contract, acting as both equity investor and D&B contractor. FCC Concessions is currently operating sections of the Zaragoza LRT, Parla LRT, Barcelona Metro, Barcelona LRT and Murcia LRT in Spain and is an SPV shareholder of the $5.4 billion Lima Metro Line 2 project, which was issued over $1.15billion in US bonds to the market in June 2015 and raised $800 million in bank debt in October 2015. In 2016 FCC Concessions sold its shares in the Malaga Metro SPV, following successful construction completion, commissioning and 2 years of operation.

Experience with tunneling technologies and methodologies

The following is a list of the main tunnel Projects in which the FCC Group has been involved in the recent years. It depicts the extensive experience whether in rail, road, or water tunnels, and with different technologies and construction methodologies:

Project	Type	Status
Design and Build for Second Avenue Subway, Phase 2 – Tunnelling and Structural Shell. New York (USA).	TBM NATM Drill and Blast Cut & Cover	Ongoing (NTP in 2025).
Design, Build and Finance of the Advance Tunnel for the Yonge North Subway Extension. Toronto (Canada).	TBM	Ongoing (NTP in 2025).
Construction Works for the Extension of Line 5 of Madrid Metro to Adolfo Suarez Airport. Madrid (Spain).	Cut & Cover	Ongoing (NTP in 2024)
Design, Build, Finance, Operation and Maintenance of the RV555 Sotra Connection Project. Bergen (Norway).	Drill and Blast	Ongoing (NTP in 2022).
Construction Works to close the Southern By-Pass of Tenerife, Section el Tanque-Santiago del Teide. Tenerife (Spain).	NATM	Ongoing (NTP in 2019).
Design, Build, Finance, Operation and Maintenance of Line 2 and Av. Faucett-Av. Gambetta Extension of Lima Metro (Peru).	TBM Cut & Cover NATM	Ongoing (NTP in 2014).
Construction Works for the NEOM Spine Infrastructure – Running Tunnels, Lots 2 and 3 (Saudi Arabia).	NATM Drill and Blast	End 2025.

Construction Works for the Toyo Tunnel (AKA "Guillermo Gaviria Echeverri" Tunnel. Antioquia (Colombia).	NATM Drill and Blast	End 2025.
Construction Works of the Renovation of Subsector 2b, Cap Y Barzava to Cap Y Ilteu, of Railway Line Border – Curtici – Simeria. (Romania).	NATM Drill and Blast	End 2025.
Design and Build of Lines 4, 5 and 6 of the Riyahd Metro (Saudi Arabia).	TBM Cut & Cover	End 2024.
Construction Works for the Section Zona Universitaria – La Sagrera Meridiana of Line 9 of Barcelona Metro. (Spain).	TBM	End 2023.
Construction Works for the Renovation of Plaza de España. Madrid (Spain).	Cut & Cover NATM	End 2022.
Design and Construction for Lot 1.1, Section Raul Doamnei-Opera, of Line 5 of Bucharest Metro. Bucharest (Romania).	TBM Cut & Cover NATM	End 2022.
Construction of the Lot 5 of the Roadway Tunnels below Les Glories Square in Barcelona. (Spain).	Cut & Cover	End 2021.
Construction Works for the Renovation of Section Sighisoara – Atel, of Railway Line Brasov – Simeria. (Romania).	NATM	End 2019
Construction of the Toronto-York Spadina Subway Extension – Highway 407 Station and the Northern Tunnels, Toronto (Canada).	TBM Cut & Cover	End 2018.
Construction of Urban Tunnels Section and Girona Station for High Speed Rail. Girona (Spain).	TBM Cut & Cover	End 2018.
Design and Construction of the Coatzacoalcos Immersed Tunnel. Veracruz (Mexico).	Immersed Tunnel Cut & Cover	End 2017.
Construction Works for the Section Parc Logistic - Zona Universitaria of Line 9 of Barcelona Metro. (Spain).	TBM	End 2015.

We appreciate the opportunity to submit our response to this RFI and to contribute further to the development process for the Project. FCC Group remains available to participate in consultation meetings or provide additional input, should it be required.

At FCC we pride ourselves on working with the public and private sectors to plan, build and maintain better infrastructure and services together. We consider that this Program perfectly fits with FCC´s previous transit transportation experience and our latest company strategy. We have the experience and capacity to participate in the Project as:

- lead/joint lead **equity provider**;
- lead/joint lead the **design-builder**; and
- lead/joint lead **maintenance provider**.

Section 2 – Letter of Interest

December 1, 2025

Attn: Milos Majstorovic, MSCE, PE
Director of Transportation and Mobility
City of Fort Lauderdale

Subject: FCC's Letter of Interest – New River Crossing Tunnel Project

Dear City of Fort Lauderdale New River Crossing Tunnel Project Team,

On behalf of **FCC Construccion S.A.** and **FCC Concesiones de Infraestructuras S.L.U.**, I am pleased to submit this Letter of Interest regarding the New River Crossing Tunnel project. We recognize the strategic importance of this initiative in enhancing regional and local mobility, supporting economic growth, and delivering resilient infrastructure for South Florida.

Relevant Experience

Our organization brings extensive expertise in **design, construction, finance, operation, and maintenance of complex transportation infrastructure**, including:

- Delivery of **tunnel and bridge projects** in urban and coastal environments.
- Proven success in **public-private partnerships (P3s)** and concession models for major transportation corridors.
- Advanced capabilities in **geotechnical engineering, rail construction, and stakeholder engagement**.

Recent projects include the Gerald Desmond Bridge Project in Long Beach, California; the Spadina Subway Extension Tunnel in Toronto, Canada; and the Coatzacoalcos Tunnel P3 project in Mexico, where we successfully managed technical challenges such as challenging geotechnical conditions, complex design elements, and high-traffic integration.

In addition, FCC Construccion is currently building the following **tunnels in North America**: the Second Avenue Subway Phase 2 in New York City, NY; the Yonge North Subway Extension – Advance Tunnel Project in Toronto, Canada; the Pape Tunnel and Underground Stations in Toronto, Canada; and the Fraser River Tunnel Project in Vancouver, Canada.

Strategic and Technical Value

We believe our participation can add value in several ways:

- **Innovative Engineering Solutions**: Application of tunnel boring technology and resilient design tailored to Florida's coastal geology.
- **Financial Structuring Expertise**: Experience in concession agreements and risk allocation to optimize project delivery.
- **Community Engagement**: Strong track record of transparent communication with local stakeholders, ensuring alignment with city priorities.
- **Sustainability**: Commitment to environmentally responsible construction practices and long-term operational efficiency.

We will form a solid and expert team that combines proven tunnel and rail experience with local knowledge and relationships.

We look forward to collaborating with the City of Fort Lauderdale and its partners to advance this transformative project for the City and the rail communications in the Southeast of Florida.

Sincerely,

Jesus M de la Fuente, Ph.D.
SVP Alternative Delivery North America
FCC
jmfuente@fccco.com / 305.775.0133

Section 3 – Response Forms

Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☒ Public-Private Partnership (PPP/P3)

   ☒ Preliminary Development Agreement (PDA)

   ☒ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ☒ Design-Build-Finance-Maintain (DBFM)

   ☐ Other: _____

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

   Based on the high-level project description, we understand the scope to include all works related to investigation, design, tunnel construction, structural and waterproofing works, mechanical and electrical tunnel systems, and rail interfaces. With a Design–Build–Finance–Maintain (DBFM) approach, we are prepared to assume long-term maintenance obligations, ensuring operational reliability and lifecycle performance.

   Should the project be procured as a Public-Private Partnership (P3) under a DBFM model, we are also prepared to participate as an equity provider.

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	☐	✔
EIS Development	☐	✔
Obtaining the Record of Decision (ROD)	☐	✔
Utility Investigations	☐	✔
Utility Coordination	✔	✔
Geotechnical Investigations	✔	✔
Property Acquisitions	☐	✔
Permitting	✔	✔
	☐	☐
	☐	☐
	☐	☐

Attachment 3 – Response Forms

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

To promote transparency and strong market participation, we recommend that the draft contract provide:
- A clearly defined technical scope covering investigation, design, construction, systems integration, and long-term maintenance obligations (if DBFM/P3).
-B alanced and predictable risk allocation, particularly with respect to geotechnical conditions, to ensure bidders can price risk fairly.
- Transparent payment mechanisms and clear procedures for changes, dispute resolution, and performance evaluation.
- Early release of baseline geotechnical data, reference design information, and evaluation criteria, enabling bidders to develop robust and competitive proposals.
- A structured Alternative Technical Concepts (ATC) process, encouraging innovation while maintaining fairness.
- Reasonable financial and security requirements, aligned with market capacity.
- Well-defined maintenance and lifecycle obligations under a DBFM/P3 model, ensuring long-term performance and sustainability.
This approach will enhance competition, reduce uncertainty, and ultimately deliver better value for the City of Fort Lauderdale and its stakeholders.

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- (●) 30% Design
- ( ) 60% Design
- ( ) 90% Design
- ( ) 100% Design
- ( ) Other (specify): _____

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

We recommend that the "Indicative Design" define project intent while leaving room for contractor innovation. A 30–60% design level should include baseline alignment, conceptual tunnel sections, preliminary geotechnical/hydrogeological baselines, structural and waterproofing concepts, excavation envelopes, environmental constraints, and rail-system interface requirements.

Binding cost estimates should be required only once the design reaches at least 60% development, ensuring bidders have sufficient technical clarity to prepare robust proposals.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

FCC Group is prepared to participate under either procurement structure. While maintenance is sometimes procured separately, including it within the main bid offers clear advantages, as it is considered during design development.

For a technically complex, high-risk asset such as a rail tunnel beneath a river, we recommend bundling maintenance with design and construction. This approach ensures long-term performance accountability, promotes whole-life design optimization, aligns incentives for durability and reliability, and reduces contractual fragmentation. A DBFM/P3 structure provides lifecycle predictability and integrates technical, geotechnical, and operational considerations under a single responsible entity.

Maintenance should only be procured separately if the Owner possesses strong in-house O&M capability and wishes to retain long-term asset risk.

Attachment 3 – Response Forms

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

FCC considers it essential that the maintenance provider participates during the design phase to ensure that best maintenance practices are incorporated into the project from the outset. This participation may be achieved either by including maintenance within the Design–Build package or by selecting the maintenance provider at the time of design development.

FCC brings proven expertise in both Design–Build and long-term Maintenance, making our proposal particularly compelling for the New River Crossing project. This integrated capability ensures that lifecycle performance, durability, and operational efficiency are embedded in the design and carried through into execution.

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ■ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

- ■ Borehole logs every 100 feet (please specify spacing)
- ■ Geological baseline report (GBR)
- ■ Laboratory soil/rock test data
- ■ Groundwater monitoring data
- ▣ Other: Boreholes to reach 1D below tunnel invert

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

FCC Group has consistently implemented methodologies and technologies tailored to the specific requirements of each project, ensuring the safest and most efficient solutions. These approaches are adapted to the unique technical, environmental, and operational conditions of each undertaking.

Rather than relying solely on regionally common practices, FCC Group leverages the most advanced technologies available worldwide. This commitment to innovation allows us to deliver optimized solutions that meet international standards of safety, efficiency, and reliability.

Attachment 3 – Response Forms

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

3 - 5 % of the total project capital cost

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

- Federal Credit Programs & Low-Cost Long-Term Debt (TIFIA, PABs) - Blended Finance Structures (Bond + Bank + Mezzanine) - User Fees (freight and passenger rail companies) - Utilities rental (gas pipeline, electricity conducts, fiber optic, etc)

14. Which financing tools should be considered?

See answer 13

15. Please advise of innovative ways for a repayment model for this Project.

In a DBFM Project Structure, an Availability Payment scheme should be considered with funds coming from a combination of: - user fees, - utility corridor rentals, - TODs, - stations concessions.

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

Between 2 to 6 months

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

18 - 24 months assuming starting from a 30% design

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

To answer this question properly, more technical details are required

19. How long should full construction, including TBM work, be expected to take?

To answer this question properly, more technical details are required

20. What length of maintenance term is acceptable to the industry?

In a DBM model, between 5-10 years / in a DBFM model, minimum 30 years

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

- Geotechnical Risks
- Shaft and Portal Risks
- Utilities and Third-Party Interfaces
- Urban Logistics and Access Constraints
- Permitting and Regulatory Approvals
- TBM Procurement and Delivery
- Interface and Systems Integration
- Safety, Monitoring, and Hold Points
- Workforce and Supply Chain Issues
- Environmental and Community Constraints
- ROW
- Stakeholder Management

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

In a project of this magnitude, with diverse stakeholders and overlapping interests, success depends not only on engineering excellence but also on collaborative leadership. We believe that identifying and empowering a "Champion" within each stakeholder organization is essential to overcoming differences, aligning priorities, and fostering trust. These Champions act as advocates for the project's vision, ensuring that technical solutions are matched with community needs and institutional goals.

By working hand-in-hand with these Champions, our team can help create a unified path forward—delivering a true solution for rail traffic congestion while supporting the long-term development and vitality of the City of Fort Lauderdale.

Name:	JESUS M DE LA FUENTE	Title:	SVP ALTERNATIVE DELIVERY NORTH AMERICA
Company:	FCC	Phone:	305.775.0133
Address:	1101 BRICKELL AVE, SUITE 1601-N. MIAMI. FL 33131	Email:	jmfuente@fccco.com
Signature:		Date:	12/01/2025

Response For Supplier: Ghella USA Corp.

Event # : 538-1

Name: New River Crossing Tunnel (Request for Information)

Description: The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the planning, design, engineering, construction and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes.

Date created: October 28, 2025 10:04:39 AM EDT

Date submitted: November 25, 2025 2:32:46 PM EST

Preview date:

Q & A open date: October 27, 2025 10:30:00 AM EDT

Open date: October 27, 2025 10:00:00 AM EDT

Q & A close date: November 21, 2025 5:00:00 PM EST

Close Date: 12/01/2025 02:00:00 PM EST

Dispute close date:

Responded To: 1 Out of 1 Lines

Response Currency: USD

Response Attachments

Attachment
New River Crossing Tunnel RFI Response - Ghella USA Corp.pdf

Line Responses

Line 1: Request for Information - New River Crossing Tunnel

Description: **This is a Request for Information (RFI); it is not a request for pricing, commitment to purchase, or an**

Event # 538-1: New River Crossing Tunnel (Request for Information)

obligation to provide products or services described in this notice. Please see the attached forms for response details.

Request for Information - New River Crossing Tunnel

Commodity Code: 913-55 Construction, Tunnel

Quantity: 1.0000 **Unit of Measure:** EA

Bid Quantity: 1.0000

No Charge: Yes **No Bid:** No

Request for Information - New River Crossing Tunnel

RFI Response

Name: Ghella USA Corp.

Mailing Address: 2020 Ponce de Leon Blvd. Suite 901 Coral Gables, FL 33134

Phone Number: (305) 717-0909

Designated Point of Contact: Fernando Bolinaga C.Eng, MSc – fbolinaga@ghella.com

Founded in 1894 Ghella is a heavy civil general contractor highly specialized in underground construction particularly state of the art mechanized tunneling techniques. Ghella has a strong presence in the North American tunneling market. The company has more than $2B worth of alternative delivery rail tunnel transit projects under construction in urban environments, including the $785M Eglington Crosstown West Extension Advance Tunnel and the $1B Yonge North Subway Extension Project in Toronto, Ontario and the $860M Broadway Subway Project in Vancouver, British Columbia.

Ghella's reach extends to the Mid-Atlantic region, where Ghella subsidiary Drill PAC USA, is performing jet grouting on notable projects such as the $2.3B Hampton Roads Bridge-Tunnel and $540M Chesapeake Bay Parallel Thimble Shoal in Virginia. With a solid understanding of the equipment, manpower, and materials necessary to execute a project of this size and complexity.

In addition to proven expertise with all tunneling methods, Ghella's core business and unique expertise is in implementing the latest in TBM technology through complex geologic conditions such as those anticipated on the Project.

Ghella is known for its use of innovative technologies and techniques. The company invests heavily in research and development to stay at the forefront of the industry and has developed several patented tunneling technologies, such as the Crossover TBM, which excavates tunnels with varying diameters. Ghella uses other state of the art technologies such as laser scanners, drones, and virtual reality simulations to make sure projects are executed with precision and efficiency.

Ghella has a deep bench of tunnel technical experts that support all of its major tunnel projects across the globe. These resources are available as part of a Technical Advisory Committee, to perform constructability reviews, provide recommendations on improving the design, develop optimal phasing and sequencing, and other technical support.

Ghella has tunneled beneath many of the world's largest cities, including Toronto and Vancouver in Canada; Athens, Greece; Milan, Rome, and Turin, Italy; Buenos Aires, Argentina; Sao Paolo, Brazil; Caracas, Venezuela; Auckland, New Zealand; Brisbane and Sydney, Australia; Hanoi, Vietnam; and Oslo, Norway.

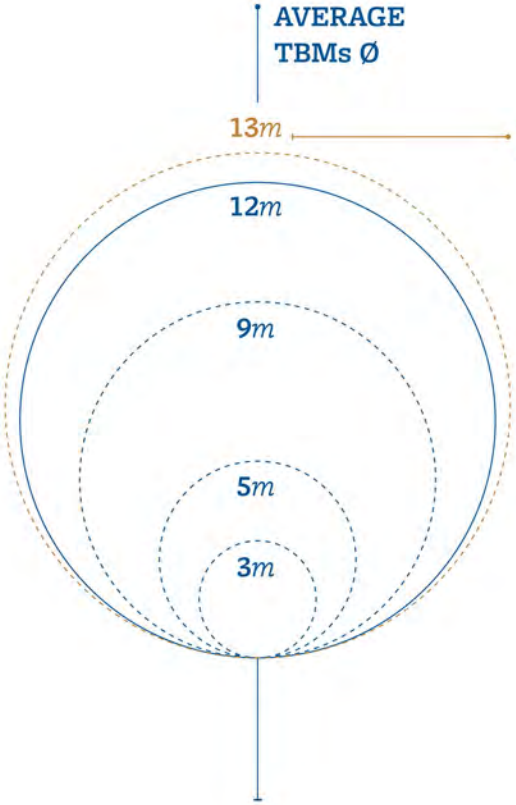
Ghella's extensive specialized tunnel experience in very similar locations will provide significant and specific insight during preconstruction, including constructability reviews, work sequencing and scheduling, risk identification, ground interpretation and behavior, and selection of the most appropriate construction methodologies for both TBM and SEM operations. We have done more than 152 projects worldwide comprising of about 320 miles of tunnels in various complex geological conditions.

Core Business

Specialized in tunnelling and recognized around the globe for our experience with **Tunnel Boring Machines** (**TBM**), Ghella is actively involved in the construction of infrastructures such as **Subways**, **Railways**, **Motorways**, and **Hydraulic** works.

88 to date · **7** active · **33** to start

As of January 2026

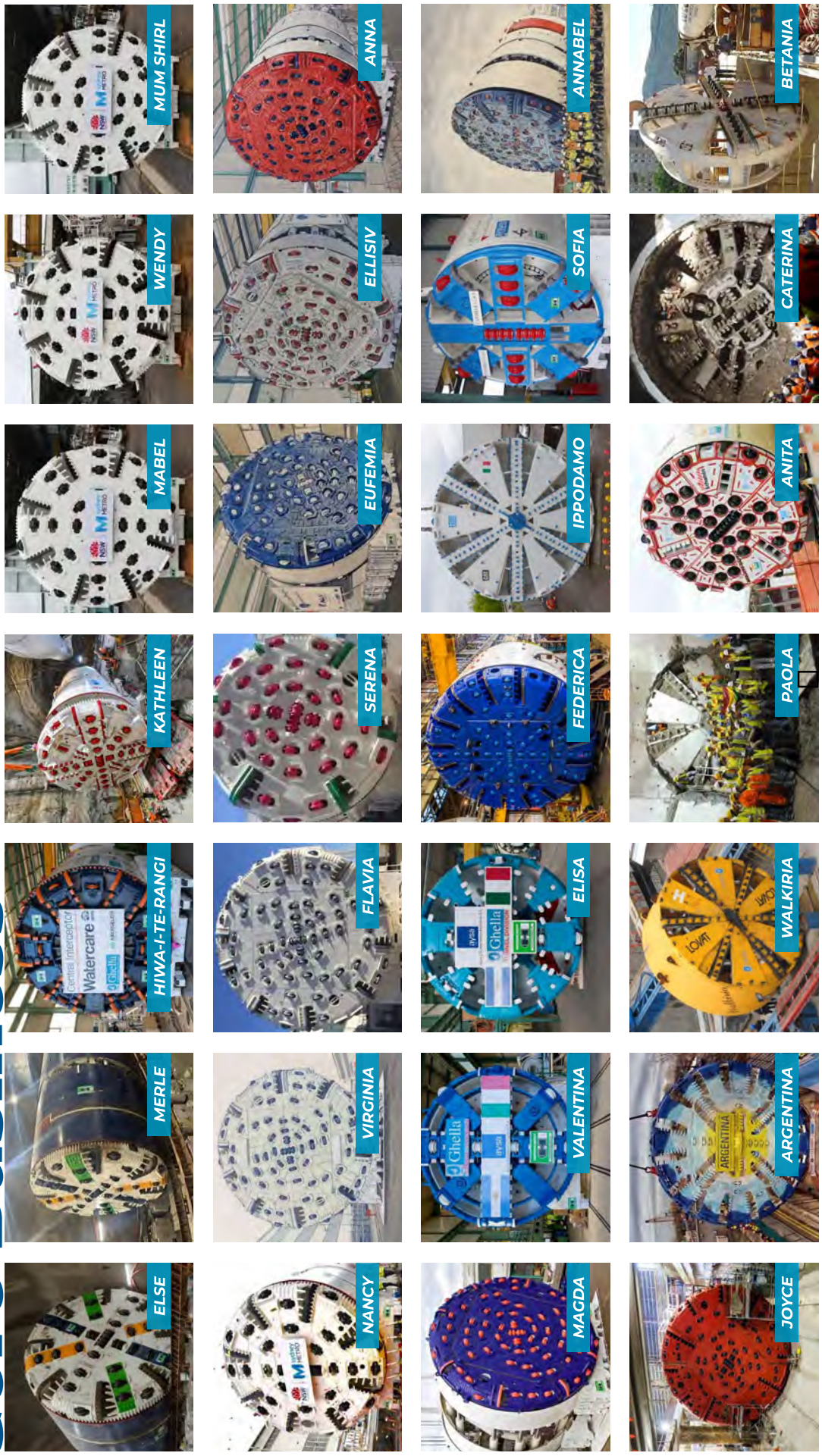


TBM PER TYPOLOGY

- **40** EPB
- **9** Dual Mode
- **7** Slurry
- **2** Gripper
- **3** Mix Shield
- **5** Single Shield
- **20** Double Shield
- **2** Open

Leave a better world for future generations

Core Business



Production

*Data as of January 2025

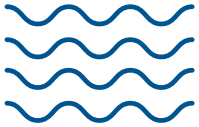
ROADS & HIGHWAYS

16 Highways
>180mi of roads

RAILWAYS & SUBWAYS

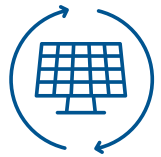
41 Railways
18 Subways

WATER



20 Hydraulic
10 Hydroelectric

PHOTOVOLTAIC PLANTS



1.250MW
in operation

190*mi* With TBM

163*mi* With Conventional Methods

23*mi* With Micro Tunneling

Excavation miles (last 10 years)

Jobsite	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Tot.
Argentina - Riachuelo		0,93	4,99	2,12	4,73	4,86	0,34					**17,97**
Argentina - Sarmiento		0,02	1,78	2,58	0,11	0,00	0,00	0,00				**4,50**
Australia - Cross River Rail							5,54	0,02				**5,56**
Australia - Sydney M6								0,88	3,46	1,23		**5,57**
Australia - Sydney Metro - City&Southwest				0,68	16,28	0,81						**17,78**
Australia - Sydney Metro - WSA									5,01	7,47		**12,48**
Australia - Sydney Metro West – ETP										0,76	1,30	**2,06**
Brazil - Metro San Paolo Line 2										0,06	0,07	**0,13**
Canada - Broadway Subway								0,32	2,77	1,46	0,02	**4,57**
Canada - Eglinton Crosstown WE								2,74	3,36	1,75		**7,86**
Costa Rica - Los Negros 2	0,70	0,70										**1,41**
France - SM La Porte	0,44	0,96	1,27	2,42	1,79	0,25	0,25	0,08				**7,47**
Greece - Athens Metro	0,82	0,58	1,44	0,11								**2,95**
Italy - Ancona A14 Highway	0,52	0,12										**0,64**
Italy - Brennero			2,66	5,04	8,79	8,84	7,70	2,51	0,78	2,09	0,95	**39,36**
Italy - Cancello-Frasso					0,43	2,06	1,03	0,14				**3,66**
Italy - Collettore Torino										1,33	1,01	**2,33**
Italy - Pavoncelli Bis	1,50	1,87	1,45	0,00								**4,82**
Italy - Salerno Reggio (A3 Highway)	6,99	1,40										**8,38**
Italy - SA-RC Lt 1A Xenia Batt-Rom											0,30	**0,30**
Italy - Telese-Vitulano									0,30	1,80	2,20	**4,30**
New Zealand - Central Interceptor							0,83	3,54	3,76	4,35	0,89	**13,36**
Norway - Follo Line	1,06	3,38	11,49	8,88	1,13							**25,94**
Norway - Oslo E6 Clean Water								1,17	1,86	3,14	4,23	**10,40**
Vietnam - Metro Hanoi										0,47	1,82	**2,29**
Total	**12,03**	**9,96**	**25,09**	**21,83**	**33,26**	**16,83**	**15,69**	**11,40**	**21,29**	**25,93**	**12,78**	**206,08**

Total tunnels internationally (last 10 years)

Jobsite	CONVENTIONAL	MICROTUNNEL	TBM	Tot.
Argentina - Riachuelo	1	8	1	**9**
Argentina - Sarmiento			1	**1**
Australia - Cross River Rail	2		2	**2**
Australia - Sydney M6	8			**8**
Australia - Sydney Metro - City&Southwest			2	**2**
Australia - Sydney Metro - WSA			4	**4**
Australia - Sydney Metro West – ETP			2	**2**
Brazil - Metro San Paolo Line 2	1			**1**
Canada - Broadway Subway	4		2	**5**
Canada - Eglinton Crosstown WE			2	**2**
Costa Rica - Los Negros 2	2			**2**
France - SM La Porte	2		1	**2**
Greece - Athens Metro	1		1	**1**
Italy - Ancona A14 Highway	2			**2**
Italy - Brennero	4		3	**4**
Italy - Cancello-Frasso	4			**4**
Italy - Collettore Torino	2	2	1	**2**
Italy - Pavoncelli Bis	1		1	**2**
Italy - Salerno Reggio (A3 Highway)	12			**12**
Italy - SA-RC Lt 1A Xenia Batt-Rom			3	**3**
Italy - Telese-Vitulano	11			**11**
New Zealand - Central Interceptor		8	1	**9**
Norway - Follo Line	6		2	**6**
Norway - Oslo E6 Clean Water	11		1	**11**
Vietnam - Metro Hanoi			2	**2**
Total	**73**	**18**	**26**	**103**

Excavated miles in North America (last 10 years)

Jobsite	2022	2023	2024	2025	Tot.
Canada - Broadway Subway	0,32	2,77	1,46	0,02	**4,57**
Canada - Eglinton Crosstown WE	2,74	3,36	1,75		**7,86**
Total	**3,06**	**6,13**	**3,22**	**0,02**	**12,42**

Total tunnel lengths in North America

Jobsite	miles
Canada - Broadway Subway	4,57
Canada - Eglinton Crosstown WE	7,86
Total	**12,42**

Total tunnels in North America

Jobsite	CONVENTIONAL	TBM	Tot.
Canada - Broadway Subway	4	2	**5**
Canada - Eglinton Crosstown WE		2	**2**
Total	**4**	**4**	**7**

GHELLA
1894

TBM Excavation miles (total in last 10 years)

Jobsite	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Tot.
Argentina - Riachuelo				0,80	4,29	3,99						**9,09**
Argentina - Sarmiento		0,02	1,78	2,58	0,11	0,00	0,00	0,00				**4,50**
Australia - Cross River Rail							4,39					**4,39**
Australia - Sydney Metro - City&Southwest				0,68	16,03	0,66						**17,37**
Australia - Sydney Metro - WSA									4,98	7,30		**12,28**
Australia - Sydney Metro West – ETP										0,76	1,28	**2,04**
Canada - Broadway Subway								0,31	2,76	1,35		**4,42**
Canada - Eglinton Crosstown WE								2,74	3,35	1,73		**7,83**
France - SM La Porte		0,19	1,11	2,41	1,69							**5,41**
Greece - Athens Metro	0,79	0,40	1,44	0,11								**2,74**
Italy - Brennero				1,68	5,85	7,12	6,65	2,35	0,74	1,57	0,52	**26,49**
Italy - Collettore Torino											0,56	**0,56**
Italy - Pavoncelli Bis	1,49	1,86	1,45	0,00								**4,80**
Italy - SA-RC Lt 1A Xenia Batt-Rom											0,29	**0,29**
New Zealand - Central Interceptor							0,23	2,36	2,84	3,76	0,89	**10,07**
Norway - Follo Line		1,63	11,09	8,60	1,06							**22,38**
Norway - Oslo E6 Clean Water									0,02	2,15	3,52	**5,68**
Vietnam - Metro Hanoi										0,47	1,81	**2,29**
Total	**2,29**	**4,10**	**16,88**	**16,87**	**29,02**	**11,77**	**11,26**	**7,76**	**14,68**	**19,11**	**8,87**	**142,63**

TBM tunnels internationally (last 10 years)

Jobsite	# Tunnels
Argentina - Riachuelo	1
Argentina - Sarmiento	1
Australia - Cross River Rail	2
Australia - Sydney Metro - City&Southwest	2
Australia - Sydney Metro - WSA	4
Australia - Sydney Metro West – ETP	2
Canada - Broadway Subway	2
Canada - Eglinton Crosstown WE	2
France - SM La Porte	1
Greece - Athens Metro	1
Italy - Brennero	3
Italy - Collettore Torino	1
Italy - Pavoncelli Bis	1
Italy - SA-RC Lt 1A Xenia Batt-Rom	3
New Zealand - Central Interceptor	1
Norway - Follo Line	2
Norway - Oslo E6 Clean Water	1
Vietnam - Metro Hanoi	2
Total	**26**

TBM Excavation miles (soft ground, all-time)

Jobsite	miles
Argentina - Maldonado	8,96
Argentina - Riachuelo	9,09
Argentina - Sarmiento	4,50
Australia - Sydney Metro West – ETP	2,22
Italy - Collettore Torino	0,64
Italy - Milano Metro L5	2,01
Italy - Pavoncelli Bis	5,22
Italy - San Ruffillo	7,61
Italy - SA-RC Lt 1A Xenia Batt-Rom	0,35
Italy - Torino Linea 1	1,65
Venezuela - Metro Caracas L3 Ext	2,82
Venezuela - Metro Valencia L1	2,51
Venezuela - Metro Valencia L2	1,09
Vietnam - Metro Hanoi	2,40
Total	**51,07**

TBM tunnels (soft ground, all-time)

Jobsite	# Tunnels
Argentina - Maldonado	2
Argentina - Riachuelo	1
Argentina - Sarmiento	1
Australia - Sydney Metro West – ETP	2
Italy - Collettore Torino	1
Italy - Milano Metro L5	1
Italy - Pavoncelli Bis	1
Italy - San Ruffillo	2
Italy - SA-RC Lt 1A Xenia Batt-Rom	3
Italy - Torino Linea 1	1
Venezuela - Metro Caracas L3 Ext	1
Venezuela - Metro Valencia L1	1
Venezuela - Metro Valencia L2	1
Vietnam - Metro Hanoi	2
Total	**20**

TBM Excavation miles (soft ground, last 10 years)

Jobsite	2015	2016	2017	2018	2019	2020	2021	2022	2024	2025	Tot.
Argentina - Riachuelo				0,80	4,29	3,99					**9,09**
Argentina - Sarmiento		0,02	1,78	2,58	0,11	0,00	0,00	0,00			**4,50**
Australia - Sydney Metro West – ETP									0,76	1,28	**2,04**
Italy - Collettore Torino										0,56	**0,56**
Italy - Pavoncelli Bis	1,49	1,86	1,45	0,00							**4,80**
Italy - SA-RC Lt 1A Xenia Batt-Rom										0,29	**0,29**
Vietnam - Metro Hanoi									0,47	1,81	**2,29**
Total	**1,49**	**1,88**	**3,24**	**3,39**	**4,40**	**3,99**	**0,00**	**0,00**	**1,24**	**3,95**	**23,58**

TBM Excavation miles (all-time)

Jobsite	miles
Argentina - Maldonado	8,96
Argentina - Riachuelo	9,09
Argentina - Sarmiento	4,50
Australia - Cross River Rail	4,39
Australia - Legacy Way	5,29
Australia - Sydney Metro - City&Southwest	17,37
Australia - Sydney Metro - WSA	12,28
Australia - Sydney Metro West – ETP	2,22
Brazil - Gastau	3,05
Canada - Broadway Subway	4,42
Canada - Eglinton Crosstown WE	7,83
Costa Rica - El Encanto	0,26
Costa Rica - La Joya	4,91
Dominican Republic - Rio Blanco	4,57
France - SM La Porte	5,41
Greece - Athens Metro	4,05
Guatemala - Las Vacas	1,03
Italy - Acquatraversa	0,58
Italy - Brennero	26,49
Italy - Collettore Torino	0,64
Italy - Gelsomino sewage lot III	0,70
Italy - Milano Metro L5	2,01
Italy - Pavoncelli Bis	5,22
Italy - San Ruffillo	7,61
Italy - SA-RC Lt 1A Xenia Batt-Rom	0,35
Italy - Torino Linea 1	1,65
New Zealand - Central Interceptor	10,07
Norway - Follo Line	22,38
Norway - Oslo E6 Clean Water	5,91
Venezuela - Metro Caracas L1, Chacaito -Alt.	1,24
Venezuela - Metro Caracas L1-1 Ext	0,76
Venezuela - Metro Caracas L3	4,22
Venezuela - Metro Caracas L3 Ext	2,82
Venezuela - Metro Valencia L1	2,51
Venezuela - Metro Valencia L2	1,09
Vietnam - Metro Hanoi	2,40
Total	**198,27**

TBM Excavation miles (rock, all-time)

Jobsite	miles
Australia - Cross River Rail	4,39
Australia - Legacy Way	5,29
Brazil - Gastau	3,05
Costa Rica - El Encanto	0,26
Costa Rica - La Joya	4,91
Dominican Republic - Rio Blanco	4,57
France - SM La Porte	5,41
Guatemala - Las Vacas	1,03
Italy - Acquatraversa	0,58
Italy - Brennero	26,49
Italy - Gelsomino sewage lot III	0,70
Norway - Follo Line	22,38
Norway - Oslo E6 Clean Water	5,91
Venezuela - Metro Caracas L1, Chacaito -Alt.	1,24
Venezuela - Metro Caracas L1-1 Ext	0,76
Venezuela - Metro Caracas L3	4,22
Total	**91,19**

TBM tunnels (rock, all-time)

Jobsite	# Tunnels
Australia - Cross River Rail	2
Australia - Legacy Way	2
Brazil - Gastau	1
Costa Rica - El Encanto	1
Costa Rica - La Joya	1
Dominican Republic - Rio Blanco	1
France - SM La Porte	1
Guatemala - Las Vacas	1
Italy - Acquatraversa	1
Italy - Brennero	3
Italy - Gelsomino sewage lot III	1
Norway - Follo Line	2
Norway - Oslo E6 Clean Water	1
Venezuela - Metro Caracas L1, Chacaito -Alt.	1
Venezuela - Metro Caracas L1-1 Ext	1
Venezuela - Metro Caracas L3	1
Total	**21**

TBM Excavation miles (rock, last 10 years)

Jobsite	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Tot.
Australia - Cross River Rail						4,39					**4,39**
France - SM La Porte	0,19	1,11	2,41	1,69							**5,41**
Italy - Brennero			1,68	5,85	7,12	6,65	2,35	0,74	1,57	0,52	**26,49**
Norway - Follo Line	1,63	11,09	8,60	1,06							**22,38**
Norway - Oslo E6 Clean Water								0,02	2,15	3,52	**5,68**
Total	**1,83**	**12,20**	**12,69**	**8,60**	**7,12**	**11,04**	**2,35**	**0,76**	**3,72**	**4,04**	**64,35**

TBM Excavation miles (mixed, all-time)

Jobsite	miles
Australia - Sydney Metro - City&Southwest	17,37
Australia - Sydney Metro - WSA	12,28
Canada - Broadway Subway	4,42
Canada - Eglinton Crosstown WE	7,83
Greece - Athens Metro	4,05
New Zealand - Central Interceptor	10,07
Total	**56,01**

TBM tunnels (mixed, all-time)

Jobsite	# Tunnels
Australia - Sydney Metro - City&Southwest	2
Australia - Sydney Metro - WSA	4
Canada - Broadway Subway	2
Canada - Eglinton Crosstown WE	2
Greece - Athens Metro	1
New Zealand - Central Interceptor	1
Total	**12**

TBM Excavation miles (mixed, last 10 years)

Jobsite	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Tot.
Australia - Sydney Metro - City&Southwest				0,68	16,03	0,66						**17,37**
Australia - Sydney Metro - WSA									4,98	7,30		**12,28**
Canada - Broadway Subway								0,31	2,76	1,35		**4,42**
Canada - Eglinton Crosstown WE								2,74	3,35	1,73		**7,83**
Greece - Athens Metro	0,79	0,40	1,44	0,11								**2,74**
New Zealand - Central Interceptor							0,23	2,36	2,84	3,76	0,89	**10,07**
Total	**0,79**	**0,40**	**1,44**	**0,80**	**16,03**	**0,66**	**0,23**	**5,41**	**13,92**	**14,15**	**0,89**	**54,70**

GHELLA
1894

December 1, 2025

Milos Majstorovic, MSCE, PE
Director of Transportation and Mobility
City of Fort Lauderdale

Subject: Request for Information
New River Crossing Tunnel

GHELLA USA CORP.

2020 Ponce De Leon Boulevard – Suite 901
Coral Gables
33134 Florida, USA
+1 (305) 717-0909
miami@ghella.com
ghella.com

Dear Mr. Majstorovic,

Ghella USA Corp. is pleased to submit this response to the RFI for the New River Crossing Tunnel. Ghella has proven experience, knowledge, financial strength, and unmatched tunnelling skills, having successfully completed many underground projects of similar size, scope, and technical complexity. Through our strategic partnerships we have built long-term success around the world and in the North American market based on a blend of local and international expertise, and strong relationships with manufacturers and suppliers. Ghella has 130 years of experience in tunnelling, in the last 45 years we have completed 200+ mi of tunnels with TBMs and in the last 5 years we have executed 75 mi using 24 TBMs in 12 projects around the world. Ghella has the knowledge to operate every kind of TBM and has relationships with all major TBM suppliers. We also have a TBM technical department with the capabilities to design our own TBMs and cooperate with suppliers to improve and optimize the TBM configuration for our tunnel projects.
Just in the past 8 years Ghella has purchased 34 TBMs and 2 pipejacking machines from Herrenknecht, recognized by the industry as the leader TBM manufacturer. The strength of the existing relationship and the long cooperation through the years has made Ghella their #1 customer.
Ghella is currently working on the Advance Tunnel for the Eglinton Crosstown West Extension and the Yonge North Subway Extension in Toronto, and the Broadway Subway Project in Vancouver. We understand this project's challenges, objectives, and expectations and are prepared to team up with local firm(s) for the future development of the project. Prioritizing safety, quality, and environment during all stages of this project while meeting The City of Fort Lauderdale's delivery objectives will be key to our approach.
Ghella has extensive experience in collaborative procurement or progressive delivery methods, such as Alliance, a contract model used in the United Kingdom

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ISO 45001

and Australia that is very similar to CMAR and PDB delivery methods. An essential part of this type of contract is the inclusion of a contingency amount to be handled by the owner and the contractor if unforeseen conditions appear during construction.

We look forward to working with you in the next stage and submitting a competitive proposal that delivers all your objectives for the New River Tunnel Crossing.

Yours Truly,

Fernando Bolinaga, C.Eng, MSc
Director/Senior Advisor

Attachment 1 – Project Information

1.0 Purpose

The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the design, engineering, construction, and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes. All submissions become City property and will not be returned.

2.0 Background

The New River Crossing is a two-track bascule bridge constructed in 1978. The bridge, at only 4 feet above the water level, must be opened numerous times a day to allow marine traffic to navigate the New River but remain down for both freight rail and passenger trains. Currently, approximately 60 trains traverse the New River Crossing rail bridge daily. That number is estimated to more than double with the addition of Broward Commuter Rail (BCR) Service. Recognizing the current challenges with the existing bridge, in 2019 the Florida Legislature directed the Florida Department of Transportation (FDOT) to evaluate long-term crossing solutions over the New River.

The City believes a tunnel would accommodate future commuter rail service while minimizing impacts on marine traffic, adjacent real estate, and the downtown environment. The tunnel alternative supports the City's vision of developing a world-class residential, commercial, and oceanfront destination community.

The City is assessing the current market to gauge interest of potential proposers and their capabilities to deliver this project. As part of that effort, the City hosted the New River Crossing Industry Day on July 28, 2025. The event included presentations from the City of Fort Lauderdale, Broward County, FDOT, and the United States Department of Transportation (USDOT) Build America Bureau.

Afternoon breakout sessions were held with the City and private-sector firms to provide an opportunity to further discuss the project, gauge interest, gain industry feedback on potential next steps, and associated timelines. For more information, project updates, and Industry Day materials, refer to the New River Crossing Project website.

Attachment 2 – Response Guidance

Interested parties are requested to respond to this RFI by uploading responses to the Infor portal. Responses shall be limited to 12 pages total and divided into three sections.

Section 1 *(4 pages max; provided by respondent)*

Section 1 of the response shall provide a company overview, administrative information, and the following at a minimum:

- Name, mailing address, phone number, and e-mail of designated point of contact
- Company profile and relevant experience with large-scale tunnel or similar infrastructure projects.
- Experience with tunneling technologies and methodologies (e.g., TBM, NATM, cut-and-cover)
- Examples of tunnel design, construction, operations, or maintenance projects completed within the past 10 years.

Section 2 *(2 pages max; provided by respondent)*

Respondents are encouraged, not required, to submit a brief Letter of Interest (LOI) along with their RFI response. The LOI should indicate the company's preliminary interest in participating in the New River Crossing project, highlight relevant experience, and outline any potential strategic or technical value the organization may bring. The LOI should be addressed to the City of Fort Lauderdale, is limited to two pages, and should be signed by the company's point of contact.

Section 3 *(6 pages max; included in RFI)*

Respondents are requested to provide detailed answers to the questionnaire included in this RFI as *Attachment 3 – Response Form*. These questions are designed to gather insights on the recommended technical approach, preferred delivery methods, and a realistic project timeline. Please ensure that responses are complete, accurate, and submitted in the fillable PDF format provided in the attached response form. While not all questions are mandatory, comprehensive responses will support the City's planning process for potential future procurement activities.

Space is provided to input additional observations and insight that would be beneficial to share with the City's project team.

Proprietary information, if any, should be minimized and must be clearly marked. To aid the City, please segregate proprietary information. Please be advised that all submissions become City property and will not be returned.

Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☐ Public-Private Partnership (PPP/P3)

   ☐ Preliminary Development Agreement (PDA)

   ☐ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ☐ Design-Build-Finance-Maintain (DBFM)

   ☐ Other: CMAR, PDB, Alliance

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

   * Design: Should be done in a collaborative manner, CMAR or PDB are our preferred methods
   * Construction: Tunnel construction including; shaft or ramps to access the tunnel portals, tunnel excavation, procurement of the TBM, lining of the tunnel, civil works related to track installation (invert, curbs, walkways, and fit-out). Civil works for the station, Management of Traffic (MOT), utilities relocation.
   * Electro-Mechanical works: ventilation, fire systems, AC, mechanical escalators, elevators, etc.
   * Maintenance and Operation

   **Risk Allocation: The party that can best handle the risk should take such a risk. A contingency amount should be included for those risks that cannot be taken by one party.

   Ghella is interested in the Design and Construction Scope.

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	☐	✔
EIS Development	☐	✔
Obtaining the Record of Decision (ROD)	☐	✔
Utility Investigations	☐	✔
Utility Coordination	✔	✔
Geotechnical Investigations	✔	✔
Property Acquisitions	☐	✔
Management of Traffic (MOT)	✔	☐
	☐	☐
	☐	☐
	☐	☐

Attachment 3 – Response Forms

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

CMAR and PDB procurement lend themselves to more qualitative evaluation criteria with a preference for contractors/teams that can demonstrate strong tunneling experience on similar sized projects, dedicate qualified key personnel for both phases of the project, and articulate and well reasoned project execution plan.

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- ○ 30% Design
- ○ 60% Design
- ○ 90% Design
- ○ 100% Design
- ● Other (specify): Depending on the delivery method. If DB 30% and CMAR 10%

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

Many of the benefits of a Progressive Procurement begin to diminish as the preliminary design is advanced beyond 20-30%. A Progressive Procurement does not eliminate the need for a transparent, open book negotiation of construction costs in order to establish the NTE price. However, it does introduce the complexity of how to decouple final design responsibilities from the construction phase, if the owner and the design-builder ultimately cannot agree on price.
Some of the issues in the indicative design could be:
- Vertical and horizontal alignment, tunnel diameter, location of the shaft or ramps to access the portals.
- Preliminary assessment of soil and site improvement along the alignment
- Preliminary geotechnical report and all geotechnical data available (Geological Baseline Report)
- Location, limitation, and geometry of the station
- Existing trains schedule
- Existing utilities map
- Any information regarding traffic and limitations for the MOT plan
- Preliminary schedule
- Financing plan for the project

We believe a CMAR approach would be the best option resulting in a more collaborative approach with fewer disputes.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

Although we have experience in maintenance and operation of similar infrastructure, it is preferable to bid separately unless the chosen delivery method is a PPP. Ghella's preferred scope is design and construction.
In our view, different packages could be effectively designed using separate, specialized design teams. Nevertheless, under normal circumstances a single design team should allow for better design interface management. It may be advantageous to have the flexibility to incorporate elements of the tunnel fit-out into civil works. Rail system components should remain as a separate design package. Initiating the Civil Works as a CMAR and as the first contract would enable the tunneling contractor to be involved in defining the various interfaces ans establishing a regime collaborating/coordinating with the Rail Systems and Maintenance contractors.
It is best to assign the scope of work to the companies with the right experience. If all design and construction scope (Civil Works, MEP, Systems) is bundled, and a Joint Venture has to be structured to bid the Project, the Client should evaluate the experience and expertise of each member of the JV according to their scope of work.

Attachment 3 – Response Forms

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

Implementation of BIM Design and tracking software systems from start of the process will lead to reducing long-term maintenance cost and risks.

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ■ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

■ Borehole logs every 150 feet (please specify spacing)

■ Geological baseline report (GBR)

■ Laboratory soil/rock test data

■ Groundwater monitoring data

■ Other: All foundation information of the buildings and other facilities along the alignment of the tunnel.

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

The use of a new state of the art tunnel boring machines (TBM) will improve the overall construction and minimize construction risks. The brand new TBM will be designed tailor made according to the GBR and project requirements. The TBM will be equipped with all the new options and innovations applicable; laser scan for volume control, weight scale, plenum camera, telescopic camera, water recycling, tool wear monitoring system, pressure sensor in and above the shield.
- Utilization of chemical biodegradable agents for soil conditioning to maintain the pressure face during excavation.
- New mix design for backfill grouting (with chemical additives)
- Electrical equipment in tunnel to reduce the CO2 footprint
- Latest safety implementation measures
- Environmental implementation measures
- Waterproofing concrete mix design
- Jet grouting with video guided drilling holes
- Construction of the new station compatible with the existing station structure
- Construction of site to avoid the interference with the railway line and existing road

Attachment 3 – Response Forms

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

50%

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

DBF: Design (and/or PDB/CMAR), Build, Finance - Usually we can support 25% of the finances to complete the design and construction and is reimbursable at construction substantial completion.
PPP: If the decision is to procure the infrastructure by a Public Private Partnership, the best way to approach this is by paying back to the private partner a monthly payment based upon the availability of the infrastructure. A similar approach was used by FDOT in the I-595 "Port Everglades Expressway"

14. Which financing tools should be considered?

Federal funds
State funds
County and City Funds
Private and Public Bonds

15. Please advise of innovative ways for a repayment model for this Project.

Please refer to answer on question 13

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

6 months to 1 year

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

1 year

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

18 months - from TBM order to TBM ready to start

19. How long should full construction, including TBM work, be expected to take?

3-4 years excluding the design development and project procurement. In total 4

20. What length of maintenance term is acceptable to the industry?

8 to 15 years

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

- Unforeseen geotechnical conditions
- Unforeseen location of utilities
- Permit acquisitions
- Traffic constraints not considered during the bid period
- Time to work limits due to noise and other issues like train schedules
- Public opposition to the Project
- Inflation and supply chain disruptions
- Final disposal area under authority responsibility
- Transport of muck material (100-200 trucks/day on the road)
- Lack of subcontractor experience
- Lack of workforce resources

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

Based on our experiences in contract alliance in Australia, we believe CMAR with a broader self-perform flexibility is potentially the more appropriate choice for delivery of the tunnel and underground station under the circumstances. By adopting this approach, the owner can continue to advance the design using their existing consultants while expediting the selection of the contractor to enable early construction planning and input in the design more transparency into construction planning; means and methods, costs and risk mitigation planning. The CMAR approach facilitates a more open and transparent interaction between the owner, design team, tunnel contractor and other interested parties to resolve tunnel design and construction issues; interfaces with the tunnel fit-out, early community engagement by the tunnel contractor, less friction between contractor's design partner and owner's design consultant, among other benefits.

A few CMAR projects have experienced challenges in reaching agreement on the construction contract price. We believe this is due, in part, to unrealistic project cost assumptions at the outset. To avoid this, updating preliminary cost estimates to ensure recent inflation trends have been taken into consideration as well as any unique project requirements.

One of the major benefits of using a PDB or CMAR approach is the further development of detailed design and project due diligence activities (ROW acquisition, geotechnical investigation, utility location, permit coordination, etc.) prior to finalizing the detailed construction price. In this way, many of the major risks which have become problematic in linear transportation projects of this type can be resolved, mitigated or clarified prior to finalizing a Guaranteed Maximum Price (GMP). Whether CMAR or PDB, we strongly recommend a phase approach to the estimate review process beginning around the 60% design submittal and progressing to an increasingly more refined level of estimate detail at 80% and 95% complete design. In this way, the framework for open book estimate negotiations is established early in the process and the parties can develop a familiarity with one another view of the construction approach, cost basis, risk register, etc.

Name:	Fernando Bolinaga	Title:	Director/Senior Advisor
Company:	Ghella USA Corp	Phone:	305-717-0909
Address:	2020 Ponce de Leon Blvd. Suite 901 Coral Gables, FL 33134	Email:	fbolinaga@ghella.com
Signature:		Date:	November 25, 2025

Response For Supplier: Plenary Americas

Event # : 538-1

Name: New River Crossing Tunnel (Request for Information)

Description: The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the planning, design, engineering, construction and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes.

Date created: November 25, 2025 9:46:04 AM EST	Date submitted: November 25, 2025 1:41:26 PM EST
Preview date:	Q & A open date: October 27, 2025 10:30:00 AM EDT
Open date: October 27, 2025 10:00:00 AM EDT	Q & A close date: November 21, 2025 5:00:00 PM EST
Close Date: 12/01/2025 02:00:00 PM EST	Dispute close date:

Responded To: 1 Out of 1 Lines

Response Currency: USD

Response Attachments

Attachment
02 New River Tunnel Crossing - Response Form_Plenary.pdf
01 New River Tunnel Crossing RFI Response_Plenary.pdf

Line Responses

Line 1: Request for Information - New River Crossing Tunnel

Event # 538-1: New River Crossing Tunnel (Request for Information)

Description: **This is a Request for Information (RFI); it is not a request for pricing, commitment to purchase, or an obligation to provide products or services described in this notice. Please see the attached forms for response details.**

Request for Information - New River Crossing Tunnel

Commodity Code: 913-55 Construction, Tunnel

Quantity: 1.0000 **Unit of Measure:** EA

Bid Quantity: 1.0000

No Charge: Yes **No Bid:** No

Request for Information - New River Crossing Tunnel

Comments: Please see attached submission.

Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☒ Public-Private Partnership (PPP/P3)

   ☒ Preliminary Development Agreement (PDA)

   ☐ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ☒ Design-Build-Finance-Maintain (DBFM)

   ☐ Other: _____

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

   Under a DBFM delivery model, Plenary would look to assemble a team of highly qualified contractors and partners to deliver the full scope of the Project. This approach would encompass the design-build scope, including comprehensive tunnel design, civil works, and installation of mechanical and electrical systems; the finance scope, involving the structuring of private financing through a combination of debt and equity to fund design and construction costs, supported by an availabilty payment mechanism; and the maintenance scope, which would ensure long-term asset performance through lifecycle maintenance, compliance with stringent safety and availability KPIs, and adherence to handback requirements at the end of the concession term.

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	☐	✔
EIS Development	☐	✔
Obtaining the Record of Decision (ROD)	☐	✔
Utility Investigations	✔	✔
Utility Coordination	✔	✔
Geotechnical Investigations	☐	✔
Property Acquisitions	☐	✔
	☐	☐
	☐	☐
	☐	☐
	☐	☐

Attachment 3 – Response Forms

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

Termination and exit clauses
Dispute resolution
Intellectual property rights
Payment terms
Process for change orders / variations

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- ○ 30% Design
- ○ 60% Design
- ○ 90% Design
- ○ 100% Design
- ◉ Other (specify): Conceptual only

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

As a part of Progressive Procurement, particularly for a DBF(O)M contract, only conceptual level indicative designs should be required during the initial procurement phase. In a DBF(O)M structure, the private partner assumes long-term responsibility for asset performance and maintenance. If the consortium is expected to guarantee these outcomes, the design must be driven by the consortium's expertise and optimized for lifecycle cost, maintainability, and operational efficiency, rather than constrained by an early-stage indicative design that may not reflect these priorities. For complex projects such as this, indicative designs prepared early are often based on incomplete information and assumptions, creating unnecessary constraints and costly redesigns later. Conceptual design should therefore serve as a framework to communicate scope and objectives while leaving flexibility for innovation and optimization during the PDA phase, ensuring the final design aligns with the City's output specifications, regulatory requirements, and lifecycle obligations under the DBF(O)M.

As part of this initial procurement package, all conceptual designs, studies, commitments, investigations, along with overall project/asset delivery objectives should be included in the initial procurement package. Additionally, Concession Heads of Terms, Progressive Procurement PDA phase cost recovery mechanism, and a clear timeline for achieving/acquiring required inter-governmental agreements between the City, Broward County, FDOT, USDOT, FRA, and the current operating railroads, as well as full and complete funding plan should be included in the any procurement announcement.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

As one of Plenary's core mandates is to invest in long-term P3 projects, we seek opportunities that utilize the DBF(O)M model. Our rationale for preferring this model is two-fold: (i) as Plenary's core mandate is to invest long-term capital into infrastructure delivery projects, a DBF approach only requires a short term capital investment, while the DBF(O)M delivery model requires long-term capital investment, and (ii) from a project perspective, the requirement for long-term capital ensures that the private developer considers and makes decisions based on the long-term success of the project – weighing first cost considerations against full life-of-asset considerations. It is not a "race" to the lowest construction cost that is often seen in more traditional procurements (including DB and DBF).

Plenary's experience with DBF(O)M models is extensive – 20 years, delivering over 60 projects through such models in North America alone - and by virtue of specializing in infrastructure delivery, we have witnessed the growth of use of the DBF model over the past several years to understand its history and advantages/disadvantages.

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

We would incorporate proven best practices to minimize long-term maintenance costs and risks, focusing on durability and reliability. Specific innovative solutions will be proposed during the formal procurement process to ensure fairness and to protect our intellectual property.

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ■ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

■ Borehole logs every 100 feet (please specify spacing)

■ Geological baseline report (GBR)

■ Laboratory soil/rock test data

■ Groundwater monitoring data

☐ Other: _____

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

One of the key features of the DBF(O)M model is the significant opportunity for innovation in design and construction. This model encourages creative solutions and new approaches to project delivery, fostering innovation throughout the project lifecycle. It allows for the integration of advanced technologies, sustainable practices, and efficient processes to optimize performance, enhance functionality, and deliver value to the City.

We believe our recommended innovative technologies, methods and approach to be a key intellectual property right belonging to us and our consortium partners, and as such we respectfully reserve the right to only provide them to the City under a competitive and confidential procurement response.

Attachment 3 – Response Forms

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

Regardless of procurement methodology, a full and comprehensive funding plan

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

We believe that our ability to finance DBF(O)M Projects through a variety of innovative financing structures is a key market differentiator and as such is an intellectual property right of ours. We would only provide detail of such under a competitive and confidential procurement process.

14. Which financing tools should be considered?

All available publicly funded, privately financed options should be explored by competing teams in order for the City to receive the most cost efficient financial solution.

15. Please advise of innovative ways for a repayment model for this Project.

We believe an Availability Payment mechanism is the only viable mechanism for this project. The City should determine how to collect fees from the operating railroads.

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

A reasonable and typical timeframe should consist of no more than 90 days after

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

As noted above, we believe that a PDA design development phase between 18

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

The procurement and delivery timeline for a Tunnel Boring Machine (TBM) is

19. How long should full construction, including TBM work, be expected to take?

For anticipated construction timelines and project phasing, we recommend

20. What length of maintenance term is acceptable to the industry?

For a project of this scale and complexity, Plenary recommends a contract term

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

Environmental and permitting delays
Property and Right-of-Way acquisition
Utility relocation / Coordination
Unforeseen site conditions
Extreme weather / force majeure events

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

Name:	Sia Kusha, PE FACEC	Title:	Group Head, Business Development & Partnering
Company:	Plenary Americas	Phone:	813-557-4669
Address:	101 E. Kennedy Blvd, Suite 1470, Tampa, FL 33602	Email:	sia.kusha@plenaryamericas.com
Signature:		Date:	November 25, 2025

Request for Information

New River Tunnel Crossing

Plenary

December 1, 2025

TABLE OF CONTENTS

SECTION 01

Contact Information

Name: Sia Kusha, PE, FACEC

Title: Group Head, Business Development & Partnering

Mailing Address: 101 E. Kennedy Blvd, Suite 1470, Tampa, FL 33602

Phone Number: (813) 557-4669

Email: sia.kusha@plenaryamericas.com

Company Profile

Plenary Americas LP (Plenary) is North America's leading dedicated developer, equity investor, and asset manager of public infrastructure. Since its inception in 2005, Plenary has achieved unrivaled success, closing, managing, and investing in 66 infrastructure projects worth over $41 billion. With over 140 employees across Tampa, Los Angeles, Denver, Toronto, and Vancouver, Plenary is the largest dedicated P3 developer in North America.

Adopting a holistic approach, Plenary manages or oversees the financing, planning, design and construction, and ongoing management and operation of each project. Plenary is organized into three divisions that collectively cover the full lifecycle of an infrastructure project:

- **Project Structuring and Investment (PSI) team:** Specializes in the bidding, closing, and commercial and financial structuring of P3 infrastructure projects.
- **Asset Delivery team:** Responsible for overseeing the construction and asset management of its projects.
- **Accounting, Finance, and Tax team:** Responsible for all financial reporting, lender and legal compliance, cash flow processing, and the monitoring and analysis of financial results.

Plenary's role is primarily as lead developer, financial arranger, and equity investor. The company partners with best-in-class contractors, architects and operators to deliver projects under long-term contracts, typically ranging from 30-50 years. Plenary's financial modelers develop financial structures in-house, and then partner with lenders, bond-purchasers, underwriters, advisors and arrangers, as required depending on the specific requirements of each project, to ensure lowest overall cost of capital for each project.

Plenary's experience encompasses a wide range of public infrastructure types, including major transportation and transit projects such as:

- **Ontario Line RSSOM (Toronto, ON)** – a complex rail systems and operations project under a DBFOM structure.
- **Disraeli Bridges (Winnipeg, MB)** – a critical bridge replacement and rehabilitation project.
- **US 36 Express Lanes (Colorado)** – a highway expansion and managed lanes project integrating innovative financing and delivery.
- **Waterloo Light Rail Transit (Waterloo, ON)** – a regional transit system delivered under a long-term concession agreement.

In collaboration with its partners, Plenary was responsible for overseeing the design and construction of these projects and now provides guaranteed levels of quality and performance under long-term concession agreements.

Plenary has never divested its equity position in any project. In 2020, Caisse de dépôt et placement du Québec (La Caisse) acquired Plenary, providing significant balance sheet support to Plenary's activities. La Caisse is one of the largest public sector pension funds in the world, with over $450 billion in assets under management.

Relevant Experience

ONTARIO LINE – ROLLING STOCK, SYSTEMS, OPERATIONS & MAINTENANCE PROJECT

TORONTO, ONTARIO, CANADA

The Ontario Line – Rolling Stock, Systems, Operations & Maintenance Project (RSSOM) is one of several contracts to deliver the Ontario Line, a 9.7-mile-long standalone rapid transit line that will connect the Ontario Science Centre to Exhibition/Ontario Place with 15 stations and more than 40 connections to existing transit options along the route. The Plenary-led consortium, Connect 6ix, is delivering the RSSOM scope of work under a DBFOM contract with a 30-year O&M phase. This scope includes not only the design, build, financing, operations, and maintenance of rolling stock and systems but also integration and coordination with other Ontario Line delivery packages, including the separate tunneling and civil works contracts, to ensure seamless interface management and system-wide performance. The commitments under this contract include:

- Design, supply, operate, and maintain the fleet of autonomous, electrically powered trains with sufficient capacity to accommodate anticipated ridership over the term of the contract.
- Design, build, operate, and maintain all track and communications (e.g., network, Wi-Fi, CCTV, passenger information) and train control systems for the Ontario Line.
- Design, build, operate, and maintain the maintenance and storage facility (where vehicles are stored) and the operations control centre (where staff control train operations).

PROJECT VALUE
CAD$9 billion

MILESTONE DATES
Financial Close: November 2022
Completion: 2031

CONTRACT TERMS
30 years, DBFOM

DISRAELI BRIDGES

WINNIPEG, MANITOBA, CANADA

The Disraeli Bridges Project has seen the rejuvenation of a critical piece of Winnipeg's transportation infrastructure, linking the north and south of the city, across the Red River.

The project involved upgrades to approximately two kilometers of road including; the Disraeli overpass that spans the Canadian Pacific Railway mainline, the four-lane Disraeli bridge crossing the Red River, and the approach streets. It also included the addition of a separate pedestrian/cycling corridor, the Active Transportation Bridge, across the Red River. This reflects the changing lifestyle of Winnipeggers, many of whom now prefer to bike and walk to work.

As the bridge is a main artery for Winnipeggers to cross the Red River, maintaining traffic flows during construction was a major consideration. Plenary and the City of Winnipeg adopted a solution to ensure a minimum of four lanes would remain open to traffic at rush hour, during the entirety of the construction period. This reduced the impact for affected businesses and the travelling public.

Substantial Completion was achieved in October 2012, and the final phase of the Active Transportation Bridge opened in October 2013.

PROJECT VALUE
CAD$195 million

MILESTONE DATES
Financial Close: March 2010
Completion: October 2012

CONTRACT TERMS
32.5 years, DBFM

Relevant Experience

US 36 EXPRESS LANES
MULTIPLE LOCATIONS, COLORADO, USA

The US 36 Express Lanes Project completes improvements to US 36 in Colorado, a congested two-lane highway connecting the rapidly growing cities of Boulder, Louisville, Broomfield, Westminster, Denver and communities in between.

The Project promotes multimodal transportation strategies that increase travel choices and efficiency for all modes—including general and express lanes, bus rapid transit, bicycling and walking—while reducing emissions and resource use. Now complete, residents have more options for cleaner, safer and less congested travel.

With construction now complete, Plenary has begun operations and maintenance. In addition, Plenary operates and maintains the existing I-25 Express Lanes segment connecting US 36 to downtown Denver.

The operating and maintenance contract is for 50 years which commenced following construction completion in early 2016. The partnership between Plenary and Colorado Department of Transportation Enterprise will see the delivery of an efficient, well-maintained multimodal transportation corridor 20 years sooner than originally planned.

PROJECT VALUE
US$200 million

MILESTONE DATES
Financial Close: January 2016
Completion: February 2014

CONTRACT TERMS
50 years, DBFOM

WATERLOO LIGHT RAPID TRANSIT
REGION OF WATERLOO, ONTARIO, CANADA

Plenary, as part of the Grandlinq consortium, has delivered a rapid transit system for the Regional Municipality of Waterloo that will serve residents in Cambridge, Kitchener and Waterloo.

Stage 1 of the rapid transit system includes 19 kilometres of tracks, 16 stations and 14 tram sets, on its route from Conestoga Mall in Waterloo to Fairview Park Mall. The Project scope also included 13 Traction Power Substations and the Operations and Maintenance Storage Facility.

The DBFOM Contract includes a minimum 10-year operator appointment, with up to four 5-year extensions, to be performed by Keolis.

As a result of the favourable interest rate environment at financial close, construction costs were $2.5 million lower than anticipated, and the 30-year financing costs dropped by $11.5 million.

The ION LRT system became operational on June 21, 2019.

PROJECT VALUE
CAD$583 million

MILESTONE DATES
Financial Close: May 2014
Completion: June 2019

CONTRACT TERMS
30 years, DBFOM

Experience with Tunneling Technologies

Plenary has extensive experience delivering complex infrastructure projects under alternative delivery models and understands the critical role of tunneling expertise in major transit and bridge projects. While Plenary does not self-perform tunneling work, we have successfully partnered with globally recognized leaders in tunneling technologies, including Obayashi Corporation, Strabag, Sacyr, Traylor Bros., and VINCI Construction.

Each of these firms brings decades of experience in tunnel boring machine (TBM) operations, ground stabilization, and large-diameter tunnel construction across challenging geotechnical conditions worldwide.

If the New River Crossing project is procured under a DBFM model, Plenary would assemble a consortium of best-in-class partners, leveraging the tunneling expertise of these firms to ensure technical excellence and risk mitigation throughout the project lifecycle.

Examples of Tunnel Design, Construction, Operations, or Maintenance Projects Completed in Last 10 Years

Once the consortium is assembled, Plenary will rely on the extensive experience and proven track record of its partners in delivering complex tunnel projects.

SECTION 02

Plenary

Plenary Americas LP
101 E. Kennedy Blvd, Suite 1470
Tampa, FL 33602
plenaryamericas.com

December 1, 2025

John Torrenga
Procurement Administrator
City of Fort Lauderdale

Dear Mr. Torrenga,

RE: LETTER OF INTEREST – NEW RIVER CROSSING PROJECT

On behalf of Plenary Americas LP (Plenary), I am pleased to submit this Letter of Interest regarding the New River Crossing project.

Plenary recognizes the strategic importance of this project in enhancing connectivity, supporting regional mobility, and delivering long-term value to the City of Fort Lauderdale and Broward County. The New River Crossing represents a critical investment in resilient infrastructure that will serve the community for decades to come.

Plenary intends to bring together a consortium of industry-leading partners to pursue and deliver the New River Crossing under a Design-Build-Finance-Maintain (DBFM) model. Plenary will offer:

- **Technical Expertise** in tunnel design and construction, and multimodal integration.
- **Financial Strength** and proven capability in structuring and securing long-term financing for major transportation projects.
- **Operational Excellence** through lifecycle asset management, ensuring safety, reliability, and optimized performance.

This approach is rooted in collaboration and partnership. Plenary will lead the formation of a consortium of industry-leading firms, ensuring that each partner's specialized expertise is fully leveraged. Once assembled, technical capabilities in areas such as tunnel engineering, construction, and long-term maintenance will be provided by Plenary's partners. This integrated approach combines financial strength with world-class technical delivery.

The team will bring a proven track record of success on projects such as:

URBAN TRANSIT AND HIGHWAY TUNNEL PROJECTS ACROSS NORTH AMERICA

Ontario Line – Rolling Stock, Systems, Operations & Maintenance Project | Toronto, Ontario, Canada

Waterloo Light Rapid Transit | Region of Waterloo, Ontario, Canada

INNOVATIVE TUNNEL SOLUTIONS IN MARINE AND WATERWAY CONTEXTS

Belle Chasse Bridge and Tunnel Replacement | Belle Chasse, Louisiana, USA

I-10 Calcasieu River Bridge Project | Lake Charles, Louisiana, USA

COMPREHENSIVE LIFECYCLE MAINTENANCE PROGRAMS FOR MAJOR TRANSPORTATION ASSETS

US 36 Express Lanes | Multiple Locations, Colorado, USA

Disraeli Bridges | Winnipeg, Manitoba, Canada

Plenary

Delivering the New River Crossing under a DBFM approach offers significant benefits to the City and its stakeholders, including:

- **Integrated Delivery and Accountability** – A single consortium responsible for design, construction, financing, and maintenance ensures alignment of interests and reduces interface risk.
- **Lifecycle Performance** – Long-term maintenance obligations incentivize high-quality design and construction, minimizing future disruptions and costs.
- **Cost and Schedule Certainty** – Fixed-price, date-certain delivery backed by private financing mitigates risk for the public sector.
- **Innovation and Efficiency** – Private sector expertise and competitive procurement foster innovative solutions and optimized asset performance.

Plenary brings a proven track record in delivering complex infrastructure projects under public-private partnership models across North America. Experience includes:

- **Major Transit Projects** – Delivery of large-scale, technically challenging assets with integrated financing and lifecycle maintenance.
- **Innovative Financing Solutions** – Structuring transactions that optimize value for public agencies while ensuring long-term sustainability.
- **Lifecycle Asset Management** – Implementing robust maintenance programs that extend asset life and reduce total cost of ownership.

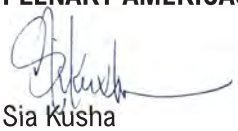
Plenary's strategic value lies in its ability to align technical innovation with financial discipline, ensuring projects are delivered on time, on budget, and maintained to the highest standards throughout their lifecycle.

It is anticipated that, by the time the project comes to market, it will have defined funding, full environmental clearance, and strong support from Broward County, the State of Florida, and USDOT. These elements are essential to ensure a successful procurement and timely delivery, and Plenary looks forward to collaborating closely with all stakeholders to achieve these milestones.

Plenary welcomes the opportunity to engage further and explore how it can contribute to the success of the New River Crossing project.

Sincerely,

PLENARY AMERICAS LP



Sia Kusha
Group Head, Business Development & Partnering

SECTION 03

Please refer to the attached document for the completed Response Form.

Plenary
plenaryamericas.com

Response For Supplier: Southland Contracting Inc.

Event # : 538-1

Name: New River Crossing Tunnel (Request for Information)

Description: The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the planning, design, engineering, construction and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes.

Date created: December 1, 2025 1:23:02 PM EST	Date submitted: December 1, 2025 1:34:16 PM EST
Preview date:	Q & A open date: October 27, 2025 10:30:00 AM EDT
Open date: October 27, 2025 10:00:00 AM EDT	Q & A close date: November 21, 2025 5:00:00 PM EST
Close Date: 12/01/2025 02:00:00 PM EST	Dispute close date:

Responded To: 1 Out of 1 Lines

Response Currency: USD

Response Attachments

Attachment
RFI_Southland_Sacyr_NewRiverTunnel.pdf

Line Responses

Line 1: Request for Information - New River Crossing Tunnel

Description: **This is a Request for Information (RFI); it is not a request for pricing, commitment to purchase, or an**

Event # 538-1: New River Crossing Tunnel (Request for Information)

obligation to provide products or services described in this notice. Please see the attached forms for response details.

Request for Information - New River Crossing Tunnel

Commodity Code: 913-55 Construction, Tunnel

Quantity: 1.0000 **Unit of Measure:** EA

Bid Quantity: 1.0000

No Charge: Yes **No Bid:** No

Request for Information - New River Crossing Tunnel

Comments: Request for Information uploaded.

New River Crossing Tunnel

Due Date & Time | 2 p.m. Dec. 1, 2025

Submitted to:

City of Fort Lauderdale

Submitted by:

Southland Contracting/SACYR Joint Venture

Address | 5517 Hansel Ave., Orlando, FL, 32809
Phone Number | 817-293-4263

December 1st, 2025

City of Fort Lauderdale
Procurement Services Division
101 NE 3rd Avenue
Fort Lauderdale, FL 33301

Attn: City of Fort Lauderdale

Dear Members of the Procurement Services Division,

The Southland-Sacyr Joint Venture is pleased to submit this response for the New River Tunnel Crossing and understands the City objective to deliver a reliable rail tunnel that removes conflicts with marine navigation and growing passenger and freight service. With Southland Contracting Inc.'s specialized tunneling experience in complex North American geologies and CAVOSA's (Sacyr) global expertise in EPB TBM and NATM methodologies, the JV offers a capable and well-aligned partner for this transformative project.

1. NAME, MAILING ADDRESS, PHONE NUMBER, AND E-MAIL OF DESIGNATED POINT OF CONTACT

Southland Contracting, Inc., A Southland Company
1100 Kubota Drive
Grapevine, Texas76051
Jim Moldovan, Vice President of Business Development
M: (614) 560-6484
jmoldovan@southlandholdings.com
Sacyr Infrastructure USA LLC
3191 Coral Way
Miami, Florida 33145
Eduardo de Lara Garay, Managing Director North America
M: (786) 773-5847
edelara@sacyr.com

2. COMPANY PROFILE AND RELEVANT EXPERIENCE:

The Southland-Sacyr Joint Venture brings the financial strength, equipment resources, and technical capability to deliver the New River Crossing Tunnel under any procurement structure identified by the City.

2.1 Southland Contracting: Specialized Tunneling and Underground Delivery

Southland Contracting, Inc. (SCI) is a leading North American tunneling contractor with extensive experience delivering complex underground infrastructure in challenging geologic conditions. Notably, SCI completed the **Mill Creek Drainage Relief Tunnel** in Dallas, Texas, using a 37.7-foot-diameter Main Beam TBM that successfully executed a first-of-its-kind in-tunnel diameter reduction to 32.6 feet. SCI also

delivered the **Jollyville Transmission Main** in Austin, Texas; a 12-foot-diameter TBM tunnel constructed under rigorous environmental protections while advancing through the highly sensitive Edwards Aquifer karst formation. In Hawaii, SCI completed the **Kaneohe-Kailua Sewer Tunnel**, marking the first TBM ever deployed in the state and showcasing our proven capability to manage complex marine logistics and constrained coastal access conditions.

2.2 Sacyr: International Soft-Ground and EPB Expertise

Publicly traded, Sacyr is a globally recognized infrastructure conglomerated with operations in almost 20 countries and +15,000 employees. Sacyr fully covers the concession lifecycle supported on its vertical integration. Sacyr Concessions; focused on managing and operating P3 projects worldwide, Sacyr Engineering and Construction; focused on construction activities, and Sacyr Water; Focused on the management of the Water Cycle. Leaders in developing infrastructure with a highly diversified portfolio, we are the world's 3rd P3 Transportation Developer. We offer end-to-end project management, generating added value across all phases: design construction, financing, operating, and maintenance. Sacyr has 76 P3 assets, $31.5B USD Investment under management and we have raised more than $43B USD, also we currently manage +2,920 Miles of highway, 434 Miles of Rail Track, and 210 Miles of Tunnels.

CAVOSA is the company of Sacyr, specialized in underground works which provides the latest technical and technological innovations in the execution of road tunnels, railway tunnels, subway, hydraulic tunnels, galleries, ramps, shafts or chambers. A specialization of more than 58 years, during which have come true from the simplest to the most complex projects. CAVOSA has developed works for the most important mining companies, the Ministry of Publix Works, the Ministry of Environment, various Autonomous Regions, Towns Councils and the main construction companies and industrial groups. Together, these projects show the Southland Sacyr Joint Venture ability to deliver large, complex transportation and marine adjacent infrastructure while maintaining operations and minimizing community disruption, a direct fit for the city vision for the New River Crossing Tunnel.

3. TUNNELING TECHNOLOGIES AND METHODOLOGIES:

The Southland-Sacyr Joint Venture provides complete in-house expertise in mechanized and mined tunneling, including Tunnel Boring Machine, New Austrian Tunneling Method, and Cut and Cover construction in soft ground and high groundwater environments similar to the New River corridor.

Southland has delivered major tunnel interface works in the United States, including TBM launch and recovery structures, and deep cut and cover segments for the **SR 99 Tunnel in Seattle**, supporting a 2-mile alignment beneath the downtown core. Additional structural tunnel box and approach excavation works for **Los Angeles regional transit improvements** and tunnel approach works for **Texas freight and passenger rail corridors** demonstrate Southland experience maintaining rail service, controlling ground movement, and constructing tunnel transitions in active transportation environments.

Sacyr has delivered more than 250 miles of TBM and NATM tunnels worldwide. This includes the **Guadalajara Light Rail Line 3** in Mexico, where CAVOSA utilized an 11.55-meter EPB TBM to excavate 5.3 kilometers through complex volcanic tufa and soft urban soils, connecting Zapopan to Tlaquepaque. In Brazil, CAVOSA brings experience from the **São Paulo Metro Line 2**, involving a 7.8-kilometer drive through water-charged sands and clays using an 11.69-meter diameter EPB TBM—the largest ever

operated by the group. Additionally, the **Fortaleza Metro East Line (Phase 1)** demonstrated our capacity for twin-bore execution, deploying two 6.92-meter EPB TBMs simultaneously across 6.5 kilometers of coastal soil conditions similar to Fort Lauderdale. NATM expertise is exemplified by the **Malo Tunnel** for the Pedemontana-Veneta Highway in Italy; this 6.1-kilometer tunnel required adaptable excavation sequences to manage a heterogeneous face of sandstones, marls, and basalts, representing the longest road tunnel executed by the Sacyr Group.

Together, these project achievements demonstrate the Southland Sacyr Joint Venture capability to apply TBM, NATM, and Cut and Cover methodologies tailored to Floridian limestone, shallow cover, and elevated groundwater conditions, ensuring safe and constructible delivery of the New River Crossing Tunnel.

4. REPRESENTATIVE PROJECT PORTFOLIO:

4.1 Sacyr (CAVOSA) – Representative Tunneling Experience

- **Guadalajara Light Rail Line 3 Tunnel**
  - **Guadalajara, Mexico | Client: SCT | Completion: 2018 Civil, 2020 Systems**
  - Large diameter EPB TBM tunnel in volcanic tufa and mixed urban soils with multiple stations and launch shafts, requiring strict deformation control.
  - Relevance: Soft ground EPB tunneling beneath active urban corridors similar to New River conditions.
- **Sao Paulo Metro Line 2 Extension**
  - **Sao Paulo, Brazil | Client: METRO Sao Paulo | Delivery 2019 to 2024**
  - Major metro expansion using one of Sacyr's largest EPB TBMs through saturated sands and clays, including tunnel approaches, stations, and cross passages under continuous metropolitan operations.
  - Relevance: High groundwater EPB tunneling comparable to the water charged geology beneath the New River.
- **Malo Tunnel, Pedemontana Veneta, P3 Toll Road**
  - **Vicenza, Italy | Client: Presidenza del Consiglio dei Ministri | Completion: 2022**
  - Mixed face tunnel excavation through alternating volcanic and sedimentary formations requiring flexible excavation methods and continuous deformation monitoring.
  - Relevance: Comparable to expected transitions between limestone and coastal sediments along the New River alignment.

4.2 Southland Contracting Inc. – Representative Tunneling Experience

- **Mill Creek Drainage Relief Tunnel (MCT3)**
  - **Dallas, Texas, USA | Client: City of Dallas | Completion: 2024**
  - Large diameter tunnel excavated beneath a dense urban corridor with complex shaft construction, liner installation, and continuous utility and community impact coordination.

- Relevance: Shows ability to manage deep, large diameter tunneling under constrained urban conditions similar to downtown Fort Lauderdale and the New River approach zones.

- **Dugway Storage Tunnel (DST)**
  - **Cleveland, Ohio, USA | Client: NEORSD | Completion: 2020**
  - 24 foot diameter TBM tunnel constructed through a soft ground to shale transition on a curved alignment requiring precision TBM steering and settlement control.
  - Relevance: Demonstrates control of soft ground and rock interfaces, comparable to transitions between coastal sediments and limestone along the New River alignment.
- **Lower Olentangy Tunnel (LOT)**
  - **Columbus, Ohio, USA | Client: City of Columbus | Completion: 2023**
  - Deep shafts and tunnel segments constructed beneath a river corridor using microtunneling and pressurized excavation to maintain hydraulic stability and protect adjacent assets.
  - Relevance: Directly applicable to river crossing conditions, high groundwater pressures, and shaft construction near water bodies similar to the New River.

The Southland-Sacyr Joint Venture appreciates the opportunity to participate in this RFI and stands ready to assist the City as it refines its approach for the New River Crossing. We look forward to continued engagement and are prepared to provide further technical input at the City's request.

Sincerely,

Jim Moldovan
Vice President of Business Development
Johnson Bros. Corporation, a Southland Company

Eduardo de Lara
Managing Director - North America
Sacyr Infrastructure USA LLC

December 1st, 2025

City of Fort Lauderdale
Procurement Services Division
101 NE 3rd Avenue
Fort Lauderdale, FL 33301

Attn: City of Fort Lauderdale
RE: **Letter of Interest - Request for Information - New River Crossing Tunnel**
Dear Members of the Procurement Services Division,

Southland Contracting, Inc., in Joint Venture with Sacyr Infrastructure USA LLC ("Sacyr" including affiliates and subsidiaries), formally submits this Letter of Interest in response to the Request for Information regarding the New River Crossing Tunnel. We welcome the opportunity to partner with the City of Fort Lauderdale to identify effective delivery strategies for this crucial rail and marine crossing, recognizing its significant value to regional transportation and to continued safe navigation along the New River.

1. COMPANY INFORMATION:

Southland Contracting, Inc. brings extensive tunneling experience, in-house tunnel boring machine (TBM) manufacturing capabilities, skilled labor, and a strong national presence to this Project. Partnered with Sacyr, which brings global expertise in large-scale tunneling and rail projects in complex environments, our Joint Venture combines leading domestic and international tunneling capabilities.

2. RELEVANT EXPERIENCE:

Southland Contracting, Inc. has delivered major tunneling projects nationwide, including soft-ground and mixed-face conditions, pressurized TBM operations, and shafts constructed in urban and water-bearing environments. Our work includes large-diameter tunnel excavation, groundwater control, settlement monitoring, and deep tunnel conveyance systems requiring precise coordination of subsurface construction activities.

Sacyr's core strategy revolves around its P3 business; leveraging its extensive experience in developing, financing, constructing, and operating large infrastructure projects. In North America, Sacyr currently maintains office in Miami (US Headquarters), Dallas, Moscow (Idaho), Lake Charles (Louisiana) and Toronto.

Sacyr adds extensive international tunneling experience, including metro and rail tunnels constructed in mixed ground, water-bearing soils, and dense urban settings. The firm has successfully used variable-density and earth-pressure-balance tunnel boring machines on projects requiring precise settlement control to protect adjacent residential, commercial, and historic structures. Recent projects include work in Europe and Latin America, as well as the financial close on the I-10 Calcasieu River Bridge in Louisiana, demonstrating the team's ability to support both technical and complex delivery structures. Together, our JV has experience managing tunnel-related ground risks, controlling settlement,

coordinating utilities, sequencing construction in constrained corridors, and completing work with minimal surface disruption. Southland's work on the Mill Creek Drainage Relief Tunnel in Dallas, including a major in tunnel diameter reduction to avoid additional surface excavation, reflects the type of innovative tunneling and constructability solutions we can apply to the New River corridor.

3. STRATEGIC AND TECHNICAL VALUE:

The New River Crossing Tunnel presents significant geotechnical, environmental, and urban challenges. We recognize the presence of porous limestone, the influence of the Biscayne Aquifer, the need to maintain marine navigation, and the sensitivity of the surrounding commercial and residential development. Our Joint Venture is well-positioned to address these challenges through advanced tunneling technology, risk-based design, and constructability solutions that minimize surface impacts.

We support a collaborative procurement approach that allows the City of Fort Lauderdale and the selected partner to jointly refine investigations, develop the geotechnical baseline, optimize alignment and excavation methods, and evaluate delivery models. A predevelopment agreement or progressive structure would allow costs, schedules, and risks to mature in a transparent and informed manner, reducing exposure to unforeseen conditions and fostering a cooperative decision-making process.

The Southland-Sacyr Joint Venture appreciates the opportunity to participate in this RFI and confirms our interest in supporting the City of Fort Lauderdale as the procurement process moves forward. We look forward to continued engagement and the opportunity to contribute technical insight and delivery capability to this important program.

Sincerely,

Jim Moldovan
Vice President of Business Development
Johnson Bros. Corporation, a Southland Company

Eduardo de Lara
Managing Director - North America
Sacyr Infrastructure USA LLC

Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☒ Public-Private Partnership (PPP/P3)

   ☒ Preliminary Development Agreement (PDA)

   ☒ Design-Build (DB)

   ☒ Design-Bid-Build (DBB)

   ☒ Design-Build-Finance-Maintain (DBFM)

   ☐ Other: _____

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

   scope: tunnel, access, etc...

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	☐	☐
EIS Development	☐	☐
Obtaining the Record of Decision (ROD)	☐	☐
Utility Investigations	☐	☐
Utility Coordination	☐	☐
Geotechnical Investigations	☐	☐
Property Acquisitions	☐	☐
	☐	☐
	☐	☐
	☐	☐
	☐	☐

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?
    - 30% Design
    - 60% Design
    - 90% Design
    - 100% Design
    - Other (specify): _____

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

7. Should maintenance be bundled with design and construction, or bid separately? Why?

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ☐ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

    ☐ Borehole logs every _____ feet (please specify spacing)

    ☐ Geological baseline report (GBR)

    ☐ Laboratory soil/rock test data

    ☐ Groundwater monitoring data

    ☐ Other: _____

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

Attachment 3 – Response Forms

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

14. Which financing tools should be considered?

15. Please advise of innovative ways for a repayment model for this Project.

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

19. How long should full construction, including TBM work, be expected to take?

20. What length of maintenance term is acceptable to the industry?

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

Name:		Title:	
Company:		Phone:	
Address:		Email:	
Signature:		Date:	

Response For Supplier: Star America Fund II GP, LLC

Event # : 538-1

Name: New River Crossing Tunnel (Request for Information)

Description: The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the planning, design, engineering, construction and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes.

Date created: December 1, 2025 11:21:04 AM EST	Date submitted: December 1, 2025 11:27:21 AM EST
Preview date:	Q & A open date: October 27, 2025 10:30:00 AM EDT
Open date: October 27, 2025 10:00:00 AM EDT	Q & A close date: November 21, 2025 5:00:00 PM EST
Close Date: 12/01/2025 02:00:00 PM EST	Dispute close date:

Responded To: 1 Out of 1 Lines

Response Currency: USD

Response Attachments

Attachment
RFI - New River Crossing Tunnel vFF.pdf

Line Responses

Line 1: Request for Information - New River Crossing Tunnel

Description: **This is a Request for Information (RFI); it is not a request for pricing, commitment to purchase, or an**

Event # 538-1: New River Crossing Tunnel (Request for Information)

obligation to provide products or services described in this notice. Please see the attached forms for response details.

Request for Information - New River Crossing Tunnel

Commodity Code: 913-55 Construction, Tunnel

Quantity: 1.0000 **Unit of Measure:** EA

Bid Quantity: 1.0000

No Charge: Yes **No Bid:** No

Request for Information - New River Crossing Tunnel

Comments: RFI submitted as pdf under "Response Attachments"

City of Fort Lauderdale

Request for Information for the New River Crossing Tunnel Project

Responses to the Request for Information

Tikehau Star Infra
11-26-2025

TIKEHAU STAR INFRA

Corporate Office

9 West 57th Street, 45th floor
New York, NY 10019
Phone: +1 212 922 3734

www.tikehaustarinfra.com

November 26, 2025

SECTION 1

Designated Contact:

Name: Damien Kolosky
Title: Global Head of Development
Mailing Address: 9 West 57th Street, 45th floor, New York, NY 10019
Email: DKOLOSKY@tikehaucapital.com
Phone: +1 646 876 2083

Company Profile:

Tikehau Capital North America LLC ("TCNA") d/b/a Tikehau Star Infra, previously known as Star America Infrastructure Partners, is a U.S. headquartered developer and manager of infrastructure assets in North America and a subsidiary of Tikehau Capital SCA ("Tikehau Capital"), a global alternative asset management group.

Tikehau Capital, Tikehau Star Infra's parent company, was founded in Paris in 2004. As of September 30, 2025, Tikehau Capital has €51.1 billion of assets under management and 757 employees across 17 offices in Europe, the Middle East, Asia, and North America. Tikehau Capital has developed a wide range of expertise and an established track record across four asset classes: private debt, real assets, private equity and capital markets strategies, as well as multi-asset and special opportunities strategies.

Tikehau Star Infra ("TSI"), with its primary offices in New York along with other TCNA teams, is a business unit within Tikehau Capital's real assets division. Established in 2011 as Star America Infrastructure Partners and acquired by Tikehau Capital in 2020, Tikehau Star Infra focuses on delivering

infrastructure projects across the transportation, social, telecommunications, and environmental sectors. TSI team members have had experience financing, developing, underwriting and managing over 18 infrastructure projects valued at over $10bn across the US. This demonstrates Tikehau Star Infra's ability to successfully deliver complex infrastructure projects under the Design-Build-Finance- Operate-Maintain ("DBFOM") and similar contractual structures.

Selective Experience:

Maryland Purple Line Light Rail Transit P3 Project

The Purple Line LRT Project in Maryland is a 16.2-mile, 21-station east-west light rail transit line running from Bethesda Metro Station in Montgomery County to New Carrollton Metro Station in Prince George's County, just outside Washington, DC. It will connect New Carrollton in Prince George's County to Bethesda in Montgomery County, including 21 new stations, three elevated structures, over 1,000 feet of new tunnel, two maintenance facilities, and procurement of 26 light rail transit vehicles. It will provide a direct connection to Metrorail Red, Green, and Orange Lines, as well as connect to MARC, Amtrak, and local bus services. It will ease congestion and provide reliable and rapid east-west travel once it begins operations, benefiting Prince George's County residents and the other project users.

TSI and its development partners, through a joint development entity, Purple Line Transit Partners ("PLTP"), are responsible for the design, construction, financing, equipping, supplying light rail vehicles for, operating, and maintaining the project. As a co-developer, TSI helped lead proposal preparation, financial structuring, and negotiation of the public-private partnership agreement with the Maryland Transit Administration ("MTA"), and subsequent drop-down agreements with subcontractors during the project's procurement phase. TSI continues to help manage the project and PLTP's relationship with the MTA through the project's design and construction phase and will continue to provide these services into the project's 30-year operations and maintenance period.

Southern Ohio Veterans Memorial Highway (Portsmouth Bypass) P3

The Portsmouth Bypass, officially named the Southern Ohio Veterans Memorial Highway, is a

16-mile, four-lane limited-access roadway developed as a bypass to Portsmouth, Ohio. Its purpose is to improve regional mobility by connecting US-23 and US-52, reducing travel time by up to 16 minutes compared to the previous route. The project scope was DBFOM and was realized through a public-private partnership (PPP) with the Ohio Department of Transportation (ODOT) and includes a 39-year availability-based concession with ODOT as the project owner.

TSI participated as an equity investor and concessionaire member in the consortium responsible for delivering the project. TSI participated in project governance and engaged in strategic oversight, particularly around operations and risk management.

State Highway 288 (SH-288) Toll Lanes P3 Project

The SH288 Toll Lanes project in Houston, Texas entails the addition of four new toll lanes (two in each direction) over a 10.3-mile stretch of SH-288, connecting US-59 to Interstate Highway 610 and the Sam Houston Tollway. The project improves mobility in one of America's fastest-growing cities and generates revenue through toll collections on the corridor. The Texas Department of Transportation (TxDOT) is the project owner, and the project is structured as a 52-year design, build, finance, operate, and maintain (DBFOM) concession.

TSI provided equity financing for project development and operations, and participated in asset oversight, risk management, and strategic governance as a member of the project company board. The asset management team has supported delivery, cost-control, contract compliance, and operational performance oversight.

SECTION 2

Dear City of Fort Lauderdale,

Tikehau Star Infra ("TSI") is pleased to submit this letter to indicate our preliminary interest in participating in any future solicitation to design, build, finance, operate, and maintain the New River Crossing Tunnel under a Public-Private Partnership ("P3") structure.

TSI is a U.S. headquartered developer and manager of infrastructure assets in North America. TSI is a business line of Tikehau Capital North America LLC, which is a subsidiary of Tikehau Capital SCA, a global alternative asset management group. Our team has extensive experience delivering transportation assets under DBFOM/DBFM concessions and deep familiarity with performance-based P3 operations and maintenance. The team's prior experience includes financing, underwriting, developing and managing over 18 infrastructure projects valued at more than $10 billion, demonstrating robust P3 execution capabilities and depth in long-term funding markets.

We recognize the New River Crossing Tunnel's strategic importance for commuter rail and regional mobility, and its unique complexity. We also note the funding pathways contemplated by the City of Fort Lauderdale, with the tunnel's high capital and lifecycle costs requiring careful affordability planning.

Strategic and technical value that we can bring to this procurement:

- **P3 structuring aligned to public objectives**
    - Transparent performance standards, deduction regimes, and handback criteria to ensure lifecycle quality. Our team has deep experience in availability-based payment mechanisms and competitive long-term financing for complex transportation concessions.
- **Financing depth and affordability optimization**
    - Mobilize private debt and equity sized to the availability payment profile and work with the City/County to blend federal discretionary grants and state participation, structured to maximize value-for-money and minimize budget volatility.
- **Delivery approach focused on schedule and interface risk**
    - Support early utility surveys/diversions, disciplined staging around Brightline/FEC outage

windows, and river/marine constraints. Evaluate dual refurbished TBMs to accelerate excavation and reduce conflicts.

- **Rail systems and station integration**
    - Coordinate station box, track, signaling/communications, and life-safety systems to protect ridership and operations during construction, addressing operator concerns flagged in prior assessments.
- **NEPA and pre-development support**
    - Assist in pre-NEPA activities and early mitigation strategies to de-risk approvals and schedule, aligned with FTA's lead and the anticipated class of action for a complex urban tunnel.
- **Lifecycle asset management**
    - Implement rigorous O&M plans, performance monitoring, and handback requirements to ensure asset reliability and residual quality over the concession term.

We appreciate the opportunity to engage with the City of Fort Lauderdale and Broward County on a project central to the region's mobility and resilience, and we look forward to participating in the next phases of market sounding and procurement.

Sincerely,
Damien Kolosky

Name: Damien Kolosky
Company: Tikehau Star Infra
Address: 9 West 57th Street, 45th floor, New York, NY 10019
Signature:

Title: Executive Director – Business Development
Phone: +1 646 876 2083
Email: DKOLOSKY@tikehaucapital.com
Date: November 26, 2025

SECTION 3
SCOPE OF WORK

1. **What procurement method would you be interested in? (check all that apply)**

   ☒ Public-Private Partnership (PPP/P3)

   ☒ Preliminary Development Agreement (PDA)

   ☐ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ☒ Design-Build-Finance-Maintain (DBFM)

   ☐ Other: _____

2. **Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?**

The scope should encompass a full end-to-end delivery program that addresses technical works, systems integration, utility risk, stakeholder interfaces, permitting, funding, and lifecycle performance.

Scope elements that should be considered:

- Twin-bore alignment beneath the New River
- TBM launch/retrieval shafts, portals, cross-passages, ventilation, fire-life safety, rail trackwork
- Ground investigations, ground treatment, and dewatering strategies
- Underground passenger station
- Comprehensive mapping, protection, and relocation program addressing the corridor's high number of underground utilities
- Marine navigation compatibility
- Environmental and permitting
- TBM procurement plan, performance-based contracting, and risk allocation

Scope elements TSI would be interested in completing:

- Establish and lead a single-purpose project company (SPV), govern the integrated master schedule, and manage interfaces among stakeholders
- Arrange and structure financing
- Lead the procurement strategy and commercial negotiations for TBMs and segment fabrication
- Sponsor a corridor-wide utility mapping, permitting, and relocation program
- Community and business disruption mitigation through coordination with Brightline/FEC to honor freight constraints, marine stakeholders, and permitting bodies
- Structure and oversee a long-term O&M regime for the tunnel and station

3. **Of the scope elements listed below, which would you be interested in accepting and**

what would you prefer the Owner to be responsible for?

Scope Element	Owner	Company
Environmental Clearance	☒	☐
EIS Development	☒	☐
Obtaining the Record of Decision (ROD)	☒	☐
Utility Investigations	☐	☒
Utility Coordination	☐	☒
Geotechnical Investigations	☐	☒
Property Acquisitions	☒	☐

4. **What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?**

We believe it is crucial that the City of Fort Lauderdale and Broward County require transparency during the PDA phase in exchange for exclusivity. An example can be to ask bidders to present the list of assumptions used for pricing key project elements, including price breakdowns, scheduling considerations, and other key inputs. During development phases, the expectation would be to further refine each assumption under an open-book, collaborative process, in order to reach agreement between the owner and developer.

In terms of scope elements, terms and conditions, the project should have a well-developed legal framework that protects both the owner and developer and effectively resolves potential issues during the PDA phase. For instance, an expedited dispute resolution process and off-ramp mechanism would help effectively resolve potential issues.

To maximize market interest and participation, we recommend that the City of Fort Lauderdale and Broward County articulate the evaluation process and criteria to all bidders. This ensures that all bids are compliant, and the prospective bidders understand the weightings for each evaluation criterion.

DESIGN

5. **What design milestone should be provided before procurement for tunnel projects of this nature?**

☐ 30% Design
☐ 60% Design
☐ 90% Design
☐ 100% Design
☒ Other (specify): 10-15% at the start of the progressive procurement process

6. **If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?**

TSI believes that design consultants and construction contractors are the most appropriate

parties to address the above question. However, the following list summarizes the broad elements:

- Design Requirements: Codes, standards, AHJ requirements; FRA/FTA, USCG for river navigation/closures
- Performance Requirements: Specs for alignment, structures, systems, and durability
- Tunnel footprint and constraints
- Geotechnical: Investigation plan and schedule; preliminary assessments
- Third-party agreements: FEC/Brightline constraints, acceptable outage windows (e.g., limited freight outages), Coast Guard navigation/closure rules
- Construction Management: Access routes; river and rail traffic management
- Environmental controls and NEPA pre-work plan; permitting roadmap
- Criteria to move from Phase 1 (development) to Phase 2 (delivery)

7. **Should maintenance be bundled with design and construction, or bid separately? Why?**

TSI believes maintenance should be bundled with design and construction under a single DBFOM contract. Integrating O&M ensures the designer-builder internalizes lifecycle performance and chooses maintainable solutions, materials, and systems that minimize long-term spend and downtime. Tunnels carry particularly high ongoing costs and longer delivery timeframes, underscoring the need for optimization of long-term reliability. A unified contract also centralizes responsibility for performance across critical systems and reduces interface risk between the designer, constructor, maintainer, and other stakeholders. Since stakeholders have expressed concern about the tunnel's feasibility-- Brightline raised concerns about financial feasibility and ridership impact, and FEC noted that the tunnel with conflict with a high number of underground utilities-- consolidating design, construction, and engineering would ensure a single point of accountability and streamline coordination with third parties. Additionally, lenders to complex assets like tunnel systems prefer clear, long-term performance obligations consolidated with design warranties. Availability payments tie revenue to uptime, driving operational excellence. This is particularly important given the higher impact of failures for tunnels than alternatives.

8. **What design considerations would you incorporate to reduce long-term maintenance costs and risks?**

Maintainability-by-design is critical to reducing the high ongoing operations and maintenance (O&M) and cyclic capital costs of a tunnelling project. Early incorporation of these measures is essential for long-term affordability and reliability of the asset. While design consultants and construction contractors could provide an in-depth response, the following list outlines TSI's preliminary items:

1. Robust Waterproofing and Corrosion Protection: Use of high-quality materials and multiple layers of waterproofing for tunnel linings and structural elements to reduce water ingress and corrosion, which are major long-term cost drivers for tunnels.
2. Durable Materials and Design: Use materials with proven durability profiles to minimize the need for frequent repairs and complex interventions.
3. Efficient Drainage and Pump Systems: Install redundant, high-capacity drainage and pumping systems with backup power supplies to manage water infiltration and flooding, ensuring system reliability and minimizing downtime.
4. Standardization and Modularity: Use standardized equipment and modular design for tunnel

systems to facilitate easier replacement and reduce spares inventory.

5. Operational Resilience: Plan for adequate redundancy in critical systems (such as power supplies for pumps, lighting, communications) to maintain safe operations and limit impacts from individual component failures.
6. Monitoring: Implement real-time structural health and environmental monitoring systems to enable predictive maintenance and early issue detection.
7. Sustainability: Use environmentally friendly materials and energy-efficient systems to fit changing environmental conditions and ensure compliance with regulatory criteria in the long term.

GEOTECHNICAL

8. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ☐ Yes ☒ No

9. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

   ☒ Borehole logs every _____ feet (please specify spacing)

   ☒ Geological baseline report (GBR)

   ☒ Laboratory soil/rock test data

   ☒ Groundwater monitoring data

   ☐ Other: _____

INNOVATION

10. **What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?**

As a financing partner in this project, TSI focuses on developing and delivering optimal financial solutions to support successful project delivery. We defer to our industrial partners for details regarding specific innovations or technological advancements in tunnel construction methods, safety, cost management, or efficiency improvements.

FUNDING & FINANCING

11. **If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?**

The upfront funding should cover the cost of the preliminary studies: borehole logs, GBR, laboratory soil data, groundwater monitoring data. The PDA phase should be compensated on a progress payment basis.

12. **Based on your experience, please share innovative financing/funding methods that**

you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

From our extensive experience in P3 project procurement, TSI recommends the project employ the availability payment model. This approach incentivizes high-quality long-term maintenance and is particularly well-suited for complex and capital-intensive assets. Previous TSI P3 projects, such as Maryland Purple Line Light Rail P3 Project, have used an availability payment model to maximize value-for-money for public sponsors.

We believe the authority should consider supplementing the core availability payment structure with milestone payments tied to key construction deliverables. Upfront, milestone-linked disbursements can help manage private partner cashflow, lower overall financing costs, and incentivize timely progress during construction.

We also recommend that the authority seek public funding as part of the overall capital stack. Blending public grants with private debt/equity raised against future availability payments optimizes project affordability and minimizes the need for upfront capital outlay.

13. **Which financing tools should be considered?**

As a financial partner and developer, TSI will lead a rigorous and competitive process to identify the most cost-effective and reliable funding sources. In our experience, the most efficient financial structure will include PABs, a TIFIA loan, and equity. Although we do expect the allocation cap to be lifted in the near future, there are other financing sources that can be used to fully fund the project in a competitive way. We have experience in issuing other types of debt - such as taxable bonds, private placement, and bank financing - that will complement or replace PABs, ensuring that the financial structure remains resilient and adaptable to evolving market conditions.

14. **Please advise of innovative ways for a repayment model for this Project.**

We believe that the optimal payment system would be composed of an availability payment mechanism with initial links to milestone payments. Please see Question 12.

PROJECT TIMELINE

15. **What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?**

We believe that 2 months is a reasonable timeframe.

16. **For Progressive Procurement, how much time should be allocated for design development before construction?**

We believe that 12 to 18 months should be allocated.

17. **What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?**

We expect the total duration to be 18 to 24 months including design, logistics, and commissioning. TBM assembly, launch, and commissioning is expected to take 4–6 months per TBM, recognizing that site logistics and restricted access can extend the process in urban environments. The mainline tunneling stage is expected to take around 24 months total, depending on advance rates, geology, and utility/groundwater interfaces.

18. **How long should full construction, including TBM work, be expected to take?**

We expect construction to take 5 to 6 years due to the length of the tunnel, addition of rail system and station, and the complexity of the approaches and utility constraints. For reference, the Port of Miami tunnel is wider (41ft vs 30ft) and deeper (120ft vs 66ft); however, it is shorter (0.8mi vs ~3.5mi) and has simpler road design without an additional train station. These design features allowed the POMT to be constructed in a shorter time period (4.5 years).

19. **What length of maintenance term is acceptable to the industry?**

One of the advantages of a P3/DBFOM approach is the transfer of risk related to the condition of the asset in the long-term. The O&M period therefore typically spans over a substantial portion of the lifecycle of the critical components of the asset, which for a new tunnel can easily exceed 150 years.

We believe the optimal O&M period is 30-50+ years. This timeframe would encourage the concessionaire to meet the agreed upon hand-back criteria and ensure a desired residual life is still left in the components of the project. The O&M period for the Port of Miami Tunnel is 30 years, within the accepted range in the industry.

From the financing perspective, our recommended length of the O&M term is long enough to raise very competitive funding for both the design and construction and operations and maintenance phases resulting in strong value for money throughout the concession period.

20. **What are the key schedule risks for tunnel projects in urban or constrained environments?**

Tunneling projects in urban areas are highly complex and capital intensive, with several major risks that can delay completion and increase costs. Securing permits and regulatory approvals often takes longer than expected due to the involvement of multiple agencies and the need for various clearances and access agreements. Unforeseen ground conditions, such as unexpected soil types, groundwater, or contamination, frequently arise and can force redesigns and cause schedule overruns. The dense network of utilities underground adds further risk, as unmapped or inaccurately mapped services may require emergency relocation and coordination with providers during excavation, disrupting work sequences. Additionally, reliance on specialized equipment like tunnel boring machines brings its own challenges—breakdowns or technical failures can be particularly difficult and slow to resolve in urban settings. Together, these risks demand strong planning, adaptability, and coordination with all stakeholders to keep tunneling projects on track.

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team. None.

Response For Supplier: VINCI Construction Grands Projets USA

Event # : 538-1

Name: New River Crossing Tunnel (Request for Information)

Description: The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the planning, design, engineering, construction and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes.

Date created: November 7, 2025 11:17:19 AM EST

Date submitted: December 1, 2025 8:46:25 AM EST

Preview date:

Q & A open date: October 27, 2025 10:30:00 AM EDT

Open date: October 27, 2025 10:00:00 AM EDT

Q & A close date: November 21, 2025 5:00:00 PM EST

Close Date: 12/01/2025 02:00:00 PM EST

Dispute close date:

Responded To: 1 Out of 1 Lines

Response Currency: USD

Response Attachments

Attachment
RFI_VCGP_USA_Attachments 1 through 3.pdf
Section1_VINCI _Construction_Grands_Projets.pdf
Section2_VINCI _Construction_Grands_Projets.pdf

Line Responses

Line 1: Request for Information - New River Crossing Tunnel

Event # 538-1: New River Crossing Tunnel (Request for Information)

Description: **This is a Request for Information (RFI); it is not a request for pricing, commitment to purchase, or an obligation to provide products or services described in this notice. Please see the attached forms for response details.**

Request for Information - New River Crossing Tunnel

Commodity Code: 913-55 Construction, Tunnel

Quantity: 1.0000 **Unit of Measure:** EA

Bid Quantity: 1.0000

No Charge: Yes **No Bid:** No

Request for Information - New River Crossing Tunnel

Comments: Request for Information

Attachment 1 – Project Information

1.0 Purpose

The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the design, engineering, construction, and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes. All submissions become City property and will not be returned.

2.0 Background

The New River Crossing is a two-track bascule bridge constructed in 1978. The bridge, at only 4 feet above the water level, must be opened numerous times a day to allow marine traffic to navigate the New River but remain down for both freight rail and passenger trains. Currently, approximately 60 trains traverse the New River Crossing rail bridge daily. That number is estimated to more than double with the addition of Broward Commuter Rail (BCR) Service. Recognizing the current challenges with the existing bridge, in 2019 the Florida Legislature directed the Florida Department of Transportation (FDOT) to evaluate long-term crossing solutions over the New River.

The City believes a tunnel would accommodate future commuter rail service while minimizing impacts on marine traffic, adjacent real estate, and the downtown environment. The tunnel alternative supports the City's vision of developing a world-class residential, commercial, and oceanfront destination community.

The City is assessing the current market to gauge interest of potential proposers and their capabilities to deliver this project. As part of that effort, the City hosted the New River Crossing Industry Day on July 28, 2025. The event included presentations from the City of Fort Lauderdale, Broward County, FDOT, and the United States Department of Transportation (USDOT) Build America Bureau.

Afternoon breakout sessions were held with the City and private-sector firms to provide an opportunity to further discuss the project, gauge interest, gain industry feedback on potential next steps, and associated timelines. For more information, project updates, and Industry Day materials, refer to the New River Crossing Project website.

Attachment 2 – Response Guidance

Interested parties are requested to respond to this RFI by uploading responses to the Infor portal. Responses shall be limited to 12 pages total and divided into three sections.

Section 1 *(4 pages max; provided by respondent)*

Section 1 of the response shall provide a company overview, administrative information, and the following at a minimum:

- Name, mailing address, phone number, and e-mail of designated point of contact
- Company profile and relevant experience with large-scale tunnel or similar infrastructure projects.
- Experience with tunneling technologies and methodologies (e.g., TBM, NATM, cut-and-cover)
- Examples of tunnel design, construction, operations, or maintenance projects completed within the past 10 years.

Section 2 *(2 pages max; provided by respondent)*

Respondents are encouraged, not required, to submit a brief Letter of Interest (LOI) along with their RFI response. The LOI should indicate the company's preliminary interest in participating in the New River Crossing project, highlight relevant experience, and outline any potential strategic or technical value the organization may bring. The LOI should be addressed to the City of Fort Lauderdale, is limited to two pages, and should be signed by the company's point of contact.

Section 3 *(6 pages max; included in RFI)*

Respondents are requested to provide detailed answers to the questionnaire included in this RFI as *Attachment 3 – Response Form*. These questions are designed to gather insights on the recommended technical approach, preferred delivery methods, and a realistic project timeline. Please ensure that responses are complete, accurate, and submitted in the fillable PDF format provided in the attached response form. While not all questions are mandatory, comprehensive responses will support the City's planning process for potential future procurement activities.

Space is provided to input additional observations and insight that would be beneficial to share with the City's project team.

Proprietary information, if any, should be minimized and must be clearly marked. To aid the City, please segregate proprietary information. Please be advised that all submissions become City property and will not be returned.

Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☒ Public-Private Partnership (PPP/P3)

   ☒ Preliminary Development Agreement (PDA)

   ☐ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ☒ Design-Build-Finance-Maintain (DBFM)

   ☒ Other: DBF, Progressive Design Build (PDB), Early Contractor Involvement (ECI), Alliance

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

   Our firm is interested in delivering the full scope of the New River Crossing Tunnel Project under an integrated design-build-finance-maintain model, PPP model or any kind of Early Contractor Involvement. We propose to handle all phases: conceptual and detailed design, geotechnical and structural engineering; construction of TBM tunnels, SEM station cavern, and approach structures; installation of trackwork, systems and signaling. We also offer financing solutions through innovative PPP structures to optimize cost and risk transfer. Our approach ensures minimal disruption to FECR and Brightline operations, by combining technical expertise, advanced tunneling methods, and financial capability, we aim to deliver a world-class, sustainable solution for Fort Lauderdale. We have experience in raising large financing for tunneling works like on the Ontario Line - Southern Civil, Stations and Tunnel project in Toronto, Canada.

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	☐	☑
EIS Development	☐	☑
Obtaining the Record of Decision (ROD)	☐	☑
Utility Investigations	☑	☑
Utility Coordination	☑	☑
Geotechnical Investigations	☑	☑
Property Acquisitions	☐	☑
Finance, Design, Build and Maintain	☑	☐
Price escalation	☑	☑
Governmental Approvals	☑	☑
Hazmats	☑	☑

Attachment 3 – Response Forms

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

To promote transparency and attract interest, the draft contract should clearly define the full lifecycle scope —design, construction, financing, operations, and maintenance— with measurable performance standards and should include the full-fledged/complete appendices at the start of the tender. It should include transparent risk allocation sharing mechanisms. Payment terms should be availability-based or performance-driven, with clear KPIs and adjustment mechanisms. Provisions for change management, dispute resolution, and step-in rights must be established to protect all parties. Compliance with federal, state, and local regulations, resiliency measures, and stakeholder coordination obligations should be explicit. Finally, the contract should incentive innovation, cost optimization, and schedule acceleration while ensuring long-term performance guarantees for the 125-year design life.

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- ○ 30% Design
- ○ 60% Design
- ○ 90% Design
- ○ 100% Design
- ◉ Other (specify): Indicative design, with collaborative approach development for future phases

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

For a progressive procurement model, the "Indicative Design" should focus on defining expected performance outcomes rather than detailed design progress. Key elements should include functional requirements for tunnel alignment, station capacity, safety standards, flood resiliency, and integration with existing rail operations. Performance-based criteria—such as maximum allowable grades, clearance envelopes, ventilation capacity, and lifecycle durability —should guide the process, leaving flexibility for innovation in construction methods and materials. This approach ensures collaboration during design development, promotes value engineering, and allows the contractor to optimize solutions while meeting the City's objectives without locking into prescriptive design details too early.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

We strongly support bundling maintenance with design and construction under a single contract. Integrating maintenance responsibilities ensures clear accountability for long-term performance and incentivizes design and construction teams to prioritize durability and lifecycle efficiency. This approach aligns with PPP principles by transferring risk and guaranteeing performance over the asset's life. Additionally, bundling facilitates seamless knowledge transfer between design, construction, and maintenance teams, reducing interface issues and improving asset management. It also enables better planning for operations from the outset, resulting in optimized cost, enhanced reliability, and a more resilient infrastructure for the City.

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

The design should prioritize durability, resiliency, and ease of access for inspections. For tunnels, key considerations include using high-performance waterproofing systems, corrosion-resistant materials, and robust drainage and sump pump systems to prevent water ingress. Incorporating flood gates and redundant power for critical systems enhances resiliency against hurricanes and extreme weather, which is essential in South Floridas. Designing for a 125-year life cycle with modular components and clear maintenance corridors ensures predictable costs and fewer disruptions, making tunnels a sustainable and cost-efficient solution over time.

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ▣ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

▣ Borehole logs every 150 feet (please specify spacing)

▣ Geological baseline report (GBR)

▣ Laboratory soil/rock test data

▣ Groundwater monitoring data

▣ Other: For tunnels, an horizontal Borehole is preferred. First GBR to be provided by the Owner, then the Contractor will de

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

VINCI Construction has created Tunnel Factory, a collaborative R&D platform dedicated to improving safety, cost efficiency, and productivity in tunnel construction. This initiative develops and deploys innovative methods and technologies tested on our major projects worldwide. Examples applicable to the New River Crossing include:
- Automated Segment Installation & HUD Assistance: Robotic systems for autonomous segment handling and head-up display tools improve precision, reduce manual intervention, and enhance safety.
- Automated Utility Extension: Systems for automatic pipe and service installation minimize downtime and reduce labor risks.
- Digital Diagnostics & Predictive Maintenance: Portable diagnostic kits and real-time monitoring tools shorten troubleshooting time and prevent costly stoppages.
- Hyperbaric Intervention Support (HyperB'Assist): Digital tools for safe, efficient management of pressurized interventions.
Geoscope – Beyond Monitoring: Advanced data acquisition and predictive analytics for ground behavior and structural health, reducing geotechnical risks.
- Low-Carbon Concrete Segments: Ultra-low carbon concrete solutions for sustainability and long-term durability.
- WISE Safety System: Integrated wireless communication and emergency management platform for confined environments.
These innovations collectively enhance safety, optimize construction cycles, and reduce lifecycle costs—critical for a complex urban tunnel like Fort Lauderdale's.
- CAP: Navigation and positioning system assistant helping continuous monitoring for production safety and quality control.

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

Ideally, the full project funding should be committed upfront, but at a minimum,

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

VINCI has extensive experience structuring innovative financing solutions for large-scale infrastructure projects under PPP and DBFM models worldwide. We have successfully combined public funding with private capital through mechanisms such as availability-based payments, milestone-linked disbursements, and lifecycle cost optimization. Our approach often leverages federal and state grants, low-interest loans (e.g., TIFIA, RRIF), and private debt/equity financing, complemented by transit-oriented development. We also

14. Which financing tools should be considered?

Recommended financing tools include federal and state grants (e.g., USDOT programs such as INFRA or MEGA), low-interest federal loans like TIFIA, availability-based PPP structures, and private debt/equity financing. Additionally, milestone-based payments paid during construction, and innovative blended finance models can be considered to optimize cost and risk allocation while ensuring long-term sustainability.

15. Please advise of innovative ways for a repayment model for this Project.

Innovative repayment models can combine availability-based payments with performance incentives to ensure predictable cash flows and high service quality.
For example, the City could structure repayments through milestone-based construction payments during delivery, followed by annual availability payments indexed to inflation and tied to KPIs for safety, reliability, and maintenance.
The City could also explore if the regulatory asset base (RAB) model used for

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

A realistic timeframe to negotiate and finalize the Pre-Development Agreement

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

Under a Progressive Design-Build approach, the design development and

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

It tooks approximately 18 months to design and build, 2 months to ship, 4

19. How long should full construction, including TBM work, be expected to take?

The overall construction period, including design, permits, tunneling, portal

20. What length of maintenance term is acceptable to the industry?

For the New River Crossing Project, a 50-year maintenance term is acceptable

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

Key schedule risks for tunnel projects in dense urban areas include unexpected ground or groundwater conditions that slow TBM progress, as well as delays caused by utility conflicts when existing lines need relocation or are discovered late especialy in the portal areas. Permitting and coordination with multiple agencies—such as rail operators, marine authorities, and local governments—can also extend timelines. Limited space for staging and restricted work windows in busy downtown areas make logistics challenging. Environmental and community concerns, like managing hazmats, noise, vibration, and settlement, can lead to additional constraints. Other risks include stakeholder negotiations for property rights, flood protection requirements, and maintaining uninterrupted rail operations during construction.

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

We strongly believe the New River Crossing Tunnel represents an opportunity to implement a PPP or DBFM delivery model, ensuring integrated design, construction, financing, and long-term maintenance under a single contract. This approach provides clear accountability, optimized lifecycle costs, and effective risk transfer, which are critical for a complex, high-value urban tunnel. VINCI brings extensive international experience in delivering major infrastructure projects under PPP frameworks, including rail, metro, and highway tunnels across Europe, North America, and beyond.
In particular, VINCI Construction has proven experience in delivering major railroad public transit projects with financing, such as the Ottawa Light Rail Transit (LRT) and the Ontario Line South (OLS) projects.
Our technical expertise covers advanced tunneling methods such as TBM and SEM, innovative station construction techniques, and robust resiliency solutions for flood-prone environments. We complement this with strong risk management systems, predictive maintenance tools, and digital monitoring platforms to guarantee safety, reliability, and performance over the asset's 125-year design life.
Beyond technical excellence, VINCI offers innovative financing strategies, leveraging federal programs, low-interest loans, and value capture mechanisms to reduce public financial burden while ensuring transparency and efficiency. We are committed to working collaboratively with the City and stakeholders to develop a solution that minimizes disruption, maximizes sustainability, and delivers long-term value to the community.
We would be delighted to meet in person to discuss these topics in detail and explore how our global best practices can be adapted to Fort Lauderdale's vision. Furthermore, we remain fully open and ready to support the City in future phases of planning, procurement, and delivery to ensure the success of this landmark project.

Name:	Antonio GARCIA	Title:	Business Development Director
Company:	VINCI CONSTRUCTION GRANDS PROJETS	Phone:	+1 757 861 3311
Address:	2331 Mill Road, Suite 501	Email:	antonio.garcia@vinci-construction.com
Signature:		Date:	05/11/2025

Section 1 – Company Overview and Experience

Point of Contact
Antonio GARCIA GONZALEZ
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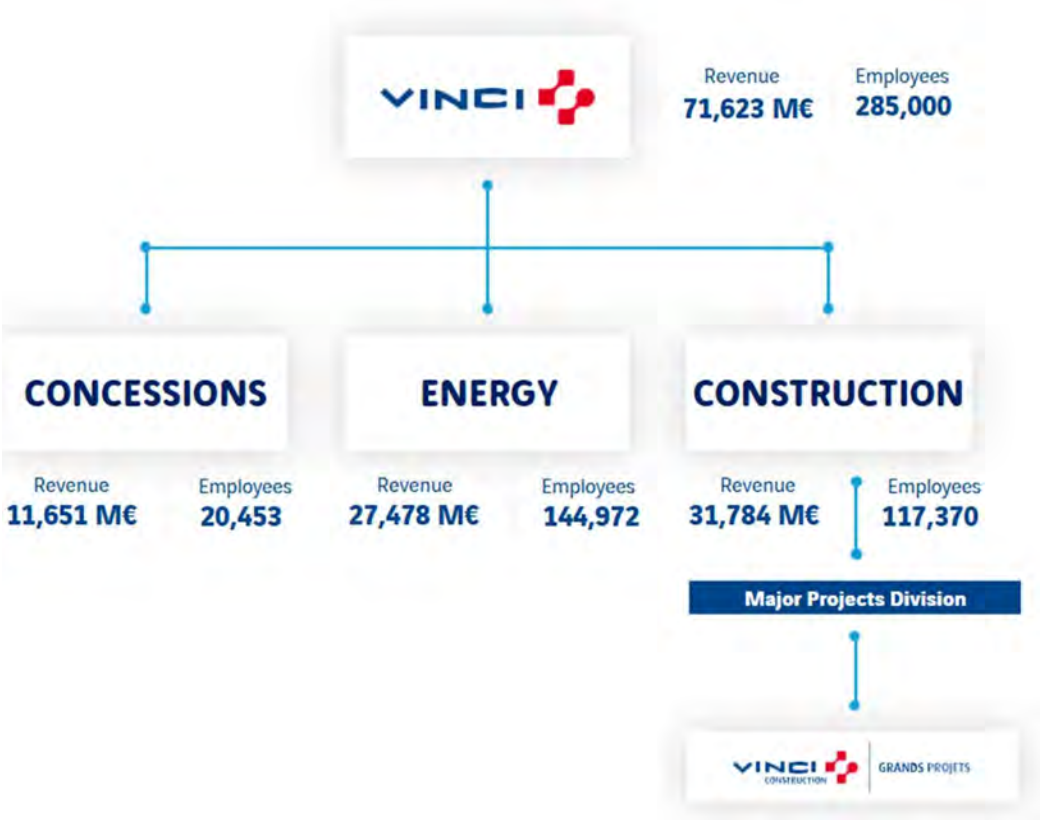
VINCI Construction Grands Projets ("VCGP") Company Profile

VCGP is a world-class engineering and construction company specializing in the *design and delivery of large-scale, complex infrastructure projects worldwide*. VCGP leverages global expertise and local knowledge to deliver innovative, sustainable solutions across sectors such as transportation, water, energy, and civil engineering and operates in more than 50 countries, managing projects that shape cities and connect communities.

Our high level of expertise, our know-how as a contractor, our extensive engineering and project management capabilities, and our experience in risk management, combined with an agile and reactive organization, enable us to develop global solutions for complex projects.

VCGP as part of VINCI Group

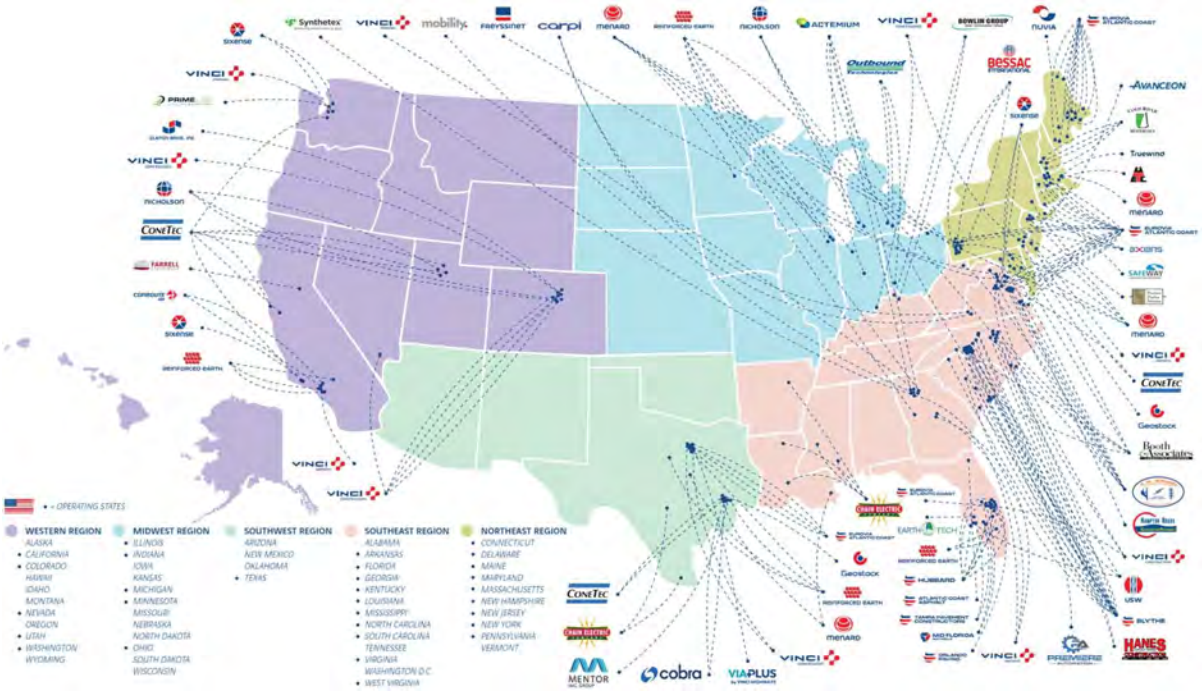


VCGP is a subsidiary of *VINCI Group, a leader global player in concessions, energy, and construction* employing 285,000 people in more than 120 countries. Its activities span the design, financing, construction, and operation of transport infrastructure (roads, airports, rail), building and civil engineering projects, and energy systems. Through its major business lines—VINCI Concessions, VINCI Energies, and VINCI Construction—the Group delivers sustainable solutions

that support mobility, urban development, and the energy transition, combining technical expertise with a strong commitment to innovation and environmental responsibility.

VINCI presence in the US

VINCI is a major player in the U.S. market, generating over $3.8 billion in revenue and employing more than 9,000 professionals nationwide. Our footprint is particularly strong in Miami, where we deliver landmark projects that shape the region's infrastructure and drive sustainable growth.



VCGP presence in the US

We are currently involved in several landmark projects across the U.S., including:

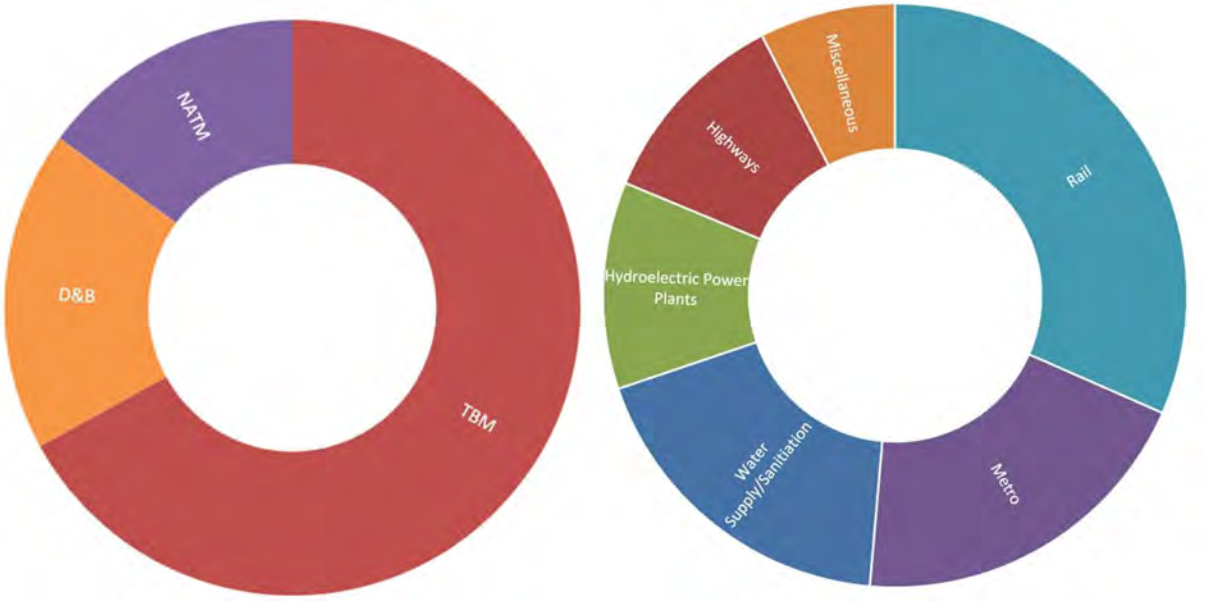
- **Red Line Extension (Chicago, IL):** As part of the Walsh-VINCI Transit Community Partners joint venture, VCGP is constructing the $2.9 billion Design-Build Red Line Extension for the Chicago Transit Authority, the largest civil construction contract ever awarded by the CTA.
- **Hampton Roads Bridge-Tunnel Expansion (Virginia):** VCGP, as part of a joint venture, was awarded the $3.9 billion design-build contract for the HRBT Expansion Project, the largest construction contract in the history of the Virginia Department of Transportation (VDOT). The project involves the construction of new twin tunnels under the Hampton Roads waterway using Tunnel Boring Machine (TBM) technology, as well as widening the existing I-64 corridor.

Our U.S. operations are supported by a global network of resources and expertise, enabling us to adapt international best practices to local conditions. We prioritize safety, sustainability, and stakeholder engagement in every project, and we are proud to contribute to the modernization of America's infrastructure.

VCGP Tunnel experience

Tunneling and underground projects are in the core business of VCGP; we have experienced and renown engineers/ project & construction managers/technical managers/ TBM pilots/ project staff, having developed their experience on many tunneling projects all around the world, having faced and managed so many different issues – either technical, organizational, human, and cultural – and they share this experience and their competences on every new project they are involved in.

For over 50 years, VINCI Construction Grands Projets has been a global leader in large-scale tunneling, successfully delivering some of the most complex underground infrastructure projects worldwide. **Our track record includes more than 600 miles of tunnels completed historically**



This proven expertise reflects our ability to manage every phase of intricate subterranean works—from design to execution—while maintaining the highest standards of safety and technical excellence.

Today, with over 8 TBMs in operation globally, we combine proven expertise with pioneering technologies to manage every phase of intricate subterranean works, from design to execution. Speaking about practical and recent valuable experience, the main **ongoing infrastructure projects with a significant tunneling scope include**:

- Ontario Line Southern – Civil, Stations and Tunnel project in Toronto (metro) – tunnel diameter = 23 ft (EPB TBM)- Link
- Hampton-Road Bridge Tunnel in Norfolk (VA) in the USA (highway road tunnel under the sea) – tunnel diameter = 45 ft (Variable Density TBM) - Link
- Auckland City Rail Link in New Zealand (metro) – tunnel diameter = 23 ft (EPB TBM) - Link
- Grand Paris Express Lines in France (metro) – tunnel diameter = 33 ft (EPB and Variable Density TBMs) - Link
- The Lyon-Turin rail connection (French to Italy tunnels through the Alps) – tunnel diameter = 34 ft (EPB TBM) - Link

Examples of tunnel projects completed within the past 10 years

• Ohio River Crossing (Evansville, KY/IN, USA)

- Client: Indiana Finance Authority (IFA)
- Contract Value: $765 Million
- Delivery Model: Public-Private Partnership (PPP)

- Completion: 2016

As part of the WVB consortium (Walsh-VINCI-Bilfinger), VCGP USA played a key role in the design, construction, financing, and long-term operation of the East End Crossing, a major component of the Ohio River Bridges Project. This included a 0.3-mile twin-bore tunnel excavated using drill-and-blast techniques, a 0.5-mile cable-stayed bridge, and upgrades to 7.5 miles of roadway infrastructure. The tunnel was mined through sedimentary rock formations and supported by advanced geotechnical solutions, including shotcrete, rock bolts, and reinforced concrete liners. The project was delivered under a public-private partnership (PPP) model, standing out for its innovative financing and accelerated delivery timeline.

• Crossrail, lot C512 – Liverpool Street and Whitechapel station tunnels (London, UK)

This contract forms a critical part of London's Crossrail project, involving complex underground construction beneath one of the busiest urban environments in the world. The tunneling scope required precise TBM operations integrated with station excavation and lining works.

- TBM Launch Chambers: Purpose-built launch zones for TBMs, including reinforced structures to handle thrust forces during initial excavation. Launch operations were coordinated with compensation grouting to mitigate settlement risks.
- Interface with Station Tunnels: TBM drives were connected to station platform tunnels and adits, requiring accurate alignment and controlled break-ins to maintain structural integrity and waterproofing.
- Urban Constraints: Excavation beneath sensitive infrastructure (London Underground lines, utilities, and historic buildings) demanded continuous monitoring and strict settlement control.
- Ground Conditions: Mixed geology (London Clay, sands, gravels) required TBMs to adapt pressure and cutterhead configurations dynamically to maintain face stability.

• RijnlandRoute (La Haye, Netherlands)

The scope of the Project is the Design, Construction, and Maintenance of a turn-key main road (N434) consisting of:

- 1.4-mile twin-bored tunnel (2.8 miles in total), excavated by means of a slurry TBM with external boring diameter 33 ft.
- 2 cut-and-cover sections at both ends of the tunnel incl. pertaining technical buildings.
- 8 cross-passages excavated by means of freezing method.
- A 0.7-mile-long U-box section performed as an open-cut under the water table with an aquaduct and ecoduct;
- All the M&E and traffic management equipment required to operate the above,

Sincerely,
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Bid Director
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Section 2 – Letter of Interest

Point of Contact
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Antonio.garcia@vinci-construction.com

City of Fort Lauderdale
Attn: Procurement Division

Subject: *Letter of Interest – New River Crossing Tunnel Project*

Dear Selection Committee,

VINCI Construction Grands Projets (VCGP) is pleased to submit this Letter of Interest in response to the City of Fort Lauderdale's Request for Information for the New River Crossing Tunnel project. As a global leader in the delivery of large-scale underground infrastructure, VCGP is highly interested in the opportunity to collaborate with the City on this transformative initiative.

As a global leader in complex infrastructure development, VCGP brings extensive experience in the design and construction of large-scale underground works, including urban tunnels, immersed tube crossings, and technically demanding transportation infrastructure. Our portfolio includes the successful delivery of landmark projects such as the Ohio River Bridge/Tunnel Project, and the recently completed Grand Paris Express in France.

The company's integrated structure, combining in-house design, tunneling expertise, and financing capability, positions VCGP to bring substantial technical and strategic value to the New River Crossing project. Our experience in North America, combined with our global tunneling portfolio, enables us to propose innovative and context-specific solutions for Fort Lauderdale's environmental, geotechnical, and urban challenges.

VCGP welcomes the opportunity to engage further with the City to discuss delivery strategies, risk-sharing mechanisms, and technical alternatives to ensure a cost-effective and resilient tunnel solution for the community.

We thank the City for the opportunity to contribute to this early planning phase and look forward to participating in any subsequent procurement processes.

Sincerely,
Antonio GARCIA GONZALEZ
VINCI Construction Grands Projets
Bid Director
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Response For Supplier: Schnabel Engineering, LLC

Event # : 538-1

Name: New River Crossing Tunnel (Request for Information)

Description: The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the planning, design, engineering, construction and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes.

Date created: November 21, 2025 12:10:34 PM EST

Date submitted: November 21, 2025 12:18:22 PM EST

Preview date:

Q & A open date: October 27, 2025 10:30:00 AM EDT

Open date: October 27, 2025 10:00:00 AM EDT

Q & A close date: November 21, 2025 5:00:00 PM EST

Close Date: 12/01/2025 02:00:00 PM EST

Dispute close date:

Responded To: 1 Out of 1 Lines

Response Currency: USD

Response Attachments

Attachment
Schnabel Engineering RFI Response.pdf

Line Responses

Line 1: Request for Information - New River Crossing Tunnel

Description: **This is a Request for Information (RFI); it is not a request for pricing, commitment to purchase, or an**

Event # 538-1: New River Crossing Tunnel (Request for Information)

obligation to provide products or services described in this notice. Please see the attached forms for response details.

Request for Information - New River Crossing Tunnel

Commodity Code: 913-55 Construction, Tunnel

Quantity: 1.0000 **Unit of Measure:** EA

Bid Quantity: 1.0000

No Charge: Yes **No Bid:** No

Request for Information - New River Crossing Tunnel

City of Fort Lauderdale
New River Crossing Tunnel RFI
Section 1 - Company Profile

Schnabel Point of Contact:

Matthew Goff, PE
Principal Tunnel Engineer
3 Dickinson Drive, Suite 200
Chadds Ford, PA 19317
484-553-4776
mgoff@schnabel-eng.com

Tunnel Engineering

Schnabel specializes in design and construction management services for tunneling and other heavy civil construction projects in the areas of transportation, water and wastewater infrastructure, and hydroelectric power. We combine our expertise in the design and construction of underground structures with a keen understanding of nuances and interrelationships of geology, hydrogeology, and geotechnics on underground projects.

Since 1976, Schnabel has been developing usable underground space. Every underground project is different and has its own set of challenges. Our extensive expertise and project experience ranges from small diameter trenchless installations to underground excavations with spans greater than 90 ft, and includes shallow and deep tunnels in soil, rock and mixed face conditions, above and below the groundwater table. We provide engineering design services for underground openings throughout all project phases (feasibility, preliminary design and final design).

Whether for large or small diameter applications, our staff focuses on providing engineering solutions for:

- Water and Wastewater Infrastructure
- Hydroelectric Power Facilities
- Vehicular Tunnels
- Rail and Mass Transit Infrastructure

Underground Services

- Feasibility Studies and Preliminary Design
- Alignment Optimization
- Assessment of Geotechnical Conditions
- Machine Selection
- Tunnel and Shaft Design
- NATM/SEM (Sequential Excavation Method)
- Numerical Methods for Design
- Cavern Design
- Construction Documents/Design Reports
- Geotechnical Baseline Reports (GBRs)
- Risk Management
- Constructability Review
- Cost Estimating
- Tunnel Inspection and Rehabilitation

Tunnel PMCM Services

Schnabel Engineering serves as a reliable partner throughout the project lifecycle. We work closely with owners, designers, and constractors to ensure projects are delivered on time, within budget, and to the desired quality standards. Our team of resident engineers, inspectors, and technicians work diligently to enhance project efficiency, reduce risks, and ensure delivery of a high quality final facility to the owner.

Firm Overview

Schnabel specializes in design and construction management services for tunneling and other heavy civil construction projects in the areas of infrastructure, transportation, water, wastewater, and hydroelectric power. Schnabel Engineering offers a comprehensive range of services from planning and conceptual design through construction and commissioning. We understand that each client is confronted with a unique set of challenges and circumstances. We customize our services to match our clients' specific needs and help them achieve their project goals. Having the right people at the right time is essential for the success of a project, with over 550+ professionals, Schnabel is here to help.

Schnabel Has the Right People For Your Project

Schnabel Engineering is uniquely qualified for the technical and construction challenges associated with large underground infrastructure projects. Our experts have been the key personnel on the largest diameter tunnels constructed in the United States, including VDOT's 46-foot diameter I-64 Hampton Roads Bridge Tunnel Project, WSDOT's 57.5-foot diameter SR99 Tunnel (highway), and Dallas Water Utilities' 38-foot Diameter Dallas Mill Creek Drainage Relief Tunnel. Schnabel Engineering is currently performing the bottom up independent cost estimating used for federal funding approval for BSV II and we are also independently verifying the CP2 Progressive Design Builder's price proposals for individual work packages. Additionally, our experts developed and managed the design build concept successfully used on DC Water's DC Clean Rivers Project (DCCRP) and provided owner advisory services for Silicon Valley Clean Water's Gravity Tunnel (SVCW GP), the first progressive design build procurement used for a tunnel project in the United States. Both DCCRP and SVCW GP are award winning projects, successful examples of completing projects with alternative delivery methods. From these projects and dozens more across the country, we have gained valuable experiences and lessons learned that can be leveraged for your project.

PMCM Services

Planning & Preliminary Design

- Conceptual Studies
- Environmental Impact Studies
- Facility Planning
- General Program Management
- Geotechnical Investigations
- Geotechnical Data Reports and Interpretations
- Preliminary Engineering
- Procurement Strategies
- Risk Management

Constructability, Estimating & Scheduling

- Program and Project Scheduling
- Cost Estimating for Heavy Civil
- and Underground Construction
- Constructability Reviews

Final Design

- Constructability Reviews
- Technical Specifications
- Geotechnical Engineering
- Geotechnical Investigations
- Geotechnical Data Reports and Interpretations
- Tunnel Engineering
- Structural Design and Analysis

Construction Management

- Resident Engineering
- Construction Inspection/Quality Assurance
- Claims Support
- Geotechnical Instrumentation Interpretation
- Document Management
- Change Management
- Risk Management

Schnabel ENGINEERING

Projects

I-64 Hampton Roads Bridge-Tunnel Expansion / Hampton, VA

VDOT is implementing the Hampton Roads Bridge -Tunnel Expansion project to increase the capacity of I-64 Hampton Roads Bridge and Tunnel between Hampton and Norfolk, Virginia. The project will include six (6) new lanes of highway and of eight (8) new lanes of bridge and twin-bore tunnels. This project includes twin 46-foot excavated diameter bored tunnels, 8,000 foot in length each, being constructed in very soft alluvial soils and underlying denser/stiffer granular and clay deposits. The tunnels will span between two existing man-made islands.

Schnabel supported in an advisory role assisting VDOT as it developed a procurement strategy for the large design-build contract. During the preliminary design phase, Schnabel provided geotechnical, structural, constructability and risk reviews of the preliminary design. As part of the Engineering and Construction Support Team, Schnabel is providing tunnel construction technical support as well as geotechnical and structural review as the final design is advanced during the construction phase. Schnabel is also providing island and tunnel construction management key personnel including the Tunnel Resident Engineer, Tunnel Engineer, and Tunnel Chief Inspector.

DC Clean Rivers Project / Washington, DC

The project comprises approximately 18- miles of soft ground, mixed face and rock tunnels that traverse beneath the Potomac and Anacostia Rivers as well as beneath federal, district and private properties. Near-surface facilities, designed to capture and divert flows from the combined sewers to the drop shafts, are located in postage-stamp sized sites throughout the District of Columbia. The DC Clean Rivers project possesses some of the nation's most challenging tunneling work, with an aggressive schedule, in a very dense urban environment with multiple stakeholders and a very engaged community.

Schnabel's role on the project included: Program Management; Contract Procurement; Preliminary and Final Design; Design Management; and Construction Management, including roles as Oversight Construction Manager, Assistant. Resident Engineer, and Construction Implementation Manager.

RiverRenew Tunnel System Project / Alexandria, VA

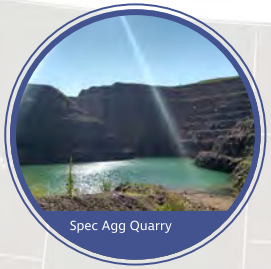
In response to a 2017 Virginia State Law, AlexRenew has implemented a plan to address the discharge of combined sewer overflows (CSO's) to Alexandria, Virginia's waterways. The plan, referred to as RiverRenew, has the following major components: a storage and conveyance tunnel system linking the existing CSO's to a new pumping station located at AlexRenew's Water Resource Recovery Facility; relocation of facilities and decommissioning of former administrative buildings; increase in pumping capacity and a wet weather treatment system.

As part of the Owner's Advisory team, Schnabel's full-spectrum of services have included: concept planning; alternatives analysis; alignment selection; planning and overseeing geotechnical investigations; developing program management processes; preliminary engineering; generating RFQ/P documents; geotechnical and structural design reviews; constructability reviews; scheduling and estimating; mentoring and training; public outreach, project risk management, and construction management oversight of resident engineering and inspections services.

Tunnel Engineering

PROJECT HIGHLIGHTS


Seattle University Link


Spec Agg Quarry


East End Crossing

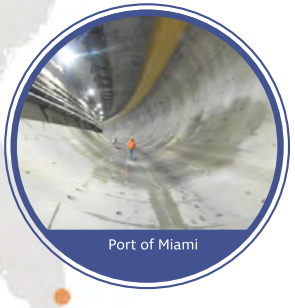

Battery Park


Loudoun Water


Lake Dorothy


DART CityPlace


BCRUA Deep Water Intake


Port of Miami


Humpback Creek

- Office Location
- Water Project
- Transportation Proje

Schnabel has decades of experience on projects of all sizes and levels of complexity, all over the world. We share a passion for our work, a focus on developing innovative solutions and a commitment to on-going improvement. We have provided our suite of services to owners, developer, AE design firms and tunnel contractors.

Schnabel ENGINEERING
O 804.264.3222
10900 Nuckols Road, Suite 210 / Glen Allen, VA 23060
schnabel-eng.com

Subject: **City of Fort Lauderdale, New River Crossing Tunnel**
RFI Response, Section 2 Letter of Interest

SCHNABEL ENGINEERING, LLC (Schnabel) is pleased to submit this Letter of Interest in response to the City of Fort Lauderdale's Request for Information for the New River Crossing Tunnel Project. We recognize the strategic importance of this project to the City's transportation network, economic development, and marine industry. At Schnabel, we specialize in serving as the Owner Advisor or Program Manager on large, complex tunnel design and construction projects.

As a firm with over six decades of experience in tunneling, geotechnical engineering, and program management, Schnabel brings unparalleled expertise in planning, design, and delivery of complex tunnel projects. Our team has served as trusted advisors on some of the largest and most challenging tunnel programs in North America, including the VDOT Hampton Roads Bridge-Tunnel Expansion, DC Clean Rivers Project, and Amtrak Frederick Douglas Tunnel. These projects require careful tunnel alignment planning, expansive geotechnical investigations, innovative delivery strategies, robust risk management, and collaborative engagement with multiple stakeholders. This experience and expertise align directly with the City's objectives for the New River Crossing Tunnel project.

Tunnel Program Management Support Services for the New River Crossing Tunnel:

- **Procurement Strategy & Delivery Model Selection**
  Advise on progressive procurement approaches, such as Progressive Design-Build (PDB) or CMAR, including contract packaging, risk allocation, and open-book pricing protocols.

- **Cost Estimating & Scheduling**
  Deliver bottom-up cost estimates and schedules for funding applications and GMP negotiations. A reliable, detailed cost estimate is essential for Phase 2 negotiations in progressive models.

- **Risk Management & Program Controls**
  Develop and maintain a comprehensive risk register, perform qualitative and quantitative risk assessments, and implement mitigation strategies to protect schedule and budget.

- **Technical Advisory Services**
  Provide independent tunnel design reviews, constructability assessments, and geotechnical baseline development to ensure technical feasibility and cost certainty.

- **Stakeholder Coordination & Public Outreach**
  Facilitate engagement with FECR, Brightline, Broward County, FDOT, and community stakeholders to align project objectives and minimize disruptions.

Schnabel has worked closely with Owner's to develop and manage alternative delivery tunnel programs across the U.S. We understand the potential benefits and risks associated with progressive delivery models on tunneling projects. More importantly, we have experience identifying, mitigating, and managing these risks with Owners. Progressive delivery models, when managed effectively, provide valuable benefits including flexibility with uncertain quantities, shorter total project schedule, improved collaboration, and reduced risk of contractor claims. However, these progressive models require a more robust and dedicated program/construction management team than traditional DBB procurement to mitigate risks and manage Phase 2 negotiations with the Contractor.

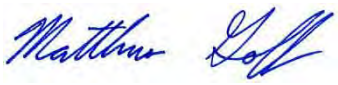
Ultimately, the successful delivery of any procurement method depends on the program management team's knowledge and familiarity with the given delivery method. Schnabel has decades of experience supporting Owner's on alternative delivery tunnel projects. Our recent tunneling Owner Advisor and Program Management experience includes:

- VTA BART Silicon Valley Extension; San Jose, CA (PDB)
- Silicon Valley Clean Water (SVCW) Gravity Pipeline Project; San Mateo, CA (PDB)
- Amtrak Frederick Douglas Tunnel; Baltimore, MD (CMAR)
- WMATA Yellow Line Rehabilitation; Washinton, DC (CMAR)
- DC Water Piney Branch Tunnel; Washington, DC (CMAR)
- DC Water Potomac River Tunnel; Washington, DC (DB)
- Hampton Roads Bridge Tunnel (HRBT); Hampton, VA (DB)

We are interested in learning more about the City of Fort Lauderdale New River Crossing Tunnel project. We would like to meet with your team in person to discuss the goals and challenges associated with the project in more detail. Please feel free to contact us if you are available to meet and discuss this RFI.

We appreciate the opportunity to respond to this RFI and look forward to learning more about this project.

Sincerely,



Matthew S. Goff
Principal Tunnel Engineer
mgoff@schnabel-eng.com
484-553-4776

Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☒ Public-Private Partnership (PPP/P3)

   ☒ Preliminary Development Agreement (PDA)

   ☒ Design-Build (DB)

   ☒ Design-Bid-Build (DBB)

   ☒ Design-Build-Finance-Maintain (DBFM)

   ☐ Other: _____

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

   Schnabel Engineering is interested in supporting the Owner team with tunnel program management services, including Owner Advisor services (delivery method, technical reviews of tunnel design, contract packaging), cost estimating and scheduling, alignment studies, risk identification and assessment (qualitative and quantitative), design of temporary and permanent support for tunnel and station, constructibility assessments, geotechnical investigation (boring, geophysics, etc.) and GBR, and construction management.

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	✔	✔
EIS Development	✔	✔
Obtaining the Record of Decision (ROD)	✔	✔
Utility Investigations	✔	
Utility Coordination	✔	
Geotechnical Investigations	✔	
Property Acquisitions		✔
Risk Management	✔	✔
Public Outreach	✔	✔
Cost Estimating and Scheduling	✔	
Tunnel Alignment Study and Planning	✔	

Attachment 3 – Response Forms

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

Full set of General Conditions, conceptual plans (tunnel alignment plan, profile, cross-section), available geologic subsurface information (bridge boring data, deep foundations information, etc.), funding source / commitment, selection criteria, schedule, and anticipated construction cost.

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- ◯ 30% Design
- ◯ 60% Design
- ◯ 90% Design
- ◯ 100% Design
- ◯ Other (specify): See 6

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

For PDB or CMAR, minimum 30% design should be provided (plan, profile, conceptual cross section, property ownership plans, plans identifying infrastructure foundations & utilities in ROW), General Conditions, Supplemental Conditions, Draft Geotechnical Data Report, Draft GBR, clear instruction on open book pricing requirements for PDB or CMAR, identified Work Breakdown Structure and Schedule Activities, ArcGIS access (geotechical, utility, and foundation data), Technical Specifications list, and preliminary risk register with major risks defined (limited to top 25-50 and rest to be developed with contractor). It is also crucial for the Owner's team to develop a bottom-up cost estimate (to be withheld).

Maximum 60% design should be provided with PDB or CMAR to still allow Contractor input on design while providing better identification of risk and higher accuracy of indicative cost.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

Maintenance should be bid separately. Tunnel construction is highly specialized, and maintenance is not in the purview of most North American tunnel contractors. Including maintenance with the tunnel construction contract will limit the competition to a few European and North American contractors. It is also important to ensure that the Terms and Conditions are in line with industry standards (i.e. they should include a DSC clause, Mutual Waiver of Consequential Damages, damages for 3rd party delays, and a clear unambiguous claims and change order process).

Attachment 3 – Response Forms

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

To reduce long-term costs and risk, the following should be included: a thorough geotechnical investigation program (borings @ 400' spacing), permanent instrumentation and monitoring system in completed tunnel structures, waterproof membrane and secondary waterproofing system (re-injectable connections), high sulfate resistant concrete for durability, flood protection doors, emergency pumping system with vertical access to quickly remove and replace pumps, fire protection for personnel safety and protection of structural integrity, prohibit suspended ceilings, and include sufficient room to make repairs without fully shutting down service.

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ■ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

■ Borehole logs every 400 feet (please specify spacing)

■ Geological baseline report (GBR)

■ Laboratory soil/rock test data

■ Groundwater monitoring data

■ Other: Utility and existing foundations study

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

For soft ground or mixed face tunnels, selection of TBM paired with ground conditions will improve cost and efficiency. This is less relevant for rock tunneling.

Precast tunnel liner with double gaskets improved durability and safety.

Cross-hole geophysical studies provide significantly more data for planning and costing tunneling operations.

InSAR satellite monitoring technology is now easily implemented to provide broad ground movement monitoring along tunnel alignment for improved safety.

Attachment 3 – Response Forms

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

Contractor interest will be minimal without identified funding for the tunnel.

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

Schnabel supported the tunnel program management team for DC Clean Rivers Program. In 2014, a 100-year bond was used to fund the tunnel contracts. The bond length matched the design life of the tunnel, allowing the construction cost to be paid over the service life of the tunnel. This was the first time that this method of bonding was used to fund a tunnel construction project.
Schnabel supported the Owner's tunnel PM/CM team on the HRBT tunnel project in VA, which was funded primarily through regional gas and sales taxes.

14. Which financing tools should be considered?

When supporting Owners on financing tools like the DC Clean Rivers bond funding described above, we have typically utilized accounting and financing consultants, like Ernst & Young.

15. Please advise of innovative ways for a repayment model for this Project.

See response to question 14.

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

This typically takes about 6 to 12 months, potentially longer with multiple agencies and stakeholders.

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

PDB Phase 1 (30% to 60%) is about 18 months (if borings are already completed). This will depend on permitting requirements. PDB Phase 2 (60% to

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

About 15 months (12 mo to manufacture, 3 mo to deliver & install).
Note: If the TBM is procured prior Phase 2 negotiations, the owner has to

19. How long should full construction, including TBM work, be expected to take?

About 7 years total (most optimistically 6 years): 2 years to construct first portal, 3 years to construct tunnels (assuming two 5,000 ft drives), 1 year to complete

20. What length of maintenance term is acceptable to the industry?

The Port of Miami tunnel project had a 35-year O&M term.

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

Third party impacts, such as delays in utility relocation, property acquisition, and permitting, are often the most significant schedule risk for urban tunneling projects.

Protection of existing structures is essential for mitigating schedule delays. Surface and adjacent structure movement due to loss of ground, jet grouting, and dewatering induce settlement are less common than third party impact, but can have significant schedule and cost impacts if tunneling methods need to be modified to minimize ground movement.

Unexpected ground conditions causing impacts to the critical path are a significant cost and schedule risk. During peak TBM production, encountering unexpected ground conditions could result in claims of about $150K to $200K per day.

Site constraints, such of limited area for staging and muck removal in urban setting, is a schedule risk. Without adequate space to store segmental liners, support TBM operations, and to remove muck, tunnel production can be significantly delayed.

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

Progressive models involving negotiated, 2-step contracts (like PDB and CMAR) provide benefits such as improved collaboration and lower risk of claims during construction. However, these models have unique risks differing from DBB and traditional DB that need to be mitigated, including:
1. Lack of contractor interest due to: lack of secured funding at procurement, considerable time between start of Phase 1 design and start of Phase 2 construction, no allowance for escalation of materials, lack of geotechnical information (extending time to start construction), poor contract terms and conditions (see earlier comment), unrealistic construction schedule.
2. Inaccurate indicative pricing that is non-binding, particularly if opportunities exist to erode the Owner's leverage prior to Phase 2 negotiation. A tight schedule may result in no off-ramping opportunity, which limits Owner leverage. Early purchase of construction equipment leads to inability to off ramp contractor (TBM, service crane, etc.) For Progressive model to be successful, the Owner needs to have adequate time in schedule to seriously consider the off ramp option. If the off ramp is not feasible or practical, then the Owner losing significant leverage during Phase 2 negotiations.
3. Owner should have clear direction on how open book pricing and scheduling will be implemented and define the contractor's responsibilities, such as: detailed cost estimate and scheduling that use common coding of activities, cost estimate narrative, cost loaded scheduling, process for establishing equipment rates, material unit prices, labor rates (ST, OT, weekend), production rates, subcontractor quotes, etc. This requires the owner to perform detailed bottom-up cost estimating early to clearly define the requirements and to provide informed comments on contractor costs. If this detailed cost estimate is not performed, the Owner's PM/CM team will be handicapped with respect to understanding the contractor's estimate limiting their ability to effectively negotiate GMP.
4. The contractor may also be purposefully late on deliverables and expect short reviews for Owner team. They use this tactic to extend the process and reduce the Owner's leverage with respect to schedule. To negotiate effectively and maintain leverage, the project schedule needs to include adequate review time and the Owner needs to be committed to using the off ramp option if needed.

There are benefits to using a Progressive model such as shorter schedule, improved collaboration, and lower rate of claims during construction. Progressive model are also especially beneficial on projects with uncertain construction quantities (grouting, ground improvement, minimal available geotechnical data, etc.) But the Owner needs to have a more robust Program/Construction Management team than DBB or traditional DB to mitigate the risks listed above for a PDB or CMAR project to be successful.

Other technical and construction considerations:
1. Design concerns: flotation, emergency egress, fire & safety, vertical grades that are 3% or greater.
2. If slurry TBM is needed: Requires a minimum of 10MW power and 2 years to get power to the site.
3. Need for allowances, such as: Escalation (materials), permitting, protection of structures, TBM stoppage, TBM interventions, grouting from TBM, rail re-leveling, temporary/permanent power.

We are interested in meeting with City of Fort Lauderdale to discuss these considerations in more detail.

Name:	Matthew Goff, PE	Title:	Principal Tunnel Engineer
Company:	Schnabel Engineering, LLC	Phone:	484-553-4776
Address:	3 Dickinson Drive, Suite 200 Chadds Ford, PA 19317	Email:	mgoff@schnabel-eng.com
Signature:		Date:	November 21, 2025

Response For Supplier: Hatch Associates Consultants, Inc.

Event # : 538-1

Name: New River Crossing Tunnel (Request for Information)

Description: The City of Fort Lauderdale is seeking information from qualified and experienced firms regarding the planning, design, engineering, construction and maintenance of the New River Crossing Tunnel (Project). This Request for Information (RFI) is issued as part of the preliminary market analysis to gather input on optimal contracting strategies and delivery models, estimate project timelines and resource requirements, and identify innovations within the industry.

This RFI is not a solicitation for bids or proposals, nor does it represent a commitment to issue a subsequent Request for Proposal (RFP). Rather, it is intended to provide a structured process for industry participants to share relevant insights, recommendations, and expressions of interest that will inform the development of a potential future RFP or other formal procurement processes.

Date created: November 20, 2025 4:55:18 PM EST	Date submitted: December 1, 2025 1:42:50 PM EST
Preview date:	Q & A open date: October 27, 2025 10:30:00 AM EDT
Open date: October 27, 2025 10:00:00 AM EDT	Q & A close date: November 21, 2025 5:00:00 PM EST
Close Date: 12/01/2025 02:00:00 PM EST	Dispute close date:

Responded To: 1 Out of 1 Lines

Response Currency: USD

Response Attachments

Attachment
Hatch LOI_ New River Tunnel Crossing_12.01.2025.pdf

Line Responses

Line 1: Request for Information - New River Crossing Tunnel

Description: **This is a Request for Information (RFI); it is not a request for pricing, commitment to purchase, or an**

Event # 538-1: New River Crossing Tunnel (Request for Information)

obligation to provide products or services described in this notice. Please see the attached forms for response details.

Request for Information - New River Crossing Tunnel

Commodity Code: 913-55 Construction, Tunnel

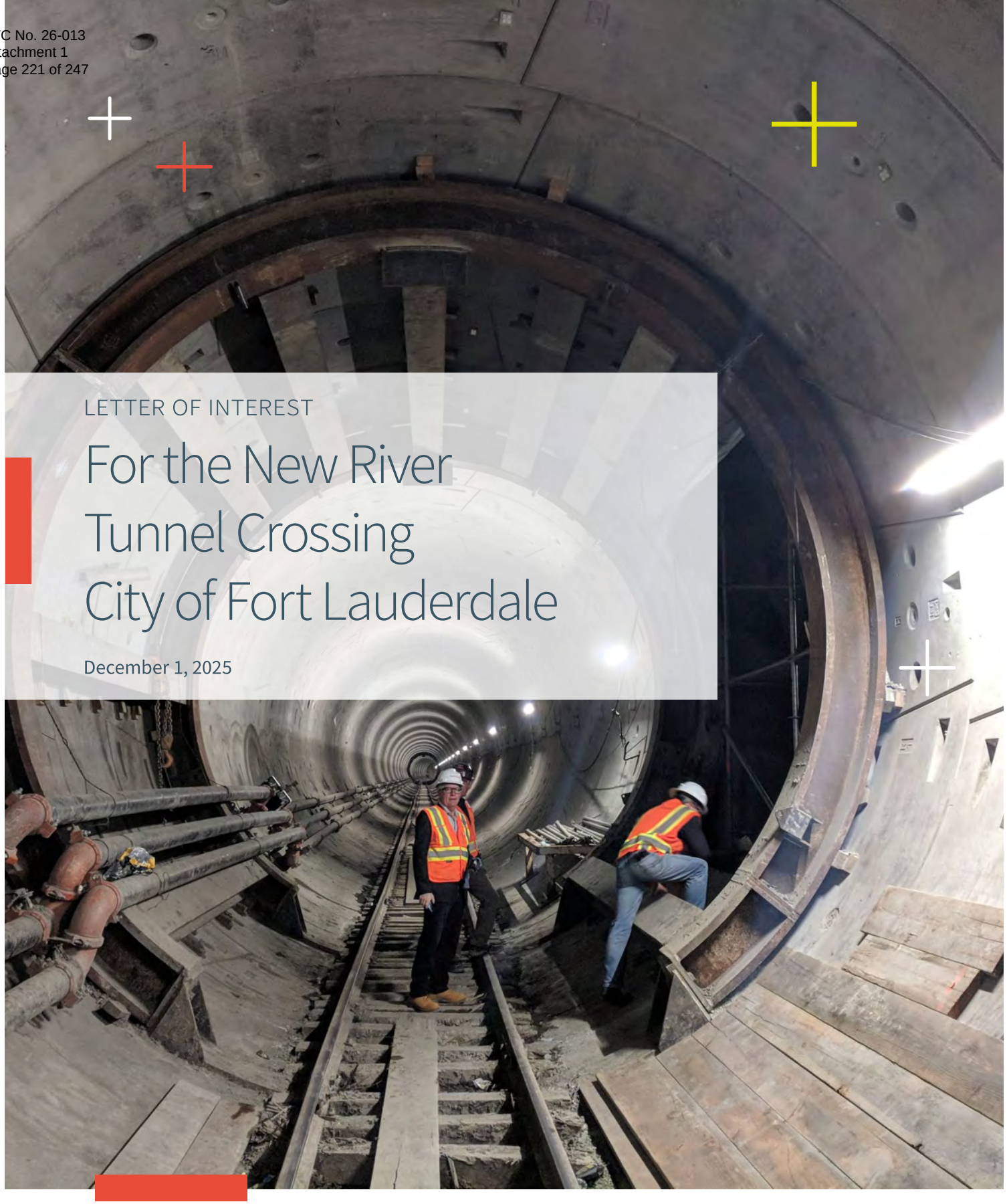
Quantity: 1.0000 **Unit of Measure:** EA

Bid Quantity: 1.0000

No Charge: Yes **No Bid:** No

Request for Information - New River Crossing Tunnel

Comments: Please review Hatch's Letter of Interest in the Attachments tab.



LETTER OF INTEREST

For the New River Tunnel Crossing City of Fort Lauderdale

December 1, 2025

December 1, 2025

John Torrenga, CPPB - Team Lead
Procurement Administrator
100 N Andrews Avenue
Fort Lauderdale, FL 33301

Subject: **New River Tunnel Crossing**

Dear Mr. Torrenga:

Hatch is pleased to present our interest in partnering with the City of Fort Lauderdale to advance its vision for safer, more efficient, and resilient transportation systems. After reviewing the TRAX Workshop materials and the innovative discussion on traffic/transit tunnels as a congestion mitigation strategy, we are confident that our global expertise in infrastructure design and project delivery can help realize these transformative goals.

About Hatch

Hatch Associates Consultants, Inc. is a global leader in infrastructure development and multidisciplinary EPCM services. We deliver end-to-end solutions that drive the design, construction, and modernization of critical infrastructure systems worldwide. Our capabilities span consulting, engineering, procurement, and construction management, enabling resilient transportation networks, transit systems, rail corridors, and transportation-oriented developments. For more than seven decades, Hatch has partnered with clients to overcome complex challenges; leveraging advanced technologies and integrated strategies to deliver sustainable, future-ready infrastructure. With a track record of successful projects in over 150 countries, Hatch is recognized for innovation, reliability, and expertise in shaping the built environment for generations to come.

We are an employee-owned firm and currently have more than USD $75 billion of capital projects under management. Our international client base is served by over 10,000 Hatch professionals in more than 65 offices worldwide, on six continents. Locally, Hatch boasts 3 offices in Florida with an office in Fort Lauderdale.

Our Tunneling Expertise

Since our founding, we've built a strong legacy in tunneling, contributing to some of the world's most significant underground projects. We've engineered thousands of miles of tunnels across five continents—beneath urban centers, residential areas, mountains, lakes, and rivers.

With over 200 staff dedicated to tunnel, shaft, and trenchless engineering services, including more than 70 tunneling specialists, we have delivered complex underground solutions for urban mobility challenges worldwide. Our portfolio includes:

- **East Side Access Project** - Program Management services, including providing tunnelling expertise, for $11B iconic project in NYC which consists of soft and hard rock tunnels, shafts, and underground stations – Long Island Railroad
- **No. 7 Line Extension** – Included new tunnels and an underground station – Metropolitan Transportation Authority, New York City
- **Beacon Hill** – Sequential excavation method, Deep mined station in soft ground - Sound Transit, Seattle
- **Toronto Transit Expansion** – Design and construction support for multiple subway tunnel alignments, integrating advanced geotechnical modeling and risk management strategies. – Toronto Transit Commission

These projects exemplify our ability to combine technical excellence with community-focused solutions—skills that align perfectly with Fort Lauderdale's goals to reduce congestion, reconnect neighborhoods, and enhance resilience against stormwater challenges. In addition to our tunnel experience Hatch provided services to the South Florida Regional Transportation Authority (SFRTA) for the proposed Wave modern streetcar and is currently delivering services to Broward County Transit for the Airport Seaport Convention Center Connector project.

Commitment to Fort Lauderdale's Vision

We strongly advocate for the tunnel alternative as the most viable solution to accommodate commuter and freight rail service while safeguarding critical community assets. The tunnel option allows the City of Fort Lauderdale to achieve its vision for the city of one connected community. Unlike bridge option, a tunnel virtually eliminates conflicts with marine traffic, ensuring uninterrupted navigation for commercial and recreational vessels. It also preserves valuable adjacent real estate and protects the integrity of the downtown environment, avoiding visual and noise impacts that could diminish property values and economic vitality.

By placing rail infrastructure underground, we unlock opportunities for vibrant public spaces, sustainable development, and enhanced mobility without sacrificing waterfront access or urban livability. The tunnel solution is not just a transportation project, it is a catalyst for long-term economic growth, tourism, and resilience, positioning the City as a premier global destination.

Tunnel benefits are unparalleled: reduced environmental impact, resilience, optimal life-cycle cost, and alignment with City's vision of creating a world-class residential, commercial, and oceanfront destination.

We believe our experience and proficiency make Hatch the right partner for this work. Our integrated approach will support feasibility studies, technical assessments, and stakeholder engagement, ensuring that solutions such as enhanced crossings, multimodal connectivity, and tunnel-based strategies are both innovative and practical.

We will appreciate the opportunity to partner with the City to develop the best contracting strategies and delivery models, estimate project schedule, cost and resource requirements, and identify innovative solution within the industry.

Thank you for this opportunity to demonstrate our expertise and experience to the City of Fort Lauderdale. If you have any questions or would like to discuss any aspect of our attached response, please do not hesitate to contact us.

Yours faithfully,

Colin Lawrence
Global Tunnel Sector Advisor
(332) 255-6045
colin.lawrence@hatch.com

Kenneth Parkinson
Local Lead Expert
(305) 206-0849
Kenneth.parkinson@hatch.com

Hatch Overview

From the very beginning, we have led some of the world's most ambitious and groundbreaking tunnel projects. No matter the scale or complexity, we're equipped to deliver successful outcomes for our clients. At Hatch, tunneling is more than a specialty, it's a passion.

Tunnels are increasingly being built through some of the world's most challenging terrain, cutting deep through mountains or below rivers, lakes, seas, and oceans with shallow cover —often through conditions once considered impossible or unimaginable. The presence of underground infrastructure in many cities often requires new tunnels to be built deeper and longer, introducing new challenges for design, technology, and operations.

Hatch has been a pioneer in this space, delivering innovative and sustainable underground infrastructure development for over seven decades. Since the 1950s, Hatch has engineered more than 1,550 miles (2,500 kilometers) of tunnels across five continents, supporting critical infrastructure development worldwide.

In the past two decades, we have met evolving challenges by integrating advanced technologies and digital tools into our tunneling practice. Our expertise spans the full tunnel life cycle—from planning and design through construction, operation, maintenance, and rehabilitation—ensuring long-term performance and resilience.

We've tackled all ground conditions, including rock, soil, mixed-face geology, high groundwater pressures, seismic zones, and faulted terrain. Whether deploying the world's largest tunnel boring machines or precision trenchless techniques, Hatch selects excavation and support methods tailored to each project's unique conditions. Our approach is guided by decades of experience and a deep understanding of ground risk management.

Serving all major tunnel markets— Expertise in construction means & methods, quality management, tunnel design, and targeted risk-based approach, Hatch is assisting clients with the development and improvement of rail and transit tunnels worldwide. We focus on facilitating best-for-project outcomes that benefit all stakeholders by taking a highly collaborative and impartial approach to projects.

Over **100** years in business

+ 1,550 miles of tunnel engineered miles

Our tunneling experience spans **5** continents

Infrastructure Services
Aviation, Highways & Bridges, Ports & Terminals, Rail & Transit, Safety & Security Consulting, Transportation & Logistics, Tunnels, Urban Solutions, Water

Ken Parkinson
Local Lead Expert
e: kenneth.parkinson@hatch.com

- **Principal Director, Transportation** and local lead expert for the delivery of transit services including vehicles, communications and traction power and innovative transit-oriented development solutions as part of a team supporting Broward County Transit for Airport Seaport Convention Center Connector Project Development & Environmental (PD&E) Study.
- **30-year resident of the City of Fort Lauderdale** with vested interest in the community.

Colin Lawrence
Tunnel SME
e: colin.lawrence@hatch.com

- **Hatch Global Tunnel Sector Advisor** and World-Renowned Tunneling Expert. Colin has led some of the world's most challenging tunnel projects and has been involved in all aspects of underground project implementation from planning & design through construction management and project completion.
- **Current Vice Chair of UCA of SME** The Underground Construction Association, which is the organization that represents the US tunnel industry.

Tunnels for all major sectors

Whatever our client's vision, Hatch tunnel specialists can design and manage it, from concept to tunnel construction completion. With over seven decades of business and technical experience in the transportation infrastructure sector, we know tunnels and understand the City of Fort Lauderdale's opportunities for the future and your challenges to achieve the vision of connected urban core.

Our specialists actively manage underground risks, delivering safe, efficient, and sustainable solutions. Whether using hard rock tunneling boring machines (TBM), Sequential Excavation Methods (SEM), drill and blast, or pressurized face TBMs in soil, rock, or mixed conditions, we select the most appropriate technology for the anticipated ground conditions.

We continue to lead advancements in pressurized face TBMs, precast concrete tunnel lining (PCTL), New Austrian Tunnel Method (NATM) and SEM methods, fiber-reinforced linings, digital tools, and record-setting large diameter TBMs. Our achievements, including several industry-defining and pioneering breakthroughs, continue to push technological boundaries and help owners and contractors overcome complex project challenges.

Our extensive portfolio is backed by a strong reputation built on consistent achievements in the tunnel industry. Our success is driven by the dedication, skill, and quality of our specialist staff, a seasoned team that consistently delivers outstanding results. Through long-term deployment, continuous mentoring from senior professionals, and a culture that encourages creatives problem solving and a "can do" attitude, we deliver cutting-edge solutions for the world's toughest tunneling demands.

Hatch's combination of technical excellence and holistic project delivery positions us as ***a trusted partner for tunnel projects*** *of any scale and complexity.*

KEY DIFFERENTIATORS AND CAPABILITIES

- ☑ Comprehensive suite of multidisciplinary services that ensure the success of the entire project
- ☑ Unmatched depth and breadth of tunnel experience
- ☑ Capabilities span fire life-safety design, tunnel ventilation engineering, transit rail design, electrical and communications systems, signaling, train operations modeling, and transit vehicle engineering decades

Visit Hatch for a detailed list of our tunneling and infrastructure and projects

Subaqueous Tunnels

Subaqueous tunnels continue to push the boundaries of technology and innovation. Backed by a proven track record in this high-risk field, Hatch confidently tackles the most demanding challenges across the industry.

Conquering the deep

The applications of tunneling solutions are diverse and continue to be applied in new and emerging markets. In the past, water bodies were a major barrier to the development and expansion of infrastructure. As technology improves, subaqueous tunneling solutions have become more popular, facilitating alignments that previously would not have been possible.

Subaqueous tunnels serve a wide range of applications, including road and rail, transit, water supply, sewage systems, high-voltage power and communication cables, and oil and gas transport. These projects have increased the demands of geological exploration, often requiring drilling from barges or in areas of soft swampy ground.

Access to the tunnel face is often extremely limited or entirely unavailable from the water surface above.

Urban Tunnels

Hatch understands the evolving challenges of urban tunneling driven by the increasing demands that growing cities place on both new and existing infrastructure. We apply emerging technologies to address and manage risks, employing a forward-thinking, innovative approach to advance solutions for the dynamic urban environments of today.

Ever deeper with tighter challenges

As cities grow denser, the need for infrastructure that avoids surface disruption has become critical. Urban tunnels enable increased service capacity while minimizing congestion and allowing normal public and business activities during construction. Centuries of development have crowded shallow underground spaces, requiring tunnels to be built at greater depths and introducing new complexities.

Urban tunneling demands solutions that minimize ground movement and protect adjacent structures and utilities while managing traffic, logistics, noise, vibration, and stakeholder concerns. Hatch applies advanced construction methods—including hybrid, multimode, slurry, and earth pressure balance TBMs, as well as SEM and drill-and-blast sequences—to meet these challenges. We complement these methods with ground improvement techniques such as jet grouting, compensation grouting, permeation grouting, and ground freezing, achieving zero settlement under sensitive structures.

Our experience includes technically demanding projects such as tunneling beneath Toronto's glass-fronted Schulich Building with zero settlement and constructing pedestrian tunnels under aging infrastructure and existing tunnels in Los Angeles with minimal cover.

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
REGIONAL CONNECTOR, Los Angeles, California

Project Cost: $1.8B Length: 1.9 miles of tunnel
Size of Tunnel: 5.74 m (18'-10") in internal diameter

Challenges

- An alternative transportation option was needed to ease congested roadways and provide significant environmental and economic benefits.
- The project is in a high-seismic-risk area and must be designed and constructed to be resilient to earthquakes.
- This new extension to LA's Metro Rail is needed to reduce travel times and eliminate the need for cumbersome transfers.
- The extension will improve access to local and regional destinations, ensuring a continuous, through service between these lines and connectors to others via the 7th Street/Metro Center Station.

People-moving that benefits the environment & economy

Solutions

- Hatch in joint venture is designing the 1.9-mile underground light-rail Metro Regional Connector Project, extending from the Metro Gold Line Little Tokyo/Arts District Station to the 7th Street/Metro Center Station.
- Our design of twin tunnels and the 2nd and Broadway station includes precast concrete tunnel lining and cross passages. We are assessing the structure of the tunnel lining under a major fire event and evaluating the impact assessment study and mitigation for the overhead structure the tunnel now crosses.
- Design and construction of the 2nd and Broadway station is adjacent to the LA Times buildings, which require underpinning for the station-structure construction.
- Our team is contributing full 3D analysis and design of the large underground structures in a seismic-prone area; the design of main underground structures; analysis and design of the entrance structure under extremely heavy overbuild loads; and the development of in-house design software.

Highlights

- The new Metro Rail extension will offer passengers an alternative to congested roadways, providing significant environmental benefits, economic development, and employment opportunities throughout Los Angeles County.
- The corridor is expected to be completed in 2020 and will initially handle approximately 60,000 trips each working day.
- This extension offers a one-seat ride for travel across Los Angeles County. From the Metro Gold Line, passengers will be able to travel from Azusa to Long Beach and from East Los Angeles to Santa Monica without transferring.

METROLINX, EGLINTON CROSSTOWN LRT TUNNELS, Toronto, Ontario, Canada

Project Cost: $700M Length: 6.2 miles of tunnel

Challenge

- The Eglinton Crosstown Light Rail Transit (ECLRT) is part of Metrolinx's 2008 adoption of the "Big Move", a long-term regional initiative to revitalize and expand transit in the Greater Toronto Area.
- The LRT will cut across central Toronto for 19 kilometers, with about 10 kilometers of tunnels, 25 stations and stops, and 76 light rail vehicles running in two- or three-car trains.
- Metrolinx needed to pay critical attention during construction, due to the tunnel alignment's proximity to buried and surface utilities, two operational subway lines, and over 1,200 existing buildings.
- A very narrow right-of-way required careful consideration to navigate issues of private property, treatment of utilities, and traffic management.
- Tunnels were mined by four earth-pressure-balance tunnel-boring machines procured by the owner. The twin tunnels needed detailed design for the ECLRT, using a six-segment universal ring attachment.

Connecting east and west Eglinton

Solutions

- Served on Metrolinx's Technical Advisor team to oversee construction, contract compliance reviews, design audits, monitoring and construction across all ECLRT infrastructure.
- Prepared conceptual designs that later formed the Reference Concept Designs (RCD) for six of the 15 underground stations and multiple guideways, including the elevated guideway across the Black Creek Drive, the at-grade guideway east of Brentcliffe Portal, cut-and-cover tunnels, and the maintenance storage facility.
- Successfully delivered 76 LRVs for the ECLRT and 14 additional LRVs already in service in the Region of Waterloo (Ion Rapid Transit), leveraging proven technical and commercial expertise to manage all design reviews, quality assurance inspection, and production oversight.
- Collaborated within a joint-venture team to provide program management and technical advisory services during the Public Private Partnership (PPP) procurement "In Market" period. Attended in-market design meetings, responded to RFIs, reviewed proposals for compliance, supported negotiations, and assisted preparation of Project Specific Out Specifications (PSOS) for the PPP tender.

Highlights

- Directly supported carbuilder negotiations, leading to Metrolinx's original order with Alstom Transportation (previously Bombardier) for 182 LRVs.
- Successfully completed and delivered design work under a compressed 16-month design schedule.
- Minimized the number of times utilities had to be handled during the LRT construction by building jet-grouted headwalls at mine-through stations.
- Provided trusted expertise in structural, electrical, geotechnical, systems, rail, and transportation engineering, along with property acquisition and disposition.

State of Florida
Department of State

I certify from the records of this office that HATCH ASSOCIATES CONSULTANTS, INC. is a New York corporation authorized to transact business in the State of Florida, qualified on December 12, 2002.

The document number of this corporation is F02000006180.

I further certify that said corporation has paid all fees due this office through December 31, 2025, that its most recent annual report/uniform business report was filed on January 6, 2025, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Twenty-seventh day of February, 2025

Tracking Number: 8868022969CU

To authenticate this certificate,visit the following site,enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

BROWARD COUNTY LOCAL BUSINESS TAX RECEIPT

115 S. Andrews Ave., Rm. A-100, Ft. Lauderdale, FL 33301-1895 – 954-357-4829

VALID OCTOBER 1, 2025 THROUGH SEPTEMBER 30, 2026

Receipt #: 315-339812
Business Name: ARLENE PETUNA DIXON **Business Type:** ENGINEER (PROFESSIONAL ENGINEER)

Owner Name: HATCH ASSOCIATES CONSULTANTS INC **Business Opened:** 10/02/2023
Business Location: 1033 NW 6TH ST STE 206C FT LAUDERDALE **State/County/Cert/Reg:**
Exemption Code:
Business Phone: 215-542-0700

Rooms	Seats	Employees	Machines	Professionals
		5		

For Vending Business Only
Number of Machines: **Vending Type:**

Tax Amount	Transfer Fee	NSF Fee	Penalty	Prior Years	Collection Cost	Total Paid
30.00	0.00	0.00	0.00	0.00	0.00	30.00

Receipt Fee 30.00
Packing/Processing/Canning Employees 0.00

THIS RECEIPT MUST BE POSTED CONSPICUOUSLY IN YOUR PLACE OF BUSINESS

THIS BECOMES A TAX RECEIPT

WHEN VALIDATED

This tax is levied for the privilege of doing business within Broward County and is non-regulatory in nature. You must meet all County and/or Municipality planning and zoning requirements. This Business Tax Receipt must be transferred when the business is sold, business name has changed or you have moved the business location. This receipt does not indicate that the business is legal or that it is in compliance with State or local laws and regulations.

Mailing Address:

JODY BLEAM C/O HATCH ASSOCIATES CO
100 W BUTLER AVE
AMBLER, PA 19002-5703

Receipt #WWW-24-00280198
Paid 07/10/2025 30.00

2025 - 2026

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Signature

For Vending Business Only
Number of Machines: **Vending Type:**

Tax Amount	Transfer Fee	NSF Fee	Penalty	Prior Years	Collection Cost	Total Paid
30.00	0.00	0.00	0.00	0.00	0.00	30.00

Receipt #WWW-24-00280198
Paid 07/10/2025 30.00

Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☐ Public-Private Partnership (PPP/P3)

   ☐ Preliminary Development Agreement (PDA)

   ☐ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ☐ Design-Build-Finance-Maintain (DBFM)

   ☐ Other: CMAR, Progressive Design-Build (PDB)

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

Hatch will be interested and has extensive capabilities in delivering those scope elements listed below. Hatch is fully committed to working together with qualified City of Fort Lauderdale and Broward County firms to ensure local expertise and knowledge are incorporated into our project delivery. .

Planning & Feasibility
+ Environmental Assessment (EA), if required environmental impact statement (EIS).
+ Geotechnical investigations and analysis for tunnel alignment
+ Traffic and marine navigation studies
+ Train system/operations modeling
+ Real Estate investigation
+ Cost-benefit analysis and funding strategy

Design Phase
+ Preliminary engineering and tunnel alignment
+ Structural, mechanical, and electrical design
+ Integration with existing rail systems
+ Safety and ventilation systems design
+ Recommendation of project delivery method

Permitting & Approvals
+ Federal, state, and local permits
+ Coast Guard and marine navigation approvals
+ Stakeholder engagement (City, FDOT, Broward County, BCT, DDA, rail operators, MIASF/marine community)

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	✔	
EIS Development	✔	
Obtaining the Record of Decision (ROD)		
Utility Investigations	✔	
Utility Coordination	✔	
Geotechnical Investigations	✔	
Property Acquisitions		
Tunnel Concept Development and Verification	✔	
Validation of existing concept	✔	

Attachment 3 – Response Forms

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

It will depend on the procurement method and scope of work. Qualification for bidders should be broad enough to ensure participation by appropriate firms in US tunnel industry. Be firm but fair with risk allocation to the contractor which serves to avoid claims.

The draft contract should clearly define scope, responsibilities, and risk-sharing to ensure transparency and market interest. Depending on the procurement method, here's a comprehensive description of each:
The scope should clearly define the project's objectives, including tunnel alignment, dimensions, and integration with rail systems, while ensuring compliance with FDOT standards, safety codes, and environmental regulations. It must outline construction deliverables such as civil works, track installation, signaling, ventilation, and flood protection, along with quality benchmarks for materials and workmanship. Key milestones for design, construction, and commissioning should be specified, as well as interface management with marine traffic and adjacent properties. Provisions for advanced tunneling methods, sustainability features, and long-term operations and maintenance—including emergency protocols and monitoring systems—should also be included.

The terms and conditions should promote transparency through clear risk allocation for geotechnical, environmental, and schedule factors, performance-based payments tied to milestones, and costing for pricing and change orders. A formal change management process, neutral dispute resolution, and audit rights should be included, along with regular compliance reporting. Provisions for delay remedies, and termination or default conditions must be clearly defined to ensure accountability and minimize conflicts.

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- ○ 30% Design
- ○ 60% Design
- ○ 90% Design
- ● 100% Design recommended for an Owner who wants to be sure on price
- ○ Other (specify): _____

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

An Indicative Design serves as a conceptual baseline to guide procurement and early collaboration without locking in all details. It should be detailed enough to define intent, performance requirements, and major constraints, but flexible for innovation during the progressive design phase. Additionally, it shall address risk to cost and project delivery schedule.

The Indicative Design should define the tunnel's alignment, length, depth, and portals, along with integration points to existing rail infrastructure, e.g. the FEC corridor. It must outline functional requirements such as capacity for commuter rail, safety standards, and flood protection. Include preliminary geotechnical and environmental data, major system concepts for track, signaling, ventilation, and drainage, as well as space allocation for the tunnel envelope, emergency egress, and maintenance access. Finally, address implementation phasing of BCR South and BCR North, identify utility conflicts, adjacent property interfaces, and right-of-way boundaries to guide progressive design development.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

Given the requirements of tunnel systems (structural, ventilation, drainage, rail infrastructure, operation systems/signaling) and the need for long-term reliability, bundling maintenance with design and construction should be considered. It ensures:
+ Integrated design for maintainability.
+ Accountability for lifecycle performance.
+ Reduced risk of disputes over defects.
+ Post construction, establish a warranty period for the construction contractor to repair any deficiencies that may be identified.

However, if funding or governance constraints make long-term contracts difficult, a hybrid approach can be suggested:
+ Bundle initial maintenance period (5–10 years) with project construction contractor.
+ Bid long-term maintenance separately later; beyond the warranty period, routine maintenance and on-call contracts can be awarded to contractors for inspections and if significant rehab is required responsible for design and specification for rehabilitation contractor.
+ Depending on the scale of the rehab work, a consultant may need to be retained to perform construction supervision of the rehabilitation contractor.

Attachment 3 – Response Forms

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

For a rail tunnel project like the New River Tunnel Crossing, reducing long-term maintenance costs and risks starts at the design stage. Here are some key design considerations:
+ Design and Structural Durability
+ Developing a risk register
+ Broward Commuter Rail (BCR) operational parameters including station considerations
+ Drainage & Flood Protection
+ Ventilation & Environmental Control
+ Track & Systems Integration
+ Accessibility for Maintenance
+ QA/QC for construction work
+ Sustainability & Lifecycle Planning

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ■ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

■ Borehole logs every *_____ feet (please specify spacing)

* 250-500 ft depending on the variability of the geology

■ Geological baseline report (GBR)

■ Laboratory soil/rock test data

■ Groundwater monitoring data

■ Other: Geologic interpretation prior to GBR, Gas testing, seismic testing methods for unit interfaces, man-made v. organic obstructions

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

+ Instrumentation connected to a dashboard in owner's control room with alarm values
+ The latest tunnel boring machine technology for anticipated ground conditions
+ The use of fiber reinforcement to replace conventional reinforcement in the tunnel lining

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

Typically it is identical to Design-Build in the early stages of the process

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

There are a number of innovative financing methods that could be adopted for the New River Crossing based on our experience. In particular, transit-oriented development can be used as a financing tool to pay for infrastructure. A new station as part of the New River Crossing will increase the demand for transit-oriented development and will also increase property values due to proximity to a transit station. This value can be captured through several financing mechanisms (e.g., Tax Increment Financing (TIF), Development Impact Fees, Special Tax Assessments) to help pay for the New River Crossing

14. Which financing tools should be considered?

In addition to transit-oriented development as described in our response to question #13 above, the following financing tools could be used to finance the project:

+ U.S. DOT Transportation Infrastructure Finance and Innovation Act (TIFIA) Loans: TIFIA loans are low interest loans administered by the Build America Bureau and can be used to finance tunnels, public transit, intercity rail, and

15. Please advise of innovative ways for a repayment model for this Project.

The repayment models under various P3/DB/DBF/DBFOM for public infrastructure are diverse and can include:
+ Fixed-price contracts - Financing is provided by the public partner and comes fromm tax revenues, e.g., MAP Broward, funded through a local one percent, Charter County Transportation Sales Surtax approved by voters in November 2018
+ Design-Build-Finance-Operate-Maintain (DBFOM) - The private sector can

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

24 months-36 months depending on project support

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

24 months (includes site investigation)

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

Procurement/Delivery: 12-18 months Use of TBM: 2+ years depending on

19. How long should full construction, including TBM work, be expected to take?

3.5-4 years

20. What length of maintenance term is acceptable to the industry?

Maintenance should continue throughout the life of the facility for both structures

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

Risks will vary with different concepts. Typical risks that get mitigated are:
+ TBM selection
+ TBM availability during construction
+ TBM shaft excavation
+ TBM power
+ Property Acquisitions
+ Permitting
+ Funding
+ Unforeseen ground conditions
+ Surface settlement
+ Impacts to adjacent structures
+ Restriction to working hours in urban areas
+ Public safety in and around the construction site
+ Traffic congestion
+ Maintenance and protection of traffic
+ Workforce availability
+ Tunnel muck disposal
+ Contaminated ground
+ Ground water ingress into the tunnel
+ Emergency evacuation measures (fire life safety)
+ Utility relocation and impacts
+ Inundation under the river

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

Across North America, cities are embracing the benefits of well-planned, efficiently operated transportation systems; solutions that improve quality of life, reduce environmental impacts, and drive economic growth. Fort Lauderdale's TRAX initiative and its exploration of traffic tunnels exemplify this forward-thinking approach. Whether implementing new mobility strategies, expanding multimodal connections, or upgrading existing infrastructure, Hatch offers the expertise and experience to ensure successful project delivery.

From concept development through design, construction, and implementation, Hatch provides integrated solutions tailored to each community's unique needs. We understand the complexities of urban infrastructure projects, including site constraints, right-of-way challenges, stakeholder engagement, environmental considerations, and safe construction practices—all while ensuring seamless integration with existing transportation networks. These factors often extend beyond engineering but remain critical to achieving long-term success.

If the opportunity allows, Hatch would encourage a thought leadership session to explore the City's vision in relation to its future needs. This collaborative forum would align strategic objectives with emerging transportation trends, technological innovations, and sustainability imperatives. By engaging key stakeholders early, we can identify potential challenges, prioritize investments, and develop innovative solutions that anticipate growth and resilience requirements. Drawing on Hatch's global experience in facilitating similar workshops, we would deliver actionable insights and a roadmap that reflects both community aspirations and long-term infrastructure goals.

To further demonstrate our capabilities, Hatch would be pleased to provide references for tunnel projects completed for the following completed for the following clients:

+ Sound Transit
+ LA Metro
+ WMATA

These references can speak to our technical expertise, collaborative approach, and successful delivery of complex tunneling projects in challenging urban environments.

Name:	Colin Lawrence	Title:	Global Tunnel Sector Advisor
Company:	Hatch Associates Consultants Inc.	Phone:	(332) 255-6045
Address:	1033 NW 6th ST, STE 206-C Fort Lauderdale, Florida 33311 USA	Email:	colin.lawrence@hatch.com
Signature:	C Lawrence	Date:	December 1, 2025

Section 1

1. Contact Information

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2. Company profile and relevant experience

Mott MacDonald has helped transit authorities across North America solve some of the industry's most difficult urban, underground transit design and construction challenges—we have worked alongside such clients as Sound Transit (Seattle), Los Angeles Metro, San Diego Association of Governments (SANDAG in San Diego, CA), and New York City's Metropolitan Transportation Authority, as well as the TTC and Metrolinx (Toronto), to Calgary Transit (Calgary) and TransLink (Vancouver). Globally, Mott MacDonald's solutions are at the cutting edge of transit technologies and advanced delivery methods, on projects like Crossrail and the Northern Line Extension in the UK, and Sydney Metro in Australia. Mott MacDonald is recognized for its work with systems integration, from conceptual design through testing, commissioning, and start-up. Mott MacDonald is also recognized for project and construction management with notable transit projects working for Seattle's Sound Transit system and Metrolinx's Ontario Line in Toronto.

As an employee-owned global consultancy focused on providing engineering and management services, Mott MacDonald employs more than 20,000 staff worldwide, including 2,500 in North America. We have a long history of working in the United States, both as Mott MacDonald (since the 1950s), as Hatch Mott MacDonald (from the mid-1990s to the mid-2010s) and now again as Mott MacDonald.

By the numbers

130+ years of continuous urban transit and tunneling worldwide.

In 1886, Mott MacDonald's founder, Sir Basil Mott, was involved in the first application of tunneling in compressed air while constructing deep tunnels for the London Underground.

Mott MacDonald designed and held patents on the first Bentonite slurry TBM, tested in 1971. There were 35 slurry TBMs operating worldwide by the end of the decade.

Mott MacDonald designed the pre-cast concrete segmental liner for the Toronto Subway in 1967, the first use for transit tunnels in North America.

Mott MacDonald provided program management services for the Alaskan Way Viaduct Replacement Tunnel Project in Seattle, the first bored double-deck truck tunnel, and at 57-ft 5-in., the largest EPB TBM in the world when it launched in 2011.

To date, Mott MacDonald has delivered more than 9,000 km of tunnels globally.

3. Experience with tunneling technologies and methodologies, and examples of tunnel projects completed within the past 10 years

The following section highlights a few key projects Mott MacDonald has delivered. Mott MacDonald is well versed in designing and managing the construction for all tunnelling technologies including TBM, NATM, cut-and-cover, etc.

Project: Regional Connector Transit Corridor

Location: Los Angeles, CA

Client: Los Angeles County Metropolitan Transportation Authority (LA Metro)

Expertise: Bid phase, Final design, Design support during construction

Timeline: 2013 through 2023

Opportunity

Over the years, rail lines have been built to serve the sprawling city of Los Angeles, including three LRT lines that end at the edges of downtown Los Angeles. Since the 1980s, plans have been discussed for a rail link that would connect these three LRT lines, as well as provide easy transfers between the city's heavy rail and LRT systems in downtown Los Angeles.

The Regional Connector is a 1.9-mile (3-km) trunk line running from the new Little Tokyo/Arts District Station on the Gold Line to the 7th Street/Metro Center Station in Downtown Los Angeles, where it connects both the Exposition and the Blue LRT lines, as well as the heavy rail Red Line and Purple Line. The line includes three new underground stations at Little Tokyo/Arts District, Civic Center/Broadway, and Grand Avenue/Bunker Hill.

Challenges to the project include the need to reduce ground-borne noise and vibration at a prestigious music school and the Walt Disney Concert Hall, as well as to minimize disruption to the operation of the existing Gold Line. Because of seismic activity in Southern California, the line had to be designed to be earthquake resilient.

Solution

LA Metro selected the Contractor Joint Venture of Skanska/Traylor Brothers with Mott MacDonald as the prime designer for this major and highly complex design-build delivery project. Our scope of work included:

- One mile (1.6 km) of twin bored tunnels.
- Nearly 1 mile (1.6 km) of cut-and-cover guideway tunnel.
- The first crossover cavern on the LA Metro system, constructed utilizing the sequential excavation method.
- Three underground stations.
- Three tunneled cross-passages.
- Ventilation, power, and communication systems.
- Civil, roadway, and utility work.
- Direct fixation track, resilient tie track, two double crossovers, a complex wye interlocking track structure, and floating slab track in sensitive areas requiring mitigation of ground-borne noise and vibration.

The project was supported remotely by staff from 15 Mott MacDonald offices throughout North America, in addition to local staff co-located with the contractor during the production of the final design resulting in streamlined communication and enhanced coordination efforts. Local specialty subconsultants were managed by a core team of senior Mott MacDonald staff.

We were responsible for innovations that saved money, improved the passenger experience, verified safety, and shortened the project schedule. These innovations included:

- Raising the alignment to reduce the depth of stations and the vertical travel distance, while maintaining LA Metro design criteria.

- Analyzing and developing a robust, yet cost-effective approach to the tunnel emergency ventilation system that met the intent of LA Metro's strict fire heat-release rate criteria.
- Using building information modeling to design the stations and tunnels, helping meet the contractor's accelerated schedule and coordinate multidiscipline design work in a fast-paced design-build environment. This was the first 3D design delivery used for the LA Metro system.

As part of the final design, Mott MacDonald coordinated with multiple key public stakeholders, including the Los Angeles Bureau of Engineering, Los Angeles County Flood Control District, and the Los Angeles Department of Transportation.

Outcome

The Regional Connector opened on June 16, 2023, and handles 90,000 or more trips each weekday. The line allows for a single-seat ride throughout Los Angeles County and links LA Metro's entire 80-station system to Southern California's regional passenger rail system (Metrolink), which services 55 stations.

The new Metro Rail connection offers an alternative transportation option to congested roadways and provides significant environmental benefits, economic development, and employment opportunities throughout Los Angeles County.

This project is a continuation of Mott MacDonald's 36-year collaboration with LA Metro. Gary Baker, Former LA Metro Executive Officer, said, "Mott MacDonald has produced designs and obtained approvals in a timely manner sufficient to keep construction advancing as scheduled. They possess adequate and experienced resources to perform the work required. Their project managers have been responsive, knowledgeable, and a pleasure to work with. Challenges have been addressed in a timely manner. I look forward to working with them again."

Project: Hampton Roads Bridge-Tunnel Expansion

Client: Hampton Roads Connector Partners

Location: Hampton, VA

Expertise: Project management, Tunnel design, Tunnel ventilation, Fire protection, Stakeholder coordination, Engineering services, Communications, Intelligent transportation systems, Tunnel systems

Timeline: 2019 through present

Opportunity

The Hampton Roads Bridge-Tunnel is a four-lane facility that extends 3.5 miles long and comprises of bridges, trestles, artificial islands, and tunnels. It carries traffic under the main shipping channels of the James River. The original two-lane crossing was completed in 1957, and over time, the volume of traffic grew well beyond the designed capacity of the crossing, leading to serious traffic problems in the Hampton and Norfolk areas.

The Virginia Department of Transportation (VDOT) is undertaking corridor capacity improvements along almost 10 miles of Interstate 64, including the construction of twin tunnels with a 41.5-foot-internal diameter that will double the capacity of the bridge-tunnel. These twin tunnels included 2.4 kilometers of subaqueous crossing per tunnel.

The Hampton Roads Bridge-Tunnel includes large-diameter deep tunnels in soil, marine works, and cofferdam construction methods. The project includes a four-lane facility that extends 5.6 kilometers long and comprises of highway, bridges, trestles, and artificial islands. The internal diameter of the tunnel is 12.6 meters, with a maximum tunnel depth of 52.7 meters. The variable density tunnel boring machine (TBM) that is mining the tunnel is 14 meters in diameter and 130 meters in length, one of the largest TBMs in the world.

Major challenges include minimizing impacts of the project on the sensitive marine environment and avoiding impacts on marine traffic using the channel, including US Navy

vessels. Additionally, the VDOT has an aggressive deadline to bring the project into operation, as this forms part of a regionwide development of tolled roads and provisions of additional high-occupancy vehicle lanes for enhanced public transportation options in the region.

Solution

The joint venture, Hampton Roads Connector Partners, was chosen to deliver this $3.3 billion project. Mott MacDonald serves as the design lead for geotechnical services, island expansion, tunnel and shaft design, floodgates, approach structures, and all mechanical, electrical, and plumbing facilities. In our design lead role, Mott MacDonald has overseen a multidisciplinary team of in-house designers and subconsultants to make 180 design submissions to VDOT over various design stages

Mott MacDonald designed the tunnel in soil constructed by the TBM. This included the design of a segmental precast concrete tunnel lining system, which features a reinforced, precast concrete lining with a hybrid reinforcement of both steel fibers and conventional reinforcement. The concrete mix for these tunnel lining segments was specifically formulated to meet the project's 100-year durability requirements.

Mott MacDonald also designed the support of excavations in soil for the TBM launching and receiving shafts. These shafts were excavated within the footprint of two reclaimed islands abutting the navigation channel for the Port of Virginia. The shaft excavations, which included a circular tri-cell shaft at South Island and a circular-rectangular twin-cell shaft at North Island, were supported by slurry walls extending up to 58 meters below the island surfaces.

To facilitate a collaborative approach to the design, the team held regular discipline-based workshops and task force meetings during the proposal phase of the project. These meetings continued into the project execution phase, and a basis of design report was produced to record the design assumptions and key decisions.

Our New England-based geotechnical staff performed the following tasks:

- Specified, managed, and provided oversight for a subsurface investigation, including over 250 borings, 216 cone penetration tests, and 74 environmental borings on land and in marine environments.
- Specified, managed, and reviewed the collection and testing of over 11,000 index tests, 220 strength tests, and 172 consolidation tests.
- Developed geotechnical design reports for 10 separate design packages, including defining geotechnical parameters for traditional and finite element calculation packages related to shallow and deep foundations, tunneling, slurry walls, coastal engineering, retaining walls, and bridge abutments.
- Developed specifications for ground improvement including jet grouting and deep soil mixing.
- Performed settlement analysis for the expansion of existing portal islands on soft clay with closed form solutions and finite element modeling.

Outcome

In November 2023, 5,480 cubic yards of concrete was placed to create the base slab of a shaft on North Island, one of two artificial portal islands at each end of the tunnel. A few months later, in March 2024, the tunnel boring machine "Mary" completed a journey of 8,000 feet to reach the North Island. A nitrogen table—a steel cradle supported by liquid nitrogen—was used to rotate it into position for its return journey back to the South Island.

When complete in December 2025, the new Hampton Roads Bridge-Tunnel will be the longest subaqueous highway tunnel in North America. According to the VDOT, "The expansion will increase capacity, ease major congestion, and enhance travel time reliability."

Section 2

City of Fort Lauderdale
Department of Transportation and Mobility
100 N Andrews Ave
Fort Lauderdale, FL 33301

Subject: Letter of Interest – New River Crossing Project

Dear Selection Committee,

On behalf of Mott MacDonald, I am pleased to submit this Letter of Interest for the City of Fort Lauderdale's New River Crossing project. With extensive experience in tunnel design, construction, and infrastructure delivery, our team is enthusiastic about the opportunity to contribute to this transformative initiative.

Relevant Experience and Capabilities

Our organization has successfully delivered complex tunnel projects in urban and environmentally sensitive areas, including:

- Geotechnical Investigations and Baseline Reporting: We have led full geotechnical investigations and developed Geotechnical Baseline Reports (GBRs) that support reliable cost and schedule estimates for some of the most challenging sub-aqueous tunnels in North America. Our approach includes borehole logs, laboratory testing, and groundwater monitoring coupled with the early use of LeapFrog modeling.
- Innovative Tunnel Construction: We have implemented advanced Tunnel Boring Machine (TBM) technologies and construction sequencing strategies that reduce schedule risks and improve safety and efficiency including working on some of the largest diameter soft ground TBMs in the World.
- Progressive Procurement Expertise: Our team has participated in Progressive Design-Build and Pre-Development Agreements (PDAs), offering flexibility and collaboration with owners, contractors and developers during all phases of design.
- Financing and Delivery Models: We have utilized innovative funding mechanisms, including Public-Private Partnerships (P3), Design-Build-Finance-Maintain (DBFM), and milestone-based repayment models tailored to large infrastructure projects.

Strategic and Technical Value

We bring the following strategic advantages to the New River Crossing:

- Integrated Delivery Approach: Our ability to bundle design, construction, and maintenance ensures lifecycle efficiency and cost control.
- Risk Mitigation in Urban Settings: We understand the schedule and reputational risks associated with geotechnical and settlement issues during tunnel construction. We recommend a risk-based approach to the geotechnical investigation to thoroughly understand the areas of the highest geotechnical risk and develop viable technical solutions ahead of excavation to avoid unnecessary settlement during construction. This will be coupled with a thorough and detailed instrumentation and

monitoring plan enabling the understanding of any ground movements during construction.

- Design Milestone Readiness: We recommend a 30% design milestone prior to procurement to balance flexibility and cost certainty.
- Commitment to Transparency: We support contract terms that promote open-book cost sharing, collaborative risk management, and clear scope delineation between owner and contractor.

We are confident that our experience and approach align with the City's goals for the New River Crossing. We look forward to the opportunity to further discuss our qualifications and vision for this project.

Sincerely,

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Attachment 3 – Response Forms

SCOPE OF WORK

1. What procurement method would you be interested in? (check all that apply)

   ☐ Public-Private Partnership (PPP/P3)

   ☐ Preliminary Development Agreement (PDA)

   ☐ Design-Build (DB)

   ☐ Design-Bid-Build (DBB)

   ☐ Design-Build-Finance-Maintain (DBFM)

   ☐ Other: Progressive Design Build, CMGC

2. Based on the high-level description, what scope elements do you believe should be considered? Please specify what scope elements you would be interested in completing?

   We can perform all of the design scope required and would partner with a construction firm in a design-build or similar contract scenario. We would suggest splitting the contracts, if required, with consideration to reduce difficult interfaces.

3. Of the scope elements listed below, which would you be interested in accepting and what would you prefer the Owner to be responsible for?

Scope Element	Company	Owner
Environmental Clearance	☐	✔
EIS Development	☐	✔
Obtaining the Record of Decision (ROD)	☐	✔
Utility Investigations	✔	✔
Utility Coordination	✔	✔
Geotechnical Investigations	✔	✔
Property Acquisitions	☐	✔
	☐	☐
	☐	☐
	☐	☐
	☐	☐

Attachment 3 – Response Forms

4. What scope elements, terms and conditions should be included in the draft contract to promote transparency and interest?

Overall budget, compensation, liquidated damages, insurance limits per contract period (design, pre-construction, construction), board approval requirements and dates,

DESIGN

5. What design milestone should be provided before procurement for tunnel projects of this nature?

- ○ 30% Design
- ○ 60% Design
- ○ 90% Design
- ○ 100% Design
- ● Other (specify): it depends on which contract model is selected

6. If the project is to be procured as a Progressive Procurement, what specific elements and what level of design development should be included in the "Indicative Design"?

The Indicative Design must identify the design "guardrails" or constraints which cannot be altered. For example, minimum track radius or train speed. A corresponding Basis of Design report should also clarify the parameters that can be modified and/or are open to innovations and value analysis. Technical project requirements should set out prescriptive or performance based specifications to govern the design.

7. Should maintenance be bundled with design and construction, or bid separately? Why?

We would recommend not including maintenance in bids based on the timing and unknowns. Any maintenance would not start for many years after design & construction procurement. A subsequent procurement for maintenance would likely yield better costs.

8. What design considerations would you incorporate to reduce long-term maintenance costs and risks?

Closeable tunnel doors to prevent water intrusion during storm events. Tunnel finishes that are durable and that limit maintenance. Safety in design principles to allow maintenance to be completed safely (i.e., lighting located at easily accessible locations for replacement).

GEOTECHNICAL

9. Should the Owner commission the full geotechnical investigation and development of baseline Geotechnical Baseline Report (GBR) before procurement? ■ Yes ☐ No

10. What level of geotechnical information do you require to provide a reliable cost and schedule estimate? Select all that apply:

■ Borehole logs every 50 feet (please specify spacing)

■ Geological baseline report (GBR)

■ Laboratory soil/rock test data

■ Groundwater monitoring data

■ Other: Completion of the GBR and spacing of bore holes prior to procurement are dependent on the contract model

INNOVATION

11. What innovative methods or technologies have you applied to improve safety, cost, or efficiency in tunnel construction?

As designers, we do not typically specify means and methods of construction, but look for design innovations to improve safety, cost, and efficiency. For example, we have been leading the way in using fiber reinforcement for tunnel linings in place of rebar reinforcement (as design loads allow). We also look to apply our "safety in design" principles, looking for design solutions that can make construction or operations of the tunnel safer. For example, in transit systems we locate lighting in optimal positions that allow the light bulbs to be changed safely, avoiding work at height wherever possible.

Attachment 3 – Response Forms

FUNDING & FINANCING

12. If the project is procured on a Progressive basis, what level of upfront funding should be committed before procurement begins?

Enough to align with the next step of the process and to maintain progress.

13. Based on your experience, please share innovative financing/funding methods that you have used previously for successful implementation of large infrastructure projects which can be adopted for the New River Crossing?

1. U.S. Federal and Development Agencies
USAID and Millennium Challenge Corporation (MCC) provide significant funding for infrastructure projects through grants and technical assistance. MCC focuses on time-limited grants tied to governance and policy reforms, ensuring transparency and sustainability.
Export-Import Bank (EXIM) and Overseas Private Investment Corporation (OPIC) offer credit and insurance products to support U.S. companies in

14. Which financing tools should be considered?

1. Public-Private Partnerships (PPP)
PPP models are widely used for large-scale tunnel projects, especially when government budgets are constrained.
Example: The Sariyer Kilyos Tunnel Extension in Türkiye was financed through a PPP structure with Turkish commercial lenders. Technical and environmental advisory services ensured compliance and financial close.

15. Please advise of innovative ways for a repayment model for this Project.

1. Availability Payment Model
How it works: The public authority makes periodic payments to the private partner based on tunnel availability and performance rather than traffic revenue.
Why innovative: Reduces demand risk for investors and ensures predictable cash flow.
Best fit: Urban transit tunnels like the Bay Area Rapid Transit Silicon Valley Extension, which used progressive design-build and early works financing to

PROJECT TIMELINE

16. What is a realistic timeframe for negotiating and finalizing a Pre-Development Agreement?

It depends on how many entities are involved on the owner's side.

Attachment 3 – Response Forms

17. For Progressive Procurement, how much time should be allocated for design development before construction?

Enough to mitigate the biggest risks (permits, ROW) & reduce contingency

18. What is the expected duration for procurement, delivery, and use of a Tunnel Boring Machine (TBM)?

Design and fabrication of a 30 ft machine = 1.5 - 2 years

19. How long should full construction, including TBM work, be expected to take?

It depends on the total length of tunnel, ground conditions, station location, TBM

20. What length of maintenance term is acceptable to the industry?

Contractually typically 5-10 years, however as designers we do not provide

21. What are the key schedule risks for tunnel projects in urban or constrained environments?

Right of Way acquisition
Utility location and re-location
Geotechnical investigations
Permitting
Environmental clearance and regulatory approval
Operator (s) approvals
Partner (s) approvals
Funding sources
Design approvals
Stakeholder engagement

Attachment 3 – Response Forms

ADDITIONAL COMMENTS

Please use the space below to provide any additional comments or project considerations that you would like to share with the City's project team.

Alternative contracts are great when design innovation and flexibility is desired. But the owner must be able to make decisions quickly to maintain the schedule and allow for sufficient time in the schedule to fully evaluate design optimizations and complete value engineering.

The facility owner and end users (railways) must have agreed to goals from the beginning. Leveraging tools such as 3D Building Information Management (BIM) and Common Data Environments (CDEs) can assist in aligning teams through the design and review process.

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