Construction Management Services for the

Raritan River Bridge Replacement Project

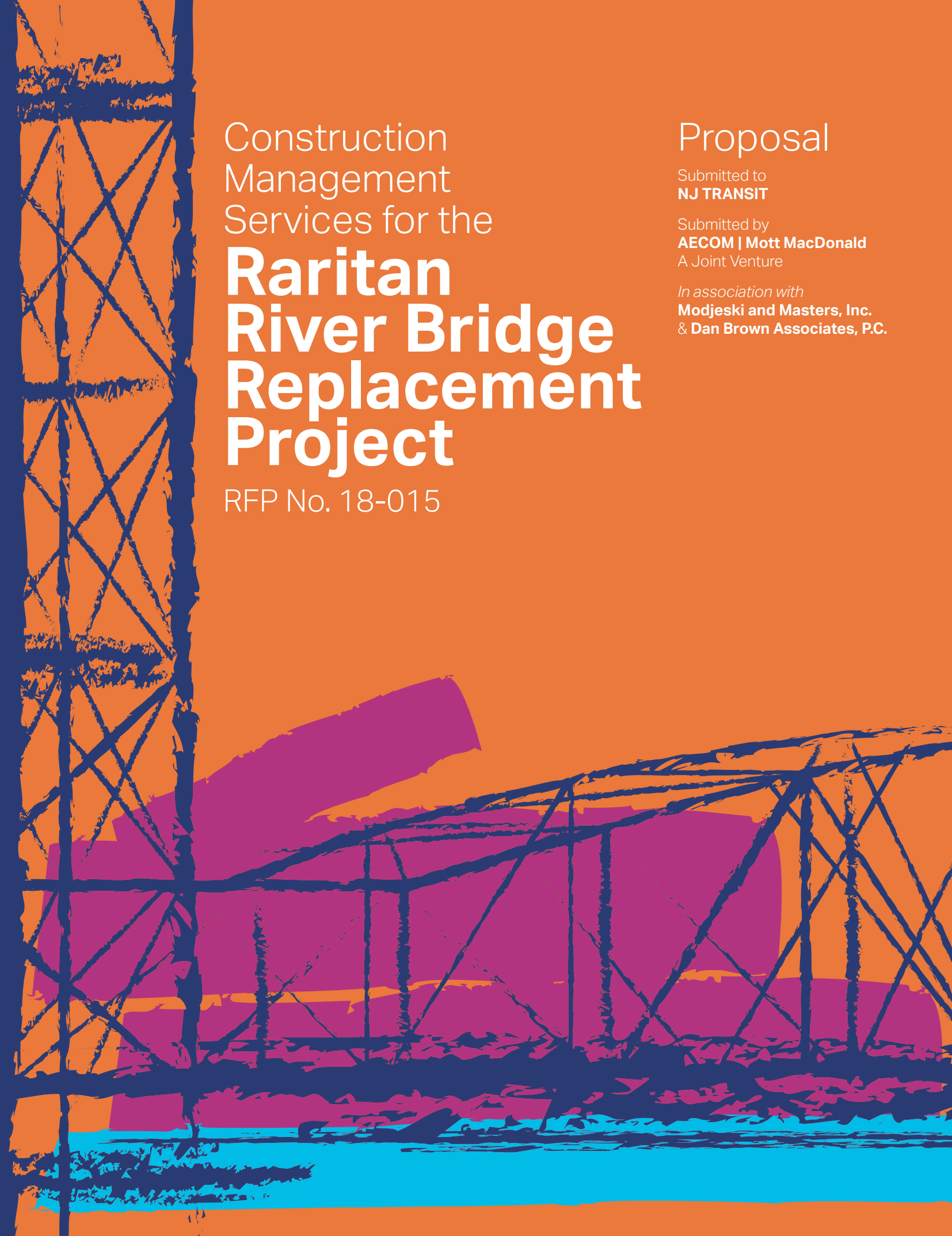
RFP No. 18-015

Proposal

Submitted to
NJ TRANSIT

Submitted by
AECOM | Mott MacDonald
A Joint Venture

In association with
Modjeski and Masters, Inc.
& **Dan Brown Associates, P.C.**



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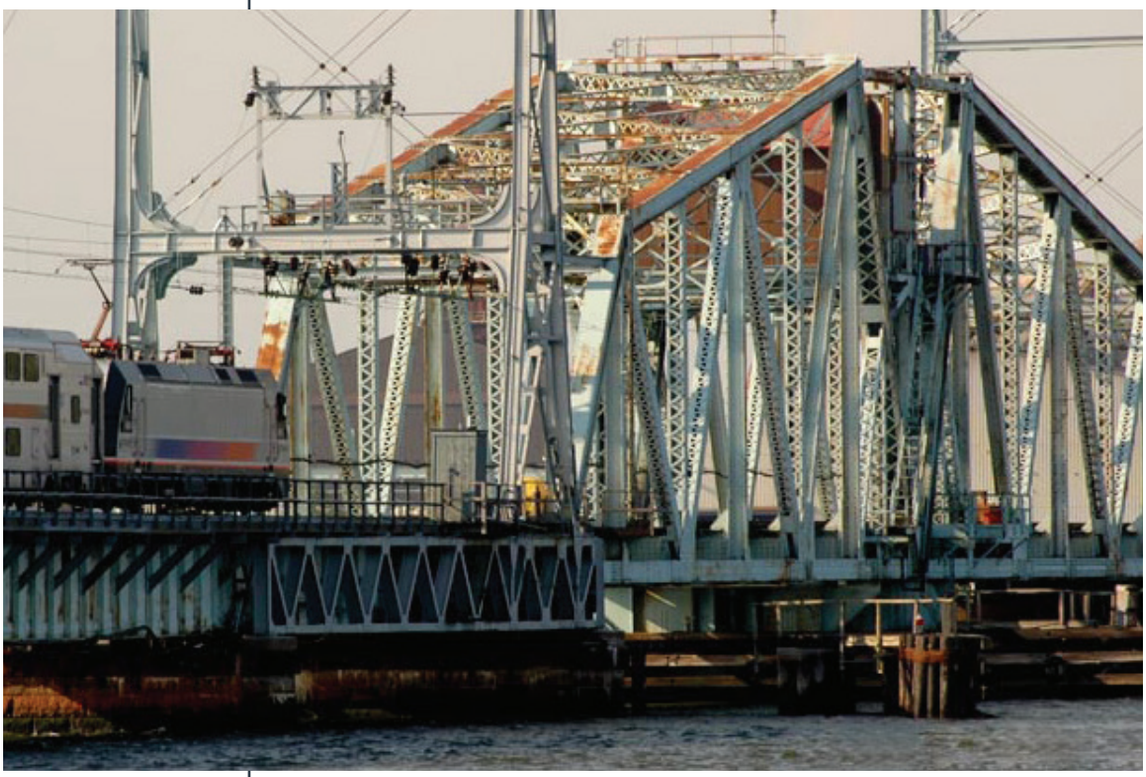


1. Cover Letter

November 27, 2018

NJ TRANSIT
Procurement Department, 6th Floor
One Penn Plaza East
Newark, NJ 07105-2246

Attn: [redacted]

RE: Construction Management Services for the Raritan River Bridge Replacement Project
RFP No. 18-015

Dear [redacted]:

The AECOM | Mott MacDonald JV Team recognizes the importance of the Raritan River Bridge Replacement (RRBR) Project and its role in delivering reliable commuter service to NJ TRANSIT customers. The current 110-year-old structure serves area communities, metropolitan area commuters and tourism to coastal recreational areas. It also facilitates Conrail freight movement, hauling 2,000,000 tons of durable goods annually over the bridge as well as both commercial and recreational maritime traffic, with over 1,500 bridge openings per year. Replacement of the structure is a major investment that will improve the North Jersey Coast Line service for NJ TRANSIT customers and for Conrail freight services and for local maritime traffic. The AECOM | Mott MacDonald JV has assembled a team that is ready to deliver a successful project for NJ TRANSIT that meets all the goals of the RRBR Project, including mitigating impacts to NJ TRANSIT operations, coordinating and scheduling and managing NJ TRANSIT Force Account work, minimizing and avoiding impacts to the environment and local communities, building a valuable and resilient replacement to River Draw and accomplishing all of these goals on time and on budget.

The AECOM | Mott MacDonald Joint Venture solidifies and brings to NJ TRANSIT the strength and resources of two leaders in transportation engineering and construction management. We have been working together for the past year, conducting workshops to help us fully understand the RRBR Project, the inherent risks associated with projects of this magnitude, and working together to develop strategies and solutions to mitigate and address those risks. To further solidify our team, AECOM | Mott MacDonald added Modjeski and Masters, Inc., recognized experts in movable bridge design and construction, and Dan Brown and Associates, P.C., experts in drilled shaft design and construction.

The AECOM | Mott MacDonald Team has been looking forward to this opportunity to submit our proposal for this important project and has dedicated the right leadership, staffing and technical approach to make sure this critical rail project is successfully managed to serve NJ TRANSIT's needs.

We offer NJ TRANSIT:

- **The right balance of New Jersey large project construction management experience, railroad movable bridge expertise and maritime experience.** As our project portfolios and references attest, we have successfully delivered great transportation projects for our clients. However, a firm's performance is only as good as the great people it delivers to your project. In our commitment to the success of this project, we have designated a team of professionals to lead the work that is second to none.

- **Strong Leadership.** An industry-leading project manager, **Al Baycora, PE**, will head our CM organization as project director and be your steadfast partner to make sure all the best resources are at your disposal. Al's résumé is broad and diverse, as he has directed billion-dollar program/construction management and design projects around the world, involving rail, bridge and highway structures, with many in the metropolitan area. Al is the national practice leader for moveable bridges at AECOM. Our **Construction Manager** is **Tom O'Connor, PE**, who will be your partner on the ground, day after day. Tom brings all the lessons learned from his past successes, including delivering the largest CM contract in recent New Jersey history, the $2.5-billion Turnpike Interchange 6 to 9 Widening, on schedule and under budget. His experience also includes

working on one of New York City's most heavily traveled rail corridors, one that services the Harlem, Hudson and New Haven Rail Lines, and he has managed bridge replacement projects over both NJ TRANSIT's Hudson Bergen Light Rail and the Bergen Main Line.

Strength in construction delivery. The AECOM | Mott MacDonald Team brings experience in delivering large-scale construction projects locally in the metropolitan area and all over the world, with proven methods focused on driving to completion through strict schedule adherence and tight budget control, with zero tolerance for delays or cost overruns. This was demonstrated by our CM Tom O'Connor on the highly successful and award-winning Turnpike Interchange 6 to 9 Widening, which was delivered on schedule and under budget under Tom's skillful direction.

A thorough understanding of how to maintain critical NJ TRANSIT operations. Construction of a new bridge adjacent to an existing bridge is a challenging task. It is vital to your customers who depend on you that this is done with minimal disruption to them. Our team includes proven professionals who know your system, have a full understanding of your operations, practices and standards and have the experience to avoid pitfalls that could result in loss of service. Our technical resources include Glenn Mack, with 22 years of project and program management experience with NJ TRANSIT and extensive Superstorm Sandy recovery repair work. With Glenn's assistance, our team will form a collaborative working relationship with NJ TRANSIT's Force Account staff.

A proactive approach that addresses the challenges proactively and efficiently. The AECOM | Mott MacDonald Team has identified a number of key challenges and drivers that are critical to the successful delivery of this project. Our approach is detailed in our proposal narrative, which outlines solutions and recommendations to address these issues, while also maintaining cost and schedule, and minimizing inconvenience and disruption to the riding customers. Our team has prepared a proposed staging/sequencing plan and identified major challenges and potential mitigation measures. We realize that maintaining schedule and cost is the most critical challenge we will face as CM and have developed our approach based on strategies to mitigate schedule risks and the associated costs. Below are some of the key project challenges that our team is prepared to address from Day One to ensure timely completion of the project.

- ***Deep drilled shaft foundations in a marine environment*** – **John Turner, PE, PhD**, **a recognized expert in drilled shaft construction**, is on our team. He brings his valuable and highly relevant experience as the foundation lead for the Goethals Bridge Replacement, approximately 11 miles north of Perth Amboy, also founded on rock-socketed large-diameter drilled shafts. There is the risk that a number of activities associated with the drilled shaft installation could result in potential schedule delays. For that reason, we propose evaluating the design and reviewing all contractor means and methods to confirm best practices. We will verify and closely monitor all instrumentation and tests. We have the benefit of Dan Brown and Associates' recognized expertise in the field of deep foundations. They literally "wrote the book" on drilled shafts — John Turner and Dan Brown co-authored "Drilled Shafts: Construction Procedures and LRFD Design Methods (2010)."
- ***Movable bridge construction*** – During our project workshops, both movable bridge and drilled shaft foundation expertise were critical in developing the right technical approach for the project. In both these areas, the AECOM | Mott MacDonald Team brings exactly that proven expertise to the RRBR Project. From **Modjeski and Masters, Kevin Johns, PE**, is our movable bridge expert who has served as **project manager or task leader on 28 movable bridge projects, 19 railroad projects and 9 movable railroad projects**. **Ralph Eppehimer, PE**, has managed, inspected or been the resident engineer for **236 railroad bridges, 44 of them being vertical-lift bridges**. There are a number of risks associated with the movable bridge that could cause delay: float-in of the main bridge span; tower construction; long-lead items; and integration of the mechanical and electrical systems.

During the Pre-construction Phase, we will benefit from the expertise of our movable bridge experts, our partners Modjeski and Masters, who will play an important role in the development of our Construction Management Plan as it relates to the movable bridge components, from the QA procedures for mechanical, electrical and structural components through the final commissioning and completion of O&M manuals.

- ***Installation of new track and rail systems*** – Force Account coordination will be one of the major factors in the successful completion of the RRBR project. During the course of our work for transit agencies throughout the metropolitan area, our team has developed a process for verification and validation for all Force Account invoices, labor and equipment rates. This process was used effectively to manage Force Account work on the Secaucus Transfer project. Under Pat Dempsey's oversight as Resident Engineer for Rail, and his management of Force Account activities, we will proactively manage and coordinate the critical work involved in the construction of new track and rail systems.
- ***Ground improvements*** – The poor soil conditions at both approaches to the new railroad alignment in both Perth Amboy and South Amboy require significant ground improvements to construct the new railroad embankments and avoid excessive embankment settlement. This will have to be performed early in the schedule, with careful management of soil embankment, excavations, surcharging and rigid inclusions techniques. Our team has worked closely with the RRBR Foundation Design Engineer on our Interchange 14A project, where similar ground conditions had to be strengthened and settlements minimized, and we successfully completed the installation of over 10,600 rigid inclusions columns and 13.5 acres of load transfer platforms.

A commitment to the region and NJ TRANSIT. Both AECOM and Mott MacDonald have a substantial presence in the New York and New Jersey region, and through our work on numerous transportation projects we have proven our commitment to enhancing mobility of both people and goods in the region. As many of our staff, friends and their families are New Jersey residents who regularly use NJ TRANSIT, we consider the Raritan River Bridge Replacement Project an important piece in improving regional transportation, and we have a stake in its success.

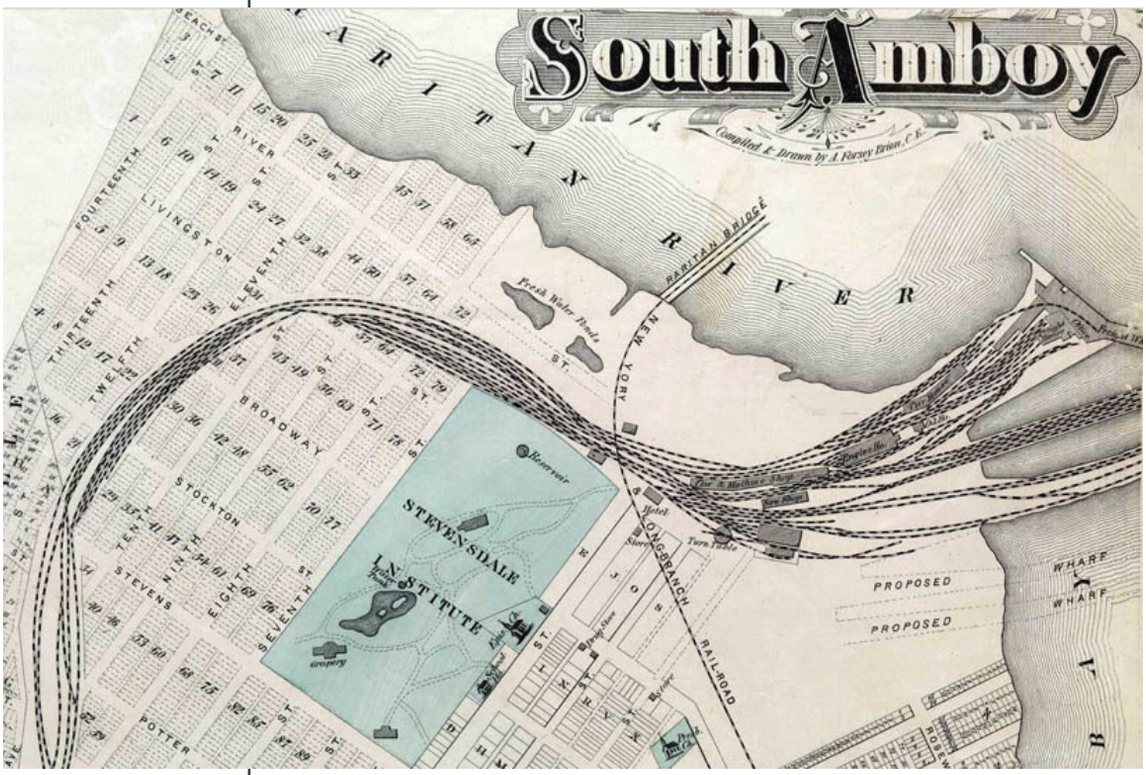
We look forward to the opportunity to serve as your trusted partner in this critical resiliency project. If you have questions or require additional information on our te osal, please do not hesitate to contact our point-of-contact for the joint venture, Anil Parikh, at [redacted], or at anil.parikh@aecom.com.

Sincerely,

AECOM | Mott MacDonald, *a joint venture*

Anil Parikh, PE, Vice President/Program Executive
AECOM Technical Services, Inc. for

Albert Beninato, Executive Vice President
Mott MacDonald



2. Qualifications of Firms

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The AECOM | Mott MacDonald joint venture team understands that the mission of NJ TRANSIT is to provide safe and reliable transit service for its customers. The damage caused by Superstorm Sandy has made resiliency work a particularly critical part of that mission. The Raritan River Bridge Replacement (RRBR) Project is an important component of this resiliency effort. NJ TRANSIT is seeking a full service construction management team that will take on the responsibility of providing oversight, minimizing risk, and delivering the new Raritan River Bridge, fully commissioned, on time and within budget, while maintaining service to its customers.

The AECOM | Mott MacDonald Team is built around two firms who have the right blend of expertise, experience and resources to deliver a successful project. Based on such recent experience together, such as the $10-billion MTA East Side Access Program Management and the WMATA General Architectural & Engineering Rail Systems IDIQ Project, AECOM and Mott MacDonald know that they can rely on each other to do whatever it takes to deliver a successful project to NJ TRANSIT and its customers. Forming the other cornerstones of this team are two primary teaming partners: Modjeski and Masters (M&M), a world-class leader in the design and construction of movable lift bridges, and Dan Brown and Associates (DBA) an industry leader in deep geotechnical foundations with specialized expertise in the design and construction of large-diameter drilled shafts. This team provides all the essential qualifications to take on the construction management duties for this important project that is demonstrated by their extensive experience in all the project elements, including rail and rail systems, fixed bridge, lift span bridge, foundation systems, ground improvements, environmental compliance, marine construction, and final testing and commissioning.

In addition, we have selected specialty and DBE subconsultants that we have worked with successfully on other major projects. Together we offer a seamless team with tremendous depth of knowledge and specialized experience involving the Raritan River area, NJ TRANSIT, and the operating and logistical challenges of this bridge replacement project. Combined, our world-class track record in project and construction management, railway and multi-span bridge expertise, lift bridges, Federal resiliency project management know-how and a deep bench of local resources provide our team with the right mix of talent, experience and commitment to ensure the success on this important project.

The AECOM | Mott MacDonald Team—full service construction managment

PRIME CONSULTANT

AECOM | Mott MacDonald
a joint venture

- *Construction Management*
- *Safety*
- *Contract Administration*
- *Resident Engineering/Inspection*
- *Project Controls*
- *QA/QC*
- *Environmental*
- *Rail Operations*
- *Bridge Demolition*

PRIMARY SUBS

MODJESKI and MASTERS — Experience great bridges.

- *Railroad Movable Bridge Construction*
- *Railroad Movable BridgeTesting and Commissiong*
- *Railroad Movable Bridge Fabrication*

DAN BROWN AND ASSOCIATES

- *Drilled Shafts Foundations*
- *Ground Improvements*
- *Geotechnical Foundations*

SUPPORT AND DBE SUBS

Advanced Infrastructure Design, Inc.
AmerCom Corp. Consulting Engineers
Calladium Group
COLLINS ENGINEERS INC.
GSC
We're in the CERTIFIED Site Safety business of saving lives
Promatech Inc. WBE/SBE/DBE
T·Y·LIN INTERNATIONAL
STELLAR

Construction inspection • Survey • Diving • Community Relations • Management support •Testing • Safety • Project controls support • Signals/communications

The AECOM | Mott MacDonald Team offers:

A safe project. Our team will emphasize a "culture of safety" for NJ TRANSIT customers, NJ TRANSIT staff, AECOM | Mott MacDonald inspection staff, the contractor's forces and project site vistors.

Significant design and construction management staff in the metropolitan area – We have vast resources and capability to meet every challenge that might arise. The AECOM | Mott MacDonald JV, is comprised of two of the most experienced transportation firms in the region, with our principal teaming partners, Modjeski and Masters and Dan Brown and Associates, and our highly qualified DBE and specialty subconsultants, have more than 2,000 CM professionals and support staff in this region.

The right balance of New Jersey mega project experience combined with railroad and movable/ fixed bridge expertise – As our extensive project portfolios and references attest, we have managed many of the region's most complex construction projects. Great firms, however, are only as good as the people they deliver to your project. In our commitment to the success of this project, we have named a team of professionals to lead the work that is second to none. An industry-leading Project Director, Al Baycora, PE, will head our CM organization and lead the performance of the team, successful delivery of the project and ensure all NJ TRANSIT objectives are met. Al's résumé is broad and diverse, having directed billion-dollar program/construction management and design projects around the world, involving rail, bridge and highway structures, with many in the metropolitan area. Serving as Construction Manager is Tom O'Connor, PE, who successfully managed the largest construction management contract in recent NJ history — the New Jersey Turnpike Interchange 6-9 Widening. This program totalled $2.5 billion in overall program costs and $1.4 billion in direct construction costs, and involved 31 bid packages and 100 bridges. Supporting Al and Tom is a proven group of resident engineers, inspectors and CM support staff with established reputations with NJ TRANSIT and other local transportation agencies.

A record of performance for NJ TRANSIT and on Federally funded resiliency transit projects in the region – The team offers decades of experience working with NJ TRANSIT as well as with other rail clients in the region, including Amtrak and the MTA agencies. We are confident in our ability to manage and drive the construction aspects of the Raritan River Bridge Replacement Project, based on our successful execution of CM assignments on projects like the $610-million Secaucus Transfer Station and the Amtrak Thames River Lift Bridge Replacement. Our firms have also been involved in resiliency efforts in the aftermath of Superstorm Sandy, providing CM services for Superstorm Sandy-related Federally funded projects for restoration of rail/transit structures and facilities for the MTA's New York City Transit, Long Island Rail Road and Metro-North Railroad. AECOM recently completed the restoration of the Montague Tunnel and South Ferry Station for New York City Transit. Mott MacDonald is also under contract to NYCT for Superstorm Sandy-related construction, including the Cranberry and Joralemon East River Crossings, LIRR Jamaica Station Platform F, NYCT 207th Street Yard and St. George Terminal, and has been responsible for the rapid and efficient reconstruction of Route 35 following Superstorm Sandy.

A proven collaborative team – AECOM and Mott MacDonald have a history of collaboration on passenger rail projects, such as one of the largest rail infrastructure programs in North America, MTA East Side Access, the Crossrail Program in London (AECOM is program manager, Mott MacDonald designer), the $4.2-billion Transbay Terminal Complex in San Francisco and the $1.4 billion Regional Connector in Los Angeles (AECOM is program manager, Mott MacDonald designer for the design-builder). Both firms have worked with Modjeski and Masters successfully in the past, on such projects as Metro-North's Devon Bridge Replacement over the Housatonic River. We have established, proven working relationships with all our proposed subconsultants which will ensure a seamless, integrated effort to achieve the successful construction of a new, more resilient Raritan River Bridge.

Awareness and understanding of key issues – The lessons learned from our experience working in railroad environments, on, over and adjacent to active tracks and catenary power, enable us to identify, analyze and resolve potential issues before they affect the critical path.

Proper inspection and documentation. The AECOM | Mott MacDonald Team's proposed Construction Manager will work closely with NJ TRANSIT and will form an "extension of staff" partnership. We will inspect the contractor's work, fully document the completion percentages, approve work quality and issue direction if corrective action is needed.

Federal Transit Administration (FTA) compliance. Our team knows the importance of the FTA's funding stream to support critical transportation initiatives. The AECOM | Mott MacDonald team has established construction management procedures and documentation processes, and activities that will be fully auditable under the regulations of NJ TRANSIT and the FTA. We fully understand these requirements and have successfully met FTA requirements on numerous FTA funded projects.

Our team will also provide **expert commissioning, testing and closeout** functions for both the movable bridge components and NJ TRANSIT's railroad systems integration.

Organizational Structure of Team And Personnel Required

The organizational structure of our team represents an integrated, seamless group comprised of the most qualified individuals from the best firms. Our firms' experience is overlapping and complementary, and offers a unique blend that gives NJ TRANSIT the confidence that this project will be managed efficiently and driven to meet quality, schedule and budget demands. **Our management philosophy requires member firms to be fully committed as a team to NJ TRANSIT's success. It's your railroad and our reputation; we are fully committed to both**.

The **Project Organization Chart** presented in Sections 3 and 6 defines specific roles to be filled to deliver our services.

- The orange boxes at the top present our management team. Our Project Director, Construction Manager and Safety Officer have active roles on a day-to-day basis to deliver the project. **Our Principals in Charge commit the resources of the joint venture to deliver the project and provide a resource for NJ TRANSIT to contact, if needed.** Our Quality Assurance Managers will prepare and oversee the JV's Quality Assurance Plan, which will include field audits of the JV staff services. We have identified a technical advisor that can provide the Construction Manager with a resource of knowledge of specific NJ TRANSIT procedures, departments and operations, and can assist with resolution of specific technical matters in a timely fashion.
- The blue boxes represent the major construction elements and construction management support functions. Each element is led by a senior individual qualified in that specific component of work. These lead individuals are assigned only during the construction of that specific component.
- Besides the construction supervision residents and their staff, we have technical experts to assist the construction manager throughout our construction support services. Many of the services identified under this heading are engaged either part time or as-needed. We anticipate the requests to engage many of these individuals will come from either our Construction Manager or NJ TRANSIT's PM.
- Under the heading "Project Administration," we have assigned Bassem Hanna as our project administration manager. He will oversee a number of critical services the team will provide, including office engineering, document control, DBE compliance and change management, among others.
- Below each of our lead individuals, we have identified a number of staff that will perform day-to-day services on an as-needed basis to deliver the program.

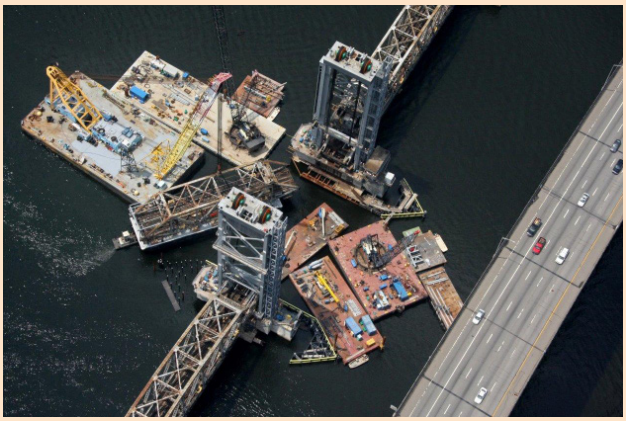
Team Composition

AECOM | Mott MacDonald Joint Venture

AECOM Technical Services, Inc. is the lead partner in the joint venture, providing Tom O'Connor as the single point of contact with NJ TRANSIT's PM. As detailed in the Project Organization Chart, AECOM also takes on a number of key roles, including resident engineering/inspection, project administration, construction support services, QA/QC, project controls, construction management and various other CM responsibilities. AECOM is a leading consultant in the rail and highway/bridge industries, providing a range of services from program/construction management to planning and design. AECOM has provided services for numerous transit agencies in the U. S., and is especially proud of its record of performance for transit agencies in the New Jersey/New York Metropolitan region. The firm's experience includes commuter rail, heavy rail transit, light rail transit, high-speed rail, freight railroads and multimodal terminals. AECOM has planned, designed and managed the construction and commissioning of FTA funded New Start projects, system extensions and the modernization of existing systems. Our world-class, award-winning bridge expertise includes design and construction management of rail, highway and marine structures, including multi-span and movable bascule, swing and lift bridge types, such as the **NYCEDC's Arthur Kill Lift Bridge, Amtrak's Thames River lift and Niantic River bascule bridges, and Metro-North's Devon Bridge over the Housatonic River.** AECOM's systems engineering expertise includes traction power, signaling, train control, communications and control centers.

AECOM has extensive experience on some of NJ TRANSIT's most ambitious projects to date, including construction management for the $610-million **Northeast Corridor Modifications/Secaucus Transfer (Frank S. Lautenberg Station) project (recipient of *New York Construction News Magazine's* "2003 Transit Project of the Year Award"),** and **program management for the Hudson-Bergen LRT and the River Line.** We were selected and lead, in joint venture, the NJ TRANSIT/ Amtrak's Portal Bridge Capacity Enhancement project.

Mott MacDonald is a joint venture partner providing expertise in NJ TRANSIT rail operations and systems; project administration; Force Account management; project and construction support services; and inspection personnel. The construction management and project engineering professionals from Mott MacDonald include leaders in the industry, with experience and credentials that are specific and relevant to managing the challenges of the RRBR Project. Similar projects include **High Bridge Over the Genesse River Construction Management** and **Harlem River Lift Bridge Inspection.** Their staff includes professionals with vast experience in the transportation industry, Superstorm Sandy repair and resilience projects, and railroad and bridge projects. Mott MacDonald professionals have **direct experience working with NJ TRANSIT and other agencies** throughout the New Jersey/New York City area, as well as across the country.



Amtrak Thames River Lift Bridge

High Bridge

Mott MacDonald offers construction management, inspection, testing, commissioning and startup specialists who understand NJ TRANSIT's infrastructure, operations and standards. Managing this work requires a team with intimate knowledge and experience working in a railroad environment, and a construction management team familiar with train operations and an understanding of the traction power and overhead catenary systems maintained by NJ TRANSIT. All railroad rules on track safety and safety clearances will be followed for track, signal and electrical systems.

Mott MacDonald provided **CM services for the NJDOT Route 7 Vertical Lift Bridge over the Passaic River** and **CM services for LIRR & NYCT projects, including the $400 million 207th Street Yard Project.**

Route 7 Movable Bridge: New lift towers under construction

An important element of the project is the Force Account labor used to provide Route 7 with flagging and electric power protection. On the RRBR Project, Force Account labor will also be used for construction of track, catenary and signal systems. Mott MacDonald understands these services represent a significant portion of the project budget and project schedule that must be scheduled, managed and documented in the same manner as the contractor's work activities. Mott MacDonald will also provide a licensed State remediation professional (LSRP) to assist in NJ TRANSIT's effort to manage contaminated soils generated from excavations, deep drilled shaft foundations and demolition of existing buildings. **Mott MacDonald has been supplying environmental services to NJ TRANSIT for the past 20 years**. In addition, Mott MacDonald has an **on-call contract with Amtrak for their Environmental and Engineering Task Order Contract**. Regionally, Mott MacDonald has managed important projects with PATH, MTA, LIRR and NYCT, including **MTA's East Side Access Project** and the award-winning **Heartland Corridor Project, for Norfolk Southern**.

Key Subconsultants

Modjeski and Masters, Inc. (M&M) is a primary subconsultant on the AECOM | Mott MacDonald Team. They will provide resident engineering, technical expertise and testing/commissioning of the movable bridge span. The firm is a nationwide leader in the design, inspection and rehabilitation of movable bridge structures. Their similar projects include **San Bernard River Bridge CE&I, Galveston Causeway Bridge Replacement and Houma-to-Freeport Bridge Relocation.** The firm primarily serves railroads, State transportation departments, port and turnpike authorities. Additional life cycle services include field instrumentation and non-destructive testing, bridge security and vulnerability analysis, vessel collision analysis, scour analysis, fatigue evaluations, emergency evaluations and forensic studies, and bridge research/code/course development.

Over the past decades, M&M has completed dozens of award-winning movable bridge projects. Recently, they led the development of the *AASHTO Load and Resistance Factor Design Bridge Specification* and the update of the companion *AASHTO Recommended Specifications for Movable Bridges*. M&M offers integrated in-house structural, electrical and mechanical disciplines for all types of highway and railroad movable bridges under a unified project management approach. It maintains structural, electrical and mechanical disciplines in-house, with a staff of approximately 180 employees dedicated to bridge engineering. That same staff provides construction inspection services for both their own movable bridge projects and also construction inspection of their competitors' work.

M&M's Movable Bridge Business Unit (MBBU) is led by those who "wrote the book" for movable bridge design, including the last major rewrite of the *AASHTO LRFD Movable Bridge Highway Design Specification* and maintenance of the AREMA's *Manual for Railway Engineering*, Chapter 15, Section 6 Movable Bridges. M&M's participation in the RRBR Construction Management Services contract will include their on-site construction inspection personnel, who have provided construction engineering, inspection, and testing/commissioning services for bridges throughout the United States for various clients, including all Class I Railroads. If needed, M&M can also provide emergency inspections, documentation and repair plan services in order to assist NJ TRANSIT in maintaining the existing bridge.

Dan Brown and Associates, PC (DBA), as a primary subconsultant on the AECOM | Mott MacDonald team, will provide resident engineering and technical expertise for the drilled shafts and other foundation systems.

DBA specializes in deep foundation design, testing and construction, and is also widely recognized as a leader in foundation technology and research for bridges and other structures. Similar recent projects include design and construction engineering services for over **200 drilled shafts at the Goethals Bridge Replacement**, and construction engineering and testing of **8-foot-diameter drilled shafts at the Mullica River Bridge**. DBA understands that foundation engineering requires the integration of geology, geotechnical engineering, structural engineering and construction management. The firm includes professionals with special expertise in each of these areas and how to integrate them to achieve the most cost-effective, constructible foundations system to meet the unique requirements of each project. DBA's consulting practice includes geotechnical and structural design, peer review of design and construction, all aspects of foundation load testing, constructability reviews and remedial repair design. DBA personnel have also led research projects on various aspects of foundation performance. Dr. Brown's work with bridge foundations was recognized by the American Society of Civil Engineers (ASCE) in 2009 with the Martin S. Kapp Foundation Engineering Award for "improvements in the design and quality of drilled shaft construction," and in 1995 with the Huber Prize "for his research on analysis, design and testing of deep foundations for highway bridges." Dr. Brown and Dr. Turner co-authored "Drilled Shafts: Construction Procedures and LRFD Design Methods," published by the FHWA in 2010, and serve as instructors for the National Highway Institute course on Design and Construction of Drilled Shafts, which is offered to State DOT agencies and other groups.

T. Y. Lin International Group (TYL) will provide inspection services for temporary trestles and bridge superstructure. TYL is a global, multidisciplinary engineering services firm recognized for solving some of the most significant infrastructure challenges of our age. TYL's global practice is rooted in the design and field support of bridges. The firm's hallmark of engineering excellence and creativity continues to thrive at the heart of its bridge design practice. Over a half-century since its formation, TYL is ranked as one of the top 10 largest bridge design and field support firms, and has the industry-leading personnel and technology necessary to deliver bridge and construction management projects in every corner of the world.

As a recognized world leader in major bridge design and field support, seismic analysis and retrofit and construction engineering, its experience includes award-winning designs for virtually all bridge types, including railroad, suspension, cable-stayed, arch, segmental, conventional, pedestrian and transit. The firm's signature bridge projects include the San Francisco-Oakland Bay Bridge New East Span; New Champlain Bridge, Oakland, California; and Chicago Skyway Viaducts and Calumet Riser Bridge in Chicago.

JHL Management Enterprises (JHL) specializes in community relations and will support the AECOM | Mott MacDonald Team in this capacity. JHL has been instrumental on many public and infrastructure projects. The firm has maintained strong statewide ties with both the legislative and executive branches of State government. Jody Herkloz manages a number of public outreach functions for various clients. In her capacity as a public outreach logistics coordinator, Jody has served as a liaison to regional stakeholders, including government officials, residents, property owners and businesses, on the NJDOT

Route 35 Reconstruction Project in Ocean County. Working directly with the contractor and field staff, she provided public information and resolved issues as required for Federal and State compliance.

DBE Team Members

AmerCom Corp. will provide inspection services for the construction of the lift span towers and flanking spans; site/civil works; and drilled shaft foundations. In addition Amercom will provide Project Administration staff. The firm is currently completing these services for the $165-million installation of the Wittpenn Bridge vertical-lift span over the Hackensack River. AmerCom is a multidisciplinary civil engineering consulting firm dedicated to providing reliable, cost-effective and professional services to governmental agencies in New Jersey and New York. The firm maintains a full staff of over 65 engineers, surveyors, technicians, Construction Managers and inspectors who are available to work on this contract for NJ TRANSIT. The firm's relevant projects include the new vertical-lift bridge on NJ Route 7, the Wittpenn Bridge Replacement, Kearny and Jersey City; the I-280 Stickel Bridge Rehabilitation, NJ Route 35; and the Manasquan River Bridge.

Promatech, Inc. (PTI) offers the A/E/C industry unexcelled quality with construction management, cost estimating, CPM scheduling, value engineering, construction inspections, constructability reviews, public outreach, CAD and GIS services. The Promatech organization employs a permanent staff of full-time professionals with multidisciplinary backgrounds and diverse experience. Its team develops techniques to help clients control cost, schedule and quality. Promatech is committed to maximum client responsiveness, accuracy in the performance of its assignments and the development of a high-level synergistic staff.

Promatech's most recent experience with NJ TRANSIT was in 2015, through the On-Call Construction Management Contract involving document control and scheduling services for the Newark City Subway Ventilation Restoration Project (Superstorm Sandy Recovery). Promatech's portfolio contains bridge projects with MTA/TBTA, DRPA, NJTA, PANYNJ and WMATA. Promatech is currently providing construction management and project controls services on various transit projects with SEPTA, MTA (NYCT, LIRR, MNR) and WMATA.

Garg Consulting Services (Garg) is a multidisciplinary engineering firm headquartered in Rocky Hill, CT, with an office in Mt. Laurel, NJ. Garg currently employs over 60 employees, mainly working on Federal and State projects in Connecticut, New York, New Jersey and Pennsylvania. Garg is DBE/MBE/SBE-certified with many agencies, particularly throughout the Northeast. The firm's core services include traction power, catenary, signal, communications and rail structures/facilities. The firm's relevant projects include construction management services for the Niantic River Bridge Rehabilitation Project; Thames River Movable Bridge Replacement Program, New London, CT; Bridge 08080R High Towers–New Haven Line; and Walk Swing Bridge Rehabilitation Project.

Certified Site Safety (CSS) is a full-service site safety management, inspection and safety designs and programs firm, dedicated to servicing public works projects in the tri-state area. The company provides licensed site safety managers, coordinators and concrete managers, New York City Fire Department (FDNY) construction site fire safety managers (S-56), fire guards and fire watch personnel. CSS provides safety management services for projects such as World Trade Center, Tower 4, New York, NY; World Trade Center, Tower 2 SNTN Demo, New York, NY; NYC Area Airports; LGA/JFK/EWR– MFA-100.512 Bollards Project, Queens, NY and Newark, NJ; 9/11 Museum, Exhibit Gallery Interior Finishes, New York, NY; and CM for LaGuardia Airport, LGA-994 504-58575 Hanger 7C, Buildings 7N & 7S, Queens, NY.

Advanced Infrastructure Design, Inc. (AID) is a full-service, research-driven consulting engineering firm, established in 1998. AID will provide services in all areas of materials engineering, testing and inspection and construction inspection, as directed by NJ TRANSIT. It is recognized nationally for the

services it provides in pavement engineering, specializing in (in-situ) evaluation of the integrity of the existing infrastructure and design, and developing repair strategies to prolong useful service life. AID is involved in investigations and design on projects covering a wide range of geological formations, pavement types and conditions.

Stellar Services, Inc. is a certified M/DBE consulting firm headquartered in New York City with twenty-five (25) years of experience providing a comprehensive range of innovative and effective IT consulting, procurement and professional services to government agencies at the federal, state and local levels.

Stellar has a long working relationship with NJ Transit and is currently involved in its Positive Train Control System project. In addition, Stellar is part of the team in the Trans-Hudson Express Tunnel project for the Document Control Services. Stellar has installed and implemented NJ Transit's ECMS (LiveLink) system, with the familiarity, Stellar is more capable to improve the rapidness and efficiency while communicating and sharing the data, drawings and reports.

The Calladium Group (TCG) has specific expertise working on large-scale and high-profile transportation, infrastructure and development projects. Its most notable services include: NEPA compliance, environmental impact analyses, environmental permitting, public outreach, interagency coordination, project management and technical editing. The group serves an array of clients in the public and private sectors, with an emphasis on rail transportation. The firm has extensive experience working with NJ TRANSIT. Notable projects include the NJ TRANSIT GRID traction power system project, NJ TRANSIT 's Portal Bridge Capacity Enhancement Project, Amtrak's Sawtooth Bridges Replacement Project, Amtrak's Susquehanna River Rail Bridge Project, Amtrak's Connecticut River Bridge Replacement Project and Port Authority of New York and New Jersey's Cross Harbor Freight Program, among others.

Firm name	Proximity to the site	Type and amount of work to be performed at these locations
AECOM	15 miles	Pre-award and as-needed construction support services not field related
Mott MacDonald	8 miles	Pre-award and as-needed construction support services not field related
Modjeski and Masters, Inc.	167 miles	Pre-award and as-needed construction support services not field related
Dan Brown and Associates, P. C.	690 miles	Pre-award and as-needed construction support services not field related
Advanced Infrastructure Design, Inc.	38 miles	Material testing and report preparation
AmerCom Corp.	30 miles	Reduction of survey notes and reports
Certified Site Safety of NY, LLC	15 miles	No work from this office
Collins Engineers, Inc.	200 miles	No work from this office
Garg Consulting Services, Inc.	62 miles	No work from this office
JHL Management	10 miles	No work from this office
Promatech, Inc.	61 mile	No work from this office
Stellar Services, Inc.	25 mile	No work from this office
The Calladium Group	26 miles	NEPA compliance and evaluation reports
T. Y. Lin International Group	10 miles	No work from this office

CERTIFICATION

The AECOM | Mott MacDonald JV Team will maintain a full-time office near the project area and NJ TRANSIT during the project period. Our Construction Manager will be reachable through that office on a 24/7 basis for the duration for the project.

Availability of Staff

Our proposed staff and Project Organization Chart are presented in Section 3, Qualifications of Individuals. We have identified over 65 personnel that can be made available on a full-time or part-time basis to support the delivery of the project and our services. Section 3 also presents a table Summary of Key Staff Qualifications that identifies key members that will manage, execute and supervise our services along with their current assignment and availability for this project.

Anticipated Workload For Duration Of Project

Comprised of the top engineering and construction management firms in the metropolitan area, the AECOM| Mott MacDonald team is confident of our ability to commit the necessary resources to deliver the Raritan River Bridge Replacement project. Collectively, AECOM, Mott MacDonald, M&M and subconsultants have over 2000 personnel in the firms' regional offices. We commit to making these resources available to NJ TRANSIT as needed for the success of the project.

C. Team Offices

Preconstruction activities requiring face-to-face involvement between our CM staff and NJ TRANSIT and other stakeholders will be accommodated. Pre-construction activities not requiring such face-to-face interaction will be carried out efficiently, effectively and economically from team offices in the NJ/NY metropolitan region. Construction phase activities will be conducted predominantly from the field office established for the RRBR Project, as requested in the RFP, with support services provided from other nearby locations periodically in an efficient, effective and economical manner.

Summary: AECOM | Mott MacDonald Advantage

The AECOM | Mott MacDonald team offers unmatched capabilities to NJ TRANSIT. We are confident in our ability to drive the construction aspects of the RRBR Project based on successful execution of previous CM assignments and our unmatched understanding of North Jersey Coast Line (NJCL) operations. None of the excellent team qualifications we have noted will have any meaning for RRBR success unless accompanied by a solid understanding of NJ TRANSIT and Conrail operations. We have that understanding, gained not only from the many operations-intensive projects we have referenced, but also from the NJ TRANSIT operations-oriented staff we are committing to this assignment. Reporting directly to our Construction Manager to keep this team focused on operating issues will be former NJ TRANSIT personnel Glenn Mack, both of whom are very familiar with NJ TRANSIT operations, staff and procedures.

We offer seamless collaboration and no learning curve; we can hit the ground running.

AECOM and Mott MacDonald know that they can rely on each other to do whatever it takes to deliver a successful project to NJ TRANSIT. With our hand-picked subconsultants, we offer an integrated team with a tremendous depth of knowledge and direct experience involving the project area and the operating and organizational dynamics affecting it. Combined with our world-class track record in project management, and railway and multi-span bridge and vertical lift bridge CM, this invaluable mix of talent, experience and dedication is basic to our belief that "Capability/Resources + Experience + Commitment = Success."

We will deliver to NJ TRANSIT the expertise needed for successful construction management and associated services for the RRBR Project.

The combined experience of the AECOM | Mott MacDonald Team is presented in the "Representative Relevant Projects" Matrix on the next page and the brief descriptions that follow.

Representative Relevant Projects

Relevant Projects / Relevant Project Features	Rail Transit and/or Conrail Coordination	Similar Construction Elements to RRBR	CM of Similar Movable Bridge projects	Construction Management	Fixed Bridge, Civil Site or Utilities	Force Account Coordination	Drilled Shafts and Deep Pile Foundations	Pre-Award Assistance	Document Controls	Construction Management Administration	Community Relations	Cost Controls	Labor Relations Assistance	Inspection & Testing	Schedule Controls	Construction Staging	Shop Drawings & Material Review/Handling	Change Orders	Quality Assurance and Quality Control	Project Safety	Project Closeout
NJ TRANSIT, CM Services for the Portal Bridge Capacity Enhancement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NYCEDC, Rehabilitation of the Arthur Kill Lift Bridge, Staten Island, NY-Union County, NJ	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NJTA Turnpike 6-9 Widening Program	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NJTA Interchange 14A Improvements	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NJ TRANSIT Frank R. Lautenberg Station at Secaucus - NEC Modifications	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Amtrak Thames River Railroad Bridge	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Norfolk Southern Railway, High Bridge Over the Genesee River	✓	✓		✓				✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	
Metro-North Railroad, Harlem River Lift Bridge Rehabilitation	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
LIRR CM for Jamaica Station Platform F, NY	✓	✓		✓	✓	✓	✓		✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓
NYCT, Cranberry Tube Rehabilitation, NY	✓	✓		✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CCM for Joralemon Tube Rehabilitation	✓	✓		✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
LIRR East Side Access	✓	✓		✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NYCT 207th Street Yard	✓	✓		✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NJDOT Rt. 7 Vertical Lift Bridge Over Passaic River	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
UPRR, San Bernard River Vertical-Lift Bridge	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
BNSF, Galveston Causeway Vertical-Lift Bridge	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
CNRR, EJ&E Bridge 552 Vertical-Lift Bridge	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
UPRR, Houma-to-Freeport Vertical-Lift Bridge	✓	✓	✓	✓		✓	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Goethals Bridge Replacement, New York/New Jersey	✓						✓														
Fore River Bridge, Quincy-Weymouth, MA	✓						✓														
Mullica River Bridge, Garden State Parkway, Atlantic and Burlington Counties	✓						✓														
BNSF Embankment Ground Improvement	✓						✓														

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
Construction Management Services for the Portal Bridge Capacity Enhancement (PBCE) Project, New Jersey **Firm: AECOM** **Client** NJ TRANSIT **Completion** Ongoing	AECOM is providing construction management services. The completion of the PBCE Project will eliminate reliability and maintenance issues of the existing 100-year-old two-track Portal swing bridge that crosses the Hackensack River just west of the Secaucus Transfer facility. The scope of work of this project is the replacement of the two-track North Bridge for the Portal Bridge Capacity Enhancement Project (PBCEP). AECOM's services include construction management; inspections, foundation geotechnical engineering, railroad operations and coordination; safety management; resident engineering; project outreach; DBE engagement, package execution; constructability and pre-award; project controls; environmental compliance; commission/closeout; and Force Account work.	✓ **Construction management** ✓ **Constructability and contract packaging review** ✓ **Railroad bridge construction** ✓ **A swing bridge similar to the Raritan River Bridge** ✓ **NJ TRANSIT Project** **Involvement of the Proposed Key Staff** Anil Parikh, PE, Program Manager Jay Bayersdorfer, PE, Estimator
Rehabilitation of the Arthur Kill Lift Bridge, Staten Island, NY and Union County, NJ **Firm: AECOM** **Client** New York City Economic Development Corporation **Completion** 2008	AECOM provided design, condition inspections and construction inspection services for the rehabilitation and reactivation of the Arthur Kill Lift Bridge, ten fixed bridges and approximately eight miles of track on Staten Island; inspection and design services for six additional miles of the Staten Island Railroad from the Arthur Kill Lift Bridge to the Township of Cranford; and six miles of the Rahway Valley Railroad from the Borough of Roselle Park into the Township of Union. The scope of work included the replacement of the emergency backup power system, the renovation and upgrade of the non-functioning elevators to the machinery rooms on both towers; new lift bridge control system; upgrades to the operator house, including new HVAC and other architectural items. Removal of asbestos, deteriorated walkway gratings, their supports and railings on the towers were also included in the design.	✓ **Long-span railroad lift bridge** ✓ **Construction Inspection** ✓ **Construction management** ✓ **Lift bridge systems and machinery upgrade** **Involvement of the Proposed Key Staff** Al Baycora, Project Manager

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
NJTA Interchange 6 to 9 Widening Program, Construction Management and Inspection, NJ **Firm: AECOM** **Client** New Jersey Turnpike Authority **Completion** 2015	As Construction Manager, AECOM (in a joint venture) was responsible for the management of the entire program divided into 31 separate bid packages, including program-wide administration, scheduling, cost control, quality, risk management, progress reporting, utility work orders, local agency coordination, community outreach, SBE engagement program and environmental permit monitoring. In addition, AECOM provided resident engineering and inspection services for 8 of the 31 bid packages, including complex multi-level interchange construction, numerous local bridge overcrossing replacements, six-lane mainline widening, drainage systems, utilities, interstate oil pipeline relocations, ITS and VMS systems, multi-phase/multi-stage traffic control, environmental mitigation, safety, material testing, toll facility modification and inspection of program-wide off-site fabrication contracts.	✓ **$2.5-billion complex mega project** ✓ **Construction management of 31 bid packages** ✓ **Resident engineering and inspection services** ✓ **Agency and municipal coordination** ✓ **Construction over Conrail ROW** **Involvement of the Proposed Key Staff** Tom O'Connor, Project Manager Pete Thompson, Office Engineer Tony Cotone, Chief Bridge Inspector
NJTA Interchange 14A Improvements, Contract T300.311, NJ **Firm: AECOM** **Client** New Jersey Turnpike Authority **Completion** 2018	Tom O'Connor and the AECOM team are completing this $180-million reconstruction of Interchange 14A. This project alleviates both safety and congestion issues and improves the traffic flow at the Interchange and its connection to Route 440 and the local street network. The staged demolition and reconstruction of the bridge structures leading to and from the toll plaza was a critical aspect of the project. Additional scope included work on local and State roadways and traffic signal systems, new toll facilities and plaza reconstruction, work over NJ TRANSIT and Conrail, environmental oversight, and extensive agency and stakeholder coordination. The project has met all contract milestones and is scheduled to be completed almost six months early in the Spring of 2018	✓ **Large, complex bridge project** ✓ **Construction management** ✓ **Project controls** ✓ **Drilled shafts** ✓ **Ground improvement** ✓ **Construction adjacent and over Conrail and NJ TRANSIT ROW** **Involvement of the Proposed Key Staff** Tom O'Connor, Project Manager Pete Thompson, Office Engineer Tony Cotone, Chief Bridge Inspector Charles Dearing, Ground Improvements

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
Frank R. Lautenberg Station at Secaucus - NEC Modifications Project, Secaucus, New Jersey **Firm: AECOM** **Client** NJ TRANSIT **Completion** 2005	AECOM provided comprehensive construction management services for NJ TRANSIT's single-largest project even undertaken: the Northeast Corridor (NEC) Modifications Project. The project is a complex mega infrastructure effort intended to expand the Northeast Corridor from two to four tracks between the Portal and Bergen interlockings, a distance of approximately 10,000 feet. The project entailed the construction of a major rail transfer station along the Northeast Corridor. This was the key element of the Secaucus Transfer/Allied Junction Development, a major mass transportation/commercial development complex that will ultimately include office, hotel and retail space, associated access roads and parking.	✓ **Mega infrastructure project** ✓ **Construction management** ✓ **Field management** ✓ **Project-wide safety program** ✓ **Construction, realignment and reinstallation of all signaling to facilitate the construction of bridge piers and platforms** ✓ **Superstructure** ✓ **Catenary, electric traction power, signaling and communications** ✓ **Environmental and regulatory compliance** ✓ **Coordination of Force Account work** **Involvement of the Proposed Key Staff** Patrick Dempsey, Resident Engineer
Amtrak Thames River Bridge Groton and New London, Connecticut **Firm: AECOM** **Client** Amtrak **Completion** 2008	AECOM oversaw the construction of the replacement of the 90-year-old Thames River Bridge that carries Amtrak's Northeast Corridor tracks between Groton and New London, Connecticut. A new vertical-lift span was installed to replace the movable bascule portion of the bridge, marking the final stage of a multi-year, $83-million project, which was commissioned in June 2008. The design improved the reliability of the bridge, reduced the chance of operational failures and minimized train delays. Over the years, more and more train travelers have crossed the bridge. The number of passengers taking Amtrak trains over the bridge rose from 1.4 million in 2002 to 2.2 million in 2007. Today, the bridge handles 36 passenger trains and two freight trains every weekday.	✓ **$83-million project** ✓ **Bridge replacement** ✓ **Railroad bridge** ✓ **Our work improved the reliability of the bridge** ✓ **New bridge reduced the chance of operational failures and minimized train delays.**

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
High Bridge Over the Genesee River, Livingston and Wyoming Counties, NY **Firm: Mott MacDonald** **Client** Norfolk Southern Railway Company **Completion** 2018	Mott MacDonald's project team provided consultant construction management services for this bridge, which replaced an existing steel trestle bridge constructed in 1875. The project included: excavation by blasting 16,000 cubic yards of rock; construction of pier and abutments using mass placement of concrete; installation of micro piles; reconstruction of park masonry walls and trails; construction of a new parking lot in the park; protection plans in place for endangered species; and demolition of the existing bridge. The project was completed without impacting rail traffic on the existing bridge and was completed ahead of schedule.	✓ **Construction management services** ✓ **Construction of new bridge parallel and in close proximity to the original bridge** ✓ **Coordination of freight rail operations with no impact to rail traffic** ✓ **Coordination of demolition of the existing Bridge** ✓ **Coordination of environmental plans and protected endangered species.** **Involvement of the Proposed Key Staff** Sam LiPuma
Harlem River Lift Bridge Rehabilitation, New York, NY **Firm: Mott MacDonald** **Client** Metro-North Railroad **Completion** 1999	For this double-span, tower drive vertical lift bridge, which carries four active rail lines over the Harlem River, Mott MacDonald provided in-depth inspections and report preparation as well as design for the rehabilitation of the bridge. The inspections/report involved the following elements: electrical control system, power supply system, wire ropes, mechanical system, track work, traction power, rail seated detection system, elevators, building and bridge foundations. Rehabilitation included replacement of the main and auxiliary counterweight wire ropes; overhaul of the mechanical system; installation of new tower hoists and replacing the span lock machinery; replacement of the existing electrical supply and associated equipment.	✓ **Inspection services for railroad vertical lift bridge** ✓ **Truss design with 340-foot long movable spans**

Project/Client/Completion	Scope / Cost / Completion	Relevance to RRBR Project
CM for LIRR Jamaica Station Platform F, NY **Firm: Mott MacDonald** **Client** Long Island Rail Road (LIRR) **Completion** 2021	This project is part of the Jamaica Capacity Improvement Phase I Project. CM services provided by Mott MacDonald included: construction of a new high-level platform; construction of a new platform waiting room; electrical, mechanical, and plumbing installations; HVAC system for the waiting room; civil work to prepare for new platforms; demolition of track and utility infrastructure; structural rehabilitation and waterproofing of sutphin bridge; installation of new station track, switches, and new diamond crossovers; installation of railroad signaling including new deep-shaft foundation cantilever signal bridge; construction of new passenger circulation elements including stairways and pedestrian bridges; and installation of new communication and PA systems.	✓ **Construction management** ✓ **Demolition of track and utility infrastruction** ✓ **Installation of new station track** ✓ **Installation of railroad signaling, including new deep-shaft foundation cantilever signal bridge** ✓ **Communication systems** **Involvement of the Proposed Key Staff** Amiri Robinson
NYCT Cranberry Tube Rehabilitation, NY **Firm: Mott MacDonald** **Client** New York City Transit **Completion** 2018	Mott MacDonald, as part of a JV Team, provided consultant construction management (CCM) services, incorporating the preconstruction, construction, and closeout phases of the project, including: repair of signals, traction power, circuit breaker houses, and electrical substation, an emergency tunnel exit and a fan plant; demolition and reconstruction of duct banks; rehabilitation of pump rooms, and installation new pumps and controls; rehabilitation of fan plants; replacement of Track B1 and Track B2 tracks; removal and replacement of communication cable and antenna/radio system; and installation of a traction power negative return and positive jumper. Mott MacDonald verified document work with the contract documents; assists the client during the bid phase; assisted with the qualification hearing for the contractor and supervises the contractor during construction; manages submittals; assures safety and Quality Control; processes payments and review, negotiates additional work orders (AWOs); and manages specific services and scope.	✓ **Construction management** ✓ **Pre-construction** ✓ **Construction** ✓ **Closeout phases** ✓ **Demolition** ✓ **Construction** ✓ **Signals** ✓ **Traction power** **Involvement of the Proposed Key Staff** Sean Crotty

Project/Client/Completion	Scope / Cost / Completion	Relevance to RRBR Project
CCM for Joralemon Tube Rehabilitation, New York **Firm: Mott MacDonald** **Client** New York City Transit **Completion** 2017	Mott MacDonald, as part of a joint venture team, provided Consultant Construction Management (CCM) services for the Rehabilitation of the Joralemon Tube. Services included: assisting NYCT in organizing overnight and weekend WGO (general orders) shutdowns for inspections; performing constructability reviews and provided design solutions with significant cost savings to the client; providing safety inspections during construction; supervising the contractor during construction; managing submittals and reporting ; safety and quality control; processing payments and review and negotiate AWO's. Specific services included: replace of third rail power cables and equipment; Repair of tunnel liner and concrete duct benches; demolition and reconstruction of duct banks; rehabilitation of pump rooms, install new pumps and controls; installation of 3.2 track miles of tunnel lighting fixtures and new tunnel lighting rooms; removal and replacement Communication cable and antenna/radio system; and traction power negative return and positive jumper.	✓ **Construction management** ✓ **Construction safety inspections** ✓ **Supervising contractors during the construction** ✓ **Demolition and re-construction** ✓ **Track installation** **Involvement of the Proposed Key Staff** Anthony Ladd
LIRR East Side Access **Firm: Mott MacDonald** **Client** Long Island Railroad (LIRR) **Completion** 2019	To create the LIRR's first expansion in over 100 years, 11,000 ft. of soft ground tunnels in glacial till will be required beneath the Harold Interlocking, together with 50,000 ft. of new rock tunnels in Manhattan and over 800,000 yds³ of rock excavation to create two 1200 x 60 x 60 ft. caverns housing eight platform tracks beneath GCT. The Harold Interlocking will be rebuilt with 72 new switches, over 200 new catenary poles and numerous other ancillary structures - all without interrupting LIRR, AMTRAK, or NJ TRANSIT operations. Mott MacDonald provides staff (including the Program Manager) for Construction Management roles; for CM for tunnel work; and for Program Management for contract formation and packaging: During the design, Mott MacDonald acted as the specialist tunnel consultant to the Program Management team, undertaking design and expert reviews on tunnel configuration, linings, tunnelling methods, risk management, and ventilation and fire/life safety issues.	✓ **Construction management** ✓ **Construction safety inspections** ✓ **Management for contract formation and packaging** ✓ **Risk management** ✓ **Construction in a complex environment**

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
San Bernard River Bridge CE&I Sweeny, TX **Firm: Modjeski and Masters, Inc.** **Client** Union Pacific Railroad **Completion** Ongoing	Union Pacific Railroad (UPRR) asked M&M to evaluate new bridge options for their San Bernard River crossing in Sweeny, Texas, at the Angleton Substation. M&M performed a comprehensive evaluation of several alternatives, including all types of movable spans as well as a fixed span. Consideration was given to channel openings, river usages and site conditions. Specific services provided under the CE&I work included: reviewing construction protocols; inspection and verification of work with design plans/specifications; and assisting the contractor in assignments during various stages of construction (with particular attention to providing supporting engineering services during construction phases).	✓ **Constructability Review** ✓ **Pre-Award Assistance** ✓ **Management Procedures and Document Control** ✓ **Construction Management Assistance** ✓ **Inspection & Testing** ✓ **Schedule Control** ✓ **Staging and Site-Specific Work Plans** ✓ **Shop Drawing and Materials Review/Handling** ✓ **Project Change Management** ✓ **QA/QC** ✓ **Project Safety Assistance** ✓ **Project Closeout Assistance** **Involvement of the Proposed Key Staff** Ralph Eppehimer, Matt Miller, Robert Peters
Galveston Causeway Bridge Replacement, Galveston, TX **Firm: Modjeski and Masters, Inc.** **Client** Galveston County & BNSF **Completion** 2012	The Galveston Bay Causeway Railroad Bridge crosses Galveston Bay, connecting Galveston with the Texas mainland at Virginia Point. The Causeway, as built in 1912, consisted of a single Scherzer rolling leaf draw span and numerous concrete arch spans. The bascule span was replaced in 1988 with a single-track span. Under the "Truman-Hobbs Act" of 1940, funding was provided to replace the bridge with a new vertical-lift bridge providing a 300-foot marine opening. The bridge alteration included the construction of a new movable vertical-lift bridge adjacent to the existing single-track bridge. The work entailed the construction of a 382-foot long vertical-lift span with flanking deck girder spans. During construction, office support was provided for the review of shop drawings and responding to contractor inquiries. Field oversight was provided and included CE&I services, recording construction activities, costs, quality assurance and as-built plan preparation.	✓ **Constructability Review** ✓ **Pre-Award Assistance** ✓ **Management Procedures and Document Control** ✓ **Construction Management Assistance** ✓ **Inspection & Testing** ✓ **Schedule Control** ✓ **Staging and Site-Specific Work Plans** ✓ **Shop Drawing and Materials Review/Handling** ✓ **Project Change Management** ✓ **QA/QC** ✓ **Project Safety Assistance** ✓ **Project Closeout Assistance** **Involvement of the Proposed Key Staff** Ralph Eppehimer, Matt Miller, Robert Peters, Elizabeth Sample

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
EJ&E Bridge 552 Replacement Morris, IL **Firm: Modjeski and Masters, Inc.** **Client** Canadian National Railway **Completion** 2012	The Illinois River Bridge was originally built as four 154-foot fixed thru truss spans. Around 1932, span 2 was converted to a vertical-lift span and the adjacent spans fitted with lifting towers, counterweights and an electro-mechanical operating system, providing a 120-foot clear opening. Under the provisions of the Truman-Hobbs Act of 1940, the USCG funded alteration of the bridge to provide a 300-foot marine opening. The replacement vertical lift span is a 348-foot long and has maximum lift vertical clearance of 56 feet. To build the new lift bridge without impacting river traffic, the contractor devised a temporary erection and launching runway, allowing the 1,100-ton span to be operational in 84 hours. M&M's construction management services included office support and field monitoring during construction of the replacement bridge.	✓ **Constructability Review** ✓ **Pre-Award Assistance** ✓ **Management Procedures and Document Control** ✓ **Construction Management Assistance** ✓ **Inspection & Testing** ✓ **Schedule Control** ✓ **Staging and Site-Specific Work Plans** ✓ **Shop Drawing and Materials Review/Handling** ✓ **Project Change Management** ✓ **QA/QC** ✓ **Project Safety Assistance** ✓ **Project Closeout Assistance** **Involvement of the Proposed Key Staff** Ralph Eppehimer, Matt Miller, Robert Peters
Houma-to-Freeport Bridge Relocation, Houma, LA & Freeport, TX **Firm: Modjeski and Masters, Inc.** **Client** Union Pacific Railroad **Completion** 2012	The existing vertical-lift bridge proposed for this project was located in Houma, Louisiana, over the Intracoastal Waterway. This abandoned bridge is a 258-foot long lift span with towers of modern design and construction. It was proposed that a contractor remove the bridge in major components and, by barges, float the bridge to the Freeport, Texas, site for placement in the existing Freeport Bridge, replacing the swing span. Now completed, the vertical-lift bridge provides a wider channel, a 69-foot vertical clearance in the open position and a 10-foot vertical clearance in the closed position. During construction, M&M provided construction monitoring services for the bridge relocation process. Inspection services were also provided. ***2012 Texas & Louisiana Best Project (Merit Award) for the Houma-To-Freeport Bridge Relocation Project (ENR)***	✓ **Constructability Review** ✓ **Pre-Award Assistance** ✓ **Management Procedures and Document Control** ✓ **Construction Management Assistance** ✓ **Inspection & Testing** ✓ **Schedule Control** ✓ **Staging and Site-Specific Work Plans** ✓ **Shop Drawing and Materials Review/Handling** ✓ **Project Change Management** ✓ **QA/QC** ✓ **Project Safety Assistance** ✓ **Project Closeout Assistance** **Involvement of the Proposed Key Staff** Ralph Eppehimer, Matt Miller, Robert Peters

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
Goethals Bridge Replacement New Jersey/New York **Firm: Dan Brown and Associates, P. C.** **Client** The Port Authority of NYNJ (DBA acted as subconsultant to an engineering firm) **Completion** 2018	DBA provided design and construction phase services for over 200 drilled shaft foundations supporting this iconic structure in the Greater New York City area. DBA was the foundation design engineer of record. In addition, DBA authored the drilled shaft construction specifications and provided engineering services during construction (ESDC) in order to address construction challenges that included zones of highly weathered rock, bleed channels in drilled shaft concrete, development of standards for base cleaning and inspection, analysis and interpretation of anomalous CSL results and concrete coring, and design of repairs to defective concrete. Many of the lessons learned were presented and published in the "Proceedings of the Deep Foundations Institute Annual Conference," in New York, October 2016.	✓ **Foundation Design Consultanting** ✓ **Dual-span, 2,000-foot long cable-stayed bridge** ✓ **Over 200 rock-socketed drilled shaft foundations** ✓ **Close proximity and several features in common with Raritan River Bridge** **Involvement of the Proposed Key Staff** John Turner, Foundation Design Lead and Engineering Services During Construction
Fore River Bridge Quincy-Weymouth, MA **Firm: Dan Brown and Associates, P. C.** **Client** Massachusetts Dept. of Transportation (DBA acted as subconsultant to an engineering firm) **Completion** 2018	Each of the four main towers of this vertical-lift bridge is supported on a group of six 8-foot-diameter drilled shafts with rock sockets. Bedrock consists of the Weymouth Formation argillite, with overburden depths ranging from 100 feet to 125 feet, consisting of alluvial deposits and glacial till. Two axial load tests designed by DBA provided the basis for final selection of rock socket lengths. The test shafts were also used to demonstrate the installation method by reverse circulation drilling. DBA was invited to join the design-build team because of its outstanding reputation as engineers who can solve difficult deep foundation design and construction challenges, which included unanticipated variations in the depth to competent rock and caving of gravelly soils in a zone just above top of rock.	✓ **Foundation Design Consultanting** ✓ **Vertical-lift bridge** ✓ **8-foot-diameter drilled shafts to rock (similar to Raritan River)** ✓ **Foundation construction over water while maintaining navigation** **Involvement of the Proposed Key Staff** John Turner, Foundation Design and Load Testing Consultant

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
Mullica River Bridge Garden State Parkway, Atlantic and Burlington Counties, NJ **Firm: Dan Brown and Associates, P. C.** **Client** New Jersey Turnpike Authority **Completion** 2011	The Mullica River Bridge rehabilitation and widening project on the Garden State Parkway in Atlantic and Burlington Counties, NJ, required drilled shafts of similar diameter and depth to the Raritan River Crossing. Shafts were excavated and installed through Atlantic Coastal Plain deposits showing similar stratigraphy to the Raritan River site, although drilled shafts at Mullica River are not rock-socketed. DBA was retained as a constructability expert and recommended the mix design for self-consolidating concrete (SCC) in conjunction with a redesign of the reinforcing cage and load testing to ensure a constructible design. Paul Axtell of DBA provided on-site observation and inspection services, including verification of base conditions using the mini-SID for the test shaft installation.	✓ **Case Foundation Consultanting** ✓ **1,230-foot long continuous, spliced, post-tensioned concrete girder bridge** ✓ **8-foot-diameter drilled shafts up to 200 feet deep** ✓ **Construction of drilled shafts over water** **Involvement of the Proposed Key Staff** Dan Brown, Foundation Construction Consultant Paul Axtell, On-site Construction Observation
14th Street Viaduct Replacement, New York City **Firm: T. Y. Lin International Group** **Client** Hudson County, NJ **Completion** 2016	The new $54-million replacement for the 14th Street Viaduct was constructed with the existing one in place to allow continuous traffic flow through the vital artery from Hoboken to local points west in Union City and Jersey City. The project was the product of a lengthy scoping process involving many local public meetings and more than $3.8 million in pre-construction planning and design work. TYLI provided design and construction management services for both phases. The scope of work included preparing construction documents comprising of plans, specifications and cost estimates. In addition to their design consulting role, Hudson County selected TYLI to provide Construction Inspection and Construction Management Services for this project. TYLI provided a full-time Resident Engineer to monitor all the construction activities for the entire duration of the project along with an office engineer and multiple inspectors. A major challenge for the project was the need to keep at least two lanes of the bridge open during construction because the viaduct was a non-redundant arterial that carried over 20,000 cars per day. Staged construction allowed the two lanes to remain open while construction took place on the other two lanes.	✓ **Bridge Replacement** ✓ **Construction Management and Inspection Services** ✓ **Full-time Resident Engineer** ✓ **Staged Construction that allowed continued traffic** **Involvement of the Proposed Key Staff** Brian Salfelder, PE Bharat Ghadara

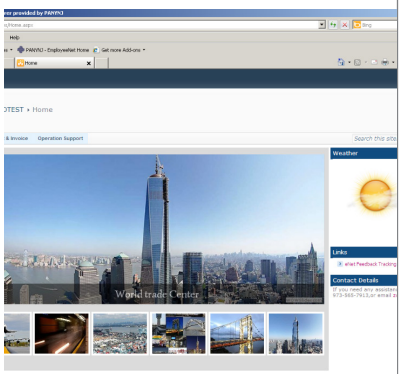
Project/Client/Completion	Scope / Cost / Completion	Relevance to RRBR Project
Rehabilitation of Cranberry and Joralemon Tunnels **New York, NY** **Firm: T. Y. Lin International Group** **Client** New York City Transit (Owner) **Completion** 2018	The T.Y. Lin International Group led the Consultant Construction Management Team for the Rehabilitation of NYCT's Cranberry and Joralemon Tunnels. Both were damaged by the tidal surge during Superstorm Sandy. The firm provided management of the constructability review, preconstruction, construction and closeout phases of the project. The construction management services included a comprehensive Constructability Review of the contract documents, and recommendations for any changes in the work. The constructability reviews and design recommendations provided significant savings to the client.	✓ **Construction Management** ✓ **Construction Inspection** ✓ **Superstorm Sandy-related resiliency project** **Involvement of the Proposed Key Staff** Brian Salfelder, PE Bharat Ghadara
Route 36 Highlands Bridge **Monmouth, NJ** **Firm: T. Y. Lin International Group** **Client** New Jersey Department of Transportation **Completion** 2011	The new $124-million bridge replaced the existing Route 36 Highlands bridge, which was built in 1932 and had reached the end of its service life. The two new fixed span precast segmental concrete box structures provide a 65-foot vertical clearance over the Shrewsbury River channel and will carry two 12-foot lanes of traffic in each direction, with a median barrier. The new bridge was constructed in a way that maintained existing traffic flow and minimized seasonal impacts and diversion of traffic to local streets. T.Y. Lin provided construction inspection and management services. The TYLI team was responsible for substructure construction and superstructure erection inspection and documentation. Work included 54-inch-diameter concrete pile foundations, mass concrete placement, segment erection, and post-tensioning and grouting. Tasks also included oversight of the existing bridge demolition.	✓ **Bridge Replacement** ✓ **Construction Management and Inspection Services** ✓ **Superstructure Construction** ✓ **Staged Construction** **Involvement of the Proposed Key Staff** Brian Salfelder, PE Bharat Ghadara

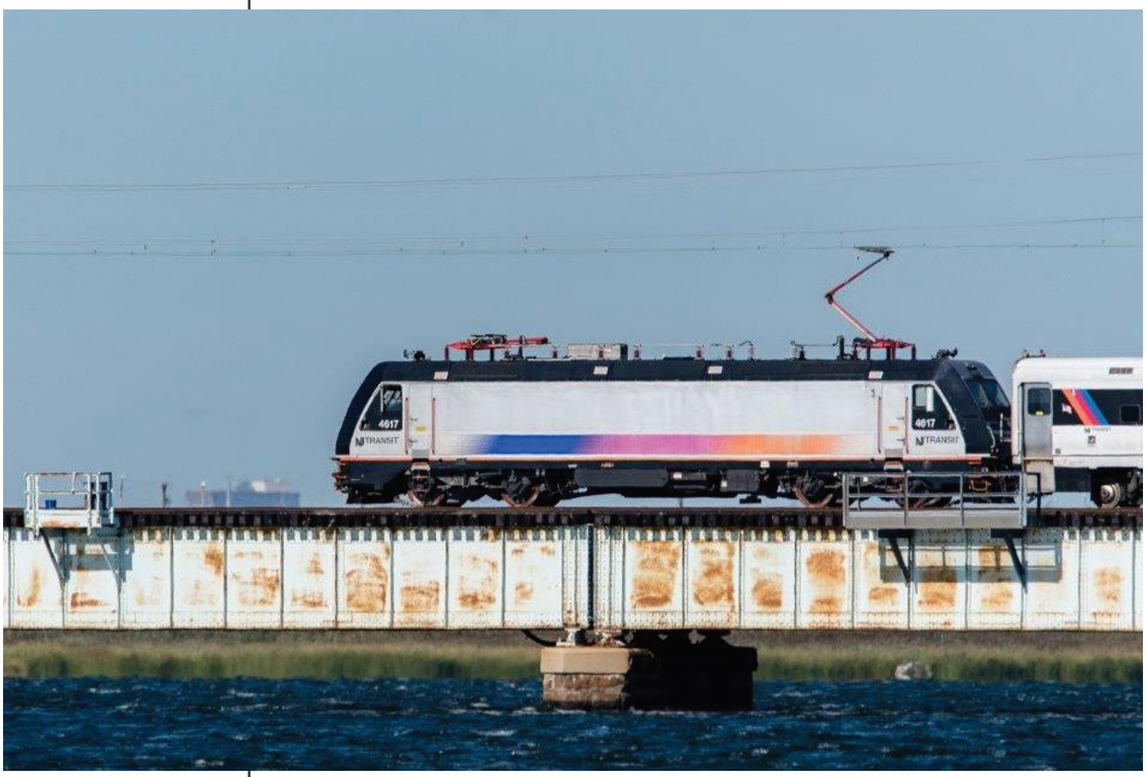
Project/Client/Completion	Scope / Cost / Completion	Relevance to RRBR Project
Route 1 & 9 Bridge over Passaic River, Newark & Kearny, NJ **Firm: AmerCom Corporation** **Client** New Jersey Department of Transportation **Completion** 2012	AmerCom Corporation provided Construction Inspection Services for the New Jersey Department of Transportation on this Vertical-Lift Bridge Rehabilitation Project. The project consisted of the interim repairs of the nearly 2,005-foot long eighteen span bridge that includes a vertical-lift main span. Construction Inspection on this $15.3-million movable bridge involved replacement of the grid deck installed on the previous contract, structural steel repairs and movable bridge control systems including mechanical and electrical repairs. AmerCom's responsibilities included: being the Department's direct representative, providing appropriate construction inspection/engineering personnel, overseeing the quality of work provided by the Department's construction engineering/inspection staff. This project required extensive maintenance and protection of traffic coordination as well as communications with the U.S. Coast Guard. Coordination with the USCG was critical due to marine traffic, since it takes the existing span about 15 minutes to be raised.	✓ **Vertical-Lift Bridge Rehabilitation** ✓ **Movable Bridge Control Systems** ✓ **Hazardous Waste Handling** ✓ **Mechanical & Electrical Repairs** ✓ **NJDOT Portway** ✓ **Reinforcement Steel** ✓ **Vertical Steel Lift Bridge** ✓ **Lift Bridge Welding Inspections** **Involvement of the Proposed Key Staff** Sonia Corte
NJ Route 7 Wittpenn Bridge Replacement, Kearny and Jersey City, Hudson County, NJ **Firm: AmerCom Corporation** **Client** New Jersey Department of Transportation **Completion** 2010-2021	As the prime consultant, AmerCom has been providing construction inspection services on this vertical-lift bridge carrying heavily congested four lanes of NJ Route 7 over the Hackensack River in Hudson County, NJ. The Federally funded project consists of the complete replacement of the existing bridge along an adjacent alignment. The bridge will be built under five separate contracts, all of which will fall under AmerCom's supervision. Work includes: construction inspection of drilled shaft foundations socketed to rock, concrete piers and steel superstructure; reviews and updates of contractor's Primavera schedules; monitoring the extensive maintenance and protection of traffic; and coordination/notification of construction activities with the United States Coast Guard regarding marine traffic in the navigable waterway. A team of AmerCom inspectors performed all required inspections and verified testing during fabrication of the orthotropic deck and girders in Oregon. The prefabricated superstructure units were then barged through the Panama Canal on their way to the project site.	✓ **Complete Replacement of the Existing Bridge** ✓ **Construction Management** ✓ **Construction Inspection** ✓ **Vertical-Lift Bridge** ✓ **Local Project** **Involvement of the Proposed Key Staff** Matt Gwiszcz, PLS Mike McGuire Hultin Austin Bryan Atkinson Sonia Corte Gene Finnegan

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
Newark City Subway Tunnel Ventilation Restoration Project (Superstorm Sandy Recovery) Newark, NJ **Firm: Promatech, Inc.** **Client** NJ TRANSIT **Completion** 2015	Promatech provided scheduling analysis and document control support for the Newark City Subway Ventilation Restoration project. Responsibilities included the preparation, maintenance and retrieval of standard inbound and outbound correspondence, shop drawings, RFIs, non-conformance reports, inspections, change orders and similar logs. The work under this contract consisted of furnishing all labor, materials, equipment, tools and incidentals, and performing all work necessary to restore structural, mechanical and electrical facilities, plus the testing and recommissioning of the existing tunnel ventilation system for the City Subway located at Newark Pennsylvania Station.	✓ **NJ TRANSIT project** ✓ **Scheduling services** ✓ **Structural elements** ✓ **Inspections** ✓ **Change orders** **Involvement of the Proposed Key Staff** James Singer
Rehabilitation Design of Eight Segmental Bridges DC, Maryland and Northern Virginia **Firm: Promatech, Inc.** **Client** Washington Metropolitan Area Transit Authority **Completion** Ongoing	Promatech was retained by a joint venture team to perform cost estimating and scheduling services for the rehabilitation of eight segmental bridges throughout the Washington Capitol Metropolitan area. Scope of work includes concrete spall repairs, cracking repairs, drainage, anchorage protection, grout and related items. The objective is the complete rehabilitation design of eight post-tensioned bridges after individual inspections. Services to Naylor Road Bridge include both visual and post-tensioning inspections. The visual inspections of other bridges include Branch Avenue A and B, Eisenhower Avenue, South Van Dorn, Cameron Run and inbound and outbound West Hyattsville.	✓ **Scheduling services** ✓ **Structural elements** ✓ **Inspections** ✓ **Change orders** **Involvement of the Proposed Key Staff** James Singer

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
Benjamin Franklin Bridge PATCO Track Rehabilitation Philadelphia, PA **Firm: Garg Consulting Services, Inc.** **Client** Delaware River Port Authority **Completion** 2015	The track structure includes open deck construction on the approach and suspension spans and direct fixation construction on the Philadelphia approach, and on Philadelphia and Camden bridge anchorages. PATCO railroad systems include a contact-rail supplied DC traction power system, a signaling and train control system, a communications system and their associated power supply span and, on both the Philadelphia and Camden sides, a concrete abutment section, a pier-supported "approach" section and a concrete-and-steel anchorage section. The open-deck track structure is supported by floor beam-supported stringers of varying lengths. Garg provided an inspector to act as an extension of staff, performing electrical inspection duties which included railroad signal inspection, communication inspection and power inspection, depending on the needs and schedule of the project.	✓ **Railroad signal inspection** ✓ **Communication inspection** ✓ **Power inspection** **Involvement of the Proposed Key Staff** Richard Funk
Walk Bridge Replacement Project CE&I Norwalk, CT **Firm: Garg Consulting Services, Inc.** **Client** Connecticut Department of Transportation **Completion** Ongoing	The Replacement of the Walk Bridge will provide safe and reliable rail transportation services, while improving navigational capacity and dependability for waterway users. The new bridge will be redundant, with two independent moveable spans. This allows one span, or two tracks, to remain in use when the other needs to be serviced. The CEI team has begun work on two advance projects, CP243 Interlocking and Danbury Branch Dockyard Projects (combined $237 millon in construction). These projects are independent of the Walk Bridge Replacement Project and will improve the dependability of operations on the mainline and shorten the distance of two-track operations for passenger services during the construction. The CP243 Interlocking Project will construct a new four-track interlocking, which is a powered switch and signal system that allows trains to move from one track to another. The Danbury Branch Dockyard Project consists of rail improvements and the electrification of the southern portion of the Danbury Line, from the mainline to approximately one mile north in the area commonly referred to as the Dockyard. Garg will provide rail systems inspection. This will include inspection of track, signals, communications and catenary systems.	✓ **Rail systems inspection** ✓ **Inspection of track, signals, communications** ✓ **Catenary systems**

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
NJ TRANSIT GRID Traction Power System **Kearny, NJ** **Firm: The Calladium Group** **Client** NJ TRANSIT **Completion** Ongoing	The Calladium Group prepared the EIS for the NJ TRANSIT GRID project, a first-of-its-kind electrical microgrid capable of supplying highly reliable power during storms and other times when the centralized power grid is compromised. The project will consist of a central natural gas power plant and transmission lines, and will provide a resilient energy supply for a targeted portion of rail infrastructure. The project is a result of a partnership between NJ TRANSIT, the NJ Board of Public Utilities, the USDOE and FTA. The Calladium Group was initially retained for technical editing services, and was subsequently engaged for a larger role—performing a comprehensive NEPA consistency review; supplementing environmental analyses (including visual and aesthetic resources, electromagnetic fields, land use, community facilities, and a Section 4(f) evaluation); overseeing a substantial historic architectural and archaeological resources investigation pursuant to Section 106 of the National Historic Preservation Act; and leading agency coordination.	✓ **NJ TRANSIT project** ✓ **Superstorm Sandy-related resiliency project** ✓ **Railroad project** ✓ **NEPA Environmental Review** ✓ **Stakeholder engagement** ✓ **Technical editing** **Involvement of the Proposed Key Staff** Leslie Mesnick, Task Leader for EIS
Long Island Rail Road Expansion Project from Floral Park to Hicksville – EIS Phase **Nassau County, NY** **Firm: The Calladium Group** **Client** Long Island Rail Road **Completion** 2017	The Calladium Group provided preliminary engineering and environmental services. The firm prepared an environmental impact statement (EIS). The firm's specific tasks entailed: preparing the purpose and need statement, project description and other EIS chapters; technical editing of engineering reports and memoranda; liaising between the public outreach team, environmental team and engineering team to ensure timely and accurate information exchange; incorporating community commitments and mitigation measures into contract documents; and synthesizing, summarizing and responding to hundreds of public comments. The Calladium Group led the planning and execution of six heavily attended public hearings within a span of three days. This high-profile project progressed on an expedited schedule with an unprecedentedly robust public outreach program.	✓ **Environmental review** ✓ **Rail transportation infrastructure project** ✓ **Stakeholder Engagement** **Involvement of the Proposed Key Staff** Leslie Mesnick, Environmental Task Leader

Project/Client/Completion	Scope/Cost/Completion	Relevance to RRBR Project
New New York Bridge (TPZ) Project Management Information System (PMIS), New York **Firm: Stellar Services, Inc.** **Client** NYS Thruway Authority **Completion** 2012-present	As a subcontractor, Stellar Services provides document control services to the NYSTA, using Microsoft SharePoint Services, which provides a platform to build secure, collaborative work environments that incorporates robust document version control. Stellar staff provides Engineering and Construction Document Control and Quality Control as owner's Rep role. Our staff oversees all official incoming and outgoing transmissions and documents with the Design-Builder; maintain distribution and archiving processes between engineering teams and program management between Owner's Rep team and the New York State Thruway Authority. The Stellar team maintains contract libraries of RFI's, Security Documents, Transmittals, Pay requests, Contract Submittals, Orders on Contracts, Schedule reports and Letters of correspondence and non-compliance report. Our staff is the first line of quality control to identify issues and coordinate to resolve them, and then timely distribute the latest revision of contract document to all appropriate users.	✓ **Document Controls**
Project Management Office (PMO), Capital Project Management System Support, New York  **Firm: Stellar Services, Inc.** **Client** Port Authority of New York and New Jersey **Completion** Ongoing	Stellar team has planned, designed and implemented various PMO systems, such as InCAPS; the Primavera (P6), Business Process Automation, Enterprise Content Management, Agency dashboard Reports, and other custom applications. Stellar team also led PMO's technology planning (roadmap), daily operational support, and business process re-engineering. Stellar supports approximately 250 end users who update the project data periodically, and analyze the project performance, and produce the report for upper management. End users are able to create, edit, and review project details. It enables project managers with all pertinent data for managing a project from inception through project closure. Stellar also assists the development of the new ICMS (Integrated Capital Program Management system) data warehouse and business intelligence initiatives, the team developed various executive reports, such as the quarterly COO's reports, monthly project status reports, project KPI performance reports, etc. This system now serves as the enterprise-wide capital planning and project management platform.	✓ **Document Controls** ✓ **Project Reports**



3. Qualifications of Individuals

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The AECOM | Mott MacDonald Team will deliver to NJ TRANSIT the expertise and resources needed for successful construction of the Raritan River Bridge Replacement Project. We have the right people to deliver.

Having the "right" people with the "right" experience is probably the best prognosis for a successful project. The AECOM | Mott MacDonald joint venture and our subconsultants offer NJ TRANSIT a team of professionals whose careers and experience have placed them in the perfect position to perform this project—they have unsurpassed construction management experience local to the area, on NJ TRANSIT and Amtrak projects, and on projects with all the same elements as the Raritan River Bridge Replacement (RRBR) Project.

The AECOM | Mott MacDonald team is comprised of highly qualified, experienced local staff as well as carefully chosen subconsultants who have significant and practical expertise in construction management and construction inspection. For this complex and critical project, we will draw on the specialized expertise of our people, who are familiar with similar projects and who will have no learning curve.

The team has available outstanding technical resources, with the capability to deal with all expected and unexpected issues related to the complexities of construction of the replacement of the Raritan River Bridge.

The Right Team With The Right People

The AECOM | Mott MacDonald team brings a locally based leadership team, with personal commitment to providing NJ TRANSIT with the best construction management services available for the RRBR Project. Our proposed CM staff possess project-specific knowledge, combined with national and global expertise in railroad and lift bridge construction management. We have experts who take a practical and proactive approach to managing a project of the magnitude and importance of the RRBR Project.

CORE TEAM MEMBERS

Alim Baycora, PE, LEED AP
Project Director

Al Baycora is an industry-leading project manager with 33 years of engineering experience. He has managed multi-billion dollar construction projects around the world, involving movable bridges and other bridge structures. Al brings both design and construction management experience on movable bridges to the project, as well as the ability to manage large infrastructure projects. His relevant experience includes his work as the project engineer for the design and project manager for the resident engineering and construction inspection services for the rehabilitation and reactivation of the Arthur Kill Lift Bridge (below).

The Arthur Kill Lift Bridge is a single track vertical lift bridge between Elizabeth, NJ and Staten Island, New York, with a main span of 558 feet. It is the longest lift bridge in the world.

Al is AECOM's National Movable Bridge Practice Leader, providing guidance and technical advice on movable bridge projects within the company. He was the project manager for the mega Qatar Project, which covered nearly $6 billion in construction value. Al also served as project manager for the $1 billion construction of 47 kilometers of new highway in Trinidad.

Al's experience and expertise make him an excellent choice to guide the construction management and inspection services for the RRBR Project.

Thomas O'Connor, PE
Construction Manager

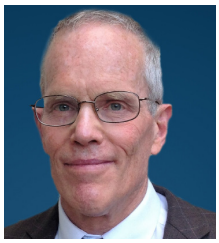
Tom O'Connor, our proposed construction manager, has directly relevant construction management experience in and around New York, New Jersey and the region. He has more than 42 years of experience and has led many large, complex projects, including the $2.5 billion Interchange 6 to 9 Widening Program and the Interchange 14A Improvements for the New Jersey Turnpike Authority. **On the Widening Program in particular, he demonstrated his ability to manage a complex infrastructure project by delivering 31 construction contracts, including over 100 bridges, on time and under budget.** Other major projects have included Interchange 15X in Secaucus for the NJ Turnpike; the reconstruction of Interchange 8 and I-287/I-87 in Westchester County for the New York State Thruway Authority; the rehabilitation of the Williamsburg Bridge, which included the reconstruction of the structural support and traction power and signal systems for NYC Transit's M and L lines; and the replacement of the Triborough Bridge Randall's Island Junction Structure (phase I) for MTA Bridges and Tunnels.

In addition, Tom started his career on major railroad improvement projects as a construction inspector on Metro-North's Park Avenue Railroad Viaduct Rehabilitation, and as the resident engineer for the NYCDOT's Leggett Avenue and 149th Street Bridge reconstructions over the Amtrak mainline and Conrail's Oak Point Railyard in the Bronx, New York.

Patrick Dempsey
Resident Engineer for Rail

Pat Dempsey is a program/project manager with over 15 years of progressive experience in the management of highly complex, multiple phase large-scale rail and transit projects for the largest regional rail stakeholders in the tri-state area. These include NJ TRANSIT, the MTA, MTACC, NYCT, Port Authority of NY & NJ, LIRR, Amtrak, FTA, FRA, the ARRA and Federal Superstorm Sandy Recovery Program initiatives. Programs and projects include rail facility rehabilitation and construction, signal system upgrades and replacement, traction power and rail replacement and reorganization, complete station construction and rehabilitations, rail management system and utility maintenance, tunnel and bridge infrastructure management and improvements.

Pat served in management roles for the $4.5 billion Phase 1 of the **Second Avenue Subway**; the $369 million rehabilitation and installation of flood protection infrastructure of the **South Ferry Terminal** Superstorm Sandy Recovery/Rehabilitation; and Harold Interlocking for the the $12-billion **East Side Access** mega project. He has extensive NJ TRANSIT experience, having served as project manager/construction manager/resident engineer for multiple capital improvement projects, including: Washington Avenue Rehabilitation, Rutherford Station Historic Interior Restoration, Morristown Station Historic Restoration, Chatham Station Historic Restoration, Secaucus Station Fare Gate Relocation, Secaucus Station Crew Quarters installation and utility upgrades. He has also provided constructability review services for the Portal Bridge Capacity Enhancement project.



John Turner, PhD, PE Drilled Shaft Foundations Technical Expert

Dr. Turner is a specialist with more than 40 years of experience in construction, load testing of deep foundations, rock-socketed drilled shafts, design and construction of anchored geo-support systems for support of excavation (SOE) and landslide stabilization, geotechnical site investigation and evaluation of soil and rock properties, engineering geology, geotechnical engineering education, and expert services for litigation and claims disputes.

John was the foundation lead for the design and construction phases for the Goethals Bridge Replacement (GBR). Located approximately 11 miles north of Perth Amboy, the GBR is also founded on rock-socketed drilled shafts, where a total of 200 drilled shafts were installed, ranging in diameter from 4.5 to 10 feet.

John is the author of 100+ technical papers and reports and has been a principal investigator on over 20 funded research projects. **He is the co-author (with Dr. Brown) of "Drilled Shafts: Construction Procedures and LRFD Design Methods (2010)." He is also a co-developer and an instructor for the NHI drilled shaft design and construction course based on the manual.** Dr. Turner and DBA will bring this valuable and highly relevant experience to bear on the RRBR Project.

Ralph Eppehimer, PE Resident Engineer for Movable Bridge

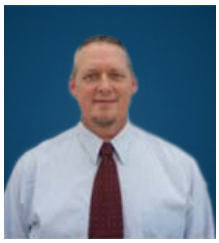
Ralph Eppehimer has 36 years of construction management experience. He has been the construction project manager, assistant resident engineer, resident engineer and technical advisor on a number of significant movable and fixed bridge projects, primarily railroad bridges. In his career **Ralph has either managed, inspected, or been the resident engineer for 236 railroad bridges, 44 of them vertical lift bridges.**

Ralph's relevant projects include: UPRR San Bernard River Vertical Lift Bridge; BNSF Galveston Causeway Vertical Lift Bridge, CNRR, EJ&E Bridge 552 Vertical Lift Bridge; UPRR, Houma-to-Freeport Vertical Lift Bridge, BNSF, Bayou Boeuf Swing Bridge, Amtrak, Livingston Avenue Swing Bridge, and **NJ TRANSIT HX Draw Bascule Bridge.**

Kevin Johns, PE Movable Bridge Technical Expert

Kevin Johns is the Director of M&M's Movable Bridge Business Unit, with more than 20 years of experience. In the past 5 years, he has served as project manager or task leader on 28 movable bridge projects, 19 railroad projects and 9 movable railroad projects. Eight of these projects have had a construction cost of over $100 million. He has worked on all types of movable commuter and heavy freight railroad bridges, including vertical lift, swing and bascule. His clients include NJ TRANSIT, Amtrak, Metro-North, Sonoma-Marin Area Rail Transit (SMART), Norfolk Southern, Conrail, BNSF and Canadian National.

On fixed and movable railroad bridge projects, Kevin coordinates the efforts of the multiple engineering disciplines and various subconsultants. He has led or participated in accelerated bridge construction workshops for railroad bridges, and actively participates on the AREMA Committee 15.



Mark Madgett, PE Resident Engineer for Deep Drilled Foundations and Ground Improvements

Mark Madgett is a resident engineer with more than 24 years of experience in geotechnical deep foundations and ground improvements. He has worked in both consulting and construction for the last 24 years, focusing primarily on deep foundations in the southeastern U.S. As a consultant, Mark gained extensive field experience with deep foundation construction techniques and the impacts on design. In 2006, he began working for Seaboard Foundations, opening a green field office in Tri-Cities, Tennessee, as the district manager. In his role as design engineer, Mark has implemented design-build techniques to vastly improve the constructability and reduce the costs of deep foundations for the owners.

Natalie Barnhart, PE, CCM Resident Engineer for Fixed Bridge/Civil/Utilities

Natalie Barnhart has 28 years of experience in construction management, holding positions of increasing responsibility, starting as a resident engineer and progressing to construction area engineer, and district construction engineer. She has considerable knowledge of complex bridge construction (both new construction and rehabilitation), foundations, aerial and underground utility coordination and relocation (including boring and water crossing), drainage and stormwater management facility construction, and maintenance and protection of traffic. Natalie also has considerable experience performing constructability review and ensuring that all project documents are compatible. She is very familiar with working on federal-aid contracts, and is fully knowledgeable of construction contract administration and documentation, including preparing and reviewing daily inspection reports, change orders, coordinating inspection activities, scheduling progress meetings, preparing meeting minutes, reviewing CPM schedules, issue resolution, claims and time impact analyses, and contractor invoices, monitoring submittals and preparing as-built drawings. Relevant experience includes the Indian River Inlet Cable Stayed Bridge, I-95 and SR 1 improvements (both toll roads) and the SR 1/ SR 72 Diverging Diamond Interchange.

Bassam Hanna Project Controls Manager

Bassam Hanna has significant expertise in the areas of program/project management and controls, contract negotiations, CPM scheduling, earned value management systems (EVMS), cost controls management, document controls, change order management and construction management. He has a successful track record performing complex CPM schedule analysis, delay-mitigation and recovery schedules to complete projects on/or ahead of schedule and within assigned budgets. He is skilled and highly trained in identifying and mitigating construction problems and delays. He has extensive experience with claims management and claim avoidance, with strong analytical and investigative skills, and has managed and assisted with the preparation, presentation and evaluation of all types of construction additional work orders (AWOs), claims and disputes. Bassam also performed project controls for the NYC 7 Line extension.

Bassam has developed and managed several Project Management Information Systems (PMIS) such as E-Builder, Constructware, SharePoint and Contract Management (Expedition). He has been an integral team member on many major domestic and world-class project teams, overseeing scheduling, cost management, document controls and risk management for heavy construction projects with budgets in the range of $92 million to $8 billion.

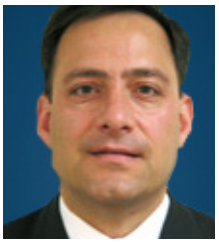
John Sikorski
Safety Officer

John Sikorski is a safety specialist with extensive consulting experience, specializing in construction of rail transit infrastructure in the New York City area. His work has been concentrated in heavy civil/railroad construction (subway and elevated), reconstruction, and renovation of railroad stations and tunnels. A particularly significant project in John's career is the construction of New York City Transit's Second Avenue Subway, including tunnel borings and mining of the caverns for passenger stations.

John served as the senior safety manager to help facilitate the safety program on the federally-funded Superstorm Sandy-related repair and resiliency projects for New York City Transit.

Steve Dempsey, PE
Quality Manager

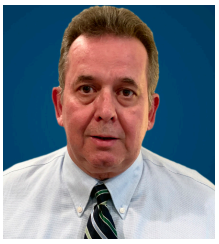
Steve Dempsey has over 38 years of diverse design and construction management experience. He serves as AECOM's Manager of Construction Operations, as well as project manager on a number of high-profile bridge and roadway construction projects, within New York and New Jersey area. His primary responsibilities include: point of contact with clients; overall reporting; and quality assurance of project/client goals. Recently he served as project manager for the NJTA Interchange 41 and 44 improvements along the Garden State Parkway, as well as as contract manager for AECOM, assigning staff and monitoring staff performance for the $2.5 billion New Jersey Turnpike Interchange 6 to 9 Widening Program.



Frank Facciolo, PE
Quality Manager

Frank Facciolo has been project principal, project executive, project sponsor, senior manager, quality manager, and engineer for traditional designs, design-build (fast-track projects), construction management and small/large on-call federal/state service contracts. He has more than 29 years of experience in infrastructure, transportation and design-build related projects in the New York metropolitan area, California and across the United States.

Frank's experience ranges from planning through final design phases, construction support services, construction management, inspection and constructability reviews. He currently serves as Mott MacDonald's Rail and Transit Leader for the New York Metro Area.



Glenn Mack
Technical Advisor

Glenn Mack has over 22 years of experience in senior level program and project management, construction management and field supervision for large transportation systems. These include building structures for large maintenance facilities; track, power and signaling systems; tunnel and shaft design and construction; underground stations; and various life-safety features, including design and construction of underground ventilation systems, NFPA 130; various transportation electronic systems, including SCADA, communications, public information and emergency notification systems. He has extensive environmental experience in design and construction, including exploration, testing, analysis, report generation and remediation.

Anil Parikh, PE
Principal in Charge

Anil Parikh has 32 years of experience working for New York City Transit (NYCT) and the State of New York's MTA Capital Construction Company (MTACC), managing many successful projects from "cradle to grave." He has an excellent and proven track record of completing these projects on time and within budget.

Anil has successfully led all phases of rail improvement projects, from environmental review, conceptual and preliminary engineering, final design, value engineering, constructability review, procurement strategy, construction, testing and commissioning. Examples from his experience include the $645 million 63rd Street Connection and the $4.5 billion Phase I of the Second Avenue Subway. These projects are among the most technically and institutionally complex and challenging projects ever undertaken by the MTA.

Marco Levoyer, PE
Principal in Charge

Marco Levoyer has experience in design, construction, inspection and management of transportation engineering projects, including movable bridge projects like the Scoping Study for Bridges W7, W8 and W9 (drawbridge) in Monmouth County, NJ, and the Dock Vertical Lift Bridge Miter Rail Inspection & Repairs for the Port Authority Trans-Hudson in Newark, NJ, as well as major infrastructure projects such as the nearby Garden State Parkway Driscoll Bridge Rehabilitation and Widening. That project included a new span over the Raritan River, with large-diameter drilled shaft foundations, for the New Jersey Turnpike Authority. His experience consists of scoping, conceptual, preliminary and final design for highway and railroad projects, including the development of plans, specifications and estimates. In addition, his professional background includes construction inspection, inspection and evaluation of existing structures, construction support services and temporary structures engineering. He currently serves as Mott MacDonald's Bridge Deputy Practice Leader.

Qualifications/Availability

Our proposed key staff is identified in the matrix on the following pages, which also summarizes their relevant qualifications and experience, and their availability to perform their stated role on the RRBR Project. They will be supported by a depth of construction management resources that is unparalleled in the region.

RESUMES OF KEY PERSONNEL

Resumes of the above-mentioned key staff, as well as other technical personnel to be assigned to the RRBR Project, are presented after the summary matrix and the Project Organization Chart.

CERTIFICATION

The AECOM | Mott MacDonald JV Team and its subconsultants hereby certify that the listed key personnel are presently employed by the Consultant Team member firms, or will be on board, and will be assigned to the project in the manner prescribed.

Summary of Key Staff Qualifications

Expertise:	Yrs. of Exp.	Relevant Expertise for RRBR Project	Representative Projects	Availability/ Anticipated Workload
Alim Baycora, PE, LEED AP Project Director	33	▪ Movable bridges and structures ▪ Program/project management of mega construction projects ▪ Movable bridge experience, nationally and internationally	▪ **$21-million** Amtrak Arthur Kill Lift Bridge Rehabilitation and Reactivation ▪ **$6-billion** mega Qatar Project ▪ **$883-million** Local Roads and Drainage Program, State of Qatar	**Current Project:** AECOM managerial functions **Anticipated Completion:** ongoing **Availability for RRBR:** 75%
Tom O'Connor, PE Construction Manager	42	▪ Construction Management ▪ Expertise in managing large and complex bridge replacement & rehabilitation projects ▪ Experience working on projects on, over and adjacent to NJ TRANSIT, and other railroad clients	▪ **$2.5-billion** NJTA Turnpike 6-9 Widening ▪ **$180-million** NJTA, Interchange 14A Reconstruction, New Jersey	**Current Project:** Interchange 145 Improvements **Anticipated Completion:** 2/2019 **Availability for RRBR:** 100%
Patrick Dempsey Resident Engineer & Task Manager for Rail	15	▪ Extensive NJ TRANSIT project management experience ▪ Rail facility rehabilitation and construction ▪ Signal system & traction power upgrades and replacement	▪ **$1.5-billion** in construction and $ 90 million in Construction Management Services for NJ TRANSIT's Portal Bridge Capacity Enhancement ▪ **$4.5-billion** (Phase I), NYC Transit, Second Avenue Subway ▪ **$300 million**, NYC Transit, South Ferry Terminal Superstorm Sandy Recovery/Rehabilitation ▪ **$50-million** NJ TRANSIT, Rutherford Station Rehabilitaion	**Current Project:** MTA/MTACC/LIRR/ Amtrak East Side Access **Anticipated Completion:**10/2019 **Availability for RRBR:** 100%
John Turner, PhD, PE Drilled Shaft Foundations Technical Expert	40	▪ Recognized expert in rock-socketed drilled shafts ▪ Drilled shaft foundations ▪ Anchored retaining walls ▪ Landslide stabilization	▪ **$1.5-billion** Goethals Bridge Replacement ▪ **$375-million** TH-53 Bridge over Rouchleau Pit, MN ▪ **$272-million** Fore River Lift Bridge, MA	**Current Project:** Purple Line 16.2-mile light rail extension of Washington Metro **Anticipated Completion:** 2021 **Availability for RRBR:** 100% for pre-construction; 25 % during construction
Ralph Eppehimer, PE Resident Engineer for Movable Bridge	36	▪ All aspects of new bridge construction, safety and maintenance ▪ Significant experience in movable and fixed bridge projects ▪ Resident engineering	▪ **$35-million** UPRR, San Bernard River Vertical-Lift Bridge ▪ **$83 Million** BNSF, Galveston Causeway Vertical-Lift Bridge ▪ **$20 Million** BNSF, Bayou Boeuf Swing Bridge	**Current Project:** JPDPW Lapalco Bridge Repairs Construction **Anticipated Completion:** 12/2018 **Availability for RRBR:** 50%

Expertise:	Yrs. of Exp.	Relevant Expertise for RRBR Project	Representative Projects	Availability/ Anticipated Workload
Kevin Johns, PE Movable Bridge Technical Expert	20	▪ Construction management for major movable bridge projects ▪ Manage Construction of Moveable Bridge projects with Similar Scope and Cost ▪ Constructability Review ▪ Pre-Award Assistance	▪ **$1.6 Billion** Amtrak and NJ TRANSIT, Portal Bridge Replacement, Movable Bridge Alternative Analysis, Secaucus, New Jersey ▪ **$200 Million** (est.) NJ TRANSIT, HX Draw Conceptual Study, Secaucus, New Jersey ▪ **$140 Million** Virginia DOT, Gilmerton Bridge Replacement, Chesapeake, Virginia ▪ Norfolk Southern, Shellpot Swing Bridge Rehabilitation, Wilmington, Delaware	**Current Project:** CMPW Cau Cau Bridge Repairs UPRR West Colton Transfer Table Replacement **Anticipated Completion:** 12/2018 for both projects **Availability for RRBR:** 50%
Mark Madgett, PE Resident Engineer for Geotechnical Deep Foundations	24	▪ Expertise in deep foundation work ▪ Extensive field experience with deep foundation construction techniques	▪ **$62-million** US27 bridges for realignment Morgan county, TN ▪ **$69-million** US 321 Bridges at Fort Loudon Dam ▪ **$8-billion** Honolulu Elevated Rail drilled shaft NDT evaluation	**Current Project:** I-74 River Bridge Shaft Repairs **Anticipated Completion:** 2/ 2019 **Availability for RRBR:** Pre-construction, 50%; Construction, 100%
Natalie Barnhart, PE, CCM Resident Engineer & Task Manager for Fixed Bridge/Civil/ Utilities	28	▪ More than 27 years of construction management ▪ Construction inspection supervision ▪ Construction services management	▪ **$900-million** PennDOT, Rapid Bridge Replacement (RBR) Program Management ▪ Delaware DOT's **$600 million** per year capital improvement program for highways, bridges and safety improvements	**Current Project:** PennDOT, Rapid Bridge Replacement (RBR) Program Management **Anticipated Completion:** 6/2019 **Availability for RRBR:** 100%
Bassem Hanna Project Controls Manager	31	▪ Project management and controls ▪ Contract negotiations ▪ CPM scheduling, earned value Management systems (EVMS) ▪ Cost controls management	▪ **$2.43 billion** MTA Subway Line Extension, New York, NY ▪ NYCDDC, CUNY, Brooklyn College Performing Arts Center, Brooklyn, NY ▪ DASNY, Healthcare Facilities, New York, NY	**Current Project:** Management Functions, no completion date needed **Anticipated Completion:** n/a **Availability for RRBR:** 100%
Glenn Mack Technical Advisor	22	▪ Project and Construction Management, Design and Construction on Rail infrastructure projects ▪ Constructability Reviews ▪ Risk Assessments	▪ Hudson Bergen Light Rail, various elements ▪ Newark City Subway Extension ▪ ARC Project, Design and Construction phase of Palisades Tunnels	**Current Project:** PANYNJ, PATH Tunnels Security Upgrades **Anticipated Completion:** 12/2019 **Availability for RRBR:** 100%

Expertise:	Yrs. of Exp.	Relevant Expertise for RRBR Project	Representative Projects	Availability/ Anticipated Workload
John Sikorski Safety Officer	32	▪ Safety specialist in construction of rail transit infrastructure in NY/NJ ▪ Heavy civil/railroad construction	▪ **$17 billion** NYC Transit, Second Avenue Subway ▪ NYC Transit, Constructability Reviews, Inspection and Construction Management of East River Cranberry Tube and Rutgers Tubes ▪ NYCT Systems Safety Inspection	**Current Project:** None **Anticipated Completion:** n/a **Availability for RRBR:** 25%
Steve Dempsey, PE Quality Manager	38	▪ Construction management and supervision ▪ Quality management ▪ Project management	▪ NJTA, Interchange 41 and 44 Improvements ▪ NJTA, Interchange 6 to 9 Widening Program – Construction Management and Inspections ▪ NJDOT, Route 52 Causeway Contracts A & B	**Current Project:** AECOM managerial functions **Anticipated Completion:** ongoing **Availability for RRBR:** 100%
Frank Facciolo, PE Quality Manager	29	▪ Quality management ▪ Construction management ▪ Constructability reviews	▪ NYC Transit, Superstorm Sandy-Related Repair and Construction ▪ PANYNJ, Facility Condition Surveys ▪ Amtrak, Master Contract for General Engineering Services	**Current Project:** Mott MacDonald managerial functions **Anticipated Completion:** Ongoing **Availability for RRBR:** 100%

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Construction Management Services for
The Raritan River Bridge Replacement Project
Project Personnel Organization Chart

NJ TRANSIT PROJECT MANAGER

PROJECT DIRECTOR
🔑 **Alim Baycora, PE, LEED AP** (A)

QUALITY MANAGERS
🔑 **Steve Dempsey, PE** (A)
🔑 **Frank Facciolo, PE** (M)

CONSTRUCTION MANAGER
🔑 **Thomas O'Connor, PE** (A)

PRINCIPALS IN CHARGE
🔑 **Anil Parikh, PE** (A)
🔑 **Marco Levoyer, PE** (M)

TECHNICAL ADVISOR
🔑 **Glenn Mack** (A)

SAFTEY OFFICER
🔑 **John Sikorski** (M)

Safety Inspector
Andrew Robinson (CSS)

PRECONSTRUCTION ASSISTANCE
Construction Manager
🔑 **Thomas O'Connor, PE** (A)

Bassem Hanna (M)
Natalie Barnhart, PE, CCM (A)
John Turner, PhD, PE (DBA)
Patrick Dempsey (A)
Kevin Johns, PE (M&M)

*

* *In addition to those listed here, we will enlist expertise from this organizational chart as needed*

PROJECT ADMINISTRATION
Project Controls Manager
🔑 **Bassem Hanna** (M)

Office Engineer
Vlad Allrich (ACC)

Assistant Office Engineer
Gene Finnegan (ACC)

Document Control Specialist
Sharron Smith (SSI)

Schedule Controls
James Singer (PTI)

Project Accounting & Administration
Sonia Corte (ACC)

Cost Estimating
Chase DeRose (A)

Cost Controls
Bassem Hanna (M)

Federal Requirements
Mike Salvato (M)

Change Management
Marc Papini (M&M)

DBE Compliance
Doreen Taveras (A)

FIXED BRIDGE/ CIVIL/UTILITIES
Resident Engineer
🔑 **Natalie Barnhart, PE, CCM** (A)

Chief Inspector
Tony Cotone (A)

Temporary Trestles
Muhammad Ali, PE (TYL)

Superstructure
Bonnie Nilsen, NICET IV (A)
Jerry Atwood, NICET IV (M)
Brian Salfelder, PE (TYL)
Bharat Gadara (TYL)

Bridge Demolition
Bonnie Nilsen, NICET IV (A)
Jerry Atwood, NICET IV (M)

Earthwork/Abutments Retaining Walls/Piles
Sean Crotty (M)
Sam LiPuma (M)
Amiri Robinson, PE (M)
Charles Dearing, NICET IV (ACC)

Electrical/Lighting/Utilities
Antonio Gonzalez, PE (M)

Soil Management
Ryan Landolfi (M)

GEOTECHNICAL DEEP FOUNDATIONS GROUND IMPROVEMENTS
Resident Engineer
🔑 **Mark Madgett, PE** (DBA)

Drilled Shaft Foundations Technical Expert
🔑 John Turner, PE, PhD (DBA)

Foundations - Drilled Shafts
Tayler Day (DBA)
Bryan Atkinson (ACC)

Ground Improvements
Alexis Leib (DBA)
John Paszkiel (ACC)

RAIL
Resident Engineer
🔑 **Patrick Dempsey** (A)

Tracks & Interlockings
Richard Funk (GCS)

Signals & Communications
John O'Brien (M)

Catenary & Electric Traction Power
Cathy Clement (A)

Force Account Construction
Frank Cienski (A)

MOVABLE BRIDGE
Resident Engineer
🔑 **Ralph Eppehimer, PE** (M&M)

Movable Bridge Technical Expert
🔑 Kevin Johns, PE (M&M)

Chief Inspector
Matthew Miller, PE (M&M)

Electrical Systems
Robert Peters, PE (M&M)

Mechanical Systems
Elizabeth Sample, PE (M&M)

Bridge Balancing
Dave Barrett, PE (M&M)

Movable Span Fabrication
Jim Vaskorilis (M&M)

Structural - Towers & Flanking Spans
Mike McGuire (ACC)

CONSTRUCTION SUPPORT SERVICES
Construction Services directed by the Construction Manager

Bridges/Structures
Gerard Kroner, PE (M)

Geotechnical
Anthony Crincoli, PE (A)

Survey Lead
Matt Gwiszcz, PLS (ACC)

Material Testing
Hasan Neamah, PE (AID)

Community Relations
Jody Herkloz (JHL)

Maritime Coordinator
Gary Kassof, PE (A)

Environmental Permitting
Timothy Hand, AICP (A)

HazMat Management
Kevin Koch, PE, LSRP (M)

NEPA Support
Leslie Mesnick (TCG)

Risk Management
Robert Rocco, PE (A)

Marine Diving
Dan O'Connor, PE (CEI)

CADD Support
Michael Gyiraszi (ACC)

Legend:
🔑: Key Personnel
(A): AECOM
(M): Mott MacDonald
(M&M): Modjeski and Masters, Inc.
(DBA): Dan Brown and Associates, P. C.
(AID): Advanced Infrastructure Design, Inc. (DBE)
(ACC): AmerCom Corporation (DBE)
(CSS): Certified Site Safety of NY, LLC (DBE)
(CEI): Collins Engineer, Inc.
(GCS): Garg Consulting Services, Inc. (DBE)
(JHL): JHL Management Enterprises
(PTI): Promatech, Inc. (DBE)
(SSI): Stellar Services, Inc. (DBE)
(TCG): The Calladium Group (DBE)
(TYL): T. Y. Lin International

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Resumes of the Core Team Members

Alim Baycora, PE, LEED AP

Project Director

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **33 years in design and program/project management**
- **Expertise in movable bridge nationally**
- **Extensive experience in construction management and construction inspection**

Firm: AECOM

Education
BE, Civil Engineering,
Manhattan College, 1985

Registration/Certification
Professional Engineer:
New York, New Jersey, Connecticut

Years of Experience
Total: 33 years
With Current Firm: 22

Work History
1996 - Present, AECOM

Mr. Baycora has 33 years of experience in design and program/project management for infrastructure and transportation projects. His expertise includes construction management, construction inspection oversight and construction support management for numerous transit and railroad clients, including Metro-North Railroad, the Port Authority of New York and New Jersey, TBTA, Chicago Department of Transportation (DOT), New York City and New York State DOTs, New Jersey DOT and Connecticut DOT. Additionally, Mr. Baycora has also performed design management and program management work for international clients all over the world. More importantly, Mr. Baycora has ***expertise in movable bridges and structures****. He is AECOM's National Movable Bridge Practice Leader. He provides guidance and technical advice on movable bridge projects within the company that are being designed by the local regions while bringing specific movable bridge expertise for the design of specific movable related aspects.*

Mr. Baycora performed as the project engineer for the reactivation of the Arthur Kill Lift Bridge, which is ***the longest lift bridge in the world****. He was the project manager for the mega Qatar Project which covered nearly $6 billion in construction value and on the Qatar project before that he was the resident engineer for a $883-million project, Contract 2 – Local Roads and Drainage Project project. Mr. Baycora's experience and expertise make him a very strong candidate for project director providing construction management and inspection services for the Raritan River Bridge Replacement Project for NJ TRANSIT .*

Relevant Project Experience

Arthur Kill Lift Bridge Rehabilitation and Reactivation, New York City Economic Development Corporation, Staten Island, New York: Project engineer for design, and project manager for resident engineering and construction inspection services for the rehabilitation and reactivation of the Arthur Kill Lift Bridge, a single-track vertical lift bridge with a main span of 558 feet, the longest lift span in the world. This bridge was constructed in 1958 and connects Elizabeth, NJ, with Staten Island, NY. Based on the inspection findings, design of the complete replacement of the bridge control system and the bridge approach signal system was performed. A major rehabilitation and redesign of the Staten Island RR's track from the Arthur Kill Lift Span to Arlington Yard; the Arlington Yard; the Howland Hook Lead from Arlington Yard; and the Travis Branch were also performed as part of this project. The project also included lowering of the east end of Arlington Yard to allow double

Alim Baycora, PE, LEED AP, continued

stack cars to pass under the South Avenue Bridge. This required a redesign of the yard and its connection to the Travis Branch. The open deck bridge ties on five open deck bridges, and the two open deck steel bridges, were replaced.

Local Roads and Drainage Program, State of Qatar: Project director for the concept development, preliminary design, detailed design, procurement and supervision of construction of various projects throughout the south half of the State of Qatar for the Qatar Public Works Authority (Ashghal). This project consists of identifying emerging rural villages, urban areas, industrial zones, greenfield sites and undeveloped roadways systems throughout the southern half of Qatar, producing conceptual, preliminary and detailed designs incorporating extensive GIS asset management capabilities. Upon completion of the designs, AECOM is involved in the procurement and construction supervision to install adequate roadways, utilities and drainage facilities to encourage further growth and private development. Based on a task order/framework type contract to accommodate multiple projects, AECOM is utilizing a project staff of approximately 350 persons to deliver multiple projects with a construction value of QR 21.69 billion (US$5.9 billion). This project involves extensive interaction with major stakeholders through various projects, including utility companies, numerous government agencies and current/prospective commercial developers. Due to the tight schedules, extensive delivery demands and project pipeline volatility, AECOM is also utilizing various international AECOM design centers for design development and contract document preparation utilizing ProjectWise and various other platforms.

Sir Solomon Hochoy Highway Extension Project, Trinidad and Tobago, West Indies: FIDIC Engineer Representative and Project Manager for the construction of 47 km of new highway from Golconda to Point Fortin for the National Infrastructure Development Company, Ltd. (Nidco). This US$ 1 billion project involves construction of a new highway with two lanes in each direction connecting five towns. This project involves acquiring additional properties, extensive interaction with major stakeholders including utility companies, local community groups affected government agencies and land owners/residents. As the FIDIC Engineer, utilizing an on-site staff of up to 30 persons, AECOM's role consists of monitoring contractor progress, field inspections, issuing non-conformance reports and notices of violation. AECOM compares actual works progress with contractor reports for payments certifications and provides monthly progress reports to the client. The project also involves meeting and providing regular updates to the Minister of Works and Transport. AECOM also reviews contractor claims and provides determinations. (1/2012 – 9/2012) East 145th Street Swing Bridge Reconstruction, New York City Department of Transportation (NYCDOT), New York: Project engineer for the preparation of preliminary design plans for the $60-million reconstruction of the East 145th Street swing bridge over the Harlem River. This project consisted of a complete superstructure replacement of all of the approach spans, replacement of the floor system superstructure and deck grating of the swing span, and replacement of the approaches. A complete analysis of the swing span through-trusses to determine the required stiffness for the new floor system was required. Involved in the design of partial replacement of the bottom chords of the swing span trusses. The profile of the bridge was raised to accommodate clearance over the Oak Point Link rail line with a vertical curve through the swing span. All work was performed in staged construction while vehicular traffic and bridge openings were maintained. This required design of a balancing system and work sequence to counter for the weight reduction during the superstructure and grating removal. Responsibilities included supervising design, maintaining client contact and participating in weekly meetings. Also involved in this project was construction and design support for emergency replacement of the bottom chord of the center truss, which required jacking of the ends of the swing span to relieve compression loads.

Tomlinson Lift Bridge, Connecticut Department of Transportation (ConnDOT), New Haven, Connecticut: Structural engineer for design of the Tomlinson Lift Bridge over the Quinnipiac River. Project included design

Alim Baycora, PE, LEED AP, continued

of a 270-foot long lift bridge with six steel stringer approach spans carrying both highway and railway traffic. Responsibilities included design of both of the concrete cantilever abutments founded on 18-inch-diameter concrete-filled steel monotube piles, the four concrete lift piers founded on 36-inch-diameter concrete filled steel tube piles, approximately 900 feet of concrete cantilever retaining walls, the fender system and the 35-foot-diameter steel sheet pile cofferdams filled with sand, with 5-foot concrete cap for protection of the lift piers from direct ship impact. Performed the coordinate geometry layout for the entire project, and provided construction support that included layout of electrical conduit throughout the lift towers and redesign of the aluminum cladding support details.

Port Authority of New York and New Jersey (PANYNJ), Permanent World Trade Center Port Authority Trans- Hudson (PATH) Terminal, New York: Design Certification for construction of the Permanent World Trade Center PATH Terminal. The project involved the design certification of the $3-billion Permanent World Trade Center PATH Terminal at the World Trade Center Site in New York City. This signature project involved design, fabrication and erection of special curved architecturally engineered structural steel (AESS) arch ribs and trusses to make up the various public access areas of the terminal; it is considered as one of the most complex structures in North America. Part of the terminal roof supports the 9/11 memorial pools and plaza as part of this complex construction site involving four building towers, PATH terminal, memorial pools, museum and performing arts center, all with operating subway and PATH trains throughout the project site. Project role consisted of assuring construction was performed in accordance with the design intent and also included extensive interaction/coordination with project-wide stakeholders such as utility companies, transit authorities, contractors and residents.

Rehabilitation of the Second Avenue and East 36th Street Manhattan Overpass Bridges, New York: Project Manager for design and construction support services for the rehabilitation of the Second Avenue and East 36th Street Manhattan overpass bridges. Project work included a detailed visual inspection and a complete deck evaluation survey. As part of this survey, a comprehensive concrete coring and testing program was developed to determine the condition of the deck and deck reinforcement. The project also developed alternatives for rehabilitating the bridges, including repairs to the bottom of the concrete deck up to the first layer of reinforcement, replacement of the concrete deck alone, and replacement of the deck and superstructure steel. Responsibilities included coordination of field inspection of the bridges, development of a concrete deck coring and testing plan, directing design staff and supervising the development of the design documents. Additional responsibilities include maintaining client contact and resolving issues with all affected agencies, including the NYC Department of Transportation, which owns the top half of the bridge.

MTA Bridges and Tunnels(TBTA), Throgs Neck Suspension Bridge Rehabilitation, Queens, New York: Project Manager for drainage improvements and structural repairs to the Throgs Neck Suspension Bridge (TN-81). Project work involved drainage improvements and various structural steel repairs at over 200 locations. A new semi-closed drain system was installed to collect and divert all bridge and approach stormwater away from the roadways and steel superstructure. The steel repairs focused on areas that had increased deterioration and section loss caused by the drainage problems, and included removing and retrofitting steel sections and adding steel members to increase strength. Other repairs included replacing cracked diaphragm connection angles, replacing deteriorated shoulder bolts

Alim Baycora, PE, LEED AP, continued

and extensive work along the parapets, including repairs, cleaning and painting. Responsible for overall management, including overseeing the design, directing staff, project meetings, management of subconsultants and invoicing.

Commodore Hull Bridge and Access Ramps, Connecticut Department of Transportation (ConnDOT), Shelton, Connecticut: Team leader for the in-depth inspections on the Commodore Hull Bridge and access ramps, which carry Route 8 over the Housatonic River (Bridge Nos. 00541A, B, and C).These inspections are the first phase of a rehabilitation project that will address structural deficiencies found during the inspection. Access to the deck trusses over the river for the in-depth inspection was provided by a self-propelled barge equipped with a 60-foot man-lift. This provided complete access to portions of the bridges without the need for lane closures.

Connecticut Department of Transportation, Saugatuck River Bridge, Connecticut: Project manager, project engineer and team leader for the engineering feasibility/economic analysis study, interim rehabilitation design, and replacement design of the Saugatuck River Bridge. Project work included developing alternatives for the repair, rehabilitation, or replacement of this six- span structure carrying four railroad tracks over the Saugatuck River. The bridge carries Metro-North and Amtrak passenger trains as well as several freight lines. The project included performing an in-depth inspection of the structural, mechanical and electrical systems.

TBTA, Triborough Bridge Anchorages, New York: Project engineer for the rehabilitation design and construction support services for rehabilitation of the anchorages at the Triborough Suspension Bridge. Project work included a $12-million rehabilitation of the anchorages with installation of four post-tension tendons through the front and rear anchorage blocks of the Queens Anchorage. Responsibilities included investigation and approval of all materials and procedures, as well as resolution of design and construction issues. This project was the recipient of the New York Association of Consulting Engineers, Inc.'s Platinum Award for Engineering Excellence. Throgs Neck Suspension Bridge Bronx Approach Roadway Improvements,

TBTA, Bronx approach roadway to the Throgs Neck Suspension Bridge, New York: Project structural engineer for the preliminary design report and final design plans of roadway and drainage improvements. Project work included evaluation of existing roadway conditions, design of the roadway slab on grade replacement, drainage design, development of complex construction staging, maintenance and protection of traffic schemes, and other incidental work. Responsibilities included design of all structural details. Also included were design of temporary roadway crossover supports, and various full and partial deck repairs.

New York City Department of Transportation (NYCDOT), Harlem River Drive Bridge and 145th Street Swing Bridge Reconstruction Project Reports, New York: Project engineer for preparation of bridge reconstruction project reports for the 145th Street swing bridge over the Harlem River and the Harlem River Drive Bridge over the East 127th Street entrance ramps. Project work included performing an investigation of the structures and developing repair, rehabilitation and replacement alternatives. Responsibilities included performing a total investigation of the structure.

Thomas P. O'Connor, PE

Construction Manager; Preconstruction Assistance Manager

Mr. O'Connor brings 42 years of construction management experience to this assignment, including major interchange bridge and highway construction programs throughout the NJ/NY/CT tri-state area. As project manager for New Jersey Turnpike Authority (NJTA)'s $2.5-billion Interchange 6-9 Widening Program, he was responsible for overall construction management for all 31 construction contracts and construction inspection services for 24 of the 31 construction contracts. He recently served as the Project Manager on the Interchange 14A Improvements project for NJTA and has served as Project Principal and Project Manager on other large, complex projects, including construction of the $173-million Secaucus Interchange 15X and $1-billion Rehabilitation of the Williamsburg Bridge for NYC Department of Transportation.

Relevant Project Experience

NJTA, Interchange 14A Reconstruction, New Jersey: Project Manager for the $180-million major reconstruction of Interchange 14A to more effectively separate local traffic from the heavy truck traffic accessing the ports and regional transportation system. This was accomplished by staged demolition and reconstruction of the interchange, including new bridges, ramps, a roundabout, building improvements and local road connections. The work included close coordination with NJ TRANSIT and Conrail for the removal and replacement of the ramps over the Hudson-Bergen Light Rail and Conrail tracks. There were several key milestones for the program, including completion of the new toll utility building, completion of the new East Toll lane and completion of the new connector bridges over NJ TRANSIT and Conrail tracks.

NJTA, Interchange 6-9 Widening Program, New Jersey: Project Manager for NJTA's $2.5 billion Interchange 6 to 9 Widening Program. As Project Manager, assisted the NJTA in delivering the Widening Program in the most cost-effective and efficient manner. The 35-mile program, the largest in NJTA history, extended through 11 municipalities and three counties. The project also included over 100 bridge crossings and bridge repairs. The CM and CI services included implementing a web-based management and reporting system; coordinating program construction schedule reporting as well as material testing and certification; conducting web-based daily inspection/reporting, and managing changed conditions. The project has a five (year) construction

RELEVANT EXPERTISE FOR RARITAN RIVER BRIDGE

- **Extensive construction management experience**
- **Expertise in managing large and complex bridge replacement & rehabilitation projects**
- **Familiarity with NJ TRANSIT and Conrail**

Firm: AECOM

Education
MS, Civil Engineering, Columbia University, 1981
BS, Civil Engineering, Manhattan College, 1976

Registration/Certification
Professional Engineer, New York, New Jersey

Years of Experience
Total: 42
With Current Firm: 42

Work History
1976-present, AECOM

Thomas P. O'Connor, PE, continued

schedule and was complete d on time and whithin budget.

NJTA, 6-9 Widening Program Constructability Consultant, New Jersey: Project Manager for planning, recommendation and review of the bid packages for the overall Widening Program to assist the Authority in delivering the Widening Program in the most cost-effective and efficient manner. Reviews and recommendations addressed construction costs, contract packaging, scheduling, sequencing and utility accommodations.

NJTA, Secaucus Interchange and Seaview Drive Extension, New Jersey: Project Manager for the $173-million construction of the Secaucus Interchange and the Seaview Drive Extension. Construction supervision services for this new interchange along the eastern spur of the New Jersey Turnpike in the area of the new Secaucus Junction Station, including the complete placement of the Turnpike mainline structure over NJ TRANSIT's Bergen Line. In addition, in support of short-term emergency repairs, AECOM oversaw the rehabilitation of bridge approach pavements and bridge decks. Work involved concrete deck panel replacements, joint repairs and replacement, and temporary pavement striping. The construction inspection services for this new interchange included a new toll plaza, new flyover structure, extensive utility mitigation and roadway and environmental management.

NYCDOT, Rehabilitation of the Williamsburg Bridge, New York: Project Manager for the $1-billion rehabilitation of the Williamsburg Bridge contracts #6 (1997-1999), #7 (1999-1997) and #8 (2003-2006). AECOM provided CI services for this rehabilitation effort, which essentially replaced the entire bridge within its existing footprint. This included deck replacement on the main span and complete replacement of approaches, including the rehabilitation of the structural support, track structures and signal system for MTA NYC Transit's M and J subway lines. The project involved close attention to the maintenance of both traffic and rail operations on this critical access point into Manhattan.

MTA Bridges and Tunnels, Triborough Bridge Roadway Deck Replacement (TB-63), New York: Project Manager for the $140-million redecking of the RFK Bridge Junction structures and approaches. The project involved demolition of the existing deck, columns, stringers, cap beams and pier walls, new cast-in-place concrete piers with spread footings, and new cast-in-place concrete decks on the QM ramp, BM ramp and MB ramp. The work also included both new concrete-filled grid decks and precast inverset construction on the Queens to Bronx Mainline and the MR ramp. Critical issues included MPT, which involved hundreds of long- and short-term lane closures, lane shifts and related MPT operations, and safety and safety awareness for pedestrians, motorists, workers and inspection staff during structure repairs during both day and night work.

NYS Thruway Authority, Reconstruction of Interchange 8 and I-287/I-87: Project Manager for the $187-million reconstruction of Interchange 8 and I-287/I-87 from the Tappan Zee Bridge Toll Plaza to the Saw Mill River Parkway. Project work included construction of new roadways and bridges, full-depth asphalt paving and resurfacing, extensive rock blasting, retaining wall and noise barrier construction, drainage improvements, utility relocation, complex MPT and community outreach programs. The project featured extensive bridge replacement and construction work. The new bridge types included trapezoidal box girders, pre-cast inverset panels and welded plate girders with composite reinforced concrete deck. Construction scheduling oversight was provided and coordinated with the NYSTA to modify staging and phasing to improve constructability and to minimize construction conflicts and phasing. Constructability reviews led to the installation of a modular retaining wall system and a shared value engineered cost saving on the project.

Thomas P. O'Connor, PE, continued

MTA Bridges and Tunnels, Triborough Bridge Rehabilitation, New York: Project Manager for the $12-million rehabilitation design and construction support services of the anchorages at the Triborough Bridge. The two anchorages, one in Queens and the other on Ward's Island, were originally built in the early 1930s. Cracking and deterioration has been detected since 1946. The cause of the cracking of the anchorage concrete and distortion of the steel framing members was identified as a byproduct of the alkali-silica reaction. This expansion of the concrete resulted in cracking of the front and rear anchor blocks, as well as the curtain walls and concrete girders between the two anchor blocks. The steel cable bents and roadway supporting structure inside the anchorages were subjected to distortion induced by the movement of the concrete to which their bases were rigidly attached. In addition, after more than 50 years of service, some broken cable wires and anchorage appurtenances were rehabilitated. The project repaired the cable bent; the roadway support bents; the cable housing; improved access to the lower levels of the anchorage; completed miscellaneous steel repairs; wire replacement and strand replacements; and povided extensive testing and inspection programs for new post-tensioning tendons. This project was the recipient of the New York Association of Consulting Engineers, Inc.'s 1997 Platinum Award for Engineering Excellence.

New York State Department of Transportation, Miller Highway Viaduct Rehabilitation, Manhattan, New York: Project Manager for the construction inspection services for the $70-million rehabilitation of the Miller Highway viaduct, from 59th Street to 72nd Steet over Amtrak. This project included the installation of pin piles for the two new approach ramps' construction, and attachment of the new concrete columns to the existing caissons. Also involved in the complete deck replacement and structural rehabilitation of the elevated portion of the West Side Highway viaduct. This was the first project in New York State that utilized a movable barrier for maintenance and protecton of traffic. It allowed added capacity in the peak travel direction during the morning and evening rush hours. Community outreach that included monthly updates regarding the project's status brought the community into the project as a partner, and resulted in a successful project for both the NYSDOT and the community.

MTA Bridges and Tunnels, Throgs Neck Bridge Approach Viaducts Rehabilitation, Queens, New York: Project Manager for construction inspection services for the rehabilitation of the approach viaducts between the Cross Island Parkway and the Throgs Neck Bridge. This project was completed on a fast-track schedule and received the Construction Management Association of America's 1995 Project of the Year Award, and the Concrete Industry Board's Award of Merit. Project work included cleaning and removal of hazardous lead debris, abatement of lead-based paint to remove existing steel members. A critical element to the successful completion of this project was the implementation of partnering as a means to quickly identify and resolve potentially problematic project issues. Close coordination and cooperation enabled the most sensitive aspects of this project, originally scheduled for 18 months, to be completed in only six months.

New York State Thruway Authority, Rehabilitation of on the New England Thruway, New Rochelle, New York: Project Manager for the construction inspection for the $19-million rehabilitation over one mile of the New England Thruway, including a viaduct over Metro-North Railroad. Project work included complete deck replacement and structural rehabilitation. Maintenance and projection of traffic requirements and railroad operations were a critical aspect of this rehabilitation work, including close coordination with metro-North Force Account. Close monitoring of the project schedule, through

Thomas P. O'Connor, PE, continued

the use of CPM scheduling, led to the easy identification and successful completion of potentially critical work elements.

Metro-North Railroad, Park Avenue Tunnel Rehabilitation, Manhattan, New York: Resident Engineer for the rehabilitation of the $146-million Park Avenue railroad tunnel and structural roadway deck. Provided inspection, evaluation and engineering of many different systems, and problems were addressed in conceptual form and then in final design. Examples of the diverse issues addressed include rehabilitation of the track structure, drainage system, roof and wall structures, and water leakage mitigation. During construction, performed additional rehabilitation design tasks that included a complete redesign of the roof structure to resolve conditions found during construction that would have required extensive underpinning to the tracks below; various redesigns to help facilitate the contractor's operations; and design modifications for the drainage system passing beneath the tunnel.

New York City Departments of Transportation, Reconstruction of the Leggett Avenue and 149th Street Bridges, Bronx, New York: Resident Engineer for the construction inspection services for the $12-million reconstruction of the Leggett Avenue and 149th Street briges. Project work included structural repairs and modifications to the substructures and superstructures, as well as a complete deck replacement for each bridge. Close coordination with Conrail minimized the impact on railroad operations.

Metropolitan Transportation Authority, Park Avenue Railroad Viaduct Rehabilitation, Manhattan, New York: Project inspector for the construction inspection services for the rehabilitation of the Park Avenue Railroad Viaduct. The rehabilitation included repairs to the structure's deck, rehabilitation and strengthening of the main girders and complete replacement of all the exterior support columns and foundations. Maintenance of rail operations was critical, since the Viaduct services Metro-North's Harlem, Hudson and New Haven rail lines.

Patrick M. Dempsey

Resident Engineer for Rail; Preconstruction Assistance

Mr. Dempsey is a program/project manager with over 15 years of progressive experience in successfully managing all phases of highly complex, multiple-phase, large-scale rail and transit projects for the largest regional rail stakeholders in the tri-state area, including the Metropolitan Transportation Authority, Metropolitan Transportation Authority Capital Construction, New York Port Authority, New York City Transit Authority, NJ TRANSIT, Long Island Rail Road, Amtrak, Federal Transit Administration, Federal Railroad Administration, American Recovery and Reinvestment Act initiative and Federal Sandy Recovery Program initiatives. Patrick's programs and projects include facility, signal system, traction power, and rail replacement, rehabilitation, complete station construction and rehabilitation, rail management system, and utility maintenance and improvements. Mr. Dempsey performed constructability review for the NJ TRANSIT Portal Bridge project.

Relevant Project Experience

MTA,MTACC,LIRR, Amtrak, East Side Access, New York, NY: The East Side Access Project is the largest transportation infrastructure project currently underway in the United States. This $12 Billion Dollar public works mega-project encompasses work in multiple locations in Manhattan, Queens and the Bronx and includes more than 8 miles of tunneling. When completed, East Side Access will serve approximately 162,000 customers a day, providing a faster and easier commute from Long Island and Queens to the east side of Manhattan in a new 8-track terminal and concourse below Grand Central Terminal. This project included infrastructure improvements to Harold Interlocking. Over 700 cars are moved through this interlocking daily. Construction in Harold Interlocking will reconfigure the track, switches, right-of-way and signal systems for the new service to GCT. Harold construction also included a new train yard and maintenance facilities in Queens for Long Island Rail Road operational use and to support East Side Access operations, track and switch work to increase Long Island Rail Road train operations efficiency to mitigate the project's construction impacts on service and support the future new service. As the Sr. Program Manager for this project, performed all facets of Program and Project Management for the Harold Interlocking work, including contract administration & mitigation, cost control, scheduling, risk and budget management, maintenance of contract requirements, Client Management and site specific scope implementation within the most active Amtrak, LIRR, NJ TRANSIT, MTA, Metro North passenger rail system within North America. Oversight and coordination of discipline leaders. Lead Management of Force

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Large scale rail and transit project**
- **Extensive NJ TRANSIT project management experience**
- **Familiarity with signal system, traction power, and rail replacement**

Firm: AECOM

Education

Morris County College, Electrical Engineering course study towards Associate degree

William Paterson College, Business course study towards Bachelor degree

Years of Experience

Total: 15

With Current Firm: 5

Work History

2013 - Present, AECOM

2010 - 2013, STV Inc.

Training and Industry Skills

NJ TRANSIT Rail Safety Training · Amtrak Rail Safety Training · Newark City Subway (NCS) Safety Training · LIRR Rail Safety Training · MTA/NYCT Training

Patrick M. Dempsey, continued

Account and Construction Management teams. Design Change Management through Designers, Transit Rail Stakeholders and Client Program Management teams. Schedule Coordination and Program Direction/Critical Path Management. The ESA project is still underway and advancing to its ultimate successful completion.

Metropolitan Transportation Authority Capital Construction, Second Avenue Subway, New York, New York: Owners representative and senior program manager. The Second Avenue Subway (SAS) Phase I is a $4.5 Billion Dollar Project, New York City Subway line that runs under Second Avenue on the East Side of Manhattan. The first phase of this new line opened on January 1, 2017, serving a projected 200,000 daily riders at three new stations between 96th Street and the 63rd Street Lines before connecting to the BMT Broadway Line and the rest of the subway system. The full Second Avenue Line is planned to be built in three additional phases, allowing new portions to open before the entire line is completed between 125th Street and Hanover Square. The proposed full line would be 8.5 miles (13.7 km) long with 16 stations and a projected daily ridership of 560,000, costing more than $17 billion.

New York City Transit, South Ferry Terminal Sandy Recovery/Rehabilitation, New York, New York: Program manager for rehabilitation and installation of flood protection infrastructure. This is a $300 Million Dollar Rehabilitation of the South Ferry Terminal Station following the devastation of super storm Sandy that destroyed the facility. This Federally funded program rehabilitated the South Ferry Terminal Station to a State of Good Repair and protected the restored infrastructure from future flooding. The South Ferry Terminal is a key piece of New York City Subway system that is used by neighborhood residents, workers, tourists and commuters and when it is again operational it will greatly improve the efficiency of the entire Seventh Avenue subway line. Before the storm, 30,000 people passed through South Ferry each day, shuttling between Staten Island and Manhattan and around the labyrinthine streets of New York's financial district. The rehabilitation work included leak remediation and repairs to the station, rail tracks, line equipment, signals and power equipment. Flood protection measures included hardening of station entrances, vents, manholes, hatches conduits and ducts. It also delivered architectural finishes such as civil and structural steel works, new ventilation system, pumping equipment, the refurbishment of two elevators and five escalators, fire protection, new traction power system and a range of electrical work at two circuit breaker houses and a ventilation plant. As the Sr Project Manager for this high profile project, I performed all facets of Program and Project Management. Including contract administration & mitigation, cost control, scheduling, risk and budget management. Maintenance of contract requirements, Client Management and site specific scope implementation. Oversight and coordination of discipline leaders. Lead Management of Force Account and Construction Management teams. Design Change Management through Designers, Transit Rail Stakeholders and Client Program Management teams. Schedule Coordination and Program Direction/Critical Path Management. This Project achieved substantial completion on time and within budget.

NJ TRANSIT projects included:

Washington Avenue Station, Newark, New Jersey: Project Manager - station rehabilitation.

Rutherford Station Rehabilitaion, Rutherford, New Jersey: Project manager.

Morristown Station Rehabilitation, Morristown, New Jersey: Project manager.

Secaucus Junction Station - Frank Lautenburg Station, Secaucus, New Jersey: Resident engineer.

Secaucus Station Fare Gate, Secaucus, New Jersey: Project manager.

Broad Street Station Rehabilitation, Newark, New Jersey: Project manager/construction manager.

John Turner, PE, PhD

Drilled Shaft Foundations Technical Expert

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Expertise in geotechnical/ foundation engineering**
- **Managed the design of over 20 bridges including deep foundations**

Dr. Turner is an accomplished practitioner, researcher, and educator in the field of geotechnical/foundation engineering. His specialty expertise includes drilled shaft foundations, anchored retaining walls, and landslide stabilization. Since joining DBA in 2011 as a Senior Principal Engineer, Dr. Turner has been actively engaged in engineering design and construction of deep foundations for over 20 bridges ranging in size from small and moderate up to major spans exceeding $3 billion in cost. Recent projects include design of rock-socketed drilled shafts for the Goethals Replacement Bridge in NJ/NY, Fore River Bridge in Boston, Pitkins Curve Bridge in Big Sur, and the Antlers Bridge on I-5 in northern California. Dr. Turner is an instructor and co-developer of the National Highway Institute course on drilled shaft design and construction, and along with Dr. Dan Brown co-authored the FHWA drilled shaft design manual. Dr. Turner is also the author of NCHRP Synthesis 360, "Rock-Socketed Shafts for Highway Structure Foundations" as well as over 100 technical publications. He is a past chairman of the ASCE Committee on Deep Foundations and is a recipient of the Outstanding Service Award (1992) and the President's Award (2000) from the ADSC: International Association of Foundation Drilling.

Relevant Project Experience

State of Minnesota, TH-53 Bridge, Virginia, MN: Foundation design, engineered slopes, and rockfall mitigation for 200-ft high bridge spanning an open-pit iron ore mine on the Mesabi Range in Northern Minnesota. Bridge opened in 2018. Client: Parsons Transportation Group; Owner: State of Minnesota

Port Authority of New York and New Jersey, Goethals Bridge, NJ: Lead foundation design engineer as member of design-build team replacing the existing Goethals Bridge with cable-stayed bridge supported on large-diameter rock-socketed drilled shafts; consultant on load testing to establish design parameters for rock sockets. Developed drilled shaft construction specifications. Responsible for managing team of engineers performing soil/rock property selection, engineering calculations, constructability review for foundation designs, and coordination/oversight of drilled shaft QA/QC (inspection). Responsible for final acceptance of drilled shaft foundations.

Powers, Taylor, and Mills Engineered Foundation Construction, LLC, Tangent Pile Retaining Wall for Slide Stabilization, Kansas City: Responsible for design of tangent pile wall for stabilization of landslide affecting adjacent buildings.

Firm: Dan Brown and Associates, P. C.

Education

PhD, Geotechnical Engineering, Cornell University, 1986

MS, Civil Engineering, University of Wyoming, 1982

BS, Civil Engineering, University of Wyoming, 1981

BS, Geology, James Madison University, 1976

Registration/Certification

Professional Engineer: New York and CA, CO, MD, NY, OK, WY

Years of Experience

Total: 40

With Current Firm: 7

Work History

See next page

John Turner, PE, PhD, continued

Massachusetts Department of Transportation, Fore River Bridge, Quincy-Weymouth, MA: Design consultant for large-diameter drilled shafts in rock supporting vertical lift bridge; consultant on O-cell load testing to establish design parameters for rock sockets. Consultant for revised installation plan in response to differing subsurface conditions. Client: Parsons Transportation Group,

ATS Drilling, 7th Street Bridge – Secant Pile Wall, Fort Worth, TX: Value-engineered design of a cantilever secant pile wall for levee protection; analysis/design of drilled shaft secant piles to meet geotechnical and structural criteria established by Texas DOT and U.S. Army Corps of Engineers.

California Department of Transportation, Bridge at Pitkins Curve, Big Sur, CA: Consultant to Caltrans on design and construction of rock-socketed drilled shaft foundations for bridge spanning a major coastal landslide. Managed a constructability study prior to design; designed and managed pre-design load testing; provided geotechnical parameters for design of drilled shafts and worked with Caltrans Structures to design drilled shafts.

Work History

2011-present, DBA

1986-2011, University of Wyoming (Professor; Independent Consultant)

1982-1986, Cornell University (Graduate Research Assistant)

1980-1982, University of Wyoming (Graduate Research Assistant)

Ralph J. Eppehimer, PE

Resident Engineer for Movable Bridge

Mr. Eppehimer has over 36 years field services experience with Modjeski and Masters, Inc. and is the Director of Field Services. He has vast experience in all aspects of field services including new bridge construction, safety and maintenance inspections of existing bridges, repair and rehabilitation of bridges, and emergency response to bridge accidents. He has been the construction project manager, resident engineer, assistant resident engineer and technical advisor on a number of significant movable bridge projects, primarily railroad bridges. Mr. Eppehimer's technical specialties are the field inspection of all types of bridge, field monitoring of movable bridge construction, repair and rehabilitation of bridges, and the repair and retrofit of movable bridges.

Relevant Project Experience

UPRR, San Bernard River Bridge Replacement, Sweeny, Texas: Principal-In-Charge. Responsible the design for a new vertical lift bridge that will replace an existing swing span bridge over the San Bernard River in the Angleton Subdivision of the Union Pacific Railroad. Mr. Eppehimer is working with the UPRR to accommodate an accelerated construction schedule, and will be providing construction support for the project. The new bridge is designed to be "remote control ready." Mr. Eppehimer also oversaw all construction activities.

Canadian National Railway, EJ&E Vertical Lift Bridge 552 Replacement, Joliet, Illinois: Project Manager and Primary Construction Engineer Inspector. Responsible for the construction services portion of the project. The Illinois River Bridge, No. 552, was originally built as four, 154' fixed through truss spans and was converted to a vertical lift bridge 80 years ago. Under the provisions of the "Truman-Hobbs Act" of 1940, the United States Coast Guard is funding alteration of the Illinois River Bridge, No. 552, to provide a 300-foot marine opening. M&M designed the replacement vertical lift span of 348' with a maximum lift vertical clearance of 56'. M&M also collected relevant data, evaluated alternatives, established design criteria, cost estimates, prepared project report, and provided the final vertical lift bridge design. M&M provided construction management services.

BNSF, Bridge 73.31 Replacement across Bayou Boeuf, Amelia, Louisiana: Construction Project Manager. Responsible for overseeing the replacement of an older single-track railroad, through-plate girder swing span with a new through-plate girder swing span for BNSF Railway. He made monthly project site visits during construction, including during the span change-out period. He also provided office support and

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Extensive exp. in movable bridge replacment and construction**
- **Managed numersous railroad bridge inspection/ construction**
- **Bridge repair and rehabilitation**
- **Emergency response to bridge accidents**

Firm: Modjeski and Masters, Inc.

Education
BS, Civil Engineering, Pennsylvania State University, 1982

Registration/Certification
Professional Engineer: Louisiana

Years of Experience
Total: 36
With Current Firm: 36

Work History
1982-present, Modjeski and Masters, Inc.

Ralph J. Eppehimer, PE, continued

supervised our full-time on-site Resident Inspector on the project. This project called for replacement of the bridge superstructure consisting of a 150 ft. open deck TPG swing span, six 80 ft. open deck simple TPG spans and three approach beam spans to the east for a total length of 693 ft. The new bridge replicates the existing span in length and style.

Galveston County/BNSF, Galveston Bay Bascule Bridge Replacement, Galveston, Texas: Project Manager/Construction Engineering Inspector. Responsible for the construction phase of the project. His duties included managing the construction of the bridge, as well as the float-in procedures. He also supervised on-site procedures and processes during construction and answered RFIs from the contractor. This project provided for the replacement of the existing 115 ft. span Scherzer Rolling Lift Bascule bridge in the Galveston Bay Railroad Causeway with a 385 ft. simple truss vertical lift bridge. The replacement bridge will provide 300 ft. of horizontal clearance and 73 ft. of vertical clearance over the Intracoastal Waterway and will carry a single railroad track.

Union Pacific Railroad, Vertical-Lift Bridge Relocation, Houma, Louisiana to Freeport, Texas: Construction Project Manager. Responsible for office support to the on-site team as needed and made project site visits on a monthly basis to attend the monthly progress meetings, and observe activities. He participated in project conference calls, and was on-site for the span change-out period. He supervised and supported the resident inspector on the project, and he monitored all project activities, including the shop drawing, submittals, and RFI review process, and worked with the parties involved to plan upcoming activities and to resolve issues as they developed. The existing railroad swing bridge at Freeport, TX was a 288' long, through-truss span and the existing railroad vertical lift located at Houma, LA was a 258' long through-truss span with two 29' tower spans. The swing span was removed and replaced with the relocated and rehabilitated vertical lift span. The lift span, towers, counterweights and machinery were relocated. New piers and approach structures were provided at Freeport and a complete electrical system replacement was provided.

NJ TRANSIT , HX Draw Conceptual Study, Secaucus, New Jersey: Constructability Task Leader. Assisted with the development of various movable bridge alternatives and provided input on constructability as needed. The project consists of rehabilitation and replacement structure alternatives for NJ TRANSIT 's HX Draw Bridge. The existing bridge structure carries the two tracks of NJ TRANSIT 's Bergen CounT. Y. Line over the Hackensack River. It consists of a Strauss Heel Trunnion Bascule bridge over the navigable channel and has 11 approach spans to the east and 4 approach spans to the west. The total bridge length is 1,095' consisting of 197.25' of movable and tower spans, 254.25' of west approach spans, and 643.25' of east approach spans. The bridge is currently double tracked.

Maine DOT, Casco Bay Bascule Bridge Replacement, Portland, Maine: Resident Engineer and Technical Advisor. Responsible for structural and machinery shop visits to observe fabrication and shop assemblies and tests, and then his full-time presence on-site during the movable span and machinery erection period. The "Million Dollar Bridge" over the Fore River linked the cities of Portland and South Portland. The replacement bridge, named the Casco Bay Bridge, is located downstream on a curved alignment. It carries a divided roadway with four 12-foot traffic lanes and a pedestrian walkway.

Training and Industry Skills

NHI 130053 - Bridge Inspection Refresher Training (2018)

NHI 130055 - Safety Inspection of In-Service Bridges (2006)

American Red Cross Adult First Aid (2013)

eRailsafe System Safety Training

OSHA 10-Hour Outreach Training Course for the Construction Industry (2012)

Kevin Johns, PE

Movable Bridge Technical Expert; Preconstruction Assistance

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Movable bridge construction management**
- **19 railroad projects**
- **NJ TRANSIT project experience**

Mr. Johns is the Director of the Movable Bridge Business Unit with more than 20 years of experience. In the past 5 years, he has served as Project Manager or Task Leader on 28 movable bridge projects, 19 railroad projects and 9 movable railroad projects. Eight of these projects have had a construction cost of over $100 million. He has worked on all types of movable commuter and heavy freight railroad bridges including vertical lift, swing and bascule. His clients include NJ TRANSIT , Amtrak, Metro-North, Sonoma-Marin Area Rail Transit (SMART), Norfolk Southern, Conrail, BNSF and Canadian National. On fixed and movable railroad bridge projects, Mr. Johns coordinates the efforts of the multiple engineering disciplines and various subconsultants. He has lead or participated in accelerated bridge construction workshops for railroad bridges, and actively participates on the AREMA Committee 15.

Relevant Project Experience

Amtrak and NJ TRANSIT , Portal Bridge Replacement, Secaucus, New Jersey: M&M Project Manager (Movable Span Alternative). Responsible for cursory field inspection and a fatigue analysis of the existing bridge. He also participated in the design of several alternatives for the main river crossing as well as numerous approach spans. These included two-track, three-track and four-track options for vertical lift bridges, swing spans, trusses, network-tied arches, deck plate girders, and prestressed concrete alternatives. Mr. Johns also contributed to the development of the Construction Cost Estimate, constructability studies, the project schedule, writing of the Alternatives Feasibility Report and the EIS Report. The existing Portal Bridge is an Amtrak swing bridge spanning the Hackensack River with a main span length of 300'.

NJ TRANSIT , HX Draw Conceptual Study, Secaucus, New Jersey: Constructability Task Leader. Assisted with the development of Various Movable Bridge Alternatives and provided input on constructability as needed. The project consists of rehabilitation and replacement structure alternatives for NJ TRANSIT 's HX Draw Bridge. The existing bridge structure carries the two tracks of NJ TRANSIT 's Bergen CounT. Y. Line over the Hackensack River. It consists of a Strauss Heel Trunnion Bascule bridge over the navigable channel and has 11 approach spans to the east and 4 approach spans to the west. The total bridge length is 1,095' consisting of 197.25' of movable and tower spans, 254.25' of west approach spans, and 643.25' of east approach spans. The bridge is

Firm: Modjeski and Masters, Inc.

Education

MS, Civil Engineering, Lehigh University, 1998

BS, Civil Engineering, Carnegie Mellon University, 1996

Registration/Certification

Professional Engineer: New York, New Jersey, and 13 other states

Years of Experience

Total: 20

With Current Firm: 20

Work History

1998-present, Modjeski and Masters, Inc.

Training and Industry Skills

Amtrak: Contractor Safety Training (2017)

e-Railsafe System: Safety Training (2016)

Kevin Johns, PE, continued

currently double tracked with steel deck girder approach spans. The objective is to replace structure with a new alignment from the existing with two tracks operating over the Hackensack River with a minimum design strength able to support 315Kip rail cars.

Virginia DOT, Gilmerton Bridge Replacement, Chesapeake, Virginia: Deputy Project Manager and Lead Structural Engineer. Responsible for the design of the new vertical lift towers including an aeroelastic wind analysis, machinery house, counterweights, span guides, tower bearings, checking the design of the vertical lift trusses, gusset plates, floorsystem, development of the specifications, constructability reviews and coordination of efforts with the electrical and mechanical systems designers as well as the geotechnical engineers and approach span designers. He also participated in generating the special provisions and construction cost estimate.

Norfolk Southern, Shellpot Swing Bridge Rehabilitation, Wilmington, Delaware: Deputy Project Manager and Lead Structural Engineer. Responsible for performing a fatigue analysis and strengthening the 252' long pin-connected through truss structure carrying two open deck tracks. He developed details to increase of the vertical clearance envelope to match AREMA requirements, raise the span to keep the machinery rack and pinion out of the water, upgrade of the mechanical and electrical bridge system components, and replacement of deteriorated fenders and approach substructure and foundation units.

Phila. Industrial Dev. Corp., Philadelphia Naval Shipard Lift Bridge Replacement, Philadelphia, Pennsylvania: Deputy Project Manager and Lead Structural Engineer. Responsible for the design of new vertical lift towers and a retrofit to the existing tower which increased its height by 15'. Both were included in the contract and Contractors could bid as alternates. He also designed modifications to the existing counterweight, strengthening of the existing vertical lift pier and abutment and replacement of the fender system. He was responsible for the fatigue analysis of the existing lift truss, checking the design of the new floorsystem and deck. He also participated in generating the special provisions and construction cost estimate. During construction he was in direct responsible charge of RFI responses, submittal and shop drawing reviews, and evaluation of non-conformance reports. He coordinated the efforts of geotechnical engineers and surveyors who were subconsultants.

Norfolk Southern, Portageville Bridge Replacement, Portageville, New York: Project Manager. Responsible for the evaluation various alternatives to increase capacity, remove operational constraints and maintain acceptable levels of safety. He was in direct responsible charge of the design of the new 483' two-hinged steel arch main span with east bank and west bank steel I-girder approaches leading up to the arch span. He oversaw the development of the track design, site civil design, erosion and sedimentation control, stormwater treatment plan, habitat restoration plan, writing of the special provisions, development of the Construction Cost Estimate and development of the project schedule. He coordinated the efforts of subconsultants for surveying, environmental, geotechnical and ROW research.

Amtrak, Middletown Bridge Replacements, Middletown, Pennsylvania: Project Manager. Responsible for all aspects of the design and construction services. M&M was tasked to provide design and construction services for the simultaneous replacement of two century-old three-span bridges on Amtrak's NEC. M&M designed the structures for replacement on the same alignment using self-propelled modular transporters (SPMT's). Each replacement structure was erected at nearby staging areas in preparation for replacement operations – scheduled to take place over one weekend to minimize rail outage.

Mark Madgett, PE

Resident Engineer for Geotechnical Deep Foundations and Ground Improvements

Mr. Madgett, MSCE, PE received a BS and MS degree in Civil Engineering at the University of Tennessee. He has worked in both consulting and construction for the last 24 years, focusing primarily on deep foundations in the Southeastern US. As a consultant, Mark gained extensive field experience with deep foundation construction techniques and the impacts on design. In 2006, he began working for Seaboard Foundations, opening a green field office in Tri-Cities, Tennessee, as the district manager. In his role as design engineer, Mark has implemented design-build techniques to vastly improve the constructability and reduce the costs of deep foundations for the owners.

Relevant Project Experience

Charles Blalock & Sons, Inc., US 27 Bridges,Harriman, TN: Geotechnical Engineer performing on-site verification of construction and evaluation of non-destructive testing or two, drilled shaft supported bridges in karst conditions. Work included the evaluation of cross hole sonic logging (SL) results, determination of structural integrity from test results, development of remediation plans, observation of remedial work, and post-remediation evaluation.

State of Tennessee and Bittner-Shen Consulting Engineers, Inc., US 321 Bridge over Tellico Canal, Lenoir City, TN: Lead Design Build Contractor/Geotechnical Engineer for the design and construction of a drilled shaft supported bridge in a highly vibration sensitive environment. Proposed foundation groups were less than 40 feet away from existing bridge foundations supported on shallow foundations in suspected blast disturbed rock. The design build team developed all structural loading, and completed the design of 72-inch diameter, rock-socketed drilled shaft groups to support the structural loads, and maintained the navigational channel requirements. The final design incorporated a drop-in cofferdam system that allowed the construction of the pile caps near the lake bottom, using the drilled shaft group to resist hydrostatic forces. The project was successfully completed in 2012.

State of North Carolina and Seaboard Foundations, Inc., US 74 Bridges over Alligator Creek, Wilmington, NC: Construction manager for the drilled shaft foundation contractor, constructing 100 feet deep drilled shafts over a tidal creek using polymer slurry. Construction of the drilled shafts was particularly difficult due to the very loose condition of the Peedee Formation within the slurry supported excavations. The project required the implementation of specialty slurry mixes, and tooling to counter the effects of the soil conditions. This project included the

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Expertise in deep foundation work**
- **Extensive field experience with deep foundation construction techniques**

Firm: Dan Brown and Associates, P. E.

Education
MS, Civil Engineering, University of Tennessee, 1994

BS, Civil Engineering, University of Tennessee, 1992

Registration/Certification
Professional Engineer: Tennessee

Years of Experience
Total: 24

With Current Firm: 2

Work History
See next page

Training and Industry Skills
Various

Mark Madgett, PE, continued

use of post-construction CSL and coring verification to verify the structural integrity of the drilled shafts and was successfully completed.

City of Honolulu- Honolulu and Applied Foundation Testing, Honolulu Rail Transit Project, Hawaii: Geotechnical Engineer performing the evaluation of non-destructive testing for drilled shafts. This included the evaluation of section strengths based on CSL data, and determination of the structural capacity of drilled shafts. Additionally, geotechnical and structural remediation design was performed incorporating a "sister shaft"/cap system to restore the capacity of drilled shafts that did not attain the required structural capacity.

Eastern US, Various Field Verification Projects, various locations: As a project geotechnical engineer, observed the construction of over 2,000 drilled shafts in the field from initial excavation to final concrete and rebar placement for most structure types utilizing drilled shaft foundations. The majority of these shafts included OSHA-safe entry to observe bearing conditions in rock, and evaluate the suitability of the as-built conditions as they related to the geotechnical design. While this work emphasized the challenges associated with karst conditions, extensive understanding and experience of the challenges associated all physiographic provinces was attained for drilled shafts, and all deep foundation types.

Work History

2016-present, Dan Brown and Associates, PC

2006-2016, Branch Manager, Seaboard Foundations, Inc.

2003-2006, Geotechnical Department Manager, S&ME

2002-2003, Project Manager, Commonwealth Towers

2001-2002, Project Manager, SBA Network Services

1996-2001, Project Geotechnical Engineer, S&ME, Blountville, TN

1994-1996, Staff Professional, S&ME, Knoxville, TN

Natalie Barnhart, PE, CCM

Resident Engineer for Fixed Bridge/Civil/Utilities; Preconstruction Assistance

Ms. Barnhart has 28 years of experience in construction management, holding positions of increasing responsibility starting as a resident engineer and progressing to construction area engineer, and district construction engineer. She has considerable knowledge of complex roadway and bridge construction (both new construction and rehabilitation), foundations, aerial and underground utility coordination and relocation (including boring and water crossing), drainage and stormwater management facility construction, and maintenance and protection of traffic. Natalie also has considerable experience performing constructability review and ensuring that all project documents are compatible. She is very familiar with working on federal-aid contracts, and is fully knowledgeable of construction contract administration and documentation including preparing and reviewing daily inspection reports, change orders, coordinating inspection activities, scheduling progress meetings, preparing meeting minutes, reviewing CPM schedules, issue resolution, claims and time impact analyses, and contractor invoices, monitoring submittals, preparing As-Built drawings. Relevant experience include the Indian River Inlet Cable Stayed Bridge, I-95 and SR 1 improvements (both toll roads), and the SR 1/ SR 72 Diverging Diamond Interchange.

Relevant Project Experience

Pennsylvania Department of Transportation, Public Private Partnership (P3), Rapid Bridge replacement (RBR) Program Management, PA: This $900 million project is an initiative to replace 558 aging bridges throughout Pennsylvania. As the AECOM Team Lead, assisting PennDOT's Project Manager with project administration, including change order review, time impact analyses, construction quality assurance oversight, program-wide utility coordination, project documentation including use of a robust document management system, preparing executive level reports for PennDOT upper management and FHWA, and project closeout activities including final acceptance and handback.

Delaware Department of Transportation (DelDOT), Chief Engineer/ Director of Transportation Solutions, DE: As DelDOT's Chief Engineer, her responsibilities included, developing and delivering DelDOT's annual $600 million, six-year capital improvement program for highway and bridge improvements; managing the right of way acquisition, environmental/permitting, design, traffic, materials testing, and construction staff to take a project from planning phase through NEPA, design and construction; supervising a staff of 380 employees consisting

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **More than 28 years of Construction**
- **Management expertise in complex utility coordination, CPM and constructability review,**
- **Contract sequencing, and contract administration.**

Firm: AECOM

Education

MBA, Business Admin., University of Delaware,1998

BS, Civil Engineering,

Virginia Tech, 1989 1998

BS, Civil Engineering, University of Delaware, Virginia Tech, 1989

Registration/Certification

Professional Engineer(civil): Delaware, Maryland, Pennsylvania

Years of Experience

Total: 28

With Current Firm: 1

Work History

2017-Present, AECOM

2013-2017, Rummel, Klepper, & Kahl CM/CI

2003-2013, DelDOT Chief Engineer, Asst. Director, Construction

Training and Industry Skills

CMAA, Certified Construction Manager,

CMCI #4359; Expiration 2021

Natalie Barnhart, PE, CCM, continued

of engineers, technicians, administrative and financial personnel. She was responsible for coordinating pre-construction and construction activities with FHWA to ensure compliance with federal regulations in all phases (right of way acquisition, NEPA, design, and construction). She successfully delivered the accelerated project development and construction for Delaware's allotment of federal American Recovery and

Reinvestment (ARRA) funds valued at $120 million, obligating and spending all available funding within the timelines required.

DelDOT, Assistant Director, South Region Construction, DE: Responsible for the construction management, construction inspection, and contract administration for all construction projects in Kent and Sussex Counties. The construction program included 30 to 50 concurrently active projects ranging in value from $300 thousand to $150 million dollars. Duties included supervising a staff of 65 full time engineers, technicians, and administrative personnel as well as consultant engineers and technicians. Coordinating utility relocations and ensuring permits were acquired and adhered to. Managed the development of the annual statewide Pavement and Rehabilitation program ranging in value from $55 million to $80 million. Packaged 20 to 25 contracts per year, ensuring efficiency by packaging similar work types and geographic locations. Ensured consistency in construction administration and implementation of Department policies and employee management practices statewide.

DelDOT, Senior Project Manager, DE: Managed the project design and construction administration for improvements at the New Castle Airport including construction of the new air traffic control tower; construction/rehabilitation of runways and taxiways; construction/rehabilitation of airplane hangars and existing buildings, construction of storm water management facilities and utility infrastructure and coordination with federal and local regulatory agencies.

DelDOT, Civil Engineer Program Manager II (North District Construction Engineer), DE: Managed the construction administration of over 30 concurrent projects ranging in value from $200,000 to $25 million in New Castle County. Duties included: Supervising 35 engineers, technicians, and administrative personnel; Resolving disputes between contractors and the Department; Ensuring the District's construction program was administered in a cost-efficient manner while maintaining the Department's quality standard; Conducting meetings with the public, contractors, utility companies, and governmental agencies to discuss project status, problems and solutions.

DelDOT, Construction Area Engineer, DE: Supervised the management of multiple road and/or bridge construction projects ranging in value from $1 million to $20 million dollars. Duties included: identifying and resolving design and/or field construction problems; provided information and support to clients (contractors, utility companies, and the public); supervising and coordinating the work of a staff that included 10 to 20 engineers, technicians, and consultants; preparation of correspondence and schedules; and conduction of semi-final and final inspections.

Bassem Hanna

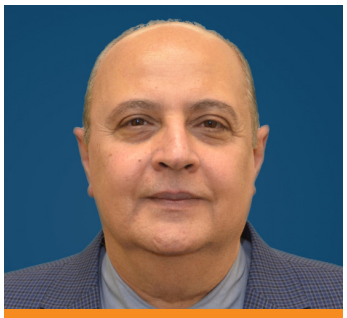
Project Controls Manager; Cost Controls; Preconstruction Assistance

Mr. Hanna has significant expertise in the areas of program/project management and controls, contract negotiations, CPM scheduling, earned value management systems (EVMS), cost controls management, document controls, change order management and construction management. He has a successful track record performing complex CPM schedule analysis, delay-mitigation and recovery schedules to complete projects on/or ahead of schedule and within assigned budgets. He is skilled and highly trained in identifying and mitigating construction problems and delays. He has extensive experience with claims management and claim avoidance, with strong analytical and investigative skills, and has managed and assisted with the preparation, presentation, and evaluation of all types of construction additional work orders (AWOs), claims, and disputes.

Mr. Hanna has developed and managed several Project Management Information Systems (PMIS) such as e-Builder, Constructware, SharePoint, and Contract Management (Expedition). He has been an integral team member on many major domestic and world-class project teams, overseeing scheduling, cost management, document controls, and risk management for heavy construction projects with budgets in the range of $92 million to $8 billion.

Relevant Project Experience

Metropolitan Transportation Authority, Subway Line Extension, New York, NY: Project Manager and JV Program Controls Manager for the $2.43-billion No. 7 Subway Extension The program scope of work for the six construction contracts included two 22.5-foot-diameter concrete lined bored tunnels and a Station cavern structure (approximately 66 feet by 1200 feet) at 34th Street, extending about 110 feet below 11th Avenue and constructed in rock using the drill and blast mining technique. Managed all field cost and schedule operation and related functions. Managed and provided administrative and technical direction to project controls staff. Provided and implemented innovative solutions to all cost and scheduling problems with the intent to execute all contracts efficiently and effectively. Provided and reported timely accurate cost and schedule analysis to Client Senior Management, the Site Construction Managers, and the Program Director. Four of the six contracts were completed 4 months ahead of schedule and $57-million below budget. Managed all change orders, claims, and disputes for all program contracts. The first $1.145 billion construction contract for running tunnels was completed approximately five months ahead of schedule



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Project management**
- **CPM scheduling**
- **Earned value management systems(EVMS)**
- **Cost controls management**
- **Document controls**

Firm: Mott MacDonald

Education

BS, Civil Engineering, Alexandria University, Egypt, 1987

Advanced Basic Computer Programming, Alexandria University, Egypt, 1985

Years of Experience

Total: 31

With Current Firm: 1

Work History

2017-present, Mott MacDonald

Training and Industry Skills

Advanced Basic Computer Programming, Alexandria University, Egypt, 1985

Bassem Hanna , continued

and $650,000 under budget. The entire program was also completed below budget.

NYCDEP, Wastewater Resiliency Program, New York, NY: Developed a program controls strategy to repair and increase the resiliency of the City's 14 wastewater treatment plants and the 58 of its 96 wastewater pumping stations (WWPS) that were affected by flooding during Hurricane Sandy. Funding for the program projects is provided through the Storm Management Loan Program (SMLP), Federal Emergency Management Agency (FEMA) 428, FEMA 406 and other funding as necessary. Total funding for the program expected to exceed $500 million. Each funding source required specific scopes of work, documentation, and construction timelines. Managed, implemented, and maintained eBuilder as the document controls system for the program. Oversaw the implementation of Risk Management process and procedures and ensured update of the Risk Register. Managed and developed all program reports and documents, including the monthly progress report. Conducted a detailed analysis of all program capital costs and budgets. Oversaw receipt, review, and processes for payment of subcontractor invoices. Conducted audits of subcontractors. Prepared, verified, and submitted monthly payment requisitions. Prepared reports and studies, and conducted briefings and presentations for key government staff, stakeholder, and programs' senior executives. Managed a dynamic and fast-moving program controls team. Incorporated all documentation into the Enterprise Management Information System (PMIS). The new NYCDEP web-based PMIS is used for automated workflows of the Standard Operating Procedures (SOPs) as well as management of project documents and reporting, contracts, and payments. This system served as the primary tracking tool and document management database for the Resiliency Program.

The City University of New York (CUNY), Department of Design and Construction Management, Brooklyn College Performing Arts Center (BCPAC), Brooklyn, NY: The $82 million project consists of a 64,000-sf addition to the existing Whitman Hall with a 200-seat auditorium, rehearsal rooms for the orchestra, choral, and theatre, and a state-of-the-art recording studio. The expansion also includes a newly-landscaped quad and courtyard. Managed and prepared a new baseline schedule to mitigate project delays, and verified and endorsed all monthly payment requisitions. A cash flow curve of the project, including actual monthly payment requisitions and forecast to completion date, was generated to plan and confirm the completion of the project within the original assigned budget. Performed and led negotiation of various claim and time impact analyses, resulting in an extension of time for total excusable delays in excess of 10.5 months, including 2.5 months due to extreme weather impact at the beginning of 2014. Liquidated Damage of the Project was originally established as $1,000/day.

Dormitory Authority of the State of New York (DASNY), Healthcare Facilities, New York, NY: Responsible of the preparation and progress of resource-loading schedules, cost, and budget controls for several healthcare projects, including the $305 million, 621,000-sf Kings County Hospital Center, the $285 million, 372,000-sf DNA Forensic Biology Laboratory, and the $ 300 million, 185,600-sf Harlem Hospital Center. Evaluated the project status using Earned-Value technique and made recommendations to senior management to accelerate schedules and mitigate problems and delays. Assisted senior management with contract negotiations and project claims.

John Sikorski

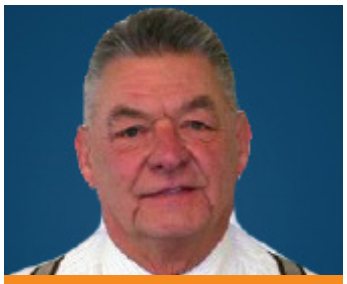
Safety Officer

Mr. Sikorski is a safety specialist with extensive consulting experience, specializing in construction of rail transit infrastructure in the New York City area. His work has been concentrated in heavy civil/railroad construction (subway and elevated), reconstruction, and renovation of railroad stations and tunnels. A particularly significant project in Mr. Sikorski's career is the construction of MTA New York City Transit's Second Avenue Subway including tunnel borings and mining of the caverns for passenger stations. Mr. Sikorski joined Mott MacDonald as a Senior Safety Manager to help facilitate the company's safety program on the federally funded Super Storm Sandy related repair and resiliency projects for New York City's transit system.

Relevant Project Experience

New York City Transit Authority, CM-1534 Indefinite Quantities Engineering Services for Superstorm Sandy Related Repair and Resiliency Projects and Miscellaneous Construction, New York City, NY: As part of a joint venture, Mott MacDonald is participating in various repair and resiliency task order projects for New York City's assets due to the significant damage from Superstorm Sandy. The task order projects have included FTA technical support, construction management, inspection, constructability reviews, and engineering design. Mr. Sikorski has served as Lead Safety Manager on the following task order assignments: He has put together a team of Safety Persons with experience in the day to day operations of the NYCT Systems, specifically Tubes. (These are the under river tunnels giving access to of the various Subway lines non-stop from Borough to Borough. He has also established a liaison with NYCT Capitol Program Management (CPM), NY MTA Systems Safety, NYCT CPM Safety as well as the various Contractors performing the work.

- Cranberry Tube and Rutgers Tubes (East River A/C Subway Lines) - This task order involves the constructability reviews, inspection and construction management for the repair and resiliency of the east river tunnels from Super Storm Sandy. Mr. Sikorski is responsible for ensuring that the contractor is following the NYCT and OSHA safety procedures while completing the construction project. The safety procedures are intended to provide minimal risk to personnel both public and workers as well as property damage to the operating railroad. This must be done with no interruption to the weekday operations of moving the public around the City of New York.
- Stillwell Avenue Terminal Flood Repairs - This task order involves providing construction management and inspection services for



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Construction of rail and transit infrastructure**
- **Construction and reconstruction of railroad stations and tunnels**
- **Safety management of mega infrastruction projects**

Firm: Mott MacDonald

Education
NY Institute of Technology, Westbury, NY

Years of Experience
Total: 32

With Current Firm: 3

Work History
2015-Present, Mott MacDonald

2007-2015, AIG Construction

2001-2007, AON Risk Services

1998-2001, Empire Insurance Group

1986-2001, Aetna Life & Casualty

Training and Industry Skills
See next page

John Sikorski, continued

rehabilitation and resiliency of the consolidated employee facility, station structures and lighting, utility building, signal crew quarters, and Police District Office #34 at the terminal. Mr. Sikorski joined Mott MacDonald near the completion of the project. He has assisted, along with his team, to bring the project to a safe completion to the satisfaction of the NYCT Authority.

- Circuit Breaker Houses - This task order involves providing construction management, inspection, and constructability review services for the repair and resiliency of four circuit breaker houses. These facilities posed particular safety issues with the large amounts of electrical current running through them and their proximity to active rail. Mr. Sikorski coordinated the JV Safety Team coverage at the site including addressing safe work plans and prep phase meetings. He also provided ongoing safety oversight.
- Joralemon Tube (East River 4/5 Subway Lines) - This task order involves the constructability reviews, inspection and construction management for the repair and resiliency of the east river tunnels from Super Storm Sandy. Mr. Sikorski is responsible for ensuring that the contractor is following the NYCT and OSHA safety procedures while completing the construction project. The safety procedures are intended to provide minimal risk to personnel both public and workers as well as property damage to the operating railroad. This must be done with no interruption to the weekday operations of moving the public around the City of New York.

RRI for AIG Construction, Sr. Construction Consultant, New York, NY: Dedicated Sr. Construction Consultant to the Metropolitan Transportation Authority (MTA) for construction of the Second Avenue Subway. Responsible for the day-to-day monitoring of safe operations on nine separate construction contracts involving tunnel boring, blasting operations, and deep open cut excavations, reporting to the MTA, as well as AIG Insurance and Prime Contractors.

AON Risk Services, Vice President-Loss Control, New York, NY: Consultant to Metropolitan Transportation Authority (MTA) Risk & Insurance Management. Supervised field personnel in loss construction of subway and elevated train stations, new construction of elevators, escalators, and station complexes. Reviewed and commented on field reports, safe work plans, site specific loss control programs and risk and loss analysis. Reported results on a monthly and quarterly basis to MTA RIM, Construction Managers (New York City Transit [NYCT] & Long Island Rail Road [LIRR]), as well as the project's general and prime contractors.

Empire Insurance Group, Loss Control Manager, Brooklyn, NY: Responsible for implementing a complete loss control department and program including designing information technology systems, reporting forms, electronic distribution, and archiving resulting information. Managed an in-house staff of administrators and field personnel. Also assigned, distributed, and reviewed work to outside venders. Specialized in new construction of housing developments, small to medium renovation contractors, and fleet accounts.

Training and Industry Skills

- Water Supply and Sprinkler Evaluation Seminar
- Post-Injury Management Workshop
- Excavation Safety Seminar
- OSHA Compliance for the Construction Industry
- Long Island RR Track Training
- MTA NYCT Track Training
- Mobile Crane Safety
- Product Liability
- Scaffold User Training
- Ladder Safety Training
- Transportation Worker ID Credentials (TWIC)

Steve Dempsey, PE

Quality Manager

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Construction management**
- **Quality management**
- **Project management**
- **Construction supervision**

Mr. Dempsey is a registered Professional Engineer with 38 years of diverse design and construction management experience. He serves as AECOM's Manager of Construction Operations, as well as Project Manager, on a number of high- profile bridge and roadway construction projects within New York and New Jersey. His primary responsibilities include: single point of contact with clients; overall reporting; and quality assurance of project/ client goals. Recently served as Project Manager for the NJTA, Interchange 41 and 44 Improvements along the Garden State Parkway and recently served as Contract Manager for AECOM assigning staff and monitoring staff performance for the $1.4-billion New Jersey Turnpike Interchange 6 to 9 Widening Program.

Relevant Project Experience

New Jersey Turnpike Authority(NJTA), Interchange 41 and 44 Improvements, New Jersey: Project Manager for the $32M interchange improvements at Milepost 41 and Milepost 44. Interchange 41 includes the construction of a new diamond interchange at the Atlantic City Service Area connecting mainline Parkway with Jimmie Leeds Road. This project also includes new signalized intersections, widening of the Parkway mainline access and egress from the Service Area, and widening of Jimmie Leeds Road. Interchange 44 includes the widening of the Parkway mainline, replacement of the northbound and southbound Pomona Road overpasses, two new connector ramps, and widening and improvements along Pomona Road.

NJTA, Interchange 6 to 9 Widening Program – Construction Management and Inspections Services Mainline, New Jersey: Lead Executive representing AECOM on the AECOM/GPI/PB Joint Venture for the construction management and resident supervision services for the $2.5 B expansion of the New Jersey Turnpike. The widening program to be completed over 4 years consists of the construction of 3 truck/vehicle lanes in both the northbound and southbound direction over a length of 34 miles in a dual-dual roadway configuration (3 inner existing car lanes and 3 outer truck/vehicle lanes in both directions). In total this program will add 176 lane miles and add or replace 100 bridge structures. As Construction Manager the Joint Venture is responsible for the management of the entire $2 billion program divided into 31 separate bid package. In addition, the JV is providing resident engineering and inspections services for 18 of the 28 bid packages with a total value of $1.4 billion including complex multi-level interchange construction, numerous local bridge overcrossing replacements, 6-lane mainline

Firm: AECOM

Education
BS,Civil Engineering, Northern Arizona University, 1980

Registration/Certification
Professional Engineer: New Jersey, California (civil)

Years of Experience
Total: 38
With Current Firm: 38

Work History
1980-present: AECOM

Training and Industry Skills
Context Sensitive Design Training Program, Rutgers

Steve Dempsey, PE, continued

widening, drainage systems, utilities, interstate oil pipeline relocations, ITS and VMS systems, multi-phase/multi-stage traffic control, environmental mitigation, safety, material testing, and inspection of program wide offsite fabrication contracts.

New Jersey Department of Transportation (NJDOT), Route 52 Causeway Contracts A & B, New Jersey: Contract Manager responsible for construction management and inspection services for the $395-million Route 52 Causeway bridge and roadway project, started in August 2006, spanning Little Egg Harbor between Somers Point and Ocean City in southern New Jersey. This project is NJDOT's largest bridge project undertaken in recent history, and serves as the major access to the region's vital tourism industry, handling 25,000 vehicles per day. Phase I consists of a $150-million, prestressed AASHTO I-beam low level bridge with project limits extending over one mile. Phase II consists of the $245-million high level bridge over the navigable waterways. Project is being built in a sensitive marine environment under NJDEP and ACOE permits including CAFRA, Waterfront Development, Coastal Wetlands, Water Quality, Section 404 and Section 10.

NJDOT, Route 139 Viaduct Rehabilitation, New Jersey: Project Manager for this 5-year $73-million project that consisted of extensive structural repairs and retrofits to the truss supported roadways and redecking of the 12th and 14th Street Viaducts in Jersey City. The project required staged demolition of the existing decks, complex MPT schemes, steel girder repair/retrofit, floor beam retrofits, steel truss bent repairs, built-up steel column repairs/retrofits, rivet replacement, and foundation and base plate repairs. Work operations were coordinated with multiple agencies, including the PANY&NJ, Jersey City, and the NJTA.

NJDOT, Route 46 and Route 23 Interchange Rehabilitation, New Jersey: Contract manager for the construction inspection of this $60-million project for major improvements to the existing interchange. Project included reconstruction of 9 bridges within the interchange, including deck demolition, steel repairs and retrofits, abutment/wingwall reconstruction, bearing replacements, spall repairs, approach and transition slabs, steel girder replacement, bridge steel painting, and HPC decks.

NJDOT, Route 1&9, Section 4T Viaduct Replacement: Project Manager for the $50-million phased demolition of the 1800-foot viaduct and replacement with a new steel girder structure on cased drilled shaft foundations over the Elizabeth River. Project includes bridge roadway items, utilities, and contaminated soil disposal. Bridge work includes phased bridge demolition, cased drilled shaft foundations, hammer head piers, CIP abutments, retaining walls (CIP and MSE), steel girder erection, and HPC reinforced decks. Roadway items include roadway embankment, drainage pipe/inlets, sampling/disposal of contaminated soil, water quality treatment system, variable milling, DGABC, and HMA Superpave, median barrier, guide rail, sidewalk, landscaping, electrical duct work, utility relocations, highway lighting, traffic signal assemblies, and staged traffic control.

NJDOT, Route 9 & 35, Section 25C from the vicinity of Andrejewski Drive to Victory Circle, and Route 9, Section 25L, from Victory Circle to Main Street, Borough of Sayreville, Middlesex County, New Jersey: Project Manager for construction supervision services for the demolition of two grade separated bridges, construction of a temporary bridge, and replacement with a new 6 lane continuous span steel girder bridge on a new alignment in Essex County. The project also includes building demolition and extensive at-grade roadway construction.

Frank Facciolo, PE

Quality Manager

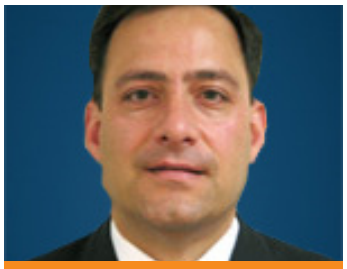
Mr. Facciolo has been Project Principal, Project Executive, Project Sponsor, Senior Manager, Quality Manager, and Engineer for traditional designs, design-build (fast-track projects), construction management, and small/large on-call Federal/State service contracts. He has more than 29 years of experience in infrastructure, transportation, and design-build related projects in the New York Metropolitan Area, California, and across the United States. Mr. Facciolo's experience ranges from planning through final design phases, construction support services, construction management, inspection, and constructability reviews. He currently serves as Mott MacDonald's Rail and Transit Leader for the New York Metro Area.

Relevant Project Experience

New York City Transit Authority, CM-1534 Indefinite Quantities Engineering Services for Superstorm Sandy Related Repair and Resiliency Projects and Miscellaneous Construction, New York City, NY: Mott MacDonald is in a Joint Venture (JV) relationship. Mr. Facciolo is serving as a Program Manager/Principal, performing management oversight for the engineering, inspection, and construction of task order projects related to the repair and resiliency of Superstorm Sandy related projects. The task order projects have included Federal Transit Administration (FTA) technical support, construction management oversight, inspection, constructability reviews, schedule analysis, operational analysis, and engineering design. The JV team is currently overseeing two large subway projects for NYCT at the A/C (Cranberry) and 4/5 (Joralemon) East River Crossings. The construction work is worth approximately $300M.

Port Authority of New York & New Jersey (PANYNJ), Facility Condition Surveys, NY & NJ: Program Manager for the execution of task order condition surveys and inspection assignments for the PANYNJ system-wide. The facility condition survey and inspection assignments include cyclical tunnel inspections and railroad bridge inspections on a task order basis.

Amtrak, Master Contract for General Engineering Services Agreement, Philadelphia, PA: Program Manager for the execution of task order assignments for Amtrak System Wide Programs and Projects under the General Engineering Services (GES) Agreement. The GES assignments include schematic and design development, planning, modeling, preliminary engineering, studies, reports, inspection, and construction management services on a task order basis.



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Construction management/ Construction supervision**
- **Quality management**
- **Railroad projects**

Firm: Mott MacDonald

Education
BS, Physics, Syracuse University (UC), 1988

Registration/Certification
Professional Engineer:
CA, C 57783, 1997
NY, Lic. No. 077221-1, 1999

Years of Experience
Total: 29

With Current Firm: 8

Work History
2010-Present, Mott MacDonald

2002-2010, Shaw Environmental & Infrastructure, Inc.

1998-2002, Stone & Webster (The Shaw Group Inc., acquired substantially all of the operating assets of Stone & Webster in July 2000)

1989–1998, Gannett Fleming, Inc.

Frank Facciolo, PE, continued

Metropolitan Transportation Authority (MTA) Capital Construction, LIRR East Side Access (ESA), Queens, NY: Served as the Deputy Program Manager for the Harold (Sunnyside Yard) Program, which included providing improvements to the existing infrastructure and operations to accommodate LIRR access into Grand Central Terminal. The program also included providing improvements to Amtrak and NJ TRANSIT operations at the yard. The major project elements included track, catenary, third rail, signals, site improvements, railroad bridges, tunnels, underground structures, and substations. The overall ESA program is valued over $7B.

MTA Metro-North, Yankee Stadium Station, Bronx, NY: Manager for the design-build contract for the design and construction of the Yankee Stadium Station in Bronx, NY with a total value of $91M. As Engineer of Record, managed the design completion of the project, which finalized all engineering plans and specifications, and provided construction support services (shop drawing reviews, engineering field support) for the new passenger rail station, including the following major elements: overhead mezzanine structure; 270' long truss bridge; track bridge; substation; utility relocations; and passenger platforms. Expedited design schedule and directed the design team in performing value engineering, specifically changing from micro-piles to H-piles; changing bridge bearings to isolation bearings to reduce seismic loads; changing bridge and track bridge design and construction approach to Prefabricated Bridge Units (PBU); changing cast-in-place bridge piers to post-tensioned pre-cast piers; changing location of electrical duct run from under RR tracks; and modified WST to address Con-Ed transformer redundancy requirement.

Design for Hudson Line Station Rehabilitation, Westchester County, NY: Project Manager responsible for the conceptual, preliminary, and detailed design of the rehabilitation of eight Metro-North train stations along the Hudson Line in Westchester County and the Bronx. As part of this project, a condition survey was performed at all stations that involved replacement of structural elements like pedestrian overpasses, high-level platforms and canopies, while introducing new elements, like elevators, to certain stations to make them ADA compliant. The appearances of certain stations were required to reflect the historic nature in which they were originally built. Supervised and managed the development of design alternatives, attended periodic client meetings and interfaced with the client, prepared structural calculations, structural quantities, specifications, and construction plans. Supervised coordination with architectural and electrical subconsultants. Awards: 2006 Tappan Zee Award - ASCE Lower Hudson Valley Branch. Construction value: $98M.

Southern Pacific Transportation Company, Intermodal Railroad Yard Upgrade Project, City of Industry, CA: Project Engineer/Construction Manager responsible for providing construction management, specification review, permitting services, design services, and cost monitoring for the Intermodal/Automobile SFRR Yard's upgrade in the Los Angeles area. Developed drainage plans for the final design of this project. Acted as Project Engineer responsible for calculations and recommendations for a large storm drainage system to service a 68 acre site. Unique characteristics included addressing environmental concerns, on-site, as well as off-site flows, and construction staging during a fully operational railroad facility. The design included a hydrology report, hydraulic analysis, flow rate calculations, pipe size requirements, and environmental mitigation of off-site liabilities. The project involved heavy coordination with local authorities.

Glenn Mack

Technical Advisor

Mr. Mack has over 22 years of experience in Senior Level Directorship, Program and Project Management, Construction Management and Field Supervision in the design and construction of large transportation systems that include building structures including large maintenance facilities; track, power, and signaling systems; tunnel and shaft design and construction, underground stations, various life-safety features including design and construction of underground ventilation systems, NFPA 130, various transportation electronic systems including SCADA, communications, public information and emergency notification systems. He has extensive environmental experience in design and construction including exploration, testing, analysis, report generation and remediation.

Relevant Project Experience

Mr. Mack has 36 years of experience with NJ TRANSIT, with an emphasis on project and program management, construction management and field supervision in the design and construction of large transportation systems that include building structures including large maintenance facilities; track, power, and signaling systems; tunnel and shaft design and construction, underground stations, various life-safety features including design and construction of underground ventilation systems, NFPA 130, various transportation electronic systems including SCADA, communications, public information and emergency notification systems.

RELEVANT EXPERIENCE

NJ TRANSIT, Long Slip Fill and Rail Enhancement Project, Jersey City, NJ: Project Executive for the final design and development of a new storm resilient rail station and terminal facility at the Hoboken Terminal and Yard. Work includes fill of existing long slip canal area and construction of new rail system infrastructure, platforms and station for the Long Slip storm resilient station.

NJ TRANSIT, Super Storm Sandy Recovery Repair Work on the Hudson Bergen Light Rail System, NJ: 26 unique projects in various stages of design, procurement and construction. Responsible for guiding contractor toward compliance to NJ TRANSIT Superstorm Sandy Resilience Program requirements and policies. Provide oversight on three separate and distinct Resilience Program project areas to ensure project progression and timely delivery. Assist in the compliance of all projects in the proper reporting and documentation.

NJ TRANSIT, Senior Director Capital Projects & Programs-Light Rail Transportation & Contract Services, NJ: Responsible for moving a stalled program, spanning three systems statewide, which included a Capital Asset Replacement Program, Homeland Security improvement program, and Capital Improvement Programs for the

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Deep caisson work, specifically related to rail structures.**
- **Rail Systems work, rail, catenary, signal & communications**
- **Experience in large transportation infrastructure facilities**
- **Integration and commissioning of complex rail systems**

Firm: AECOM

Education

MS, Eng. Management and Industrial Engineering, New Jersey Institute of Technology, NJ, 2000

BS, Industrial Engineering, New Jersey Institute of Technology, NJ, 1996

BS, Workforce Education and Development, S. Illinois University, Carbondale, Ill, 1994

Years of Experience

Total: 36

With Current Firm: 1.5

Work History

2017-present: AECOM

1996-2016, NJ TRANSIT

Training and Industry Skills

Primavera Scheduling, Initial and Refresher

Project Management Professional Course

Deep Subsurface Tunneling and Micro Tunneling

Glenn Mack, continued

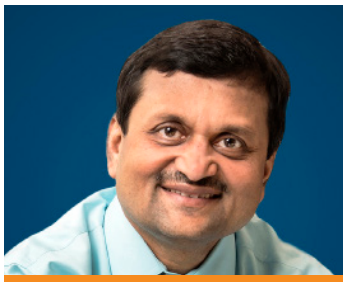
Light Rail, ADA and Access Link, and Private Carriers. Responsible for identifying and securing sources of funding and resources to meet the various programs goals, developing and maintaining the budgets necessary for completing the specific projects, ensuring schedule and quality programs resulting in required product. Responsibilites also included coordination with internal and external entities and resources necessary to facilitate desired project delivery. Provided clear and consistent direction to staff and consultants on the Capital Programs goals, schedules and budgets ensuring accountability and compliance toward on time delivery. Monitored the LRT Capital Programs for compliance toward corporate requirements and policies regarding reporting, budget monitoring and procurement and contract compliance. Ensured program compliance toward Homeland Security requirements and policies, provided on time reporting and projects review. Responsible for the design progression on all capital programs to include comprehensive timely review and evaluation of design packages to ensure on time and quality performance. Responsible for all programs as they advanced through procurement and ultimate awards to construction. Was charged with anticipating and responding to changing and evolving operational, departmental and company needs and requirements, identifying issues, impediments or impacts that would impact project progression and operational integrity. Clearly communicate Light Rail and Contract Service's needs, status and issues.

NJ TRANSIT, Access to the Region's Core - Trans Hudson Express (THE) Tunnel, NJ: Initially worked as an Assistant Program Manager responsible for managing three tunnel packages: Palisades, Hudson River, and Manhattan Tunnels. Mr. Mack managed the packages (total of 3.2 miles of tunnels) through various stages of Preliminary Engineering with responsibilities including invoice and payment approvals, budget generation and management, tracking consultant progress and coordination of review processes with numerous internal, external and third parties. Responsibility also included the coordination of internal staff made up of a partnership between NJ TRANSIT and the Port Authority of New York and New Jersey, the design consultant and the construction management team. Promoted to Program Manager during Extended Preliminary Engineering, Mr. Mack was responsible for progressing four design packages: the Palisades Tunnels package; the Internal Concrete Structures, Portals, Substation and Cross Passageway Interior Fit out of the Palisades Tunnels package; the Hoboken Fan Plant and Internal Concrete of the Hudson River Tunnels package; and Fan Plants (5) Mechanical, Electrical and Plumbing (MEP) and Electrical Substations including the complete Emergency Ventilation Fan sets package. Mr. Mack was also responsible for coordinating, facilitating and managing the conversion of the Palisades Tunnels Preliminary Engineering level design package to a design-build package for procurement. Threat and Vulnerability Analysis and facilitated the coordination between the project and the various security entities in NYC and NJ. He initiated and managed the selfcertification process including the System Safety Certification process and was responsible for forming the committee that was responsible for overseeing the self-certification of the project through the State Safety Oversight Office incompliance with federal regulations. Responsible for initiating and managing the development and establishment of the project Heat Release Rate (HRR). Also responsible for the procurement of a specialty consultant, facilitating the selection of a project critical vehicle, managing the burn testing of numerous representative samples and generation of reports to form basis for the ultimate critical Project HRR.

NJ TRANSIT, Newark City Subway Extension and Vehicle Base Facility Project, NJ: Project Manager responsible for the extension of the existing Newark City Subway system as a design-build project. The work included the final design of all aspects and construction of over a mile of a new two-track system, which included three new at- grade crossings and two new at-grade station stops. The construction of the new 55,000 square foot maintenance facility for the new light rail vehicles, purchased as part of the overall light rail program, included a new storage facility and a complete bidirectional yard to enable entering vehicles to access any function of the new facilities, including reentering the main line without making a reverse move.

Anil Parikh, PE

Principal in Charge



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Extensive experience in overseeing completion on-time and within budget of multi-billion dollar projects**
- **Expertise in all aspects of planning, design, and construction of complex and challenging projects**

As the leader for the AECOM New York City Metro Rail Practice, Mr. Parikh is responsible for providing leadership, strategic guidance and management. He has more than 34 years of management experience on transit projects. In addition to providing technical oversight and managing project personnel, he takes full responsibility for quality, safety, financial integrity and schedule performance of all projects.

Mr. Parikh brings experience working for New York City Transit and the State of New York's MTA Capital Construction Company, managing many successful projects from "cradle to grave." He has an excellent and proven track record of completing these projects on time and within budget. Mr. Parikh has successfully led all phases of the project from environmental review, conceptual and preliminary engineering, final design, value engineering, constructability review, procurement strategy, construction, testing and commissioning for mega projects such as the $645-million 63rd Street connection and the $4.4-billion Second Avenue Subway. These projects are among the most technically and institutionally complex and challenging projects ever undertaken by the MTA. As the program executive, he was fully accountable for all aspects of planning, design, and construction, and both in-house and third-party design and construction. As such, Anil provided executive management and oversight related to schedule, estimating, quality, safety, contractor's claims, and budget controls. He led the interactions between various stakeholders in defining requirements, securing funds and finding the financial means to meet the requirements.

Relevant Project Experience

NJ TRANSIT, Portal Bridge Replacement Project, NJ: Served as Program Manager and performed contract packaging, schedule and cost estimating reviews. Also made recommendation on contract packaging options and is providing construction management support to NJ TRANSIT.

Ottawa Light Rail Transit Project, Canada: Part of the independent review team providing guidance to the owner in completing the construction work, and testing and commissioning work for Stage 1 of the LRT project.

MTA Capital Construction, New York, NY: Served as SVP and Program Executive (2014 to 2017); VP and Deputy Program Executive (2009 to 2014); and Program Manager Level II (2007 to 2009). Provided leadership and direction to the program managers and consultant construction

Firm: AECOM

Education

MS, Civil Engineering, New Jersey Institute of Technology

BS, Civil Engineering, New Jersey Institute of Technology

Registration/Certification

Professional Engineer: New York

Years of Experience

Total: 33

With Current Firm: 1.5

Work History

2002-2017: New York MTA Capital Construction

1992-2002: MTA New York City Transit

Training and Industry Skills

Various

Anil Parikh, PE, continued

managers during construction. Phase 1 of the Second Avenue Subway project includes the construction of tunnels from 92nd Street to 63rd Street station (approximately 2.3 miles), three new underground stations, and the rehabilitation of the existing 63rd Street station, track power, signals and communication.

- Managed completion of the final design and successful award of 10 construction contracts.
- Managed risk management, constructability reviews, contract packaging workshops, system safety certifications, and systems testing and commissioning activities.
- Served as the chair of the change control board for review and approval of change orders related to design changes, code requirements, and user requests.
- Created and implemented numerous systems and procedures to improve project management and achieved financial control, resulting in more efficient management and increased productivity.
- Implemented programmatic and financial reporting for project management and executive review, which enabled the Project Managers to make prudent decisions during a period of budget constriction.

MTA Capital Construction, New York, NY: Served as Program Manager Level II (2002 to 2007). Provided leadership and direction to the joint design team to complete the preliminary and final design of the Second Avenue Subway Project.

- Completed Environmental review and obtained Record of Decision for the full length of the Second Avenue Subway Project (8.5 Route miles and 16 underground new stations).
- Completed preliminary engineering design, and final engineering design of Phase 1 of Second Avenue Subway with ten construction contract packages.
- Managed risk assessment and constructability reviews for various design packages.
- Developed design management processes to effectively manage the design, such as the formation of various working groups, technical advisory, and senior management committees.
- Supervised a large team of consultants in the implementation of the Project Management Plan and Quality Plan.

MTA New York City Transit, New York, NY: Served as Lead Construction Manager (1996 to 2002); and Assistant Project Manager (1995 to 1996). Managed three construction contracts for the 63rd Street Connection Project to connect two existing subsurface subway lines ($645 million in construction costs). Also, managed the design-build of an addition to the Central Electronics Shop of the Woodside Maintenance Facility, and modifying the existing wet and dry fire lines in the 63rd Street Tunnel. Was responsible for assisting the program manager in the overall construction management of the program which included:

- Maintained project budgets and schedules.
- Coordinated construction with adjacent contracts.
- Implemented quality and safety programs for the project.
- Maintained and improving relationships with customers within and outside the Authority to maximize support and cooperation.
- Resolved field problems in a timely manner.
- Prepared management reports.
- MTA New York City Transit, New York, NY: Served as Project Engineering Manager (1992 to 1995). Managed the final design for the $645-million 63rd Street Line Connection Project in the following areas:
- Coordinated design of design consultant activities and in-house design for five construction contracts on the project.
- Provided support to the design consultant, such as NYCT standards, user requirements, and geotechnical exploration (such as borings, pump tests, and jet grouting).
- Monitored design budgets, schedules, and project cost estimates.
- Conducted in-house design progress meetings and consultant progress meetings with in-house designers and consultants.

Marco Levoyer, PE

Principal in Charge

Mr. Levoyer has experience in design, construction, inspection, and management of transportation engineering projects, including lift bridges like the Scoping Study for Bridges W7, W8, and W9 in Monmouth County, NJ and the Dock Vertical Lift Bridge Miter Rail Inspection & Repairs for Port Authority Trans-Hudson in Newark, NJ, as well as major infrastructure projects like the Garden State Parkway Interchange 125 Improvements Project for NJTA and Route 27 Improvements & Amtrak NEC U.G. 24.08 Bridge Replacement over Evergreen Road for NJDOT, both in Middlesex County, NJ. His experience consists of scoping, conceptual, preliminary, and final design for highway and railroad projects, including the development of plans, specifications, and estimates. In addition, his professional background includes construction inspection, inspection and evaluation of existing structures, construction support services, and temporary structures engineering. Mr. Levoyer has significant experience with alternative delivery projects, including Design-Build and Public-Private Partnership projects. He currently serves as Mott MacDonald's Highway and Bridge Deputy Practice Leader.

Relevant Project Experience

Driscoll Bridge Rehabilitation and Widening, New Jersey Turnpike Authority, Middlesex County, NJ: Project Manager for the rehabilitation of the approximately 4,400-foot long, high-level Garden State Parkway Bridge over the Raritan River and construction of a new parallel bridge. The existing 129-foot wide bridge was reconfigured to carry eight northbound lanes and shoulders. The rehabilitation consisted of deck replacement, structural steel replacement/strengthening, and seismic retrofitting. The widening consisted of construction of a new high-level, 96-foot wide, seven lane bridge to carry southbound traffic. Alternative bid designs were provided for the new bridge: post-tensioned segmental concrete and steel plate girder superstructures. The steel alternative was constructed after competitive bidding.

Maryland Department of Transportation & Maryland Transit Administration, Purple Line Project, Montgomery and Prince George's Counties, MD: Structures Design Task Leader for the bid phase design for the Public-Private Partnership (P3) contract to construct a 16.2 mile, east-west light rail transit line from Bethesda Station to New Carrollton Metro Station in the Washington, D.C. metropolitan area. Responsible for design of retaining walls and bridges at the Lyttonsville and Glenridge Rail Yards. The bridge alternatives include precast, prestressed concrete and steel plate girder superstructures. The

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Program oversight of infrastructuore projects**
- **Design, construction, inspection of transportation projects**

Firm: Mott MacDonald

Education
BS, Civil Engineering, Stevens Institute of Technology, 1986

Registration/Certification
Professional Engineer: New Jersey, Florida

Years of Experience
Total: 32

With Current Firm: 10

Work History
2008-Present, Mott MacDonald

2006–2008, Weidlinger Associates

1996-2006, DMJM Harris

1986-1996, Bettigole Andrews & Clark

Training and Industry Skills
see next page

Marco Levoyer, PE, continued

retaining walls include a variety of types including post and panel, soil nail, MSE and cast-in-place concrete walls. The structures support rail, roadway, and embankment loads.

Port Authority Trans-Hudson, Dock Vertical Lift Bridge Miter Rail Inspection & Repairs, Newark, NJ: Quality Control Director for the inspection and repair of miter rail assemblies at PATH's rail tracks on the Amtrak Dock Vertical Lift Bridge in Newark, NJ. Wheel impacts at the miter rails had caused operational issues with the bridge's vertical lift span proximity switch. The inspection was conducted to assess the condition of the bridge's miter rails, surrounding track work and supporting structural members. Reviewed the project team's work for the inspection of the assembly components and supporting structural members, preparation of an immediate action memorandum and findings report, and the design and development of contract plans for short term repairs.

Sistema de Transporte Colectivo Metrorrey, Line 2 Extension, Monterrey, Mexico: Deputy Project Manager for the design of a 6.4 kilometer (four mile) elevated precast segmental viaduct carrying twin tracks of Monterrey's light rail system. The Line 2 extension Design-Build project also included six aerial stations for which design of the platform structures was performed. Typical viaduct spans are 37m and are supported on 1.6 meter circular columns and 1.8 meter diameter drilled mono-shafts. The work included design and plans for over 200 spans and piers, including straddle bents and transition spans, shop drawing preparation, erection analysis, and coordination with the power/communications contractor.

New Jersey Department of Transportation (NJDOT), Route 27 Improvements & Amtrak NEC U.G. 24.08 Bridge Replacement over Evergreen Road, Middlesex County, NJ: Project Manager for the construction of a replacement structure for the Evergreen Road Underpass carrying Amtrak's Northeast Corridor Line in Edison Township. The project was undertaken to alleviate substandard vertical clearance and roadway geometry at the underpass and improve traffic operations. The existing arch bridge was replaced with a steel plate girder Roll-In structure to minimize rail traffic impacts to the corridor.

City of Newark, McClellan Street Underpass, Essex County, NJ: Project Manager for a scoping study to repair, widen, or replace the existing McClellan Street Underpass carrying Amtrak's Northeast Corridor (NEC) Line in the City of Newark. The project required engineering and environmental work to develop alternatives that addressed the substandard vertical clearance at the underpass, alleviate existing flooding problems, and improve traffic operations and safety in the project area. One of the alternatives consisted of tunneling under the NEC embankment for a separate westbound crossing.

Amtrak, Inspection and Priority Repairs for Bridge No. 7.96 (Northeast Corridor over PATH and Conrail), Hudson County, NJ: Team Leader and Structures Task Leader for the condition inspection, load rating and priority repair design for the rail bridge carrying the Amtrak's Northeast Corridor over Port Authority Trans-Hudson and Conrail tracks in Harrison. The bridge, one of a pair of bridges with a staggered configuration known as "Sawtooth Bridges", carries significant rail traffic over active rail lines. This bridge has two staggered spans with an overall length of 278 feet and an overall width of 71feet. The superstructure consists of a concrete encased floorbeam slab system connected to steel girders supported on concrete encased steel columns.

Training and Industry Skills

- Load & Resistance Factor Design Seminar - 2000
- NHI Value Engineering Workshop - 2001
- Project Management Training - 2001
- Strengthening Structural Steel Beams - 2009
- Innovative Designs for Intersection Capacity - 2009
- Design of Steel Bridges - 2011
- Accelerated Bridge Construction - 2012
- Installation of Driven Piles – 2013
- Best Practices for Steel
- I-Girder Bridge Design - 2014
- LRFD Subsurface Invest. & Soil-Rock Testing

Andrew Robinson

Safety Inspector

Mr. Robinson has more than 11 years of experience in safety inspections, safety management, OSHA compliance, and safety training. He possesses extensive knowledge of Safety Regulations and Compliance with DOT, EPA, OSHA regulations, NYC DEP/BEDC, NYCTA-MTA.

Relevant Project Experience

RCC/CCC JV Hicksville Station Improvements, Hicksville, NY: • Project Safety Manager duties include daily safety inspections, daily safety reports and ensure the SHECP & JHAs are being implemented. Work included:

- Project Safety Manager duties include daily safety inspections, daily safety reports and ensure the SHECP & JHAs are being implemented.
- Attended all progress meetings, scheduled review meetings and management meetings and all meetings that discussed safety issues.
- Daily safety briefings to discuss safety precautions applicable to that day's hazardous work.
- Communicate to all management levels the responsibility and accountability of all personnel on-site with appropriate safety rules, regulations and procedures.
- Confirm all foreman conduct a safety briefing with crews before each work shift and document SWPs and JHAs daily.
- Assure that all co-workers have necessary training for all facets of their daily work operation.
- Ensure all subcontractors adhere to the LIRR and OSHA rules, regulations and standards.
- Distribute relevant information, reports, accident data and changes in regulations or codes that pertain to operations.
- Enforce disciplinary procedures for those who violate any of the safety rules, procedures and policies.
- Provide advanced planning to maximize the use of engineering and administrative controls which contribute greatly to the operations of a safe work site.
- Monitor that qualified supervision is present on job site at all times.

MBC/WD Properties, LLC 101 Marshall Ave. Hoboken, NJ: Ensured high-rise construction compliance with federal, state and city safety standards/codes.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Extensive knowledge of safety regulations**
- **Federal, State, and city compliance**
- **Familiarity with NY/NY safety regulations**

Firm: Certified Site Safety

Education
State University of NY, Farmingdale, NY

Registration/Certification
n/a

Years of Experience
Total: 11

With Current Firm: 5

Work History
2003-present, CSS

Training and Industry Skills
40-hr.-Site Safety Manager Certificate

30-hr.-OSHA Safety and Health for Construction

10-hr.-OSHA Safety and Health for Construction

32-hr.-Suspended Scaffold

4-hr.-Supported Scaffold

40-hr.-Hazardous Waste Operations & Emergency Response Training

MTA Track Safety

LIRR Track Safety

First Aid-SPR

Confined Space

Andrew Robinson, continued

JW Rufolo & Associates, Edison NJ: Site Safety Director. Work included:

- Inspect site to ensure all contractors are in compliance with all OSHA regulations.
- Perform OSHA compliance audits
- Perform air monitoring for dusts and organic vapors

Delta T4 Expansion Project, JFK Airport: Site Safety Director. Work included:

- Performed and supervised for dust and organic vapor exposures.
- Maintained and create health and safety work procedures (SWP/JSA/JHA) for contractors.
- Supervised and interacted with sub-contractors and health and safety personnel in order to collect and maintain weekly reports, safety schedules and meetings.
- Multitasked to balance high levels of health and safety productivity while simultaneously ensuring an excellent level of quality is met.

Joseph Jingoli and Sons, Astoria Energy, Phase II, Project consisted of demolition and rebuilding of power generation facility, New York, NY: Site Safety Director. Work included:

- Managed all Safety and Health for project electrical work and contractors.
- Oversaw and managed all construction.
- Supervised a staff of 4 employees, 11 contractors.
- Performed and supervised air monitoring on-site for hazardous materials including dusts, lead heavy metals, organics etc.
- Conducted health and safety orientations and weekly health and safety supervisors' meetings for all trades
- Inspected project site and ensured compliance with OSHA regulations are followed

Holder Construction/Select Safety: Safety Officer

- Inspected project site and ensured compliance to OSHA regulations.
- Managed safety and health officer requirements for project.
- Conducted health and safety orientations and weekly health and safety supervisors' meetings.
- Atlantic Yards, MTA/LIRR
- February 2008 to June 2008 Site Safety Coordinator
- Home Land Safety Consultants New York, NY
- Performed air monitoring for oxygen, PCB, organic vapors and general dust.
- Conducted tool box meetings for all trades.
- Responsible for ensuring employees follow OSHA regulations for staff and public protection.

Avalon Riverview North, Toll Brothers

- January 2007 to January 2008 Site Safety Coordinator
- A&I Construction Brooklyn, NY
- Supervised mason crew workers ensured work quality and timely completion.
- Purchased and ordered material for completion of projects.
- Balanced workload and timekeeping and schedules of staff.
- Supervise and interact with subcontractors and health and safety personnel in order to collect and maintain weekly reports, safety schedules, meetings.

Resumes of Project Staff

Rail

Richard Funk

Tracks & Interlockings

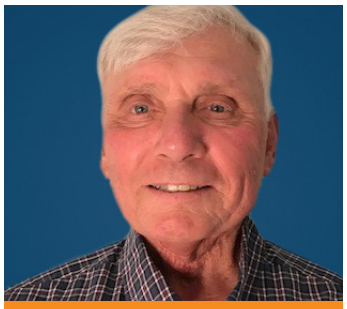
Mr. Funk is a qualified professional Construction Engineer with over 40 years of Construction Management and Field Inspection experience associated with the railroad industry, facility construction engineering, planning and design.

Relevant Project Experience

DRPA, Lindenwold Yard and Viaduct Rehabilitation: Communications Systems and Electrical Engineer. Project consists of replacement/rehabilitation of approximately 25,000 lf of track, the replacement of fasteners and the direct fixation system on the Lindenwold viaduct, the replacement/rehabilitation of 49 turnouts and support components, improvements to power feeders, traction power, communication and lighting systems, and removal of legacy way & power work equipment. The project also includes the replacement of 26. 4kv and 2.4kv aerial cable adjacent to the Conrail track.

SEPTA, Market- Frankford Line, Margaret- Orthodox Station Rehabilitation, Philadelphia, PA: CM-Senior Inspector. Participated in scheduled project meetings, advised SEPTA Project Engineer with regard to adherence of construction specifications, monitored force account activities, interpretation of designs, specifications, validated contractor's compliance with construction documents, engineering standards and practices, monitored and verified the construction was performed safely, maintained daily logs and progress reports, investigated field conditions, reviewed site specific work and safety plans, assisted with change order evaluation reviews and responses.

Construction Monitoring Services for Contract No. 21-D Benjamin Franklin Bridge, PATCO Track Rehabilitation, Camden, NJ: Communications Systems and Electrical Engineer for this $102 million Project. The work consisted of the complete replacement of the existing PATCO track both open deck bridge timbers and direct fixation fasteners and concrete plinth construction in the Anchorages and Philadelphia approach spans. Mr. Funk was responsible for the inspection related to the 26kV power feeder cable replacement, 2.4kV signal cable replacement and 4.1kV lighting power cable replacement, conduit and raceway reconstruction and replacement, traction power work, removal and proper disposal of asbestos containing shims under the third rail support brackets, testing and proper disposal of potential residual PCB's in existing transformer cases, communications and signaling. Garg was responsible for construction monitoring services including but not limited to; inspection of all work to ensure that it was done in compliance with the contract plans and specifications, inspection of all construction materials



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Communication and signal**
- **Construction and maintenance of railroad signal systems**
- **Numerous transit and rail project experience in New York and New Jersey**

Firm: Garg Consulting Services, Inc.

Education

AAS, Civil Engineering, Glouster County College, Sewell NJ,1971

U. S. Army Combat Engineer School (Topographic Map Compiling and Map Reading), Fort Belvoir, VA,1967

Registration/Certification

Construction Safety & Health Certification

U.S. Department of Labor, OSHA, June 2008

Track Foreman Certification

Years of Experience

Total: 40

With Current Firm: 3

Work History

2016- Present, Garg Consulting Services, Inc.

2009-2013, Systra Consulting, Inc.

April 2016-October 2016, Urban Engineers

Training and Industry Skills

See next page

Richard Funk, continued

to be used at the site to ensure compliance with the contract plans and specifications, obtained certifications of all manufactured materials, reviewed and approved all working/shop drawings, reviewed the preparation of "as built" by the contractor and all such other services required to furnish complete engineering services of high quality.

New Haven Line Danbury Branch Signalization, New Haven, Connecticut: Engineer in Charge for this $60 million. Responsible for supervising construction, inspection services, quality control on this major capital project for the signalization of the entire Danbury Branch with a Traffic Control System and cab signals with improvements to track reconfigurations with vital processor based interlocking system. Also responsible for providing engineering design review, contract administration assistance to Connecticut Department of Transportation, resident engineering and on-site inspection to verify construction work complied with contract requirements. Monitored and measured work completion, recorded all force account activity, reviewed contractor payment requisitions and disposition, document control and generated monthly progress and manpower reports.

SEPTA, Market-Frankford Line, Margaret- Orthodox Station Rehabilitation Philadelphia, PA: CM-Senior Inspector. Participated in scheduled project meetings, advised SEPTA Project Engineer with regard to adherence of construction specifications, monitored force account activities, interpretation of designs, specifications, validated contractor's compliance with construction documents, engineering standards and practices, monitored and verified the construction was performed safely, maintained daily logs and progress reports, investigated field conditions, reviewed site specific work and safety plans, assisted with change order evaluation reviews and responses.

AMTRAK, Station ADA Assessment Surveys, NY: Construction Manager for this $100 million project. Engaged in field assessing ADA and State of Good Repair surveys for passenger stations for Amtrak for structural, electrical, plumbing systems, fire, security, and safety systems in addition to HVAC systems. Assisted in preparation of recommended improvements and estimates for ongoing and proposed maintenance cost impacts for Amtrak's national train system.

MTA, East Side Access Project , New York, NY: Lead Field Engineer. for this $8 billion project. Observed, monitored, and documented the work progress in the field by ensuring conformance to plans and specifications. In addition, assisted Field Supervisors from LIRR and Amtrak and representatives from the GEC to resolve technical issues, work methodology, equipment, materials and constructability reviews for the force account construction.

NJ Transit, Hudson – Bergen Light Rail Transit System, Construction Management Oversight & Resident Engineering, NJ: Resident Engineer Responsible for the expansion of the Weehawken Tunnel and construction of the Bergen Line Station. Project involved a new light rail service, including stations, park-in-ride facility, overhead catenary system, elevators, ventilation systems, wayside signals, VIS signage and Homeland Security monitoring. The design and build effort was to enlarge the existing 4500 foot tunnel to accommodate a two track system. A new underground station was constructed 160 feet below street level. Was responsible for monitoring all design changes and T/M work associated with the station and plaza for bus drop off and storage buildings, also for the installation of the Homeland security systems for the underground station, Tonnelle Avenue Station and the Port Imperial Station. Also oversaw the erection of the Port Imperial pedestrian bridge to the New York Waterway Ferries. Work encompassed a 200 foot steel and concrete span with elevators at both ends and access from the existing passenger station. Project Value: $90 million.

Training and Industry Skills

OSHA 30 Hour

Quality Improvement School

Consolidated Rail Corporation January 1992

Challenge of Supervision School

Consolidated Rail Corporation, April 1989

Consolidated Rail Corporation Engineering Department February 1986

Traffic Control for Street and Highway Construction and Maint Operations

NJ Department of Transportation March 1985

Safety for Road & Highway Supervisors

NJ Department of Civil Service March 1979

Asphalt Technician School

Asphalt Technology, Inc. March 1976

John O'Brien

Signals & Communications

Mr. O'Brien is a Senior Project Manager with more than 40 years of service in the communication and signal industry. He is experienced in the construction and maintenance of signal systems and has provided his expertise to numerous transportation clients throughout the New Jersey and New York area as well as others throughout the country. Mr. O'Brien is a career Amtrak employee.

Relevant Project Experience

WMATA, Dulles Airport Connection, Vienna, VA: Review and comment on submittals from the signal contractor and witness testing at the signal contractor's facility in Rochester, NY.

PATCO, Pole Line Replacement, Camden, NJ: Provide CM services for the replacement of signal cables and eight signal locations between Broadway and West Ferry Interlockings.

PATCO, 11th Street Interlocking Track Renewal, Philadelphia, PA: This project replaced a two-track diamond crossover in a subway environment. Directed and recorded the signal testing for Vanalt Electrical Construction.

Southeastern Pennsylvania Transit Authority (SEPTA), Market Street Elevated Reconstruction Project, Philadelphia, PA: Manager/Signal Engineer responsible for the installation oversight and testing of the signal system to keep the system running during the construction of two miles of elevated guideway including six stations. Responsible for changes to the signal system to convert two existing single crossover interlockings to universal interlockings.

VA Department of Rail and Public Transportation (DRPT), Buckingham Branch Rail Road, Richmond, VA: Surveyed signal sites for the potential re-routing of Amtrak through Richmond.

URS, Hudson-Bergen Light Rail, Jersey City, NJ: Directed signal department in maintenance and signal testing.

VA Department of Rail and Public Transportation (DRPT), Norfolk Light Rail System, Norfolk, VA: Participated in review of current construction and future operation plans as they pertain to engineering systems.

Union Station Rail Corridor- HDI Joint Venture, Go Transit, Toronto, ON: Directed and recorded testing of signal system revisions.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Communication and signal**
- **Construction and maintenance of railroad signal systems**
- **Numerous transit and rail project experience in New York and New Jersey**

Firm: Mott MacDonald

Education
BA, History, LaSalle University, 1970

Registration/Certification
n/a

Years of Experience
Total: 40+

With Current Firm: 10

Work History
2018 – Present, Mott MacDonald

2017 – 2018, Gannett Fleming Canada

2008 – 2017, Mott MacDonald

2007 – 2008, SM Electric

1968 – 2007, PRR - Penn Central – Amtrak

Training and Industry Skills
Various

John O'Brien, continued

SM Electric Company, Inc., Meadowlands Giant Stadium, E. Rutherford, NJ: Directed the electrical contractor in the construction and testing of the signal system for the added spur on the NJ TRANSIT system.

SM Electric Company, Inc., Hudson Bergen Light Rail Extension Project, Rahway, NJ: Signal Engineer responsible for the completion of a one-mile extension of the Hudson Bergen Light Rail Transit System from 34th Street to 21st Street in Bayonne, NJ.

Amtrak, Senior Systems Manager, New York, NY: Directed the installation of the High Density Interlocking Systems (HDIS) and the Wayside Communication and Control Systems (WCCS) for the Penn Station Improvements

Amtrak, Senior Engineer, New York, NY: Directed the safety, production, scheduling, and budget for the HDIS.

C&S, Philadelphia, PA: Foreman of Construction and Maintenance, responsible for the safety of the signal forces and the work that was installed and the equipment maintained.

C&S/ET, New York, NY: Senior Engineer responsible for the maintenance and construction of the communication, signal, and electric traction systems on the New York Division.

Northeast Corridor Improvement Project, Boston, MA to Philadelphia, PA: Worked as Planning Engineer, Staff Engineer, and Construction Engineer in the construction of the NECIP program between Boston and Philadelphia. Early project duties included the Philadelphia to Washington, DC area.

C&S, New Haven, CT., Lancaster, PA., Philadelphia, PA., Camden, NJ: Went from Helper C&S to Supervisor C&S within the Pennsylvania Railroad, Penn Central Railroad and Amtrak.

Catherine Clement, EIT
Catenary & Electric Traction Power

Ms. Clement is a lead overhead contact system (OCS) engineer with 17 years of experience designing catenary profiles, calculating catenary loads, preparing catenary structure and layout. She also has experience executing advance preliminary and conceptual OCS design.

Ms. Clement has effective planning and organizational skills. She is highly organized and has the ability to work under pressure in a fast-pace environment.

A leader in her field, Ms. Clement offers innovative and practical solutions and has proven capacity to approach problems effectively and creatively, successfully manage multiple priorities and assignments.

Relevant Project Experience

Long Slip Phase 2, Hoboken, NJ: Task leader for the design of the OCS as part of the design-build team for the Long Slip Fill and Enhancement Project. The project include the preparation of catenary structure and wiring layouts for existing, proposed and final stages for the six new electrification tracks branching off from Track 4 Main and Track 119 Lead track. Staging was done to maintain track availability during construction. The design include new catenary support poles and foundations well as modifications of existing structures and the sectionalizing of the mainline and all new six tracks through section insulators and motorized operated disconnect switches.

REM Project, Montreal, CA: OCS Engineer for the design of the single wire fixed termination (SWFT) and retractable overhead conductor rail (OCR) in the maintenance buildings. Design support details and loads for the vertical hangers from roof truss and V-terminations outside and inside the doors of the maintenance buildings.

Long Island RailRoad (LIRR), ESA, Queens, NY: Engineer overseeing the testing of impedance bonds for the commissioning of the new LIRR traction power substation G02 at Harold interlocking.

Citylynx Gold Line, Charlotte, NC : OCS engineer as part of a design-build team for the design of the modern articulated, low floor streetcar with the ability to operate off-wire for significant distances.

NJT HBLR Cable Testing, NJ: Determine the cable replacement priority of cable system for the transfer trip cable damage or compromised by Superstorm Sandy.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Extensive Experience in Catenary Design, Calculating Catenary Loads**
- **Testing and Calculating Electical Capacity**
- **Cable Systems Design and Replacement**
- **NJ TRANSIT Experience**

Firm: AECOM

Education

MS, Civil Engineering, Polytechnic University, New York, 2011

BS, Civil Engineering, Polytechnic University, New York, 2000

Registration/Certification

Engineer-In-Training (EIT)

Years of Experience

Total: 17

With Current Firm: 1

Work History

N/A

Training and Industry Skills

NYS Registered Certificate in Executive Construction Management, Polytechnic University, New York, 2004

Micro-station Auto CAD

Microsoft Office (Excel, Power Point, Access)

Catherine Clement, EIT, continued

MBTA Mobile TP substation, MA: Develop specifications for the new mobile Traction power substation for the Massachusetts Department of Transportation.

Electrical Sectionalizing and Associated SCADA System Improvements for GCRTA, Cleveland, OH: Provide catenary support for the modification of the catenary system to isolate sections so as to maintain uninterrupted train services for the electrical sectionalization.

Brookpark Station, GCRTA, Cleveland, OH: Calculated loads for the relocate catenary structures for the station modification.

Metrolinx Electrification Project, Toronto, Ontario: Provided conceptual and preliminary OCS design, development of conceptual and preliminary engineering reports and performance specifications and design criteria as well as construction cost estimates for the commuter rail service Go Transit.

West Street Bridge, Amtrak Keystone Corridor at Parkesburg, PA: Provided layout plans and loads for new catenary structures. Calculate clearances for the catenary wires on the underside of the bridge and transmission wires to the new overhead bridge over Amtrak's rail lines.

Cincinnati Streetcar, Cincinnati, OH: Provided catenary support during construction phase, including response to RFI's and design support during construction.

Harbor Center, Buffalo, NY: Provided design for relocation of OCS structures, and coordinated with design team for catenary location and with NFTA on the proposed catenary modifications.

NFTA 500 Block, Buffalo, NY: Provided schematic and final design, including dead-end of existing catenary. Coordination with NFTA on the proposed catenary modifications, which included structure relocation, temporary and final supports.

Moynihan Project: Senior catenary engineer responsible for designing the extension of the West End Concourse. Designed Catenary profiles and erection diagrams for interim and final stages. Calculated catenary loads. Design specific attachments and fittings for low clearance and other special location. Revised layouts and incorporation the changes in the structure erection and wiring plans. Interfaced and coordinated with other system disciplines, e.g. structural, civil and electrical. Prepared Bill of Material for the project.

Marietta Avenue Bridge Rehabilitation Project : Modified the catenary system to accommodate the rehabilitations of the bridge, revised structural location plans, re-profile catenary, calculate new catenary loads, provide new erections diagrams and bill of materials.

East Side Access Project: Designed catenary system at Harold Interlocking. Prepare Schematic Sectionalizing Plans for existing and future stages. Planned for staged construction that avoids or minimizes interruption to operation and maintenance of trains. Designed catenary structure location and wiring layouts for existing, proposed and final stages. Designed Catenary profiles and erection diagrams for interim and final stages. Calculated catenary loads. Designed mono poles, portals and cantilever structures. Designed catenary structural and foundation details. Designed of specific foundations, where foundations are identified to be part of retaining wall. Revised layouts, structure erection and wiring plans, including temporary and permanent switching modification. Interfaced and coordinated with other system disciplines, structural, civil, electrical and tunnel engineers. Prepared Bill of Material for the project.

Frank J. Cienski

Force Account Construction

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Extensive experiences and knowledge of the railroad industry**
- **Construction management and inspection**
- **Force account coordination and resource requirements**

Mr. Cienski possesses extensive experience in operational and logistical planning, resource and staff coordination, estimating and scheduling for large scale rail transit construction projects including direct and indirect force account coordination and resource requirements, invoicing and finance procedures and track and power outage planning for all related trades with all the local and regional agencies. His experiences and knowledge of the railroad industry have allowed him to participate in a wide range of projects that can impact railroad operations and worked closely with internal groups and departments such as Transportation, Engineering, Operations, Facilities and FA staffing and economics, encompassing all the railroad departments and services. From track and switch installation to safety inspections to estimating and planning detailed multiple track and power outages including resource loading, scheduling and logistical planning. These type projects and programs may include force account finances, invoice verification, reviews and processing and coordination for direct and in direct work and support services for access, protection and construction. My experiences within the railroad industry have included assignments for Amtrak, Long Island Rail Road, New York City Transit, Metro-North Railroad, Conrail, NS, CSX, BN, WMATA, MBTA, MARC, VRE, Canadian National and New York and Atlantic freight services, as well as coordinating efforts between some of these groups and other local train and railroad operations. Mr. Cienski worked for 25 years with Amtrak, during this time he worked throughout the metropolitan area including Pennsylvania Station, Sunnyside Yard in various positions and locations throughout the Northeast Corridor between Boston and Washington, DC. Mr. Cienski has also participated in other varied highway and bridge construction projects that have broadened his experience beyond the railroad and continue to keep him as a valued component and contributor to these and other operations.

Relevant Project Experience

Amtrak Empire Line Infrastructure Rehabilitation Project, New York City, New York: As the Construction Manager. Worked with the Amtrak PM to assist in progressing the contractor's work to make emergency and other repairs on this decommissioned line. The work included major track, ties, rail and switch installation and other repairs along this 11 mile run on the west side of Manhattan from Penn Station to the Spuyten Duyvil Bridge. The work also included the repair and replacement of track, plates and plinth and concrete repairs as necessary in the tunnel approach to PSNY. We managed a field operation comprised

Firm: AECOM

Education
Bayside High School
Other various studies

Registration/Certification
n/a

Years of Experience
Total: 31 years
With Current Firm: 11

Work History
2007 - Present, AECOM
2005 – 2007, McKissack
2002 – 2005, URS
1977 – 2002, Amtrak

Frank J. Cienski, continued

of approx. 12 Inspectors that covered round the clock work activities, reviewed daily inspection reports and associated documents, planned, scheduled and coordinated work activities and assisted Amtrak in all project work related items. Conducted meetings and prepared relevant documents required to progress the work.

Hudson Yard Development Project, Related Companies, New York City, New York: As Force Account Manager. Duties included managing an inspection staff and providing inspection services to the Related Field Director for the contractor and FA staff verifications. Produced daily reports identifying manpower and staffing activities for the multiple contractors and FA support services. Created and provide detailed analysis of past and present costs and cost forecasting through job completion for the Eastern Rail Yard. Managed inspection services daily including weekends and providing reports and data for project progress reporting.

Amtrak ADA Station Program, ADASP, Amtrak, multiple locations: Participated with the design team to perform constructability reviews and force account resource planning and scheduling for Amtrak's ADA Station upgrades program. This work is to upgrade multiple stations throughout the US and bring those stations up to current ADA compliance including station upgrades. These stations are located in Atlanta, West Virginia, Illinois to name a few. This work may impact multiple railroads and surrounding communities and our planning and constructability effort was to identify and recommend detailed construction and logistical planning and to identify the resources and other items required to perform these enhancements and upgrades.

Amtrak Union Station Infrastructure and Expansion, Washington, DC: Participated with the design team to perform constructability reviews and force account resource planning and scheduling for Amtrak's Union Station upgrades, improvements and expansion program. This work is to upgrade the station, platforms and tracks including system upgrades in and around Union Station including the below grade station expansion and enhancements. This work impacts multiple railroads and the surrounding areas and our planning and constructability effort is to identify and recommend detailed construction and logistical planning and to identify the resources and other items required to perform these enhancements and upgrades and to also identify obstructions, hazards and items that could impact the project.

Moynihan Station Development Project - Phase 1/1.5 Farley Post Office, New York City, New York: In the position of Director, Force Account on this project which duties include the involvement in the planning, review and coordination of track and power outages and operational and construction sequencing and scheduling, utility relocation coordination, force account coordination including access and protection and security requirements, and cost control items related to the direct and indirect tasks and personnel required to perform the construction activities associated with this large scale project. Invoicing responsibilities include Force Account and staff reviews and approvals for NYCT, LIRR, and Amtrak. The role as Director has a major responsibility that involves force account and railroad invoice review and approvals for the Port Authority of NY NJ and works closely with MSDC and ESD to follow the invoicing and verification process through to payment. The role involving invoices includes the organizing and establishing of a process that allows for expedited review and audit preparation.

Brooklyn Battery Tunnel, MTA Bridges and Tunnels, New York, New York: Construction Manager, Coordinator and Inspector with the Highway and Bridge department for performing concrete repairs at the MTA Battery Tunnel Facility. Duties included the security clearance and coordination of contractors, equipment and specific activities on site, including inspections and providing and coordinating access to the various facility locations to perform the repairs at this facility with minimal impact to the facility personnel and daily operations and meeting schedule and cost requirements involved with this scope of work. This also included the review and approval of invoices of those involved in this operation.

Resumes of Project Staff

Geotechnical Deep Foundations
Ground Improvements

Tayler Day, EIT

Foundation–Drilled Shafts

Mr. Day has substantial knowledge in civil engineering. His also has in-depth knowledge in modeling and load testing post-grouted drilled shafts in clay. Since joining DBA in 2016, he has performed design and field duties for projects involving rigid inclusions, CFA piles, and drilled shafts.

Relevant Project Experience

Malcolm Drilling Company/Kroenke Sports & Entertainment, Inglewood NFL Stadium, Inglewood, CA: Construction support during installation and bi-directional load testing of drilled shafts and large-diameter continuous flight auger (CFA) piles.

GSW Arena LLCSan, Chase Center/Malcolm Drilling Company, Francisco, CA: Bi-directional load testing of drilled shafts and top-down load testing of CFA piles for new Warriors Arena.

Charles Blalock & Sons, Inc/State of Tennessee, TDOT SR29 Expansion, Harriman, TN: Drilled shaft installation monitoring and analysis of cross hole sonic logging (CSL) results for drilled shafts installed through permanent casing into rock sockets. Drilled shaft anomaly analysis and remediation.

Figg Bridge Engineers Inc/United Bridge Partners- Cline Avenue Bridge, East Chicago, IN: Geotechnical exploration support and design of pile foundations for a bridge replacement. Ground improvement design for on-site casting segment casting facility.

Malcolm Drilling Company, Ground Improvement, Multiple Projects, San Francisco Bay Area, CA: Design, load testing, and construction support for drilled displacement column ground improvement systems to control settlement, improve bearing capacity, and mitigate effects of liquefaction for several multi-story building projects.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Civil engineering**
- **Drilled shafts**
- **Modeling and load testing**

Firm: Dan Brown and Associates, P. C.

Education

MS, Civil Engineering, University of Missouri, 2012

BS, Civil Engineering, University of Missouri, 2010

Registration/Certification

Engineer-in-Training (EIT)

Years of Experience

Total: 2

With Current Firm: 2

Work History

2016-present, Dan Brown and Associates, PC

Training and Industry Skills

Various

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Bryan Atkinson

Foundation-Drilled Shafts

Mr. Atkinson has over 28 years of experience in heavy and movable bridge construction inspection. Throughout his extensive career, he has served as Chief Inspector, Lead Construction Inspector and Construction Inspector. Mr. Atkinson is fully familiar with the construction and rehabilitation of movable bridges, and has extensive experience with deep water drilled shaft foundation construction.

Relevant Project Experience

New Jersey Department of Transportation, Route 7 (1953) Hackensack River Wittpenn Bridge, Contract 3, Main Lift Span and Kearny Approach, Township of Kearny and City of Jersey City, Hudson County, NJ: Senior Bridge Inspector on this $170M movable bridge project located in Hudson County, New Jersey. Contract 3 involves the construction of the main lift span towers and isotropic deck on piers constructed in Contract 1, counterweights, ropes, sheaves, Nuttal gear boxes, all mechanical and electrical systems, control and machinery house, elevator, and the elevated roadway portion of the western approach. Responsibilities and duties include on-site inspections of the Contractor's means and methods for lift span tower erection, structural steel floor beams, surface preparation of bolted connections, pre-installation verification of impact guns, post-torque verification of fasteners used for all structural steel components including splice plates and transverse tower support beams. Also inspected items associated with the elevated approach roadway including steel girder and concrete beam erection, SIP forms, shear studs, epoxy-coated reinforcement steel, armored deck joints, HPC concrete deck and parapets, setup and grade verification (dry run) of Bidwell paving machine, bridge safety railing and bridge lighting facilities. Also assisted the RE and ARE in coordinating channel operations and closures with the US Coast Guard and the NJDOT Movable Bridge Unit.

County of Passaic, West Brook Road Bridge Over the Wanaque Reservoir, Ringwood, NJ: Lead Foundation Inspector on this $34M bridge replacement project over the Wanaque River. This 505' long viaduct required the construction of 10-foot wide drilled shafts ranging in depth from 190 to 210 feet including rock sockets. Duties and responsibilities included on-site inspection of the Contractor's means and methods for welding and placing of 60 foot long sections of steel casings from barge used for demo and production shafts, daily monitoring of the water elevation inside and out of the steel casings, overseeing drilling operations and preparing daily logs for depth drilled,

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Large Diameter Deep Water Drilled Shafts**
- **Thermal Cooling of Mass Concrete Pours**
- **Concrete Substructures and Superstructures**
- **Setup and Grade Verification (Dry Run) of Concrete Paving Machine**

Firm:
AmerCom Corporation

Education

TCP – Rutgers Traffic Control Coordinator Workshop

ACI-CCTC Concrete Construction Technology Course

ACI - Concrete Field Testing Technician, Grade I

OSHA, 40-hour Hazardous Waste Operations and

Years of Experience

Total: 28

With Current Firm: 28

Work History

1990 -present, AmerCom

Training and Industry Skills

Emergency Response

NHI, Drilled Shaft Foundation Inspection

NJSAT – Asphalt Paving Technologist Certification

Bryan Atkinson, continued

spoil recovery and disposal, auger types, muck bucket and core barrel and sizes, placement of reinforcement cages along with cooling tubes for mass concrete pours, proper installation of cross-hole sonic logging (CSL) tubes, observation and field reporting of sonic logging tests, construction and installation of O-cell assembly and field verification of the tremie pipe which runs down through the top plate of the O-cell assembly to the bottom of the shaft, daily measurement of casing cleaning and air lift, active thermal cooling of mass concrete pours , and daily environmental and safety reports.

New Jersey Department of Transportation, Route 7 (1953) Hackensack River Wittpenn Bridge, Contract 2, West Approach to New Lift Bridge, Township of Kearny and City of Jersey City, Hudson County, NJ: Bridge Inspector for Contract 2 which exceeded $33M and involved the construction of 8 new piers, pile foundations, structural steel girders, HPC multi-span concrete decks, and barrier and warning gate supports for the Wittpenn lift bridge. This contract also included various utility relocations to accommodate the new bridge and roadway alignment. Duties and responsibilities included on-site inspection of the Contractor's means and methods for cofferdams, dewatering, system, H-pile foundations, concrete footings, abutment, columns and piers utilizing active thermal cooling methods of mass concrete pours, structural steel girder and diaphragm erection, high strength fasteners, surface preparation of bolted connections, pre-installation verification of impact guns, post-torque verification of fasteners, reinforcement steel, bearings, setup and grade verification (dry run) of Bidwell paving machine, HPC concrete deck and parapet placement, wet cure and railing system. Additional items included retaining walls, utilities, traffic control and staging and environmental compliance with permits. Trained in and utilized quality assurance protocols specific for this assignment.

New Jersey Department of Transportation, Reconstruction of Route 183 Bridge over NJ TRANSIT and Netcong Circle (Route US 46), Grading, Paving, Drainage and Structures, Contract # 000950476: Bridge Construction Inspector on this $13.9 million project involving the demolition and reconstruction of the Route 183 Bridge over NJ TRANSIT line and reconstruction of the Netcong Circle (Routes 46 and 183) in Netcong Borough. Responsibilities and duties include on-site inspections of the Contractors' means and methods for temporary shielding, bridge demolition, H-pile foundations, reinforced concrete footings, abutments and piers, HPC concrete deck and parapets, setup and grade verification (dry run) of concrete paving machine, bridge safety walks, traffic control, staging, milling, paving, line striping, environmental compliance with permits, relocation of utilities, installation of new traffic signals, curbs and sidewalks, highway lighting DGA, HMA, beam guide rail, bridge rail and pre-cast T-walls and landscaping. Trained in and utilized quality assurance protocols specific for this assignment.

New Jersey Department of Transportation, Route 80 Bridges over Route 287 Northbound and Smith Road Contract No. 043003714: Bridge Inspector for this $6.4 million deck replacement project located in Morris County, NJ. Responsibilities and duties included on-site inspection of the Contractor's means and methods for temporary shielding, bridge deck removal, HPC concrete decks and parapets, setup and grade verification (dry run) of concrete paving machine, aluminum D-rail, safety walks, milling, paving, ITS, beam guide rail and terminals, and maintenance and protection of traffic. Trained in and utilized quality assurance protocols specific for this assignment.

New Jersey Department of Transportation, Route 5, Contract No. 000983530, Reconstruction, Widening and Structures, from MP 0.38 to 0.97, Borough of Palisades Park, Bergen County NJ: Road/Bridge Construction Inspector on this $15 million project. Responsibilities and duties included on site inspection of the Contractor's means and methods for bridge demolition, bridge construction including substructure concrete, superstructure concrete and rebar, structural steel, concrete bridge decks, milling, HMA paving, guiderails, lighting, retaining walls, roadway excavation, extensive environmental work for storm water management facilities, maintenance and protection of traffic and work zone safety, and nighttime operations. Trained in and utilized quality assurance protocols specific for this assignment.

Alexis Leib, EI

Ground Improvements

Ms. Leib is a graduate of the University of Tennessee, where she completed both her BS and MS in civil engineering. She has experience in the construction of large-diameter drilled shafts and timber piles used as rigid inclusions beneath a railroad for support.

Relevant Project Experience

Oceanwide Center Development, San Francisco, CA: Field observation rock coring and rock classification for drilled shafts. (Client: Malcolm Drilling Company Inc.; Owner: Oceanwide Holdings)

Applied Foundation Testing, Honolulu, HI: Field observation of drilled shaft piles and assisting with cross hole sonic logging (CSL) tests. (Client: Applied Foundation Testing: Owner: City of Honolulu)

Chase Center, San Francisco, CA: Field observation of indicator piles and bi-directional drilled shaft test piles. (Client: Malcolm Drilling Company Inc: Owner: GSW Arena LLC)

The Exchange on Sixteenth, San Francisco, CA: Field observation and field calculations of drilled shaft depths based on soil stratigraphy. (Client: Malcolm Drilling Company Inc: Owner: Kilroy Realty Corporation)

BNSF Twin Railway Track, La Crosse, WI: Observation of driven timber pile installation as well as fill and geogrid installation for a load transfer platform. (Client: Lunda Construction: Owner: State of Wisconsin)

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Construction of Large Diameter Drilled Shafts**
- **Civil Engineering**

Firm: Dan Brown and Associates, P. C.

Education

MS, Civil Engineering, University of Tennessee, 2015

BS, Civil Engineering, University of Tennessee, 2014

Registration/Certification

Engineer-in-Training (EIT)

Years of Experience

Total: 2

With Current Firm: 2

Work History

2016-present, Dan Brown and Associates, PC

Training and Industry Skills

Various

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John Paszkiel

Ground Improvements

Mr. Paszkiel has over twenty (25) years of construction engineering and inspection experience including many years on large scale transportation projects. Inspection duties includes mechanical stabilized earth (MSE) and cantilever retaining walls, handling and disposal of regulated waste, drilled shaft and H-pile foundations, embankment construction, storm water facilities and high performance concrete (HPC) deck construction.

Relevant Project Experience

New Jersey Department of Transportation, Route 7 (1953) Hackensack River Wittpenn Bridge, Contract 3A, Township of Kearny and City of Jersey City, Hudson County, NJ: Construction Inspector on this $15M project involving the construction of a storm water pump station, lightweight fill soil surcharge, detention basin, and pipe jacking under railroads. Duties and responsibilities include on-site inspection of the contractor's means and methods for excavation, 25-foot high embankment surcharge with monitoring wells, inclinometers mounted to existing structures to measure deflection from surcharge, handling and disposal of regulated material, temporary and permanent sheeting, 36" and 48" pipe jacking under active railroads, reconstruction of Fish House Road, new storm drainage system including inlets, manholes, RCC pipe, detention basin and outfall structures, and maintenance and protection of traffic. Trained in and utilized quality assurance protocols specific for this assignment.

New Jersey Department of Transportation, Route 7 (1953) Hackensack River Wittpenn Bridge, Contract 2, West Approach to New Lift Bridge, Township of Kearny and City of Jersey City, Hudson County, NJ: Bridge and Road Construction Inspector on this $33.2 million project for the construction of a new Wittpenn Movable Bridge which will carry New Jersey Route 7 over the Hackensack River connecting Kearny and Jersey City, New Jersey. Responsibilities and duties include on-site inspection of the contractor's means and methods for excavation, handling and disposal of regulated material, structural steel erection placed from Weeks barge crane, coordination of marine traffic with US Coast Guard, drilled shafts for PSE&G catenary towers, 11,000 sf of temporary sheeting, construction of 7000 sf of permanent sheeting, cantilever retaining walls, test piles, H-pile foundations for the installation of 8 pier footings, mass concrete pours with thermal curing, pier columns and caps, erection of steel girders, HPC concrete deck, parapets, median barrier, deck joints, access stair tower, bridge drainage and utility work. Trained in and utilized quality assurance protocols specific for this assignment.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **MSE and Cantilever Retaining Walls**
- **Mass Concrete Pours with Thermal Cooling**
- **H-Pile and Drilled Shaft Foundations**
- **Handling and Disposal of Regulated Waste**

Firm:
AmerCom Corporation

Education
Jersey City State College, 1988

Registration/Certification
NICET IV - Highway Construction

SAT - NJ Society of Asphalt Technicians

ACI - Concrete Field Testing Technician- Grade 1

Years of Experience
Total: 25

With Current Firm: 23

Work History
1993 - present, AmerCom

Training and Industry Skills
TCP - Rutgers Traffic Control Coordinator Program

ACI, -Concrete Construction Technology Course

Work Zone Safety Awareness Program

OSHA 10 HR Construction Safety Program

OSHA 1910.134 Respirator

John Paszkiel, continued

NJDOT, Route 10 Eastbound Rehabilitation and Improvements, NJ: Road Inspector on this $4.7 million Roadway Resurfacing Contract. Responsibilities and duties included on-site inspections of the contractor's means and methods for milling, paving, pavement markings & delineation, traffic control, night work, tack coating and joint sealant, proper night time lighting of roadway and traffic signals. Utilized current NJDOT inspection report DC-144. Trained in and utilized quality assurance protocols specific for this assignment.

NJDOT, Route 3 over Hackensack River (EB & WB) Rehabilitation, NJ: Bridge Inspector on this $17.6 million bridge deck replacement project involving bridge deck replacement and structural steel repairs to the 2700' long eastbound and westbound Route 3 Bridges over the Hackensack River. Responsibilities and duties included on-site inspections of the contractor's means and methods for temporary shielding, demolition, structural steel, HPC bridge deck, concrete parapets, rebar, concrete repairs, abutment reconstruction, approach slabs, fender repairs, drainage, utility relocations, milling, paving, pavement markings & delineation, traffic control and night work. Utilized current NJDOT inspection report DC-144.

NJDOT, Route US 46 Contract No. 066950374, Widening, Grading, Paving Drainage & Structures, NJ: Road Inspector on this $23.4 million Roadway Widening, Paving Drainage and Structures Contract. Responsibilities and duties included on-site inspections of the contractor's means and methods for roadway excavation, sign structures with drilled shaft foundations, MSE walls, milling, paving, pavement markings & delineation, traffic control, night work, tack coating and joint sealant, proper night time lighting of roadway, DGA, drainage, sidewalk, curb, guiderail, utilities and traffic signals.

NJDOT, Route 15 Wilson Drive/White Lake Road, Contract No. 154058024; Intersection Improvements, NJ: Road Inspector on this $2.2 million Intersection Improvement and Resurfacing Project. Responsibilities and duties included on-site inspections of the contractor's means and methods for milling, paving, pavement markings & delineation, traffic control, night work, tack coating and joint sealant, proper night time lighting of roadway, DGA, drainage, sidewalk, curb, utilities and traffic signals. Utilized current NJDOT inspection report DC-144. Trained in and utilized quality assurance protocols specific for this assignment.

NJDOT, Route 5, Contract No. 000983530, Reconstruction, Widening and Structures, from MP 0.38 to 0.97, Borough of Palisades Park, Bergen County, NJ: Road Construction Inspector on this $15 million project. Responsibilities and duties included on site inspection of the contractor's means and methods for milling, HMA paving, guiderails, highway lighting, regulatory signage, striping, MSE retaining walls, extensive environmental work for storm water management facilities, maintenance and protection of traffic and work zone safety, and nighttime operations.

NJDOT, Route 21 TSM6 No. 3, Contract No. 0039880264, NJ: Road Construction Inspector and Office Engineer on this $31 million Roadway Reconstruction, Widening, Paving, Drainage and Structures Contract. Responsibilities and duties included on-site inspections of the contractor's means and methods for milling, paving, pavement markings & delineation, traffic control, night work, tack coating and joint sealant, proper night time lighting of roadway, DGA, drainage, sidewalk, curb, utilities and traffic signals. Trained in and utilized quality assurance protocols specific for this assignment.

Resumes of Project Staff

Movable Bridge

Matthew Miller, PE

Movable Bridge Chief Inspector

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- CE&I Inspection Services on Bridge Repair
- Bridge Construction
- Emergency Inspection
- Bridge Inspection

Mr. Miller is a registered professional engineer with over seven years of experience in the Field Services Section in the New Orleans Office. During his time at M&M, Mr. Miller has been primarily involved with CE&I inspection services on bridge repair and construction projects, and with the detailed, interim and special inspections of numerous railroad bridges. He has been involved in numerous emergency inspections and troubleshooting. Mr. Miller is certified in a variety of Bridge Inspection industry standard training, including FHWA-NHI Bridge Inspection Refresher and FHWA-NHI Safety of In-Service Bridges courses, e-Railsafe Safety Training, M&M's Technical and Rope Access program, and American Red Cross CPR and First Aid.

Relevant Project Experience

San Bernard River Bridge CE&I. Angleton, Texas: CEI Bridge Inspector. M&M provided the design for a new vertical lift bridge that will replace an existing swing span bridge over the San Bernard River in the UPRR Angleton Subdivision. M&M is working with UPRR to accommodate an accelerated construction schedule and is providing construction support for the project. The new bridge is designed to be "remote control ready." Mr. Miller serves as the CE&I bridge inspector.

2016/2017 Inspections, Northern, Southern & Western Regions: Lead Bridge Inspector. M&M provided professional services to inspect designated steel railroad bridges across the UPRR System. The firm was responsible for leading the inspections, assisting the UPRR inspectors in comparing the inspection findings against past findings, and formulating overall condition ratings of bridge systems. The firm also compiled the condition rating data and prepared summary reports indicating the overall health of the bridges inspected in this project. Mr. Miller was the lead bridge inspector.

Bridge Inspection Services. New Orleans, Louisiana: Bridge Inspector. As part of the open-end agreement with NOPBRR, M&M provided the annual inspection of three structures: the Huey P. Long Bridge, a locomotive turntable span and the Florida Avenue Canal Span. An in-depth periodic inspection was performed on all three structures during 2012 and detailed reports were prepared. Mr. Miller was a member of the inspection team and assisted with inspection report drafting.

St. Claude Ave. Bridge Grating Replacement. New Orleans, Louisiana: M&M prepared contract documents and provided construction monitoring for the replacement of the open grid deck on the outboard lanes of the St. Claude Avenue Bridge. The grid deck was approaching the end of its service life and replacement was warranted.

Firm: Modjeski and Masters, Inc.

Education
BS, Electrical Engineering, New Jersey Institute of Technology, New Jersey

Registration/Certification
Professional Engineer: NJ, 1992, 24GE03651000

Years of Experience
Total: 8

With Current Firm: 8

Work History
2010-Present, Modjeski and Masters, Inc.

Training and Industry Skills
FHWA-NHI 130053 - Bridge Inspection Refresher Course

eRailsafe System Safety Training

FHWA-NHI 130055 - Safety of In-Service Bridges

Matthew Miller, PE, continued

M&M researched alternate available grid decks to select given the dimensions, capacity, design and connection details and weight. Mr. Miller prepared the construction plans & specifications, and performed CE&I inspection on site.

Lapalco Boulevard Bridge Repairs. Harvey, Louisiana: Resident Engineer. This is a 2,840-foot, double-leaf bascule bridge carrying four lanes of vehicular traffic over the Harvey Canal. The main bridge portion is comprised of welded steel plate girders, with the approaches including steel and concrete girder spans. This bridge has eleven concrete spans at 77', four concrete spans at 100', four 135' steel spans, two 182' steel spans, and two bascule leaves at 187' each. The inspection was a visual inspection of all structural elements, including fatigue-sensitive and fracture-critical members, comprising the main bridge structure and approaches. M&M provided construction management, including shop drawing review, shop inspection, and field inspection for the rehabilitation of this bridge. Mr. Miller assisted in checking submittals and assisted in monitoring construction.

Seabrook Bridge Roadway Removal & Repairs. New Orleans, Louisiana: CEI Inspector. This project consisted of the removal of two 120-foot long roadways cantilevered from a single-leaf bascule bridge over the Inner Harbor Navigational Canal in New Orleans, LA. The roadways have been abandoned due to corrosion and over time have presented a safety concern. M&M performed engineering services for the design and preparation of plans, specifications and inspection services related to emergency repairs at the Seabrook Bridge, including removal of the roadways, rebalancing the movable span and railroad repairs. A full analysis of the bridge was completed to ensure structural integrity, and modifications are being made to the bridge counterweight and span to ensure balance during operation. Mr. Miller performed CE&I Inspection on site.

Tombigbee River Bridge Ropes Replacement. Jackson, Alabama: CEI Inspector. M&M prepared plans and specifications for securing new counterweight ropes on the Tombigbee River Bridge. Separate plans and specifications were also developed for the installation. M&M also oversaw the construction efforts and provided observation of the tension testing of the ropes at the mill. Mr. Miller prepared the specifications for the counterweight and operating cable replacement. He also assisted in the preparation of construction plan and performed the CE&I inspection on site

Hurricane Creek Bridge Repairs, Tuscaloosa, Alabama: Resident Engineer. As a result of a massive tornado that struck the region near Tuscaloosa, AL, the Hurricane Creek Bridge, an elevated railroad viaduct belonging to the Alabama Southern Railroad, was blown down. M&M, as part of a team, designed and repaired various existing steel girders and pedestals of bridge. In addition to designing the repairs, M&M designed new steel girders and towers as well as new reinforced concrete pedestals. Mr. Miller was part of the inspection team that conducted the initial inspection of the bridge to assess the damage. Mr. Miller also monitored the heat straightening work, concrete pedestal installation, tower and girder erection and conducted the final inspection after construction was complete.

Galveston Railroad Bridge Replacement. Galveston, Texas: Resident Engineer. This project provides for the replacement of the existing 115 ft. span Scherzer Rolling Lift Bascule bridge in the Galveston Bay Railroad Causeway with a 385 ft. simple truss vertical lift bridge. The replacement bridge will be a single-track, open deck, simple through Warren Type truss span and provide 300 ft. of horizontal clearance and 73 ft. of vertical clearance over the Intracoastal Waterway and will carry a single railroad track. M&M provided construction support services and construction inspection. Mr. Miller assisted in checking shop drawings and responded to RFIs.

Robert Peters, PE

Electrical Systems

Mr. Peters has more than 28 years of industrial control system engineering experience with 9 years experience being with movable bridges. Mr. Peters is assigned to the firm's Electrical / Mechanical Section. He has been involved in a variety of bridge projects.

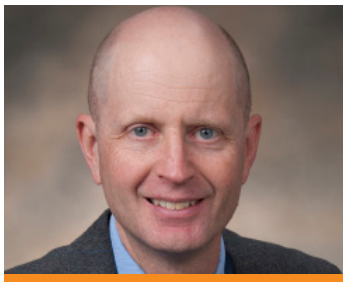
Relevant Project Experience

BNSF Railway Company, Galveston Lift Span Inspection, Galveston, Texas: Electrical Engineer. Responsible for electrical inspection services and developed a report of observations, finding and recommendations to the railway for the new vertical lift span.

Louisiana DOT, LADOTD Inspections T.O. #2 - 4 Bridges, Multiple Cities, Louisiana: Electrical Engineer Responsible for mechanical and electrical inspections of the LA 319 bridge at Louisa, LA as well as structural and coating inspections of the I-210 Calcasieu River Bridge, I-20 Bridge at Vicksburg and the LA 47 bridge at the Mississippi River Gulf Outlet.

Illinois DOT, Joliet IL Bascule Bridges Automation, Joliet, Illinois: Senior Electrical Engineer. Responsible for electrical design and engineering services related to a preliminary investigation and design to convert six bascule bridges on the Des Plaines River in Joliet, Illinois to remote control operations. Each bridge is to be fitted with a new PLC based control system designed to provide remote control capability through a SCADA (Supervisory Control and Data Acquisition) system at IDOT's Joliet Bridge Office building. New bridge CCTV camera systems and a dedicated fiber optic communications network with a backup wireless network are also to be provided. Mr. Peters also served as primary electrical designer on the project. Each bridge is to be fitted with a new PLC based control system designed to provide remote control capability through a SCADA (Supervisory Control and Data Acquisition) system at IDOT's Joliet Bridge Office building. New bridge CCTV camera systems and a dedicated fiber optic communications network with a backup wireless network are also to be provided.

NYSDOT, Suffolk County Movable Bridges Design & Construction Support, Westhampton Beach/Southampton, New York: Electrical Engineer. Responsible for developing the plans and specifications for the electrical repairs. Electrical and mechanical construction documents were developed for each structure based on the condition inspection reports. The repairs were monitored through the construction phase.



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Electrical Engineering**
- **Movable Bridge Project Experience**
- **Development of the Plans field services for the Electrical Repairs of Bridges**

Firm: Modjeski and Master, Inc.

Education

MS, Engineering, Temple University, Pennsylvania, 1989

BS, Electrical Engineering, Temple University, Pennsylvania, 1987

Registration/Certification

Professional Engineer:

PA, 2013, No.: PE080682,

MO, 2017, No.: 2017027411,

IL, 2017, No.: 062.069632,

NC, 2016, No.: 044257,

MD, 2016, No.: 49018

Years of Experience

Total: 28

With Current Firm: 9

Work History

2009-Present, Modjeski and Masters, Inc.

Training and Industry Skills

Amtrak Contractor Safety Training (2015)

E-Railsafe System Safety Training (2010)

Robert Peters, PE, continued

VDOT, Gilmerton Bridge Replacement, Chesapeake, Virginia: Electrical Engineer. Responsible for on-site testing of the bridge skew monitoring system and troubleshooting any operational issues. Eight 12-foot diameter drilled shafts were installed to a depth of 120 feet below ground and are some of the largest ever constructed using the oscillating method.

NJDOT, Movable Bridge Instrumentation & Monitoring Design, Statewide, New Jersey: Electrical Engineer. Responsible for instrumentation of movable bridges throughout New Jersey. This includes bridge monitoring, security monitoring, and machinery monitoring. Two vertical lift bridges (Routes 44 and 13) were completed by M&M. The machinery monitoring provided early detection of failures and help to determine maintenance frequency.

Cape May County, Townsends Inlet Bascule Bridge Rehabilitation, Sea Isle City, New Jersey: Electrical Engineer. Responsible for developing the plans and specifications for the electrical repairs. M&M was selected to develop structural, mechanical and electrical contract documents for a limited scope reconstruction of the bascule and tollhouse spans. M&M also provided post design services to the county during construction of the project.

Union Pacific Railroad, New Augusta Swing - Scoping Inspection, Little Rock, Arkansas: Electrical Engineer. Responsible for mechanical and electrical inspection to confirm the existing conditions of the New Augusta Swing Bridge on the Union Pacific Railroad. A brief report was prepared for Union Pacific that included the severity of the deficiencies and an estimated cost to provide the rehabilitation design. Mr. Peters was an electrical inspector.

DelDOT, Structural, Mechanical and Electrical Rehabilitation Design Services for 3 Movable Bridges, Wilmington, Delaware: Electrical Engineer. Responsible for structural, mechanical, and electrical rehabilitation design services to DelDOT on three bridges in Wilmington. M&M, as part of a team, also worked on miscellaneous repairs on the movable portions of these bridges. All repair work was done so as not to affect rush hour traffic across these bridges. Mr. Peters assisted with developing plans and specifications for several of the electrical repairs.

Louisiana DOT, Louisville St. Bascule Bridge & East Pearl River Swing Bridges Electrical Rehab, New York, New York: Electrical Engineer. Responsible for troubleshooting and developing corrections for several bridge operational problems. M&M prepared the electrical plans with specification notes for the rehabilitation of the Louisville Street Bridge over the Ouachita River in Monroe, LA and the East Pearl River Bridge over the Pearl River in LA. Both bridges were in need of an electrical rehabilitation including lighting, gears and generator replacement. M&M also provided construction support services.

CTDOT, Niantic River Drawbridge Emergency Declaration, Niantic, Connecticut: Electrical Engineer. Responsible for maintenance personnel with on-site troubleshooting, performed the electrical portion of the design for the work, and oversaw the implementation of the repairs. M&M was contracted to provide emergency services to diagnose operating problems with the hydraulically actuated double leaf bascule bridge. Repair work included design of an independent method to operate the bridge outside of the existing PLC control system and replacement of the obsolete PLC hardware.

NCDOT, Elizabeth City Bridge Replacement Constr. Support, Elizabeth City, North Carolina: Electrical Engineer. Responsible for preliminary inspection and strain gage balance testing. He assisted with the design of the electrical power distribution and the conduit/wiring system, performed the design of the new PLC based control system for both bridges, and provided construction support.

Elizabeth Sample, PE

Mechanical Systems

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Mechanical Engineering**
- **Bridge and Rail Project Experience**
- **Construction Staging**

Since joining Modjeski and Masters, Inc., Ms. Sample has been involved in a variety of bridge projects for both highway and rail traffic, with a concentration in movable bridge machinery. In addition to design work, this includes work during the construction stage of rehabilitation projects, including shop drawing review, inspections, and construction consultation. Her experience includes swing spans, bascule bridges and vertical lift bridges. Ms. Sample has also developed and worked with computer programs for bridge machinery and balance analysis. She has experience installing strain gages and performing and analyzing strain gage balance measurements on movable bridges.

Relevant Project Experience

NJ TRANSIT , HX Drawbridge Rehabilitation Construction Services, Secaucus, New Jersey: Mechanical Engineer. Responsible for creation of a bridge balance spreadsheet to track bridge balance during rehabilitation. This required an evaluation of existing machinery components and the evaluation of and modifications to the Contractor's proposed construction sequence in order to maintain an acceptable balance throughout construction activities. Services included: performing initial engineering investigation to determine the extent of damage and develop preliminary assessment as to probable cause(s); strain gage installation and analysis; new bearing design for replacement of counterweight trunnion bearings; and construction support services.

Galveston County/BNSF, Galveston Bridge Replacement Construction Services, Galveston, Texas: Mechanical Engineer. Responsible for construction support efforts, including being the lead engineer involved in mechanical shop drawing review, and participating in several shop visits during construction for testing and inspection of mechanical components. Ms. Sample was also the lead mechanical inspector during the entire marine outage for float-in of the new lift span. These on-site efforts included strain gaging and balance determination of the existing rolling lift bascule bridge for operation on a single pinion during float-in, witnessing and inspecting float-in of the lift span, connection of the counterweight ropes, alignment of the machinery, and other activities necessary to bring the lift span into operation. During the design phase, Ms. Sample performed a check of all design calculations, plans, and specifications during design, and assisted in other design tasks as necessary.

Firm:
Modjeski & Maters, Inc.

Education
BS, Engineering, Concentration in Mechanical, Geneva College, PA, 2002

Registration/Certification
Professional Engineer: Maryland, North Carolina

Years of Experience
Total: 16
With Current Firm: 16

Work History
2002-present, Modjeski and Masters, Inc.

Training and Industry Skills
Amtrak Contractor Safety Training (2017)
American Red Cross Adult First Aid (2017)
American Red Cross Adult CPR (2017)
CSEM, Inc.: Confined Space Entry Training (2003)
E-Railsafe System: Safety Training (2017)
Modjeski and Masters: Technical and Rope Access - Technical Access Worker

Elizabeth Sample, PE, continued

NCDOT, Elizabeth City Bridge Replacement Const. Services, Elizabeth City, North Carolina: Lead Mechanical Engineer. Responsible for visits to the steel fabrication shop for bascule span alignment measurements, and visits to the machinery shop for machinery testing and inspection. Ms. Sample was also present full time on-site as the resident engineering inspector during erection of the new eastbound bridge bascule leaves and associated machinery and electrical systems, providing a point of contact between construction efforts in the field and design engineers in the office. After completion of the new eastbound bridge, Ms. Sample continued to be present on-site in a part-time capacity during the rehabilitation of the machinery and electrical systems of the westbound bridge. This work also included assistance on balance related issues that arose during the bascule girder crack repairs.

Massachusetts DOT, Fore River Bridge Replacement Const. Services, Quincy, Massachusetts: Mechanical Engineer. Responsible for design, contract plans, and internal review of the plans and specifications. The replacement of the Fore River Bridge, carrying Route 3A, is a signature project in the Massachusetts Accelerated Bridge Program. The vertical lift bridge replaced the former bascule span at the original location of the structure.

VDOT, Gilmerton Bridge Replacement Const. Services, Chesapeake, Virginia: Mechanical Engineer. Responsible for checking of the mechanical shop drawings, and was the office point of contact for the coordination of structural, mechanical, and electrical shop drawings and RFIs. Ms. Sample also participated in several shop visits during construction for testing and inspection of mechanical components. During construction, Ms. Sample also made several visits to the site for inspection, and was the mechanical engineer on site during the float-in of the new lift span, witnessing and inspecting all activities necessary to bring the lift span into operation, including machinery alignment and balance adjustments.

Louisiana DOTD, Bayou Lafourche Lift Bridge at T-Bois Shop Drawings, Larose, Louisianna: Mechanical Engineer. Responsible for the shop drawing review for the mechanical systems, including the evaluation of design changes to the original contract. She also participated in the analysis of heat treating and stress relief procedures for sheave weldments.

New York City DOT, Macombs Dam Bridge Rehabilitation Const. Services, New York City, New York: Mechanical Engineer. Responsible for an extensive on-site survey of the machinery alignment, with documentation of results. She also assisted in the strain gage analysis to determine the bridge operating characteristics and torque requirements. She participated in shop drawing review and extensive field testing and other construction support activities.

Kiewit/Weeks JV, Willis Avenue Bridge O/M Training Manuals, New York, New York: Technical Writer. M&M provided technical writing services for the Bridge Operator's Manual, Electrical Operating Manual and Mechanical Operating Manual for the Willis Avenue Bridge replacement. There were a total of five operating and maintenance manuals developed for the swing bridge over the Harlem River. Ms. Sample served as the primary technical writer for all five manuals.

U.S. Army Rock Island Arsenal, Government Bridge End Lift Linkage Repair, Rock Island, Illinois: Mechanical Engineer. Responsible for an evaluation of the existing machinery in order to size and design a new hydraulic brake system to replace the original pneumatic brake system. She also performed a peer review of the end lift and rail drives for conversion from pneumatic to hydraulic systems. She assisted in work on the center pin, upper and lower tracks and treads, and end lifts, which included peer reviews of drawings and calculations, a review of shop drawings, and the development of as-built drawings after work was completed.

Dave Barrett, PE

Bridge Balancing

Mr. Barrett joined M&M in 1993. He is an Associate with the firm's Movable Bridge Department. Mr. Barrett has significant experience in mechanical, electrical, and structural aspects of bridge design, inspection, and testing, with a concentration in movable bridge machinery. His well-rounded resume' of design and field experience has molded him into a nimble and exceptionally dedicated engineer well-suited for the demands of movable bridges which serve the passenger rail industry. In addition to traditional design and inspection work, Mr. Barrett holds certifications in UT, MT, and PT. He is also a leader in the firm's technical access program and is certified by the Society of Professional Rope Access Technicians. Mr. Barrett is the director of the firm's instrumentation department. His instrumentation expertise includes strain gaging, vibration testing via accelerometers, displacement sensing, and tilt sensing.

Relevant Project Experience

Gilmerton Bridge Replacement, Chesapeake, Virginia: Mechanical Engineer and Quality Assurance. M&M engineered a plan that involved building a new lift bridge above and below the existing structure, with the original bascule bridge remaining functional and carrying live traffic until the float-in of the new span. M&M completed preliminary and final design of the new bridge, which includes a 250' vertical lift channel span with a clearance of 135'. The lift span is 85' wide. Eight 12' diameter drilled shafts were designed to reach 120' below ground and are some of the largest ever constructed using the oscillating method. Mr. Barrett provided QA and technical insight on this project.

Elizabeth City Bridge Replacement, Elizabeth City, North Carolina: Lead Instrumentation Engineer and Mechanical Engineer. As part of a Movable Bridge Services Agreement for North Carolina Dept. of Transportation, M&M has been contracted to replace the eastbound and rehabilitate the westbound bridges at Elizabeth City. The westbound span is a double-leaf, Hopkins trunnion bascule bridge. The new eastbound bridge is a double-leaf trunnion bascule bridge. M&M provided construction management, including shop drawing review, shop inspection, and field inspection for the work on these bridges. Mr. Barrett led the instrumentation and mechanical engineering work necessary to repair cracks found during an inspection of the structure. He used UT, strain gages, and potentiometers to monitor indications under live load and bridge operations.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Construction Management for Major Movable Bridge Projects**
- **Expertise in instrumentation vibration, testing and balancing of movable bridges**
- **Constructability Review**
- **Pre-Award Assistance**

Firm:
Modjeski & Maters, Inc.

Education
MS, Mechanical Engineering, University of Washington, Washington, 1993

BS, Mechanical Engineering, Messiah College, Pennsylvania, 1991

Registration/Certification
Professional Engineer: New Jersey

Years of Experience
Total: 27

With Current Firm: 25

Work History
1993-present, Modjeski and Masters

1991-1993, Boeing

Training and Industry Skills
Ultrasonic Inspection Level I & II

Liquid Penetrant Inspection Level I & II

Magnetic Particle Inspection Level I & II

SPRAT Level II Rope Access Technician

Dave Barrett, PE, continued

Rock Island Arsenal Bridge Inspection & Instrumentation, Rock Island, Illinois: Lead Instrumentation Engineer. M&M was called on to inspect Span #2 of the Rock Island Arsenal Bridge to diagnosis the cause of recent breakings of the end slides and inspect the hydraulic systems, mechanics and landings of each slide. A report of the findings was prepared for the client. A follow-up inspection was also performed in 2013 to verify the findings of the previous inspection. Mr. Barrett installed all sensors and recorded all data.

Macombs Dam Bridge Rehabilitation, New York, New York: Mechanical Engineer. This Harlem River crossing consists of a 416' swing span, which serves 154th Street, an urban arterial, at the West Approach and the Major Deegan Expressway and Jerome Avenue at the East Approach. M&M provided design and construction support services associated with the rehabilitation of the historic swing span and its approaches including civil, structural, mechanical, and electrical elements. Mr. Barrett has been involved in this project by checking design calculations, modifying the end lift and center latch machinery, performing on-site inspections, preparing design calculations, writing specifications and participating in meetings with NYCDOT personnel. He also provided cost estimates for the machinery.

Houma Vertical Lift Bridge Relocation to Freeport, TX, Houma, Louisiana: Mechanical Engineer. The swing span was removed and replaced with the relocated and rehabilitated vertical lift span, including the towers and counterweights. Machinery upgrades and complete electrical system replacement will be provided. M&M provided preliminary design services, final structural, electrical and mechanical design services and prepared permit applications for this project. Mr. Barrett participated as a mechanical engineering design manager for this project during design and construction.

Krotz Springs Bridge Mechanical Rehabilitation, Krotz Springs, Louisiana: Mechanical Engineer. The Krotz Spring Bridge is a 3,435' swing span bridge. M&M worked on the rehabilitation of this bridge which included new end lifts.
Mr. Barrett detailed the rehabilitation of existing mechanical components and designed new end lift, rail lift, and center latch machinery for this swing span. He also performed QA/QC and cost estimates for rehabilitation of the span drive system and span guide system.

CTWT, CN Sault Ste Marie, Sault Ste Marie, Michigan: Instrumentation Engineer. M&M provided Canadian National Railway with a proposal to stabilize the counterweight trunnion joints rather than replace them. Before this rehabilitation effort could be commenced, the condition of the bronze liners in the trunnion joints should be verified. M&M inspected the liners using a video probe to determine the condition and provided a recommendation report based on the findings. Mr. Barrett inspected the liners using a video probe to determine the condition and provided a recommendation report based on the findings. Mr. Barrett served as lead instrumentation engineer for the project as well as expert reviewer for the joint rehabilitation design.

Shellpot Bridge Rehabilitation Final Design, Wilmington, Delaware: Mechanical Engineer. This existing riveted, wrought-iron swing span was built in 1888 and is a 252' long pin-connected through truss structure carrying two open deck tracks. M&M completed an $11 million rehabilitation of this bridge which included modifications to carry only one railroad track, increase of the vertical clearance envelope, raising of the span to keep the machinery rack and pinion out of the water, upgrades of the mechanical and electrical bridge system components, and replacement of deteriorated fenders and approach substructure and foundation units.

Fore River Bridge Final Design, Quincy, Maine: Mechanical Engineer. M&M provided the final mechanical and electrical design for the lift span in Weymouth, MA. The replacement of the Fore River Bridge, carrying Route 3A, is a signature project in the Massachusetts Accelerated Bridge Program. The vertical lift bridge will replace the former bascule span at the original location of the structure. Mr. Barrett performed all design verification for the mechanical systems.

James Vaskorilis

Movable Span Fabrication

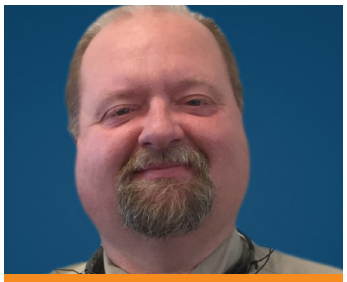
Mr. Vaskorilis joined Modjeski and Masters, Inc. in 1989 and is a Field Services Engineer. He has inspection experience on a wide variety of structure types including precast/prestressed concrete I-beam and box beam bridges, pipe culverts, steel through trusses, steel deck trusses, steel girder bridges including rolled and built-up sections, suspension bridges, a cable-stayed bridge, and bascule and swing span bridges. Mr. Vaskorilis has participated as a team leader and resident engineer in the in-depth inspections of several major highway and railway bridges of various types. Many of the bridges have been inspected in multiple years. Mr. Vaskorilis has extensive experience in construction inspections as well.

Relevant Project Experience

DRPA, Walt Whitman Bridge Biennial Inspection, Philadelphia, Pennsylvania: Team Leader and Field Inspector. Responsible for the inspection of all the span superstructures, including a close visual inspection of all fracture-critical members and fatigue-sensitive details. A cursory inspection was made of all substructure units above ground and water, including the fender system. The crossing features a 2,000-foot suspension span over the channel with two 770-foot side spans. The deck is a concrete-filled grid overlaid with asphalt concrete which carries seven lanes of traffic. The total length of the facility, including approaches, is 6.2 miles.

DRPA, Benjamin Franklin Bridge Biennial Inspection, Philadelphia, Pennsylvania: Quality Control Inspector. Responsible for inspection services in conformance with the National Bridge Inspection Standards and current applicable FHWA, PennDOT and NJDOT inspection criteria. The inspection included hands-on inspection of all main components of the superstructure. The inspection also included overpass and ramp structures, associated appurtenances. The overall structure length from abutment to abutment is approximately 7,500'. The main river crossing is approximately 1,750' between towers. The side spans are each approximately 717' long. The total out-to-out width of the bridge is 128' with a total roadway width of 77', 10". The navigable channel width under the main span is approximately 400' wide and the minimum clearance above mean high water is 135'.

Detroit International Bridge Company, Ambassador Bridge Monitoring Services, Detroit, Michigan: Chief Inspector. Responsible for load capacity rating of the entire crossing was completed. Over 100 permit vehicles were evaluated. This project involved the replacement of expansion deck joints and miscellaneous metalwork repairs. It also



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- Construction Quality Control
- Constructability Review
- Pre-Award Assistance
- Document Controls
- Construction Management/Inspection

Firm:
Modjeski & Maters, Inc.

Education
BS, Structural Design and Construction Engineering Technology, Pennsylvania State University, 1988

AS, Engineering Surveying Technology, Pennsylvania State University, 1984

Registration/Certification
Professional Engineer: Maryland, Pennsylvania

Years of Experience
Total: 29

With Current Firm: 29

Work History
1989-present, Modjeski and Masters, Inc.

Training and Industry Skills
NJSAT New Jersey Asphalt Paving Technologist

Traffic Control Coordinator (TCC)

NHI - Fracture Critical Inspection Techniques

OSHA, 40-hour Hazardous Waste Operations and Emergency Response, (HazWopper)

James Vaskorilis, continued

included destructive testing of the suspender ropes. Mr. VasKorlis was the chief inspector and observed the destructive testing of the suspender ropes at Lehigh University in Pennsylvania. The crossing features a suspension bridge with a 1,850-foot main span. The total length of the structure including approaches is 7,478 feet. The approach spans consist of steel multi-girder and deck truss spans. The structure carries a 47-foot roadway and 8-foot sidewalk.

Tennessee DOT, SR-56 Hurricane Truss Bridge Redecking, Nashville, Tennessee: Construction Inspector. Responsible for construction inspector services for on-site construction activities for the redecking of an eight-span bridge consisting of a four-span deck truss with two steel girder approach spans on each end.

Tennessee DOT, I-40 over the French Broad River CEI, Oak Grove, Tennessee: Construction Inspector. Responsible for construction inspector services for on-site construction activities for the construction engineering and inspection phase of this project. Extensive strengthening truss members, truss member end connections and gusset plate repairs were required to achieve the desired structural capacity.

Maryland Transportation Authority, Annual Facilities Inspection O-E Contract, Various Locations, Maryland: Team Leader. Responsible for inspections of fixed bridges and the mechanical and electrical components of movable bridges. The inspections included the approach and bascule spans, including superstructure, machinery support frames, above water portion of substructures, and fenders. Ultrasonic testing of pins was included in the work. M&M, as part of the RK&K team, provided visual inspections of 14 I-95 and I-395 structures and bridges in Baltimore County. M&M also performed a hands-on inspection of all portions of the suspended spans of the Westbound William Preston Lane Jr. Memorial Bridge and the substructure and superstructure components of the Millard E. Tydings Memorial Bridge.

Michigan DOT, Blue Water Bridge In-Depth & Routine Inspections, Port Huron, Michigan: Inspection Engineer. Responsible for inspections of the Original Blue Water Bridge and the Second Blue Water Bridge. The Original Blue Water Bridge consists of a continuous steel cantilever through truss with a main span of 871' and flanking spans of 326', four deck truss spans, and numerous approach spans. The total structure length is approximately 6,000'. The Second Blue Water Bridge is also 6,000' in length and features a continuous steel tied-arch main span of 920' and anchor spans of 280'. The approaches are comprised of either concrete tub-girder spans or steel box-girder spans. The inspections consisted of a visual examination of all structural elements for the Michigan portion of the structure. Fracture critical members received a full-length, close-up, hands-on visual inspection.

Mike McGuire

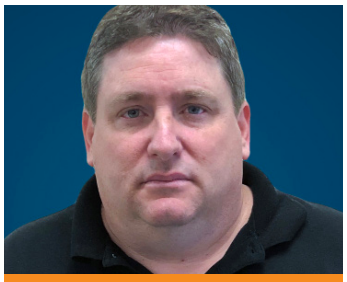
Structural-Towers & Flanking Spans

Mr. McGuire has over twenty-five (25) years of construction inspection experience on major heavy construction projects, including thirteen (13) years on major movable bridges over navigable waterways in New Jersey.

Relevant Project Experience

New Jersey Department of Transportation(NJDOT), Route 7 (1953) Hackensack River Wittpenn Bridge, Contract 3, Main Lift Span and Kearny Approach, Township of Kearny and City of Jersey City, Hudson County, NJ: Assistant Resident Engineer on this $170M movable bridge project located in Hudson County, New Jersey. Contract 3 involves the construction of the main lift span towers and orthotropic deck on piers constructed in Contract 1, counterweights, all mechanical and electrical systems, control and machinery house, elevator, and the elevated roadway portion of the western approach. Duties and responsibilities include supervising field inspection and office staff, maintaining office records including those specialized for movable bridge projects, approve inspector and office staff time charges, review and approve daily work reports, track contract items for payment and as-builts, review and approve progress schedules, enforced regulated material handling requirements, supervised the excavation, storage and disposal of regulated material, checked and maintained all required documents (daily and weekly tracking logs, disposal site permits, lab testing results, final regulated material report, etc.), develop and maintain relationships with all project stakeholders including the US Coast Guard, NJDOT Movable Bridge Unit, NJ Dept. of Environmental Protection and the design consultant, coordinate all Hackensack River channel operations with the US Coast Guard, assisted the RE or chaired all project meetings, initiate and approve change orders, negotiate extra work items with the Contractor, prepare force account spreadsheets and provide the Department's draft response letter to RE for approval, prepared draft responses to claims for RE's approval, prepared "measured mile" for claim settlements, prepared NJDOT step 1 and step 2 packages for NJDOT defense for claims, prepared and maintained project closeout and "as built" documentation during the project, prepare Agenda for all meetings for the RE's review and concurrence, and assist the RE in all day to day activities necessary to administer the project.

NJDOT, Route 7 Hackensack River Wittpenn Bridge, Contract 1, River Piers and Fender System, Kearny and City of Jersey City, Hudson County, NJ: Assistant Resident Engineer for this $70M movable bridge project located in Hudson County, New Jersey. Contract 1



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- Construction Management on major Movable Lift Bridges
- Drilled Shafts
- Vertical Lift Bridges
- Concrete & Steel Erection

Firm:
AmerCom Corporation

Education
BSCE - Fairleigh Dickinson University, 1992

Registration/Certification
NICET IV- Highway Construction

ACI-CCTC Concrete Construction Technology Course

ACI Concrete Field Testing Technician Grade 1

Years of Experience
Total: 25

With Current Firm: 25

Work History
1993 -present, AmerCom

Training and Industry Skills
NJSAT New Jersey Asphalt Paving Technologist

Traffic Control Coordinator (TCC)

NHI - Fracture Critical Inspection Techniques

OSHA, 40-hour Hazardous Waste Operations and Emergency Response, (HazWopper)

Mike McGuire, continued

involves the construction of the main lift span piers and pier protection system including the construction of seventy two (72) 8-foot diameter deep foundation drill shafts. Duties and responsibilities included direct supervision of all field and office staff, inspection and tracking of the test borings at all drill shaft points to determine final development length, worked with geologists to determined competent rock elevations, rock socket final inspection and approval prior to concrete pour, underwater video inspection, preparation of all required documentation including Drill Shaft Logs and Drilling Condition Survey reports, assisted the RE or chaired all project meetings, communicated and coordinated with NJDOT Movable Bridge Unit to synchronize schedules with the existing Wittpenn bridge openings, supervised the disposal of regulated soil excavation and maintained custodial paperwork, verified all permits and disposal facility credentials and compiled master report for submittal to the NJDOT Environmental Unit for approval, initiated and approved change orders, estimated and negotiated extra work items with Contractor, reviewed claim notices and provide the Department's draft response letter to RE for approval, prepared and maintained project closeout and "as built" documentation during the project, prepared and completed requirements for the close out for the project, prepared Agenda for all meetings for the RE's review and concurrence, and assist the RE in all day-to-day activities necessary to administer the project.

New Jersey Department of Transportation, Route 7 (1953) Hackensack River Wittpenn Bridge, Interim Priority Repairs Contract 2, Movable Bridge Maintenance Contract, Township of Kearny and City of Jersey City, Hudson County, NJ: Assistant Resident Engineer on this $3.2M interim priority repairs project on the existing Wittpenn lift bridge located in Hudson County, New Jersey. This Contract incorporated the remaining non-Movable Bridge Items remaining from Interim Priority Repairs Contract 1. Work included concrete deck repairs, waterproof asphalt membrane installation across the bridge deck and both approach roadways, substructure rehabilitation (spalls patches, crack Injection sealer, and the installation of steel bands around pier cap/bearing areas. This contract also added aluminum staircase and lighting to both towers and the installation of a hoist at the top of each tower. Office duties included checking and verifying progress schedule dates, initiated and approved change orders, estimated and negotiated extra work items with Contractor, reviewed claim notices and provide the Department's draft response letter to RE for approval, prepared Agenda for all meetings for the RE's review and concurrence, and assist the RE in all day to day activities necessary to administer the project.

New Jersey Department of Transportation, Route 7 (1953) Hackensack River Wittpenn Bridge, Interim Priority Repairs Contract 1, Movable Bridge Maintenance Contract, Township of Kearny and City of Jersey City, Hudson County, NJ: Assistant Resident Engineer on this $10.1M interim priority repairs project on the existing Wittpenn lift bridge located in Hudson County, New Jersey. This project involved emergency repairs to the electrical and mechanical systems in order to maintain serviceability while the new lift bridge was being constructed. Duties included supervision of field and office staff, tracking and expediting all movable bridge submittals, structural steel inspection, creating a jacking system for the tower counterweights, covered all operations for the weighing and balancing of the bridge including balancing block inventory and adjustments, inspection of electrical and mechanical items and making sure installation procedure were followed, checked and verified progress schedule dates.

Resumes of Project Staff

Fixed Bridge/Civil/Utilities

Tony Cotone

Fixed Bridge/Civil/Utility Chief Inspector

Mr. Cotone has 35 years of progressive highway/bridge inspection experience with many of the regional clients and served as senior inspector on the $170M Interchange 14A Improvements Project for the New Jersey Turnpike Authority. Prior to this assignment, he served as the senior inspector/assistant resident Engineer on the $121M Interchange 6 to 9 Widening Contract T120.869.803 bridge and roadway project. He also served as chief inspector for the $130M Interstate 78 GSP 142 interchange project, a joint effort between NJTA and NJDOT, and the Interchange 89 Cedar Bridge Road project for NJTA. His project background includes major highway and bridge projects including roadway milling/resurfacing, drainage, utilities, earthwork/embankment, environmental permit compliance, bridges (reconstruction and new), substructure and cofferdams in waterways, staged construction under live traffic, roadway lighting, and signage/striping. He has extensive experience coordinating maintenance and protection of traffic schemes for complex projects.

Relevant Project Experience

New Jersey Turnpike Authority (NJTA) Interchange 14A Improvements Project in Bayonne and Jersey City, New Jersey: Lead Inspector for the $170M Project. The Project included the complete renovation of the toll plaza utility building, construction of a new communication building, renovation of the existing eleven toll lanes and addition of two new toll lanes, reconstruction of the ramps to and from the Hudson County Extension including three existing bridge structures and a utility culvert, reconstruction of the connector bridge to Port Jersey Boulevard, construction of a new ramp network connecting the toll plaza with Route 440 and Port Marine Terminal, construction of four new bridges, extensive sewer, water, gas, petroleum, communication and electric utility relocations, and local street, intersection and traffic signal construction. Duties include inspection of deep foundation construction including large diameter drilled shafts and pipe and "H" pile installation, substructure and superstructure, complex structural steel inspection, concrete roadway construction, and sign structure installation.

NJTA, Interchange 6 to 9 Widening Project, New Jersey: Lead Inspector for this $121M Contract T869.803 which is a part of the $1.7B contract. The T869.803 contract includes 5 bridge structures, 8 miles of new mainline roadway construction and HMA paving; ITS/electrical systems; ramp construction into Service Area 7S; and complex MPT staging schemes, and cofferdams in waterways. Bridge construction included two new 4 span bridges with drilled shaft foundations,

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- CMC ground improvement
- Retaining walls
- Large diameter drilled shafts
- Pile and pier construction
- Long span bridge construction

Firm: AECOM

Education
B.S. Civil Engineering, New Jersey Institute of Technology, 1981

Registration/Certification
NJSAT, Asphalt Technician Certificate

ACI Grade I Field Testing Certificate

NJACI - CCTC

Years of Experience
Total: 32

With Current Firm: 32

Work History
1986-Present

Training and Industry Skills
Rutgers Traffic Control Coordinator

Tony Cotone, continued

concrete piers, bridge shielding, steel girder erection, and HPC deck. The third and fourth bridge included pile supported abutments, steel girder erection and HPC deck that required the installation of cofferdams in Cranbury Brook. The fifth structure included extension of a mainline box culvert bridge. Roadway construction included 8 lane miles of new construction, ramp widening, and existing roadway work including the construction of the temporary merge/diverge 2 miles north of the existing merge/diverge perhaps one of the most complex MPT schemes undetrtaken by the Authority in recent years. Duties include inspection of all substructure and superstructure, roadway construction, supervision of 12 inspectors, coordination of major traffic control schemes, and coordination with contractor and stakeholders.

NJTA, Interstate I-78 and the Garden State Parkway Interchange 142, New Jersey: Lead Bridge Inspector for the $130M project. This regional bridge and roadway project included the construction of $71M of bridge work including the construction of two major multi-span flyover bridges on drilled shaft foundations; CIP piers, bridge shielding, steel girder erection, and HPC decks. Bridge work also included Route 78 mainline reconstruction on 7 bridges including resetting/repair steel stringers, substructure repairs, misc steel repairs, joint reconstruction, barrier repair, and partial deck repair or replacement. The bridge reconstruction work required multiple mainline traffic shifts as the worked progressed. The bridges were built under two specification with the bridges on Authority property to Duties include inspection of all substructure and superstructure, supervision of inspectors, coordination of major traffic control schemes, and coordination with contractor and stakeholders.

NJTA, Reconstruction at Rte 9 and Rte 79 (Schank Rd), New Jersey: Senior Inspector for the $12 million project. This project involved major intersection demolition and site clearing, ramp modifications and realignments, drainage, electrical systems, utility relocations, highway lighting, traffic signals, retaining walls on drilled shaft pipe piles, and OH sign structures. Work was completed under multiple phases of traffic control and staging including numerous night work shifts. Duties included inspection of all project items listed above including drainage, utilities, retaining walls and OH sign structures on drilled shaft foundations, highway lighting, new traffic signals, electrical conduit, earthwork, HMA pavement, and traffic control and staging.

NJTA, Interchange Reconstruction Project at Routes 46/23/80, New Jersey: Lead Bridge Inspector for the $72 million project which included the widening, reconstruction, and grade adjustment of 9 bridges. Responsibilities included inspection of 4 of the 9 bridges and oversight of inspection staff on remaining 5 bridges. Inspected Bridges 3 and 5 requiring staged demolition, substructure and superstructure replacement with new steel girders, header block reconstruction, HPC decks, parapets, and related lighting, traffic staging, and HMAC paving. Bridges 4 and 8 were widened and the profiles raised including driven H-piles, existing and new concrete pier construction, bridge shielding, steel girder erection, HPC deck, parapets, and related lighting, traffic staging, and HMAC paving. Project was constructed in environmentally sensitive areas under NJDEP Stream Encroachment, Freshwater Wetlands, and Statewide CAFRA permits. Duties include inspection of all substructure and superstructure, supervision of inspectors, coordination of major traffic control schemes, and coordination with contractor and stakeholders.

NJTA, New GSP Interchange 89 at Cedar Bridge Road, New Jersey: Senior Bridge Inspector. Project included demolition and reconstruction of Cedar Bridge Road, and a new 4 - span continuous steel girder flyover bridge over the Parkway. Project also included bridge shielding, bridge demolition, multi-phased traffic control and phasing, roadway excavation, utilities, drainage, abutments including spread footings, reinforced conc piers and caps, four MSE retaining walls, continuous span steel girder erection, reinforced concrete decks and parapets, traffic signals, highway lighting and electrical conduit, and HMA paving.

Muhammad Ali, PE

Temporary Trestles

Mr. Ali has over 21 years' experience as an engineer for the construction of significant infrastructure projects in New York City and has provided construction administration and inspection services for bridge replacements, roadway reconstruction and transit rehabilitation. His responsibilities as Resident Engineer have included the management of construction inspection teams, preparation of daily inspection reports, change orders, quantity estimates, budget and schedule tracking, coordination with various stakeholders, environmental permitting, public involvement and overall compliance with plans and specifications.

Relevant Project Experience

NYCT CCM for Sandy Flood Mitigation at St. George Terminal, Staten Island: Resident Engineer. Mr. Ali is currently serving as Resident Engineer for the consultant construction management (CCM) services at St. George Terminal. Mr. Ali is responsible for ensuring the contract work is being performed as per specifications and plans, contract work is on schedule. Coordinating client and stakeholders with weekly/monthly meetings and update of the job progress and informing the client of any activity that could cause potential delay to the project. Oversee the payments and ensure that it is processed in timely manner. Inspection and monitoring of the project site safety ensuring that it meets the requirement of NYCT/SIRTOA and NYCDOT Ferry. The project entails the construction of concrete floodwalls using micro-piles, soldier piles, spread footing, miscellaneous drainage site work, regrading areas to meet site drainage and installation of swing and deployable flood gates for tunnel portals and driveways.

NYCDOT St. George Ferry Terminal Ramps, Staten Island, NY: Assistant Resident Engineer. As Assistant Resident Engineer for this $192 million project, Mr. Ali oversaw construction which included deck replacement (full and partial), concrete abutment repair, rehabilitation of deteriorated steel super and substructure members as well as complete removal and installation of new paint system on all exposed structural steel. Other duties included complete replacement of the existing bridge lighting and drainage systems, replacement of the existing underground storm water drainage system from the bridges to the final point of discharge in the Upper New York Bay, installation of a pigeon deterrent system, reconstruction of the North Municipal Parking Field and architectural enhancements to the bus canopies and pedestrian breezeway. The project also included coordination of construction work with NYCT and SIRTOA for flagging and GO efforts for the construction work.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- Extensive Construction Services for Roadways and Bridges
- Inspection and Monitoring of Construction Activities
- Drainage Systems
- Rail and Transit

Firm: T. Y. Lin International Group

Education
Civil Engineering, the City College of New York, 1997

Registration/Certification
Professional Engineer: New York, Delaware

Years of Experience
Total: 21
With Current Firm: 1

Work History
2018-present: T.Y. Lin
2008-2018: HAKS
2006-2008: NYCDOT
1997-206: HAKS Engineers

Training and Industry Skills
Advanced Professional Certificate in Database Management System (ORACLE), NYU Information Technologies Institute
OSHA 30 Hour
Rutgers Traffic Control Coordinator Refresher Course

Muhammad Ali, PE, continued

NYCDOT Reconstruction project of Manhattan College Parkway – W. 232nd Street, W. 239th Street, and W. 252nd Street Bridge over the Henry Hudson Parkway, Bronx, NY: Project Engineer. Supervise, coordinate and monitor the performance, progress and quality of work by Resident Engineer Inspection Staff, Contractor and Construction Support Service. As a client representative involve in resolving all the issues that can potentially slow down or cause hindrance to the progress of work such as community issues, permits, payments, non-compliance of contract provisions and quality. Review contractor's schedule to assure compliance of all the critical activities to meet deadlines and targets. Conduct monthly meetings and field visits to keep up to date with the construction issues and work progress. Involved in review and negotiation of Time Extension and Change Order requests required due to the field conditions and issues pertaining to the job.

NYSDOT, Brooklyn Queens Expressway, Viaduct Between Sand Street and Flushing Ave, Brooklyn, NY: Senior Inspector/Office Engineer. Provided Resident Engineering Inspection Services for the $138 million rehabilitation of Brooklyn Queens Expressway (I-278) viaduct between Sand Street and Flushing Avenue for the NYS DOT. Project involved complete reconstruction of viaduct in phases. Coordinated client, contractor and Resident Engineer Inspection staff with matters pertaining to daily job assignments, contract, plans and standard specifications. Intensely involved in NYSDOT "ShareChive" system, adapted to expedite payments, reduce paperwork and on-time review of field reports and conditions.

Route 21 Reconstruction and Widening of Mainline and Side Streets in Newark, NJ: Office Engineer/Inspector. Resident Engineering Inspection Services for Route 21 Reconstruction and Widening of Mainline and Side Streets in Newark, NJ. As Office Engineer/Inspector thoroughly reviewed quantities and payments made to items called for by the plans. Examined engineer's estimates, inspector's reports and contractor's claims for items where dispensaries existed and suggested recommendations to Resident Engineer based on findings. Worked in the filed as inspector on an as need basis, mostly covering items such as concrete sidewalk, curb, structural wall construction and other related electric transfer work.

NYCDOT, Rehabilitation of the Belt Parkway Bridge over Ocean Parkway, Brooklyn, NY: Office Engineer. Resident Engineering Inspection Services for $50 million NYCDOT Rehabilitation of the Belt Parkway Bridge over Ocean Parkway. This project was the NYCDOT's largest design/build project to date and included reconfiguring Exit 6 and 7 entrance ramps within a 1,400-meter section of the Belt Parkway. The existing two-span bridge was replaced with a longer (65-meter) and wider (8-lane) three-span bridge. The new bridge has a precast Inverset decking system and precast cap beams for the piers. The bridge design includes semi-integral abutments with overhung backwalls behind the abutment cap beams. A temporary 54-meter single-span bridge allowed maintenance of the 160,000 vehicles per day on the Belt Parkway during the three MPT stages of bridge replacement. Extensive coordination with NYC DEP, NYC Parks Department and local community board was necessary. The project beat critical duration of Belt Parkway impacts by 30 days and received the Silver Award from the NY Association of Consulting Engineers; the Design-Build Project of the Year Award from the ASCE Metropolitan Section; and the Design Build Institute of America Metropolitan Chapter's Transportation Award.

NYCDOT, Reconstruction of 91st Place over LIRR, New York, NY: Office Engineer. Resident Engineer Inspection Services for Reconstruction of 91st Place over the Long Island Rail Road for the NYCDOT. Scope of work included preparation of Inspector's Daily Report (MURK); maintenance of field records; material quality control; preparation of fixed assets reports; semi-monthly and monthly reports; monthly construction estimates; material balance sheets; payment summary sheets; annual reports; in-service sheets; community board entries; monthly construction report data bank quantities and final report records; and project

Bonnie Nilsen, NICET IV

Superstructure; Bridge Demolition

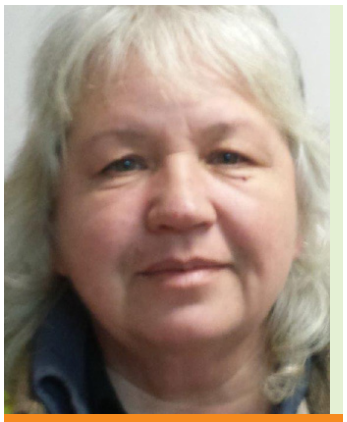
Ms. Wilson has considerable experience on major bridge projects for a variety of clients in New York and New Jersey. Her experience includes reconstruction of the sub-structure, superstructure, expansion and stress relief joints, bearings, crack and spall repairs, asphalt paving, and maintenance and protection of traffic.

Relevant Project Experience

NJTA, Pulaski Contract 3 - Deck Replacement, New Jersey: Chief Inspector (nightshift) for the $127M Pulaski Skyway 3 Contract that includes replacement of the northbound deck, extensive steel repairs, major utility relocations, ITS, and ramp reconstruction over a span of 3 miles. As Chief Inspector duties include coordination of all construction activities with NJDOT, stakeholders, and contractor. Oversee quality assurance of all construction in accordance with plans and specs and assign and supervise inspection staff.

NJ TRANSIT , Third thru Seventh Streets and Roseville Avenue over NJ TRANSIT Morristown Line, New Jersey: Construction Inspector for the $14M bridge superstructure and deck reconstruction on five bridges including replacing the Third Street, Fifth Street, Sixth Street, Seventh Street and Roseville. Avenue bridges over the NJ TRANSIT Morristown line in Newark. Bridge work at each of the five bridges included bridge demolition and shielding of one bridge at a time over active right of way utilizing lane closures and require extensive coordination and scheduling of work activities. Substructure concrete repairs included (footings, wing walls, backwalls, abutments). Superstructure on 4 of the 5 bridges includes the installation of precast deck slabs, new HPC decks, and new parapets. Roseville Ave superstructure included steel girders and HPC deck. As part of the bridge construction, utility relocations are required including steel gas mains, drainage systems, and watermains. Roadway items include excavation, 5000 SY milling, HMA Superpave, staged traffic control, and approach & transition slabs.

Metropolitan Transportation Authority - Bridges and Tunnels(TBTA), Bronx Approach and Queens-to-Bronx Portion of the Triborough Bridge Junction Structure Replacement and Rehabilitation, New York,New York: Senior construction inspector for the $140 million project that involved staged demolition and reconstruction, including concrete substructure, bearings, shear blocks, earthquake restrainers, cast-in-place reinforced concrete decks at ramps, and precast deck units; staged demolition and reconstruction of the substructure, superstructure, and deck using precast pre-tensioned concrete deck



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Construction Inspection**
- **Superstructure/Bridge Demolition**
- **NJ TRANSIT Project Experience**

Firm: AECOM

Education

BS, Engineering Technology, Fairleigh Dickinson University

Registration/Certification

NICET IV Certification

FHWA Drilled Shaft Certification

Certificate, ACI Concrete Construction

Bridge Inspector Certified

Special Inspector

Certificate, ACI Concrete Construction Technology

Certificate, ACI Concrete Field Testing Technician - Grade I

Certificate, ACI Concrete Field Testing Technician - Grade I

Certified Asphalt Technician

Drilled Shaft Certificate

Years of Experience

Total: 25

With Current Firm: 25

(see next page)

Bonnie Nilsen, NICET IV, continued

units; and the rehabilitation of both expansion and stress relief joints. Other site work included replacement of the barrier, concrete overlay, bonded aggregate surface, waterproof membrane, asphalt paving, approach slabs, retaining walls, electrical lighting, and drainage; and crack and spall repairs to the remaining structures. The project MPT program incorporated new traffic patterns, lane closures, and detours. Specific duties consisted of construction inspection, including welding operations; bolting; concrete formwork, reinforcement, placement, and curing procedures; surface applications; monitoring new traffic patterns; daily construction reports; identifying and reporting potential field changes to the ARE; and calculating and recording as-built quantities.

New Jersey Department of Transportation, Hackensack Avenue Bridge Sections 2AD and 3U Reconstruction over Route 4 and Route 4 over Kinderkamack Road and NJ TRANSIT Railroad, Bergen County, New Jersey: Construction inspector for rehabilitation and reconstruction of two bridges, and reconstruction/widening of Route 4. The critical elements included the staged reconstruction of a heavily traveled arterial highway and the associated maintenance and protection of traffic, and work over local streets, active rail lines, and waterways. Rehabilitation of the existing bridge included concrete pier repairs, repairs of cracked and spalled concrete abutments and piers, new capbeams, pedestals and bearings, installation of new bearings, steel girders/stringers, concrete deck, and injection grout repairs to the approach slabs. Other structures included concrete barrier and guide rail systems, eight separate retaining walls, and overhead sign structures.

New York State Department of Transportation, Biennial Inspection of 400 Highway Bridges, Bronx, New York: Assistant team leader for the 1993-1994 and 1995-1996 biennial inspection of 400 highway bridges. The bridges included structures on and over some of the most important arterial highways in the metropolitan area. The bridges are comprised of numerous superstructure types including multi-steel stringer, girder/floorbeam, steel and concrete arches, prestressed concrete stringers, and box beams and steel trusses. These structures carry and cross a variety of features including major highways, local streets, railroads, relief and waterways, some of which required complex methods of access and maintenance and protection of traffic. Complex coordination with property owners and public transportation agencies was required to schedule lane closures and track outages so that inconvenience to the traveling public was minimized. Services included preliminary scheduling, field inspection of bridges, load rating, and writing inspection reports New Jersey Department of Transportation, First Cycle Inspection of 48 Bridges, New Jersey. Office engineer and inspection team member for the first cycle inspection of 48 bridges in northern New Jersey. Project work included field inspection of bridges, load ratings, and preparation of inspection reports. Responsibilities consisted of surveying the conditions of the structures, reviewing and checking available plans, taking additional measurements where required, and photographing the bridge sites and defective conditions.

Work History
1993-present, AECOM

Training and Industry Skills
ACI Grade I
NJSAT Asphalt
Rudgers Traffic Control
Lead Paint Awareness Training
OSHA HAZWOPER 40-Hour Training Traffic Control Coordinator (TCP)

Jerry Atwood, NICET IV

Superstructure; Bridge Demolition

Mr. Atwood has 39 years of experience in the construction industry, including work with a general contractor, construction inspection, and office engineering. He has developed numerous civil works projects from the design stage through construction. Mr. Atwood has acted as Resident Engineer or Chief Inspector on a number of projects that involved supervisory duties.

Relevant Project Experience

NYSDOT, US Route 219 Bridge and Highway Rehabilitation & NY Route 240, Drainage Improvements Project D263296, Towns of Orchard Park and West Seneca, NY: NICET Level IV inspector responsible for construction inspection of new drainage improvements, bridge rehabilitation, and asphalt milling and paving. Project Cost $6.4 million.

NYSTA, Bridge Replacements at Milestrip Rd. and Four Mile Level Rd. over I90 at Mileposts 453.5 and 454.3 on the Seneca Nation of Indians Territory, TAB 14-21B, D214317, Buffalo, NY: Project Engineer representing the Thruway Authority, responsible for the supervision of two site inspectors, an office engineer, and an inspector trainee. The project consists of the total removal and replacement of these two structures. Work includes bearing pile installation, construction of reinforced concrete substructure components (one bridge being an integral abutment structure), installation of Geosynthetic Reinforced Earth walls, Fill Type Retaining Walls, total superstructure replacements, architectural concrete treatments related to the culture of the local Native American community, guide railing and drainage improvements, and asphalt pavement rehabilitation. This project involved the establishment of detours to perform the reconstruction of each site, including temporary traffic signals. Responsible for conducting bi-weekly project meetings and coordinating the materials testing program. Worked closely with representatives of the Seneca Nation of Indians Transportation Department to progress the work in accordance with the Project Specific Agreement between the Seneca Nation and the Thruway Authority. Note: Work on this project and Project TAB 13-41B ran concurrently.

NYSTA, Rehabilitation of the Four Bridges over Silver and Walnut Creeks on the Mainline I90 at Mileposts 458.80 and 459.90, TAB 13-41B, D214237, New York State Thruway Authority, Buffalo, NY: Project Engineer representing the Thruway Authority, responsible for the supervision of two site inspectors, an intern, and an office engineer. The project consisted of removal of the structural decks, reinforced concrete

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Bridge Inspection**
- **Superstructure/Bridge Demolition**

Firm: Mott MacDonald

Education
AAS, Construction Engineering Technology, SUNY Alfred, 1979

Registration/Certification
NICET IV – Highway Construction – 066834

Years of Experience
Total: 39

With Current Firm: 20

Work History
4/1998 – Present, Mott MacDonald

1996 – 1998, Flint, Allen, White & Radley

1990 – 1996, Bettigole Andrews & Clark

1983 – 1990, Bergmann Associates

1981 – 1983, Fact Technical Services

1980 – 1981, C.P. Ward, Inc.

1979, Goodkind & O'Dea, Inc.

Training and Industry Skills
See next page

Jerry Atwood, NICET IV, continued

floor beams, and partial removal of the spandrel arch columns. Reconstruction included class D concrete repairs to the remaining reinforced concrete arches and pier columns; placement of new spandrel arch columns; installation of precast concrete floor beams, new structural slabs and parapet walls; and approach pavement improvements. This project involved extensive Maintenance of Traffic work, including drainage and temporary asphalt crossovers for staged construction. Conducted bi-weekly site progress meetings and coordinated material testing program. The project also included relocation of the Thruways fiber optic system through the project limits.

City of Buffalo, Rehabilitation of Pearl Street, Buffalo, NY: Engineering Technician involved in developing quantity estimates, review for constructability, and field edit of drawing package. Project involves converting Pearl Street in Buffalo, NY from one-way to two-way traffic. Project consists of upgrading all intersections to allow for both northbound and southbound traffic, the design of two new intersections, upgrading damaged sidewalks, installing ADA compliant sidewalk ramps, and milling and paving the roadway.

NYSDOT, Reconstruction of the I 190/ Rte. 265 Bridge at the New York Power Authority Reservoir, Towns of Lewiston and Niagara, NY: Engineering Technician involved in the development of the initial Quality Control Plan for this Design-Build project in the initial proposal phase. The project involves rehabilitation of the bridge structure, while maintaining The Power Authority's ability to operate the intakes for hydropower production from this reservoir. Worked on the final QC Plan submittal after our team was awarded the project.

University of Rochester, Rehabilitation of Railroad Bridges, Rochester, NY: Resident Engineer included for the rehabilitation of two concrete railroad bridges, converted into roadway structures, for use in the parking lot expansion program. Work involved substructure and superstructure repairs, and architectural detailing.

Training in Industry Skills

- NYS DEC Soil Erosion & Sediment Control Inspector 2016
- Certified NETTCP Soils and Aggregate Inspector 2017
- Certified NHI/FHWA Work Zone Traffic Control 2015
- OSHA 10 HR Course 2014
- Assistant Team Leader - NYSDOT Fracture Critical Inspection Program (Bridges)
- Troxler Nuclear Density Gauge Usage and Safety Procedure 2008
- Federal Aviation Administration Bituminous Pavements for Airport Projects
- SSPC-Certified 2005
- Primavera Project Scheduling 2003

Brian Salfelder, PE

Superstructure

Mr. Salfelder has over 21 years of experience in the design and construction management of infrastructure projects in New York and New Jersey. He brings over 15 years of experience providing construction administration and inspection of bridge replacement, roadway reconstruction, and transit rehabilitation. As Resident Engineer on numerous projects throughout New Jersey his responsibilities have included management of construction inspection teams, preparation of daily inspection reports, change orders, quantity estimates, budget and schedule tracking, coordination with State and local agencies, environmental permitting, public involvement and overall compliance with the plans and specifications. He most recently served as Project Manager for the Construction Management team for the Cranberry and Rutgers Tunnels rehabilitation for New York City Transit. Mr. Salfelder oversaw a team of administrators and inspectors in the rehabilitation of Fan Plants, Substations and Track and Power Systems that were damaged during Superstorm Sandy.

Relevant Project Experience

County of Hudson, 14th Street Viaduct Replacement, Hoboken, NJ: Resident Engineer. Provided oversight to the construction management team on the replacement of the 14th Street Viaduct a non-redundant 1,460 foot, 4 lane structure that is a critical link in the local transportation system. This complicated replacement involved staged construction and extensive coordination with local aerial and underground utilities including water and sewer mains to facilitate the work. During construction contaminated soil was discovered near the foundations. Mr. Salfelder oversaw the structural team who redesigned the foundations to avoid potential problems with contaminated soil. Mr. Salfelder's responsibilities included conducting preconstruction and project progress meetings, coordination with County, New Jersey Department of Transportation, Federal Highway Administration – NJ Office, design team, utility companies and local governments, review and negotiation of change orders, review and processing of Contractor's requests for partial payment, review of Contractor's schedule, monitor project budget for both the contract and professional services, preparation of invoices, preparation of federal paperwork for funding reimbursement.

Morris County, Replacement of County Bridge No. 1400-164. Stillwater Drive Bridge over Kakeout Brook, Kinnelon Borough, Morris County, NJ: Resident Engineer. Replacement of a two span

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Extensive Bridge Construction Services**
- **Bridge Replacement with Phased Construction**
- **Preconstruction Services**
- **Superstructure Design**

Firm: T. Y. Lin International Group

Education
BS, Civil Engineering, Virginia Technology Institute, 1997

Registration/Certification
Professional Engineer: New Jersey

Years of Experience
Total: 21

With Current Firm: 7

Work History
2011-present, T.Y. Lin International

1997-2011, Keller & Kirkpatrick, Inc.

Training and Industry Skills
Various

Brian Salfelder, PE, continued

steel stinger superstructure on reinforced concrete substructures with a steel stringer superstructure on reinforced concrete substructures and relocation of utilities on the new structure. The bridge served as the only access to a local lake community and was originally designed in staged construction but was closed to through traffic after a temporary bypass was constructed. Coordination with the local lake community allowed lowering of the lake to accelerate construction schedule. NJDEP Freshwater Wetlands and Stream Encroachment Permits were required. Responsibilities included preparation of and holding pre-construction meeting, review of shop drawings, preparation of daily inspection reports, recording of contract quantities, review of contractor requests for partial payment, review and negotiation of change orders, involvement of local lake community, community involvement with neighboring property owners and final change order/project closeout.

Morris County, Replacement of County Bridge No. 1400-900, Green Pond Road Bridge over Hibernia Brook, Rockaway Township, Morris County, NJ: Resident Engineer. Staged replacement of an existing temporary truss bridge with a steel pony truss superstructure on reinforced concrete substructure. Responsibilities included redesign of utility relocation scheme, preparation of daily inspection reports, recording of contract quantities, coordination with affected utility companies, review of Contractor requests for partial payment, review and negotiation of change orders, and final change order/project closeout. The project was funded by NJTPA administered by Local Aid. Assistance in the preparation of federal paperwork was performed.

Warren County, Replacement of County Bridge 2102215, Brass Castle Road Bridge over Pohatcong Creek, Washington Township, Warren County, NJ: Resident Engineer. Staged replacement of multiple type structure with prestressed box beam superstructure on reinforced concrete substructure. Traffic was shifted on existing structure maintaining two-way travel and bridge constructed in stages. NJDEP Freshwater Wetlands and Stream Encroachment Permits were required. Responsibilities included attendance of pre-construction meeting, review of shop drawings, preparation of daily inspection reports, recording of contract quantities, coordination with affected utility companies, coordination of redesign to maintain construction schedule due to conflict with underground water main relocation, review of Contractor requests for partial payment, review and negotiation of change orders, community involvement with neighboring businesses and final change order/project closeout. The project advanced through scoping and design phases and was funded by NJTPA administered by Local Aid. Preparation of federal paperwork was performed.

NYCT, Enhanced Station Initiative Package 3, New York, New York: Senior Resident Engineer. Leading a construction manager team for Package 3 that includes four stations in Manhattan's Upper West Side. Scope items are structural repair and modifications, architectural finishes (including painting and signage), electrical (including lighting, communications and technology) and mechanical work, as well as architectural and engineering services and surveying.

NYCT, Cranberry Tunnel Resiliency and Rehabilitation, New York, New York: Project Manager. Managed a staff of twelve inspectors and three office engineers, and coordinated all construction and inspection activity including providing oversight for Track outages and coordination with various NYCT departments. Mr. Salfelder served as an extension of MTA while providing real time communications of project status to all stakeholders. Mr. Salfelder conducted meetings with MTA officials, progress meetings with construction managers and contractors, supervised construction activities as per the schedule and ensured that the work was carried out within the budget. In addition, he directed all project activities, resolved conflicts and challenges, and coordinated with inter-departmental and other outside agencies.

Bharat Gadara

Superstructure

Mr. Gadara has over fifteen years of experience in the design and construction inspection/management of bridges and transportation infrastructure projects. His experience includes inspection of bridges, structural condition evaluation, and preparation of inspection reports and development of repair details. Mr. Gadara's construction inspection experience includes cost estimating, submittal and RFI review, coordination of material testing services and inspection assuring construction compliance with project plans and specifications. Recently has served as inspector on multiple NYCT CCM projects.

Relevant Project Experience

Hudson County, 14th Street Viaduct Replacement, Hoboken, NJ: Office and Construction Engineer. Mr. Gadara served as Office and Construction Engineer for this $54 million Hudson County project involving the replacement of the existing 14th Street Viaduct which was a 31-span structure 1,460 feet in length, running between Willow Avenue in the east and Manhattan Avenue in the west. The new bridge consisted of an eight span 1,177 foot long structure consisting of multi-steel girders. The lower portions of the existing viaduct was replaced with a retained earth section by eliminating first 8 spans of existing bridge towards the east side. There was extensive roadway work including streetlights, paving. Mr. Gadara kept records of RFI's, submittals, shop drawings and change orders using primavera contract management. He performed on-site inspection of construction activities and ensured that the construction conformed to approved plans, specifications, approved submittals and construction practices. He reviewed contract documents for consistency and compliance with applicable codes and standards, and reviewed, confirmed and modified approved monthly contractor payment applications. Mr. Gadara monitored survey construction progress to confirm percent complete by trades. He also oversaw construction activities including splicing of bridge plate girders.

Brookfield Properties / PANYNJ, Dyer Avenue Deck Replacement, New York, NY: Inspector. Mr. Gadara served as Inspector for this $33 million replacement project which included the construction inspection for the deck replacement of the Dyer Avenue Bridge with precast panels, reconstruction of deteriorated steel components, removal of lead based paint, and repainting of the entire structure. The project was over Amtrak and LIRR tracks at the mouth of the Lincoln tunnel and required extensive coordination with vehicular, pedestrian and rail traffic. As Inspector, Mr. Gadara performed reviews of design drawings and shop drawings for

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- Inspection Services
- Bridge Replacements
- Constructability
- Demolition

Firm: T. Y. Lin International Group

Education

BS, Civil Engineering, Sardar Vallabhbhai National Institute of Technology, India, 2002

Registration/Certification

n/a

Years of Experience

Total: 15

With Current Firm: 7

Work History

2011-present, T.Y. Lin International

2010-2010, Vishwa Construction, India

2007-2009, Acies Group, UK

2006-2007, Halcrow & RMJM Scotland Ltd, UK

Training and Industry Skills

OSHA 30

ACI Concrete Construction Special Inspection, Nov. 2013

Asphalt Paving Construction Technologist, NJ Society of Asphalt Technologists, Oct. 2013

ACI Concrete Field Testing Technician, Grade I, American Concrete Institute, June 2013

Bharat Gadara, continued

constructability and conformance to specifications. He oversaw sandblasting of the existing steel frame under the deck to remove lead paint and ensured contractor maintained all environmental safety aspects during lead paint removal process. Mr. Gadara inspected the existing deck's condition, during demolition and ensured there was no damage to the structural steel during demolition and removal of existing deck. He oversaw the splicing of plate girders during construction. Mr. Gadara also oversaw the removal of the existing steel frame and the pouring of quick set concrete using the zin mixer for the median. The deck roadway work comprised removing existing curbs along northbound and southbound roadways, removing partial median curbs and corner sidewalks and replacing with rigid based pavements. Entire precast deck and abutment area were paved using asphalt as per required design grade and thickness. Mr. Gadara also oversaw the abutment and drainage custom panels and concrete pour using quick set concrete. He oversaw expansion joint assembly installed at the end of the bridges.

Essex County, Rehabilitation of the Clark Street Bridge, Essex County, New Jersey: As a Site Inspector, Mr. Gadara was responsible for overseeing daily construction and inspection activities, maintaining daily work reports and photographs, reviewing shop drawings, coordination with client's contractor and preparation of as-built drawings. Making sure that all work has been performed as per plan and specification, ADA and NJDOT requirements. The Clark Street Bridge spans over Toney's Brook in the Borough of Glen Ridge, NJ. TYLI was selected to provide final design and construction management for the superstructure replacement of the single span, steel multi-stringer with brick jack arches bridge, constructed in 1922. For permitting reasons it was necessary for the replacement bridge to match the existing roadway profile and superstructure depth, which was very shallow. The solution was an Exodermic bridge deck system that consists of structural steel grid deck partially embedded in and composite with a concrete deck. This deck system forms the entire superstructure and spans the bridge opening without any additional beams or members.

MTA NYCT CCM for Rehabilitation of Joralemon Tunnel, New York, NY: Inspector. Mr. Gadara served as Inspector for the Rehabilitation of Joralemon Tunnel that was part of the federally funded NYCT Superstorm recovery work. Mr. Gadara oversaw the contractors and ensured all construction conformed to plans, specifications and engineering best practices. Work included replacement of damaged tracks, Substation, structural inspections of Fan plants, pump rooms, electrical components and structures in the tunnels including duct banks, communication cables, and traction power.

MTA NYCT CCM for the Rehabilitation and Resiliency of Cranberry / Rutgers Tunnels, New York, New York: Construction Engineer. Mr. Gadara was Construction Engineer in Charge for the constructability review and construction of the Rehabilitation and Resiliency of Cranberry/Rutgers Tunnels. This project was part of the federally funded NYCT Sandy recovery work and required extensive coordination and oversight of contractors and specialists necessary to rehabilitate the extensive damage to these tunnels. Mr. Gadara oversaw the contractors and ensured all construction conformed to plans, specifications and engineering best practices. Work included replacement of damaged tracks, Cliff St. Substation 90, Fan plant equipment and pump room equipment, structural inspections of both the Tunnel Liner and the Duct benches, electrical components and structures in the tunnels including duct banks, fans, communication cables, and traction power.

MTA NYCT Enhanced Station Initiative Package 4, New York, NY: Inspector. Mr. Gadara is serving as Inspector for Package 4 of the Enhanced Station Initiative (ESI) program. As part of a Construction Management team, TYLI is providing services for multiple subway stations in NYCT's ESI Program which includes five stations in Midtown Manhattan. Two stations are located at Penn Station (7th and 8th Avenue lines). The team will provide pre-construction, construction and closeout services simultaneously. Scope items include architectural finishes (including painting and signage), structural repair and modifications, electrical (including lighting, communications and technology) and mechanical work, as well as architectural and engineering services and surveying.

Sean Crotty

Earthwork/Abutments/Retaining Walls/Piles

Mr. Crotty has significant experience in the construction management field for various New York and New Jersey transportation agencies, including NJ TRANSIT ., NYCT, and New York State DOT. His primary responsibilities focus on the coordination and management of office-related construction activities, including assisting the project manager with management of the project during construction phase, contract document management including construction progress reports, client/contractor/agency correspondence, time and materials (T&M) monitoring and verification, contractor payment requests, Requests for Information (RFIs), and change order/additional work order (AWO) management. He has extensive experience with civil, earthwork and structural work.

Relevant Project Experience

NJ TRANSIT , Penn Station East End Concourse Rehabilitation, New York, NY: As Document Controller, responsible for managing the construction management database for submittals, Requests for Information (RFIs), change orders/additional work orders (AWO), and progress meeting minutes. Drafted client/contractor correspondence, as needed. Assisted with managing time and material (T&M) documentation and the punch list.

New York City Transit Authority, Cranberry Tube Rehabilitation and Joralemon Tube Rehabilitation – Project Closeout, New York, NY: Deputy Project Manager responsible for project closeout, which includes project closeout documents like beneficial use approvals, punch list completion, final acceptance for all categories of work, as-builts, operation and maintained manuals, training, guarantee bonds and warranties; and final payment and release of retainage to the contractor.

MTA/New York City Transit Authority, Cranberry Tube Rehabilitation, New York, NY: Project Engineer responsible for managing payment and change orders; and general project management. Supervise and evaluate quantity take-offs and estimates related to change orders. Supervise office engineers who are responsible for tracking and coordinating project documentation such as submittals, RFI's, shop drawings, and meeting minutes. Assist with management of safe work plans, and quality work plans. Coordinate client requests with field staff. Field inspection and field quality assurance as needed.

MTA/New York City Transit Authority, Constructability Review, Cranberry Tube and Rutgers Tube Rehabilitations, New York, NY: Assistant Project Manager responsible for management of the constructability review of pre-bid contract documents. Work involves

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Construction inspection**
- **Resident engineering**
- **Inspection team oversight**
- **Transit / rail projects**

Firm: Mott MacDonald

Education

BE, Civil Engineering, City College of New York, 2010

BA, History/Political Science, Long Island University, 1999

Registration/Certification

Engineer Intern: NY

Years of Experience

Total: 17

With Current Firm: 4

Work History

2014-present, Mott MacDonald

Training and Industry Skills

Various

Sean Crotty, continued

coordinating review of pre-bid contract specifications and drawings with client designers and in-house reviewers, and consolidating and tracking reviews for incorporation into a constructability report. Responsible for managing document control for the client-controlled construction management database (Constructware). Other assignments include drafting various meeting minutes and other constructability review tracking documents.

MTA/New York City Transit Authority, Station Finishes, Second Avenue Subway/72nd Street Station, New York, NY: As Field Inspector, performed quality assurance field inspections of layout and formwork for cast-in-place concrete walls and decks and installation of reinforcing steel, as well as the contractor's surface work, including maintenance and protection of traffic (MPT), traffic controls, pedestrian barricades, work zone barriers, and lane closures. Coordinated/Ensured contractor's quality control by special inspection. Additional responsibilities included construction progress reporting, project tracking for payment and schedule, coordination with Special Inspectors for steel and concrete inspection, and time and material (T&M) tracking for Change Orders/Additional Work Orders (AWOs), as needed.

MTA/New York City Transit Authority, Cavern Mining and Heavy Civil, Second Avenue Subway/72nd Street Station, New York, NY: As Field Inspector, performed quality assurance field inspections of building remediation activities in advance of blasting on 100-year old buildings. Site work included utility relocation, temporary shoring, foundation repair, Fiber-Reinforced Polymer Wrap, structural steel and concrete, façade support through tiebacks, framing repair, and sidewalk sheds. Inspected cut-and-cover rock exaction by blasting and support of excavation. Responsible for scheduling and managing coverage for track outages and piggybacking, as well as flagging on live tracks. Coordinated with Flaggers and contractor's crews on-site. Also responsible for inspecting the contractor's surface work, including maintenance and protection of traffic (MPT), traffic controls, pedestrian barricades, work zone barriers, and lane closures. Coordinated/Ensured contractor's quality control by special inspection. Additional responsibilities included construction progress reporting, project tracking for payment and schedule, coordination with Special Inspectors for steel and concrete inspection, and time and material (T&M) tracking for Change Orders/Additional Work Orders (AWOs), as needed. As Office Engineer, additional responsibilities included construction progress reporting related to blasting and rock excavation, preparation of various quantity take-offs for rock excavation, geotechnical instrumentation, and utility relocations, change order tracking related to building remediation, monthly contractor/ subcontractor payment reconciliation, and submittal coordination and document control.

NYSDOT, Brooklyn-Queens Expressway Reconstruction, Queens, NY: As Transportation Construction Inspector, performed quality assurance field inspections. Assisted with regular inspection, as well as inspection of the contractor's maintenance and protection of vehicular traffic and pedestrian safety, construction signage, and lane closures. Performed concrete field tests and anchor testing for highway signage. Assisted with the preparation of progress documentation, daily work reports, progress photos, and time and material (T&M) estimates and verification.

MTA/New York City Transit Authority, Roosevelt/74th Street Intermodal Subway-Bus Station Complex, Queens, NY: As Office Engineering Assistant, provided construction project management and coordinated with field inspectors for construction progress reporting. Responsible for managing construction management database for submittals, Requests for Information (RFIs), change orders/additional work orders (AWO), and progress meeting minutes. Drafted client/contractor correspondence, as needed. Maintained construction progress photos for the construction manager's office. Assisted with flagging and diversion requests.

Sam LiPuma

Earthwork/Abutments/Retaining Walls/Piles

Mr. LiPuma is a Resident Engineer experienced in railroad, highway, bridge, tunnel, runway, and utility construction. Inspection assignments have included some of the largest high-profile projects in western New York. His responsibilities include: the inspection of concrete and asphalt pavement; construction and rehabilitation of simple span, arch and suspension bridges; tunnel clearance improvements; runway expansion; maintenance and protection of traffic; painting and metalizing of structures; sewer, waterline, and drainage system construction; bike paths; traffic signals; landscaping; and CCTV/VMS installation. Mr. LiPuma has served as Chief Inspector on projects valued up to $62 million.

Relevant Project Experience

Norfolk Southern Railway, Replacement of the High Bridge Over the Genesee River, Portageville, NY: Managing Engineer for the replacement of the Norfolk Southern Railway Bridge over the Genesee River in Letchworth State Park. Responsibilities include maintaining all project records, writing the weekly progress meeting minutes, checking the Contractor's EEO compliance in EBO, receiving and transferring all Contractor's submittals and RFI's for review, checking materials for compliance with the specification and compiling the monthly progress payments in CEES. Additional responsibilities are uploading photos and video to the project website and monitoring the thermal performance of the mass placement concrete via the internet.

Norfolk Southern Railway, Altavista District Clearance Improvement Project Investigative Probing Program, Roanoke, VA: Inspector responsible for field work, gathering information necessary to develop the Geotechnical Baseline Report for the clearance improvement of lined and unlined railroad tunnels. Duties consist of coordinating with the drilling subcontractor, logging probe hole drilling and rock core samples, video camera inspection, and logging of bore holes. Also responsible for filing daily reports.

NYSTA, D213884/TAB 13-08 1R Safety Upgrades, Culvert Extensions, and Drainage, MP 393.7 to 404.7, Buffalo, NY: Chief Inspector on project in the Buffalo Division of the NYSTA. Project included extension of existing culverts, slope flattening, guide rail improvements, signs, and concrete repairs and modifications to existing bridges and box culverts. Duties included supervision of inspection staff, designating work assignments to the staff, field inspection of the work, and inspection of work zone traffic control measures.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Experience with bridge, tunnel and utilitiy construction**
- **Construction/ Rehabilitation of simple span, arch and suspension bridge**
- **Freight rail projects**

Firm: Mott MacDonald

Education
AAS, Construction Engineering Technology, State University of New York at Alfred, Alfred, NY, 1977

Registration/Certification
NICET Transportation Engineering Technology/ Highway Construction Inspection /Level IV, #058482

Years of Experience
Total: 43

With Current Firm: 15

Work History
See next Page

Training and Industry Skills
N/A

Sam LiPuma, continued

NYSTA, TAB 09-28 Pavement Mill & Inlay, Buffalo, NY: Chief Inspector on this project in the Buffalo Division of the NYSTA. Project included twelve miles of pavement mill and inlay, full and partial depth pavement repairs, guide rail improvements, and pavement stripes. Duties included supervision of field inspection staff, determination of pavement repair locations and limits, and inspection of work zone traffic control measures.

Norfolk Southern Railway Company, Heartland Corridor Clearance Improvements Project, Atlanta, GA: Assisted in initial study and design for a tunnel clearance improvement project involving 28 railroad tunnels. Assignments included field investigation and documentation of existing conditions, rock core, soil sampling and logging, plan review, and estimates.

CP Railway, Tunnel Clearance Enlargement, Ft. Ticonderoga & Willsboro, NY: Resident Engineer for this project involving the enlargement of two railroad tunnels by the drill and blast method. Ground reinforcement was provided by rock bolts, shotcrete, and rockfall mesh. Duties included daily inspection of work and coordination of field changes with geologists and the tunnel engineer. Acted as the owner's representative at weekly job meetings, processed monthly pay estimates, reviewed contractor's submittals, maintained all project records, and worked with contractor and owner to resolve disputes and extra work claims.

Thousand Islands Bridge Authority, Deck Replacement of Thousand Islands Bridge, Collins Landing, NY: Chief Inspector for the replacement of orthotropic deck and stringers on this 1,400-foot suspension bridge. Project also included maintenance and protection of traffic, installation of 4,200-foot maintenance platform with cross beam extensions and railings, removal, rehabilitation, and replacement of main cable bents, and replacement of 4,200 feet of sidewalk hand railing. All new members were galvanized and the project was completed without closing the bridge to traffic.

NYSDOT, Reconstruction of Hamburg and Seneca Street Bridges, Buffalo, NY: Inspected bridge demolition and reconstruction, including concrete caissons, structural concrete, steel erection, SIP placement, and utility relocation. Also reviewed demolition and erection plans and shop drawings for approval.

NYSDOT, Route 78 Reconstruction, Lockport, NY: Inspected the construction of a single span bridge over Tonawanda Creek and the rehabilitation of two smaller concrete bridges. Also inspected maintenance and protection of traffic, asphalt paving, sanitary sewer installation, and landscaping. Instructed trainees in areas relating to bridge construction and rehabilitation.

Work History

2003 – Present, Mott MacDonald

1998 – 2003, Parsons (formerly Parsons Transportation Group)

1997 – 1998, Systems & Engineering, PC

1995 – 1997, Fisher Associates

1984 – 1995, De Leuw, Cather & Company

1988 – 1989, Le Roy Callender, PC

1981 – 1983, Southeast Underground Construction

1978 – 1979, Zack Construction Corp.

1975 – 1980, LiPuma Bros. Construction Company, Inc.

Peace Bridge Authority, Inspection of Superstructure and Deck of Peace Bridge, Buffalo, NY, USA & Fort Erie, Ontario, CA: Performed hands on inspection of steel arch superstructure and composite bridge deck in advance of design for improvements and expansion of the Peace Bridge. Duties included logging, photographing and determining the extent of structural deficiencies found and reporting to the design engineer in order to produce plans and specifications for the repair and rehabilitation of the bridge.

Peace Bridge Authority/NYSTA, Peace Bridge Access Modification, Buffalo, NY, USA & Fort Erie, Ontario, Canada: Chief Inspector for the reconstruction of the existing thruway ramp and construction of a new ramp to Peace Bridge with concrete pavement. Project also included maintenance and protection of traffic, drainage and waterline construction, street lighting, traffic signals, and a CCTV traffic surveillance system that utilized variable message signs and video cameras linked by fiber optic cable.

Amiri Robinson, PE

Earthwork/Abutments/Retaining Walls/Piles

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Construction inspection**
- **Resident engineering**
- **Inspection team oversight**
- **Transit / rail projects**

Mr. Robinson has 24 years of experience as a design and construction management professional. His project experience includes, but is not limited to, roadways, bridges, tunnels, rail stations, maintenance facilities, schools, buildings, stadiums, and parking structures. This experience includes conceptual through final design, construction support, construction management, and maintenance. Mr. Robinson has worked on projects with many civil components, deep foundations, and retaining walls. Mr. Robinson's leadership background includes project management assistance, resident engineering, bid management, inspection team oversight, design management, training, mentoring, and motivating. His computer skill set includes project management and modeling software (Constructware, Primavera, BIM, and other applications), and strong verbal and written communication.

Relevant Project Experience

MTA Long Island Railroad, Jamaica Capacity Improvements Project, Phase 1 (Platform F), Jamaica, Queens, NY: Resident Engineer responsible for 8-person onsite consultant construction management team for the construction of a new station platform, mezzanine and pedestrian bridge extensions, an elevator and escalator, stairs, electrical, traction power, communications, signals, instrumentation and control, lighting, plumbing, and fire protection infrastructure, curtain wall and artglass enclosures, canopies, all associated trackwork, rehabilitation and waterproofing of street and highway bridges to/from the station, new signal bridges, and other related improvements. Collaborating with client to oversee and manage all aspects of safety, quality, schedule, cost, funding and site access within an operational environment during 7 days per week schedules.

MTA New York City Transit, Joralemon Tube Rehabilitation Project, Recovery and Resiliency Program, New York, NY: Deputy Project Manager responsible for a 20-person, multidisciplinary onsite consultant construction management team for the rehabilitation and retrofit of the 108-year old under river 4/5 train tube. Responsible for budget, schedule, and change order negotiations. Leading team from constructability review during preconstruction phase, through contract execution in current construction phase, on 7 days per week schedules in an operational environment. Scope includes traction power, lighting, copper/fiber optic/sound power communications, new pump room systems, flood doors, cast iron repairs, structural steel erection, concrete repairs,

Firm: Mott MacDonald

Education
BS, Civil Engineering, San Francisco State University, 1997

Registration/Certification
Professional Engineer: NY #085588, 2008

Years of Experience
Total: 24

With Current Firm: 3

Work History
2015-Present, Mott MacDonald

Training and Industry Skills
Various

Amiri Robinson, PE, continued

a new tunnel lighting room, substations, vent shafts and other ancillary components.

MTA Bridges and Tunnels, Design-Build of TBTA Training Facility on Ward's Island, New York, NY: Resident Engineer responsible for engineering and project management assistance for the design-build of a modular training facility for TBTA police (1st in command of multi-disciplinary field office team). Performed monthly progress reporting, presided over design and construction progress meetings, and interviewed prospective contractor safety engineers. Oversaw baseline schedule approval, cost estimating, subcontractor due diligence, job safety assessment, and field office set-up.

MTA New York City Transit, Design-Build of the Mother Clara Hale Bus Depot, New York, NY: Assistant Resident Engineer for the new LEED accredited Mother Clara Hale Bus Depot. Provided project management assistance by collaborating with the client on project risk and schedule assessment, leading constructability review, participating in evaluation of shortlisted design-build bidders, overseeing construction, and set-up of the field office. Other responsibilities included resident engineering (third in command of 10-person onsite consultant construction management team), overseeing multi-disciplinary field inspection crew (architectural, mechanical, industrial, plumbing, electrical, communication), completed weekly resident engineer reports, spearheaded kickoff meetings, evaluated extra work claims, performed offsite material inspections, managed delivery/storage of owner-furnished equipment, reviewed cost breakdowns and payment requisitions, oversaw and enforced safety, and civil/structural inspection (soil borings, pile driving, concrete placement, rock anchors, structural steel, precast concrete, masonry, and site work).

MTA Metro-North, Design-Build of Yankee Stadium Train Station, Bronx, NY: Assistant Design Manager and Structural Project Engineer for Metro-North's new, aggressively scheduled Yankee Stadium Train Station. Responsible for project management assistance. Tasks included reporting to the design manager, interfacing with client/contractor, overseeing the design work by a team of multi-disciplinary in-house and subconsultant design professionals (architectural, civil/structural, environmental, mechanical, electrical), structural design (foundation, concrete, steel, timber), and construction support (RFI response, submittal/shop drawing review, temporary structures, and progress meeting attendance).

New York City Transit, South Ferry Terminal Project, New York, NY: Structural Engineer. Participated in a request-for-proposal package for a new subway tunnel extension and station for NYCT.

Port Authority of NY & NJ, Design-Build of AirTrain JFK Light Rail, Jamaica, NY: Structural Engineer responsible for the computer modeling and superstructure design of multiple, new light rail stations. Oversaw development of contract drawings and produced calculation reports. Checked structural steel and reinforced concrete shop drawings and answered RFIs.

Borough of Manhattan Community College, Deconstruction of Fiterman Hall, New York, NY: Structural Engineer responsible for asbestos abatement exclusion zone inspections, site management and bid document development (plans, details, notes & specs) for the deconstruction of a 15-story community college building damaged beyond repair by the 9/11 attack and collapse of World Trade Center 7.

City University of New York, Marshak Curtain Wall, New York, NY: Structural Engineer responsible for condition surveys and designing and developing bid documents for rehabilitation and a new curtain wall around a university science building. Coordinated work with owners and architects.

New York City College of Technology, Voorhees Hall Curtain Wall, Brooklyn, NY: Structural Engineer responsible for condition surveys and designing and developing bid documents for rehabilitation and a new curtain wall around a technical college building. Coordinated work with owners and architects.

Charles Dearing, III

Earthwork/Abutments/Retaining Walls/Piles

Mr. Dearing brings over 33 years of heavy construction inspection experience on major infrastructure construction projects including the $198M Route 7 Wittpenn Contract 4 Vertical Lift Bridge project, the $64M Wittpenn Contract 1 Vertical Lift Bridge project, and the $32M I-280 Stickel Vertical Lift Bridge project. Having worked on several movable bridge projects, Mr. Dearing is fully familiar with all aspects of movable bridge construction in navigable waters, and is able to handle the more difficult inspection tasks, particularly those in a marine environment.

Relevant Project Experience

NJ Department of Transportation (NJDOT), Route 7 (1953) Hackensack River Wittpenn Bridge, Contract 4, Final Bridge and Approach Roadway Segments,Township of Kearny and City of Jersey City, Hudson County, NJ: Lead Bridge Inspector on this $198M Vertical Lift Bridge project located in Hudson County, New Jersey. Contract 4 involves the construction of the final bridge and approach roadway of the new vertical lift bridge over the Hackensack River, and the improvements to the interchange at Fish House Road, new connection ramps to Newark Avenue and St. Paul's Avenue, along with maintaining the operational function of the existing Wittpenn Bridge while the new lift bridge is being constructed. Responsibilities and duties include inspection of the contractor's means and methods for clearing site bridge, reinforced concrete footings, abutment and piers, H-Pile foundations, girder and steel diaphragm erection using high strength fasteners, new utility facilities including 24" and 36" ductile iron water mains, 12", 16", 20" and 24" gas mains, and 8' x 12' Verizon service vaults. Also ensured work zone safety devices are properly installed and maintained.

NJ Turnpike Authority (NJTA), Contract No. T300.311, Interchange 14A, Improvements, Grading, Drainage, Paving, Structures & Lighting, Milepost N0.0 to N4.0, Cities of Bayonne and Jersey City, Hudson County, NJ: Senior Road/Bridge inspector for this $150M NJTA interchange improvement project. This project also included the realignment and reconstruction of NJDOT Route 440 NB and SB in the vicinity of Interchange 14A. This project is unique since it requires the use of both NJDOT and NJTA Specifications. Responsibilities and duties include on-site inspection of the contractor's means and methods of various road and bridge items including full roadway box out, subbase, DGA, SODs, HMA base, intermediate and surface courses, curb, polymerized joint adhesive, new and reconstruct manholes and inlets,

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Large Diameter Deep Water Drilled Shafts**
- **Mass Concrete Pours with Thermal Cooling**
- **Bridge Pier Protection System, Fenders and Dolphins**
- **Experienced with Navigable Water Authorities**

Firm: AmerCom Corporation

Education

NJ Turnpike Traffic Safety Training

NHI, Drilled Shaft Foundation Inspection

NYSDOT Traffic Safety Training

Registration/Certification

NICET IV- Highway Construction #71486

ACI-CCTC Concrete Construction Technology Course

ACI Concrete Field Testing Technician Grade 1

NJSAT New Jersey Asphalt Paving Technologist

Traffic Control Coordinator Issued by Rutgers CAIT

NACE Coatings Inspector, Level III

SSPC C-3 Certification

Years of Experience

Total: 33

With Current Firm: 10

Work History

2008 -present, AmerCom

Training and Industry Skills

See next page

Charles Dearing, III, continued

RCCP, reset castings, long life pavement markings, guiderail and terminals, wick drains, regulatory signs and extensive MPT. Bridge items inspected include clearing site bridge, temporary shielding, concrete spread footings, backwalls, abutments, piers, elastomeric bearings, prestressed concrete beams, structural steel, HPC parapets, safety walks, HPC decks, MSE walls, overhead and cantilever sign structures, highway lighting, JBs and JBFs, conduit, and other related bridge and road items. Project also utilized HICC construction methods at the toll plaza. This work involved the demolition and removal of existing concete slabs, DGA, rebar, placement and curing of new concrete. Contractor worked 60-hour shifts through the weekends to ensure roadway was opened by Monday morning rush hour.

NJ Turnpike Authority (NJTA), OPS P3448 Garden State Parkway, Contract No. P200.200 Shoulder Restoration and Improvements Milepost 90.5 to 93.5 and Contract No. P200.201 Shoulder Restoration and Improvements, Milepost 93.5 to 99.5, NJ: SeniorRoad/Bridge Construction Inspector on this $200M roadway widening and bridge reconstruction construction project. Responsibilities and duties include on-site inspection of the contractor's means and methods for excavation of the existing roadway box, roadway drainage pipes, drainage outfalls and inlets, utility relocations, reconstruction of the pavement box including DGA, HMA base, intermediate and surface course, polymerized joint adhesive, curb and sidewalk, highway lighting, and MPT. Bridge inspection duties include partial demolition of existing structures, steel H piles, concrete foundations, substructure concrete, epoxy coated reinforcement steel, pier caps, structural steel erection, concrete bridge decks and MSE retaining walls.

New Jersey Department of Transportation, Route 7 (1953) Hackensack River Wittpenn Bridge, Contract 1, River Piers and Fender System, Township of Kearny and City of Jersey City, Hudson County, NJ: Senior bridge inspector for this $70M movable bridge project located in Hudson County, New Jersey. Contract 1 involves the construction of the main lift span piers and pier fender protection system including the construction of seventy two (72) 8-foot diameter deep foundation drill shafts to support the bridge and fenders. Also installation of pre-cast cofferdams and mass pours required to construct the pier stems and caps. Responsibilities and duties included on-site inspection of the contractor's means and methods for placement and maintenance of precast concrete cofferdams, drilled shafts, inspection and tracking of the test borings at all drill shaft points to determine final development length, worked with geologists to determined competent rock elevations, rock socket final inspection and approval prior to concrete pour, underwater video inspection, preparation of all required documentation including Drill Shaft Logs and Drilling Condition Survey reports, communicated and coordinated with the US Coast Guard and the NJDOT Movable Bridge Unit to synchronize schedules with the existing Wittpenn bridge openings, help oversee the disposal of regulated soil excavation and maintained custodial paperwork, verified all permits and disposal facility credentials and help compile the master report for submittal to the NJDOT Environmental Unit for approval.

NJ Turnpike Authority (NJTA), Contract No. T 869.120.101, Interchange 6 to 9 Widening Program, North to South / South to North Outer Roadways, Grading, Drainage, Paving, Structures & Lighting, Milepost 51.5 to 52.3, Mansfield, Burlington County, NJ: Road Construction Inspector on this $125M roadway widening/bridge demolition and bridge construction project (Section 103). Responsibilities and duties included on-site inspection of the contractor's means and methods for excavation of the existing roadway box, roadway drainage pipes, drainage outfalls and inlets, utility relocations, reconstruction of the pavement box including DGA, HMA base, intermediate and surface course, curb and sidewalk, highway lighting, traffic signal systems, MSE walls, culvert extensions, ITS interconnects and MPT. This project required extensive night and weekend work.

Training and Industry Skills

OSHA 40-Hour (HazMat)

SSPC C-3 Certification

NYSDOT Traffic Safety Training

OSHA/Supervisor of Hazardous Waste Operations

OSHA 10-Hour Construction Safety Training

Antonio Gonzalez, Jr., PE

Electrical/Lighting/Utilities

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Electrical engineering**
- **Lighting**
- **Transit / rail projects**
- **Power distribution and protection**

Mr. Gonzalez has significant experience in commercial, transit, and industrial electrical and power engineering and design, complimented by a working knowledge of AutoCAD, MicroStation, PTW SKM, Visual Pro, CDEGS, EDSA, ICAMS, and Microsoft Office Suite, among other industry software. His primary duty is the conceptual and physical design of electrical and power distribution and protection systems, including power studies such as load flow/short circuit analysis and protective coordination. His design experience includes AC/DC traction power, AC/DC protection relays, AC/DC power protection, low-voltage/medium-voltage (LV/MV) power systems, electrical substations, and motor control center (MCC) in accordance with the National Electrical Code (NEC). His 15+ years of experience includes providing electrical engineering services to local clients such as the Middlesex County Utilities Authority, TBTA, Delaware River Port Authority, MTA, along with others around the country, including the USDOE.

Relevant Project Experience

Middlesex County Utilities Authority (MCUA), Edison Pump Station Restoration and Flood Mitigation, Edison, NJ: Professional Electrical Engineer for the power distribution system restoration efforts post SuperStorm Sandy. Critical items for restoration include the replacement of the low voltage main distribution switchgear, exiting panels, and variable frequency drives (VFDs), as well as all associated power cables. Critical items for flood mitigation include the design/installation of an elevated bypass pump station with a localized low voltage switchgear and all associated distribution equipment required to run two 500-HP and two 215-HP bypass pumps. Design and integration of a new PLC/SCADA system and tie in to the central treatment plant across the river from the pump stations for the purpose of remote monitoring and control is also being performed.

MCUA, Wastewater Facilities Electrical Distribution Systems Upgrades, Sayreville, NJ: Resident Electrical Engineer for the overall electrical distribution system installation involving multiple construction contracts, including the Central Treatment Plant electrical unit substations replacements and rehabilitation project and the boiler building project. Critical construction management items include coordination with the contractor and client, review, coordination and processing of requests for information (RFIs), shop drawings, and allowance item/change order requests, and supervision/inspection of all related electrical installations. Critical installation items include nine new medium voltage (MV)/low voltage (LV) unit substations, 10 reduced voltage auto transformer starters, 10 variable frequency drives (VFDs), a

Firm: Mott MacDonald

Education

BS, Electrical Engineering, New Jersey Institute of Technology, 2004

Registration/Certification

Professional Engineer:

NJ #24GE05046600, 2013;

NY #094428, 2014;

LA #PE.0038719, 2014

Years of Experience

Total: 15

With Current Firm: 5

Work History

2013-Present, Mott MacDonald

Training and Industry Skills

NHI Tunnel Safety Inspection #FHWA-NHI-130110, 2017

OSHA Confined Space Entry, 2013

Antonio Gonzalez, Jr., PE, continued

motor control center (MCC), an automatic transfer switch, modifications to two MV distribution switchgear, a new LV switchgear with portable generator connections, and a new LV synchronizing switchgear line-up with two 1-MW Waukesha landfill gas generators, as well as all associated sub-distribution systems.

MCUA, Water Reuse Facility, Sayreville, NJ: Provided construction support for the installation of a new 2000-Kva unit substation and adjacent structure housing two 350-HP pumps and all associated auxiliary systems to provide power to the nearby generation plant for cooling. Systems include lighting, receptacles, raceway/ductbank, pump controls, and power/light panels. Responsibilities also include design development of a new plant-wide fiber optic backbone and Plant/Power SCADA system to be used for future remote monitoring and control of all processes and power distribution equipment.

MCUA, Central Treatment Plant Electrical Unit Substation Replacements and Rehabilitation, Sayreville, NJ: Professional Electrical Engineer for the overall electrical distribution system upgrade design and installation, including nine new medium voltage/low voltage unit substations, two new 500-HP channel air blowers, new reduced voltage autotransformer pump starters, and expansion of the new fiber optic backbone and SCADA system to accommodate remote monitoring and control of the unit substations and all of their associate switches and breakers. Responsibilities also include performing short circuit, load flow, protective coordination, and arc flash studies, as well as bid and construction support.

TBTA, Brooklyn Battery Tunnel Rehabilitation (Phase II), New York, NY: Professional Electrical Engineer (Level IV) responsible for the electrical power distribution design as it pertains to the tunnel drainage system, lighting system, and communications system. Tasks included systems coordination, modification and design of low voltage electrical distribution systems, generation of low voltage one-line diagrams, creation of equipment room layouts compliant with the National Electrical Code (NEC), production of staging schemes and drawings, general power and lighting design, underground duct bank, above ground conduit, and cable tray systems/plan design, loading calculations for the above raceway systems, cable sizing and voltage drop calculations, systems short circuit, and load flow analysis via SKM Power Tools.

NYCMTA/LIRR, East Side Access Project, New York, NY: As a Level III Electrical Engineer, assisted with various aspects of the electrical power distribution design, including tunnel ventilation, traction power, and signal power, as well as ancillary location lighting design, systems design and coordination, traction power layout, and coordination and design of the systems duct bench linking all related facilities. Tasks included design of low voltage/medium voltage (LV/MV) electrical distribution systems, generation of low voltage one-line diagrams, generation of LV/MV equipment room layouts compliant with the National Electrical Code (NEC), underground duct bank, above ground conduit, and cable tray systems/plan design, loading calculations for the above raceway systems, equipment grounding layouts, lighting calculations via Visual Pro with lighting layout drawings, LV/MV cable sizing and voltage drop calculations, review of vendor document submittals, coordination of design tasks amongst multiple disciplines, and creation of man hour estimates, work schedules, and identification of potential deviations from project contracts resulting in project change notices (PCNs). Responsible for direct communication and coordination with contractor to assist in expediting the fast track construction schedule of the project.

NYCMTA, No. 7 Line Subway Extension, New York, NY: As a Level II Electrical Engineer, assisted with the design of back-up power system (UPS and battery specification sizing and room layout) and overall conduit, cable tray, and point of entry arrangement schemes. Prepared architectural and underground duct bank layouts. Coordinated efforts with Con Edison and the NYCMTA.

Ryan Landolfi

Soil Management

Mr. Landolfi is involved in various types of projects throughout New Jersey related to releases from storage tanks, groundwater contamination due to various types of discharges, and remediation of soils and groundwater at private, municipal, and industrial properties. These projects include the performance of investigations to detect, identify, and delineate soil and aquifer contamination, the development and evaluation of monitoring and testing programs, and the selection and evaluation of alternatives for corrective actions.

Mr. Landolfi has provided support and assistance regarding the completion of environmental regulatory compliance documents and reports for National Environmental Policy Act (NEPA) Section 4(f) evaluations and New York State Environmental Quality Review Act (SEQRA) documents.

Mr. Landolfi's project experience also includes wetland investigations and delineations. He has completed the Rutgers University Wetland Delineator Program and is trained in the identification and delineation of vegetative and wetland habitats. His primary field responsibilities include plant identification, hydric soil and hydrology assessments, and flagging and surveying wetland habitats and stream corridors consistent with the US Army Corps of Engineers 1987 Wetland Delineation Manual and regional supplemental updates, along with the Routine Onsite Determination Method as outlined in the January 1989 Federal Manual for Identifying and Delineating Jurisdictional Wetlands and in accordance with the New Jersey Freshwater Wetlands Protection Act Rules as outlined in the New Jersey Administrative Code (NJAC) 7:7A.

Relevant Project Experience

Amtrak, Hazardous Materials Assessment, Penn Station, New York, NY: Responsible for the collection of soil/sediment and concrete samples for analysis to evaluate the potential presence of PCBs along tracks. The results of the analysis are used to evaluate potential health concerns for workers performing track improvements. Tasks include data analysis and review.

Port Authority of NY/NJ, SARA Title III/Community Right-to-Know Survey, Various Sites, NY and NJ: Responsible for implementing the annual SARA Title III/Community Right-to-Know Survey for all facilities to comply with State requirements. Activities include performing hazardous substance inventories, database coordination, and the review/input of manufacturer Material Safety Data Sheets (MSDSs).

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Ground water contamination**
- **Investigating Aquifer contamination**
- **Evaluation of monitoring and testing program**

Firm: Mott MacDonald

Education

MS, Environmental Science, New Jersey Institute of Technology, 2016

BS, Environmental Science, Richard Stockton College of New Jersey, 2012

Registration/Certification

AMTRAK Safety Training and Roadway Worker #A-US-NJ-1013-00539

Years of Experience

Total: 6

With Current Firm: 5

Work History

2012 – Present, Mott MacDonald

2012, Rutgers University

2010, Department of Defense

Training and Industry Skills

NJ Transit Safety Training & Roadway Worker

OSHA Hazardous Waste Site Operations

OSHA Construction Safety and Health

Ryan Landolfi, continued

NJ Turnpike Authority, Remedial Investigation, Alexander Hamilton Service Area (16E), Secaucus, NJ: Monitored soil boring installation, collected composite soil samples, and created analytical results summary tables.

Holtec International, Preliminary Assessment (PA)/ Site Investigation (SI)/Remedial Investigation (RI)/ Remedial Action (RA) and Hazardous Materials Assessment, Camden, NJ: Assisted in the completion of all phases of redevelopment for the 55-acre site that is a leasehold portion of the South Jersey Port Corporation Broadway Terminal and is being redeveloped into an industrial manufacturing facility. Environmental investigations included the performance of a PA/SI/ RI/RA for over 20 potential Areas of Concern (AOCs), including historic fill material. During demolition and redevelopment, petroleum, hexavalent chromium, and hazardous lead impacted soils were identified, delineated, and excavated. Also performed ground water sample collection from the onsite discharge system and generated monthly discharge monitoring reports (DMRs) for permit compliance. Currently involved with site preparation activities for the installation of capping elements as part of the overall site redevelopment.

70-76 Passaic Avenue LLC, Site Investigation (SI)/ Remedial Investigation (RI)/Remedial Action (RA), Proposed Sports Complex, Florham Park, NJ: Assisted in the performance of SI/RI/RA actions for a developer who will be transitioning a former contractor yard into a commercial sports facility complex. The project includes the incorporation of work undertaken at the site as part of previous PA/SI/RI due diligence efforts from 2005 through 2014. Assisted in the implementation of a remedial strategy to address historic fill material and impacts to adjacent deciduous wooded wetlands that would allow for mixed use redevelopment of the site in an area of residential and public properties. Future RA tasks will include the preparation of a remedial action workplan, sampling and review of clean fill, review of environmental site assessments and contaminants of concern, oversight of the installation of capping elements, and preparation of a Deed Notice and Classification Exception Area (CEA) to address historic fill contamination.

Middlesex County Improvement Authority, Open Space Program Environmental Investigations, Various Sites, Middlesex County, NJ: Participated in the Preliminary Assessments/Phase I Environmental Site Assessments (ASTM 1527E-05 and 1527E-13), Site Investigations, Wetlands Assessments/Surveys, and Lot Yield Assessments of undeveloped parcels as well as current/former residential, agricultural, and commercial uses. The lot yield analyses consist of determining the number of buildable lots which can be obtained from the property given current zoning and other known site-specific land use constraints, including contamination issues, wetlands, streams/surface water bodies, threatened and endangered species, and topography, as well as the availability of utility service and other required infrastructure.

Middlesex County Utilities Authority (MCUA), Phase I Environmental Assessment, Sayreville, NJ: Participated and assisted in the completion of the site inspection and Phase I Environmental Site Assessment Report (1527E-05) with regard to two parcels of land, owned by the Sayreville Economic and Redevelopment Agency, as part of the redevelopment of the former National Lead Superfund site. The project was successfully completed on an aggressive schedule and within budget.

Resumes of Project Staff

Preconstruction Assistance

Resumes of our proposed preconstruction assistance project staff can be found on the following pages:

Name and Project Role	Location of the Resume (Page #)
Tom O'Connor, PE Preconstruction Assistance Manager	21
Bassem Hanna Preconstruction Assistance	37
Natalie Barnhart, PE, CCM Preconstruction Assistance	35
John Turner, PE, PhD Preconstruction Assistance	27
Patrick Dempsey, PE Preconstruction Assistance	25
Kevin Johns, PE Preconstruction Assistance	31

Resumes of Project Staff

Construction Support Services

Gerard Kroner, PE

Construction Support-Bridges/Structures

During his career, Mr. Kroner has held successive positions of responsibility including Engineer, Senior Engineer, Project Engineer, Project Manager, Senior Project Manager, and Branch Manager. In his current position as a Principal Project Manager, he is concentrating his efforts in technical work. His assignments have included work for the New Jersey and New York Departments of Transportation, the New Jersey Turnpike Authority, and several County Departments of Public Works on safety improvement projects, short and medium span bridge rehabilitation and replacement projects, bridge inspection and evaluation projects, and construction support service and administration contracts.

Relevant Project Experience

NJDOT and NJ TRANSIT, Route 1&9, Section 6J, Secaucus Road Interchange, North Bergen & Jersey City, NJ: Structural Project Manager for development of Phase I through IV structural plans. Overall Project Manager for the last 20% of the interchange project for development of plans and contract documents for three new bridge structures and five new retaining walls required for the construction of a new diamond interchange at Secaucus Road in North Bergen and Jersey City, NJ. Project included bridge sketches, design appraisal statement (structure type selection), general plans & elevations, preliminary cost estimates and final plans, specifications, and estimates for the structures. The main structure is a seven-span steel multi curved girder 550- ft viaduct structure spanning two railroads, an access road, and isolated wetlands. The structure, arranged with three continuous span segments (2-2-3), was analyzed with a multi-mode analysis and the open concrete column bents on deep pile foundations were adjusted in stiffness to produce acceptable displacements within the allowable stresses. Subsurface geotechnical investigations during design revealed 30-ft layers of glacial lake sediments with "weight of hammer" blow counts. Substructure units were reinforced concrete abutments and open column and cap piers. The other bridge structures included a single span steel multi plate girder with composite concrete deck over US Rt. 1&9 (Tonnelle Avenue) and a single span prestressed precast concrete box adjacent beam superstructure with a varying thickness concrete overlay to accommodate a roadway cross slope superelevation transition on the bridge over one of the interchange ramps. Part of the project involved eight new retaining walls up to 35 feet high to retain cut slopes and new ramp embankments. Retaining walls consisted of reinforced concrete counterfort walls, mechanically stabilized earth

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Inspection of railroad tracks and bridges**
- **Bridge rehabilitation**
- **Worked with NY and NJ departments of transportation**

Firm: Mott MacDonald

Education
BE (concentration in Civil/Structural), Stevens Institute of Technology, 1981

Registration/Certification
Professional Engineer: NJ (GE032436), PA (PE070653)

Years of Experience
Total: 37

With Current Firm: 37

Work History
1981–Present, Mott MacDonald (Includes predecessor companies, acquisitions/mergers)

Training and Industry Skills
See next page

Gerard Kroner, PE, continued

walls, and permanent soldier pile walls. An extensive soil pre-consolidation program was developed to hasten construction settlements and reduce post construction settlements of new embankments up to 30 feet deep. This included staged pre-load fills with overfills, wick drains, lightweight fills, and extensive instrumentation. Extensive utility relocation was required for telephone, gas, sewer, and electric facilities, including a major CSO upgrade/reconstruction for Jersey City Municipal Utilities Authority. The CSO required an extensive staged excavation support system for construction of the CSO box culverts across active Conrail and NYS&W rail lines. Over 50 ROW acquisition/easement parcels were handled as part of the extensive ROW acquisition needed for the new interchange. Design performed in accordance with the NJDOT Road and Bridge Design Manuals and the NJDOT Procedures Manual. Project administration was transferred to NJ TRANSIT near the completion of the design phase. Design completed under NJ TRANSIT's direction which included splitting up the overall plan set into two main contracts to facilitate and speed construction. Construction support services were provided to NJT in accordance with NJDOT standards for this DOT maintained interchange project which included a major redesign of one ramp based on local input, review of shop and working drawings, and consultation to NJDOT, NJT, and the construction manager during construction.

NJDOT, Design Services Term Agreement, Task order for Stability Assessment of Roselle Railroad Embankment, Roselle, NJ: Project Manager for the completion of a stability analysis of an existing railroad embankment that was compromised by trespass construction encroachment. Work included embankment stability assessment and development of stability measures to maintain the safety of the embankment.

D&H Canadian Mainline over Reading-Blue Mountain & Northern Railway, Inspection, Evaluation and Rating of Canadian Pacific Railway Bridge No. 679.27, Canadian Pacific Railway, Avoca, PA: Deputy Project Manager and Team Leader for the inspection, rating, and evaluation of this two bay single span riveted steel plate through-girder railway bridge. Work included inspection and field measuring of the existing bridge to document deterioration for identification of priority repairs and performing capacity ratings. The bridge consisted of three through girders spanning 90 feet and carrying one live track. A reduced operating speed had been implemented due to deterioration of steel stringers and loss of bearing area under a partial width floorbeam at the north abutment of this 35 degree skewed structure. Rating calculations were prepared at full operating speed and reduced speeds. Priority repairs required to remove the operating speed limitation were detailed.

Middlesex County Dept. of Public Works, Rehabilitation of New Dover Road Bridge, Middlesex County, NJ: Project Manager for construction administration services for rehabilitation of the New Dover Road Bridge over Route 27, Amtrak, and Middlesex Avenue. The 14-span viaduct type structure was rehabilitated with substructure repair, new decks, knee braces and encasement removal in the three thru-girder spans as well as deck repairs and new LMC overlays in the 11 encased multiple stringer spans. Duties included supervision of field inspection, construction records, and coordination of material testing, change orders, as-builts, shop drawing review, and miscellaneous engineering services during construction.

Training and Industry Skills

AASHTO Blast Resistant Concrete Bridge Column Design and Detailing Workshop, NJDOT, 2014

NHI/NBIS Bridge Inspection Refresher Course No. 130053, with NJDOT Pontis, 2013, 2008 & 2003

Design of Straight & Curved Girder Steel Bridges Using AASHTO LRFD Design Spec's, 5th Edition, 2011

Steel Design using the AASHTO LRFD Bridge Design Specifications, 3rd Edition, 2004

NTI/NJDOT Context Sensitive Design Training, 2003

PennDOT NHI/NBIS Comprehensive Basic Bridge Inspection Training Course, 1997

"Safety Inspection of In-Service Bridges," FHWA: NHI Course No. 13055, 1997

Bridge Safety Inspection Program, PennDOT: Basic Course No. 26, 1997

NJDOT Structure Inventory & Appraisal Workshop, 1992

Anthony Crincoli, PE

Geotechnical Construction Support Services

Mr. Crincoli has over 30 years of diversified experience in geotechnical design on various projects in the transportation field. Mr. Crincoli's experience includes preparation of geotechnical engineering reports, providing recommendations for foundation design, liquefaction potential, soils improvement techniques, and construction procedures. His responsibilities include conducting soil testing, site investigation, slope stability and foundation design and analysis. His design experience includes design and analysis of drilled shafts, pile foundations, anchored retaining structures, and flexible retaining structures.

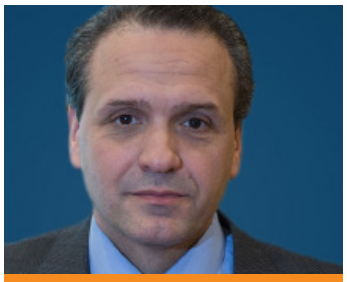
Relevant Project Experience

NYSDOT Region 10, Scour Critical Bridge Improvements: Lead Geotechnical Engineer, responsible for evaluating the stability analyses of five scour critical bridge piers located in Nassau and Suffolk Counties. Bridge spans ranging from 4 to 44 and are founded on precast concrete or timber piles. The piers were modeled in FB-Multiplier to determine lateral stability. Axial capacities were also evaluated using Apile software. Also, responsible for the geotechnical aspects of scour protection for eight bridges in two contracts. Weeks Marine was the contractor for the five-bridge contract.

NYSDOT, Nassau Expressway Design-Build Rehabilitation: Mr. Crincoli is the Lead Geotechnical Engineer on this $60-milllion rehabilitation of the Nassau Expressway. Design includes the stabilization of the roadway to mitigate long-term settlement.

NJDOT, Route US 130 Bridge over Raccoon Creek, Logan Township, NJ: Geotechnical Task Leader responsible for geotechnical engineering services for the final design of Route US 130 over Raccoon Creek. The project consists of the replacement of the existing Route 130 movable bridge over Raccoon Creek with a new fixed structure which shall provide a 25-foot clearance to marine traffic. Responsible for the supplemental subsurface investigation program, which included soil borings, cone penetrometer testing and a laboratory testing program. Design responsibilities included the evaluation of soil improvement methods which included column supported embankments, and the use of lightweight fill for the proposed embankments. (2013-present)

DeldOT, State Route 141, Newport Viaduct Stability Analysis, DelDOT: Lead Geotechnical Engineer responsible for analyzing existing bridge piers that were undermined by scour. Th e bridge piers were supported by steel H-piles. The piers were evaluated with FB-Multiplier to determine lateral stability and pile stresses. Axial capacity



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- Geotechnical engineering for mega infrastructure projects
- Foundation design
- Construction procedures
- New Jersey local projects

Firm: AECOM

Education

ME, Civil Engineering, 1991, Stevens Institute of Technology, NJ

BE, Civil Engineering, 1988, Stevens Institute of Technology, NJ

Registration/Certification

Professional Engineer: NY, NJ, CT, DE, PA

Years of Experience

Total: 31

With Current Firm: 29

Work History

1989-Present, AECOM

Training and Industry Skills

OSHA 40-HR. Hazardous Materials Health and Safety Training

Anthony Crincoli, PE, continued

was also modeled and analyzed. Also, responsible for geotechnical aspects of scour protection at these piers.

NJDOT, Route U.S. 1 Over Millstone River, Townships of Plainsboro and West Windsor, NJ: Lead Geotechnical Engineer for this breakout project from the NJDOT Route 1 Penns Neck project. The project consists of maintaining 3 lanes of traffic in each direction on US Route 1, designing a bridge replacement using prefabricated bridge components to minimize construction impact to the area, performing a hydraulic analysis to properly size a 2-span bridge to replace the 3-span structure, performing a scour analysis to determine if the bedrock is non-erodible.

NJDEP, The Rebuild by Design Hudson River Project: The proposed project is intended to address flooding from both major storm surge and high tide as well as from heavy rainfall events. The project seeks to benefit flooding areas inside the Study Area, which encompasses the City of Hoboken, extending into Weehawken and Jersey City, with the following approximate boundaries: the Hudson River to the east; Baldwin Avenue (in Weehawken) to the north; the Palisades to the west; and 18th Street, Washington Boulevard and 14th Street (in Jersey City) to the south. Lead Geotechnical Engineer responsible for coordinating staff for preparation of subsurface investigation, pile analysis for floodwalls, cut off walls for seepage and evaluation of existing embankments for stability.

Project Atlantis, Large Scale Excavation for Construction of Gravity Based Structures – Corpus Christi, TX/Mobile, AL/Altimira, MX: Geotechnical task Leader responsible for the analysis of the geotechnical conditions at several sites in Texas, Alabama and Mexico to determine the optimal location for construction of two Gravity Based Structures (each 550 ' long x 245' wide x 135' tall) to be built along the shoreline and floated out to sea and sank into place on the seafloor. Reviewed the available data and reports at several sites to determine the soil condition at each, site constraints, support of excavation and dewatering systems.

MDOT Scour Evaluations for I-55 over Tangipahoa River, I-55 over Black Creek and I-59 over Little Black Creek: Lead Geotechnical Engineer, responsible for evaluating the stability analyses of six scour critical bridge piers located in Mississippi. . Bridge spans ranging from 7 to 9 and are founded on precast concrete piles. The piers were modeled in FB-Multiplier to determine lateral stability. Axial capacities were also evaluated using Apile software.

NJIT, Scour Evaluation of Bridges with SEM, New Jersey Institute of Technology: Lead Geotechnical Engineer responsible for accessing geotechnical risks of six scour critical bridges located in Atlantic, Burlington, Bergan, Hunterdon, Warren and Somerset Counties. In an effort to improve scour design and evaluation method within the State of New Jersey, NJDOT engaged the NJIT to develop a new Scour Evaluation Model (SEM). Geotechnical risk was evaluated using the SEM. This risk was later coordinated with hydrologic/hydraulic risk for recommended actions. Also performed field investigation of the bridges to evaluate scour risk. The investigation assessed the erosion class of the streambed materials and check evidence of scour holes, erosion zones, degradation, and aggradation. Also, assisted in preparing reports for each bridge detailing the results of the SEM evaluation.

Maryland Transportation Authority (MDTA), Viaduct over the Patapsco River, Piers Stability Analysis: Lead Geotechnical Engineer responsible for analyzing existing bridge piers that were undermined by scour. The pier was modeled in FB-Multipier to determine lateral stability. Axial capacity and combined stresses were also evaluated.

Matt Gwiszcz, PLS

Construction Support Services: Survey Lead

Mr. Gwiszcz has over eighteen (18) years of experience in right-of-way and surveying (land and bathymetric). Throughout his career as a professional land surveyor, he has been responsible for the planning and design of surveys and right-of-way documents for Railroads, Bridges and Waterways.

Relevant Project Experience

NJ TRANSIT , Contract No. 13-007, Task Order Contract, Bridge and Railway Engineering, AR No. 11 Bergen CounT. Y. Line M.P. 6.34 Culvert Replacement Design: Task Leader & Crew Chief for topographic survey, mapping and preparation of Right-of-Way documents for a replacement culvert in Rutherford, NJ.

NJ TRANSIT , Contract No. 13-007, Task Order Contract, Bridge and Railway Engineering, North Jersey Coastline M.P. 6.97 Culvert Replacement: Task Leader & Crew Chief for topographic survey, mapping and preparation of Right-of-Way documents for a replacement culvert in Aberdeen, NJ. ROW documents included preparation of: GPPM, IPM, and metes and bounds descriptions in accordance with the Map Recordation Law.

NJ TRANSIT , Morgan Draw Bridge over Cheesequake Creek: Task Leader & Crew Chief for topographic survey, mapping and preparation of Right-of-Way documents for a new bridge control platform in South Amboy, NJ. ROW documents included preparation of: GPPM, IPM, and metes and bounds descriptions in accordance with the Map Recordation Law.

NJ TRANSIT , Contract No. 13-007, Task Order Contract, Bridge and Railway Engineering, North Jersey Coastline M.P. 12.70 Culvert Replacement: Task Leader & Crew Chief for topographic survey, mapping and preparation of Right-of-Way documents for a replacement culvert in Middletown, NJ. ROW documents included preparation of: GPPM, IPM, and metes and bounds descriptions in accordance with the Map Recordation Law.

NJ TRANSIT , Contract No. 13-007, Task Order Contract, Bridge and Railway Engineering, AR No. 9 –Brielle Drawbridge on North Jersey Coastline MP 36.09, Brielle and Point Pleasant, NJ: Task Leader & Crew Chief for topographic survey, mapping and establishing Right-of-Way on both sides of the Manasquan River. Work included establishing horizontal and vertical controls; field edit and producing survey report.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **18 years of Surveying (land and bathymetric)**
- **NJ TRANSIT project experience**

Firm: AmerCom Corporation

Education
BS, Surveying, New Jersey Institute of Technology

Registration/Certification
Licensed Professional Land Surveyor: NJ, NY, PA

Years of Experience
Total: 18
With Current Firm: 18

Work History
2000-Present, AmerCom

Training and Industry Skills
Various

Matt Gwiszcz, PLS, continued

MTA Long Island Rail Road, Design for the Replacement of Wreck Lead Bridge Submarine Cables across Reynolds Channel between Long Beach and Island Park, Nassau County, New York: Task Leader & Crew Chief for topographic survey (land and bathymetric), mapping and for the submarine cables replacement project across Reynolds Channel between Long Beach and Island Park in Nassau County, NY.

NJ TRANSIT Contract No. 13-007, Task Order Contract, Bridge and Railway Engineering AR No. 7, Engineering, Design and Construction Support Services – Track Repairs at Stirling Station, Gladstone Line MP 28.50": Task Leader & Crew Chief for topographic survey and mapping for this track repair project in Stirling, NJ.

NJ TRANSIT , Leland Avenue Undergrade Bridge on the Raritan River Line: Task Leader & Crew Chief for topographic survey and mapping including Right-of-Way for a replacement bridge over Leland Avenue in Plainfield, NJ.

NJ TRANSIT , Roosevelt Avenue Undergrade Bridge on the Raritan River Line: Task Leader & Crew Chief for topographic survey and mapping including establishing Right-of-Way for a replacement bridge over Roosevelt Avenue in Plainfield, NJ.

NJ TRANSIT , Watchung and Park Avenue Undergrade Bridges on the Raritan River Line: Task Leader & Crew Chief for topographic survey and mapping including establishing Right-of-Way for two replacement bridges over Watchung and Park Avenues in Plainfield, NJ.

AMTRAK, Hamilton NJ Substation: Task Leader & Crew Chief for topographic mapping, survey and right of way for design of a new electrical substation along AMTRAK's Northeast Corridor Line. Work included base line survey, track profiles, track cross-sections, catenary location and clearance survey, topographic survey of the adjacent properties where substation is to be built, wetland surveys and establishment of property corners.

NJ TRANSIT , Old Bridge NJ Route 18 Park 'N' Ride: Task Leader & Crew Chief for topographic mapping, survey and right of documents for a new Park N Ride in Old Bridge, NJ adjacent to Route 18.

NJ TRANSIT , Atlantic CiT. Y. Line MP 54.86 Jonathans Thorofare Bridge: Task Leader & Crew Chief for topographic mapping and survey for the rail bridge carrying the Atlantic CiT. Y. Line over Jonathans Thorofare. Work included base line survey, track profiles, track cross-sections, underclearances, soundings and establishment of right-of-way along the rail line. AmerCom responsibilities also included all right-of-way documents and preparation of all riparian documents.

NJ TRANSIT , Atlantic CiT. Y. Line MP 54.57 Elder Creek Bridge: Task Leader & Crew Chief for topographic mapping and survey for the rail bridge carrying the Atlantic CiT. Y. Line over Elder Creek. Work included base line survey, track profiles, track cross-sections, underclearances, soundings and establishment of right-of-way along the rail line. AmerCom responsibilities also included all right-of-way documents and preparation of all riparian documents.

NJ TRANSIT , Summit Yard Ditch MP 21: Task Leader & Crew Chief for topographic mapping and survey for drainage improvements at the Summit yard. Work included base line survey, track profiles, track cross-sections, topographic survey of ditch and surrounding area and establishment of right-of-way along the rail line and ditch.

Hasan Neamah, PE

Material Testing

Mr. Hasan Nemeah is a Professional Engineer (PE) with over 20 years of experience in roadway and building construction inspection and material testing. He holds the necessary certifications for asphalt and concrete field and plant inspection, such as NICET II, NJSAT Plan Inspector II, and ACI concrete field and laboratory testing. Mr. Neamah has performed construction inspection and supervised the inspection team for several projects in New Jersey, Pennsylvania, and overseas (working with US Army Corps of Engineers). He also has an extensive material testing experience, including serving as AID's laboratory supervisor, performing and overseeing asphalt and concrete tests, for over two years.

Relevant Project Experience

NJDOT, Pavement Evaluation Services for Routes 1, 10, 15, and 22, New Jersey: Performed visual inspection and FWD testing.

NJDOT, Rt. 72 Full Depth Reclamation, New Jersey: Led the QA testing services including, in-place density, moisture, preparing proctor samples and testing for compressive strength.

NJDOT Rt. 55 Full Depth Reclamation, New Jersey: Led the QA testing services including, in-place density, moisture, preparing proctor samples and testing for compressive strength.

NJDOT, NDT Testing on Rt. 35 as Part of Sandy Restoration Project: This is a Federally funded project. Performed NDT pavement testing.

NJDOT, NDT testing on Rt. 35 as part of Sandy Restoration Project (Federally Funded), New Jersey: Performed NDT pavement testing.

Construction Engineering and Inspection Services, Wenonah Borough, Mantua Ave Multi-Modal Transportation Improvements, NJ: Lead inspector performing daily log of construction activities, reporting construction issues and non-compliances to the RE, performing concrete onsite testing.

Cape May County, Concrete Field Inspection and Testing, Lafayette St. Bridge, Cape May, New Jersey: Performed concrete inspection and testing for slump, air voids, temperature and compressive strength.

Mixed Design Development and QC Services, PA: Prepared HMA/WMA mix designs and on-call QC support.

Adams, Rehmann and Heggan Associates, Inc, Field Inspection and Compressive Strength Testing, Egg Harbor City, NJ (Federally Funded): Performed concrete inspection and compressive strength testing.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Extensive experience in material testing and inspection**
- **Performed QA/QA assessments and inspections**
- **Experience with NJDOT projects**

Firm: Advanced Infrastructure Design, Inc.

Education

MS, Civil and Environmental Engineering, Rowan University, Glassboro, NJ

BS, Civil Engineering, Basrah University, Iraq

Registration/Certification

Professional Engineer: MD, 2018, Registration No.: 52754

E.I.T: NJ, 2014, Registration No.: EIT-02850

Years of Experience

Total: 21

With Current Firm: 4

Work History

See next page

Training and Industry Skills

See next page

Hasan Neamah, PE, continued

Remington and Vernick Engineers, Blackwater Branch Culvert Replacement, City of Vineland, New Jersey: Performed concrete inspection and testing for slump, air voids, temperature and compressive strength.

Sussex County Resurfacing Program, New Jersey: Performed Inspections and field QC.

Multiple HMA paving projects, Weymonth, Cherry Hill & Mays Landing, NJ: Performed Inspections and field QC.

Lindenwold Street Improvements, Lindenwold, New Jersey: Performed concrete inspection and testing for slump, air voids, temperature and compressive strength.

Field Inspection and Compressive Strength Testing, Egg Harbor City, NJ: Performed concrete inspection and compressive strength testing.

Work History

2016 -Present Engineer/ Lab Supervisor, Advanced Infrastructure Design, Inc.

2015 -2016 Senior Technician/Engineer, Advanced Infrastructure Design, Inc.

2013 -2015 Graduate Research Assistant, Rowan University

2006 -2012 Supervisor, United States Air Base, Iraq

1997 -2006 Supervisor Engineer, Construction and Overlay of several roads in Thi Qar/ Iraq

Training and Industry Skills

NJSAT, MARTCP, and NECEPT Asphalt Plant Level 1 and 2

NJSAT, MARTCP, and NECEPT Asphalt Paving Construction Technologist Nuclear Gauge Safety Training

HAZMAT Training

ACI Field Technician Certification Grade 1

ACI Compressive Strength Testing Technician Grade 1

ACI Aggregate Testing Technician Grade 1

ACI Concrete Laboratory Testing Technician

Transportation Worker Identification Credential Card

Jody Herkloz

Community Relations

Ms. Herkloz has maintained strong statewide ties which have made her an effective lobbyist of both the legislative and executive branches of state government. Jody also manages a number of public outreach functions for various clients. In her capacity as a Public Outreach Logistics Coordinator, Jody has served as a liaison to regional stakeholders including government officials, residents, property owners and businesses on the NJDOT Route 35 Reconstruction Project, Ocean County, NJ. Working directly with the contractor and field staff, she provided public information and resolves issues as required for federal and state compliance.

From 2005 - 2016, Jody was instrumental with many clients local coordination efforts, whether local public hearings for water company issues or major utility investment in local areas, her outreach skills have proved invaluable. Past clients include but are not limited to: JCP&L, A First Energy Company, Verizon, United Water and T-Mobile.

Her experience as the founder of JLH Management Enterprises made Jody the best choice to head MBI-GluckShaw's event planning division, Creative Events. Jody has worked with various non-profit and political action committees, such as, Council of State Governments Eastern Regional Conference (CSG/ERC), Verizon / NJSHARES and the NJ State Police Memorial Association (NJSPMA). She currently serves as the Director of Operations for the American Council of Engineering Companies of NJ (ACECNJ). A full client list can be supplied.

Prior to and while working with MBI-GluckShaw Jody continued her work with JLH Management Enterprises, a firm which handled all aspects of campaigns, political, non-profit and corporate / conference event management. Clients included but were not limited to: Gormley for US Senate, Ocean County Mayors' Association and the Boy Scouts of America. Jody has an extensive knowledge of FEC and NJ ELEC Guidelines. Jody began her career at the Assembly Majority Office in Trenton, working first as, Executive Assistant to the Executive Director and then as a Communications Staffer and Research Analyst. While working with all of the clients throughout the state, Jody has built a large base of support that spans various industries, corporate entities and the public sector.

Relevant Project Experience

See next page.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Expertise in public outreach**
- **Familiarity with NJ local government agencies, including NJDOT and various counties**

Firm: JHL Management Enterprises

Education

BA, International Relations and History, University of Delaware

Registration/Certification

Director of Operations, American Council of Engineering Companies of NJ (ACECNJ)

Active Member of Utility & Transportation Contractors Association of NJ (UTCANJ)

Active Member of NJ Alliance for Action

Active Member of ASHE NY Metro

WBE – Pending as of June 2016

Years of Experience

Total: 12

With Current Firm: 12

Work History

See next page

Training and Industry Skills

Various

Jody Herkloz, continued

Relevant Project Experience

NJDOT Route 35 Reconstruction Project, Ocean County, New Jersey: Jody served as a community outreach liaison to regional stakeholders including government officials, residents & property owners and businesses for the NJDOT Route 35 Reconstruction project in Ocean County. Working directly with the Public Outreach Team Leader, she provides public information and resolves issues as required for federal and state compliance. Jody also manages the day to day community issues received thru the project hotline/email, directing constituent inquiries and complaints to the Team Leader.

In addition to public involvement and community relations, Jody's other responsibilities with the team include project event planning, securing on-site venue locations, literature, handouts, etc. for Public Information Meetings, project information events and small community/individual group meetings.

Monmouth/Ocean/Middlesex (MOM) Rail Line Project, New Jersey: Jody worked directly with the Monmouth and Ocean project team in developing a long term strategy for this proposed rail project. Her duties included, but were not limited to, attending various constituent meetings, meetings with NJ TRANSIT, conference calls with ridership consultants and coordinated monthly tasks for the team.

United Water: Jody worked directly with United Water – Toms River staff to execute a public outreach campaign surrounding a rate increase due to capital investment surrounding an issue with radionuclides. Duties included: meetings with local elected officials in three towns affected by the issue; meetings with the County and State elected officials who represented the affected area and public meetings where the general public was invited to attend and discuss their concerns with company representatives.

Work History

JLH Management Enterprises, 1997- present

North Star Strategies, LLC July 2016 - present

MBI-GluckShaw, 2005- 2016

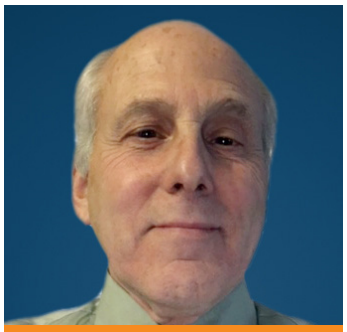
Israel & Slomka, LLC, 1995 – 1997

Haytaian US Senate Campaign, 1994

New Jersey General Assembly, Majority Office 1992 - 1994

Gary Kassof, PE

Maritime Coordinator



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Permitting**
- **Marine projects**
- **Personally responsible for issuing more than 750 bridge regulations and drawbridge deviations**

Mr. Kassof is a senior manager for permitting who brings more than 40 years of experience to his position at AECOM. He came to AECOM following a long career in the U.S. Coast Guard, where he was the bridge program manager for the First Coast Guard District, directly supervising eight and overseeing program efforts across five sectors, eight states and the Atlantic maritime border between the United States and Canada. Gary directed, supervised and coordinated all aspects of the bridge program, which included permits, drawbridge regulations, casualties, navigability determinations, construction oversight, Truman-Hobbs applicability, civil penalty processing and National Environmental Policy Act analysis.

Throughout his career, he was personally responsible for issuing more than 750 bridge regulations and drawbridge deviations, conducting more than 1,000 jurisdictional determinations, approving more than 1,000 permits and overseeing countless construction reviews. At AECOM, he is working on projects that involve the need for a U.S. Coast Guard permit for a new bridge or rehabilitation of an existing bridge, by providing guidance on preparing the USCG permit application, recommending revisions to the bridge design to make projects more permittable, preparing responses for questions asked by the USCG, attending meetings with the USCG and negotiating permit conditions.

Relevant Project Experience

The Port Authority of New York and New Jersey (PANYNJ), Bayonne Bridge Raising, Staten Island, NY and Bayonne, NJ.: Coast Guard program manager for NEPA lead agency responsibilities and bridge permitting for this Port Authority of NY/NJ-owned bridge, one of the major crossings between New York and New Jersey. This nationally significant Presidentially-promoted (federal dashboard) project sought to raise the Bayonne Bridge roadway within the existing historic tied arch span, to increase air draft clearance from 150 feet to 215 feet over the Kill Van Kull, the major commercial vessel access to Port of New York and New Jersey. By providing access for post-Panamax and larger vessels, which will be accommodated by expansion of the Panama Canal, this project will enhance the Port of NY/NJ's competitive edge compared to other East Coast ports. Within a federally mandated time frame, successfully directed a major and controversial environmental review process coordinated with Federal, State and local agencies. culminating in an approved EA/FONSI and bridge permit.

Firm: AECOM

Education

MS, Environmental Health Science, City University of New York, Hunter College, 1974

BA, Biological Sciences, Long Island University, 1969

Registration/Certification

Professional Engineer: NJ, NY, PA

Years of Experience

Total:

With Current Firm:

Work History

2003-Present, AECOM

Training and Industry Skills

Various

Gary Kassof, PE, continued

MTA Bridges & Tunnels (TBTA), Bronx-Whitestone and Throgs Neck Bridges Fender Protection, Fireboat Mooring Platforms at Towers and Anchorages, Scope Development and Permit Acquisition (BW-07), NY: Project consists of preliminary engineering and developing design-build procurement documents to construct and protect the bridge's towers and anchorages, and to provide new fireboat mooring platforms. Responsible for developing the permit packages and attending meetings to obtain the Coast Guard and U.S. Army Corps permits for the installation of the new fender systems. (2014-present)

NYSDOT, Region 10 Scour Critical Bridge Improvements, NY: Responsible for review and recommendations for plans and specifications for the design of riprap scour countermeasures for 7 bridges for their CG permit applications. This included accelerated design and preparation of final plans and specifications for two contracts. Construction cost: $52.5 million. Weeks Marine was the contractor for the 5-bridge contract, which included 4 bridges over navigable waterways.

NYCDOT, Belt Parkway Bridge Replacements, Brooklyn, NY: Performed as Coast Guard Bridge Program Manager, oversaw bridge permitting and construction coordination for 4 Belt Parkway Bridge replacements (Fresh Creek, Paerdegat Basin, Gerritsen Inlet, Mill Basin). Bridge replacements on major urban parkway, which required maintenance of 6 lanes of traffic during the entire construction period. Mr. Kassof managed significant community and navigational controversies during the project planning and construction period. His navigation coordination efforts resulted in the adoption of a design option for Mill Basin Bridge, which satisfied the needs of navigation, while meeting engineering and design parameters.

TBTA, Governors Island Ventilation Building Modification, NY: Regulatory and environmental lead for Federal, State and local approvals for flood and security protection at the Hugh Carey (BBT) vent structure on Governors Island. Upgrade protection to withstand 500-year flood event after the Superstorm Sandy experience. Assessment of environmental and cultural resource impact and development of permitting strategy for conceptual alternatives to improve structural resiliency to flood events.

New York City Economic Development Corporation, East Midtown Waterfront Esplanade, New York, NY: Providing consultation to project team with U.S. Coast Guard bridge permitting requirements for urban waterfront park effort. Assist with coordination of environmental requirements/documentation for FHWA, the lead Federal agency, pursuant to Federal environmental mandates.

Connecticut Department of Transportation (CTDOT), Devon RR Bridge Replacement, CT: Preparing navigational study and assisting with bridge permit application and impact assessment for replacement of movable railroad bridge along heavily transited commuter/regional rail corridor (Metro-North/Amtrak). Provided permitting, environmental and constructability presentation for RFP and client interview, contributing to project award.

Massachusetts Department of Transportation (MassDOT), Route 3A Bridge Replacement, Quincy-Weymouth, MA: Performed as Coast Guard Bridge Program Manager, oversaw bridge permitting and construction coordination for new Route 3A Vertical Lift Bridge across the Weymouth-Fore River in this major transportation corridor in the Boston environs. The new bridge replaced a temporary vertical lift bridge, which had previously replaced the original historic bascule bridge removed due to severe deterioration. Representing the Coast Guard, Mr. Kassof managed this highly contentious project dealing with local community and marine controversies. Ultimately, he was instrumental in approving a vertical lift design which responded to the needs of existing and future commercial and recreational navigation, reduced bridge openings and accommodated pedestrians and bicyclists.

Timothy Hand, AICP

Environmental Permitting

Timothy Hand is a Senior Environmental Planner with over 31 years of experience on transportation and site development projects. Mr. Hand has managed complex environmental permitting programs for major infrastructure projects and has been responsible for acquiring federal, state, and regional environmental permits involving wetlands, waterways, coastal zones, navigation issues, riparian land, and air quality. He has prepared National Environmental Policy Act (NEPA) documentation including Environmental Impact Statements, Environmental Assessments, Categorical Exclusion Documents, Section 4(f) evaluations, and technical studies that are consistent with the Federal Highway Administration Environmental Impact Procedures (23CFR 771) and the New Jersey Executive Order 215 process. Mr. Hand has also overseen State Historic Preservation Office Section 106 consultation.

Relevant Project Experience

NJ TRANSIT , Trans-Hudson Express (THE) Tunnel: Environmental Task Leader for a new tunnel beneath the Hudson River to connect NJ TRANSIT 's rail corridors with New York Penn Station. Responsible for preparation of the U.S. Army Corps of Engineers Section 404/10 Permit, NJDEP Waterfront Development Permit, NJDEP Flood Hazard Area Permit, and New Jersey Meadowlands Commission Approval. The project also required extensive coordination with NJDEP regarding Cultural Resources and Contaminated Materials.

Amtrak, Hudson Tunnel Project, Secaucus, North Bergen, Union City, Weehawken, New Jersey and Borough of Manhattan, New York: Permitting Manager for the rehabilitation of the North River Tunnel and construction of a new tunnel to preserve the current functionality of the Northeast Corridor's (NEC) Hudson River rail crossing between New Jersey and New York and strengthen the resiliency of the NEC. The Hudson Tunnel Project consists of a new rail tunnel under the Hudson River, new surface tracks in New Jersey and railroad infrastructure connecting the new rail tunnel to the existing NEC in Secaucus, New Jersey and at Penn Station New York (PSNY), together with the rehabilitation of the existing NEC tunnel, beneath the Hudson River. Responsible for acquisition of all environmental land use permits required for the project including: USACE Section 404/10 Permit; NJDEP Flood Hazard Area Individual Permit/Waterfront Development Permit/ Freshwater Wetland Individual Permit/Water Quality Certification; NJDEP Tidelands Conveyance; NJDEP Green Acres Program Parkland Diversion; NYSDEC Protection of Waters; NYSOGS Permit to Occupy State-Owned

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Environmental planning**
- **Complex environmental permitting**
- **Hands-on experience in Federal and state and regional env. regulations and policies**

Firm: AECOM

Education

MS, Environmental Science, 1995, Rutgers University, NJ

BS, Biology, 1986, College of Mount St. Vincent, NY

Registration/Certification

Certified Planner

Years of Experience

Total: 33

With Current Firm: 29

Work History

1989-Present, AECOM

Training and Industry Skills

40 Hr. Health and Safety Training (OSHA)

8 Hr. Supervisor Training Course (OSHA)

Timothy Hand, AICP, continued

Underwater Lands. As part of the permitting process, mitigation will be required for impacts to freshwater wetlands, riparian zones, Green Acres, and the Hudson River. Development of mitigation possibilities and solutions will be conducted and coordination with the regulatory agencies to meet the mitigation obligations will be performed. (2016 – Present)

Delaware River Joint Toll Bridge Commission, I-95/Scudder Falls Bridge Improvements, Lower Makefield Township, PA and Ewing Township, NJ: Environmental Task Leader responsible for the preparation and acquisition of the environmental permits for the replacement of the Scudder Falls Bridge over the Delaware River and improvements to 4.4 miles of road approachways. The project extends from Newtown-Yardley Road (PA Route 332) in Lower Makefiled Township, PA to Bear Tavern Road (County Route 579) in Ewing Township, NJ and requires a U.S. Army Corps of Engineers Section 404/10 Permit; Pennsylvania Department of Environmental Protection (PADEP) Chapter 105 Water Obstruction and Encroachment Permit; a New Jersey Department of Environmental Protection (NJDEP) Freshwater Wetland Individual Permit (FWIP)/Flood Hazard Area Permit (FHAP)/Water Quality Certificate; Delaware River Basin Commission Approval; Delaware and Raritan Canal Commission Certificate of Approval; and Bucks County Conservation District Erosion and Sediment Control Permit. An NJDEP Green Acres Program Parkland Diversion approval is also required for the crossing of the Delaware and Raritan Canal State Park. Wetland Mitigation Plans were developed to compensate for impacts to wetlands in both New Jersey and Pennsylvania while a Riparian Zone Mitigation Plan was developed to compensate for riparian zone impacts in New Jersey. Mitigation Plans were also developed for several threatened and endangered species including freshwater mussels, peregrine falcon, and shortnose sturgeon.

New Jersey Highway Authority (NJHA), Driscoll Bridge Rehabilitation and Widening, Middlesex County, NJ: Environmental Task Leader for the $140M rehabilitation of the approximately 4,400-foot long, high-level Garden State Parkway (GSP) Bridge over the Raritan River and the construction of a new parallel structure west of it. The existing 129-foot wide bridge, which currently carries twelve, narrow NB and SB lanes, will be reconfigured to carry eight NB lanes, with shoulders. The rehabilitation will entail deck replacement, structural steel replacement/strengthening and seismic retrofitting. Alternative bid designs were provided for the new 96-foot wide, seven lane, SB bridge: post-tensioned segmental concrete and a steel plate girder superstructures. The project also included substantial approach work: widening of the GSP for the new SB roadway, bridge widenings, retaining walls and sign support structures. Responsible for overseeing the permit modifications to the NJDEP Waterfront Development Permit/Freshwater Wetland Individual Permit/Coastal Wetland Permit/Water Quality Certificate, U.S. Army Corps of Engineers Section 404/10 Permit, and U.S. Coast Guard Bridge Permit. Also prepared the NJDEP Stream Encroachment Permit and Soil Erosion and Sediment Control Plan Certification application packages and coordinated efforts with the NJDEP for the Soil Reuse Plan.

New Jersey Department of Transportation, Route U.S. 9 (Sections 25K and 1F) Edison Bridge over Raritan River Rehabilitation, Woodbridge and Sayreville, NJ: Environmental Task Leader for the rehabilitation of the Edison Bridge over the Raritan River. The project proposes the construction of a new parallel bridge and the rehabilitation of the existing bridge so that traffic can be maintained during construction. Responsibilities involved overseeing the permit modifications to the NJDEP Waterfront Development Permit/Freshwater Wetland Individual Permit/Coastal Wetland Permit/Water Quality Certificate, U.S. Army Corps of Engineers Section 404/10 Permit, and U.S. Coast Guard Bridge Permit. Also prepared the Soil Erosion and Sediment Control Plan Certification and NJDEP Treatment Works Approval application packages and coordinated efforts with the NJDEP for the Soil Reuse Plan.

Kevin Koch, PE, LSRP

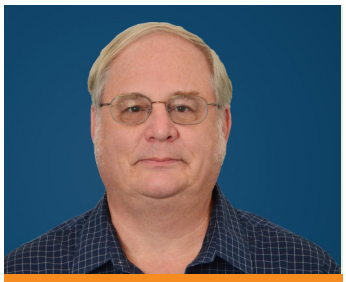
HazMat Management

Mr. Koch's responsibilities are in the areas of hydrogeologic and hazardous waste remedial investigations, environmental impact statements (EIS)/ environmental assessments, design and construction, industrial site evaluations, environmental site audits, and wastewater and water supply facilities evaluation, design, and construction. He supervises personnel within the firm's Environmental Management Division, managing projects related to the Industrial Site Recovery Act (ISRA), Underground Storage Tanks, Spill Compensation and Control Act, the Water Pollution Control Act, the National Environmental Policy Act (NEPA), the Resource Conservation and Recovery Act (RCRA) regulations, Brownfields regulations, New Jersey Executive Order 215, New York State/City Environmental Quality Review Act (SEQRA/CEQRA), and Phase I Environmental Site Assessments. These projects include on-site inspections/investigations, assessment of environmental impacts, development and implementation of sampling plans (soil and/or groundwater), development and implementation of site remediation plans (soil and/or groundwater), analyzing implement ability and cost effectiveness of remedial alternatives, development of closure plans, interfacing with various regulatory (local, state, and federal) agencies and obtaining various permits (air, NJPDES, etc.)

Mr. Koch's project responsibilities include all project phases, from initial field studies to the preparation of plans, specifications, preliminary design, permitting, bid documents, and construction management. He is involved in the development of site-specific/project-specific scope(s) of work, and supervision and scheduling of all aspects of project activities, including subconsultant coordination and continual client contact. He has represented clients at public meetings and has provided testimony for municipal boards and regulatory agencies, as well as in private litigation matters.

Relevant Project Experience

NJ TRANSIT Corp., Phase I Environmental Assessment, Bloomfield and Belleville, NJ: Project Manager responsible for the preparation of a Phase I environmental assessment of four properties. One or more of these properties is being considered for a new base facility of light rail vehicles. Project included visual inspection of the sites, review of historical aerial photographs and fire insurance maps, contact with state and local regulatory agency officials, review of NJDEP and USEPA documents, and interviews with personnel knowledgeable on the sites.



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Hydrogeologic and Hazardous Waste Remedial Investigations**
- **Environmental Review and Assessment**
- **Experience with NJTrnsit projects**

Firm: Mott MacDonald

Education

MS, Civil Engineering, New Jersey Institute of Technology, 1984

BS, Civil Engineering, New Jersey Institute of Technology, 1981

Registration/Certification

Professional Engineer: NJ #24GE03034600

Licensed Site Remediation Professional: NJ #591320

NJDEP UST License - All Categories: NJ #0011224, 1992

OSHA Hazardous Waste Site Operations

OSHA Confined Space Entry

Years of Experience

Total: 37

With Current Firm: 37

Work History

1981-Present, Mott MacDonald

Kevin Koch, PE, LSRP, continued

SWEC/BRW, A Joint Venture, Environmental Impact Statement (EIS) Utility Assessment/Hazardous Materials Assessment, Newark International Airport Monorail-NEC Connection, Newark and Elizabeth, NJ: Project Manager for the utility assessment and the hazardous materials assessment sections of the EIS for the Monorail-NEC connection project. The utility assessment included the identification of major utilities in the study area. An evaluation of potential conflicts between the project and the identified utilities was conducted. Mitigation alternatives and associated costs were presented. The hazardous materials assessment included conducting a Phase I Environmental Assessment of the study area. Evaluation of potential impacts of contaminants on construction and operation of the project were conducted.

NJ TRANSIT Corp., Environmental Services Task Order Contract, Various Sites, NJ: Program Director responsible for environmental services for numerous facilities. Projects include environmental site assessments, due diligence site investigations, implementation of groundwater monitoring and free product recovery under an approved Remedial Action Workplan (RAW), completion of Remedial Investigations for sites under NJDEP oversight, oversight of environmental aspects of construction activities, and oversight of a free product recovery system. General duties include technical review of all reports and proposals, management of various project teams, monitoring of project budgets, performance of site inspections, interaction with the client and the NJDEP, and overall project management.

NJ TRANSIT Corp., Site Investigation, Madison, NJ: Project Manager for an investigation which identified an unknown migratory path of a discharge of heating oil from an underground storage tank (UST) to public storm sewers. Tasks included reviewing historical "as-built" drawings for site and local utilities, supervising a ground penetrating radar survey, overseeing sewer inspections and cleaning, and preparing a Remedial Action Workplan (RAW) to address impacts to soil and groundwater from the discharge.

NJ TRANSIT Corp., Groundwater Investigation, Howell, NJ: Project Manager for NJPDES groundwater monitoring. Initiated a Remedial Investigation (RI) to investigate discharges from several underground storage tanks (USTs). The Remedial Investigation involved the delineation of free-phased floating petroleum product and a dissolved groundwater plume underlying the site.

NJ TRANSIT Corp., Groundwater Investigation, Paterson, NJ: Project Manager for a Remedial Investigation (RI) and preparation of a conceptual Remedial Action Workplan (RAW) to investigate discharges from several underground storage tanks (USTs). The Remedial Investigation involved the delineation of free-phased floating petroleum product and a dissolved groundwater plume underlying the site.

NJ TRANSIT Corp., Underground Storage Tank (UST) Removals, Various Sites, NJ: Project Manager responsible for services related to the removal of one to eight underground storage tanks (USTs) per site. Project responsibilities included coordination with contractor, observation of UST removals, implementation of field assessments (e.g. post-excavation sampling), and preparation of final Closure and Site Assessment Reports. Due to contamination encountered at some sites, Remedial Investigations (RI) of soil and groundwater were prepared and submitted to the NJDEP. The approved RIs were implemented and RI Reports were submitted to the NJDEP which included soil Remedial Action Workplans (RAWs) which were also approved by the NJDEP.

NJ TRANSIT Corp., Underground Storage Tank (UST) Specifications, Jersey City, NJ: Project Manager for the preparation of a detailed technical specification for the removal of underground storage tanks as part of a bus garage rehabilitation project. The specifications also addressed the management of potentially contaminated groundwater that would be generated as part of dewatering operations.

Leslie Mesnick

NEPA Support

Leslie has approximately 23 years of environmental consulting experience serving as Project Director, Project Manager, and Deputy Project Manager for a variety of complex and high-profile transportation, infrastructure, and Brownfields redevelopment projects. Her capabilities include: project management, environmental review, permitting, interagency coordination, public outreach, and consensus-based mitigation. She has led many successful agency and community engagement programs for large and controversial transportation projects. Her recent projects required the preparation of EISs, permit applications, public involvement programs, and technical studies for various clients in New Jersey, New York, Pennsylvania, Maryland, and Connecticut. Leslie has expertise in natural resources permitting and environmental reviews performed in accordance with NEPA, SEQRA, CEQR, and NJ EO215.

Relevant Project Experience

Amtrak & NJ TRANSIT , Portal Bridge Capacity Enhancement Project EIS and Preliminary & Final Engineering, Hackensack River, NJ: NEPA and Environmental Lead: Leslie led the preparation of the NEPA EIS and alternatives analysis for this complex, fast-track project. The Portal Bridge is a critical link on the Northeast Corridor, and its timely replacement is essential to long-term plans to increase transit service between New Jersey and New York. As EIS Manager, Leslie performed technical analyses, coordinated the efforts of engineering and environmental sub-consultants on a large multi-firm team, and developed a strategy to complete the NEPA environmental review on a very aggressive schedule. This project included analyses pertaining to Section 4f, Section 106, parkland, hazardous materials, energy, natural resources, and more. Leslie was also responsible for much of the public participation and agency coordination required under NEPA, and responding to comments on the Draft EIS. The team was successful in securing a Record of Decision from the FRA. During preliminary and final design, Leslie served as the lead environmental subconsultant to the tri-venture of Gannett Fleming, Jacobs Engineering, and HNTB Corporation ("Portal Partners"). Leslie and the environmental team were responsible for securing all necessary environmental permits and regulatory approvals, including those from the USACE, USCG, NJDEP, NJHPO, and the NJ Meadowlands Commission. Leslie was Environmental Deputy Project Manager for the environmental portions of this enormous project (estimated construction costs of $1.5B). Her responsibilities included preparation and review of permit applications and daily coordination with

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **National Environmental Policy Act (NEPA) Environmental Review**
- **NJ TRANSIT**
- **Project management**
- **Stakeholder engagement and public involvement**

Firm: The Calladium Group

Education

MS, Environmental Engineering, Department of Systems Engineering, University of Pennsylvania

BS, Environmental Systems Technology, Agricultural and Biological Engineering, Cornell University

Registration/Certification

N/A

Years of Experience

Total: 23

With Current Firm: 3

Work History

2015-Present, The Calladium Group

Training and Industry Skills

OSHA 40-Hour Hazardous Waste Operations (HAZWOPER) Certification

NJ TRANSIT , Amtrak, and Conrail, Safety Training

Leslie Mesnick, continued

the client, regulatory agencies, and the large engineering team. She helped Amtrak and NJ TRANSIT secure more than 20 federal, state, and local discretionary permits, and continues to assist with permit renewals and NEPA re-examinations.

NJ TRANSIT , NJ TRANSIT GRID Environmental Impact Statement, Kearny, NJ: NEPA support: Leslie is supporting the prime consultant and NJ TRANSIT in the preparation of an EIS for the NJ TRANSIT GRID project, a first-of-its-kind electrical microgrid capable of supplying highly reliable power during storms and other times when the centralized power grid is compromised. The Project is a result of a partnership between NJ TRANSIT , the NJ Board of Public Utilities, the USDOE, and FTA. The Calladium Group was initially retained for technical editing services, and was subsequently engaged for a larger role—performing a comprehensive NEPA consistency review; supplementing environmental analyses (including visual and aesthetic resources, electromagnetic fields, land use, community facilities, and a Section 4(f) evaluation); overseeing a substantial historic architectural and archaeological resources investigation pursuant to Section 106 of the National Historic Preservation Act; and leading agency coordination. Leslie performed a comprehensive NEPA consistency review and has been supplementing several environmental analyses.

NJ TRANSIT Mid-Line Loop Project, North Brunswick, NJ: Environmental Deputy Project Manager: As a subconsultant to HNTB, Leslie prepared portions of a draft EIS for NJ TRANSIT 's Mid-Line Loop Project in accordance with New Jersey's Executive Order No. 215 (EO 215). This state-funded project entails an elevated loop track over the Northeast Corridor, a new passenger rail station in North Brunswick, and a reconfiguration of the Jersey Avenue Station. Leslie wrote substantial sections of the EIS, (including Purpose and Need, Project Description, and Indirect and Cumulative Impacts) and coordinated the preparation of the natural resources, air quality, noise and vibration, land use, cultural resources, and other analyses. Leslie also assisted in permitting efforts for the proposed project, including Freshwater Wetlands, No Net Loss Reforestation, and Flood Hazard Area. Leslie served as Environmental Deputy Project Manager for this major infrastructure project.

Amtrak, Sawtooth Bridges Conceptual Design Services, Kearny, NJ: NEPA Lead. As a subconsultant to the tri-venture of Gannett Fleming, Jacobs Engineering, and HNTB Corporation ("Portal Partners"), Leslie performed an environmental screening report to inform the conceptual design for replacement and enhancement of the "Sawtooth Bridges". The Sawtooth Bridges were built in 1910 and are elevated structures that pass over PATH, Conrail, and NJ TRANSIT . As such, they are an integral component of the Northeast Corridor. Leslie was subsequently retained by the client to prepare NEPA documentation for the project. As a key member of the project team, The Calladium Group is leading the preparation of NEPA documentation and playing an integral role in managing compliance with Section 106 of the National Historic Preservation Act, including coordination with consulting parties and the NJHPO. The NEPA studies include detailed analyses of natural resources, wetlands, floodplains, historic and archaeological resources, contaminated materials, land use, transportation, and more. The firm is also serving as a liaison between the environmental and engineering teams to ensure timely information exchange and development of implementable mitigation measures.

LIRR, LIRR Expansion Project from Floral Park to Hicksville, Design-Build Phase, Nassau County, NY. Public Outreach Manager: Leslie is serving as the Public Outreach Manager for the joint venture of Arup-Jacobs in the delivery of Project Management Services to MTACC. The Calladium Group is spearheading an extensive stakeholder outreach program for this transformative project, which extends through five villages and four hamlets in Nassau Country. The firm's role includes coordinating with elected officials, developing and administering the community benefits fund, developing and implementing the design-builder incentive program, and assisting affected property owners.

Robert Rocco, PE

Risk Management

Mr. Rocco is a professional engineer with extensive experience in risk management, business development, project management, engineering supervision, engineering, and design. Assignments have included risk assessment programs for transit, highway, bridges, facilities, water, ports and airport projects, major rail transit and rail freight development projects; fusion test reactors design and installation; facility decontamination and decommissioning; and the civil features of fossil, nuclear and hydroelectric generating stations. He was the supervising engineer responsible for numerous civil designs for fossil, hydroelectric, and nuclear power plants, including roads, railroads, drainage facilities, erosion control systems, circulating water systems, structures, and hydroelectric dam design and stabilization. Mr. Rocco is a decisive team builder with proven skills in communication, management, planning, and problem-solving.

Relevant Project Experience

Hudson Tunnel Project: This is a multi-billion dollar project which will provide two new tunnels beneath the Hudson River to access the Pennsylvania Rail Station. Risk assessment involves developing risk registers for five individual contracts and performing risk analysis on each to provide confidence levels for the contract cost and schedule. Major risks include geotechnical uncertainties related to tunneling under the river and utility work in Manhattan.

New York State Department of Transportation (NYSDOT), Tappan Zee Bridge/I-287 Environmental Review, New York: AECOM was responsible for technical support for the environmental process and is providing program management for major improvements to 30 miles of Interstate 287, including the Tappan Zee Toll Bridge. Held risk workshop for qualitative risk assessment. Identified strategic risks and qualitatively assessed the likelihood and consequence for each. Prepared the Risk Report.

PANYNJ, PATH Permanent World Trade Center Terminal (Task Order Contract), New York, New York: Risk manager responsible for implementing a risk management program for DMJM Harris's scope of work. Performed conceptual and preliminary engineering services, including integrating the terminal work with the numerous stakeholders interfacing with the project. This terminal replaced the terminal damaged during the 9/11 attack. Responsibilities entailed developing a risk plan tailored to the unique requirements of the project and conducting workshop sessions with project personnel to introduce the program concepts, and to identify project risks and respective mitigation plans.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Risk management**
- **Project management**
- **Engineering supervision**

Firm: AECOM

Education

MS/1971/Engineering Management, New Jersey Institute of Technology

BCE/1968/Civil Engineering, University of Detroit

Hazardous Materials Remediation, 1986, Ebasco Services, Inc

Registration/Certification

Professional Engineer:

New York, (Civil) 1975, No: 051954

New Jersey, (Civil) 1978, 24GE02417800

Virginia, (Civil) 1998, 0402-032533

Years of Experience

Total: 33

With Current Firm: 16

Work History

2002-Present, AECOM

Training and Industry Skills

Various

Robert Rocco, PE, continued

The project risks were reflected the relatively large number of upper level opportunities defined for the project. A cost/schedule risk analysis process was developed that met FTA PMO requirements. Estimated cost is $2.2 billion in year of expenditure.

New York City Transit (NYCT), Second Avenue Subway, New York, New York: The Second Avenue Subway is a $16 billion new subway line within New York City's subway system. Risk Manager responsible for meeting Federal Transit Administration risk management directives, including development and implementation of new risk based decision making tools and cost and schedule contingency management processes. Director of support services responsible for project controls, risk management, constructibility and real estate acquisition.

San Francisco Municipal Transportation Agency, Central Subway Project, San Francisco, California: The Central Subway Project (CSP) is a $1.5 billion subway line within San Francisco. Deputy Project Manager for the Central Subway Partners Joint Venture, which has a contract for program and construction management of the CSP. Responsible for JV operation, risk management and configuration management. Established the project's risk management program that included preparation, approval, and implementation of the project execution plan, risk management plan, and the risk mitigation process to meet FTA approval.

Metropolitan Council, Central Corridor Light Rail Transit Project, Minneapolis–Saint Paul, Minnesota: The project will link downtown Saint Paul and Minneapolis via a new 9.8-mile and 15-station light rail transit line. Lead facilitator for a series of workshops for quantitative risk analysis, including risk-identifying meetings, risk register development, a workshop to range risk items, and preparation of the quantitative risk analysis report.

NYSDOT, Route 9A West Street Reconstruction Program, Lower Manhattan, New York: At NYSDOT's request, introduced the risk program to the project team. He conducted cost and schedule risk analysis workshops, and performed a cost and schedule risk analysis of the most significant alternate. The results were presented to NYSDOT. DMJM Harris was part of a tri-venture, acting as an extension of the NYSDOT's staff. The scope of work included replacing the roadway adjacent to the World Trade Center Site. The firm evaluated alternative schemes, supported the environmental process, and assisted the NYSDOT in managing the work. Project valued between $500 million to $750 million.

Amtrak's Three Vent Projects in the New York City Area, New York: AECOM provided construction management services for three vent rehabilitation projects for Amtrak in the New York City area. The work consisted of rebuilding tunnel vent structures. Some structures were adjacent to existing buildings exacerbating risk conditions. Aggregate sum of the work was in excess of $100 million. Presented DMJM Harris's risk management approach to Amtrak senior management in March 2004. Subsequently, Amtrak requested that the risk program be implemented on the three projects. Risk plans were developed and risk identification workshops scheduled.

New York Power Authority Robert Moses Hydroelectric Power Plant: This is an approximately $1 billion project to upgrade the facility control systems, electrical distribution systems and the components of the turbines and related mechanical appurtenances. The most significant risks requiring effective mitigation strategies involved assuring that long-lead items could be delivered as needed and the scope of the systems work is adequately defined for contractor's bid.

Long Island Railroad (LIRR) Expansion Project from Hicksville to Floral Park Long Island: This is an approximately $2.5 billion project to install a third track between Hicksville and Floral Park and to make several improvements to grade crossings along this portion of the rail line. Major risks include resource availability, overly aggressive schedule and resource constraints.

Dan O'Connor, PE

Marine Diving

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- Commercial Diving
- Underwater Bridge Inspection
- Bridge Inspection
- Construction Inspection

Mr. O'Connor is a Senior Civil/Structural Engineer with over 24 years of experience in the design, inspection, permitting, repair and construction of waterfront and offshore marine engineering projects including piers, wharves, bulkheads, dry docks, floating structures, mooring/berthing systems, and dredging. He has managed complex, multiphase and high-profile engineering projects.

Mr. O'Connor has experience in Design-Build and Design-Bid-Build project plans, specifications, and engineering cost estimates. He has performed above and underwater inspections of marine facilities as well as planning and concept development reports. Additionally, he has experience with GIS strategies for infrastructure management.

Relevant Project Experience

Rhode Island DOT, Bridge Inspection, Statewide, RI: Project included the inspection of bridge structures under a Master Price Agreement. To date, Collins has performed the above water inspection of 460 structures under two consecutive contracts.

Massachusetts DOT, Bridge Inspection, Statewide, MA: Project included statewide bridge inspection and engineering services. Routine, special member, and fracture critical bridge inspections were provided. Bridges ranged from minor to complex steel, concrete, prestressed concrete, and timber bridges. Work included: the review of previous inspection and load rating reports; field inspections; the preparation of bridge inspection reports within MassDOT's Bridge Inspection database and SI&A sheets; repair recommendations; and Element Level evaluations for bridges that required a routine inspection. All operations were completed in conformance with FHWA, NBIS, AASHTO, and MassHighway standards and specifications.

Rising Tide Waterfront Solutions, LLC, Verrazano Narrows Bridge Inspection, Brooklyn, NY: Project Manager. Project included supplementing a dive crew for the underwater inspection of the Verrazano-Narrows Bridge. The same professional engineer/diver used in the inspection reviewed the report prepared by the prime consultant. Collins provided review comments for the prime to address. Once the report was revised, the final report was signed and stamped.

Massachusetts DOT, Bridge Live Load Rating Project, Statewide, MA: Project included load ratings of MassDOT and municipality owned bridges located throughout the State of Massachusetts as part of MassDOT's Bridge Live Load Rating Program. The general scope of work

Firm: Collins Engineering, Inc.

Education
BS, Civil Engineering, Lehigh University, 1993

Registration/Certification
Professional Engineer: NH

Years of Experience
Total: 24
With Current Firm: 4

Work History
2013-Present, Collins
2006-2013 Appledore Marine Engineering, Inc.
1998-2006, Independent Consulting Engineer
1993-1998, M.G. McLaren Engineering Group

Training and Industry Skills
ADCI Commercial Diver

Dan O'Connor, PE, continued

consisted of the determination of the live load capacity for bridge structures. The work also included the review of existing ratings and making necessary calculations to bring them into compliance with the National Bridge Inspection Standards, 23 CFR part 650 subpart C, section 650.303. Prior to starting work on each bridge, Collins reviewed the existing plans, inspection reports and other pertinent data furnished by MassDOT. Based upon the existing plans, inspection reports, and data, Collins submitted a cost proposal for each bridge structure for MassDOT's approval. All bridges were rated for H 20, Type 3, Type 3S2 and HS 20 truck loading, as defined by the American Association of State Highway and Transportation Officials (AASHTO). Collins provided a full analytical live load rating in accordance with MassDOT guidelines and performed the ratings utilizing the Allowable Stress Design (ASD) method for the H 20, Type 3, Type 3S2 and HS 20 vehicles. In addition to the above ratings, Collins provided a rating for the MS18 (HS20) vehicle using the Load Factor Rating(LFR) method to be in compliance with the requirements of the December 1995 FHWA NBIS Coding Guide.

Private Client, 6 Ellsworth Retaining Wall Inspection, Nahant, MA: Project included a structural assessment and letter report for a residential retaining wall in Nahant, MA. The retaining wall is constructed of mortared stone and is approximately 50 feet long.

BP America Production Company, Carteret Marine Terminal Inspection, Carteret, NJ: Principal. Project included underwater inspection of six steel caisson structures, steel-pile-supported access walkways, fender systems, and gabion basket wall shore protection. Data collection included ultrasonic steel measurements of sheet pile and H-pile elements, timber coring of piles, water depth soundings by fathometer, and digital photography.

Cianbro Corporation, Berth 11 Underwater QC Inspection, Portsmouth, NH: Principal. Project included underwater surveillance and inspection for the underwater work that was being performed as part of the Structural Repairs to Berth 11 at the Portsmouth Naval Shipyard in Portsmouth, New Hampshire. The frequency of the underwater surveillance and inspection was quarterly at a minimum and more frequently to verify bulkhead installation compliance and final inspection acceptance. Prior to the start of dive operations, Collins provided a dive operations plan and hazard analysis for review and acceptance by the Navy. Letter reports were provided to the client after each trip to the site. It is currently anticipated that 18 trips will be required to perform this work.

Con Edison, Sherman Creek Underwater Inspection, New York, NY: Principal. Project included the above and underwater inspection of the dock structure at the Sherman Creek Station that consists of a 1,240 ft long seawall and bulkhead structure. Project deliverables included schedule, eHASP, summary letter, technical presentation, and comprehensive inspection report.

Con Edison, Hudson Avenue Underwater Inspection, New York, NY: Principal. Project included the above and underwater inspection of the eastern portion of the waterfront structures at the Hudson Avenue Generating Station. These waterfront structures included intake screen well, tunnels, concrete deck, ssp bulkhead, and timber fender system. One tunnel inspection required a penetration dive (80 LF). Project deliverables included project schedule, eHASP, summary letter, technical presentation, and comprehensive inspection report.

Town of Lincolnville, Harbor Planning, Lincolnville, ME: Project Manager. Project included the evaluation, planning, and feasibility study for the Town of Lincolnville, Maine's harbor facilities. This included an assessment of the existing facilities, collaborative planning process with Town and key stakeholders to develop viable alternatives, economic analysis and harbor maintenance plan, final report and presentation to the Town.

City of Portland, ME, Port Ocean Terminal Dock Repairs, Portland, ME: QA/QC. Project included the design of repairs to the concrete deck at the Port Ocean Terminal in Portland, Maine.

Michael Gyiraszi

CADD Support

Mr. Gyiraszi has over twenty-three (23) years experience in CADD work and over thirty (30) years of experience in plan preparation. He has worked at AmerCom since 1992 and has prepared many construction contract documents and studies for various public agencies in New Jersey including the NJTA, NJDOT, NJ Transit and various agencies and counties throughout the area.

Relevant Project Experience

NJ Transit – ARC Trans Hudson Express Tunnel: Worked on producing rail and structural plans while assigned to the Tunnel Partnership Staff for CADD work on this $15Billion project.

PANYNJ – Cross Harbor Freight Program: Greenville Rail Yard Redevelopment Contracts #8 and #9, Jersey City, NJ – Completed CADD work for $100M reconstruction of the rail yard. Work included foundation designs and structural contract drawings for elevated transformer platforms, pump stations, storage sheds, trailer pads and light towers.

MTA LIRR – Contr. #6121 – Design/Build Johnson Ave. Yard Reconfiguration, Jamaica, Queens, New York: Completed CADD work for high mast lighting and retaining wall foundations.

NJDOT – Route 46 over the Passaic River: Completed CADD work for four new sign structures along with signing and striping plans.

MNR No. 71479 D/B - 14th Ave Bridge Mt Vernon: Completed CADD work for micropile plans.

NJ Transit – Morgan Draw Bridge over Cheesequake Creek – Completed CADD work for new bridge control platform 15' high x 20'x 30' to support electrical shed and transformers.

NJ Transit – Contract No. 13-007, Task Order Contract: Bridge and Railway Engineering, AR No. 11 Bergen County Line M.P. 6.34 Culvert Replacement Design – Completed CADD work for base mapping and Right-of-Way.

Williams Companies – LNG Plant Bridge (Metro Road) Replacement over Moonachie Creek, Carlstadt, NJ: Completed CADD work for a new 89' span bridge utilizing built-up steel plate girders and precast components for ABC construction. Project won ACECNJ's Grand Honor Award.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Experienced with CADD on Major Infrastructure projects over $100 million**
- **Extensive CADD experience with NJTransit Projects**
- **Expert in Structural CADD**
- **Expert in Civil CADD**

Firm:
AmerCom Corporation

Education
CADD Training Courses

Registration/Certification
n/a

Years of Experience
Total: 30
With Current Firm: 26

Work History
1992-present, AmerCom

Training and Industry Skills
Various

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Resumes of

Project Administration

Vlad Allrich

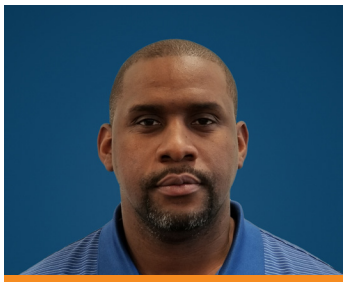
Office Engineer

Mr. Allrich has over 15 years of experience working as an assistant resident engineer, office engineer, and as a heavy highway construction inspector on major road and bridge construction projects in New Jersey.

Relevant Project Experience

New Jersey Department of Transportation, Route 7 Hackensack River Wittpenn Bridge Contract 3A: Assistant Resident Engineer/ Office Engineer on the Route 7 Hackensack River Wittpenn Bridge Contract 3A. This $14 million construction project includes a storm water pump station, a geotechnical soil surcharge in preparation for the Fish House Road bridge abutments, retention basin, pipe jacking under two railroads, and reconstruction of a portion of Fish House Road. Duties and responsibilities include reviewing and inputting material questionnaires and field inspection reports into the NJDOT SiteManager accounting program, organizing and tracking material deliveries and material certifications, preparing various geotechnical construction activity reports, preparing regulated waste disposal reports and documenting material handling and custody transfers, preparing contractor monthly pay estimates, assisting the resident engineer with claim and change order packages, reviewing the contractor's CPM schedules and alerting the resident engineer of discrepancies, preparing as-builts, tracking RFIs and coordinating resolution with the design consultant, document control, plotting contractor's work progress on office plans, preparing and tracking all required EEO documents, and assisting the resident engineer with all administrative work for ongoing construction of the project.

New Jersey Department of Transportation, Route I-78 Union/ Essex Rehabilitation Contract B, Contract No. 054003732: Assistant Resident Engineer/Office Engineer on this $73 million interstate reconstruction project. Work included the complete rehabilitation and realignment of the express & local lanes, and rehabilitation of the bridge decks along Rt. I-78 from MP 53.40 to MP 57.13. Duties and responsibilities included reviewing and inputting material questionnaires and field inspection reports into the NJDOT SiteManager accounting program, review and preparation of contractor payments, organized and tracked material deliveries and material certifications, assisted the resident engineer with claim and change order packages, reviewed the contractor's CPM schedules, prepared as-builts, tracked RFIs and coordinated resolution with the design consultant, document control, plotted work progress on office plans, prepared and tracked all required



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Change Order Development and Tracking**
- **Material Approvals and Regulated Waste Disposal**
- **Plotting Work Progress on Office Plan Set**
- **RFI Investigation and Resolution**

Firm: AmerCom Corporation

Education
BS, Civil Engineering, New Jersey Institute of Technology

Registration/Certification
NICET 4

NJDOT Concrete Testing Technologists

Certified Asphalt Technologist- Level 1

Certified NJDOT Soil Testing Technician

ACI Certified (Concrete Construction Technology

Certified Traffic Control Coordinator-Rutgers College

Years of Experience
Total: 15

With Current Firm: 6

Work History
2011-2012, NJDOT

Training and Industry Skills
MS Office Professional

Vlad Allrich, continued

EEO documents, and assisted the resident engineer with all administrative work for ongoing construction of the project.

New Jersey Department of Transportaion, Route 280 at Garden State Parkway Interchange 145, Contract No. 011053110: Office Engineer/Inspector on this $17 million bridge replacement and roadway widening project for a two-lane ramp from GSP Interchange 145 to I-280. Work included inspection of the contractor's means and methods for bridge superstructure and substructure construction, drilled shafts, maintenance and protection of traffic, bridge demolition, new pavement box, median barrier, utility relocations, milling, HMA paving, concrete paving, retaining walls, steel erection, and concrete deck construction. Office responsibilities and duties included schedule reviews, setting up and maintaining the ACES computer system, using MS Office, responsible for compilation and review of the daily inspector reports, logging as-built quantities and maintaining the same on the office plans to make sure there is no overlap in payment, reviewed construction material submittals such as questionnaires and certifications and delivery slips, checked contractor payrolls, tracking shop drawing submittals, developed Construction Orders, EEO documentation, monthly pay estimates and change order preparation.

New Jersey Department of Transportation, MRR Contract #155: Road Construction Inspection on this $7 million road rehabilitation project on Route 206 in Sussex County. Responsibilities and duties included on- site inspection of the contractor's means and methods for milling, HMA paving, joint repair, concrete curb construction, drainage, guard rail, line striping, tack coat application, and the maintenance and protection of traffic.

New Jersey Department of Transportation, MRR Contract #154: Road Construction Inspection on this $2 million roadway resurfacing project located on Routes 439 and 124 in Union County. Responsibilities and duties included on-site inspection of the contractor's means and methods for maintenance and protection of traffic, milling, Superpave HMA paving, sidewalk, curb, and pavement markings. All work was performed at night utilizing proper nighttime lighting procedures.

New Jersey Department of Transportation, 1st & 2nd Street Bridges: Construction Inspector on a $2 million bridge replacement project over NJ Transit's Morris & Essex Rail Line in Newark, NJ. Duties included on-site inspection of the contractors means and methods for bridge demolition, concrete formwork, reinforcing steel installation, concrete deck installation, abutments, sidewalks, milling, paving and maintenance and protection of traffic.

New Jersey Turnpike Authority, Contract #R1428, Newark Bay-Hudson County Bridge Deck & Approach Repairs: Road and Bridge Construction Inspection on a $13 million New Jersey Turnpike Bridge Deck Repair and Approach Roadway project. Duties and responsibilities included on-site inspection of the contractor's means and methods for bridge deck removal, bridge deck replacement, bridge deck repair, installation of reinforcement steel, stay in place forms, deck waterproofing, parapet construction, milling, paving, pavement markings, installation of shielding and MPT.

New Jersey Turnpike Authority, Contract #R1397, Newark Bay-Hudson County Bridge Deck & Approach Repairs: Road and Bridge Construction Inspection on a $13 million New Jersey Turnpike Bridge Deck Repair and Approach Roadway project. Duties and responsibilities included on-site inspection of the contractor's means and methods for bridge deck removal, bridge deck replacement, bridge deck repair, installation of reinforcement steel, stay in place forms, deck waterproofing, parapet construction, milling, paving, pavement markings, and installation of shielding.

Gene Finnegan

Assistant Office Engineer

Mr. Finnegan has over ten (10) years of office engineer, construction engineering and field inspection experience on major heavy highway and infrastructure improvement projects. He is currently serving as the Office Engineer on the $170M Route 7 Wittpenn Movable Bridge replacement project located in Kearny and Jersey City, NJ.

Relevant Project Experience

New Jersey Department of Transportation(NJDOT), Route 7 (1953) Hackensack River Wittpenn Bridge, Contract 3, Main Lift Span and Kearny Approach, Township of Kearny and City of Jersey City, Hudson County, NJ: Office Engineer on this $170M movable bridge project located in Hudson County, New Jersey. Contract 3 involves the the construction of the main lift span towers and isotropic deck on piers constructed in Contract 1, counterweights, all mechanical and electrical systems, control and machinery house, elevator, and the elevated roadway portion of the western approach. Office Engineer duties include maintaining all office records including those specialized for movable bridge projects, prepare agendas and meeting minutes and attended all meetings with project stakeholders including the US Coast Guard and NJDOT Movable Bridge Unit, NJDEP permitting requirements, review and approve inspector's daily work reports (DWRs), track material deliveries and verify material acceptance by certification or inspection reports, as-builts calculations, monthly estimate auditing, track RFIs and designer resolutions to changed field conditions, assisted RE with contractor claims and change order processing, maintain logs for inspector assignments and contractor work activities, special assignments and other office engineering duties.

NJDOT, Route 17 NB, Linwood Avenue to Lake Street, Resurfacing, Bergen County, NJ: Road/Bridge Inspector on this $6.3 million pavement restoration project located in Bergen County. Major work Items inspected include concrete milling, HMA milling, HMA pavement repair, full depth concrete pavement repair, stone matrix ashalt (SMA), fog seal, polymerized joint adhesive, HMA core samples, reset castings, reconstructed manholes and inlets, sanitarty sewer manholes, reset gas valve boxes, concrete curb and sidewalk including ADA compliant ramp construction, detectible warning surface, crosswalks, rumble strip, raised pavement makers (RPMs), temporary latex striping, long life epoxy striping, thermoplastic traffic markings, night work and MPT. Also entered daily work reports (DWRs) into SiteManager, performed as-built calculations, project closeout paperwork and performed other office engineering related duties.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Office Engineer on $170M Lift Bridge Project**
- **Familiar with Navigable Water Requirements**
- **US Coast Guard and NJDOT Movable Bridge Experience**
- **NJDEP Permitting Processes**

Firm:
AmerCom Corporation

Education
BS, Computer Engineering, Manhattan College

Registration/Certification
NICET II Certified

ACI Concrete Field Testing Technician Grade 1

NJSAT New Jersey Asphalt Paving Technologist

Traffic Control Coordinator Issued by Rutgers CAIT

Years of Experience
Total: 10

With Current Firm: 5

Work History
2013 -present, AmerCom

Training and Industry Skills
OSHA 10-hour Construction Safety Program

OSHA Confined Space Entry Program

Microsoft Office Suite

Gene Finnegan, continued

NJDOT, Region North Maintenance Term Agreement Task Order #8, CI Services for Maintenance Repairs and JOC Contracts, Various Locations, NJ: Road/Bridge Inspector for this multi-faceted $3 million Maintenance Term Agreement Contract with work assignments located throughout northern NJ. Work items inspected include A, B, and E inlet reconstruction, reset and replace inlet castings, bridge curb and sidewalk repairs, bridge deck rehabilitation using Type A rapid set concrete, pier and abutment substructure repairs, beam jacking to facilitate pedestal and pier cap repairs and reconstruction, steel girder and diaphragm rehabilitation, and maintenance and protection of traffic. Also required to utilize SiteManager to input daily work reports (DWRs) and other contract information. Also entered daily work reports (DWRs) into SiteManager, performed as-built calculations, project closeout paperwork and performed other office engineering related duties.

NJDOT Route 80, Route 46 (Ledgewood Ave) to Cherry Hill Road (CR-654) Resurfacing Project, NJ: Road/Electrical inspector and office engineer on this $12.8 million pavement rehabilitation project. Major work Items inspected include HMA milling and micro-milling, HMA pavement repairs, slurry seal, polymerized joint adhesive, HMA surface course, over 22 miles of high performance thin lift overlay (HPTO), HMA core samples, reset castings, reconstructed manholes and inlets, concrete curb and sidewalk including ADA compliant ramp construction, rumble strips, raised pavement makers (RPMs), temporary latex striping, long life epoxy striping, thermoplastic traffic markings, night work and MPT. Office engineer duties included assisting the RE with claims and change orders, entered daily work reports (DWRs) into SiteManager, performed as-built calculations, project closeout paperwork and other office engineering related duties.

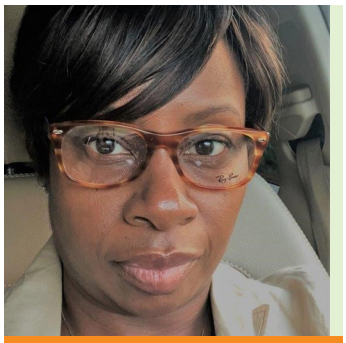
NJDOT, Palisades Interstate Parkway Resurfacing from I-95 to the New York State Line, Bergen County, NJ: Road/Bridge Inspector on this $12 million pavement restoration project. Project spans from Route 95 to the NY State line in Bergen County. Major work item inspected include 25 miles of milling and HMA paving, polymerized joint adhesive, reset castings, reconstruct manholes and inlets, vertical and sloping curb, sidewalks, rumble strips, raised pavement reflectors (RPMs), long life epoxy striping, thermoplastic traffic markings, Type B concrete deck repair, elastomeric joint seals, bridge deck waterproof surface course (BDWSC), night work and MPT.

NJDOT, South Summit Ave., Str. No. 0226-152 over Route 80, Ramp L, and Route 17 SB and Str. No. 0214-151 over Route 17 NB Bridge Deck Replacement, NJ: Construction Inspector for this $5.0 million bridge deck replacement and intersection improvement project located in Hackensack NJ. Work performed consisted of the staged deck replacement of the South Summit Avenue Bridge, Ramp L, and Route 17 SB, and South Summit Avenue Bridge. Also included was the complete reconstruction of the Ramp I and So. Summit Avenue intersection. Work included the partial demolition of the existing concrete deck and parapet, Joint Class D. Construction, total replacement of approach slabs, strip seal expansion deck joints, construction of a new HPC deck superstructure, near-white blast cleaning and painting of stringer top flanges with pollution control collection system, substructure spall repairs, bridge sidewalk and parapet, new bridge lighting systems, cleaning existing drainage structures and pipes, relined 16-inch gas main with new vaults, under-bridge and bridge approach utility work. Also entered daily work reports (DWRs) into SiteManager, performed as-built calculations, project closeout paperwork and other office engineering related duties.

NJDOT, , Park Avenue Bridge Over Route 3, NJ: Road/Bridge Inspector on this, $10 million bridge replacement project. Duties and responsibilities included the on-site inspection of the contractor's means and methods for bridge footings and foundations including piles, retaining walls, sanitary sewer construction, bridge deck reinforcement, HP Concrete bridge deck, structural steel, water mains, gas mains, bridge mounted utility conduits, aerial and underground electric relocations, sheeting, stay in place deck forms, bridge deck joint installation, foundation excavation, reinforced concrete pipe, roadway excavation, subbase, HMA surface course, drainage structures, guide rail, multi-stage maintenance and protection of traffic, bridge demolition within confined construction staging area, and nighttime construction operations using proper lighting techniques. Also entered daily work reports (DWRs) into SiteManager, performed as-built calculations, project closeout paperwork and other office engineering related duties.

Sharron Smith

Document Control Specialist



QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Document Control**
- **Contract Management**

Ms. Sharron Smith is a collaborative engineering document management professional with over 15 years of Executive Office and Administrative Management experience. She is a project-oriented self-starter with excellent communication, analytical, organizational, and strategic planning skills. Ms. Smith is also a motivated self-starter possessing strong interpersonal skills and ability to effectively interface with all levels of management. In addition, she is a proactive multi-tasker with demonstrated strengths in MS Office, MS SharePoint, Primavera Contract Manager, Livelink, and Expedition. Ms. Smith has the ability to handle sensitive information with tact and strict confidentiality.

Relevant Project Experience

New Jersey Transit, NJ Transit ASES II Positive Train Control, New Jersey: Contract Management Specialist. Administer document and system access rights and revision control to ensure the security of system and integrity of master documents using SharePoint. Search electronic sources, such as databases or repositories, or manual sources for information. Assure that all NJTPTC team personnel are adequately trained in the principals, policies, and procedures of the configuration management system. Perform regular audits on corporate documents in order to ensure that all documents are properly submitted to team member and other departments. Consult with end users regarding problems in accessing electronic content. Exercise security surveillance over document processing, reproduction, distribution, storage, or archiving. Develop or configure document management system features, such as user interfaces, access profiles, and document workflow procedures. Assist in the development of document or content classification taxonomies to facilitate information capture, search, and retrieval.

Newark Airport, Newark Airport Terminal A Redevelopment Program, New Jersey: Document Control Content Manager. Created websites and provided training to the team members. Trained users to navigate within Content Server. Searched for documents and other work managed in Content Server and added new documents and other Content Server items. Applied custom categories (and attributes) to documents and edit these categories. Revised documents and other information managed in Content Server. Initiated document review workflows. Process workflow and other tasks assigned to them. Assisted IT helpdesk with Livelink technical issues. Created and implemented a document control department and system. Developed project and

Firm:
Stellar Services, Inc.

Education
BA, English, Hunter College, New York

Registration/Certification
n/a

Years of Experience
Total: 12
With Current Firm: 4

Work History
2014 – present, Stellar Services, Inc.
2006 – 2014, AECOM

Training and Industry Skills
n/a

Sharron Smith, continued

corporate specific procedures including templates, and reporting formats to meet client requirements. Manage the Project Document Control Team in receipting, logging and distributing project information as needed. Produce specific documentation in accordance with Client and contractual requirements. Submit documentation in line with defined timetables and in client's web-based document control system (Livelink) or e-mail system

Port Authority of New York and New Jersey, World Trade Center Downtown Design Partnership, New York, New York: Document Control Coordinator. Responsible for the flow and storage of all project documentation such as correspondence, contracts, construction documents, engineering schedules throughout the construction team electronically and hard copy files. Received, tracked, and monitored documents using Primavera document management system registering documents and producing logs, transmittals, and other reports as required. Coordinated mailing of documents via FedEx and UPS

New York City Metropolitan Transportation Authority, Second Avenue Subway Project, New York, New York: Executive Assistant. Compiled monthly reports on the progress of Second Avenue Subway to distribute to the MTA and the FTA. Developed a new hire processing template for new employees. Collected, retained, distributed and transmitted project documents, reference documents, project reports, transmittals, drawings, submittals and request for information using MS SharePoint. Managed timesheets and expense report focusing on accuracy for approval assuring the appropriate charge numbers are billed. Responsible for space management and office equipment for new employees. Delivered confidential and high quality secretarial and support services to the Leader and other staff (as required) including but not limited to producing documents, presentations, researching and gathering information and authoring non-standard letters, reports, and other documentation

James Singer

Schedule Controls

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Construction management**
- **Administration of prime and subcontracts**
- **Project close-out**
- **Coordination and scheduling of civil construction**

Jim has vast experience in construction management services with an emphasis in schedule controls and close out, settlement and claim resolution/prevention. He provides direct and peripheral supervision, coordination and scheduling of civil construction and electrical activities on a variety of major construction projects. In addition, he develops software systems for document control and construction claims. During Mr. Singer's career, he has served in many positions such as Project Manager, Project Engineer, Office Engineer, Electrical Engineer and Electrical Superintendent.

Relevant Project Experience

NJ TRANSIT , On-call Construction Management Contract, Newark, New Jersey: Sr. Scheduler. Mr. Singer provided CPM scheduling services for the Newark City Subway Tunnel Ventilation Restoration Project (Superstorm Sandy). Scope of work involved restoring structural, mechanical and electrical facilities, testing and re-commissioning of the existing tunnel ventilation system for the light rail system.

NJDOT, Route 72 Manahawkin Bay Bridge, Stafford Twp., New Jersey: Sr. Scheduler. Mr. Singer is currently reviewing the Contractor's schedule monthly and making recommendations, as necessary for Contract #4. Contract 4 consists of the improvements, repairs and modifications of the approaches, abutments and structures of the Hilliard Thoroughfare Bridge and the existing North Route 72 Bay Bridge.

MTA/TBTA, Verrazano-Narrows Bridge Master Plan of Upper Level, Brooklyn and Staten Island, New York: Sr. Cost Estimator/Sr. Scheduler. Mr. Singer provided cost estimating and CPM scheduling for the conceptual design of the upper level approaches and the Belt Parkway connector ramps. The six projects included Bike Lane; Denyse Wharf Ramp Connection; Belt Parkway Reconfiguration; Belt Parkway Ramps; Upper Level Approaches; and Existing Rehabilitation needs.

DRPA, Benjamin Franklin Bridge Walkway Preservation, Camden, New Jersey, and Philadelphia, Pennsylvania: Sr. Cost Estimator/ Sr. Scheduler. Mr. Singer is providing cost estimating and scheduling services. He reviews the plans and specifications for this project to prepare detailed cost estimates and construction schedule. The scope of this project is methods of preventative maintenance of the walkways over the span of the bridge, including walkways, railings, and framing.

DRPA, Betsy Ross Bridge Painting of NJ Approaches and Steel Repairs Phase I, Camden, New Jersey, and Philadelphia, Pennsylvania: Sr. Scheduler. Mr. Singer is providing scheduling services

Firm: Promatech, Inc.

Education
BS, Electrical Engineering, Fairleigh Dickinson University

Years of Experience
Total: 40

With Current Firm: 20

Work History
1998-Present, Promatech, Inc.

Training and Industry Skills
Primavera P3/P6

eTakeoff, SureTrak

Expedition

4Clicks softwares

James Singer, continued

for the first phase of the Betsy Ross Bridge painting and steel repairs. The scope of work includes miscellaneous steel and concrete repairs, underdeck spall repairs, substructure spall repairs, blast cleaning and application of a new coating system. Currently monitoring the Contractor's construction schedule on a monthly basis and making recommendations, as required.

WMATA, Rehabilitation Design of Eight Segmental Bridges, DC, Maryland and Northern Virginia: Sr. Cost Estimator/Sr. Scheduler. Mr. Singer is currently providing cost estimating and scheduling services for the rehabilitation of eight segmental bridges throughout the Washington Metropolitan area. Scope of work includes concrete spall repairs, cracking repairs, drainage, anchorage protection, grout and related items.

PANYNJ, Lincoln Tunnel (LT) Helix Replacement Project, Weehawken, New Jersey: Sr. Cost Estimator/Sr. Scheduler. Mr. Singer provided cost estimating and CPM scheduling for six potential schemes for the replacement of the Lincoln Tunnel helix. The helix's seven-lane roadway is supported on ten individual structures and on-grade segments. The helix carries inbound and outbound traffic of the LT over the local streets of Weehawken and the Hudson-Bergen Light Rail. Other features below the roadway include NJ TRANSIT bus parking, the LT Administration/Maintenance Building and the existing Amtrak Tunnel.

SEPTA, General Engineering Contract, Philadelphia, Pennsylvania: Sr. Cost Estimator/Sr. Scheduler Mr. Singer provided cost estimating and scheduling services for this task order contract. Several projects include Frankford Garage, Elmwood & Germantown Station Roof Replacements, Exton Station Parking Expansion and the Greenline Portal.

NJTA, Supervision of Construction Services for Miscellaneous Improvements for Contract T100.381, Northern New Jersey: Sr. Scheduler. Mr. Singer is reviewing the Contractor's schedule monthly for shoulder and ramp bridge deck reconstruction and making recommendations, as necessary. The scope of work includes bridge deck reconstruction and parapet replacement with miscellaneous structural repairs; roadway, lighting and drainage improvements; pavement striping, emergency and routine repairs.

NJTA, Supervision of Construction Services for Repainting of Structural Steel and Miscellaneous Bridge Improvements, State of New Jersey: Sr. Scheduler. Mr. Singer reviewed the Contractor's schedule on a monthly basis and made recommendations, as necessary. The scope of work included bridge painting and structural repairs on various locations along the Garden State Parkway.

DelDOT, Elkton Road, Maryland Border to Casho Mill Road, Newark, Delaware: Sr. Scheduler. Mr. Singer prepared the detailed construction schedule. The scope of work included a full-depth reconstruction of Elkton Road and the addition of a travel lane between the intersection of Otts Chapel Road and SR4 Christiana Parkway.

MTA/LIRR, Investigation of Storm Surge and Yard Location, Long Island City, Queens, New York: Mr. Singer provided cost estimating services for the $3.5M Long Island City Yard Flood Study project and the $2.5M West Side Yard Flood Study. The scope of work included investigating the flooding within and adjacent to the yards and determining the actual pump and drainage operations to provide an understanding of the sequence of events due to Hurricane Sandy. The results of this study were then used to recommend mitigation alternatives to prevent future flooding.

City of Philadelphia Department of Streets, On-call General Engineering Contract, Philadelphia, Pennsylvania: Mr. Singer provided preliminary cost estimating for repairing historic streets listed on the Philadelphia Historic Street Paving Thematic District Directory. Scope of work included pricing to demolish and replace brick pavers and stone and granite curbs.

Sonia Corte

Project Accounting & Administration

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Project administration**
- **Lift bridge construction project**
- **Technical Knowledge of lift bridge construction**

Firm: AmerCom Corporation

Education
Paralegal, New Jersey City University

Years of Experience
Total: 10

With Current Firm: 10

Work History
2008-present, AmerCom

Training and Industry Skills
Notary Public, State of New Jersey

Ms. Corte has over 10 years of project administration experience involving the construction management and inspection of Moveable Lift Bridges over major navigable waterways. She has extensive experienced in coordination of documents involving drilled shafts, concrete, structural steel and movable bridge mechanical and electrical components. Efficient coordination of stakeholders including the US Coast Guard, NJDOT Movable Bridge Unit, owners and contractors on multiple movable lift bridge bridges.

Relevant Project Experience

NJDOT, Route 7 Wittpenn New Bridge Projects – Town of Kearny & Jersey City:

- Contract 3, New Construction Lift Bridge Superstructure and Approaches Pier Roadway, $167M
- Contract 1, New Construction River Piers & River Protection System, $94M

Contract 1 & 3 Wittpenn Project constructing a new Wittpenn Bridge which will be a vertical lift bridge that will carry New Jersey Route 7 over the Hackensack River connecting Kearny and Jersey City, New Jersey. Project consists of the installation of drilled shafts, sheeting, pre-cast cofferdams and mass pours required to construct the pier stems and caps, the monitoring of vibrations or movement at the adjacent bridge structure, leak detection monitoring of a 150 YR old water main across river bed, maintaining environmental countermeasures and removal, tracking and disposal of Regulated Material generated from the shaft excavations. Complete new construction will consist of Structural, Mechanical, and Electrical systems to the Movable Bridge, performed in and over navigable waterways.

Duties and responsibilities include logging all incoming and outgoing correspondence and emails, filing, answering phones, taking meeting minutes, reviewing consultant invoices, creating and maintaining spreadsheets, working directly with the New Jersey Department of Transportation resident engineer, office engineer and inspection staff, report review and date entry using SiteManager and Microsoft Office daily work reports (DWRs), monthly estimates, change orders, EEO and payrolls, organized and scheduled meetings and appointments for the resident engineer, assisted in the research and preparation of reports to be presented to NJDOT, produced and distribute memos, letters, forms, and spreadsheets, extensive research and involvement in EEO contract

Sonia Corte, continued

compliance, attended presentations by NJDOT, research and preparation for responses to tort Claims and contractual claims.

NJDOT, Route 7 Wittpenn Existing Bridge Projects – Town of Kearny & Jersey City:

- Existing Lift Bridge Rehabilitation Priority Repairs #2, $35M
- Existing Lift Bridge Rehabilitation Maintenance Repairs, $12M
- Existing Lift Bridge Rehabilitation Interim Priority Repairs #1, $8M

Maintenance Repairs Projects consisted of the rehabilitation of a movable bridge. Project included a movable bridge control system including electrical repairs, sheave replacement, Wire Rope Replacement, Jacking of the Counterweights, Structural Steel Repairs and traffic control. This project also required night work.
Duties and responsibilities include logging all incoming and outgoing correspondence and emails, filing, answering phones, taking meeting minutes, reviewing consultant invoices, creating and maintaining spreadsheets, working directly with the New Jersey Department of Transportation resident engineer, office engineer and inspection staff, report review and date entry using SiteManager and Microsoft Office daily work reports (DWRs), monthly estimates, change orders, EEO and payrolls, organized and scheduled meetings and appointments for the Resident Engineer, assisted in the research and preparation of reports to be presented to NJDOT, produced and distribute memos, letters, forms, and spreadsheets, extensive research and involvement in EEO contract compliance.

NJDOT, Route 1&9(T) Bridge over the Passaic River, City of Newark and Town of Kearny:

- Existing Lift Bridge Rehabilitation, $35M

Rehabilitation Project included the rehabilitation of a movable bridge. Project included the replacement of the grid deck installed on the previous Contract, structural steel repairs, and movable bridge control systems including mechanical and electrical repairs for this lift span over the Passaic River.
Duties and responsibilities include logging all incoming and outgoing correspondence and emails, filing, answering phones, taking meeting minutes, reviewing consultant invoices, creating and maintaining spreadsheets, working directly with the New Jersey Department of Transportation resident engineer, office engineer and inspection staff, report review and date entry using SiteManager and Microsoft Office daily work reports (DWRs), monthly estimates, change orders, EEO and payrolls, organized and scheduled meetings and appointments for the Resident Engineer, assisted in the research and preparation of reports to be presented to NJDOT, produced and distribute memos, letters, forms, and spreadsheets, extensive research and involvement in EEO contract compliance.

NJDOT, Route I-280 Stickel Memorial Lift Bridge Rehabilitation, Borough of East Newark & Town of Harrison:

- Existing Lift Bridge Rehabilitation, $35M

Rehabilitation Project involved the rehabilitation of a movable bridge. Project included bridge foundation repairs, reconstruction of the fender systems, concrete repairs, structural steel repairs, rebar placement, movable bridge control systems including electrical repairs, mechanical repairs, milling, Super pave HMA paving, pavement markings, structural steel bridge painting, and traffic control. This project also required night work.
Duties and responsibilities include logging all incoming and outgoing correspondence and emails, filing, answering phones, taking meeting minutes, reviewing consultant invoices, creating and maintaining spreadsheets, working directly with the New Jersey Department of Transportation resident engineer, office engineer and inspection staff, report review and date entry using SiteManager and Microsoft Office daily work reports (DWRs), monthly estimates, change orders, EEO and payrolls, organized and scheduled meetings and appointments for the Resident Engineer, assisted in the research and preparation of reports to be presented to NJDOT, produced and distribute memos, letters, forms, and spreadsheets, extensive research and involvement in EEO contract compliance.

Chase DeRose

Cost Estimating

Mr. DeRose has 30 years of experience in the heavy construction industry. He has worked on a wide range of projects, from those valued at $1 million up to $16 billion. His project responsibilities have included cost estimating, scheduling, engineering, design, risk management assessment, project management, site supervision, and project planning. Cesar has been project executive overseeing numerous complex engineering assignments. He has experience with tunnel, bridge, highway, sewer and utility work, foundation supports, marine construction and commercial rehabilitation projects. Cesar is manager of the Capital Cost group, managing the full estimating, scheduling, and constructibility capabilities of in-house support for AECOM business lines in the areas of transit and heavy civil engineering, underground and tunnels, MEP, public works, structures and utilities. He also oversees the cost estimation process from concept estimates (early design definition), budget estimates (advanced design definition), design alternative estimates, construction bid estimates (completed design), check estimates and construction change order estimates.

Relevant Project Experience

Second Avenue Subway Project, New York, NY: Mr. DeRose has held many successive positions on this AECOM*Arup joint venture project, which involves a new $16.8-billion new subway lines, to include 8.5 miles of twin, bore subway tunnels and 16 stations. His roles have included serving as Chief Cost Estimator/Construction Manager and his current role as Manager of Project's Control, Constructability and Cost Estimating for the final engineering and closeout of the First Phase. The scope of work involves tunnel boring machine (TBM) rock tunnels, EPBM soft ground tunnels, mined cavern stations, open-cut construction, slurry walls, and utility relocations. Mr. DeRose is responsible for detailed construction cost estimating and constructability as well as scheduling services for all aspects of the project, except for vehicle acquisition and agency costs. He provided estimating support for the Full Funding Grant Agreement application to the Federal Transit Administration.

Pump Station Cavern, (AECOM) Department of Public Works, Indianapolis, Indiana: Mr. DeRose served as Chief estimator and Projects Control Manager for final design of a $300 million underground pump station cavern having 3 shafts and a short connection tunnel located deep within limestone as part of a larger $1.7 billion project. [2009 to 2011/AECOM]

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Cost estimating for all types of infrastructure projects**
- **In-depth knowledge of rail/transit projects**
- **NJ TRANSIT project cost estimating experience**

Firm: AECOM

Education

MBA., Management and Finance, 1989 Manhattan College, NY

BS, Civil Engineering, 1979, Manhattan College, NY

MS, Civil Engineering, 1982, Manhattan College, NY

Registration/Certification

n/a

Years of Experience

Total: 39

With Current Firm: 14

Work History

2004-Present, AECOM

Training and Industry Skills

Various

Chase DeRose, continued

Deep Rock Tunnel Connector, (AECOM) Department of Public Works, Indianapolis, Indiana: Mr. DeRose served as Chief estimator and Projects Control Manager for final design of a $257 million, six-mile long, and 20' diameter TBM tunnel having 3 access shafts and 3 drop shafts as part of a larger $1.7 billion project.

The Port Authority of New York and New Jersey WTC Transportation Hub: Mr. DeRose served as "The Field Coordination Manager" for the $3.2 Billion Dollar World Trade Center Transportation Hub. Acting as the agent of the Engineer/Architect of Record (E/AOR) to observe construction relative to the contract plans and specifications and report back to the E/AOR. As part of the field observation effort, the representatives maintained daily logs and note any discrepancies relative to the plans and specifications [2010 to 2011/AECOM]

Trinidad and Tobago National Highway Network, Ministry of Works and Transport, Trinidad and Tobago: Chief Estimator and Projects Control Manager for this $2.44 billion National Highway Network Project. This major infrastructure program will support the development of this emerging industrial nation. The first phase of this project will entail the construction of approximately 125 miles of highways, highway extensions, new freeways and a new causeway.

The Permanent Mission of the Socialist People's Libyan Arab Jamahiriya to the United Nations, New York, NY: Mr. DeRose is the Project Director for this program, where AECOM is serving as Owner's Representative for the conceptual, preliminary, the final design and construction of a $25-million Libya House renovation and restoration. The initiatives include the 309 East 48th Street exterior renovations project, whose goal is to remove unsafe conditions on the exterior façade. The Interior Project where the lower portion of the building will be made available for commercially leased office space when the renovation has been completed. Floors 18 – 20 will be Libyan Mission offices floor 21 Ambassador's staff residence and floor 22 and 23 the Ambassador's residence. And the $6 million gut renovation of the 14,000-square foot Ambassador's country residence in Englewood, NJ.

Metropolitan Atlanta Transit Consultants (MATC) which is the General Engineering Consultant (GEC) for the Metropolitan Atlanta Rapid Transit Authority (MARTA), Atlanta, Georgia: Served as Acting Projects' Control Manager; were AECOM, as the lead firm in a Joint Venture, the Metropolitan Atlanta Transit Consultants, is performing services as General Engineering Consultant (GEC) for Track & Systems for the Metropolitan Atlanta Transit Authority (MARTA). The role of MARTA's GEC for Track and Systems is to provide design, engineering, construction management, and management and administration services to support the planning, development, repair, maintenance, and improvement of the Authority's transit system. Currently, the Joint Venture is engaged in 19 individual task orders encompassing analysis, engineering, design, and construction management within traction and station power, communications (variable message signs, public address, telephone and radio), signaling and train control, central control and supervisory control and data acquisition (SCADA), trackwork, fire protection and operations planning.

The Queensboro Bridge, Manhattan, NY: On this $196-million project, Mr. DeRose served as Superintendent/Chief Estimator. The project included the replacement of outer roadways, all structural steel repairs, painting of the lower portion of bridge, renovation of the full electrical system and the anchorage.

Tappan Zee Fender Replacement for the New York State Thruway Authority, Hudson River at Tarrytown, NY: Served as Sr. Engineer/General Superintendent on this $32-million project that involved replacing the existing wooden fender with pre-cast pieces weighing up to 300 tons.

Mike Salvato

Federal Requirements

Michael Salvato has vast experience within the US transit industry and has led numerous initiatives applying innovative practices and technologies to the management of critical assets. He works with organizations to identify needs, translates them into solutions, and drives them into execution plans to improve organizational outcomes. He has implemented multi-organization changes that support strategic objectives, process improvements, lifecycle management, new capabilities, and disruptive technologies. This has resulted in system-level transformations that improved safety, reliability, capital efficiency, operating costs, and lifecycle decisions. For example, he led a multidisciplinary team to achieve a 20% budget saving ($120 million annually) in paratransit services by working with unit leaders to control cost drivers, change delivery models, and upgrade technologies. Michael recently completed a project as the director of enterprise information and asset management, responsible for upgrading the management systems for $1 trillion in multi-modal transportation assets.

As an asset management advisor at Mott MacDonald, Michael works with owners, operators, funders and regulators to support strategic, asset management, digital and other technical advisory services. These services leverage Mott MacDonald global expertise in economics, due diligence, lifecycle costing, program management, resiliency, and smart cities to help clients unlock asset value, efficiencies and sustainability to meet rising expectations of customers, government, industry, and society.

Michael is a Vice President of the Institute of Asset Management, a lecturer on Urban Infrastructure Systems at New York University, and a member of the American Society of Civil Engineering Leadership Council World Vision Taskforce.

Relevant Project Experience

Metropolitan Transportation Authority (MTA), Enterprise Information and Asset Management, New York, NY: Led a business transformation program for lifecycle asset management of $1 trillion in public infrastructure to improve the safety, reliability, costs, and resiliency of the New York transportation system. Led analyses to determine the economic value of physical assets, benchmark the reinvestment rate, and develop evidence of the MTA's economic, environmental, and social value to the region. Led strategy, gap assessments, investment case, and program formation. Established a $500 million portfolio of improvement projects for buses, subways, commuter rail, bridges, tunnels, IT, and

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Understanding of US Transit requirements**
- **Coordinates with multiple agencies and interest groups**

Firm: Mott MacDonald

Education

MS, Urban Planning, New York University, 1995

Ecole Nationale des Travaux Publics de l'Etat, France

BA, Economic Geography, State University of New York, 1990

Pratt Institute, School of Architecture

Registration/Certification

Chartered Financial Analyst, Level One

IAM Asset Manager

APM Reliability Leader

MPS Program Manager

PRINCE2 Project Manager

PROSCI Change Manager

Years of Experience

Total: 26

With Current Firm: 1

Work History

See next page

Mike Salvato, continued

supply chain. Increased accountability of operating groups by introducing the first Asset Management Plans requiring lifecycle justification of capital and operating and continuous improvement investments. Responsible for $190 million in contracts with management consultants, software, and system integrators. Collaborated with the Chief Safety Officer to integrate Safety, Risk, and Asset Management Systems. Designed and implemented an ISO 55000 compliant enterprise management system, business architecture, and capabilities model using a TOGAF Open Architecture and Business Process Platform. Developed an application architecture, common data environment, and system integration for Computerized Maintenance Management, Asset Performance Management, Building Information Management, Geographic Information Systems, Content Management, Enterprise Resource Planning, and mobility using an Enterprise Service Bus following MIMOSA open standards. Ensured compliance with BSI PAS 1192 standards for Building Information Management and Data Management Association in support of high data quality and management. Created new Communities of Practice in Asset Management, Reliability, Continuous Improvement, and Change Management from all agencies to share knowledge and accelerate bottom-up organizational change. Trained over a 1500 people in maintenance, reliability, lean six-sigma, and asset management. Established enterprise change management capabilities to support organizational transformation, competency development, training, and communications.

Metropolitan Transportation Authority (MTA), Strategic Initiatives Implementation, New York, NY: Collaborated with senior leaders and built cross-functional initiatives to improve operations, mitigate risk, and create value through cost savings, processes improvement, and organizational changes. Collaborated with Paratransit business unit leaders to gain control of cost drivers, change service delivery models, and upgrade technologies, resulting in an estimated 20% budget savings ($120 million annually). Developed strategy and business case for lean RCM for rolling stock, which revealed potential savings of over 15% improvements in productivity. Improved service levels by 50% and avoided $20 million in costs by leading teams to improve signal maintenance performance. Changed core processes, management systems, and organizational mindsets. Identified $20 million in savings by working with frontline employees and implementing Lean Six Sigma continuous improvement to develop recommendations to improve speed, cost, and quality of legal, procurement, and IT processes. Researched and implemented new sourcing solutions to lower cost of goods and services by improving supply chain, demand, and process improvements resulting in 10% savings.

Metropolitan Transportation Authority (MTA), Lower Manhattan Capital Construction, New York, NY: Executive Member of the program management team. Responsible for planning, finance, and administration of the $2 billion portfolio of transportation mega-projects for the South Ferry Station and Fulton Street Transit Center designed to aid in the recovery of Lower Manhattan after September 11, 2001.

Metropolitan Transportation Authority (MTA), Capital Budget Administration, New York, NY: Managed over $250 million in annual capital investments in major technology initiatives. Operational technologies included Communications-based Train Control, Automatic Train Supervision, Sonet/ATM, Customer Information Systems, and Automated Fare Collections. Portfolio included investments for 9-11 reconstruction. Optimized capital program allocations by analyzing the impact of the MTA Capital Program, the major cost drivers, and relationships between capital investments and operating expenses. Improved overall outcomes and streamlined decision making by developing tools and reports for strategic management, asset management, performance measurement, and long-range financial planning.

Work History

2018 – Present, Mott MacDonald

1999 – 2018, Metropolitan Transportation Authority

1996 – 1999, Development Planning International

1992 – 1996, New York Chamber of Commerce/NYC Partnership

Marc Papini

Change Management

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Contract compliance**
- **Contract specifications**
- **Comprehensive understanding of the infrastructure**
- **Construction/project management**

Mr. Papini is a results-oriented hands-on operations executive with extensive experience in all facets of the construction industry. A civil engineer as well as a construction attorney he has a comprehensive understanding of the infrastructure business including: construction company operations, engineering/professional services, infrastructure investment & P3, insurance programs, functioning of Federal and State governmental agencies and the laws relating to same. This depth and breadth of knowledge in the industry allows for a keen ability to understand the commercial, technical, and operational risks that face an organization/project protecting same and ensuring profitability. He has experience providing strategic project and risk management advice on high-profile pursuits and active projects with construction values of over $15 billion. Leading pioneer of full stakeholder risk management where all stakeholders are focused on meeting the project objectives. Specialist in facilitating collaboration and creating a team approach to managing complex projects, which reduces posturing, positioning, and disputes and saves millions. Proven strategy to increase profitability, compiled a verifiable track record in regard to the turnaround and completion of complex infrastructure projects, leading complex large scale commercial negotiations, and leading/defending construction claims. Mr. Papini excels at solving arduous commercial and technical issues that arise on infrastructure projects. He has a proven track record of assembling and mentoring teams of qualified professionals specific to the organization and project requirements. One of his most recent operational experience includes the successful turnaround and management of one of the largest and complex design-bid-build projects recently constructed in the Commonwealth of Virginia, the Gilmerton Bridge in Chesapeake.

Relevant Project Experience

Virginia DOT, Gilmerton Bridge Replacement, Chesapeake, Virginia: CEI Project Manager. Mr. Papini acted as the Project Manager successfully managing construction engineering inspection services for the $170 million Gilmerton Bridge replacement structure and subsequently the demolition of the original double-leaf bascule bridge. Overseeing an extremely tight schedule with day and night shifts since September 2011 continuing through March 2014. Replacement structure is among the largest design-bid-build projects currently being constructed in the State of Virginia. Meeting all client objectives; delivering the Project on time and within budget with an exceptional environmental compliance, safety, quality, and public outreach record as

Firm: Modjeski & Masters

Education

Juris Doctorate, University of NH School of Law, 2002

BS, Civil Engineering Northeastern University, 1994

Registration/Certification

Member of the Connecticut Bar

Years of Experience

Total: 24

With Current Firm: 1

Work History

2017-present, MEP Advisors, LLC (associated with Modjeski and Masters, Inc.)

2015-2017, Haley & Aldrich

2006-2015, Parsons Brinkerhoff (WSP)

1998-2006, Balfour Beatty Infrastructure, Inc.

1995-1998, Malcolm Drilling

Training and Industry Skills

See next page

Marc Papini, continued

well as no contractor claims. Developed and implement a first-of-its-kind in the industry Joint Project Risk Management Plan between VDOT and its contractor using best in the industry practices. Precepts used: Code of Practice for Risk Management of Tunnel Works, Engineering and Construction Risk Institute (ECRI), Federal Highway Administration (FHWA), the Project Management Body of Knowledge (PMBOK), and the California Department of Transportation (Caltrans). Developed comprehensive Float-In Risk Management Plan which successfully resulted in the new bridge opening to the traveling public in half the allotted time. Lead advisor to VDOT's senior management on a major Notice of Intent to File Claim from the contractor that placed the Project in jeopardy early on in the project. Win-win settlement was negotiated saving VDOT potentially millions in damages and years of litigation and placing the Project back on track. Having extensive experience in the installation and remediation of drilled shafts, managed the complex drilled shaft program prior to taking over the role as Project Manager.

Virginia DOT, Chincoteague Bridge Replacement Project, Chincoteague Island, Virginia: Lead Expert Witness. Mr. Papini was the Lead expert witness and strategist providing construction claims services to the Construction Litigation Section in the Office of the Attorney General and the Construction Division of VDOT's Hampton Roads District on the Project valued at over $100 million.

Virginia DOT & MDTA, Woodrow Wilson Bridge Replacement, Alexandria, Virginia to Prince George's County, Maryland: Risk Manager. Mr. Papini provided risk management consulting services and advised on the drilled shaft program for the Project valued at $2.5 billion.

Metropolitan Transportation Authority Capital Construction, New York City Second Avenue Subway Project. New York, New York: Risk Manager. Mr. Papini acted as the Risk Manager, Head of the Project Risk Management function for the $4.8 billion Second Avenue Subway project. Developed and implemented a project wide risk management framework consistent with the Code of Practice for Risk Management of Tunnel Works to satisfy the provisions of the $400+ million Owner Controlled Insurance Program (OCIP). Assumed Deputy Director responsibilities: serving as interim resident engineer for Contract 5; led the constructability reviews for contract packages valued at over $1 billion; consulted on the merit of disputes and damages, including representing the owner at meetings of the Disputes Review Board for issues concerning the $400 million tunnel boring machine (TBM) contract; and supported such core staff functions as scheduling, safety, quality, environmental, utility coordination, community relations and change-order administration.

Training and Industry Skills

- Construction Management Association of America (CMAA)
- American Society of Civil Engineers (ASCE)
- American Bar Association (ABA), Forum on the Construction Industry
- Engineering and Construction Risk Institute (ECRI)
- International Partnering Institute (IPI)

Doreen Taveras

DBE Compliance Officer

Ms. Taveras has joined AECOM bringing over 15 years of experience working with the M/W/DBE business community. Utilizing her extensive background, Doreen provides direction and oversight of AECOM's compliance program. Ms. Taveras is responsible for monitoring compliance with M/W/DBE existing policies, and enhancing such policies as needed; communicating with executive management on compliance issues and making recommendations for addressing those issues; conduct outreach to the M/W/DBE & SDVOB community to identify opportunities for participation; assist in the development of RFP, pre-bid and post-bid M/W/DBE & SDVOB utilization plans; and document Good Faith Efforts to reach the M/W/DBE & SDVOB participation goals for each project.

Relevant Project Experience

Ms. Taveras has joined AECOM bringing over 15 years of experience working with the M/W/DBE business community. Utilizing her extensive background, Doreen provides direction and oversight of AECOM's compliance program. Ms. Taveras is responsible for monitoring compliance with M/W/DBE existing policies, and enhancing such policies as needed; communicating with executive management on compliance issues and making recommendations for addressing those issues; conduct outreach to the M/W/DBE & SDVOB community to identify opportunities for participation; assist in the development of RFP, pre-bid and post-bid M/W/DBE & SDVOB utilization plans; and document Good Faith Efforts to reach the M/W/DBE & SDVOB participation goals for each project.

Previously, Ms. Taveras served as Assistant Deputy Chief Diversity Officer for the Department of Diversity and Civil Rights (DDCR) at the MTA Headquarters. She was responsible for providing supervision and staff management of the M/W/DBE Contract Compliance Unit, including, but not limited to, managing the goal setting process, assessing and determining compliance issues related primarily to the MTA's seven operating agencies, analyzing reports, overseeing staff site visits, reviewing and processing goal waivers and reduction requests. Prior to her promotion to Assistant Deputy Chief Diversity Officer, Ms. Taveras also served as Compliance Manager at the MTA, where she reviewed requisition documents, scope of work and contract budgets for goal assignment; analyzed and approved bidders' proposed M/W/DBE plan to ensure compliance and accordance with MTA policy and applicable federal and state regulations; and attended M/W/DBE outreach events and activities.

QUALIFICATIONS FOR RARITAN RIVER BRIDGE

- **Development of Policy and Procedures for DBE Compliance**
- **DBE Outreach**
- **DBE Contract Compliance Monitoring**

Firm: AECOM

Education
Business Administration, LaGuardia College,

Registration/Certification
LIRR Safety Certification and MNR Roadway Worker Procedures Certification

Years of Experience
Total: 15

With Current Firm: 1

Work History
2017-present, AECOM

2014-2017, Metropolitan Transportation Authority - Headquarters

2007-2014, Crescent Consulting

12004-2007, NYC School Construction Authority

Training and Industry Skills
MTA Safety Trainings: NYC Transit Track Safety Certification

Doreen Taveras, continued

Prior to rejoining the public sector, Ms. Taveras was the Director of Development and Special Projects at Crescent Consulting, a boutique MWDBE consulting firm. During her time at Crescent, Ms. Taveras worked closely with the CEO and CFO directing the day-to-day activities involving business development and influenced expansion plans for the firm. Her role included executive oversight and quality assurance for several projects with NYS Article 15A (M/WBE) and U.S. DOT Title 49 CFR parts 26 (DBE) compliance requirements. Her oversight included preliminary review of all master reports prior to submission to the client, ensured the project maintained efforts to achieve the government mandated goals and oversee the overall quality and delivery of services from Crescent Consulting. Ms. Taveras also coordinated and managed M/W/DBE Outreach Events/Workshops for a variety of clients. She collaborated with clients and sub-consultants on all aspects of event planning including development of marketing materials, selection of media sources for marketing efforts, venue selection, vendor negotiations and utilized relationships with external organizations to expand access to target the M/W/DBE market. While at Crescent her client list include but are not limited to NYSDOT, NYCSBS, DASNY, MTA, as well as Private Sector clients such as Goldman Sachs, Silverstein Properties, Steiner Studios, Columbia University, etc.

Ms. Taveras worked at the NYC School Construction Authority (NYC SCA) as the Business Development Coordinator where she was responsible for overseeing M/W/LBE contract compliance in the boroughs of Brooklyn and Manhattan. Collectively the boroughs represented over $500 million in active construction projects. As part of her oversight, she tracked M/W/LBE compliance across multiple projects through a series of reports utilized to analyze and improve compliance and monitored Prime/General contractor goal attainment relative to commitment and recommend corrective action when appropriate. In addition, she established partnerships with various Chambers of Commerce, Trade Associations, Economic Development Corporations and Business Associations promoting the SCA's Mentor Protégé Program and contracting opportunities available through NYC SCA.

4. References

4. References

A. Firm References

	Project/Services Provided	Project Duration	Client References
AECOM			
Non–NJ TRANSIT	NYCEDC, Rehabilitation of the Arthur Kill Lift Bridge, Staten Island, NY, and Union County, NJ	2005-2008	New York City Economic Develo[redacted]ion Alice Cheng, Former VP at EDC, [redacted]
Non–NJ TRANSIT	NJTA, Interchange 6-9, Widening Program, Construction Management and Inspection, NJ	2008-2015	New Jersey Turnpike Au[redacted]arry Williams, Deputy Chief Engineer, [redacted]
Non–NJ TRANSIT	NJTA, Interchange 14A Improvements Construction Management and Inspection, NJ	2015-2018	[redacted]rso, Supervising Engineer, [redacted]
NJ TRANSIT *	NJ TRANSIT, Portal Bridge Construction Management Services, Kearny, New Jersey	2010-Present	[redacted]ll, K. Donovan, Chief of Construction, [redacted]
NJ TRANSIT *	NJ TRANSIT, Long Slip Canal Fill and Rail Enhancement Project, NJ	1998-2003 2013-2023	[redacted]ck Valente, Senior Project Manager, [redacted]
Mott MacDonald			
Non–NJ TRANSIT	MTA New York City Transit, CM-1534 Superstorm Sandy Repair and Resiliency Program, NYC	2013-2023	New York City Transit, Alok Sa[redacted]ief Engineer and Vice President [redacted]
Non–NJ TRANSIT	Port Authority of New York & New Jersey, Task Order Program, NJ	2011-2018	PANY&NJ, S[redacted]ne, Proj. Mgr.-Principal Engr, QAD, [redacted]
Non–NJ TRANSIT	Amtrak, Environmental Consulting and Engineering Services, PA	2012-ongoing	Amtrak, Ric[redacted]ff, Manager Environmental Programs, [redacted]
NJ TRANSIT	Bay Head Rail Yard Environmental Consulting Services, NJ	2002-ongoing	John Geit[redacted]ctor, Environmental Services, [redacted]
NJ TRANSIT	Washington Twp., Bus Garage, Environmental Engineering Contract, NJ	2012-ongoing	John Geit[redacted]ctor, Environmental Services, [redacted]
Modjeski & Masters, Inc.			
Non–NJ TRANSIT	Union Pacific Railroad (UPRR) San Bernard River Bridge CE&I, TX	2014-ongoing	[redacted]eman, Director Structures Design, [redacted]
Non–NJ TRANSIT	Canadian National Railway (CN) EJ&E Bridge 552 Replacement, IL	2001-2012	C[redacted]la, Manager Bridges and Structures, [redacted]
Non–NJ TRANSIT	UPRR Houma-to-Freeport Bridge Relocation, LA & TX	2006-2012	[redacted]cuso, Director of Bridge Maintenance, [redacted]
NJ TRANSIT	NJT Bridge & Rail Task Order Contract (Cotract No.16-038), NJ	2018-2023	NJ TRANSIT, Lisa Fanning, Chief Engineer of [redacted] Penn Plaza East, Newark, NJ 07105, [redacted]
NJ TRANSIT	NJ TRANSIT Conceptual Design Services for the Replacement and Construction of Undergrade Bridge 5.48 HX Draw, (Contract No. 14-022), NJ	2014-2016	NJ TRAN[redacted]sen, Senior Project Engineer, [redacted]
Dan Brown and Associates, Inc.			
Non–NJ TRANSIT	PANYNJ, Goethals Replacement Bridge New York/New Jersey	2013-2018	Thomas Spoth, PE, Vic[redacted]sons Transportation Group, [redacted]
Non–NJ TRANSIT	MinnDOT, TH-53 Bridge over the Rouchleau Pit, Minnesota	2014-2018	Kevin West[redacted]e Engineer MinnDOT, [redacted]
Non–NJ TRANSIT	Silver Line Extension of the Washington Metro, Virginia	2012-2017	Steve Saye, PE, Senio[redacted]r, Kiewit Infrastructure, [redacted]
NJT	n/a		

** These are our team's representative NJ TRANSIT projects. Additional NJ TRANSIT client references are available upon further request.*

	Project/Services Provided	Project Duration	Client References
Advanced Infrastructure Design, Inc. (DBE)			
Non–NJ TRANSIT	Sussex County Resurfacing Program, NJ	2016-2018	Susan Delmar, PE, Chief Engineer, Su Division of Engineering, New Jersey, [redacted]
	DRPA, Walt Whitman Bridge Anchorage Preservation, DE	2018	[redacted]mid, P.E., Project Manager, [redacted]
	Construction Engineering & Inspection Services, Wenonah Borough, Mantua Ave. Multimodal Transpiration Improvements	2018	Rem[redacted]k Engineers, Joseph R. Ragusa, PE [redacted]
NJT	n/a		
AmerCom Corporation (DBE)			
Non–NJ TRANSIT	Route 7 Wittpenn Bridge Replacement Project Kearny and Jersey City, Hudson County, NJ	2010-2021	[redacted]ster, Resident Engineer, [redacted]
	Route I-280 Stickel Bridge Rehabilitation, NJ	2006-2010	NJDOT, Eric Neu, Resident Engineer, [redacted]
	Structures and Roadway Construction Route 46 Section 7L&8K, Route 46 and Route 15, NJ	2010-2012	[redacted]rovskis, Resident Engineer, [redacted]
NJ TRANSIT	NJ TRANSIT, Contract No. 13-007, Bridge and Railway Engineering, Bergen County Line MP 6.34, Culvert Replacement Design, NJ	2015-2016	NJ TRANSIT, Moussa [redacted]T Manager, Rail Infrastructure Design, [redacted]
	NJ TRANSIT Contract No. 13-005, Task Order Contract: Stations, Access and Site Planning, NJT Programmatic Planning Year 3, NJ	2015	NJ TRANSIT, R[redacted]ager Project Development, [redacted]
The Calladium Group (DBE)			
Non–NJ TRANSIT	Amtrak Susquehanna River Rail Bridge Project, PA	2013-2017	Amtrak, Paul DelSignore, PE [redacted]uctures Maintenance & Inspection, [redacted]
	Amtrak Sawtooth Bridges Replacement Project, PA	2015-present	Amtrak, John [redacted]tor of Structural Engineering, [redacted]
	LIRR Expansion Project – Floral Park to Hicksville, EIS Phase, NY	2016-2017	Long Islan[redacted]C. Picca, Executive Vice President, [redacted]
NJ TRANSIT	NJ TRANSIT GRID, NJ	2016-present	NJ TRAN[redacted]rton, Senior Program Manager [redacted]
	NJ TRANSIT, Portal Bridge Capacity Enhancement Project	2016-present	NJ TRANS[redacted]ton, Senior Program Manager, [redacted]
Certified Site Safety of NY, LLC (DBE)			
Non–NJ TRANSIT	Croton Waste Treatment Plant, Bronx, NY	2014-2016	[redacted]es Martinez, Sr. VP, [redacted]
	91st Marine Transfer Station, New York, NY	2015-2016	[redacted]rence H. Blond, Sr. VP, [redacted]
	Pratt Institute 135 Emerson Place, NY	2013-2014	[redacted]ince Kirsch, Project Manager, [redacted]
NJT	n/a		
Collins Engineers, Inc.			
Non–NJ TRANSIT	Numerous Projects	2016-2017	C[redacted]if Rafla, Senior Engineer, [redacted]
	Numerous Projects	2009-Present	MassDOT [redacted]ate Bridge Inspection Engineer, [redacted]
	Numerous Projects	2014-Present	C[redacted]Kathy Alves, Port Director, [redacted]
NJ T	n/a		

	Project/Services Provided	Project Duration	Client References
Garg Consulting Services, Inc. (DBE)			
Non–NJ TRANSIT	Walk Bridge Replacement/Rehabilitation Project, Norwalk, CT	2017-2021	[redacted]ic LaRosa, Project Engineer
Non–NJ TRANSIT	CE&I services for I-95 Safety improvements from Baldwin Bridge to Rocky Neck Connector, Old Lyme, CT	2015-2017	[redacted]go, Project Manager
Non–NJ TRANSIT	Engineering Services for PATCO Lindenwold Yard and Viaduct Rehabilitation, Lindenwold, NJ	2014-2020	[redacted]dya, Project Manager
NJ TRANSIT	ASES II Positive Train Control, Statewide NJ; Services provided: Positive Train Control, Advanced Speed Enforcement System II technology, rail services, NJ	2017-2019	NJ TRANSIT, R[redacted]ief, Project Management, [redacted]
Promatech, Inc. (DBE)			
Non–NJ TRANSIT	WMATA, Architectural and Engineering Services for the Rehabilitation Design of Eight Segmental Bridges Services	ongoing	Gannett-Fle[redacted]JV, Brad Mason, Vice President, [redacted]
Non–NJ TRANSIT	NJTA, Contract No. T100.381, Supervision of Construction Services	ongoing	[redacted]Ritter, Resident Engineer, [redacted]
NJ TRANSIT	NJ TRANSIT, On-call Construction Management Services, Newark City Subway (Superstorm Sandy Recovery)	2014-2015	Greenman-Pederson, Inc., [redacted]n, PE, Assistant Vice President, [redacted]
Stellar Services, Inc. (DBE)			
Non–NJ TRANSIT	New New York Bridge (TPZ) Project Management Information System	2012 - Ongoing	NYS Thruway Aut[redacted]u, Document Control Manager, [redacted]
Non–NJ TRANSIT	Project Management Office (PMO), Capital Project Management System Support	2013 – Ongoing	Port Authority of NY & NJ PMO Vinod Paspuleti, Project Manager [redacted]
T. Y. Lin International Group			
Non–NJ TRANSIT	14 Street Viaduct Replacement, NYC	2011-2015	[redacted]on, Sean Keating, Principal Engineer, [redacted]
Non–NJ TRANSIT	MTA NYCT CCM for Cranberry Tunnel Rehabilitation, NYC	2014-2017	[redacted]thari, Program Manager, [redacted]
Non–NJ TRANSIT	NYCDOT, TD/CSS for FDR Drive Northbound Bridge, East 42nd St. to East 49th St., NYC	2016-2019	[redacted]h Shah, PE, Project Manager, [redacted]
NJ TRANSIT	NJ TRANSIT Gladstone Line Catenary Poles Replacement, Phase II, NJ	2013-2015	[redacted]even Yen, Program Manager, [redacted]
NJ TRANSIT	NJ TRANSIT New County Road Grade Separation, Secaucus, NJ	2000-2005	[redacted]Roberson Edwards, Program Manager, [redacted]
NJ TRANSIT	NJ Transit Passaic-Bergen Passenger Restoration, Hawthorne to Hackensack, NJ	2005-2009	[redacted]SIT, Nick Marton, Senior Director, [redacted]

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B. Key Staff References**

Name	Project Duration	Project	Client References
Al Baycora, PE (A) Project Director	2005-2008	NYCEDC, Rehabilitation of the Arthur Kill Lift Bridge, NJ and NY	New York City Economic Development Corp eng, former VP at EDC, [redacted]
	2012 – 2016	Contract 2 – Qatar Local Roads and Drainage Programme (Qatar South), Doha, Qatar	Saoud Ali Al-Tamimi, Director, Qatar Local Roads gramme, Doha, Qatar, [redacted]
Thomas O'Connor, PE (A) Construction Manager	2008-2015	NJTA, Interchange 6-9, Widening Program, Construction Management and Inspection, NJ	NJTA, Lar uty Chief Engineer, [redacted]
	2015-2018	NJTA, Interchange 14A Improvements Construction Management and Inspection, NJ	NJTA, Fra rvising Engineer, [redacted]
Ralph Eppehimer, PE (M&M) Resident Engineer-Movable Bridge	2001-2012	Canadian National Railway (CN) EJ&E Bridge 552 Replacement, IL	CN, Sandro Bridges and Structures, [redacted]
	2006-2012	UPRR Houma-to-Freeport Bridge Relocation, LA & TX	UPRR, Butch Lansford Bridge Maintenance, [redacted]
Patrick Dempsey (A) Resident Engineer-Rail	2013-present	East Side Access/Second Avenue Subway	MTACC, Dave Puza, VP MTACC, nager- East Side Access [redacted]
	2015-2017	South Ferry Station Rehabilitation	NYCT, Peter Leong, Sr. Construction l Program Management, [redacted]
Mark Madgett, PE (DBA) Resident Engineer-Geotechnical Deep Foundations, Ground Improvements	2014	US 321 Bridge over Tellico Canal, Loudon County, TN	Charles Blalock a ockery, Project Manager, [redacted]
	2018-2020	TN SR 13 over Cumberland River, Clarksville, TN	Thompson Engineering, Saieb Haddad, nical Consultant, [redacted]
John Turner, PE, PhD (DBA) Drilled Shaft Technical Expert	2012- 201	Goethals Bridge Replacement, Elizabeth, NJ	zoumanides, [redacted]
	2013- 2015	Fore River Bridge, Quincy, MA	omb, PE, Vice President, [redacted]
Kevin Johns, PE (M&M) Movable Bridge Technical Expert	2001-2012	Norfolk Southern Portageville Bridge Replacement, NY	Norfolk Souther ildt, Chief Engineer, [redacted]
	2015-2017	Amtrak South Branch Bridge Inspection/ Rating, IL	Amtrak, Paul ctor of Engineering, [redacted]
Natalie Barnhart, PE (A) Resident Engineer-Fixed Bridge/Civil/Utilities	2017- Present	PennDOT Rapid Bridge Replacement	PennDOT, Project Manager, [redacted]
	2011-2013	Various DelDOT projects	DelDOT, Ni puty Secretary, [redacted]
Bassem Hanna (M) Project Controls Manager	2007-2013	NYCT MTA Capital Construction, No. 7 Subway Line Extension, NYC	NYCT/MTA Capital Construction, Paul onstruction Manager, [redacted]
	2007-2013	NYCT MTA Capital Construction, No. 7 Subway Line Extension, NYC, NYC	NYCT/MTA Capital Construction, Ehambaram Sundaresan, PE, Chief, nd Site Security, [redacted]
John Sikorski (M) Safety Officer	2013-2016	MTA New York City Transit, CM-1534 Sandy Repair and Resiliency Program	tel – Program Executive, [redacted]
	2016-2018	MTA New York City Transit, CM-1534 Sandy Repair and Resiliency Program	tel – Program Manager, [redacted]
Steve Dempsey, PE (A) Quality Manager	2013-2016	NJTA, Interchange 41 and 44 Improvements	NJTA, Joe ervising Engineer, [redacted]
	2009-2016	NJTA, Interchange 14A	NJTA, Lar uty Chief Engineer, [redacted]

Name	Project Duration	Project	Client References
Frank Facciolo, PE (M) Quality Manager	2013-2016	NYCT, CM-1534 Superstorm Sandy Repair and Resiliency Program	atel – Program Executive, [redacted]
	2016-2018	NYCT, CM-1534 Superstorm Sandy Repair and Resiliency Program	MTA NYCT Program Manager, [redacted]
Glenn Mack (A) Technical Advisor	2014-2017	Superstorm Sandy Recovery Program, NJ	NJ TRANSIT, Lenora Isaac, Resilience Program, [redacted]
	2007-2010	ARC Tunnel Project, NJ/NY	NJ TRANSIT, Tom Martin, Senior Projects and Planning, [redacted]
Anil Parikh, PE (A) Principal In Charge	2013-2016	MTACC, Second Avenue Subway, NYC	MTACC, Tim Gianfrancesco PE, VP and xecutive, [redacted]
Marco Levoyer, PE (M) Principal In Charge	2001-2006 & 2011-2018	NJ Turnpike Authority, Driscoll Bridge Widening and Rehabilitation & GSP Interchange 125 Improvements, NJ	NJTA, Bill Wilson, S eer - Structures Design, [redacted]
	2012-2013	NJ Department of Transportation, Emergency Reconstruction of Route 35, NJ	NJDOT, Andrew Tunnard, Assistant Operations, [redacted]

** References for additional staff listed on the Project Organization Chart are available upon NJ TRANSIT's request.*

Legend:
(A): AECOM
(M): Mott MacDonald
(M&M): Modjeski and Masters, Inc.
(DBA): Dan Brown and Associates, P. C.
(AID): Advanced Infrastructure Design, Inc. (DBE)
(ACC): AmerCom Corporation (DBE)
(CSS): Certified Site Safety of NY, LLC (DBE)
(CEI): Collins Engineer, Inc.
(GCS): Garg Consulting Services, Inc. (DBE)
(PTI): Promatech, Inc. (DBE)
(SSI): Stellar Services, Inc. (DBE)
(TCG): The Calladium Group (DBE)
(TYL): TY Lin International Group

5. Technical Approach

5. Technical Approach

Introduction

The AECOM | Mott MacDonald Joint Venture Team understands the NJ TRANSIT's Raritan River Bridge Replacement Project's scope of services. We will demonstrate our knowledge of this project, our team's capability to perform the work effectively and the value added features of our team.

Throughout this section, we have identified and highlighted enhancements that will result in added value for NJ TRANSIT and the key stakeholders in terms of timely performance, effective communications and coordination and, ultimately, an outstanding project delivered safely, on time and within budget.

Our Technical Approach is divided into the following sections:

Understanding and Management Approach: The section begins with the project organization and leadership team responsible for successful completion of this project, understanding of project scope of work and challenges. It also includes how we plan to mitigate the risks of the project challenges.

Technical Approach to Project Scope Items: This section begins with our approach to managing safety during the construction. It is followed by our understanding of the scope of work and our approach for Railroad Operations, Force Account work, Drilled Shafts, Movable Bridge, Fixed Bridge, Ground Improvements, Environmental, and Testing and Commissioning of the movable bridge. We will develop a detailed work plan for managing each of the work activities for its successful completion, based on our knowledge of NJ TRANSIT's rail operations, experience in movable bridge construction and our lessons learned from managing similar projects.

Understanding and Management Approach

The section begins with a discussion of why we formed the AECOM | Mott MacDonald Team and comments on the combined strength that the team represents and brings to the project. That is followed by our understanding of the project and key project issues, followed by a description of our overall management approach to organizing, assigning, managing, communicating and controlling the contract work effort. We will demonstrate:

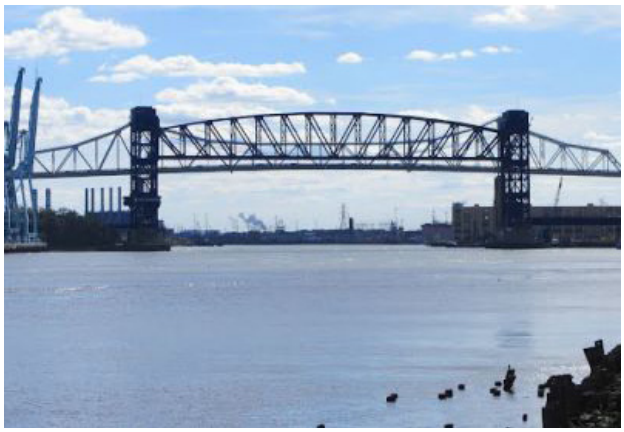
- The right leadership to drive the successful completion of the project.
- Our knowledge of the project issues and our proven ability to address those issues.
- Our capacity and capability to manage large construction projects and control schedules and budgets.
- The value that we add based on our combined experience and lessons learned.

The existing Raritan River Bridge was opened to rail traffic in 1908, at a cost of $1 million.

The Right Team

AECOM and **Mott MacDonald** have worked successfully together on major rail transportation projects, including the MTA East Side Access Project where AECOM provided Program Management services and Mott MacDonald provided Construction Management services, and expert systems and railroad services. Also on the WMATA Rail Systems IDIQ Contract, where Mott MacDonald provided program management and AECOM provided communication systems services. Those successful partnerships led to the AECOM | Mott MacDonald Team proposed for this project. Using the strengths of each of our firms and combining them with the expertise of **Dan Brown and Associates** in Drilled Shaft Foundations and the Movable Bridge expertise of **Modjeski and Masters** will provide NJ TRANSIT with all the engineering and construction experience necessary to guide the successful completion and commissioning of the Raritan River Bridge Replacement (RRBR) Project.

Leading our team will be AECOM's **National Movable Bridge Practice Leader, Al Baycora, PE,** and our proposed **Construction Manager, Tom O'Connor, PE.**



Arthur Kill Railroad Lift Bridge

The Right Leadership to Deliver RRBR

Our project leadership, **Al Baycora, Project Director, and Tom O'Connor**,**Construction Manager,** has demonstrated its ability to successfully deliver major infrastructure projects in the past.

Al Baycora is AECOM's National Movable Bridge Practice Leader, providing guidance and technical advice within the company on movable bridge projects. Al led the design and construction inspection services for the rehabilitation and reactivation of the Arthur Kill Lift Bridge, a single-track vertical-lift bridge between Elizabeth, NJ, and Staten Island, NY—the longest lift bridge in the world. He also recently completed a $6-billion+ infrastructure assignment in Qatar, involving a project staff of approximately 350 and extensive interaction with major stakeholders, including utility companies, numerous government agencies and current/prospective commercial developers.

Tom O'Connor has experience working on rail rehabilitation projects involving some of the busiest commuter and freight lines in the metropolitan area, including NJ TRANSIT's Hudson Bergen Light Rail and the Main Bergen Line. He brings over 40 years of construction management expertise to this project, demonstrated on the recently completed and highly successful $2.5-billion NJTP Interchange 6 to 9 Widening Program in New Jersey, delivery on schedule and under budget.

Supporting Tom and Al are a strong team of proven professionals that bring further railroad, marine foundation, structure and movable bridge expertise to the project:

Pat Dempsey will be leading the rail elements of the RRBR Project, including Force Account coordination, as our RE for Rail.

In the past 15 years, Pat has demonstrated his ability to successfully manage all phases of highly complex, multiple-phase, large-scale rail and transit projects for the largest regional rail stakeholders in the tri-state area. He is no stranger to NJ TRANSIT, having served as RE for the Secaucus Junction Station project and the Northeast Corridor Enhancements, and as CM for the nine follow-on contracts at the Secaucus Station. That work involved close coordination with both NJ TRANSIT and Amtrak Force Account personnel.

John Turner of DBA will bring his valuable and highly relevant experience as the foundation lead for the design and construction phases for the Goethals Bridge Replacement. During the construction phase, John and DBA provided oversight of drilled shaft inspection and integrity testing, and the evaluation of different site conditions and final acceptance of drilled shafts on the basis of as-built records and nondestructive integrity testing.

The movable bridge aspects of RRBR will be led by **M&M's Movable Bridge Business Unit Director, Kevin Johns, PE.** He will have an integrated team of mechanical engineers and electrical engineers, who will be the discipline leads in their respective fields, with **Ralph Eppehimer, PE,** serving as RE for the movable span construction.

In the past 5 years, **Kevin** has served as PM or task leader on 28 movable bridge projects, 19 railroad projects and 9 movable railroad projects. He has worked on all types of movable commuter and heavy freight railroad bridges, including vertical lift, swing and bascule, for transit clients including NJ TRANSIT.

Ralph has 35 years of experience as a movable bridge expert specializing in railroad vertical-lift bridges. In his career, Mr. Eppehimier has either managed, inspected, or been the resident engineer for 236 railroad bridges, 44 of them being vertical-lift bridges. Within the recent past, he has supervised the construction of nearly a quarter-of-a-billion dollars' worth of movable railroad bridge construction, including the $83-million Galveston Railroad Bridge, which was replaced on an alignment close to the existing bridge.

Our Fixed Bridge Construction Inspection Team will be led by RE Natalie Barnhart, PE.

Natalie is a construction manager with over 28 years of experience. She has considerable knowledge of complex bridge construction (both new construction and rehabilitation), foundations, aerial and underground utility coordination and relocation (including boring and water crossing), drainage and stormwater management and facility construction. She is very familiar with working on Federal aid contracts, and is fully knowledgeable of construction contract administration and documentation.

Our team has been working together for the past year, conducting workshops to evaluate construction issues and solutions, and brainstorming to come up with a roadmap to provide CM services that will result in an efficient and safe project undertaking.

During that time we developed an understanding of NJ TRANSIT's project goals, and the benefits they represent for NJ TRANSIT and its customers; we also identified the RRBR Project challenges and risks that could jeopardize those project goals. *Figure 5-1* presented below identifies both the NJ TRANSIT goals and the project challenges, and how the team's experience will address those challenges.

RRBR PROJECT GOALS+BENEFITS

Minimize Impact to Rail Operations

- 2-track bridge to be constructed parallel to and north of the existing bridge to avoid impact to operations.

Improved reliability and resiliency

- New vertical profile reducing maintenance, more reliable electrical and mechanical components, and added resilience to withstand the storm surge from future severe weather events.

Improved railroad operations

- New Perth Interlocking in Perth Amboy to replace existing Essay Interlocking in South Amboy.
- South Amboy curve will be flattened, resulting in improved speeds of 60 miles per hour.
- New track, catenary and signaling constructed to support the new alignment.

Improved clearances for marine navigation

- Vertical-lift span with 300-foot navigation channel, and 110-foot vertical clearance.
- Reinforced dolphins and fender system to protect the bridge during errant navigation.

Minimized environmental impacts

- Minimize adverse impacts on the natural environment during and after project completion, to comply with the findings of the Environmental Assessment.

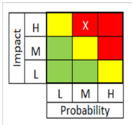
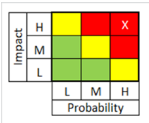
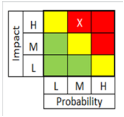
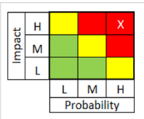
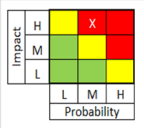
Figure 5-1

RRBR PROJECT CHALLENGES

1. **Construction of the new rail interlocking**
   - Provide up front in the schedule to avoid manpower issues
   - Construct railroad systems compound for railroad turnover and quick cut-in
2. **Ground improvements to strengthen the land approaches**
   - Perform early in the schedule
   - Manage soil embankment, excavations, surcharging and rigid inclusions techniques
3. **Deep drilled shaft foundations in a marine environment**
   - Proper evaluation of test shaft program
   - Incorporate best practices with expert inspectors
4. **Environmental concerns regarding the removal and disposal of potentially contaminated soils**
   - Proper soil management, stockpiling and manifesting
   - Work closely with NJ TRANSIT's LSRP
5. **Movable bridge construction**
   - Inspection protocol that ensures reliable bridge operations
   - Long-lead items for the mechanical/electrical systems for the movable span.
   - Efficient final testing and commissioning of movabe span
6. **Installation of new track and rail systems**
   - Provide Force Account coordination
   - Manage Force Account and contractor activities
   - Proactively manage Force Account manpower availability
7. **Final testing and commissioning**
   - Final testing/commissioning of railroad systems prior to the eventual cut-in of new service and removal of the existing structure

Under the leadership of Al and Tom, the AECOM | Mott MacDonald Team developed an independent construction schedule and conducted a risk assessment workshop so that all aspects of the project could be discussed, and the most critical challenges identified and mitigation strategies developed. That effort was led by AECOM's Robert Rocco, a national leader in the field of Risk Management. We identified what we determined are the five top risks and challenges that need to be addressed to bring this project to a successful completion, on time and within the established budget. Those risks are summarized in a snapshop of our overall risk register, as shown in *Table 5-2* below.

Table 5-2 **Summary Risk Register**

Potential Risk	Risk Level	Mitigation Strategy
Safety: Working in an active rail environment. Lifting operations, especially the lifting required for the tower installations, pose a potential risk to both labor safety as well as possible property damage.	 Probability medium, Impact high	Ensure that flag protection is in place for all operations adjacent to the NJ TRANSIT ROW. Coordinate with NJ TRANSIT for their review and approval for all lifting operations adjacent to their ROW. And ensure that the requirements of the approved lifting plans are met prior to the start of lifting operations. Dedicated site safety inspections for compliance to approved Health and Safety Plans (HASP).
Force Account Coordination: Adequate flagging protection & ET support and the potential for delay to contractor work operations. Scheduling required track outages. Scheduling and performance of Force Account work set aside for NJ TRANSIT labor.	 Probability high, Impact high	Resource load the project schedule with required Force Account operational support. Weekly coordination meeting with NJ TRANSIT and Conrail to schedule required flagging and ET protection and required track outages. Regular coordination meeting with NJ TRANSIT Force Account to review schedule performance and impacts on the overall project schedule. Commence procurement process to acquire support requirements that are beyond NJ TRANSIT resource pool.
Drilled Shaft Installation: Unforseen site conditions and geological conditions. Tight spacing of reinforcing steel that results in CSL anomalies and potential rework or foundation redesign. Cleanout and tremie concrete placement. Lifting operations.	 Probability medium, Impact high	Assure that the rebar arrangement is not too congested and that the cage size will fit in the casing. Review all contractor means and methods for industry best practices. Closely monitor all the drilled shaft test and review all test results for anomalies. Review all contractor Safe Work Plans for drilled shaft operations.
Movable Bridge: Tolerances on the tower are not met. Float-in of the main bridge span. Tower construction guides may not be placed properly, causing binding. Span weight may be different than calculated and the counterweight design must to be able to correct for this. Long-lead items and integrating the mechanical and electrical systems.	 Probability high, Impact high	Quality assurance for all structural steel fabrication and erection for the flanking spans and support towers. Review and approval of the contractor's SWP for float in and pre-installation coordination meetings Coordination meetings well before and the during the installation of counterweights. Identify long-lead items and work with the contractor to expedite and monitor the ordering and delivery of these items.
Environmental/Permit Compliance: Identification and disposal of potentially contaminated soils. Maritime restrictions and fish widows. Maritime coordination for the existing bridge demolition. Managing the contractor's operations in the river, including barge placement, marine traffic and barge crossings of the river to get into position.	 Probability medium, Impact high	Preparatory phase meetings with NJDEP, Soil Conservation District, NJ TRANSIT and Contractor to review erosion and sediment control plans and monitoring. Preparatory phase meetings with NJDEP, NJ TRANSIT, NJ TRANSIT's LSRP and Contractor to review Contractor's material handling plan and testing and disposal of contaminated material for off-site disposal. Preparatory phase meetings with the Coast Guard, NJ TRANSIT and Contractor to review maritime rules and restrictions. Documentation of compliance on Daily Inspection Reports and in Project Monthly Progress Report.

Those key issues and challenges included: overall project safety when working in both a railroad and marine environment; the importance of railroad coordination; the technical challenges associated with deep drilled shaft foundations in the Raritan River; the technical aspects of lift bridge construction, testing and commissioning; and finally, monitoring the compliance with environmental permits, and monitoring and documentation for the removal and disposal of potentially contaminated soils from both excavations and drilled shaft construction.

The leadership of the AECOM | Mott MacDonald Construction Management Team will be ready to meet on Day One to work closely with NJ TRANSIT to ensure that these challenges are met.

Each of those challenges and other key issues are discussed in the following portions of our technical approach, that start with our understanding of the history and need for the project and end with our detailed understanding of the scope of services as defined in NJ TRANSIT's Request for Proposals RFP No. 18-015.

The summary risk register identified those elements of the project that the AECOM Mott MacDonald joint venture determined would require a major focus of our construction management approach. Those elements included: overall project safety working in an active rail environment; Force Account scheduling and co-ordination to integrate the contractors work with Railroad FA activities; the potential obstacles associated with the deep drilled shaft foundations in the Raritan River; the complexities associated with vertical lift bridge construction; and finally the importance of complying with the environmental permits and requirements associated with working near sensitive wetlands and construction activities in the Raritan River. Each of these issues has the potential to significantly impact the success of the project and potentially delay progress.

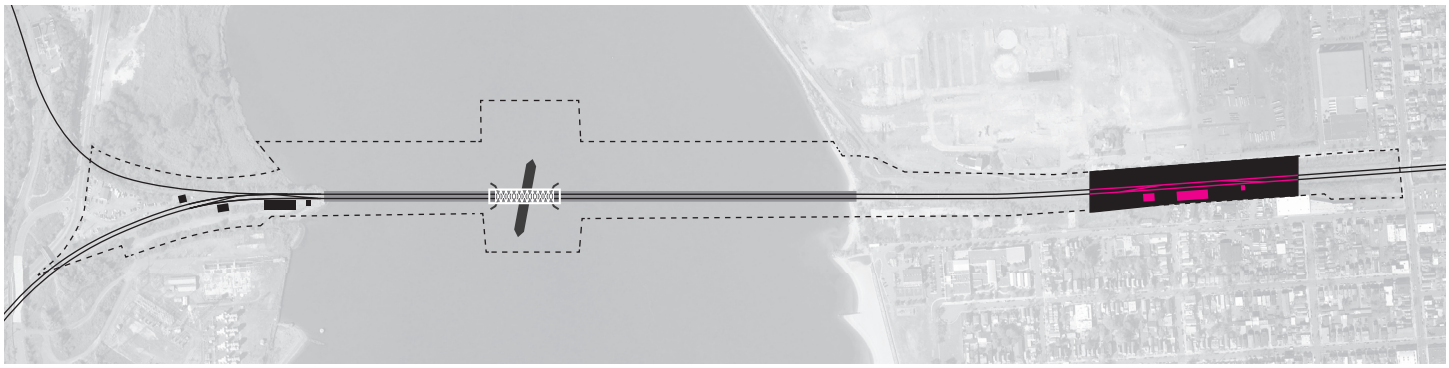
As we looked carefully at each of these issues we also evaluated their potential impact to the independent construction schedule that we developed based on our understanding of the project. Similar to the construction schedule prepared by NJ TRANSIT our critical path ran through the installation of the drilled shaft foundations, the construction, testing and commissioning of the movable span and finally with the installation of new track and railroad system and their final commissioning and testing. We looked at each of these critical work activities and the risks we identified and established our technical approach to mitigate or eliminate those risks and deliver a successful project for NJ TRANSIT.

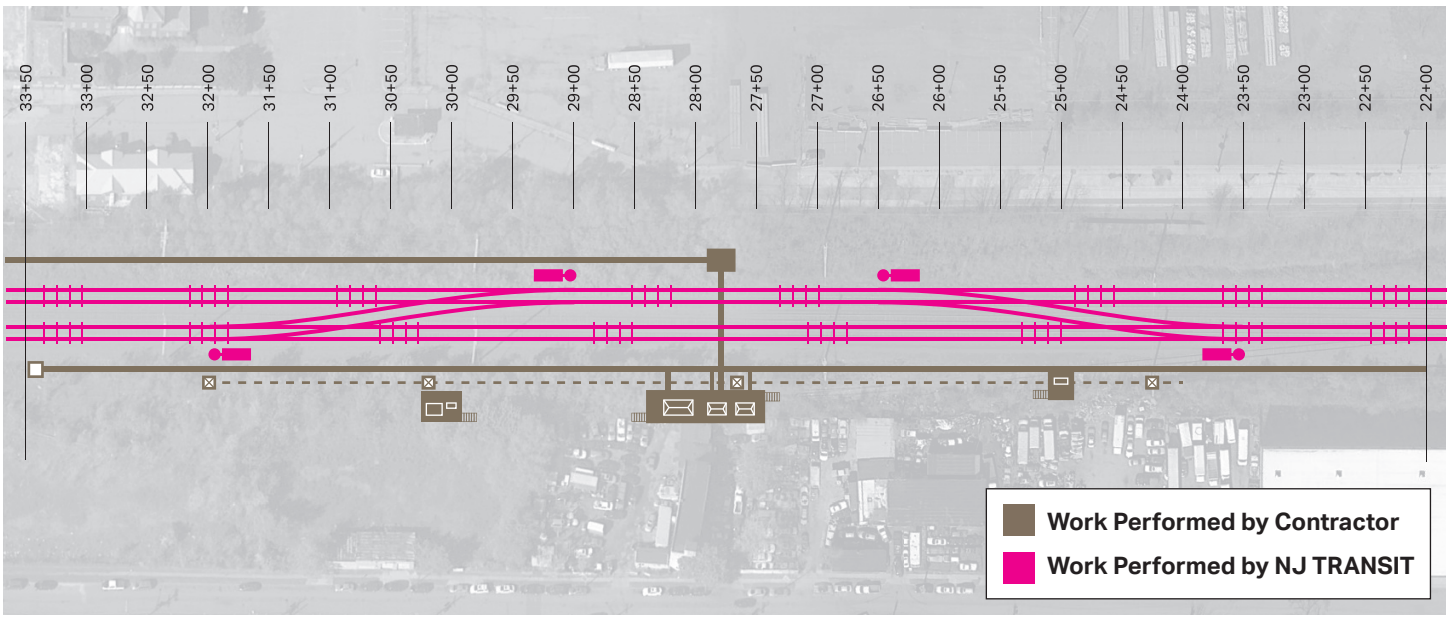
The Staging Plans presented on the following pages as *Figure 5-2* were developed from the NJ TRANSIT Schedule provided in Addendum No.1 and they outline the sequence of the contractors work and the associated NJ TRANSIT Force Account work that needs to be incorporated into the Contractors Baseline Schedule and our Master Construction Schedule. While our independent schedule was similar in most regards to the NJ TRANSIT Schedule, with a similar critical path, our schedule indicated that almost 6 months could be saved from the schedule by providing earlier rail access to the new approach structures. In our schedule, presented as *Figure 5-3*, early access was provided by temporarily extending the existing Raritan Steel Track for access to Perth Amboy and using the existing Conrail turnout along the Essay Running Track and extending track to the west approach in South Amboy. Even in the NJ TRANSIT Schedule (see *Figure 5-4*), the approach spans are completed 6 months before they are eventually utilized by NJ TRANSIT Force Account to complete their track, traction power and communication & signal work. In our independent schedule we provided earlier access to the approach spans on both sides of the Raritan River so that NJ TRANSIT could fully utilize that 6 month duration to complete a significant portion of the FA work including their track, traction power and S&C work on the approach spans.

We recognize that our independent schedule requires some additional refinement since we had limited access to the details in the contracts plans and specifications. Also included after the proposed construction are both our independent construction schedule and NJ TRANSIT's Construction Schedule. Both are shown in a summary bar chart format.

Construction Phasing

STAGE 1: Perth Amboy "Interlocking"



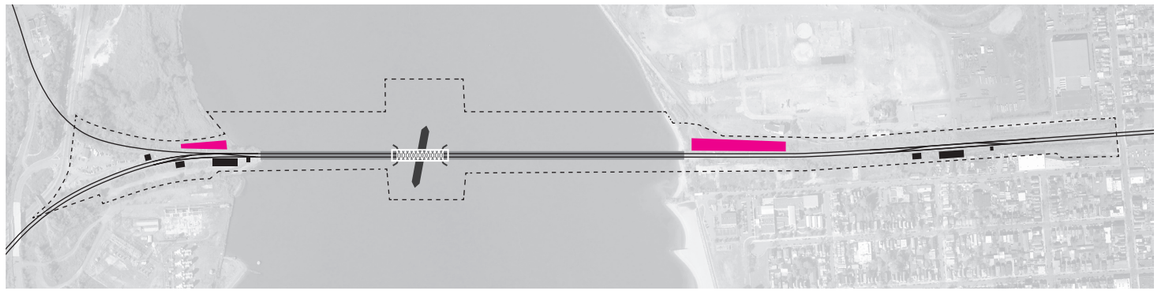


Task No.	Task	Dur.	Start	Finish	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4
CONSTRUCTION		1443	1/23/20	9/26/25								
STAGE 1 - PERTH AMBOY INTERLOCKING		410	4/10/20	11/18/21								
Work to be Performed by Contractor		**190**	**8/4/20**	**5/3/21**								
SH1120	Build new "Perth" compound @ Sta. 28+00	60	8/4/20	10/27/20								
CON1220	Set equipment, pull feeders, etc., for "Perth" compound	120	10/28/20	4/19/21								
SC1030	Build (6) catenary structures from Sta. 23+50 to 45+50 (Perth Amboy)	35	3/16/21	5/3/21								
Work to be Performed by New Jersey Transit		**410**	**4/10/20**	**11/18/21**								
NJT900	Line and surface existing Tracks 1 and 2 from Stations 16+50 to 46+80	60	4/10/20	7/6/20								
NJT910	Install new "Perth" crossovers 12 and 21	120	7/7/20	12/23/20								
NJT1000	Install all hardware for catenary structures from Sta. 23+50 to 45+50 (Perth Amboy)	10	5/4/21	5/17/21								
NJT1010	Pull all wiring for catenaries from Sta. 23+50 to 45+50 (Perth Amboy)	10	5/18/21	6/1/21								
NJT1080	Build signal interlocking system at Perth Amboy side / test signal system	120	6/2/21	11/18/21								

Figure 5-2

Construction Phasing

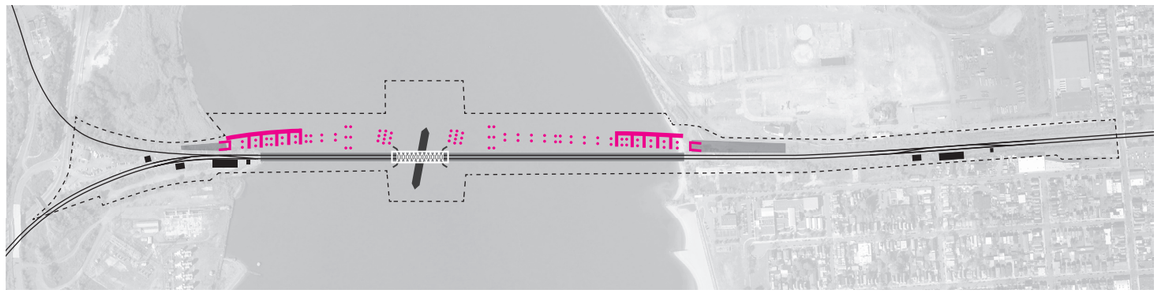
STAGE 2: New Movable Bridge and Approach Structures



PHASE A: Ground Improvements

(January 2020 - September 2020)

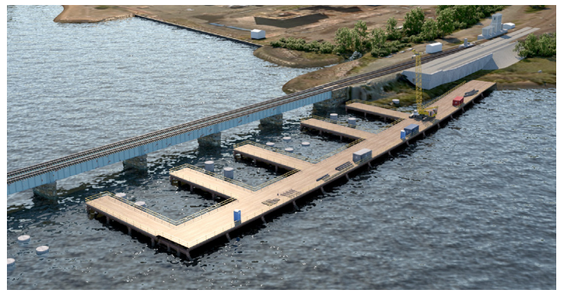
- Install Soil and Erosion Control measures
- Construct Ground Improvements using Rigid Inclusion/Columns and Load Transfer Platforms
- Install Temporary Sheeting and tiebacks
- Perform Pile test
- Build East Abutment foundation and reinforced concrete cap
- Build Wall 1 from abutment to station 43+25

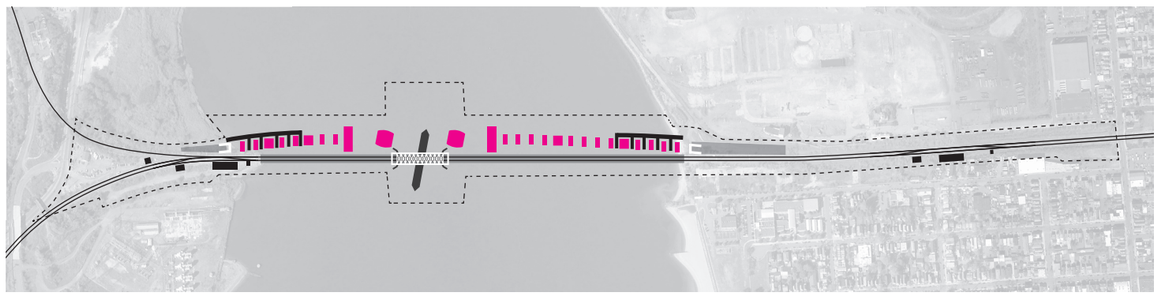


PHASE B: Drilled Shafts

(July 2020 - June 2022)

- Fish Window restriction lifted
- Review and Approve Safe Work Plans for marine construction
- Construct temporary trestles
- Perform Drilled Shaft test
- Prioritize casing installations at Tower Piers
- Drilled shaft installation including rebar and tremie concrete
- Monitor Environmental Compliance and material handling and disposal

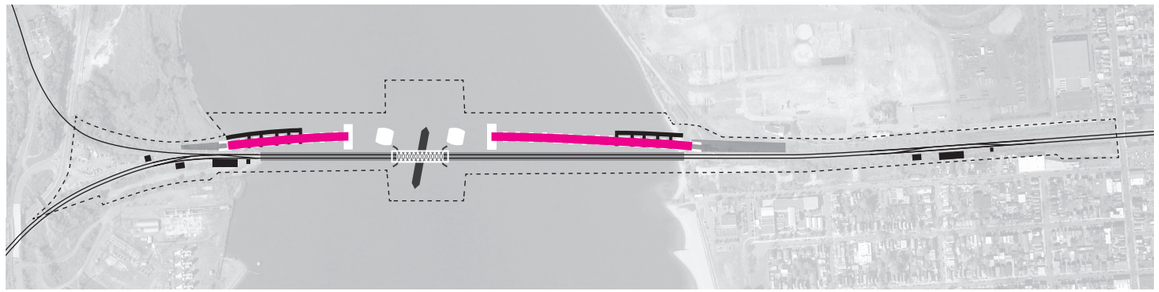




PHASE C: Pier Caps

(November 2020 - June 2022)

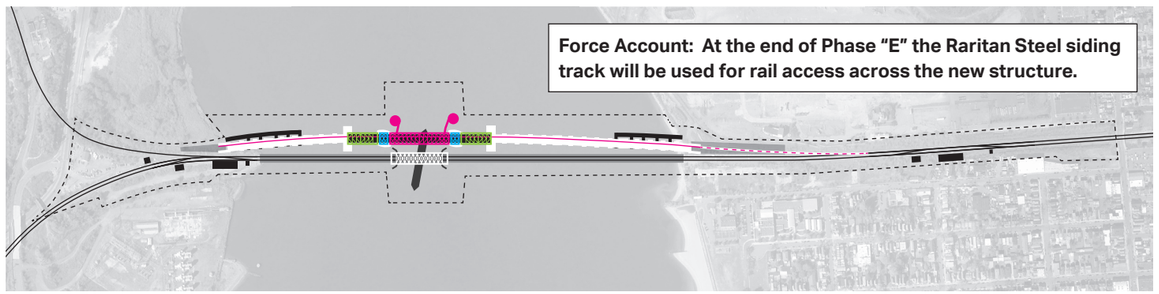
- Construct reinforced concrete pier caps for approach spans
- Construct reinforced concrete pier caps for tower piers



PHASE D: Approach Spans

(March 2021 - March 2023)

- Erect approach span steel superstructure
- Erect approach span deck troughs for ballasted deck
- Install waterproofing and drainage system
- Install sub-ballast for new track ties



PHASE E: Movable Span

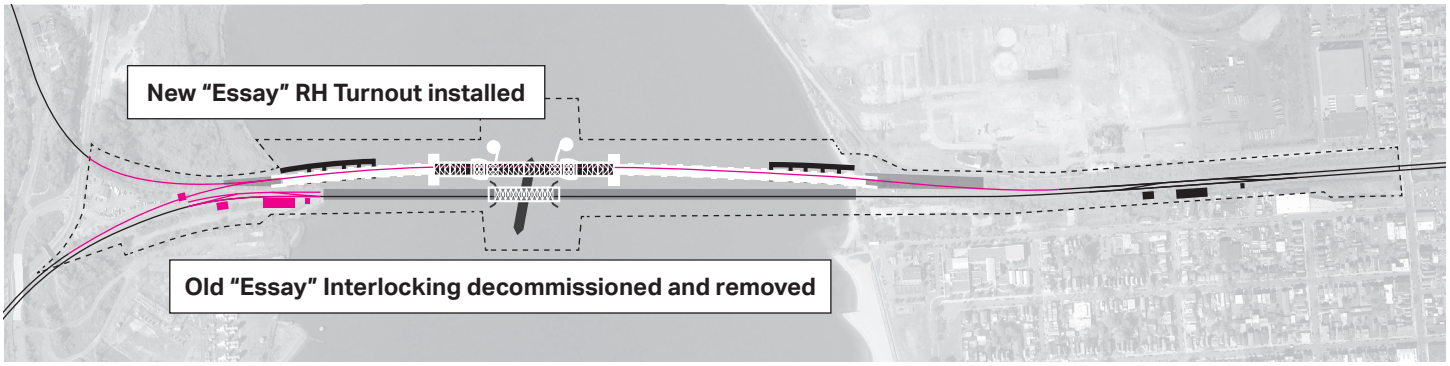
(June 2021 - March 2023)

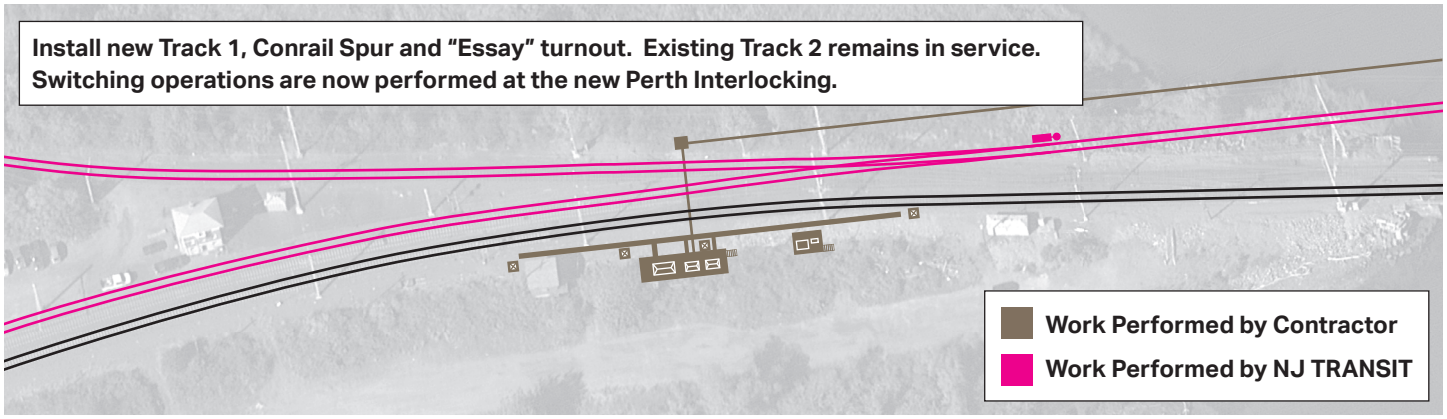
- Erect East and West Tower steel
- Set Flanking Spans /Float In
- Build and Install east and west counterweights
- Set movable span
- Tie in counterweights
- Complete fender system north of the new bridge
- Test and commission new movable bridge

Figure 5-2

Construction Phasing

STAGE 3: Track 1 Related Work



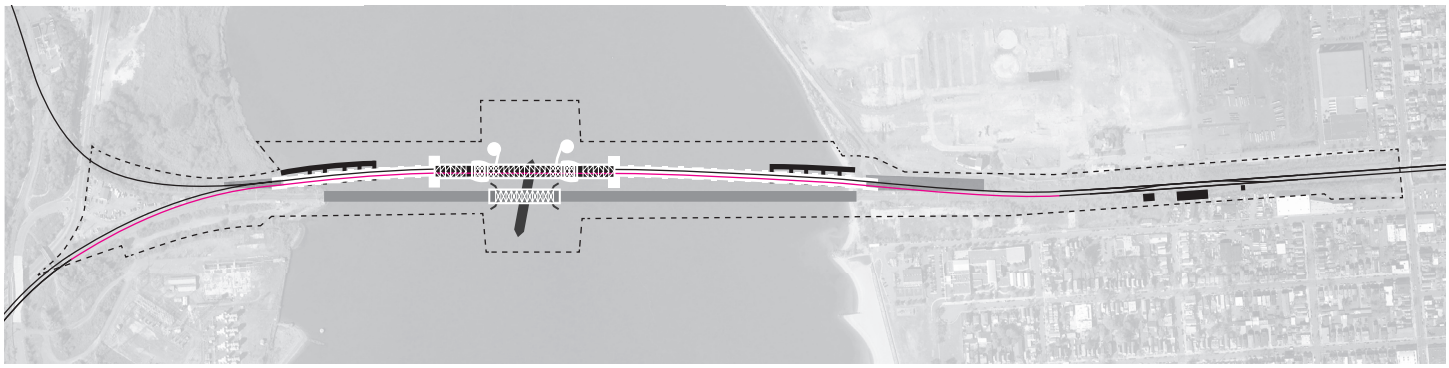


Task No.	Task	Dur.	Start	Finish	2023 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3	2024 Q4
STAGE 3 - TRACK 1 RELATED WORK		26	8/31/23	2/29/24								
Work to be Performed by Contractor		**20**	**10/6/23**	**11/2/23**								
CON1140	Grading for New Track 1 from Sta. 30+78 to 38+71 & 80+92 to 99+00	10	10/6/23	10/19/23								
CON1150	Grading for proposed "Essay" running track from Sta. 80+72 to 90+35	10	10/20/23	11/2/23								
Work to be Performed by New Jersey Transit		**126**	**8/31/23**	**2/29/24**								
NJT1070	Install all hardware for catenary structures from Sta. 47+00 to 76+50 for Track 1	10	8/31/23	9/14/23								
NJT1115	Remove temp. Raritan Steel Track 1: Sta. 31+55 to 38+71 & Track 2: Sta. 41+90 to to 46+00 & No. 10 LH Turnout	10	8/31/23	9/14/23								
NJT1120	Remove existing Track 1 from stats. 38+71 to 41+88, 80+92 to 84+50 & 92+00 to 99+50	15	9/15/23	10/5/23								
NJT1130	Remove existing "Essay" running track from Stations 79+49 to 88+50	5	10/6/23	10/12/23								
NJT1140	Remove 3 existing No. 10 Turnouts in "Essay" Interlocking on Track 1	15	10/13/23	11/2/23								
NJT1150	Construct new Track 1 from Stations 43+91 to 45+01, 80+72 to 84+63 & 92+00 to 99+50	30	11/3/23	12/15/23								
NJT1170	Installl ne No. 15 RH Turnout to "Essay" running track in Track 1	10	12/18/23	1/2/24								
NJT1172	Relocate temp. Raritan Steel Track 1 to proposed Track 1 from Sta. 38+71 to 43+91	5	1/3/24	1/9/24								
NJT1175	Relocate existing Track 1 to proposed alignment from Stas. 30+87 to 38+71 & 84+63 to 92+00	20	1/10/24	2/6/24								
NJT1200	Construct new "Essay" running track from Sta. 80+72 to 88+50	15	1/24/24	2/13/24								
NJT1090	Pull all wiring for catenaries from Sta. 47+00 to 76+50 for Track 1	10	2/7/24	2/21/24								
NJT1177	Line & surface existing Track 1 from Sta. 99+50 to 101+18	5	2/7/24	2/13/24								
NJT1220	Relocate existing "Essay" running track to proposed alignment from Sta. 88+50 to 90+35	10	2/14/24	2/28/24								
NJT1110	Terminations, test and integrate system - Track 1	5	2/22/24	2/28/24								
NJT1180	New Track 1 over New Bridge placed in service	0		2/28/24								
NJT1230	Place new "Essay" running track in service	1	2/29/24	2/29/24								

Figure 5-2

Construction Phasing

STAGE 4: Track 2 Related Work

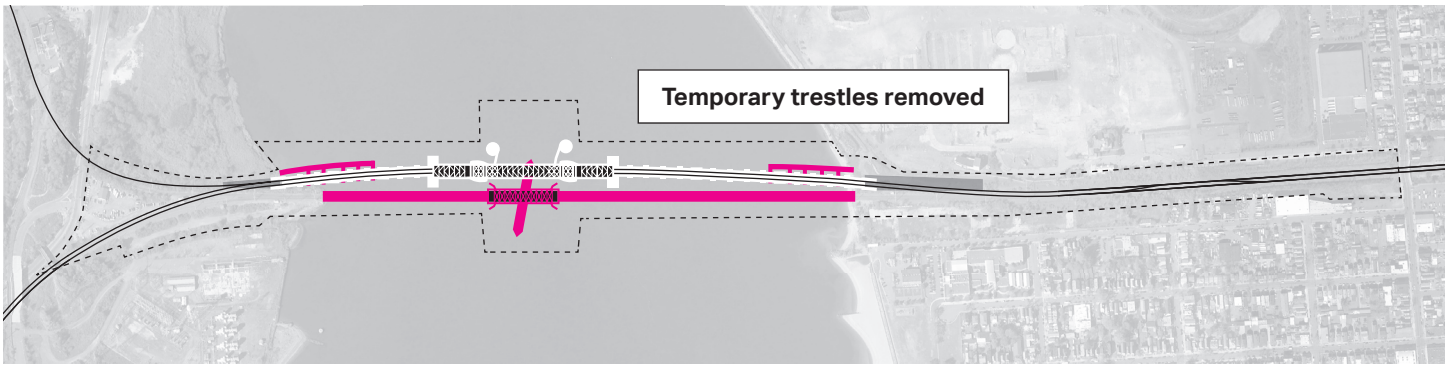


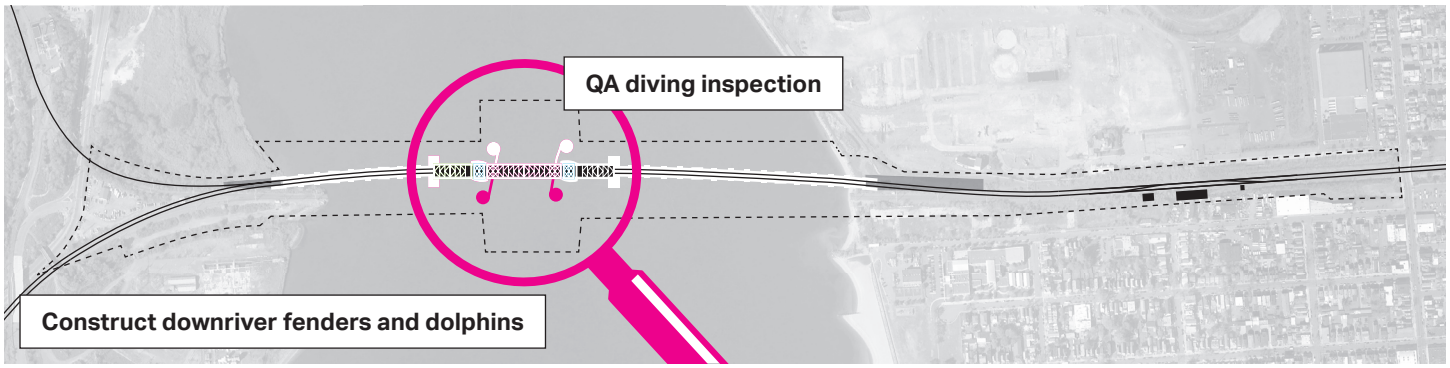
Task No.	Task	Dur.	Start	Finish	2024 Q1	2024 Q2	2024 Q3	2024 Q4	2025 Q1	2025 Q2	2025 Q3	2025 Q4
STAGE 4 - TRACK 2 RELATED WORK		136	1/24/24	8/5/24								
Work to be Performed by Contractor		**15**	**3/1/24**	**3/21/24**								
CON1230	Grading for New Track 2 from Sta. 32+41 to 46+00 & 77+50 to 99+50	15	3/1/24	3/21/24								
Work to be Performed by New Jersey Transit		**136**	**1/24/24**	**8/5/24**								
NJT1190	Install all hardware for catenary structures from Sta. 47+00 to 76+50 for Track 2	10	1/24/24	2/6/24								
NJT1250	Remove existing Track 2 from Stas. 79+00 to 86+00 & 92.00 to 99+50 & (2) No. 10 Turnouts @ “Essay”	20	3/22/24	4/18/24								
NJT1270	Relocate existing Track 2 to proposed alignment Sta. 32+41 to 39+50 & 86+00 to 92+00	10	4/19/24	5/2/24								
NJT1260	Install new Track 2from Stas. 39+50 to 46+00, 77+50 to 86+00 & 92+00 to 99+50	40	5/3/24	6/28/24								
NJT1280	Line & surface Track 2 from Sta. 99+50 to 105+49	5	7/1/24	7/8/24								
NJT1310	Relocate 2 138kV conductors from existing span to south side of monopoles	10	7/1/24	7/15/24								
NJT1320	Pull all wiring for catenaries from Sta. 47+00 to 76+50 for Track 2	10	7/16/24	7/29/24								
NJT1100	Terminations, test and integrate system - Track 2	5	7/30/24	8/5/24								
NJT1290	New Track 2 over New Bridge place in service	0		8/5/24								

Figure 5-2

Construction Phasing

STAGE 5: Demolition and Miscellaneous Work





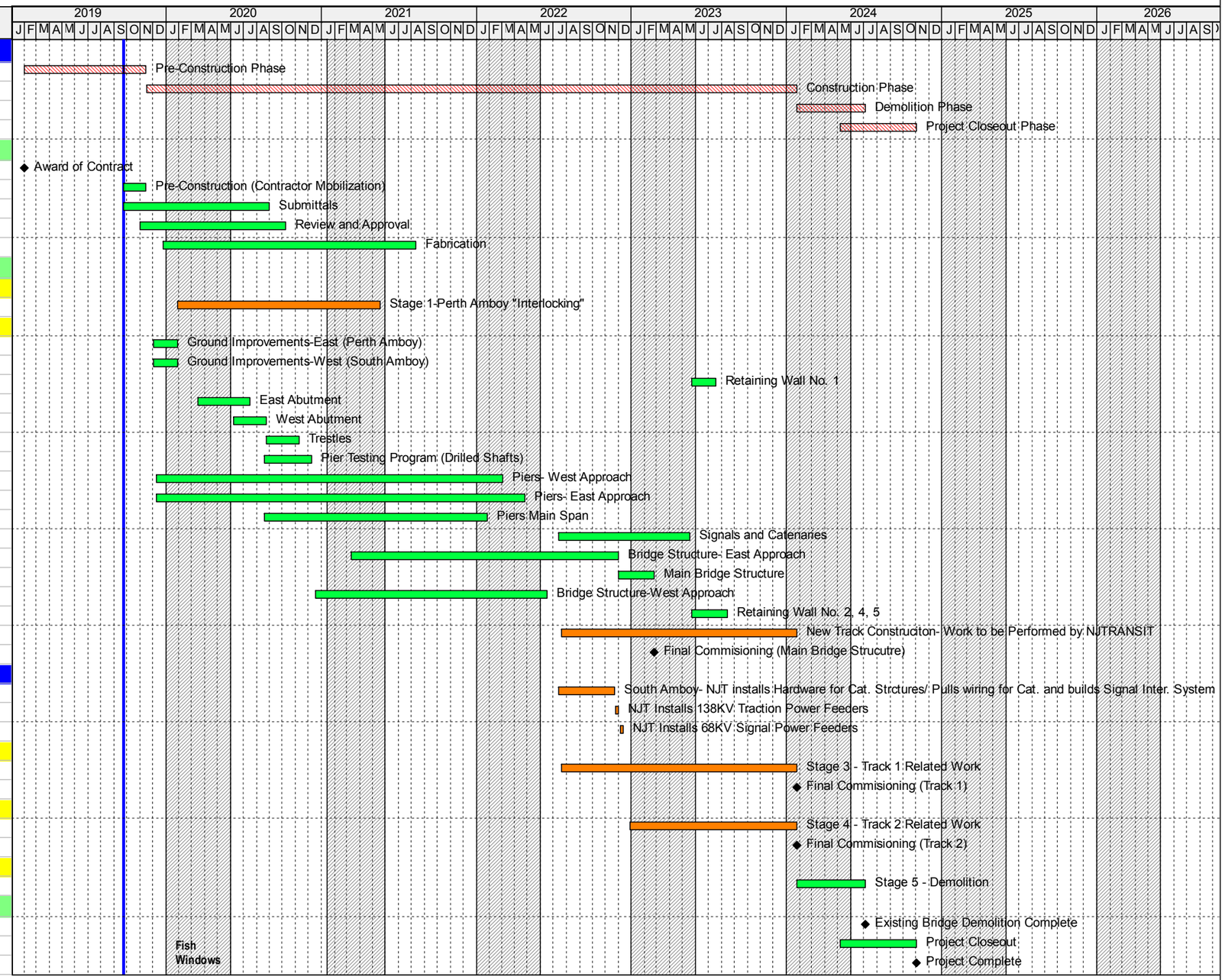
Task No.	Task	Dur.	Start	Finish	2024 Q1	2024 Q2	2024 Q3	2024 Q4	2025 Q1	2025 Q2	2025 Q3	2025 Q4
STAGE 5 - DEMOLITION AND MISCELLANEOUS WORK		316	7/1/24	9/26/25								
Work to be Performed by Contractor		**316**	**7/1/24**	**9/26/25**								
CON1080	Remove existing swing span, pivot pier, existing flanking spams and rest piers	100	7/1/24	11/19/24								
CON1200	Build dolphins and fenders, including piles (downriver)	90	11/20/24	9/26/25								
CON1120	Demolish existing bridge structure	150	11/27/24	7/1/25								
BR1130	Remove east trestle - Perth Amboy side	60	7/2/25	9/25/25								
Work to be Performed by New Jersey Transit		**80**	**8/6/24**	**11/26/24**								
NJT1210	Remove existing Track 1 from Stas. 41+88 to 77+38	40	8/6/24	10/1/24								
NJT1300	Remove existing Track 2from Stas. 39+51 to79+00	40	10/2/24	11/26/24								

Figure 5-2

Raritan River Drawbridge Replacement

AECOM Internal Schedule

Activity Name	Start	Finish
Raritan River Drawbridge - October 12 2018		
Pre-Construction Phase	01-Feb-19 A	15-Nov-19
Construction Phase	16-Nov-19	25-Jan-24
Demolition Phase	26-Jan-24	04-Jul-24
Project Closeout Phase	06-May-24	01-Nov-24
Raritan River Drawbridge - Summaries		
Award of Contract	01-Feb-19 A	
Pre-Construction (Contractor Mobilization)	23-Sep-19	15-Nov-19
Submittals	23-Sep-19	01-Sep-20
Review and Approval	01-Nov-19	09-Oct-20
Fabrication	26-Dec-19	12-Aug-21
Construction		
Stage 1 - Perth Amboy "Interlocking"		
Stage 1-Perth Amboy "Interlocking"	29-Jan-20	18-May-21
Stage 2 - New Movable Bridge and Approach Structures		
Ground Improvements-East (Perth Amboy)	02-Dec-19	28-Jan-20
Ground Improvements-West (South Amboy)	02-Dec-19	28-Jan-20
Retaining Wall No. 1	23-May-23	18-Jul-23
East Abutment	17-Mar-20	17-Jul-20
West Abutment	08-Jun-20	25-Aug-20
Trestles	25-Aug-20	10-Nov-20
Pier Testing Program (Drilled Shafts)	20-Aug-20	09-Dec-20
Piers- West Approach	09-Dec-19	03-Mar-22
Piers- East Approach	09-Dec-19	25-Apr-22
Piers Main Span	20-Aug-20	27-Jan-22
Signals and Catenaries	13-Jul-22	17-May-23
Bridge Structure- East Approach	12-Mar-21	01-Dec-22
Main Bridge Structure	30-Nov-22	24-Feb-23
Bridge Structure-West Approach	18-Dec-20	16-Jun-22
Retaining Wall No. 2, 4, 5	23-May-23	15-Aug-23
New Track Construciton- Work to be Performed by NJTRANSIT	19-Jul-22	25-Jan-24
Final Commisioning (Main Bridge Strucutre)		24-Feb-23
Work to be Performed by NJ TRANSIT		
South Amboy- NJT installs Hardware for Cat. Strctures/ Pulls wiring f	13-Jul-22	23-Nov-22
NJT Installs 138KV Traction Power Feeders	24-Nov-22	02-Dec-22
NJT Installs 68KV Signal Power Feeders	05-Dec-22	13-Dec-22
Stage 3 - Track 1 Related Work		
Stage 3 - Track 1 Related Work	19-Jul-22	25-Jan-24
Final Commisioning (Track 1)		25-Jan-24
Stage 4 - Track 2 Related WOrk		
Stage 4 - Track 2 Related Work	29-Dec-22	25-Jan-24
Final Commisioning (Track 2)		25-Jan-24
Stage 5 - Demolition		
Stage 5 - Demolition	25-Jan-24	04-Jul-24
Post-Construction		
Existing Bridge Demolition Complete		04-Jul-24*
Project Closeout	06-May-24	01-Nov-24
Project Complete		01-Nov-24*



Summary
Summary_Actual
Milestone
Contractor's Task
NJTRANSIT Task

Raritan River Drawbridge - October 12 2018
Data Date : 23-Sep-19
Raritan River Drawbridge Replacement_AECOM

Print Date : 15-Oct-18

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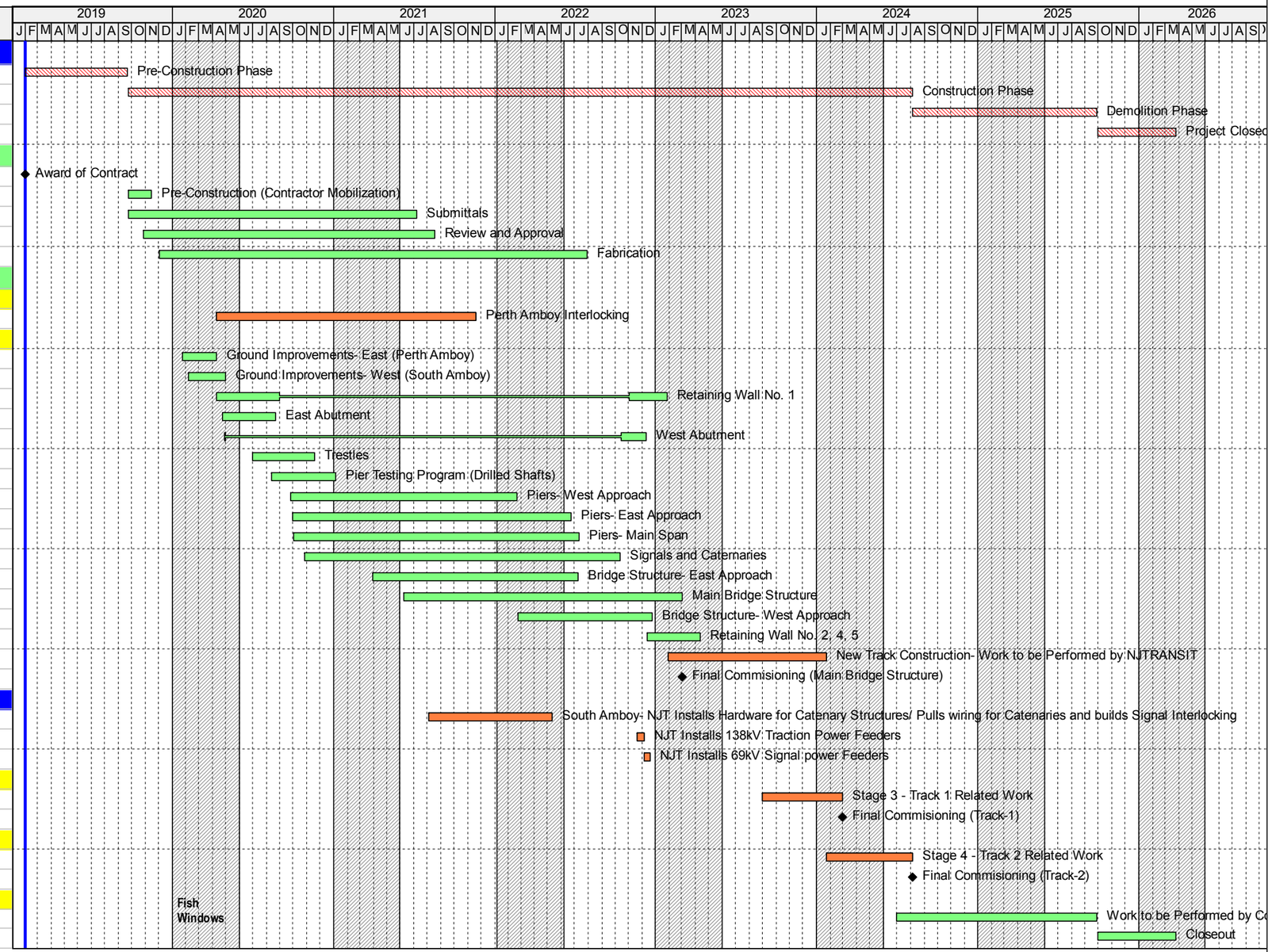
AECOM | Mott MacDonald

Raritan River Drawbridge Replacement

New Jersey Transit Schedule

Activity Name	Start	Finish
RARITAN RIVER DRAWBRIDGE REPLACEMENT		
Pre-Construction Phase	01-Feb-19	20-Sep-19
Construction Phase	23-Sep-19	05-Aug-24
Demolition Phase	06-Aug-24	26-Sep-25
Project Closeout	29-Sep-25	26-Mar-26
RARITAN RIVER DRAWBRIDGE REPLACEMENT		
Award of Contract	01-Feb-19*	
Pre-Construction (Contractor Mobilization)	23-Sep-19*	15-Nov-19
Submittals	23-Sep-19*	07-Jul-21
Review and Approval	28-Oct-19*	18-Aug-21
Fabrication	03-Dec-19*	29-Jul-22
Construction		
Stage 1- Perth Amboy "Interlocking"		
Perth Amboy Interlocking	10-Apr-20*	18-Nov-21
Stage 2- New Movable Bridge and Approach Structures		
Ground Improvements- East (Perth Amboy)	23-Jan-20*	09-Apr-20
Ground Improvements- West (South Amboy)	06-Feb-20*	30-Apr-20
Retaining Wall No. 1	10-Apr-20*	27-Jan-23
East Abutment	24-Apr-20*	21-Aug-20
West Abutment	28-Apr-20*	09-Dec-22
Trestles	01-Jul-20*	19-Nov-20
Pier Testing Program (Drilled Shafts)	13-Aug-20*	05-Jan-21
Piers- West Approach	25-Sep-20*	21-Feb-22
Piers- East Approach	29-Sep-20*	23-Jun-22
Piers- Main Span	02-Oct-20*	12-Jul-22
Signals and Catenaries	28-Oct-20*	12-Oct-22
Bridge Structure- East Approach	30-Mar-21*	08-Jul-22
Main Bridge Structure	09-Jun-21*	02-Mar-23
Bridge Structure- West Approach	22-Feb-22*	23-Dec-22
Retaining Wall No. 2, 4, 5	12-Dec-22*	11-Apr-23
New Track Construction- Work to be Performed by NJTRANSIT	30-Jan-23*	23-Jan-24
Final Commisioning (Main Bridge Structure)		02-Mar-23*
Work to be Performed by NJ TRANSIT		
South Amboy- NJT Installs Hardware for Catenary Structures/ Pulls w	05-Aug-21*	11-May-22
NJT Installs 138kV Traction Power Feeders	21-Nov-22*	05-Dec-22
NJT Installs 69kV Signal power Feeders	06-Dec-22*	19-Dec-22
Stage 3 - Track 1 Related Work		
Stage 3 - Track 1 Related Work	31-Aug-23*	29-Feb-24
Final Commisioning (Track-1)		29-Feb-24*
Stage 4 - Track 2 Related Work		
Stage 4 - Track 2 Related Work	24-Jan-24*	05-Aug-24
Final Commisioning (Track-2)		05-Aug-24*
Stage 5 - Demolition and Miscellaneous Work		
Work to be Performed by Contractor	01-Jul-24*	26-Sep-25
Closeout	29-Sep-25	26-Mar-26



- Summary
- Milestone
- Contractor's Task
- NJTRANSIT Task

RARITAN RIVER DRAWBRIDGE REPLACEMENT
Data Date : 01-Feb-19
Raritan River Drawbridge Replacement

Print Date : 14-Nov-18

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Understanding of the Project Purpose and Need

The purpose of the RRBR Project is to reduce the vulnerability of the existing Raritan River Bridge to major storm surge events and thereby enhance the reliability of the NJ TRANSIT North Jersey Coast Line (NJCL). The NJCL is the third busiest rail line in New Jersey and serves a total of 20 rail stations and carries roughly 19,200 commuters each day. The proposed RRBR Project will be the third generation of rail bridges to cross the Raritan River between Perth Amboy and South Amboy.

A troubled history of storm-related damage – The first bridge was constructed in 1875 for the New York and Long Branch Railroad. The bridge was a timber structure with a 440-foot swing draw truss, the longest in the world at that time. The old wooden structure was unreliable and caused severe delays and maintenance issues. Work began on the existing bridge in 1896. After 10 years of construction, at a cost of $1 million, the existing bridge was opened to rail traffic.

While the old bridge was a single-track structure, the new bridge carried two tracks across the Raritan River, improving the South Amboy curve; was eight feet higher in elevation; and was able to handle longer trains and heavier locomotives.

The 110-year-old existing Raritan River Bridge crossing has an overall length of 3000 feet. The swing span creates two navigable channels approximately 110 feet wide and has a long history of storm-related damage. Shortly after its opening in 1908, the bridge suffered damage from a winter storm, and that troubled history hasn't changed. Numerous bridge strikes during the years have also had an impact, with damage to both the superstructure and the fender system.

Most recently, in 2012 Superstorm Sandy forced the temporary closure of the bridge. The detrimental impacts of storm surge from Superstorm Sandy on the existing structure shifted the existing girder deck up to 18 inches at its piers. The damage resulted in the suspension of NJ TRANSIT service across the bridge for a period of three weeks after the storm passed. Though this damage was quickly managed and repaired under separate emergency contracts, the damaged support piers along the eastern approach spans of the existing bridge were heavily impacted and in need of future repairs, which ultimately led to the decision to rebuild.

A new, more resilient structure – The RRBR Project is a key element of NJ TRANSIT's Federal Transit Administration (FTA) Federal disaster relief funding for transportation and infrastructure projects in areas affected by Superstorm Sandy. The new structure is being designed and reconstructed to withstand the projected storm surge standard set by NJ TRANSIT for future severe weather events.

The RRBR Project includes the complete replacement of the existing two-track bridge with a new two-track bridge with a movable vertical-lift span. The new bridge will be constructed parallel to, and north of, the existing bridge. The parallel alignment will allow NJ TRANSIT train operations to continue without interruption as the new bridge and approaches are being constructed.

As mentioned above, the bridge has fallen victim to numerous bridge strikes, causing structural damage and the resulting service outages. The improved condition of a vertical-lift movable segment will allow for a 300-foot navigation channel and provide an easier path for mariners crossing beneath the bridge. The seemingly unlimited vertical clearance of the existing swing span was actually restricted by the railroad's 138KV overhead catenary lines. The proposed vertical-lift bridge will have a vertical clearance of 110 feet. That clearance was reviewed by the U.S. Coast Guard and is consistent with the upstream bridges.

New track, catenary and signaling will be constructed to support the RRBR on the new alignment. Beginning in Perth Amboy, the existing track geometry and vertical profile will be held to meet the proposed high-level platforms at Perth Amboy Station and the Market Street overhead bridge just west of the station. Immediately west of the Perth Amboy Station and past the Market Street Bridge is the former Raritan

River Steel Siding on Track 1 and Goldberg's Siding on Track 2. Between the No. 10 switch for Goldberg's Siding and the proposed bridge abutment in Perth Amboy, NJ TRANSIT will be constructing a new interlocking. The new Perth Amboy Interlocking "Perth" will replace the existing Essay Interlocking in South Amboy. The new location will improve railroad operations and place the new interlocking on a tangent railroad. As the track profile begins to rise and the new alignment shifts to the north, the new track system will be constructed on new embankment and retained fill. New pile-supported concrete retaining walls will be constructed to accommodate railroad loading and to minimize the acquisition of additional right-of-way (ROW). The new vertical profile will serve to elevate the new bridge structure approximately an additional 10 feet, and be consistent with the NJ TRANSIT design flood elevation. Raising the structure will increase the structure's longevity, reduce maintenance and provide added resilience to withstand the storm surge from future severe weather events.

As the new track alignment continues west past the South Amboy abutment, the existing Conrail turnout for Essay Running Track to "CQ" must be maintained. Conrail is a frequent operator, hauling 2 million tons annually over the bridge and onto Essay Running Track. In addition to maintaining this Conrail turnout as part of the new alignment, there are other alignment constraints, including the JCP&L Private Bridge and Conrail's Amboy Secondary Bridges. At both those bridges the vertical and horizontal clearances must be maintained. The new alignment will require the demolition of the existing Essay Tower, a landmarked building on this historic corridor. Special attention will be paid to the contract requirement for documenting the removal of the historic structure. Further to the west lies South Amboy Station, which has existing high-level platforms. This new alignment will improve overall rail operations, as the South Amboy curve will be flattened by shifting the alignment to the north, resulting in improved speeds of 60 miles per hour through the area.

Project Issues and Challenges

Based on our understanding of the project and the risk register developed during our Risk Assessment Workshop, we have identified the following issues and challenges that need to be met to deliver a successful project for NJ TRANSIT.

Project Safety

The AECOM | Mott MacDonald Team places an emphasis on project safety and benefits from lessons learned from successfully completing complex infrastructure construction projects in an active railroad environment. **Our commitment to project safety starts with our own staff** — all project personnel will undergo OSHA safety training as well as NJ TRANSIT's RWP contractor safety training. No agents, employees, consultants, contractors or subcontractors will be allowed to enter onto NJ TRANSIT/Conrail property without a right-of-entry permit and the required safety training. In addition, all visitors to the project will receive appropriate training before they are allowed to enter the NJ TRANSIT ROW.

Our focus on safety for the RRBR project starts the moment the AECOM | Mott MacDonald Team begins work on the Pre-Construction Phase.

As part of the Construction Management Plan (CMP), we will follow the guidance of FTA 5800.1, Safety and Security Management Guidance for Major Capital Projects. We will review the Safety and Security Management Plan (SSMP) for compliance, as part of NJ TRANSIT's Project Management Plan (PMP). This will include development of an approach to provide oversight to contractors and identify safety and security protocols that the contractor must perform.

As part of our CMP, the contractor's health and safety requirements in the specifications will be reviewed to ensure that they are comprehensive and reflect that the CM team will be responsible for monitoring and reporting conformance to their Health and Safety Plans and Safe Work Plans. This focus on safety will ensure that whether you are a NJ TRANSIT commuter, NJ TRANSIT or Conrail personnel, part of the contractor's work force, or AECOM | Mott MacDonald inspection staff, you will return home safe after every work day.

Working in and around an active railroad requires paying close attention to the safety protocols in place to safeguard the public, the railroad ROW and the impacted work force. This will include coordination with NJ TRANSIT Force Account staff to provide track outages, grounding of overhead catenary wire and flagging personnel during work either adjacent to or on NJ TRANSIT's tracks.

The importance of project safety cannot be underestimated. Our team will have a designated Safety Officer with full authority at all times to act on behalf of our team who will be responsible for reviewing the Contractor's safety program and monitoring of construction activities throughout the project. Our team will conduct periodic safety meetings with NJ TRANSIT and the Contractor's representative to review the project safety and loss prevention program. We understand that our team has the authority to issue a STOP WORK order should the Contractor, or any third-party, act in an unsafe manner that could jeopardize human safety.

To these typical safety concerns and established protocols there will be an added component due to the type of marine construction that will be taking place adjacent to NJ TRANSIT's ROW — the structural lifting operations adjacent to the NJCL and the catenary system that powers NJ TRANSIT's trains. During the development of our CMP, we will make sure that the contract specifications are clear regarding the submittals required. We will verify that all safe work plans and structural lifting plans are reviewed, approved and closely followed to ensure that NJ TRANSIT's facilities and operations are properly protected.

An established culture of safety.

AECOM's Construction Safety Performance Management Program leverages and tailors key elements of AECOM's own highly successful **Safety for Life** Program into construction-focused, project-specific programs designed to establish a culture of safety.

In addition to the safety considerations associated with construction operations adjacent to and on an active rail line, there are also significant safety considerations regarding working in a marine environment. Coordination early and ongoing with the United States Coast Guard (USCG) and navigational interests operating along Raritan River will be essential.

The Raritan River is relatively contorted, but marked with Federal navigational aids in the lower reaches of the waterway closest to the RRBR project location. While adequate depth and width of the waterway appears to be available for access for marine equipment, the added congestion associated with construction barges and equipment will reduce the available width for much of the maritime traffic. The safety precautions associated with these added construction barge operations and the need to safely maintain existing marine traffic will be closely managed during the construction of the foundation's new approach structures and the movable span.

Navigation along the Raritan River consists of fuel and fuel products, sand and gravel, and rock and chemicals deliveries and shipping. It is anticipated that construction activities can be planned to accommodate the movement of commercial navigation without significant disruption of either the bridge construction activities or the movement of goods along the waterway. The bridge construction activity for the Victory, Edison and Driscoll Bridge over the past 15 years was conducted without significant delay or interference with local commercial navigation. Here again, early and close coordination with the USCG and local boating interests is the key to smooth operations. The AECOM | Mott MacDonald Team was involved in the design and construction management on the relevant and nearby bridge projects spaning over the Raritan River, including the Driscoll and Edison Bridges.

Driscoll Bridge Construction

The construction contractor will be required to comply with the USCG's Navigation Rules (33 CFR 83), which provide requirements for vessel operations and markings (lighting/signs) while working and traveling in and around the project vicinity. Due to the recent storm related incidents on recent projects, all construction barges have been equipped with GPS location devices. Once the anticipated plan and schedule of construction operations is developed, this information will be shared with the USCG for their further input.

We are prepared to meet with the Contractor, NJ TRANSIT, and the USCG Bridge Branch office and Waterway Management office early in the construction phase to review the applicable rules and regulations and the safety precautions that will be required for safe operations in the bridge vicinity.

Railroad Coordination

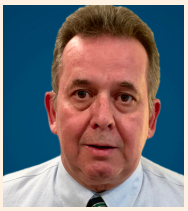
The RRBR Project requires that all construction take place in close proximity to the critical NJ TRANSIT's North Jersey Coast Line (NJCL) and adjacent to active Conrail freight service. We understand that both NJ TRANSIT's and Conrail's primary purpose is to move people and durable goods, and that all construction work that must be performed within the railroad ROW must minimize any interference with train operations; safeguard the agency's facilities; and be performed with the utmost attention to safety. Furthermore, the contractor must provide proof of insurance that meets all of NJ TRANSIT's and Conrail's requirements.

The AECOM | Mott MacDonald Team has extensive experience working in close proximity to active railways, and from this extensive rail experience, we have acquired a thorough understanding of the close coordination that will be required with NJ TRANSIT and Conrail to ensure that construction activities are progressed while maintaining rail operations. This includes a proactive approach to the coordination and monitoring of Force Account services, including electric traction clearances and flag protection, the scheduling of track outages and night work, 55-hour weekend outages, or shift work required to minimize disruption to railroad operations. **It will always be our team's priority to safeguard NJ TRANSIT's customers, employees, operations, equipment, facilities and ROW.**

Key members of the AECOM | Mott MacDonald Team have successfully managed some of NJ TRANSIT's most significant infrastructure projects and have successfully completed major bridge replacement projects adjacent to and over NJ TRANSIT's critical facilities. That work includes current assignments on the Portal Bridge Project, Secaucus Transfer Station and the **Secaucus Interchange 15X (above), where bridge structures and a new train station were constructed over and adjacent to NJ TRANSIT's active commuter platform and the Main and Bergen Rail Lines.**

In addition, supporting both Al Baycora and Tom O'Connor are railroad professionals that have worked successfully for NJ TRANSIT in the past:

NJ Turnpike Authority Secaucus Interchange 15X



Glenn Mack has 22+ years of experience, including serving as PM on Superstorm Sandy Recovery repair work for NJ TRANSIT. He was also NJ TRANSIT Senior Director Capital Projects & Programs-Light Rail Transportation & Contract Services.

During the development of our pre-construction phase, we will verify that the specifications include a requirement for highly visible temporary fencing along work areas to delineate the 18-foot fouling limit from the centerline of the closest track. This will ensure that workers, equipment and material do not inadvertently enter into the restricted area without the appropriate NJ TRANSIT and Conrail permission and flag protection.

A major safety concern, in addition to working adjacent to active train lines, is the presence of overhead power/signal lines. These safety concerns will be a regular "toolbox talk" topic for all consultants, inspectors and contractor workers and their subcontractors. Our team is fully aware of NJ TRANSIT's requirements for catenary and power facilities fowling limits, and will ensure that ET clearances are obtained anytime work is within or has the potential to be within 15 feet of any high voltage lines or facilities. And all project personnel will be required to take the NJ TRANSIT and Conrail Railroad Workers Protection (RWP) training class and obtain certification to be allowed access onto the railroad ROW.

NJ TRANSIT and Conrail have similar requirements for mainline track protection and consider their facilities impacted any time work is within their right-of-ways or has the potential to foul tracks or high voltage facilities. The flagman will have to obtain permission from the dispatcher anytime work will be within fouling limits of the track (18'). Also, Qualified ET Person will be required when work is within the fouling limits of the catenary or high voltage lines (15'). Our team will engage early discussions with the contractor so the submitted Site Specific Work Plans make clear reference of the fouling limits and any other potential safety requirements t ensure that these SSWP's completely conform with NJ TRANSIT's Guidelines For Working Witin orin Vicinity of NJ TRANSIT's Right-of-Way".

Our team is fully aware of NJ TRANSIT's and Conrail's requirements for sheeting and shoring any excavations in vicinity of railroad tracks and the special requirements for sheeting when excavation work interferes with the railroad Live Load Influence Envelope. We will engage the contractor from day one to ensure that his SSWP's clearly conform to

NJ TRNASIT's and Conrail's requirements for sheeting and shoring. This will reduce the approval time for these SSWP's.

Our REs will work closely with the contractor to schedule the required flagmen, ET and other FA support services, to perform the greatest amount of work within the allowable windows to maintain the contract schedule.

NJ TRANSIT will likely not permit construction grade crossings over their tracks. However, it may be necessary to build a construction grade crossing over Conrail's Essay Running Track in South Amboy. This will facilitate contractor staging and delivery of equipment and supplies to the western end of the bridge. During construction of the Newark International Airport Station, a construction grade crossing was successfully used over a Conrail siding at Bud Interlocking. Our team will coordinate with Conrail and guide the contractor through the approval process. Our RE will work with the contractor from the moment a potential crossing need is identified until the time when it is removed, and the track is restored to its original condition. Our Force Account Coordinators will ensure Conrail provides adequate flag protection and the grade crossing is safe to use.

We will also ensure that the grade crossing is safely secured so potential trespassers do not use it after hours. We will collaborate with NJ TRANSIT's Safety and Transportation Departments to find engineering controls/solutions for any safety issues that could enable us to install temporary construction crossing if it is absolutely required.

As part of the development of the pre-construction assistance, we will verify that the contract specifications include submittals for detailed sheeting and shoring requirements and structural lifting plans. Based on our past experience and lessons learned working around railroad facilities, we will insist that the contractor's baseline schedule include activities for the contractor's preparation, submittal and a review period for these critical safe work plans. We will verify that all these submittals are signed and sealed by a NJ-licensed Professional Engineer. The enclosed drawings must include all the requirements outlined in the specifications, with a detailed drawing of the location of the work relative to the tracks. In conjunction with the designer, we will review the contractor's plans prior to submission to offer comments that will detail the locations/size of cranes, all overhead wires and adjacent structures, operating radiuses, pick locations, access to the site, lay down areas, schedule of operation and safety concerns. Upon approval and field implementation, the AECOM | Mott MacDonald Team will ensure that the approved plan is closely followed. NJ TRANSIT flag and/or electric traction (ET) personnel are also expected to be required during these operations.

During construction and prior to any sheeting or excavation operations within or adjacent to the NJ TRANSIT ROW, utility mark-outs are required and test pits will be required to locate and identify any underground facility. All test pits within the railroad ROW will be coordinatied with NJ TRANSIT and the respective utility company.

Force Account – Force Account coordination will be one of the major factors in the successful completion of this project. The AECOM | Mott MacDonald Team has dealt with both NJ TRANSIT and Conrail Force Account personnel on other projects, so we understand the issues.

Pat Dempsey, Rail Systems RE, will be in charge of managing both the Contractor's and NJ TRANSIT's Force Account work related to installation of track, power, signals and communications systems work. Pat will be supported by seasoned professionals, with his decades of NJ TRANSIT experience in managing Force Account work. They will monitor the Force Account activities with NJ TRANSIT's various operating groups for the successful completion of this work.

Based on our past project work, we have developed a process for verification and validation for all F/A invoices, labor and equipment rates. This process was used effectively to manage Force Account work on the Secaucus Transfer project, under Pat Dempsey's oversight as RE.

This process is still used as a formula for reviewing and resolving billing issues involving NJ TRANSIT's and other rail agency Force Account work.

Pat will be leading the rail elements of the RRBR Project, including F/A coordination, as our RE for Rail. Pat has demonstrated his ability to successfully manage all phases of highly complex, multiple-phase, large-scale rail and transit projects for the largest regional rail stakeholders in the tri-state area. He is no stranger to NJ TRANSIT, having served as RE for the Secaucus Junction Station project and the NE Corridor Enhancements, and as CM for the nine follow-on contracts at the Secaucus Station. That work involved close coordination with both NJ TRANSIT and Amtrak Force Account personnel.

Our team understands the challenges in getting the Force Account work completed.

The key is to plan the work well in advance to allow NJ TRANSIT's operations group to commit the needed resources to perform the Force Account work.

We will schedule meetings with NJ TRANSIT's Track, Signals & Communications (S&C), Electric Traction (ET), Building & Bridges (B&B) and Work Equipment Departments to understand the scope of work and schedule for performing the work and providing resources. Once the schedule is agreed upon, the work activities will be incorporated into our master schedule. All track and electric traction outages will be well planned and will be communicated with the NJ TRANSIT Transportation Department.

We will also provide support to the NJ TRANSIT Public Outreach group to inform the riding public of any short- and long-term outages or disruptions.

Following is a summary work plan for managing Force Account activities:

- Arrange early meetings with Force Account (FA) to plan and schedule resources early. This will ensure that work scopes are fully understood by all departments at NJ TRANSIT, and will enable us to combine work activities when possible during track and power outages. We will ensure the Track, S&C, ET, B&B and Work Equipment Departments fully understand project milestones, work activities and expectations. We will communicate all outages with the NJ TRANSIT Transportation Department. We understand the outreach procedures and that NJ TRANSIT must inform the riding public of any short- and long-term outages/disruptions.
- The NJ TRANSIT Project Manager will be assured that the project outages and required Force Account resources are reflected in the Annual Outage Meeting that NJ TRANSIT usually conducts in January of every year. We will also provide updates to the Annual Outage requirements based on updated project schedules. We will ensure that our contractor's outage requests do not conflict with other project or planned maintenance outage requests along the North Jersey Coast Line.
- We will properly communicate the flagging needs/changes as required by the project construction activities. Early on, we will establish the number of flagmen required on a full-time basis and will request that these positions are advertised and filled to ensure continuous availability of flagging personnel. We will establish procedures to follow in case the flagman(s) did not show up during emergencies or due to unforeseen circumstances.
- We will attend, or assist the NJ TRANSIT PM with, any information required for the weekly outage meetings to ensure that our outages are properly communicated, and proper representation exits at the weekly outage meetings. We understand that NJ TRANSIT is in the business of moving people and will establish procedures to keep the contractor working in case a track outage is returned to service during rail emergencies. This will drastically reduce contractor's claims.
- Ensure FA services are charged properly to the proper project. We will ensure no erroneous charges are applied to our project. We will review all "Daily Participation Project Reports" to check that proper charges are applied by all FA personnel.
- All material needed for FA will be properly procured early on to ensure no conflicts with the construction schedules. We are familiar with NJ TRANSIT's procurement process and will provide any assistance required. This includes standard and long-lead material items.
- We will collaborate with NJ TRANSIT's Work Equipment Department to ensure proper maintenance, availability and functionality of Work Trains.
- We will plan flagging and other FA services properly to reduce costs by ensuring that Track, S&C, B&B and ET construction services are fully communicated with these departments. We will review that their material and long-lead items are reordered in a timely manner and will follow up as needed to maintain the project progress. If possible, we will confine construction activities within the line-of-sight of the flagman(s) to

prevent requiring additional flagmen. We will maximize the contractor productivity when work involves FA support to reduce FA costs. We will properly locate staging, storage areas and project access routes to reduce UTU's (Flagmen union) and NJ TRANSIT Safety Department's concerns. Will establish protected work site perimeter and contractor employee access zones to minimize the number of flagging personnel.

- Will properly communicate the contractor schedule and milestones to Rail Operations through the NJ TRANSIT PM. Will ensure that the NJ TRANSIT Transportation Department, Infrastructure Department and Contractor fully understand the project requirements early on in the project. We will confirm that all required testing is performed prior to any cut-ins. We will ensure that any outages affecting rail service are properly communicated through NJ TRANSIT to its customers to reduce customer complaints.
- Our team understands the current NJ TRANSIT Safety Rules, Roadway Worker Protection (RWP) and Standard Operating Procedures (SOPs). We are familiar with the current "Guidelines For Working Within or on Vicinity of NJ TRANSIT's Right-of-Way." We will ensure that all the contractor's hoisting activities conform to NJ TRANSIT's "Engineering Data Required For Erection, Demolition, or Other Hoisting Operations Over NJ TRANSIT's Rail Operations."
- We will ensure that all contractor's construction activities conform to NJ TRANSIT's "General Requirements For Working Within The Right-of Way." This includes all equipment that foul, or has the potential to foul, adjacent track (18-foot fouling distance from CL) or adjacent catenary (15 feet from closest facility).
- We will enforce that any contractor's hi-rail equipment used on the project is properly inspected, and an inspection sticker is provided by NJ TRANSIT's Work Equipment Department prior to placing this equipment on NJ TRANSIT tracks. All contractor's hi-rail equipment must conform to NJ TRANSIT's "Third Party Contractor Vehicle Use on NJ TRANSIT Rail Property."
- This project will require a good deal of work trains and hi-rail equipment on adjacent out-of-service track. Our team fully understands the adjacent track protection rules when working on adjacent the out-of-service Track and will verify compliance.
- The performance of Force Account work performed by NJ TRANSIT's personal and contractor's personnel will follow NJ TRANSIT's safety protocols.

This project faces unique challenges, including competition for the scarce NJ TRANSIT resources, scheduling of outages, maintaining rail traffic on the existing bridge, maintenance of ongoing railroad operations, and maintaining positive community and customer relationships. We view these challenges as primary risks to keeping the project on schedule and on budget. We fully understand that any disruptions will adversely affect the train service along the North Jersey Coast Line.

Our key team will truly be proactive, will make a difference and will add value while supporting NJ TRANSIT throughout the entire project process.

New Track and Switches

We will closely monitor the soil consolidation and rigid inclusions to ensure that the ground improvement can accept new track construction. The current condition is east of the river, tracks are constructed with timber ties and west of the river concrete ties are used.

Timber Ties: For timber ties, the tie material typically specified is to be a hardwood species as per the AREMA Manual Chapter 30, Section 3.1.1 (Specifications for Timber Cross Ties). When delivered to the project site, we will inspect to ensure that ties shall be unloaded and handled in such a manner as to not damage the ties, using approved handling equipment. The top surface of ties shall be clean and smooth to provide full bearing for tie plates. Good practice is to lay timber ties with heartwood face down, and if not possible, to determine position of the heartwood, and lay the widest surface of the tie down. We will follow NJ TRANSIT guidelines, which will specify the distance between timber ties, and the inspectors will check that the proper tie spacing is being constructed by the contractor.

Unless NJ TRANSIT chooses to specify a fastening system such as the Pandrol Victor or E-clip systems, the tie plates will be of the standard double-shouldered type

and accommodate the 136-lb. rail with its 6-inch wide base. We will inspect to ensure the tie plates are in accordance with the AREMA Manual Chapter 5, Section 1.1 (Specifications for steel tie plates) or Contract Specifications. They should be placed on timber ties and set in position with cant surface sloping inward, making sure they are firmly seated and have full bearing. After rails are in place, we will inspect that the shoulder of plates shall be in full contact with the outside edge of the rail base.

During track construction, the rail should be set in place with temporary rail joints being assembled before fastening the rails to the tie plates and ties, using joint bars with a full number of track bolts and spring washer for each bolt, first removing loose mill scale and rust from contact surfaces or joint bars and rails. We will enforce that under no circumstances must rail be struck in the web with any tool or any metal object. The right-hand rail facing in the direction of increasing construction shall be spiked to ties, and the opposite rail shall be brought to a gauge of 4' 8-1/2", measured at right angles between the rails, in a place 5/8" below top of rail. We will use a track gauge manufactured for the purpose of measuring gauge as opposed to a tape measure. Gauge is to be checked at every third tie. We will be watchful that the contractor not strike a rail directly with a maul, either on top when driving spikes, or on the side to obtain track guage. Rail shall be laid with staggered joints. Joints shall be located as nearly as possible to the middle of the opposite rails with the following variation: (a) except through turnouts, the staggering of the joints on one side shall not vary more than 6 feet in either direction from the center of the opposite rail. After the temporary joints have been removed and the rail joints welded in the field, the continuously welded rail (CWR) will need to be de-stressed as soon as possible, after construction, and prior to track being placed in service.

If a standard fastening system is used with cut spikes, in the timber tie approach section, then rail anchors will be utilized as per the specification.

Concrete Ties: Ties shall be inspected in accordance with the AREMA Manual Chapter 30, Part 4 (Concrete Ties) or Contract Specifications. The information regarding the rail fastening and restraint system is in this Part as well. NJ TRANSIT will specify the distance between concrete ties, and the inspectors will check that the proper tie spacing is being constructed by the contractor.

In both cases of timber tie sections and concrete tie sections, the ballast material should be granite, or a rock material having a hardness of at least similar to that of granite, have no fines included and conform to the AREMA Manual Chapter 1, Section 2.3 (Materials). The shape of the ballast rock shall not be rounded, but rather angular, to permit the ballast to keep compaction when tamped. The inspectors will review the tickets from the quarry to assure compliance with the specification.

The dimensions of the track ballast section are to be specified by NJ TRANSIT and Conrail, including the depth of ballast below the ties, the width of the ballast shoulders, etc. The inspector will check that the ballast section specified by NJ TRANSIT is being constructed by the contractor.

The ballast may be dumped on the skeletonized track by the contractor's means and methods. We will confirm that care is taken not to disturb grade stakes. Tamping is most likely to be done by NJ TRANSIT Force Account, using power tamping machines wherever possible, or manually, using approved AREMA tamping tools appropriate for type of ballast being placed. We will review that NJ TRANSIT FA tamps each layer of ballast from a line 15 inches inside each rail, on both sides of and to the ends of ties. The center area between these limits should be filled lightly with ballast but not tamped. At turnouts and crossovers, we will inspect the tamping of ballast uniformly for the full length of ties. Tamping should proceed simultaneously at both ends of the same tie, and we will make sure ballast is forced directly under the ties and against the sides and ends of ties.

After ballasting, surfacing and de-stressing of the CWR are completed, the inspectors will check the track to see that joints are tight and rail attachments to ties are secure, and the CWR de-stressing process was followed per plan and specification. The Construction Manager, or designate, will inspect the finished track work for approval and coordinate with NJ TRANSIT Force Account to place the tracks in service.

Switches: The Essay Interlocking in South Amboy will be replaced by a new interlocking in Perth Amboy, called Perth. After the Perth Interlocking is installed and put in service, the Essay Interlocking will be straight railed. All of the inspection techniques for the approach tracks will be followed for switches and interlockings.

OCS and Traction Power

Presently, in the area pertaining to this project, there are two wired tracks running from the South Amboy train station through Essay Interlocking, over the Raritan River swing bridge, crossing the river to Perth Amboy. The Overhead Catenary system is comprised of a 3-wire compound fixed termination system. To the west of Essay Interlocking at the curved track area, the catenary goes from inclined to tangent chord.

Along the tracks, supporting the catenary are cantilever and portal structures. The structures comprise foundations, poles, anchors, guy wires, steelwork, brackets and associated structural and registration assemblies. They also support 138kV transmission lines as well as 6.9kV Signal Power lines and static wires.

The 138KV Transmission lines feed the NJ TRANSIT South Amboy substation from the Amtrak Rahway substation on the NEC; the 138KV Transmission lines cross the Raritan River bridge on high towers. At South Amboy Substation, the voltage is stepped down from 138kV to 12kV, 25Hz. Two 12kV feeders leave the substation to feed the catenary to the west and two 12KV feeders feed east of Essay Interlocking via sectionalizing switches. From the substation, these ancillary wires are currently routed aerially and supported on the OCS structures located on either side of the existing tracks through Essay Interlocking towards Perth Amboy.

An experienced OCS and Traction Power Construction Inspection Team will be present to monitor and document the installation of the new catenary and traction power system, as well as the various electrification components of the system and third-party utility and railroad Force Account activities.

We will provide construction support to monitor the NJ TRANSIT Force Account employees installing/commissioning the Traction Power, Catenary Overhead system and all Force Account work.

Once the contractor has installed all the catenary portal structures, Cathy Clement, our senior OCS Engineer, will be present to monitor the various tests performed on the erected catenary, catenary assemblies, foundations, poles, anchors, guys, small part steelwork, brackets and power systems.

We will witness the test of the bonding and grounding protection system, devices and equipment by monitoring and ensuring the safe and reliable operation of the OCS and Traction Power system.

We will pay special attention to the electrical clearances required for 12kV bare wires, 138kV cables and 6.9kV cables. Their observations will be documented in the daily inspection reports and testing reports. Our Traction Power and OCS engineers will witness the demolition of the existing power distribution cables, which will not commence until after the new power cables have passed all required electrical tests (megger, hi-pot) to ensure that there will not be any disruption to existing operations.

A new interlocking will be built across the river just before the Perth Amboy Station to replace the Essay Interlocking. This will require a new switching arrangement, re-sectionalizing of the catenary and power feeder, bonding, grounding measurement and testing.

The outage required for connecting adjacent sections of the OCS system must be managed properly. The performance and acceptance testing outage may be limited to night and weekend work.

The new alignment will consist of the pair of new tracks coming off the curved track, suitable for 60-mph train operation, over the new vertical-lift bridge and back into the existing alignment on the other side of the river. To the north of the existing Raritan swing bridge, a new

vertical-lift bridge will replace it. The existing Essay Interlocking will be replaced with a new interlocking just west of Perth Amboy Station.

The new OCS will be installed in line with new track alignment from west of the Essay Interlocking to west of Perth Amboy Station. A stringing plan depicting the sequence of installing the catenary system, installing tensions and loads will be reviewed prior to catenary installation.

In conjunction with the installation of the new tracks, attention will be given to the existing catenary sectionalizing switch at Essay Interlocking. The switches must be modified such that each track will be independently powered. This arrangement will provide flexibility for installation and commissioning of one track at a time.

When the contractor is installing the new OCS poles and beams over the existing catenary, caution must be taken to verify that the in-service catenary fouling limits are maintained (15'). Any installation above the catenary lines, such as cross beams, would require catenary outages.

For the installation of the OCS foundations, the schedule excavation, boring, installation of the reinforcing steel and concrete pouring must be made so that the excavated area is poured immediately after excavation. Vibration or excessive wheel loads within the immediate vicinity will not be allowed. Water will not be accumulated in excavations. Survey monitoring of the existing track will be required to verify no movements occur.

Particular attention should be made to the terminations of the OCS at the separating face of the movable span. When the bridge is at a normal (down) position, current continuity is essential. For good current collection by the pantograph, there must have been negligible loss of contact or sparking at the sliding contact.

Communication and Signals

The scope of Communication and Signaling (C&S) work includes replacement of interlocking facilities for the moveable bridge as well as reconfiguration of the existing Essay Interlocking and construction of the new Perth interlocking. Substitution of new #20 crossovers at Perth for existing #10 crossovers at Essay will improve traffic flow and reduce the high recurring maintenance expense of current switches on the existing curves. The overall project limits for C&S work on this project extend from interlockings Essay to Wood. The train control component of this work includes conventional 4-aspect cab signaling combined with ACSES-II for NJT trains and I-ETMS for Conrail (Norfolk Southern) freight traffic.

The AECOM | Mott MacDonald Construction Management Team will provide field inspection, submittal review, RFI processing, preparation of track and signal bulletins, contractor payment and documents for FA labor manhour and equipement charges associated with this work. The priorities of the Construction Manager are schedule adherence, budget control and minimization of service disruption. In its role as CM, The AECOM | Mott MacDonald Team will also serve as a liaison to the NJSHPO in matters concerning historical elements of the Essay Tower.

C&S work will be a continuous activity over the life of this project. C&S changes, such as cable relocation, will be among the tasks during this project, and completion of C&S work will be the very last activity prior to final project commissioning and close-out. The C&S element is particularly vulnerable to unforeseen contingencies and schedule changes. We will work to ensure proper communication among the rail and rail systems disciplines. **The AECOM | Mott MacDonald Team will provide well-qualified and experienced staff who will form a callabrative working relationship with NJ TRANSIT C&S staff.**

Drilled Shaft/Deep Foundations

The RRBR Project requires installation of drilled shaft foundations at 26 pier locations within the Raritan River. The design calls for the approach spans, flanking spans and towers of the main lift bridge to be supported on drilled shafts ranging in length from 167 to 230 feet. Out of 84 total drilled shafts, 66 are to be socketed into rock of the Stockton Formation, with socket lengths ranging from 5 to 28 feet. Each shaft will be constructed with 8½-foot-diameter permanent steel casing embedded into the Raritan Sand stratum, with 8-foot-diameter uncased sections extending below the casing and into rock.

Drilled shaft installation will require construction over water from temporary work platforms, including temporary trestles and barges. Construction of large-diameter drilled shafts over water constitutes one of the most critical aspects of this project. Potential impacts to construction schedule, sequencing and costs must be understood and managed effectively. In addition, the overall structural safety, reliability and long-term durability and resilience of the bridge depend on proper installation of the deep foundations. The importance of competent construction management for the foundations of this bridge cannot be overemphasized.

Pre-construction Phase – The AECOM | Mott MacDonald Team will conduct a thorough review of the contract plans and specifications to verify that key elements of the drilled shaft inspection are included in the CMP inspection protocols. Key elements include, but are not limited to, reinforcement cage design from the perspective of bar spacing, concrete passing ability, splicing requirements for both the permanent casing and rebar cages, and lifting considerations. The objective is to identify critical inspection parameters and, if necessary, recommend changes that can provide improvements to constructability. We will revise existing NJ TRANSIT drilled shaft construction specifications for quality control and quality assurance of drilled shaft construction, with a focus on critical items such as verification of bottom cleanliness, proper handling of drilling fluids, properties and placement of concrete, and other factors.

Recognized expertise in ground improvements and deep foundations

The benefit of Dan Brown and Associates (DBA) as an important part of our team is having access to the vast expertise and experience of its industry-recognized professionals:

John Turner will bring his valuable and highly relevant experience as the foundation lead for the design and construction phases for the Goethals Bridge Replacement (GBR). Approximately 11 miles north of Perth Amboy, the GBR is also founded on rock-socketed drilled shafts, ranging in diameter from 4.5 to 10 feet. A total of 210 drilled shafts were installed. During the construction phase, John and DBA provided oversight of drilled shaft inspection and integrity testing, and were responsible for approval of all foundation-related change orders, evaluation of different site conditions and final acceptance of drilled shafts on the basis of as-built records and nondestructive integrity testing.

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NHI Course No. 132014

Drilled Shafts: Construction Procedures and LRFD Design Methods

Developed following:

AASHTO LRFD Bridge Design Specifications, 4th Edition, 2007, with 2008 and 2009 Interims.

John is the author of 100+ technical papers and reports and has been a principal investigator on over 20 funded research projects. **He is the co-author (with Dr. Brown) of Drilled Shafts: Construction Procedures and LRFD Design Methods (2010)."** He is also a co-developer and an instructor for the NHI drilled shaft design and construction course based on the manual.

Upon award of the construction contract, our team will review the contractor's Drilled Shaft Installation Plan, including the load testing submissions. Our focus will be on making sure the Installation Plan meets the project specifications and includes both primary and contingency plans for means and methods that minimize risk to schedule, cost and reliability. Following the submittal reviews, a meeting with all parties will be conducted to

discuss the methodology, experience, manpower and equipment needed to provide high-quality drilled shafts. All facets of the operation will be discussed thoroughly, including site logistics, testing and hold points, details of drilling, setting reinforcement cages, concrete placement and finishing of the shaft. Before final approval of the Installation Plan, we must be confident that the contractor's proposed equipment, methodology and access are capable of excavating through whatever materials are encountered, while maintaining strict alignment criteria. Shafts must meet plumbness and location requirements based on survey points surrounding the shaft. The contractor will be required to provide a licensed surveyor to establish the exact location of each shaft and shaft alignment, and to provide the final as-built information for each completed pier.

Drilled Shaft Load Testing – The RRBR Project requires two drilled shaft axial load tests to be performed using the bi-directional load testing method (O-Cell Test). **Our team is very experienced in working with testing vendors, drilled shaft contractors and foundation designers to maximize the benefits of load tests**. **Our philosophy is that a properly managed load test is a risk-control measure.** Installation of the test shafts is used to demonstrate the contractor's means and methods, and the load test results provide verification that the as-built shafts are capable of carrying the design loads.

DBA has designed hundreds of such tests and has special expertise in how best to perform the tests, and how to utilize the results to optimize design and construction.

Construction of test shaft at Fore River Bridge

One axial load test is to be performed on a test shaft located between Bridge Piers 15 and 16 (East Flanking Span). The primary purpose of this test is to verify the design assumptions pertaining to axial geotechnical resistance of the shafts socketed into Stockton Formation rock. The second load test is to be performed on a test shaft installed between Piers 2 and 3, and is intended to verify the design assumptions pertaining to the geotechnical resistances of the drilled shafts with end bearing in the Raritan Formation, an unconsolidated Cretaceous-age deposit of clay and silt with varying amounts of sand.

To verify the success of the load testing program, team member DBA will monitor all aspects of the test design, test shaft installation, load testing and reporting of the results.

First, we will coordinate with the foundation design firm to make sure the objectives of the test are understood by all parties. It is our understanding that verification of side and base resistances used to design the drilled shafts is a primary objective. We will then work with the contractor and testing vendor to ensure that each test is designed to meet its objective. Factors such as the number and location of bi-directional load cells (Osterberg-cells) in the test shafts will be determined. The contractor's shop drawings and test shaft installation plans will be reviewed and approved prior to construction. The test shaft installations will be monitored and documented by the same inspection personnel assigned to the production shafts. Once the load tests are completed, a full package, including installation and inspection records and load test results, will be submitted for approval to NJ TRANSIT and the foundation design engineer of record. Means and methods used by the contractor to install the test shafts that provide verification of the design assumptions will not be permitted to change during production without prior approval by the design engineer of record (EOR).

Each of the load test shafts provides an opportunity to evaluate the contractor's means and methods of drilled shaft installation prior to construction of the production shafts. We will make a careful, detailed observation during these installations to identify problems, difficulties or potential improvements, and to revise the contractor's Installation Plan if warranted. Our inspection personnel will make the detailed observations and will gain first-hand experience with the contractor's means and methods. This opportunity will enable our inspectors to ask questions, refine the inspection procedures if needed, and gain a better understanding of the QA/QC process under real-world conditions before going into full production. We will carefully evaluate the methods used by the contractor for final base cleanout to verify that the criteria given in the drilled shaft construction specifications for base cleanliness can be met and verified.

Drilled Shaft Construction Phase – The AECOM | Mott MacDonald Team will provide special inspections of each drilled shaft installation, including non-destructive integrity testing by cross-hole sonic logging (CSL). As clearly recognized by NJ TRANSIT and stated in the RFP, drilled shaft inspection is a specialty item requiring trained personnel experienced in drilled shaft construction for large-diameter, deep shafts socketed into rock. Inspection records are the primary basis for final acceptance of installed drilled shaft foundations. Some of the principal aspects of this effort will be establishment of an inspection management structure, inspection forms that are straightforward while providing adequate detail for verification that specifications and other requirements have been met, and clear delineation of the inspectors' role during construction. Responsibility for review and interpretation of CSL test results will be established based on rational engineering principles and in coordination with the foundation design EOR. Criteria for final acceptance by NJ TRANSIT will be defined clearly.

The Role of Inspectors – Each drilled shaft inspector will be qualified, by training and experience, to perform this role. This includes the required prior experience as a drilled shaft inspector. **Our team, with guidance from DBA, adheres to inspection best practices as described in Chapter 19: Inspection & Records of the FHWA Drilled Shaft Manual, authored by DBA staff.**

Inspectors will participate in pre-construction coordination meetings that address drilled shaft installation to understand project requirements and the contractor's Drilled Shaft Installation Plan, and to be fully informed on the particular concerns of the designer and the contractor. Pre-construction meetings will address the responsibilities of the drilled shaft inspectors and the procedures for preparing and submitting inspection forms electronicaly, and for establishing the required lines of communication during construction.

Specific responsibilities of the drilled shaft inspectors will include:

- Attend pre-construction meetings and construction meetings with the designer, the geotechnical engineer and the contractor;
- Be thoroughly familiar with site conditions, including maintenance of traffic/rail requirements, permit issues and utilities;
- Be familiar with general subsurface conditions, including types of soil and rock materials, and groundwater levels anticipated from the geotechnical exploration borings;
- Be familiar with the relevant contract drawings, specifications, specification special provisions and payment provisions applicable to the drilled shaft foundations;
- Be familiar with the approved Drilled Shaft Installation Plan, particularly information related to the procedures and equipment to be used and verify that the available plan is the most current;
- Be familiar with the drilled shaft installation criteria and tolerances;
- Have available all necessary inspection equipment, and verify the equipment is calibrated and in good operating condition;
- Be trained and have available the electronic record-keeping tools to be used for inspection documentation;
- Observe and document all drilled shaft activities;
- Observe field testing of slurry; and
- Perform field testing of concrete, and prepare concrete cylinder samples for laboratory testing.

Some of the critical phases of drilled shaft installation and inspection for the RRBR Project include casing installation, observation and verification of base cleaning, cage lifting and placement, concrete placement and cross hole sonic logging (CSL) testing. Each drilled shaft will be installed using permanent steel casing (pipe) in a manner that provides borehole stability and water pressure equalization during excavation to the tip elevations noted on the plans. The bottom of each shaft will be inspected and sounded to verify that it is sufficiently clean of sediment prior to placement of the reinforcing cage and concrete. Verification methods to be employed include the mini-shaft inspection device (mini-SID) and/or weighted tape soundings. For shafts with rock sockets, careful monitoring and inspection of drilling and excavated materials will be performed to verify the required embedment into sound rock.

The recent experience of Dr. Turner and DBA engineers at both the Goethals and Mullica River bridges (and others) gives the AECOM | Mott MacDonald Team and NJ TRANSIT a significant benefit.

The geologic setting and characteristics of the Stockton Formation rock have many features in common with these other NJ bridge sites and **the successes and lessons learned on these projects will be incorporated into base cleanout and verification on the RRBR Project.**

Properly performed airlifting allows removal of sediment and drill cuttings to a level that ensures excellent contact between the bearing rock and drilled shaft concrete. The base condition was then verified using the mini-SID. This device consists of a downhole camera encased in a sealed cylinder that provides a visual measurement of sediment thickness at the base of the excavated rock socket. The requirement at Goethals was for at least 12 of 15 measurements to be less than ½-inch of sediment and for zero measurements exceeding 1-½ inches. Four load-tested shafts constructed under this requirement exhibited base resistance exceeding 300 ksf.

The AECOM | Mott MacDonald JV's experience with deep foundations on the Raritan River is unparalleled, based on our work on the new Edison and Driscoll Bridges.

By requiring production drilled shafts to follow the same cleanout and verification protocol, the design-build team and the Owner achieved a high level of confidence in the base resistance used for design (i.e., the essence of quality assurance).

We intend to apply similar rigorous inspection procedures to construction of drilled shafts on the RRBR Project in order to provide NJ TRANSIT with the same level of quality assurance.

Lifting Cage for Placement in Drilled Shaft – Following cleanout and acceptance of the excavated borehole, lifting and placement of the reinforcement cage is a critical step, requiring attention to proper procedure and inspection.

Use of the Mini-SID for base inspection of rock-socketed drilled shafts

At the **Goethals Bridge**, where the rock is of similar geologic age and exhibits similar engineering properties, base cleanout was achieved most effectively using an airlifting procedure for cleanout, with cleanliness verification provided by the mini-SID.

Submittal and approval of a lifting plan will be required. Given the size and lengths of the cages for this project, we will pay careful attention to cage bracing, lift point connections and stability during lifting, placement in the borehole and concrete placement. CSL access tubes cannot be allowed to bend excessively or to become dislodged, or be subject to filling by concrete. Proper spacers will be used to center the cage in the casing pipe. The cage installation, as with all lifting operations adjacent to the railroad ROW, will be closely monitored for conformance to the approved lifting plans, including the presence of the appropriate flag protection and safety protocols required by the railroad.

Tremie Concrete Placement – We intend to work with the contractor to facilitate the application of the most up-to-date best practices in the design and handling of the drilled shaft concrete.

The recently published "Guide to Tremie Concrete for Deep Foundations" represents a joint effort by North American and European experts on deep foundation construction to provide clear, practical guidelines on mix design, testing and quality control of drilled shaft concrete.

DBA President Dr. Dan Brown is a member of the Task Force and one of the co-authors of this milestone publication. We intend to apply many of the recommendations in the Guide to minimize risk and optimize constructability of the RRBR drilled shafts.

The contractor's proposed concrete mix design will be approved prior to commencement of the drilled shafts. Concrete will be placed by the tremie pipe method from the bottom of the excavation upward in one continuous pour to avoid segregation and ensure an integral reinforced concrete structure. Features that our inspectors will carefully monitor and record include concrete volumes vs. depth, the rate at which the tremie pipe is being raised and embedment of the tremie pipe in the placed concrete. Measured concrete volume vs. depth curves will be plotted next to theoretical neat volume curves for comparison and to identify zones of over- or under-pour. Sufficient overflow of concrete will be provided to ensure all drilling fluid has been removed. The entire operation from the time of completing the shaft, installing the rebar cage and pouring the shaft, will be continuous. Concrete will be inspected and tested in the field for slump, spread and flow characteristics and test specimens cast for strength, in conformance with the specifications.

Lifting the cage for placement in a drilled shaft on the Goethals Bridge Replacement project.

The cage must have adequate clear spacing between bars to allow concrete to pass and flow into every portion of the shaft. Our review during the pre-construction phase and inspection services during the construction phase will place special focus on these constructability features of the drilled shafts to confirm the quality of the RRBR foundations. Providing a concrete mix/rebar cage design that ensures concrete workability and passing ability is the single most effective way to minimize anomalies detected by nondestructive testing.

Nondestructive Testing – The final step to assess the integrity of drilled shaft concrete will consist of cross-hole sonic logging (CSL) of each shaft. To verify the reliability of CSL test results, we will inspect the steel access tubes to confirm proper placement inside the rebar cage, in conformance with the plan drawings and parallel to the vertical alignment of the cage. Individual access tubes will be securely tied to the reinforcing cage at not more than five vertical foot intervals to ensure correct plan arrangement and profile alignment. To account for cage "flex" during lifting for insertion into an excavation, we will check for correct and secure placement of logging tubes as the cage is lowered into the excavation and re-tightened and/or adding additional tie points as necessary. Our inspectors will insist on the exercise of reasonable care to avoid dislodgment of installed logging tubes during and after concrete placement. They will verify that access tubes are filled completely with clean water and capped prior to concrete placement.

Upon completion of each shaft, a CSL test will be performed (a minimum of 48 hours after concrete is placed) by an approved testing firm to assess the shaft integrity. Results will be submitted for approval by the Design Engineer. If anomalies are detected by the CSL testing, as defined in guidelines given in the FHWA Drilled Shaft Manual, additional CSL testing involving more pair combinations and/or cross-hole tomography (CT) will be performed to isolate and better define the anomalous location.

DBA engineers involved in this project have extensive experience in the interpretation of CSL and CT measurements, and in the decision-making process based on the results of nondestructive testing and any follow-up testing used to evaluate drilled shaft integrity. In cases where anomalies are detected, engineering evaluation is used to provide a basis for making decisions on drilled shaft remediation or repair. **For example, the paper by Daita et al. (2018) describes DBA's approach to drilled shaft integrity evaluation and repair for drilled shafts at Goethals Bridge, which exhibited CSL anomalies.**

Movable Bridge

The new Raritan River Bridge movable span is a two-track, 376-foot vertical-lift steel truss span. Towers are 186 feet tall, using a steel trusses-framed construction. The bridge is to be metalized and painted. Towers are supported by 8-foot-diameter drilled shafts. The navigable channel is 300 feet clear and is skewed to the bridge. A span drive operating system is being used. There are two 1⅛"-diameter up-haul and two 1⅛"-diameter down-haul operating ropes per corner. There are four double-web sheaves per tower, each with a 180-inch pitch and ten 2¼"- diameter ropes per sheave. There are dual 125 HP motors to operate the bridge. A relay-based control system is being used in lieu of a PLC system. There are aerial droop cables at each tower. There is a 450kW diesel generator set in the machinery house, which is capable of an eight-hour run time. There are also redundant incoming power feeds from both ends of the bridge. Both a lightning and power surge protection system have been provided.

During the Pre-construction Phase, our team member, Modjeski and Masters, Inc. (M&M), will play an important role in the development of the CMP as it relates to the movable bridge components of the RRBR Project, from the QA procedures for mechanical electrical and structural components through the final commissioning and completion of O&M manuals.

M&M is an important member of the AECOM | Mott MacDonald Team, with a long history of providing bridge construction engineering and inspection services to transit and Class I railroad clients throughout the U.S. The movable bridge aspects of RRBR will be led by **M&M's Movable Bridge Business Unit Director, Kevin Johns, PE.** Kevin's background is in structural engineering. He will have an integrated team of mechanical engineers and electrical engineers who will be the discipline leads in their respective fields, with **Ralph Eppehimer, PE,** serving as RE for the movable span construction.

In the past 5 years, **Kevin** has served as PM or task leader on 28 movable bridge projects, 19 railroad projects and 9 movable railroad projects. He has worked on all types of movable commuter and heavy freight railroad bridges, including vertical-lift, swing and bascule, for transit clients including NJ TRANSIT.

Ralph has 35 years of experience as a movable bridge expert specializing in railroad vertical-lift bridges. In his career, Mr. Eppehimier has either managed, inspected, or been the resident engineer for 236 railroad bridges, 44 of them being vertical-lift bridges. Within the recent past, he has supervised the construction of nearly a quarter-of-a-billion dollars' worth of movable railroad bridge construction, including the $83-million Galveston Railroad Bridge, which was replaced on an alignment close to the existing bridge.

M&M will focus on the unique aspects of railroad movable bridges, and develop inspection protocols that will ensure that the bridge will provide safe and reliable service after completion. Their staff will be responsible for the structural, mechanical and electrical construction inspection of the bridge, including the erection of the steel towers. They will provide construction engineering and inspection support services to make sure that the project is built in accordance with the approved plans and specifications. They will also verify that the contractor complies with the requirements for field testing processes and materials. Through all of the AECOM | Mott MacDonald Team work, the primary goal will be to protect the interests of NJ TRANSIT.

During our recent plan review meeting, the following areas of focus were identified for this project. After a more thorough review of the plan set, additional items will be added.

- Are there any interferences with the counterweight or lift span along the length of travel?
- Is there adequate visibility from the Operator's House by either windows or CCTV?
- Has access been provided to all points that require lubrication?
- Has access and a crane hoist been provided in the tower top that allows replacement of machinery?
- Are span guides, counterweight guides and auxiliary counterweight guides provided with proper adjustability?
- Is there adequate adjustability at critical interface points of the mechanical and structural systems, such as sheave bearings, motor mounts, bedplates, span locks, etc.?
- Have all critical machined surface been called for with proper flatness, roughness, parallelism and dimensional tolerances?
- Has adequate redundancy been included with the electrical power and control systems?
- Has proper camber been included for the tower members so that when fully loaded the legs are plumb?
- Has the potential for foundation settlement been considered?
- Is there adequate adjustability in the counterweight jacking and support hangers to account for elastic and long-term rope stretch?
- Have miter rails been specified and detailed to accommodate required train speeds?
- Has the bridge balance condition been properly calculated, including the weight of often missed items such as metalizing and paint?
- Has adequate space been provided in the counterweight for both the required initial number of balance blocks and potential future balance blocks?

As we stated earlier, **Ralph Eppehimier, PE,** will lead the on-site construction inspection for the movable bridge component of the project. Ralph will be supported by a team of mechanical engineers and electrical engineers who will oversee all aspects of construction specific to their discipline. The same mechanical and electrical engineers that help develop the inspection protocols in the CMP will be in the field inspecting the contractor's work. They will be reporting directly to Ralph for any questions or concerns, and for the review and approval of their web-based daily inspection reports.

Close communication between the electrical and mechanical inspectors will be necessary to monitor that all systems are properly coordinated. Monitoring equipment, such as resolvers and encoders, have a large quantity of electrical and mechanical components that must fit up and operate together flawlessly. Our team's design experience in every category of vertical-lift bridge construction will help to ensure proper installation, testing and performance of the equipment. As indicated, our designers are field inspectors as well. Their background encompasses all phases of movable bridge electrical work, including in-service inspection and testing, design and in-process construction inspection, and final testing.

Electrical and mechanical engineers familiar with the project will travel to the fabrication shops for the machinery and electrical systems. They will monitor the test verification in accordance with the contract or the supplier's quality control plan, whichever is more rigorous. These inspectors will have the experience to verify that all components have been shop assembled, tested and measured to meet chemical, commercial, dynamic, geometric and mechanical requirements.

During the plan review meeting, the following areas were considered of notable interest and will be given special attention during construction:

Span Guide Adjustability – The span guides were detailed so that they could be adjusted independently from the tower legs. This is important because the tolerances for the guides will be much tighter than the tower leg's. This is important to keep the span from binding as it moves up and down the tower. The adjustability is initially provided with set screws through the guides that lock against the tower leg. After the guide is positioned correctly, the space between the guide and the tower is grouted. At this point, there is no more opportunity to adjust the guide. It will be critical for the inspectors to verify the guide is adjusted properly before grouting to avoid delays in the project.

Long lead items – Vertical-lift bridges contain many specialized components that can take considerable time to procure and fabricate. In our experience, some contractors have been unaware of this, which has led to inevitable project delays. These delays, of course, are not in the best interest of NJ TRANSIT. Our team has the experience to know which items have the potential to be long-lead items. We will keep track of whether the contractor has submitted those items for approval before they control the critical path. If it appears the items have been overlooked, we can offer a reminder to the contractor that they should act on this before it becomes a problem. Examples of potential long-lead items include the following:

- Sheaves with Ring Gears – 18 months
- Large Custom Gear Reducers – 12 months
- Trunnion Bearing Housings with antifriction roller bearings – 12 months
- Trunnion Bearing Internals with antifriction roller bearings – 6 months
- Trunnion Shafts – 4 months

Live Load Bearings – Live load bearing installation and adjustment of vertical-lift bridges appears straightforward from the surface. We know from our experience that poor seating characteristics for vertical-lift bridges can cause poor load sharing of the machinery, live load impact, poor roadway (and rail joint) deck alignment and unreliable fully seated limit switch indication. Highlighting these issues and confirming that a detailed procedure is submitted and approved before the work is key. This will give the contractor and engineer opportunity to discuss the pertinent issues. Sequence of testing and adjustment will be detailed so that the whole system can be evaluated for seating, live load, and electrical performance and reliability. Too often, we see the live load bearing maladjusted because not all facets of the system are considered. NJ TRANSIT can count on our team to highlight all the nuances of these critical elements.

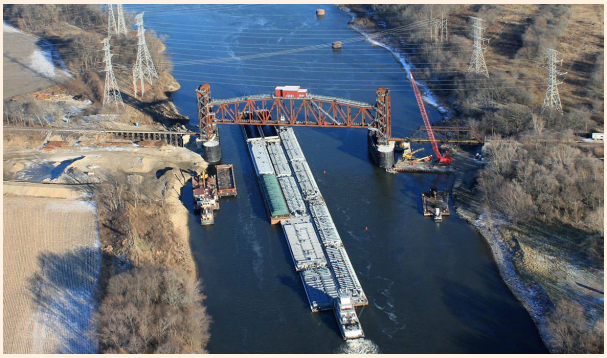
Galveston Causeway Bridge, TX – similar CM services for replacement of swing bridge with lift span

The AECOM | Mott MacDonald Team's movable bridge partner Modjeski and Masters has extensive experience in all types of movable bridges. Presented here are a few directly relevant projects that have similar elements as the RRBR:

- M&M's services for **San Bernard River Bridge** included: pre-award assistance, management procedures and document control, construction management assistance, inspection & testing, schedule control, staging and site-specific work plans, shop drawing and materials review/handling, project change management, QA/QC, project safety assistance and project closeout assistance.
- **EJ&E Bridge 552, Lift Bridge Replacement** for Canadian National Railway. The Illinois River Bridge was originally built as four 154-foot fixed thru truss spans. The USCG is funding alteration of the bridge to provide a 300-foot marine opening. The replacement vertical lift span is 348 feet long and has maximum lift vertical clearance of 56 feet. To build the new lift bridge without impacting river traffic, the contractor devised a temporary erection and launching runway allowing the 1,100-ton span to be operational in 84 hours. Construction services included office support and field monitoring during construction of the replacement bridge.
- **HX Draw Bridge**. M&M assisted with the development of various movable bridge alternatives and provided input on constructability as needed. The project consisted of rehabilitation and replacement structure alternatives for NJ TRANSIT's HX Draw Bridge. The existing bridge structure carries the two tracks of NJ TRANSIT's Bergen County Line over the Hackensack River. It consists of a Strauss Heel Trunnion Bascule bridge over the navigable channel and has 11 approach spans to the east and 4 approach spans to the west.

  Houma-to-Freeport Bridge Relocation. M&M provided construction monitoring services for the bridge relocation process. Services provided included: pre-award assistance, construction management assistance, inspection & testing, schedule control, staging and site-specific work plans, QA/QC, project safety assistance and project closeout assistance.

San Bernard River Bridge, Sweeny, TX



Illinois River Bridge, Morris, IL

HX Draw Bridge, NJ

Houma-to Freeport Bridge, LA and TX

Counterweight Ropes – The counterweight ropes have to be installed safely, and adjusted to proper tensions. If the installation is not done properly, the tension distributions of all ropes could be adversely affected. Ropes are to be prepared during fabrication with a white stripe to help guard against rope twist during installation. When in the field, this can be overlooked by an inexperienced contractor. When ropes are twisted, their service life can be compromised and it results in some ropes being shorter than others, which puts uneven tension in the ropes.

In addition, we will verify that all ropes are prepared and lubricated with appropriate field dressing. This lubrication will instantly become part of the contractor's maintenance procedures.

Electrical Control System – Our lead electrical engineer, Rob Peters, PE, will closely review and help coordinate the drive, control system and power components of the electrical system work. Multiple subcontractors will be reporting to the General Contractor. Early considerations for sequence and testing procedures will be a necessity. The aerial cable work will be considerable rigging, which will need to be submitted for review and approval. Motor drive and control startup and testing efforts and durations can be significant. Our team will help prepare all stakeholders for this work and drive the process of having the appropriate expertise, manpower and equipment available for this work in order to complete it safely and efficiently.

Operations and Maintenance Manuals – The O&M manuals will be critical documents in the latter part of construction as well as into the future for NJ TRANSIT maintenance personnel. Work related to the manuals is a significant task. Past projects have experienced long periods of delay due to unacceptable O&M manuals. Our team has experience as the engineer of record and reviewer as well as technical writer and supplier. We know what is required of these manuals. Early coordination and communication to drive these deliverables to a reasonable schedule will avoid a long, drawn-out process at the worst time of construction, final acceptance.

Bridge Balancing – Span drive motors for movable bridges are only capable of operating a movable bridge with an imbalance that is a small percentage of the total weight. An imbalance of several percent larger than the imbalance designed for could cause a drive motor overload, a control system overload, an overstressed condition of any portion of the span drive assembly (shafts, couplings, bearings, gear reducers, etc.), or exceed the brakes capacity to stop bridge operation at fully seated or raised or during an emergency stop.

These overstressed conditions can occur at a later date as extreme wind or snow/ice events occur. We will verify the proper balance of the bridge. Because our inspectors will already be at the bridge, it will likely be easier to independently verify the balance than to sort through someone else's data. Team member M&M has been retained by owners in the past to determine operational problems after other consultants have performed strain gage balance testing. This can range from review of the submitted balance report to complete retesting to verify recommendations and balance adjustments. Improper balance recommendations and adjustments by other consultants have rendered movable bridges unable to operate.

Field Painting – Abrasive blasting media can enter machinery components and create significant problems. All machinery will be protected during this type of work. Continued inspection of containment will be part of the inspection team's protocol. Containment breaches will be cause for total shutdown of blasting operations. Our team is familiar with several vertical-lift bridges where pinion shafts/bearings and trunnion shafts/bearings were severely damaged during blasting and painting. Subsequent painting operations were monitored by the painting inspector and the movable bridge/machinery inspectors. Bridge operations will not be approved until verification of cleanliness of all machinery can be made. By anticipating issues in these scenarios, the damage can be avoided.

Ground Improvements

The poor soil conditions at both approaches to the new railroad alignment in both Perth Amboy and South Amboy require significant ground improvements to construct the new railroad embankments and avoid excessive embankment settlement. Close monitoring of the settlements and the design criteria for the railroad embankments will be necessary to ensure that the post-construction settlement remaining after the consolidation period is less than the specified differential settlement at the transition between ground improvement zones and unimproved zones.

The locations where various ground improvement measures will be implemented are delineated on the contract plans. Concrete columns with Load Transfer Platforms (LTPs) are the most extensively used ground improvement techniques.

The AECOM | Mott MacDonald Team has worked closely with the RRBR Foundation Design Engineer on our Interchange 14A project, where similar ground conditions had to be strengthened and settlements minimized, and we successfully completed the installation of over 10,600 rigid inclusions columns and load transfer platforms.

Our team has the added benefit of Dan Brown and Associates, providing invaluable geotechnical expertise; their experience includes ground improvement for major bridge and railroad projects with conditions similar to those on South Amboy's approach:

- For the **$130-million Hastings Bridge design-build replacement project in Hastings, MN,** strict performance requirements regarding serviceability and global stability, combined with the tight construction schedule, dictated ground improvement beneath a 35-foot tall approach embankment embankment. The resulting ground improvements achieved the depth of improvement necessary to satisfy the stringent performance requirements, and provided a robust, reliable and economical system commensurate with the 100-year design life of the structure.
- For the 1-mile long **BNSF Railroad Embankment Widening in LaCrosse, WI,** ground improvement was required to mitigate settlement and global stability concerns induced by the additional embankment and rail live loads, in combination with compressible soils consisting of peat, organic clay, silt, silty sand and sand. Here again, a column-supported embankment (CSE) supporting a geogrid-reinforced load transfer platform has demonstrated excellent performance while meeting the client's requirements for schedule, cost and constructability.

Interchange 14A ground improvements

Pipe piles for support of load transfer platform at Hastings Bridge

Construction of geogrid-reinforced load transfer platform for BNSF rail embankment

The lessons learned our team members have gathered from our vast experience regarding varying ground conditions will be beneficial to NJ TRANSIT as we implement the ground improvements.

Rigid Inclusions/Columns – Based on our review of the contract plan details and past experience with the foundation designer, Gannett Fleming, on the Interchange 14A project, we expect the specifications to require the contractor to be responsible for selecting the type of rigid inclusions columns and LTPs, designing the system, submitting a detailed design report, signed and sealed by a NJ-licensed PE, conducting performance tests on a selected number of demonstration columns to verify the design, and then furnishing, installing and monitoring the systems of columns and LTPs that will be used to support much of the new railroad embankment required for the project. The specifications may allow the use of either controlled modulus columns (CMCs), vibro concrete columns (VCCs) or auger pressure grouted displacement piling, and then the LTPs will be constructed above the cutoff height of the concrete columns, using compacted granular soil and at least three layers of biaxial geogrid reinforcement. The specified minimum column diameter, the maximum allowable column spacing and the minimum LTP thickness will all be specified and included in the contractor's design calculations.

The AECOM | Mott MacDonald Team has worked closely with the RRBR Foundation Design Engineer on our Interchange 14A project, where similar ground conditions had to be strengthened and settlements minimized and we successfully completed the installation of over 10,600 rigid inclusions columns and 13.5 acres of load transfer platforms.

Key Ground Improvements Issues – There are a number of key issues to be addressed by the CM team during the implementation of the ground improvement plan, commencing at the beginning of the construction schedule. One of the initial activities on the project schedule is the "Ground Improvement – Construct Columns for Load Transfer Platforms." The schedule calls for the contractor to have fully mobilized and completed the ground improvements by the end of April 2020. This is a Stage 2 activity, but starts as the same time as the Stage 1 Force Account work at the new Perth Interlocking. The work is shown as critical and close monitoring and its completion on schedule will be essential to avoid delays later in the project. The AECOM | Mott MacDonald Team will carefully monitor the contractor's initial schedule activities to verify that the rigid inclusions/concrete column and LTP designs are prepared, submitted, reviewed and approved in order to complete this critical phase of the ground improvement program without impacting the overall project schedule. This will be closely followed by the load testing confirmation and production work.

Utility Protection – There are a number of areas where rigid inclusions columns and LTPs are to be installed that will require the protection of existing utility installations. **On AECOM's Interchange 14A project, the load transfer platforms over existing utilities were reinforced concrete mats in order to reduce the potential for added settlement of the underlying utility.** The same type of protection is planned for several utilities that cross under the existing NJ TRANSIT track bed.

Load Transfer Platform over existing utilities at the Interchange 14A Project

Concrete Column and LTP Installation – Supervision of the concrete column installation is critical. The contractor should be required to use rigid inclusions column installation equipment that will permit the real-time calculation of the average effective column diameter, using computer-recorded concrete volume vs. depth data. Part of our initial review will be a review of the specification to confirm that this type of instrumentation is required. For concrete columns, the installation procedures should also include grouting through the auger stem during auger extraction, which results in a composite soil/cement ground improvement system. This can be installed relatively quickly, and can support the railroad embankment as soon as the LTP are installed above the concrete columns.

Installation of the select reinforced fill for the LTPs must also be carefully monitored by our field staff for compliance with the specified maximum Modified Proctor dry density.

Geotechnical Instrumentation and Monitoring Program – The contractor will also be responsible for designing and implementing the specified geotechnical instrumentation and monitoring program to observe and record ground movements and pore pressure levels during the surcharge operations, and the instrumentation and monitoring program for the extensive areas where concrete columns and LTPs are being used. The latter system will require settlement platforms spaced along the new railroad embankments, temporary sheeting and cast-in-place CIP walls.

Supervision of the contractor's instrumentation and monitoring performance will be critical in achieving the specified final subgrade surface post-construction settlement.

The contractor is responsible for maintaining the settlement monitoring devices throughout the contract, and protecting them from damage due to construction operations, weather, traffic or vandalism. The continuing availability of the settlement devices is critical to the accurate assessment of settlement rates and soil movement. We will carefully monitor the continued availability and proper functioning of all settlement monitoring devices, and the repair or replacement of lost or damaged devices so that monitoring of settlement rates and soil movement can properly be evaluated and remedial measures instituted if necessary.

Structures

The Raritan River Bridge Replacement (RRBR) Project will include a number of new and temporary structures in order to accommodate the new railroad alignment. Initially temporary sheeting will be required to separate the proposed ground improvements and new alignment from the existing track. That temporary sheeting will support the existing track embankment and railroad loads while the rigid inclusions columns and load transfer platforms are being constructed. That will be followed by the pile foundations for the new retaining walls and the new abutments at both Perth Amboy and South Amboy. All this work will be monitored for excessive vibrations and potential settlement to verify that the existing track embankment isn't impacted by those construction operations. Once the pile foundations are in place, reinforced pile caps, abutments and eventually retaining walls will be constructed and the new embankment placed and compacted in preparation for the new track structure.

In addition, the contractor will be installing new catenary foundations and structures to support the Force Account catenary and system work to follow.

Finally, temporary trestles will be erected at both Perth Amboy and South Amboy to provide access to the drilled shafts closest to the shoreline where barge access will be limited by shallow water.

The AECOM | Mott MacDonald Team has extensive local experience with all aspects of this type of work. Our combined construction management and inspection team has provided similar construction inspection services on major bridge construction projects throughout New Jersey, including the recently completed Interchange 14A project over and adjacent to NJ TRANSIT's Bergen Light Rail and Conrail tracks in Bayonne; the Driscoll and Route 35 Bridges over the Raritan River just north of River Draw; and over 100 new bridges on the Interchange 6 to 9 Widening Program

Sheeting and Pile Installation – A number of pipe and H-Beam pile types will be used during the course of this project, depending on the location and type of subsurface conditions identified in the geotechnical reports. Regardless of the type of sheeting or pile installation, our inspection effort will follow the approach described below.

Each of the structural elements required to complete this project are discussed in detail in the sections that follow, including; sheeting and pile installation, vibration and settlement monitoring, cast-in-place concrete construction, new steel construction and finally, structure demolition.

Our bridge construction inspection team will be led by RE Natalie Barnhart, PE.

Natalie is a construction manager with over 28 years of experience. She has considerable knowledge of complex bridge construction (both new construction and rehabilitation), foundations, aerial and underground utility coordination and relocation (including boring and water crossing), drainage and stormwater management facility construction, and maintenance and protection of traffic. She is very familiar with working on Federal aid contracts, and is fully knowledgeable of construction contract administration and documentation. **Natalie's recent experience includes a PennDOT Rapid Bridge Replacement program, a $900-million program to replace 558 aging bridges throughout Pennsylvania.**

The contractor is required to select the pile-hammer combination based on the type of sheeting or pile to be installed, soil characteristics and the capacity of the pile. Due to the proximity of the railroad and local facilities, it is expected that no vibratory hammers will be allowed for installations on this project. The submittal of a wave equation analysis modeling the hammer, subsurface conditions, pile type and capacity for a given blow count per foot, is expected to be required to be submitted by the contractor for review and acceptance. Similarly, pile sources, splices and catalog information need to be submitted for approval. The contractor will also need to submit test pile lengths for approval. Dynamic tests will be performed at the required locations (as determined by the designer) by an independent entity hired by the contractor. Once the driving criteria are established, including hammer type, weight, stroke, blow count and verification of minimum and estimated tip elevations, production pile lengths can be determined. It will then be our responsibility as CM to inspect and verify that the sheeting and production piles are installed to the capacities and depths as established by the driving criteria and contract plans.

It is during the review of these records, in conjunction with our own pile monitoring and inspection, that we will provide added value to NJ TRANSIT.

For the NJ TRANSIT Interchange 15X, we monitored the installation of 100,000 linear feet of piles, including "H" and pipe piles with lengths exceeding 100 feet.

The construction of integral abutments required the piles to be driven through pre-drilled corrugated steel "cans." The **Driscoll Bridge** and **Interchange 14A** are recent examples of other projects where the AECOM | Mott MacDonald Team supervised the installation of thousands of feet of H-piles, pipe piles and drilled shafts for abutment, wall and pier foundations.

A pile driving inspector from our team will maintain accurate pile driving logs on forms that we have used on many projects. The information recorded on the logs includes footing location, contractor/subcontractor name, weather conditions, crane/pile rig type, hammer type and model number, pile type, pile number (based on numbering plan), ground elevation at the time of driving, tip elevation, cut-off elevation, blow-count per foot and blow count at capacity. The piles will be installed to the designated minimum tip elevation, shown on the contract documents or as determined by the PDA performed on the test pile. The final depth of the pile driven will be noted, and this will be translated to a pile tip elevation. This tip elevation will be compared with the tip elevation of the other piles driven in each pile cap in order to ensure that the pile has been driven to the proper elevation. Once the piles are driven to their final depth, the as-built location will be surveyed. Where piles exceed the maximum allowable plan tolerance (six inches), the contractor will be required to provide a recommended corrective action, which may include a modification in the pile cap size, additional reinforcement or a new pile to be driven. The piles will then be cut to their final cut-off elevation as shown on the Contract Plans.

Vibration and Settlement Monitoring – We expect that the contractor will be required to develop and implement a vibration and settlement monitoring program prior to the start of activities that could cause excessive vibration and settlement, including sheeting, pile driving, demolition and other activities. Areas of concern include all nearby buildings and railroad facilities and work adjacent to the railroad right-of-way. Considering the loose underlying soils and the use of heavy construction equipment anywhere within the project, limiting the potential for settlement or vibration is a concern.

The AECOM | Mott MacDonald Team has extensive experience reviewing contractor submittals on this subject, conducting our own QA audits of a contractor's program, and most importantly, understanding "means and methods" that may result in negative effects to above- and below-ground infrastructure.

As part of our QA Plan for the project, we will use established protocols and procedures used on a number of our construction projects where these issues were a concern. Our RE for Structures, Natalie Barnhart, PE, CCM, will be responsible for overseeing this QA function.

On the Interchange 6 to 9 Widening program, led by our CM Tom O'Connor, our team implemented and supervised a vibration/settlement program. Staff performed all pre- and post-surveys, monitored seismographs and took periodic surveys of settlement targets installed on critical infrastructure for horizontal and vertical movement.

Cast-in-Place Concrete Construction – The new alignment for the RRBR project will be constructed using a a wide variety of reinforced concrete elements. This work will include the installation of new piles, pile caps, footings, abutments, retaining walls and piers. The concrete placement for these types of concrete placements could include tremie pours, pumped mixes or direct discharge methods once forms are installed and braced, and rebar is tied. The challenge for the inspection staff is to confirm the quality of the work before, during and after concrete placement by checking that:

- The approved forms are set plumb, square and level and are adequately braced.
- Rebar is installed per approved schedule; checks are made on lengths, diameters and adequate cover; and are tied sufficiently to prevent movement during concrete placement.
- Off-site rebar cages, when installed, are checked for adequate bracing during erection and prior to form closure.
- Concrete has the required properties including slump, air entrainment, temperature and mixing revolutions.
- Concrete is properly conveyed, placed and consolidated.
- Concrete is properly finished.
- Transit mix trucks are adequately spaced to ensure the timely delivery of material within a given placement.
- Strict curing materials are used and times are observed for the various concrete components prior to form removal and loading.
- Winter concrete is properly insulated and heated during the curing period.
- Barge-mounted concrete plants for cast-in-place and tremie concrete are properly certified.

The key to successful concrete placement begins with a coordination meeting with the contractor, the independent testing firm and NJ TRANSIT prior to the start of concrete operations. This meeting will outline the items noted above as well as mix designs, pouring sequence, safety, covering and curing, quality assurance and the locations of concrete washouts. At these meetings, held well in advance of the first placement, we intend to communicate expectations very clearly to the contractor. We will discuss all issues, including how the contractor intends to meet the requirements identified above. That will start with a QA review of the proposed concrete plants and on-site plants to ensure proper control of the approved concrete mix. Also covered will be the contractor's anticipated manpower and any backup equipment necessary should primary equipment such as generators, vibrators or screeds break down during the placement operation. The contractor will submit a plan for placing concrete and address hot/cold weather placement, including misting systems and heating as needed. The contractor will also submit how they are to address massive concrete pours, including interior concrete temperature monitoring.

Our inspectors will provide oversight for the proper consolidation, finishing and curing of all concrete placements. They will be ACI-certified and trained in all aspects of concrete placement and curing.

QA of the concrete includes coordination of material order submissions the day prior to any concrete placement to allow the CM team and the contractor to schedule field and or plant inspection for the material requested. Our inspection team will coordinate with the contractor's inspection firm to confirm that the appropriate technicians are at the plant or in the field to assist field inspectors as they perform field tests and make test specimens for the tests required. The contractor will supply curing boxes at all pour site locations. Our office engineer will track all test specimens and document test results and create a spreadsheet to compile the data for easy reference. Our CM will review the test results for compliance with the specifications.

Our assigned inspection staff has extensive experience derived from such projects as the Driscoll Bridge, Interchange 14A improvements, the interchange 6 to 9 Widening Program, and the Secaucus Interchange 15X and Secaucus Transfer. Several members of our team have been involved in the design or construction of the Driscoll Bridge located just miles upstream.

New Steel Construction

The new structural steel to be erected as part of the Raritan River Bridge Replacement (RRBR) Project will involve a multi-stringer steel trough system on the approaches to the new movable span and new steel truss structure of the flanking spans, the movable spans and the new Lift Bridge towers. All this new steel construction will require close coordination of the shop drawings and steel detailing and monitoring of the steel fabrication. That management and QA inspection effort will verify material certifications and confirm that the specified fabrication and eventual erection tolerances are met. The AECOM | Mott MacDonald Team has extensive experience in that regard.

AECOM's Mill Basin Bridge Project NYCDOT

Steel erection and safe work plans for lifting operations have always been a significant component of all our bridge construction projects, including the construction of the previously mentioned projects – Driscoll Bridge, the Secaucus Interchange 15X over NJ TRANSIT and Interchange 14A over both NJ TRANSIT and Conrail. In all these projects there were significant structural lifting operations, where new girders, box beams and precast concrete girders were successfully placed over major transportation arteries, railroads and waterways.

The AECOM | Mott MacDonald Team will use the same proactive approach that resulted in the successful completion of all those projects. This approach has a proven track record in ensuring that

the fabrication, delivery and installation of new steel components not only meet the requirements of the contract specifications, but that they are erected without incident over some of the most vital transportation links in the metropolitan region. That approach begins with early and frequent coordination meetings, timely review and approval of shop drawings, quality assurance inspection and monitoring of the fabrication process, review and approval of all structure lifting operation and inspection of the field assembly.

Frequent coordination meetings chaired by the CM are held months before the actual work and include the contractor, the fabrication plant QA, off-site inspection Firm, NJ TRANSIT and the designer. These meetings start with the review and approval of shop drawings and end after the successful erection and assembly of the steel components. However, a major focus of these meetings is to confirm that the structural lifting operations are carefully planned and consider all aspects associated with working adjacent to an active rail line and live catenary wires.

Detailed means, methods and erection procedures will be developed by the contractor, designed by a professional engineer and submitted to our CM team, NJ TRANSIT and the design engineer for review and final approval prior to the commencement of field work.

The finalized plan is reviewed in the field with involved parties prior to commencing the work, so responsibilities and clear lines of communication are known.

Equipment, including cranes, rigging, saws, demolition hammers and other support equipment, is reviewed in the field by our inspection staff to verify compliance with data sheets, catalog cuts and erection plans prior to their use.

This is the same proactive approach that was a success on the Secaucus Interchange 15X project and more recently on Interchange 14A.

On the Interchange 14A project, the new girders were installed over NJ TRANSIT facilities without incident. Detailed plans were produced by the contractor and reviewed by our resident/field staff and the designer. NJ TRANSIT Operations was kept informed of the plan specifics and schedule well in advance, and, where necessary, NJ State Police was given similar schedule notice as the plan was being developed. All comments were addressed and incorporated into the erection plans and then presented to other affected agencies (local township, NJDOT, NJ TRANSIT, the Turnpike Authority) prior to presenting the final version to the owner.

Another example, the **Route 21 Viaduct project**, had the contractor use a ringer crane to lift pairs of preassembled girders over the Amtrak Corridor within a small window of time when the tracks could be taken out of service.

A key aspect to the construction of the RRBR is the need to coordinate all the work operation with NJ TRANSIT and Conrail. **As we have indicated, all aspects of this project will have a potential impact on NJ TRANSIT operations and it will be our responsibility to make sure those potential impacts are avoided or minimized through careful planning and inspection.** We will place significant emphasis and effort on the planning, layout and field execution of the deep foundation work in close proximity to where tight operating parameters and short work windows are expected.

These work efforts will only be successful if proper attention is given to the step-by-step inspection and monitoring practices that our team routinely performs. Through our experience on numerous other bridge reconstruction projects, we understand the importance of making quality assurance checks throughout the steel installation and erection process. The following list is an example of the attention to detail our steel inspection process entails:

Checks upon delivery of materials:

- Verify conformance with approved shipping and handling procedures.
- Verify that members have been stamped with the fabrication shop inspector's mark.
- Verify that softeners are in place when members are hoisted.
- Verify materials are placed on sufficient dunnage if not erected directly from delivery trucks.
- Verify that no damage has occurred to factory applied coatings (if any) and, if it has, document this by inclusion of a punch list or deficiency report to the daily inspector's report.
- Verify size, type and sample fasteners for testing.

Checks to be performed prior to lifting:

- Verify that the crane operator has a current, valid license.
- Verify that the crane has been inspected and is certified to operate.
- Verify the crane size and that the crane is equipped with the required counterweight.
- Verify that outriggers are fully deployed and supported by matting as shown on picking procedures.
- Verify equipment locations are as shown on the approved plans.
- Verify size and type of all rigging as shown on picking procedures.
- Verify the use of fall protection.
- Verify the crane is grounded in the vicinity of railroad catenaries/overhead wires.

Checks to be performed during erection:

- Verify proper member and proper orientation prior to lift.
- Verify required cleanliness of connection laying surfaces.
- Verify that excessive force is not used to drift connections into alignment.
- Verify no reaming of primary member connections.
- Verify that at least the minimum number of bolts are installed and torqued, as required, before the crew moves onto the next lift.
- Verify that all required internal or external bracing is installed, as required by the erection plan, before releasing the load.
- Maintain vigilant review of the entire erection process for the unexpected.

Checks to be performed following erection:

- Verify that all holes are filled with the specified bolts and torqued per the approved specification.
- Verify that connection is cleaned and coated if required.

This process and our team's collective experience will be most valuable in assuring that the fabrication, erection, fit up and final bolting are all completed within the specified erection tolerances.

Common to all steel erection will be the connection procedures. Steel faying surfaces will be cleaned to specification requirements prior to fit-up of mating surfaces. In addition, our inspectors know that all piece marks on delivered structural steel will be checked against the shop drawings. During the on-site inspection, they will check proper edge distance and size and hole spacing for the given fastener diameters with the appropriate specifications. The fasteners will be torque tested per specifications. All torque wrenches will be calibrated using a Skidmore-Wilhelm device. Minimum and maximum tensions will be determined and used to verify field tensioning of fastener groups. All of the required hold points for structural steel bolting will be documented in step-by-step checklists developed during our preconstruction activities.

Our team understands the global market for steel. The RRBR Project will use approximately 20,000,000 pounds of steel. Tariffs and global market supply need to be accounted for to make sure delivery will be uninterrupted. We will work proactively and reach out to the industry to reduce risk and mitigate schedule disruptions.

Structural steel detailers should be pre-qualified to confirm that they are experienced and can handle the workload. The shop drawing cycle is critical to keeping the project on track. Multiple review cycles must be avoided, and favorable disposition of drawings should be awarded the first time around. We recommend that two detailers work on the project, one for structural steel girders and one for truss sections.

Keeping track of steel erection is a challenge, but one our team can overcome. It requires a team poised to understand the schedule of steel originating from:

- Land
- River
- Stick built, or
- Float in

Structure Demolition – The AECOM | Mott MacDonald Team has been involved in major structural steel and concrete bridge rehabilitation projects on critical highway systems and over railroads throughout the metropolitan area. We have inspected the demolition and installation of tens of millions of pounds of steel, and hundreds of thousands of cubic yards of concrete.

The demolition of existing structures was a key component on recent projects, including the recent Interchange 14A Improvements for the Turnpike Authority, and past projects such as the Secaucus Interchange 15X for the Turnpike, as well as Route 21 Viaduct over NJ TRANSIT.

This work on Interchange 14A included structure demolition over NJ TRANSIT's Hudson-Bergen Light Rail and Conrail tracks.

It is extremely important that all structure demolition be accomplished safely and effectively. We will work with the contractor, NJ TRANSIT, Conrail and others to safely plan and execute the work zone set-up, partial demolition, material deliveries, foundation and substructure work, and structure demolition and erecting operations.

As with any reconstruction effort, it will become necessary for the contractor to make precise staged dissection of sections of the existing structures while ensuring the stability of remaining portions of the structure. Careful demolition is always critical on bridge replacement projects and the demolition on the RRBR Project is obviously complicated by the unique nature of the structures, limited access on the water, and close proximity to the active railroad and new bridge structure.

The successful demolition of the existing structure along predetermined lines is the result of prudent design, meticulous planning and careful field execution. Detailed means, methods and demolition plans will be submitted to the CM, client and the design engineer for review prior to the commencement of field work. The plans will be discussed in detail and all concerns addressed before the work commences. These proactive planning meetings include the contractor, the client, the designer and our team as CM with the purpose of "fleshing out" and thinking through the demolition choreography, leaving nothing to chance. Our inspectors will then be made responsible for monitoring the safe and timely demolition of the existing structure, including the carefully choreographed lifting and floating out of the existing swing bridge.

Our inspection programs include checklists for verifying that cut lines are made in the appropriate locations, to the specified depth and length, and with any necessary shoring or bracing in place. Required equipment, including cranes, rigging, demolition wet saws and demolition hammers, specified in the approved submissions, are checked for compliance with data sheets, catalog cuts and demolition plans. Also, prior to the start of work, inspectors check that all horizontal and vertical protective shielding, noise and dust suppression and fire and safety watches are in place and functioning as required. These are the same checks our inspection staff will perform during all demolition activities during the course of the project.

To ensure prevention of bridge debris falling beneath the bridge structure during any cutting operations, demolition of superstructure, removal of structural steel railings, drainage system, utility support and debris, temporary protective shielding will be installed where required. Shielding will be to prevent any debris from escaping and falling to the river below. The shielding must be placed before any demolition work is started. Our team will ensure that the contractor submits calculations and detailed drawings of the proposed shielding to the Engineer for approval. These calculations and detailed drawings will be stamped by a NJ-licensed professional.

As indicated above, our team has dealt with the demolition of bridge structures over water and has closely coordinated that work with the Coast Guard and regularory agencies to verify compliance with their respective permitting requirements.

Environmental Mitigation

Environmental issues to be addressed include stormwater runoff, management of regulated waste, groundwater discharge, soil erosion, and sediment control and compliance with the restrictions associated with the fish windows for work in the Raritan River. As indicated in the RFP, it is expected that the RRBR Project has been designated by NJ TRANSIT as a NJDEP Linear Construction Project. The AECOM | Mott MacDonald Team will be working with NJ TRANSIT's licensed site remediation professionals (LSRP) to oversee the management of the contamination encountered during project activities.

Our team will also oversee compliance with the permits and approvals received from the governing regulatory agencies. This will include the land use permits it's received from the NJDEP as well as the Soil Erosion and Sediment Control certification from the Freehold Soil Conservation District. We will verify that construction fence and turbidity barriers are placed at the limits of all impacts to all wetlands and riparian zones and that incursion into these sensitive areas is closely monitored and controlled.

We will monitor the soil erosion measures on a weekly basis and/or after a storm event, and will alert the contractor of any areas of concern or non-compliance. Typical areas of concern are the condition of silt fence, construction access driveways and dewatering operations. The NJDEP NJPDES Storm Water General Permit will require a Storm Water Pollution Prevention Plan. Under our project-specific QA plan, we will develop checklists to monitor compliance on a continuous basis throughout construction.

We will leverage the experience gained on the Interchange 6 to 9 Widening Program and Interchange 14A, where we worked closely with the designated LSRP to manage the ID-27,

contaminated and hazardous materials that were required to be either re-used or removed for off-site disposal.

Our team will track and record all issues as they pertain to any regulated material within the project limits. Key to this aspect of the project will be the development of the Materials Management Plan by the contractor. We will review and comment on this plan to ensure that potential impacts to both soil and groundwater are properly managed. The goal will be to re-use as much acceptable material on site to minimize off-site disposal costs. In addition, we will work with the NJ TRANSIT's LSRP to see if it makes sense to apply for a NJDEP Discharge to Groundwater Permit-By-Rule so that dewatering operations are allowed to inject the water back into the ground to avoid other potentially expensive containment and disposal costs. Other notable reviews will be the Health and Safety Plan and Material Handling Plan prepared by the contractor. These documents will be reviewed to confirm compliance with Federal and State environmental regulations as well as the project safety specifications.

Excavated soils should be handled as regulated material and are eligible for re-use on site or within the project limits. Proper stockpiling actions will be performed to prevent the stockpiled material from contaminating the surrounding area. The stockpiles will be placed on an impervious surface or plastic sheeting to prevent wind dispersion and contact with rainfall. It will also be contained by hay bales or silt fence. Finally, all material that is removed from the site will be tested and disposed of in accordance with all applicable regulations. Our project administration staff will maintain documentation and manifests for all this material removal.

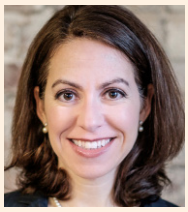
Environmental Permitting Compliance – The AECOM | Mott MacDonald Team recognizes the need for a proactive, structured approach to ensure environmental permitting compliance success during construction of the RRBR Project. Clear, concise, timely, firm and consistent communication of concerns, issues and requirements (needs) – with accountability for actions and results – are keys to ensuring environmental compliance and an overall successful project.

We will work with NJ TRANSIT to confirm that there is sufficient environmental oversight to verify all decisions and commitments are met. This includes strict compliance with the 6-month fish window that restricts certain work activities in the Raritan River. There has been, and will continue to be, involvement from permitting representatives of the NJDEP, Freehold Soil Conservation District and the community. All have specific compliance requirements that will need to be addressed during the life of the project.

The AECOM | Mott MacDonald Team's approach to ensuring permit compliance is based on developing an early comprehensive understanding of the project and specific permitting requirements. Again, effective communication and understanding among all parties is critical to achieving acceptable results.

Our environmental coordination will be led by Tim Hand of AECOM and Leslie Mesnick of the Calladium Group.

Tim is a senior environmental professional with 31 years of consulting for mostly NJ agencies, including NJ TRANSIT. His experience has included leading enironmental tasks for the Trans-Hudson Express (THE) Tunnel, the Driscoll Bridge construction and the NJTP Interchange 6 to 9 Widening, among many others.



Leslie's 23 years of environmental consulting experience have included recent projects requiring the preparation of EISs, permit applications, public involvement programs and technical studies, including several NJ TRANSIT projects, such as the Portal Bridge NEPA EIS preparation and alternatives analysis, as well as the NJ TRANSITGRID EIS.

Tim and Leslie will be directly charged with administering and ensuring environmental compliance. They will work with NJ TRANSIT and their environmental group to address any issues and provide a seamless transition for permit compliance from the design team to our CM team.

Marine Construction

The RRBR Project between Perth Amboy and South Amboy, NJ, will require marine construction operations in the Raritan River over several construction seasons. Coordination early and ongoing with the United States Coast Guard (USCG) and navigational interests operating along Raritan River will be essential.

The Raritan River is approximately 11 miles long, emptying into Raritan Bay at Perth Amboy. The waterway is relatively crooked but marked with Federal navigational aids in the lower reaches of the waterway. A Federal navigation project is authorized and provides for depth of 15 feet, width of 200 foot width in the project vicinity and extending up to the Washington Canal about 6 miles above the proposed bridge replacement site. Controlling depth of the Raritan River in the project vicinity is between 22.5-23 feet. Adequate depth and width of the waterway appears to be available for access for marine equipment above the construction site if this option is anticipated.

The existing NJ TRANSIT swing bridge to be replaced at mile 0.5 offers 8-ft. vertical clearance (above mean high water) and horizontal clearances through channels on either side of the center pier of 124 and 125 feet. Federal drawbridge operating regulations found at 33 CFR 117.747 authorize the existing NJ TRANSIT swing bridge to remain closed to navigation during daily commuter hours (Monday-Friday 0600-0930; 1630-1930). At all other times, the bridge must open for navigation when requested. Construction equipment and material barges traveling from downstream will be required to comply with these drawbridge operating regulations. Even during periods when the bridge must open for navigation, delays may occur in waiting for bridge openings. The ability of construction equipment and materials to be moved from an upstream loading/unloading location should be considered. This is particularly advantageous with a western replacement option.

Other bridges and restrictions crossing the Raritan River upstream of the NJ TRANSIT Bridge are as shown on *Table 5-2*.

Bridge/ Restriction	Mile	Horz Cl	Vert cl (MHW)
Overhead power (catenary)	0.5		140' above MHW
Victory Fixed Bridge (Route 35)	1.6	364	110
Edison Fixed Bridges (Route 9)	2.1	197	110
Driscoll Fixed Bridge (GSP)	2.2	193	134
NJ Tpke Fixed Bridge	10.2	150	45

Table 5-2

The tidal current along the Raritan River is approximately 1.5 knots, measured at the Victory Bridge. Any pilotage required for vessel movement along the Raritan River is provided by the Sandy Hook Pilots Association. During winter, ice generally does not interfere with waterborne commerce or vessel operations; however, severe winters (rare) may result in up to 2 weeks of marine interruption. A special anchorage located south of Perth Amboy (and downstream of the existing NJ TRANSIT Bridge) is available but primarily for recreational vessels and those vessels less than 20 meters (65.5 feet) in length. See 33 CFR 110.1, 110.60 for restrictions.

Navigation along the Raritan River consists of fuel and fuel products, sand and gravel and rock and chemicals deliveries and shipping. It is anticipated that construction activities can be planned to accommodate the movement of commercial navigation without significant disruption of either the bridge construction activities or the movement of goods along the waterway. The bridge construction activity for the Victory, Edison and Driscoll Bridges over the past 15 years was conducted without significant delay or interference with local commercial navigation. Here again, early and close coordination with the USCG and local boating interests is the key to smooth operations.

Recreational boating along the Raritan River increases during the spring, summer and autumn seasons. Pleasure boating consists mainly of small outboards, canoes and kayaks. Sailboating is minimal along the waterway. The South River, a tributary emptying into Raritan River at approximate mile 7.0, is the primary

destination for recreational boating. Interference with or from recreational boating should not be a concern. A good point of coordination is the NY/NJ Baykeeper, mail@nynjbaykeeper.org.

It is recommended that as early as the bridge permitting process (with the USCG), constructability be addressed. Access to and from the construction site as well as anticipated construction restrictions (e.g., time of year restrictions to protect natural/ecological resources) can be ascertained and planned for. For example, it is likely that the USCG's eventual bridge permit will contain time of year restrictions to protect habitat and spawning activities for several fish species. Both the USCG Bridge Branch office and Waterway Management office should be engaged early. In this regard, important USCG points of contact are Mr. Christopher Bisignano, Chief Bridge Branch, First CG District (Christopher.j.bisignano@uscg.mil) and Mr. Jeff Yunker, Waterway Management office, USCG Sector NY office (Jeffrey.m.yunker@uscg.mil).

The USCG Sector NY office, along with the Sandy Hook Pilots Association, conduct bi-monthly Harbor Operations Committee (Harbor Ops) meetings (on Staten Island) with local commercial and recreational navigation interests as well as Federal, State and local agencies to brief on upcoming projects in the port and to receive valuable input. It is recommended that a presentation of the project's construction parameters to the Harbor Ops Committee be planned.

The construction contractor will be required to comply with the USCG's Navigation Rules (33 CFR 83), which provides requirements for vessel operations and markings (lighting/signs) while working and traveling in and around the project vicinity. Anticipated plan and schedule of construction operations, once developed, should be shared with the USCG for early input.

Once the new movable span is operational, coordination with the USCG and navigational interests to allow testing of the span will be necessary. The USCG may authorize temporary departures from bridge openings during the testing period to minimize interference with the testing schedule. However, this will need to be coordinated and approved by the USCG in advance. it is not expected that this will be a difficult coordination effort, given the frequency of vessel movements on the waterway. Utilizing low tide periods for testing to the extent practicable should be considered since much of the commercial fleet utilizes high tide for transit. Additionally, a request for permanent bridge opening restrictions during commuter hours for the new structure must be approved by the USCG as well. However, processing of this request by the USCG can occur during the final construction phase of the project.

Task-Specific Work Plan

The following narrative describes our task-by-task approach to performing the work required in accordance with the scope provided in the RFP.

Pre-Construction Phase

Task P1 – Pre-Award Assistance

The AECOM | Mott MacDonald Team can complete the mobilization within 30 days.

Bid Process Participation – Our team has all the required expertise to assist NJ TRANSIT during the pre-bid process. Our Project Director, Al Baycora, and our Construction Manager, Tom O'Connor, will lead that effort and will attend all pre-bid meetings and site inspections. They will provide meeting minutes that capture the topics discussed, questions asked and answers provided.

Once prospective contractors are identified as part of a prequalification process, our team will work with NJ TRANSIT to evaluate their strengths, with particular emphasis on the key issues that will be the drivers for RRBR Project success. That includes technical issues regarding their experience with the installation of deep drilled shafts in a marine environment and with railroad lift bridges, their safety records and experience working in a railroad environment and their ability to complete the work within the established schedule. We will work with NJ TRANSIT and contribute to their pre-qualification process and, if necessary, provide expert assistance during their procurement process. As indicated above, we will assist NJ TRANSIT to manage the design team's responses to all contractor questions.

We will also assist in the evaluation of bidders' proposals. A significant element is a thorough review of the bidders' proposals for completeness and adherence to proposal requirements. A second element is the comparison of actual unit prices and lump sum amounts bid by the competing contractors and the engineer's estimate. Careful review of unit prices and lump sum items may identify areas of work where there are significant differences and potential issues could develop. Such areas will be identified so that NJ TRANSIT can address them with the contractor in a fair and open manner. It is always preferable that these potential issues be addressed prior to execution of the Contract Agreement. Our team has provided similar analyses of bids for numerous projects that helped our clients select the right contractor for the job.

Deliverables – Recommendations on the responsiveness of bids as well as any areas of concern that are identified will be presented to NJ TRANSIT.

Task P2 – Management Procedures and Document Control

A. Construction Management Plan – Under the direction of Tom O'Connor, the team will develop and implement a project-specific Construction Management Plan (CMP) , which establishes the QA/QC organizational structure, functional responsibilities, levels of authority, and internal and external interfaces for all quality-related activities. Items specifically addressed will include roles and responsibilities of the various team members, off-site inspection and test verification for fabricated components, reporting and documentation, correction of non-conformances, quality records, periodic audits and other elements. The CMP will include a series of detailed methodologies for all standard CM procedures. Those procedures will include, but not be limited to, those for: 1) handling, monitoring and inspecting completed and installed work; 2) material and equipment testing, both in the field and at manufacturing sites; 3) implementation of quality assurance and quality control measures; and 4) our safety program for CM personnel, including the monitoring of the contractor's health and safety program. (See *Table 5-3* on next page.)

Additionally, procedures will be included for change order monitoring and processing, progress photographs, shop drawings and submission handling, environmental compliance, subcontractor approvals, value engineering, warranty and closeout documents, record drawings, operational start-up and testing, punch list inspections and Force Account coordination. All of these procedures will be submitted for review and approval by NJ TRANSIT prior to being inserted into the final Construction Management Plan (CMP).

Construction Management Plan

The AECOM | Mott MacDonald Team will prepare the Construction Management Plan (CMP) to guide the project's activities by fully defining the processes and procedures to be followed for a successful project. We will implement this plan and update it on an ongoing basis to make sure that it acts as a living document to guide the team. We will structure the CMP to foster a proactive approach to the project by requiring the project to anticipate impediments and formulate strategies for successful mitigation well in advance of them happening. The contents of the CMP are shown in the *Table 5- 3* below.

CMP Sections	Content
Executive Summary	Executive Summary
Chapter 1: Document Control System	Goals of the project's filing system and document control, control of incoming and outgoing correspondence; maintain controlled documents such as approved reports, drawings, design criteria and procedures; develop a secure system capable of retrieving documents; and maintain the administrative record for the project. Requirements to prepare reports regarding the progress and quality of the work, including business status reports with respect to potential and actual budget and schedule impacts of risk, claims, disputes and contract changes.
Chapter 2: Scope Management	Processes and procedures to make sure the project scope is well understood by all parties and documented and that scope changes are well defined in a timely manner.
Chapter 3: Schedule Management	Process and procedures to be used to develop timely schedules for EIS, design and construction phases. This includes developing the schedule management plan, review of contractor's schedules and the process to make sure that all project parties are aware of and understand the implications of each schedule issue.
Chapter 4: Cost Management	Process and procedures to be used to develop timely schedules for EIS, design and construction phases. This includes developing the schedule management plan, review of contractor's schedules and the process to make sure that all project parties are aware of and understand the implications of each schedule issue.
Chapter 5: Requirements Management	Process to be employed so that all project personnel are aware of critical EIS, design and construction requirements.
Chapter 6: Quality Management	Functions, procedures and responsibilities for construction and for system installation and integration of system components. Outline of the owner's quality management manual and process for conducting compliance audits and non-conformance management process.
Chapter 7: Human Resources Management	Defines the Federal, State and NJ TRANSIT's obligations required of the project to fairly treat all project personnel regarding hiring practices, workplace interfaces, harassment issues, etc. Identifies HR personnel to be contacted should violations occur.
Chapter 8: Risk	Risk management process including coordination with the contractor. Summary of significant risks identified in previous project risk workshops.
Chapter 9: Communications Management (Internal and External)	Process for timely, informed and efficient communications between project team members necessary to present management information at the appropriate level, with sufficient detail to make an informed decision in time and to act appropriately. Outline of the project communications plan to be prepared in coordination with the NJ TRANSIT team, including processes and procedures necessary to establish communication protocols. Outline of the outreach plan to be developed, implemented and updated to include all stakeholder and public activities, processes and interactions.
Chapter 10: Stakeholder Management	Define the processes necessary to keep key user groups involved throughout the project. Securing their buy-in is critical for success. This will describe the required process for building consensus among stakeholders and addressing their concerns.
Chapter 11: Compliance Management	Process to make sure that project environmental obligations are met, including record-keeping requirements, non-compliance and violation procedures, coordination with resource agencies and expected post-construction environmental performance requirements.
Chapter 12: Change Management	Processes and procedures required to make sure that changes are properly evaluated with regard to merit and with a full understanding of their impact on cost and schedule. This will establish a template for a change control log to record and track all potential changes and will identify the general categories of changes (e.g., design errors and omissions, owner directed changes, contractor requests, unforeseen conditions, etc.).
Chapter 13: Project Fraud Management	Processes and procedures necessary to raise awareness of and remedies for violations of applicable laws governing execution of the project. This will include malicious intent; prior history of fraudulent behavior (individuals); testing fraud; DBE fraud; bid rigging; kickbacks; substitution; or bribery. This may result in legal action, leading to reputational issues.

Table 5-3

Many of the procedures that will become part of the CMP have already been submitted for approval on the Portal Bridge Project and build on the procedures developed for the Interchange 14A Project for the NJ Turnpike Authority.

B. Document Control Specialist – We will assign one dedicated staff person from our project administration staff as the "Document Control Specialist." Sharron Smith will be responsible to act as the CM representative for access to NJ TRANSIT's ECMS system. The ECMS will be the project's file cabinet for archiving all project documents, correspondence and email. All documents in the system will follow and be in compliance with NJ TRANSIT Capital Planning & Program's (CP&P) document Control Procedures. The Document Control Specialist will have access to the ECMS via NJ TRANSIT's server. Anthony and all individuals accessing the NJ TRANSIT ECMS will be required to sign and execute a Non-Disclosure Agreement with NJ TRANSIT.

C. Document Control System – We will be using a web-based construction management system we have used successfully on major construction management projects, including the Interchange 6 to 9 Widening Program and Interchange 14A project. The AECOM | Mott MacDonald Team will integrate our systems with NJ TRANSIT's Electronic Content Management System (ECMS). We will provide assistance to the ECMS configuration/integration consultant and ensure that the CMP provides the procedures and processes to fully use ECMS as the electronic filing system to store and archive all project documents, correspondence and emails. That will allow NJ TRANSIT's Project Manager and staff real-time access to all project records, including project submissions and daily inspection reports. **Our Construction Manager, Tom O'Connor, used exactly that type of "paperless" system for all the record-keeping on New Jersey Turnpike's Interchange 6 to 9 Widening Program and the Interchange 14A Project.** That system was fully integrated with the Authority's CAPEX system.

All final documents were delivered to the Authority in an electronic format, including all daily inspection reports, RFIs, submittals, correspondence, material certifications and all test results.

Deliverables:

- The Construction Management Plan.
- Identification of the document control support staff for NJ TRANSIT review, approval and training.
- Maintain all project hard copy and electronic documents and upload all documents to the ECMS on a weekly basis.
- Monthly Project Records Submission Report (Correspondence, RFIs and Submittal Logs).
- Final electronic transfer of all project records at project closeout.

Tom O'Connor and his staff have been using these web-based systems effectively since 2009 on a variety of construction projects, including the 31 contracts that comprised the Turnpike Widening Program.

This web-based inspection reporting system provides real-time documentation of construction inspection activities on computer tablets. Daily inspection reports can then be reviewed and approved on-line, without the inspector leaving the field.

Construction Phase Tasks

Task C1 – Construction Management Administration

A. Mobilization at Construction Site – The AECOM | Mott MacDonald Team fully understands the nature of the project site and we are prepared to mobilize our CM team to work efficiently and effectively for NJ TRANSIT's Project Manager and his staff. As currently planned, we expect that the construction contractor will be required to provide the necessary field offices for the CM staff, and that there will be one main field office in either Perth Amboy or South Amboy, with a satellite office on the opposite shore. All of our inspection staff will be provided cell phones for direct communication with the main field office and computer tablets for their daily inspection reporting through a web-based construction management and inspection reporting system. The contractor is expected to provide, maintain and coordinate access to the work site, barges and other marine locations, and to transport project and Force Account staff to and from the various work locations on the RRBR Project.

B. Work Coordination –

Project Materials and Equipment: We will have ongoing conversations and preparatory phase meetings with the contractor regarding pending construction activities. That effort starts with the submittal of the required material certifications, proceeds through the fabrication and QA acceptance of materials to be delivered to the project site. Those material and equipment deliveries will be discussed so all off-loading activities are planned, and staging areas and storage facilities are reviewed to determine that they are prepared to receive material and equipment deliveries. As part of our oversight, we will confirm that all materials are mobilized and available when the schedule dictates the start of the corresponding work activity. Finally, all our inspectors will be provided with approved construction work plans, which will also be available through the same web-based inspection reporting system, so that they can be monitored for adherence to the contract requirements.

Site-Specific Work Plans: Our team will conduct weekly meetings with the contractors, the appropriate representatives of the agencies and operating railroads. When track occupancy and/or foul time is required, the necessary coordination, resources and staffing will be in place. Site-Specific Work Plans (SSWP) will be required by NJ TRANSIT. On past projects, when contractors have been deficient in preparation of the required SSWPs, we have initiated special meetings with the contractor, at which time SSWPs were jointly written by the contractor and our CM personnel. While our CM team will not dictate means and methods, we will facilitate discussions regarding the contractor's plans in order to assist in preparation of the SSWPs.

C. Force Account Assistance – We will keep open lines of communication with the NJ TRANSIT Project Manager to maintain control of the project schedule. Force Account work activities will be incorporated into the contractor's schedule and the project Master Schedule. The schedule will be monitored and discussed with the appropriate Force Account personnel to identify the windows for support work so the contractor's progress is not impacted. Communication and relationships are key to successful integration of the Force Account activities. As work dictates, meetings as needed or on a cyclical basis will be held to discuss the program Force Account needs.

We will also monitor the Force Account budget, including tracking and documentation of the daily Force Account activities, and an analysis of NJ TRANSIT's budget vs. actual costs. Variations from proposed budgets will be documented and discussed with NJ TRANSIT's Project Manager.

D. Document Control – The AECOM | Mott MacDonald Team has extensive experience in the successful implementation and utilization of computerized and web-based construction management and document control systems. Our team's proactive approach to construction management also involves the effective control of the submittal/approval process. This includes the Request for Information (RFI) tracking and response process, submittal tracking and control. Our Construction Management System is used to:

- Track and monitor submittals;
- Track and monitor the status of open items;
- Document correspondences (sent and received);

- Record minutes and prepare agenda for meetings;
- Monitor status of Inter-Office Memoranda (IOM);
- Record all transactions regarding changes, including Requests for Information (RFIs), responses to RFIs, change requests, cost proposal for changes and final change order documents;
- Record Daily Construction Reports;
- Record Non-Conformance Reports; and
- Retrieve project documents on-line.

As-Built Drawings – An updated set of marked-up construction drawings that indicate record conditions will be maintained at the CM office. The contractor will also be required to maintain as-built drawings. Variances from contract drawings, or between the drawings, will be discussed with the respective contractor for clarification. NJ TRANSIT will be notified of any such occurrences and our team will give its recommended course of action. Upon completion of the work, we will submit the marked up as-built construction drawings from each contractor to the design consultant for review and approval. Final as-built drawings will be reviewed by our team to determine that the drawings correctly represent site conditions.

All project records will be maintained on the project site and available in secure off-site servers so that records will always be accessable and retrievable.

Construction Filing System – The AECOM | Mott MacDonald Team will maintain a construction filing system for tracking the following, including but not limited to: project correspondence, reports, test result, shop drawings, SSWPs, contract addenda, bids, meeting minutes, Force Account records, Change Order and Change Order documentations, environmental issues and other project related documents. Data will be maintained on site. Electronic copies of all project documents will be stored electronically in NJ TRANSIT's ECMS documentation system.

All project records, including all records associated with contractor payments for work completed, will be maintained so that the NJ TRANSIT Project Manager will always have the required documentation to support the expenditure of project funds. This includes the documentation that will be required to address all Federal Transit Administration requests for backup and verification for all funding expenditures, and quarterly reports and meetings.

E. Project Meetings –

Pre-Construction Meetings – Our team will conduct pre-construction meetings prior to the start of any contract with responsible personnel representing the contractor, NJ TRANSIT, the design consultant, public utilities and any other stockholders where such attendance is deemed necessary.

Progress Meetings – We will hold bi-weekly progress meetings. Should project conditions warrant, we will initiate discussions with NJ TRANSIT to hold meetings on a weekly basis as long as necessary. Progress meetings will be documented in our standard meeting minutes format. The format highlights the scheduled discussion, old and new business, labor and equipment on site, and status of outstanding submittals. An action list, developed from each meeting, will be forwarded to responsible parties and attached to the meeting minutes.

Minutes – Minutes of meetings attended by our team will be forwarded to NJ TRANSIT's Project Manager for review and approval within three work days of the meeting. Upon approval of the minutes, we will distribute to the necessary stakeholders, or as directed by NJ TRANSIT.

Special Meetings – We will also chair and/or participate in any other meetings that may be scheduled throughout the project, including those with public utilities and any other body exercising jurisdiction over the project.

Meeting Log – A log of meetings will be maintained and incorporated into monthly reports.

Other Meetings – We will conduct or attend special meetings for new work activities, coordination of

Force Account activities, or any other issues related to the project.

F. Community Relations –

Inquiries: We will investigate and disseminate to NJ TRANSIT, as received, any inquiries or complaints received regarding the project. We will assist NJ TRANSIT in dealing with such occurrences as needed or directed. A log to record each inquiry and/or complaint will be maintained at the project site.

NJ TRANSIT's Project Manager Notification – As an integral part of all of our critical infrastructure projects, we developed a Construction Incident Communication Plan so that our client is immediately notified regarding any incident on the project that negatively impacts the project, project staff or the surrounding community.

Reportable Incidents include:

- Potential delay in return of Track > 2 hrs. before scheduled return.
- Potential delay in availability of Track < 1 hrs. before scheduled track outage.
- Early Return of Track.
- Workplace Accident (requiring emergency response).
- Workplace Accident (all others).
- Hazardous/Contaminated Material Incident.
- Maritime Incident.

The protocols for notification will be developed in coordination with NJ TRANSIT's Project Manager, EMS services, local police and fire departments.

Direct Communication with Others: We understand that direct communication with public authorities, news organizations or others is forbidden. Requests for comments will be discussed with NJ TRANSIT's Project Manager. We will fully support NJ TRANSIT in outreach programs, such as the preparation of project pamphlets to keep the neighborhood's boaters, stakeholders, and affected and interested parties aware of the progress of the job, and to answer questions or address issues as they occur. We will support NJ TRANSIT in its community and governmental efforts, including, but not limited to, providing graphics, reports, presentations or attendance at meetings.

If requested by NJ TRANSIT, our CM, Tom O'Connor, and/or team member Jody Herkloz of JHL Management Enterprises, will be available to make presentations to neighborhood groups during the construction phase of the RRBR Project. We will be the focal point for questions and concerns if they arise from the community and/or stakeholders. We will be especially involved with adjacent properties, including local schools, parks and marinas, during specific construction periods. For areas where there will be long-term impacts, such as the use of laydown areas, we will keep the neighborhood and interested parties aware of the changing conditions. We will make staff available who have the ability to explain in laymen's terms issues such as boat traffic restrictions and impactful construction activities, including pile driving and sheeting operations.

G. Cost Control –

Measure Pay Items – As part of our team's CM procedures, contract pay items/quantities are reviewed for allowable payment as part of the daily inspection reporting. At the end of every pay period, we will develop our own preliminary pay estimate for eventual discussions with the contractor. Our Constuction Manager will then review quantities with the contractor and NJ TRANSIT's Project Manager. This practice averts discrepancies between our quantities and the contractor's payment requisitions. Recommendation for payment of Contractor Requisitions will be provided to NJ TRANSIT once we receive receipt of the final CM approved payment requisitions from the contractor(s). In five (5) years on the Interchange 6 to 9 Widening Program, where progress payments were processed twice each month, contractor payments were never delayed.

Maintain Cost Account Records – Our Construction Management system will be used to track quantities, including quantities paid-to-date, the date work was performed and the location of the work. This procedure applies to contract quantities as well as change orders paid by unit cost or on a time-and-material basis.

Claims Avoidance – Our team's project control systems are geared to minimize claims for additional time, cost, or other liability issues. Timely response time to correspondence, RFIs, or submissions is a major factor in claims avoidance. As issues arise, they will be immediately

discussed with the contractor(s) and NJ TRANSIT's Project Manager and a recommendation will be provided as to how to proceed. Should a contractor submit a request for additional compensation, we will evaluate the issue, assemble the pertinent documentation and provide a recommendation for resolution. Time will be of the essence in addressing changed conditions and minimizing any potential time and cost impacts. This includes assisting the design team to address any unforeseen conditions promptly and proposing work-around solutions to maintain the construction progress. The issues regarding all changed conditions and their cost impacts will be well documented and detailed so that any cost impacts are justified and verified for NJ TRANSIT review and acceptance, and for review and approval by the Federal Transit Administration.

The AECOM | Mott MacDonald Team proposes biweekly change control meetings, led by our claims and dispute resolution specialist, and involving key decision-makers from NJ TRANSIT and our CM team to review pending or potential changes above an established threshold, or any change that could have a schedule impact. In our experience, the first step in issuing a Notice of Proposed Change (NPC) is through the RFI process. The RFI is a documented proposal generated by the contractor that outlines the nature of the changed condition. Based on our experience, the RFI process has been instrumental in identifying the potential for extra cost as well as providing an early warning for a field or design issue. This early alert allows expeditious direction to the designer and contractor on how or whether to proceed, and sets thresholds and criteria for negotiating any cost or schedule impacts.

Construction Budget – We will establish and institute procedures for monitoring the project's construction budget and NJ TRANSIT Force Account. We will enforce earned value-based cost loaded schedules to facilitate progress payments. We will work with NJ TRANSIT to develop a budget reporting system that is compatible with NJ TRANSIT's systems. The report will be part of our Monthly Report and the report format will be comprised of budget and schedule control elements, including, but not be limited to, the following:

- Budget Summary by Contract;
- Budget Summary by Force Account;
- Budget Summary by Utility Company;
- Contract Change Order Status;
- Notice of Proposed Change Summary;
- Request for Information Summary;
- Contractor Requested Change Summary;
- SSWP Summary;
- Current Schedule and any Slippage Issues;
- Estimated Percent of Completion ;
- Expenditures Incurred as Percentage of the Budget;
- Contract Cost Complete Projections;
- Upcoming Decisions, Milestones;
- Submission Review Status;
- Man-hour Projections and Usage;
- Contract Change Order Status; and
- Changes to Anticipated Staffing through Contractor's Work Sequence.

H. Labor Relations Assistance –

Labor Laws – We will review the contractor's work for compliance with all applicable State and Federal labor laws. Our team's labor relations specialist will assist with any non-conformance issues or labor actions.

Prevailing Wages – We will set up a routine process with the contractor for submission of certified payrolls. These payrolls will be used to review the contractor's compliance with the labor requirements as stated in the contract. Any discrepancies between the two will be brought to the attention of the contractor and NJ TRANSIT, and the contractor will be required to rectify problems.

Affirmative Action Programs – We will generate a report at the beginning of the project outlining the contractor's DBE requirements and the subcontractors that will fulfill those requirements. The report will outline the work to be performed

by the DBE subcontractors, along with the dollar value associated with that work. It will be updated with the current values of the contractor's compliance. Should a contractor fail to meet the participation goal, our DBE engagement and compliance lead, Doreen Taveras, will first discuss the issue with the contractor to work through solutions. If no solution can be found, we will immediately discuss the issue with NJ TRANSIT and schedule a meeting with the contractor to reach an acceptable resolution.

I. Record-Keeping –

Contract Documents – Current copies of project documents will be maintained at the CM field office, including but not limited to contracts, addenda, drawings, specifications, samples, catalogue cuts, test results, shop drawings, RFIs, change orders, payment requisitions and other pertinent data, and they will be available to NJ TRANSIT at all times via our construction management system.

Daily Inspection Reports – Inspection staff will maintain a daily record of work accomplished on a daily basis, including but not limited to classification, equipment (active and idle), material deliveries, weather, material shortages, tests, labor disputes, observations, Force Account support, visitors and other unusual circumstances. All this information will be captured in our construction management and inspection reporting system. This web-based system will allow real-time review of daily inspection reports for completeness and final acceptance of completed contract work. In addition, access can be provided to NJ TRANSIT's Project Manager via the RRBR Project Dashboard, where all the latest information regarding the project will be available for review.

Electronic Copies – Our team will keep and back up electronic copies of all documents collected or produced during the program for filing into the NJ TRANSIT ECMS system. The ECMS system will be updated weekly by our document control specialist.

J. Project Progress Reports –

Monthly Progress Reports – Two (2) copies of progress reports will be provided on a monthly basis. The monthly progress will contain information on the contract or work packages including, but not necessarily limited to, actual vs. planned progress, schedule analysis, decision and/or resolution logs, change order status, including status of work completed and associated costs incurred, decision and/or resolution logs, photographs of construction activities and projected work for the next period. The report will also include an issue section, which will provide a brief narrative of any issues that could adversely affect the project. Issue narratives will be maintained and updated in monthly reports until such time as they are resolved. Additionally, the report will identify any potential changes to the contract completion date and recommended mitigation or recovery strategies.

Electronic Copies of Monthly Reports – In addition to the bound binders, which are marked on the front and spine with their contents, each report binder will include a disc with the full contents of the report. Electronic copies will also be emailed to a select distribution list of NJ TRANSIT staff established by the NJ TRANSIT Project Manager.

Cost Account Records – Change Orders – Our progress reports will also include a section on cost control. The reports will identify payments to the contractor for contract work completed to date as well as change order work.

Project Photographs – Photographs, slides and/or other electronic media will be submitted to NJ TRANSIT as requested and their complete archives turned over to NJ TRANSIT upon completion of the job. We will use digital cameras with GPS so that photos can be electronically cataloged into the document control systems according to the coordinates at which they were taken and the direction in which they were shot. If acceptable, we recommend the use of full-time documentation of the construction operations via EarthCam. This practice was recently used on the Interchange 14A and Tappan Zee Bridge projects and provided a complete record of all work activities and the ability to access live video feeds of the work in progress.

Photographic Records – Photographic records in both picture and slide form, or other medium as approved, detailing the progress of each contract and program element will be maintained. A minimum of two project photographs will be provided in monthly reports.

Task C2 – Inspection and Testing

Our team of REs and inspectors, many of whom are licensed engineers or certified inspectors, will monitor the construction work to verify that the contractors are getting it right the first time. They are very familiar with the applicable New Jersey State building codes, AREMA and NJ TRANSIT standards.

General

Work Areas – Our team will verify that the contractor's work is limited to areas necessary for performance of project activities. We understand that maintaining railroad operations is paramount to the success of the program. Our past performance for NJ TRANSIT and other operating railroads provides the experience, lessons learned and know-how to complete the project on time and within budget, while maintaining railroad operations.

Equipment – We understand and will implement controls of staging areas for contractor equipment and materials throughout construction. While security of the staging and work areas is the responsibility of the contractor, we will work in a proactive manner to assist in this effort. We will not allow equipment or materials to be left unattended in areas where doing so would create hazards, or in areas where they could be moved and thus would create a hazard or impede operations. In addition, we will review the equipment certification and operator certifications for all equipment used on the project. This will include all barges and equipment used on the Raritan River as part of the contractor's operations. GPS tracking of all construction barges and proper lighting of river barges was a key safety and security issue on the Tappan Zee Project.

Coordination with NJ TRANSIT Project Manager – Communication with the NJ TRANSIT Project Manager is essential.

Our communication will not simply report status, but rather will identify potential issues and recommended solutions, always with the goal of protecting our client's interests and advancing the project expeditiously and safely.

Fouling – Our team understands that fouling limits are defined as the potential to have an activity or construction activity that has the potential to impact railroad operations. Typically, fouling limits for the NJCL are for activities within 18 feet of the centerline of track. Monitoring compliance by the contractor is a continuous task that is not taken lightly. We will make sure that the contractors do not work within the fouling limits of the railroad without flagmen protection. Compliance is necessary to construct the project safely and to maintain the schedule.

Property Owners – Right of Entry – Contractor activities will be monitored to prevent entry upon, cross over, under or over private property without confirmation from NJ TRANSIT that approval to enter has been obtained.

Roadway Worker Protection Training – Employees of the CM team will not enter the railroad right-of-way without completion of the Roadway Worker Protection training. All proposed staff will be required to attend the training sessions conducted by NJ TRANSIT and Conrail. We will also ensure that all our CM field staff will have OSHA, HAZWOPER and confined space training as appropriate.

Evidence of Roadway Worker Protection Training – Construction personnel will be monitored for completion of the Roadway Worker Protection Training. Contractors will be required to maintain a log of all personnel assigned to their contract, identifying the date of training and current status of successful completion. Submission of the log to the CM team will be required.

Construction Inspection and Testing

Conformance with Contract Documents – Our Team will monitor work for conformance with contract documents, applicable codes, permits and any other pertinent regulations. We have standard inspection reports that will be customized for this project to meet the requirements of NJ TRANSIT.

Inspector Daily Records – We will document on-site activity in our Construction Management System and tablet-based inspection reports. These reports will outlining the work performed, crew size and equipment utilized by the contractor in addition to other pertinent information. Electronic copies of all the approved daily inspection records will be cataloged and submitted to NJ TRANSIT and bound hard copies can also be made avaialble for approval/acceptance by NJ TRANSIT.

Non-Conforming Work – Our team will identify items of work that do not conform to the contract documents and will notify the contractor of the requirement to bring such items up to standard. We will evaluate the non-conforming work and determine if it justifies the issuance of a stop work order. Prior to issuance of a stop work notice, we will inform NJ TRANSIT's Project Manager of the non-conforming work and obtain concurrence on the recommended actions to be taken. When appropriate, a stop work order will be issued.

Should the non-conforming work not warrant a stop work order, our team will evaluate the work for potential impacts to subsequent work. The AECOM | Mott MacDonald Team will bring the issue to the immediate attention of NJ TRANSIT and provide recommendations regarding appropriate corrective actions. Non-conforming work which does not impact other work activities will be brought to the attention of the contractor in writing. A log will be maintained for non-compliant work on the project's site, including the type and date of the corrective action taken.

Correspondence regarding non-conforming work forwarded to the contractor will present the opportunity for the contractor to submit remedial work to obtain compliance with the intent of the contract documents. Submissions will be reviewed and recommendations discussed with NJ TRANSIT.

Enforcement of Stop Work Notices – Progress of work associated with the non-conforming work will not be permitted until such time as the contractor has corrected the non-compliance, or has justified reasons for the non-compliance to the satisfaction of NJ TRANSIT.

Log of Non-Conforming Work – A log will be maintained to identify non-conforming work in accordance with Task P4 – Management Procedures and Document Control. Resolution of non-conforming work will also be identified in the log.

On- and Off-Site Inspection and Testing

Material and Equipment – The AECOM | Mott MacDonald Team will conduct on- and off-site testing of materials as necessary and as directed by NJ TRANSIT. Advanced Infrastructure Design (AID), our team's designated materials testing firm, will assist the team in providing any additional material testing requested by NJ TRANSIT and not covered by the contractor's independent testing firm.

Contractor Field Tests – We will oversee field tests required of the contractors to ensure material and equipment compliance with contract documents. We will evaluate and approve the quality and workmanship of all contract work within seven calendar days after its installation. Test results that identify non-compliant work will be handled in accordance with Task C2-Inspection.

Independent Laboratory Testing – Testing will be provided by an independent laboratory certified by NJ TRANSIT in the areas that they will perform services. Written reports with a recommended action will be obtained, reviewed for compliance with contract requirements and forwarded to the NJ TRANSIT Project Manager within 7 calendar days after installation.

Manufacturer's Testing – We will monitor that required manufacturer's testing is performed prior to any material or equipment being installed or placed into service. Certified results will be obtained and preserved within our document control system.

Comprehensive Testing Program – Our CM will submit to NJ TRANSIT a comprehensive testing program to be used for interim and final acceptance testing. The approved testing program will be developed based on the contract specifications and recommended best practices.

Material Testing – We will include a $300,000 allowance for as directed testing and monitoring for the program, and for areas where there are no provisions for testing in the construction contract. The allowance will be included in the cost proposal as a direct expense and only utilized upon approval by NJ TRANSIT's project manager.

Surveying – We will include a $300,000 allowance as a direct expense to have a land surveying team available to perform surveying activities as necessary. The allowance will be included in the cost proposal as a direct expense and only utilized upon approval by NJ TRANSIT's Project Manager.

As-Built Construction Drawings – We will maintain one set of as-built construction drawings at the RRBR site office. These drawings will be kept up-to-date, redlining changes, additions, or deletions to the construction contract, including subsurface conditions. Upon completion of construction, our team will review the drawings prepared and submitted by the contractor. Should differences be identified, we will reconcile the items with the contractor to identify true as-built drawings. Final redlined drawings will be submitted by our Team to the Design Consultant for preparation in a reproducible format.

Environmental

Contaminated Material – Our on-site representatives are trained in evaluating construction activities and site conditions to identify potential issues as they are developing in the field. In the event potentially hazardous or contaminated materials are discovered, we will inform NJ TRANSIT's Project Manager and coordinate with NJ TRANSIT's LSRP, so that any potentially contaminated material can be sampled and tested for determination of its final disposition. We will maintain our own LSRP on staff, if needed.

Handling Contaminated Material – If contaminated material is encountered, we will work with the NJ TRANSIT LSRP to recommend the appropriate response. Once a determination is made, we will monitor to ensure that the contractor's work is conducted in strict compliance with the guidance provided by the LSRP and with all Federal, State and local regulations. Activities under this task may include, but are not necessarily limited to, the following:

- Contaminated soil stockpiling (location, runoff controls, sampling, etc.).
- Independent soil or groundwater samples to confirm remediation requirements.
- Review appropriateness of contractor submittals to the regulatory agency.
- Monitor air quality, if needed.
- Waste manifest preparation and permitting.
- Public meeting attendance.
- Monitor permits compliance.
- Documentation of quantity and content of materials removed from the site.

During the Pre-Construction Phase, we will review the construction documents to identify areas where sampling and analysis of potentially impacted environmental media may be warranted. Impacted environmental media is a potentially harmful substance that may be present in soil, groundwater, sediment, surface water or building materials that may pose a threat to human health or the environment. Media or areas warranting sampling could include, but are not limited to:

- Areas of temporary Work Platforms (both approaches)
- Areas of Drilled Shafts and Pile Foundations
- Areas where retaining walls are constructed
- Areas of abutments and wing wall installation
- Rail line relocation for access to new bridge
- Fill material brought onto the project site
- Lead-based or containing paint on the existing bridge components
- Asbestos-containing material on the existing bridge components
- Polychlorinated biphenyls in existing electrical equipment

Given the urban nature of the project area, the above listed contaminants and various media may be impacted by volatile and semi-volatile organic compounds, heavy metals, pesticides and/or herbicides. Impacts to the

project site may have occurred as a result of long-term rail operations or operations formerly conducted at adjacent sites. Our review will occur in concert with any previously conducted sampling.

Upon the completion of the identification of media warranting sampling, we will prepare a summary report presenting the findings and rationale. A meeting would then be held with the LSRP retained by NJ TRANSIT to review issues, including the following:

- Need for and frequency of sampling of each type of media;
- Laboratory analysis of samples;
- Sampling methodology; and
- Implementation schedule.

With this understanding and once the contractor is retained, we would interface with the selected entity to develop an understanding of their perceived sampling needs, timing requirements and to come to a common agreement on the areas requiring sampling as well as the number and type of samples and laboratory analysis. As the design proceeds and the locations of the aforementioned areas or additional areas requiring sampling becomes established, additional meeting(s) between our team, NJ TRANSIT's LSRP and the contractor will occur. The timing and need of these meetings will occur once a high certainty of the planned construction has been established, including, in particular, areas of planned permanent and temporary disturbance. As with prior meetings, the focus will be to come to consensus on the frequency and location of required sampling as well as the specific laboratory analysis required for re-use and disposal. Schedule will also be addressed, such that sampling will be prioritized, as needed, to avoid project delays. The approach will address areas of new work as well as the demolition phase of the existing bridge structure and appurtenances.

Another important activity of our on-site environmental CM staff is to monitor permit compliance and compliance with any "permit conditions" that may be imposed. For example, if dewatering is required, the dewatering permit may include sampling, monitoring and disposal requirements. The local wastewater treatment facility that accepts dewatering liquids may also require specific testing and/or pre-treatment prior to discharge into the public sewers. These activities may require special on-site monitoring during the construction phase. Such requirements will have already been identified in the project Environmental Implementation Scheme so that enforcement and compliance reviews can be readily accomplished.

Task C3 – Schedule Control

The AECOM | Mott MacDonald Team will use Primavera Version 6.0 as the designated scheduling software for the RRBR project. Primavera Version 6.0 was the scheduling program used for all 31 construction contracts on the Interchange 6 to 9 Widening program and was used to develop the Project Master Schedule so that the overall program completion could be tracked and managed. The Master Schedule for the Widening also tracked the design and procurement process as each of the thirty-one (31) construction contracts was rolled out as the program progressed.

Schedule Management – After receiving the NTP, we will initiate communication with the RRBR design team, to further develop the master schedule and establish the uniform standards for use by each participant involved in the RRBR Project. Items that will be addressed include, but are not limited to, work breakdown structures, naming and coding activities, means of identifying resources for cost-loaded schedules, procedures for updates, requirements for submission of time extension requests and requirements for recovery schedules.

Ownership of Schedule – At the very outset, after receiving NTP, we will request an initial meeting with NJ TRANSIT to begin the transition of taking ownership of the existing master schedule developed by the team. We will conduct a thorough review of the staging, sequencing, bid packaging alternatives, long-lead item procurement, third-party constraints and interfaces, Force Account requirements, right-of-way status and potential utility conflicts.

Program Master Schedule – Our team will develop the Program Master Schedule working with the design consultant regarding matters including but not limited to cost and resource loading, reports, requirements for updates and baseline requirements. We will use Primavera P6, an ideal choice for a complex Master Schedule. If necessary, the Enterprise Project Structure in P6 allows for the seamless organization of the multiple construction contracts. We will set up a Master Schedule with appropriate coding and levels. This will allow each schedule (Force Account or contractor) to remain as intended, allow easy importation of update data and simplify the size of the Master Schedule. P6 has the ability to open numerous

schedules simultaneously so that external links can be run, analyzed and documented. P6 has the ability to summarize the schedules and has a powerful layer system to assist in higher level analysis and reporting.

We will perform additional analyses of the schedules, design drawings, contracts and collected data to identify conflicts and to model the conflicts using the Master Schedule. These models from the Master Schedule will be used to present the conflicts to affected parties to promote understanding, discussion and resolution of the issues. Our team will investigate potential inefficiencies, especially with utility coordination, a potential source of conflict. Analysis of utility inefficiencies is very important because they are typically a major delay issue on most construction projects.

From our team's extensive construction, engineering and scheduling experience, we understand that scheduling is a challenging concept to many people, including seasoned construction and engineering professionals. Our team is experienced in communicating schedule information to all types of audiences. We understand that we cannot just use a bar-chart schedule printout to explain a conflict or interface issue. We use graphics, drawings, charts and simplified diagrams and 4D scheduling to convey the points that we are trying to make. Simple presentations and graphics will promote better understanding of the issues and help to keep discussions focused.

Review of Contractor Baseline Schedule – The contractor's baseline schedule will be loaded into a Master Schedule using 4D scheduling. It will be linked and modeled in key drawings to identify issues related to crane and site logistics, space planning, trade coordination and staffing, and utility conflicts. We will communicate any concerns arising out of this review to the contractor. We will also review the baseline schedule for contract specification adherence, adequacy of durations and reasonableness of logic, float sequestering and open ended activities.

Our team will use 4D schedule visualization, in conjunction with the computerized CPM schedule in Primavera Version 6.0, to evaluate staging and phasing scenarios and identify potential benefits (and/or pitfalls) in the overall logic and sequencing. We will select key drawings and link it to the CPM activities in P6 to identify issues related to Force Account staffing, trade coordination, site logistics, as well as space planning, utility conflicts and access constraints. This tool can also be used for presentations to neighborhoods and other interested parties (i.e., the NJ TRANSIT Board) to allow them to understand the complexities and impacts of the project in layman's terms.

Creation of Force Account Schedules – Our team is very experienced in implementing Force Account schedules and will work closely with the NJ TRANSIT personnel to create a schedule for each of the Force Account packages identified in the RFP. This information will be loaded into the overall Master Schedule for proper integration and alignment of Force Account activities with the contractor's.

Review of Monthly Updates – Our team will review monthly updates submitted by the contractors within 7 to 10 calendar days of receipt to determine that they are consistent with progress required by the contract, to monitor for logic changes and verify compliance with Force Account schedules. Should job conditions warrant, we will recommend more frequent submissions until such time as monthly submissions are sufficient. We will review updates and discuss recommendations for approval or rejection with NJ TRANSIT's project manager.

Schedule Slippage – Should the contractor fall behind schedule, our team will assist the contractor and provide ideas and recommendation to mitigate impacts and/or gain the lost time. Additionally, should the contractor fall behind the allowable total float for a specific activity on near-critical path, our team will always wave a red flag ahead of time before a negative impact hits the schedule or the critical path is shifted. It is our experience that frequently scheduled workshops, as needed, will help in developing ideas and assisting the contractor to predict future problems or enhance and improve the schedule to finish ahead of the completion date, if possible. It is always important in maintaining a partnering atmosphere, to work as one team.

Deliverables:

- Contractor CPM Reviews and Analysis;
- Project Construction Schedule and Updates; and
- Time Impact Analysis as necessary.

Task C4 – Staging and Site- Specific Work Plans

Construction Site-Specific Work Plans (SSWPs) – Submission of construction staging plans by the contractors will be required within 30 calendar days from award of the contract to identify sequencing for the various work elements. The AECOM | Mott MacDonald Team will review the sequencing of these work elements for discussion with NJ TRANSIT and the contractor. These discussions will result either in comments for contractor's action or in a recommendation for approval.

Review of SSWP – Comments on SSWPs will be provided to a contractor within 10 calendar days of receipt by our team. The contractor will be required to identify means and methods, crew size, equipment, staging areas and a schedule in each work plan submitted. We will verify that the submitted construction SSWPs are consistent with governing agency requirements and that they correspond to the staging plans included in the bid documents.

SSWP Agency Review – Should we concur that the submission corresponds with SSWP requirements and is consistent with contract staging, it will be forwarded to the appropriate representatives of NJ TRANSIT and Conrail for review and approval. Prior to major work activities affecting railroad operations, we will coordinate a meeting with the contractor and the operating railroad(s) to discuss the impending work and the SSWP. A great deal of time can be saved through the use of meetings with the operating railroad. Further, we will maintain a log of the submissions and discuss the log at regularly scheduled job meetings.

Agency Review Period – We will coordinate meetings with the operating railroad to discuss major work activity and the return of SSWPs within 10 calendar days from submission. Should the review duration jeopardize the 30-calendar day requirement for return of comments, our team will, at least three days in advance of termination of the review period, notify NJ TRANSIT's Project Manager.

Deliverables – Construction Staging Plan reviews and comments; SSWP review and comments.

Task C5 – Shop Drawings and Material Review/Handling

Detailed Procedures – The AECOM | Mott MacDonald Team has detailed standard shop drawing procedures that will be tailored for RRBR to expedite the processing and review of submissions. The initial review of shop drawings and materials for the project will be performed by our team.

Design Review Period – Upon completion of the initial review, within five calendar days, for contract conformance, submissions will be forwarded to the design consultant for review or returned to the contractor if they do not comply with the contract documents. We assume that the design consultant will complete its review within 21 calendar days of receipt.

Construction Manager Review – Submissions, depending upon the item, may warrant review by operating railroads, utilities, or other players involved with the project.

Submittal Log – Separate logs will be maintained for shop drawing and material submissions, work plans and RFIs to track response time. We will work with the designer, NJ TRANSIT's Project Manager and staff, and other players involved to develop flow charts for routing of various submissions.

Submittal Tracking – A section of biweekly progress meetings will be dedicated to discussion regarding the current status of submissions. We will discuss shop drawings, working plans, SSWPs and RFIs. Prior to each meeting, our Project Controls Manager, Bassam Hanna, and the Construction Manager will discuss outstanding submissions with the NJ TRANSIT Project Manager, or other reviewing parties, to ascertain the current status and improve the review times identified in contract documents. Additionally, our personnel will work closely with the design team, including attending regularly scheduled meetings regarding outstanding submissions and potential issues.

We have found on numerous projects that these meetings and continuing discussions not only enhance the return of submittals within the allowable review times, but often shorten expected durations.

Comments – Should the reviewing party exceed 21 calendar days, NJ TRANSIT's Project Managerwill be notified immediately. Upon return from the reviewing party to our team, submissions will be forwarded to the contractor within two days. Typically, our team will return submissions to the contractor the same day that they are received from the designer.

We understand that RFIs may be generated by any party, even the CM. Upon receipt of RFIs, our team will provide an initial review. Each RFI received will generate an RFI form; have a number assigned for tracking purposes; and a response date noted. RFIs may be submitted that warrant response only from our team. Should a response require additional clarification, it will be forwarded to the design consultant.

Prevent Installation of Items Not Approved – We will take any actions required, including stop work orders, to prevent installation of any materials or equipment not approved or certified. The contractor will be notified immediately of work items that fail to conform to contract plans, specifications and shop drawings.

Deliverables:

- Submittal flow charts
- Contractor submittal log
- RFI review response log
- Working plan log
- SSWP log

Task C6 – Project Change Management (Change Orders)

Change Order Procedures – The AECOM | Mott MacDonald Team has worked for NJ TRANSIT on numerous assignments for many years. We are quite familiar with NJ TRANSIT's change order process.

Preparation of Fact Finding Memorandum – Upon receipt of a change proposed by a designer, the CM, NJ TRANSIT or other third party, we will prepare a fact-finding memorandum related to the proposed change and will issue it to NJ TRANSIT for its review and recommendation of approval. If approved by NJ TRANSIT, we will proceed to issue a notice of the proposed change (NPC) and transmit all applicable information to the contractor with a request for proposed monetary or schedule impacts. At this time, our team will prepare an independent cost estimate and schedule analysis, if applicable. We will issue a proposed NPC to the respective contractor within 24 hours of the directive.

Contractor Requested Change Order – We will maintain a log of contractor-requested changes or change order requests (COR). Upon receipt of a COR, our team will analyze the request for entitlement, perform a cost-price analysis and submit a recommendation to NJ TRANSIT's Project Manager and contracting officer.

Negotiations – We will coordinate and participate in the negotiation of change orders. We understand that negotiation of change orders without the NJ TRANSIT's Contracting Officer and Project Manager present is not permitted, unless otherwise directed. We also understand and concur that NJ TRANSIT's contracting officer is the only person authorized to direct the contractor to proceed with the change order work.

Deliverables:

- NPC log
- COR log
- Cost estimates for each Change Order
- Time Impact Analysis (if applicable)
- Pertinent documentation justifying each NPC

Task C7 – Quality Assurance and Quality Control/ Budget

A project quality plan will be prepared to establish, manage and maintain the methods and procedures required to make sure that the project has a level of quality commensurate with the NJ TRANSIT and AECOM | Mott MacDonald Team requirements.

The effectiveness of the project quality plan will be monitored and audited by our quality manager, Steve Dempsey. As a result of the monitoring and auditing procedures, an assessment of the effectiveness of the quality program will be made and measured against policy goals and contract requirements.

The section of the Project Quality Manual will include the following information, and be prepared in accordance with the FTA Requirements:

- Communication Protocol
- Define roles and responsibilities and a distribution and responsibility matrix
- Stakeholder, project and emergency contact information
- RFI, submittal and document control procedure, including turn-around requirements
- Quality review process
- Approved change management process
- Safety policies
- Testing and inspection guidelines
- Reporting requirements
- Community and facility operations requirements
- Testing and commissioning
- Project closeout procedure

The QMP is a tool for our project team members to use as a reference throughout the project. In addition, the development of the QMP allows all project members to gain a full understanding of each other's roles through the duration of the project.

Deliverables:

- Written QA/QC Program
- Construction Manager's Budget Report
- Construction Budget Report

Task C8 – Project Safety

The AECOM | Mott MacDonald Team shares NJ TRANSIT's and Conrail's emphasis on safety and has designated John Sikorski, an experienced rail safety veteran, to be its Safety Officer. John and Andrew Robinson, our full-time Safety Inspector, will have full authority to act on behalf of our team to monitor construction work and performance in accordance with the standard industry practices in State and Federal laws. John, Andrew, and the entire AECOM | Mott MacDonald Team, will promote a culture of safety in everything they do.

The contractor work plans will be reviewed by our safety officer, the Construction Manager and our resident engineers for conformance with NJ TRANSIT safety requirements. Subsequent to review, the contractor will be notified of any questionable work practices and be required to revise its plan accordingly.

The Safety Officer will review the Contractors Site Safety Work Plans (SSWP). All new work, particularly work involving new equipment, picks or lifts, or work in close proximity to trains or electric power, will require a Preparatory Phase meeting to review means and methods and the SSWP.

Contractor Safety Plan Recommended Changes: The AECOM | Mott MacDonald Team agrees that the safety of the contractors, CM personnel, NJ TRANSIT forces, rail passengers, NJ TRANSIT equipment, visitors and all other parties and stakeholders is paramount. During construction, we will monitor the contractor's safety programs for compliance with their safety plan, standard industry practice and NJ TRANSIT safety requirements. Questionable practices observed will be brought to the attention of the contractor and NJ TRANSIT, and recommendations will be provided. During the course of the project, our Team's safety officer, working with our full-time safety inspector, will perform a number of safety related functions. Duties include but are not limited to the following:

- **Periodic Meetings:** Periodic meetings will be held with NJ TRANSIT's designated safety personnel, including Risk Management staff, the OCIP Team and the contractor's supervisory personnel to review the status of the safety and loss prevention program, and emergency and first aid plans. Minutes will be provided for the subject meetings.
- **Stop Work Orders:** Our CM will recommend to NJ TRANSIT that a Stop Work Order be issued if a condition or action by the contractor will endanger the health or safety of any work or on the job site. Once the Stop Work Order is issued, work will not resume until the contractor has implemented corrective actions, the team safety officer has inspected the area and corrective actions have been documented.
- **Site Visitors:** The AECOM | Mott MacDonald Team will develop a protocol for job site visitors. It will be made clear that visitors are to be directed to the CM office prior to entering the site both for safety and security reasons. When appropriate, NJ TRANSIT will be notified.

  The AECOM | Mott MacDonald Team is acutely aware that trespassers represent the major fatality category on the NEC, and unauthorized access will be dealt with in a direct and decisive manner through NJ TRANSIT and local police.
- **Roadway Worker Protection:** All personnel entering upon the site will be required to supply proof of Roadway Worker Protection and Training. All personnel will also be required to wear proper Personal Protective Equipment, including hard hat, reflective safety vest, safety shoes and ANSI safety glasses.

Deliverables:

- Accident or Incident Reports
- Stop Work Orders if Applicable
- Safety Checklist
- Minutes of Safety Meetings
- Visitor Log

Task C9 – Project Closeout

Substantial Completion – For each contract, our team will prepare a preliminary punch list on each activity performed by the contractor throughout the project. This practice helps to minimize the final punch list at substantial completion. Prior to a recommendation for a substantial completion, we will monitor the contractor's testing of services and the system's readiness for service. After approval of systems and if the contractual completion is deemed acceptable by NJ TRANSIT, we will recommend that the contractor be notified of substantial completion. With NJ TRANSIT's concurrence, we will prepare a punch list of remaining work with the contractor and a Certificate of Substantial Completion. We will approve the Certificate of Substantial Completion with the attached punch list and obtain approval from the design consultant and the contractor. The certificate will then be given to NJ TRANSIT for approval. If applicable, we will provide all documentation for the determination and assessment of liquidated damages to NJ TRANSIT.

Punch List – Our team will develop a punch list for construction activities performed by each contractor as they proceed and are mobilized at the field locations. We have found that the contractors view this practice as a partnering effort, which allows them to complete work in one attempt, ultimately saving time and money. If the contractor chooses to forgo punch list items at the time of initial construction of a work element, future work will be evaluated to ascertain that additional work will not inhibit the contractor's ability to access the punch list item at a later date. Items that the contractor does not complete or concerns regarding workmanship will be included in a final punch list at substantial completion.

Monthly Report of Punch List Items – We will coordinate the completion of all remaining work identified on the punch list and generate a monthly report on the status of each item.

Final Completion – Upon completion of punch list items, we will provide written notice to NJ TRANSIT and the RRBR's design engineer that the work is ready for final inspection.

Guarantees, Affidavits, Releases, Binds, O&M Manuals & Waivers:

Upon satisfactory final inspection and NJ TRANSIT concurrence, we will provide guarantees, affidavits, releases, bonds and retainers, operations and maintenance manuals, etc., to NJ TRANSIT's Contracting Officer. We will prepare a comprehensive index of O&M manuals provided by the contractors to provide easy reference to any O&M subject.

CM Certification – Upon satisfactory completion of all work, we will certify in writing that the work has been completed in accordance with the plans and specifications and that the final estimate of payments to the contractor are correct.

Written Notification of System Testing:

We will provide written notification when railroad systems have been tested, approved and are ready to be placed in service.

Testing & Commissioning – We will assist NJ TRANSIT in the preparation of start-up plans of operations and will provide NJ TRANSIT support as needed prior and following the start of operations. The AECOM | Mott MacDonald Team will oversee this start up testing and commissioning effort. The testing and commissioning of system elements will be the responsibility of the contractors and managed by our team in cooperation with NJ TRANSIT operating departments. we will develop a comprehensive commissioning and testing program early in the construction phase in concert with the affected transit operating departments. Testing and commissioning will not be left ot left until the end of construction. Rather, as project elements such as the movable bridge components are completed, the testing and commissioning plan will be with the cooperation and signoff of the affected department, such as signal, track, and ET, and formal signoffs for all tests documented and maintained. This will streamline the final full testing and acceptance program

Training – Our team will coordinate all training necessary for agency personnel on the applicable equipment and systems with NJ TRANSIT's Project Manager. We will obtain specific training manuals and session outlines from the contractor, and within 5 days of receipt, provide a recommended action to the NJ TRANSIT Project Manager regarding training.

Deliverables:

- Certificate of Substantial Completion
- Punch List and Subsequent Update
- Monthly Punch List Status Report
- Contractor Certificate of Completion
- Affidavit of Payment
- Record Drawings
- Final Inspection Certificate
- Required Guarantees, Affidavits, Releases, O&M Manuals and Warranties
- Written Certification of Final Payment Estimate
- Written Certification that Rail Systems are Operational
- Training Manuals

Task C10 – As Directed Services

The AECOM | Mott MacDonald Team brings to the RRBR Project an in-depth understanding of the objectives and the project's many components, requirements and interfaces among the stakeholders. Our team will capitalize on our recent and current construction management experience, lessons learned, systems and procedures, all of which have been developed within the context of protecting the interests of NJ TRANSIT and respecting the interests of the project's key stakeholders.

With the considerable resources that the AECOM | Mott MacDonald Team brings to the project, we will be able to address any issues that could potentially arise either before or during construction operations. Whether the issue is related to the installation and testing of railroad systems, geotechnical concerns regarding proposed ground improvements, drilled shaft installations, the procurement and acceptance of mechanical or electrical components, the fabrication delivery or erection of structural steel, or local community concerns, our team is ready to assist NJ TRANSIT whatever their need might be. And our team is ready to go to work immediately.

6. Team Organization/ Resource Allocation

6. Team Organization / Resource Allocation

The AECOM | Mott MacDonald JV team consists of a unique blend of talent crafted to deliver construction management excellence. Our mission is to manage the Raritan River Bridge Replacement (RRBR) Project to an on time and within budget completion. Staff was carefully selected to build a team with outstanding technical resources and to meet NJ TRANSIT's needs for a project delivered by experts, and a project delivered safely. We have partnered with the best DBE subconsultants that have worked with NJ TRANSIT before. Our DBE subconsultants will not only help us meet NJ TRANSIT's DBE goal, but will play an important role in the success of the CM effort. We understand the Raritan River Bridge Replacement project and our team has the talent and resources to deal with any problem that may arise. Many members of our team are known by NJ TRANSIT and have worked on high-profile rail projects; they understand NJ TRANSIT's requirements and procedures.

A. TEAM ORGANIZATION AND STAFFING

Our team has extensive experience working in a railroad environment that is similar to that of the Raritan River Bridge Replacement Project.

Our Project Organization Chart (see figure) depicts the experienced staff that the AECOM | Mott MacDonald JV Team has selected to address every aspect on this important NJ TRANSIT improvement project. Our Construction Manager will be the Team's principal contact with NJ TRANSIT. Our Construction Manager will keep NJ TRANSIT's Project Manager informed regarding the status of the project. The support and construction inspection staff that we have shown bring their construction experience to successfully deliver expert construction management servies, including railroad construction and oversight, drilled shaft construction, movable and fixed bridge construction, and environmental oversight.

Our team organization chart is presented below as *Figure 6-1* and a detailed project personnel organization chart is presented on the next page as *Figure 6-2.*

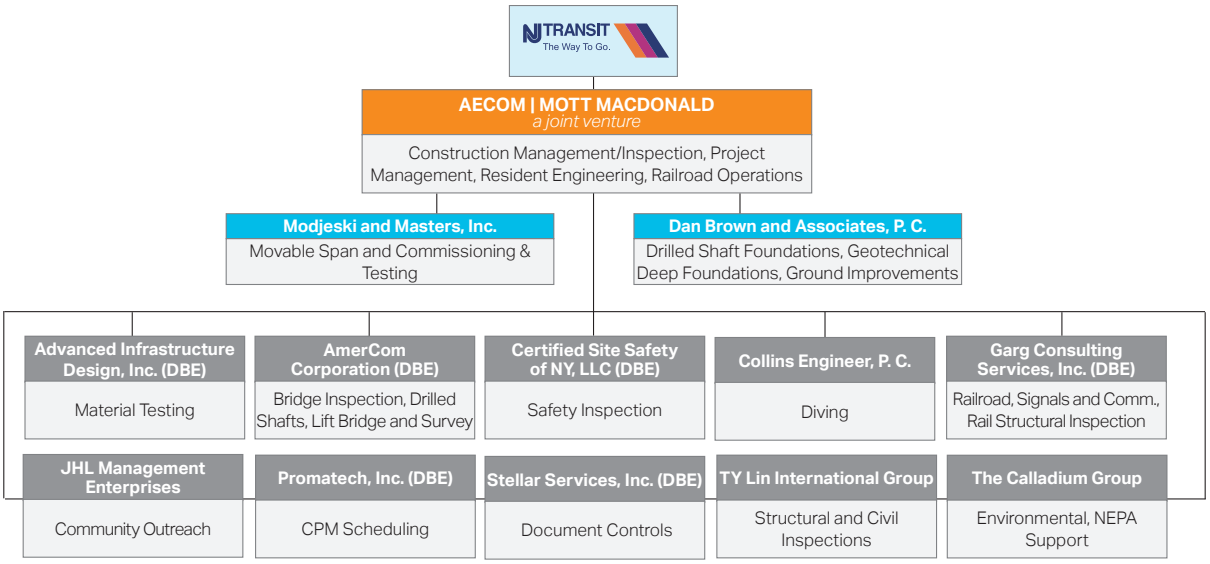


Figure 6-1. AECOM | Mott MacDonald Project Team Organization Chart

The AECOM | Mott MacDonald JV team has the expertise and resources to get the job done. We have resource loaded the schedule and have optimized staffing to fit the work at hand. We also have identified a large pool of additional resources that can be drawn upon as needed. In the event key work is required at nights or during a 55-hour outage on weekends, you can depend upon the AECOM | Mott MacDonald JV to provide the resources needed to support the work.

Our proposed Project Organization Chart presented herein shows activities and responsibilities for the work being performed from Preconstruction through Contract Closeout. Our manpower allocation is further demonstrated on the matrix's provided at the end of this section distributed across the various tasks by firm and individual.

The organization charts demonstrate the impressive depth of resources available to NJ TRANSIT to work on this project. We have anticipated the timing of various functions and staffing needs of the Pre-construction Services, Construction Management and Close-out Services phases and can **attest that all named staff on the charts are fully available to work on this project as shown.**

We can assure NJ TRANSIT that resource availability will not be an issue for the AECOM | Mott MacDonald JV Team should it be awarded the RRBR CM Contract.

Capability + Experience + Commitment

The AECOM/Mott MacDonald JV in association with *Dan Brown Associates* and *Modjeski and Masters* has outstanding technical resources and the experienced inspection staff with the capability to manage the complexities associated with this critically important project for NJ Transit. We fully understand NJ Transit's goals and we are committed to deliver the RRBR project on time and within budget.

Abundant resources for RRBR CM...

	Total Staff	Total CM	Metro Area Local
AECOM	75,000	2,430	1,489
Mott MacDonald	16,000	1,610	475
Modjeski and Masters	190	10	20
Dan Brown and Associates	20	15	15
Other Team Resources (subconsultants)	1,580	228	346
TOTAL	**9,2821**	**4,301**	**2,423**

Figure 6-2
Construction Management Services for The Raritan River Bridge Replacement Project
Project Personnel Organization Chart

NJ TRANSIT PROJECT MANAGER

PROJECT DIRECTOR
- Alim Baycora, PE, LEED AP (A)

QUALITY MANAGERS
- Steve Dempsey, PE (A)
- Frank Facciolo, PE (M)

PRINCIPALS IN CHARGE
- Anil Parikh, PE (A)
- Marco Levoyer, PE (M)

CONSTRUCTION MANAGER
- Thomas O'Connor, PE (A)

SAFTEY OFFICER
- John Sikorski (M)

Safety Inspector
Andrew Robinson (CSS)

TECHNICAL ADVISOR
- Glenn Mack (A)

PRECONSTRUCTION ASSISTANCE

Construction Manager
Thomas O'Connor, PE (A)

Bassem Hanna (M)
Natalie Barnhart, PE, CCM (A)
John Turner, PhD, PE (DBA)
Patrick Dempsey (A)
Kevin Johns, PE (M&M)
*

* *In addition to those listed here, we will enlist expertise from this organizational chart as needed*

PROJECT ADMINISTRATION

Project Controls Manager
Bassem Hanna (M)

Office Engineer
Vlad Allrich (ACC)

Assistant Office Engineer
Gene Finnegan (ACC)

Document Control Specialist
Sharron Smith (SSI)

Schedule Controls
James Singer (PTI)

Project Accounting & Administration
Sonia Corte (ACC)

Cost Estimating
Chase DeRose (A)

Cost Controls
Bassem Hanna (M)

Federal Requirements
Mike Salvato (M)

Change Management
Marc Papini (M&M)

DBE Compliance
Doreen Taveras (A)

FIXED BRIDGE/ CIVIL/UTILITIES

Resident Engineer
Natalie Barnhart, PE, CCM (A)

Chief Inspector
Tony Cotone (A)

Temporary Trestles
Muhammad Ali, PE (TYL)

Superstructure
Bonnie Nilsen, NICET IV (A)
Jerry Atwood, NICET IV (M)
Brian Salfelder, PE (TYL)
Bharat Gadara (TYL)

Bridge Demolition
Bonnie Nilsen, NICET IV (A)
Jerry Atwood, NICET IV (M)

Earthwork/Abutments Retaining Walls/Piles
Sean Crotty (M)
Sam LiPuma (M)
Amiri Robinson, PE (M)
Charles Dearing, NICET IV (ACC)

Electrical/Lighting/Utilities
Antonio Gonzalez, PE (M)

Soil Management
Ryan Landolfi (M)

GEOTECHNICAL DEEP FOUNDATIONS GROUND IMPROVEMENTS

Resident Engineer
Mark Madgett, PE (DBA)

Drilled Shaft Foundations Technical Expert
John Turner, PE, PhD (DBA)

Foundations - Drilled Shafts
Tayler Day (DBA)
Bryan Atkinson (ACC)

Ground Improvements
Alexis Leib (DBA)
John Paszkiel (ACC)

RAIL

Resident Engineer
Patrick Dempsey (A)

Tracks & Interlockings
Richard Funk (GCS)

Signals & Communications
John O'Brien (M)

Catenary & Electric Traction Power
Cathy Clement (A)

Force Account Construction
Frank Cienski (A)

MOVABLE BRIDGE

Resident Engineer
Ralph Eppehimer, PE (M&M)

Movable Bridge Technical Expert
Kevin Johns, PE (M&M)

Chief Inspector
Matthew Miller, PE (M&M)

Electrical Systems
Robert Peters, PE (M&M)

Mechanical Systems
Elizabeth Sample, PE (M&M)

Bridge Balancing
Dave Barrett, PE (M&M)

Movable Span Fabrication
Jim Vaskorilis (M&M)

Structural - Towers & Flanking Spans
Mike McGuire (ACC)

CONSTRUCTION SUPPORT SERVICES

Construction Services directed by the Construction Manager

Bridges/Structures
Gerard Kroner, PE (M)

Geotechnical
Anthony Crincoli, PE (A)

Survey Lead
Matt Gwiszcz, PLS (ACC)

Material Testing
Hasan Neamah, PE (AID)

Community Relations
Jody Herkloz (JHL)

Maritime Coordinator
Gary Kassof, PE (A)

Environmental Permitting
Timothy Hand, AICP (A)

HazMat Management
Kevin Koch, PE, LSRP (M)

NEPA Support
Leslie Mesnick (TCG)

Risk Management
Robert Rocco, PE (A)

Marine Diving
Dan O'Connor, PE (CEI)

CADD Support
Michael Gyiraszi (ACC)

Legend:
- Key Personnel
(A): AECOM
(M): Mott MacDonald
(M&M): Modjeski and Masters, Inc.
(DBA): Dan Brown and Associates, P. C.
(AID): Advanced Infrastructure Design, Inc. (DBE)
(ACC): AmerCom Corporation (DBE)
(CSS): Certified Site Safety of NY, LLC (DBE)
(CEI): Collins Engineer, Inc.
(GCS): Garg Consulting Services, Inc. (DBE)
(JHL): JHL Management Enterprises
(PTI): Promatech, Inc. (DBE)
(SSI): Stellar Services, Inc. (DBE)
(TCG): The Calladium Group (DBE)
(TYL): T. Y. Lin International

The combined staffing in the metropolitan area of our respective team members is approximately 2,345 with 484 of that number being CM professionals (see chart below). With work wrapping up on other major assignments for both JV firms, **we have the resources needed for this assignment and will not be stretched because of other commitments.**

The key staff we have identified for this project, filling senior or critical positions, are listed in the personnel qualifications summary matrix in Section 3: Qualifications of Individuals. Most of these staff members have experience working on NJ TRANSIT or railroad projects, and have been designated because of their experience and the importance of their roles to the successful performance of our team. **All of these individuals have been vetted and will be made available for the project based on the anticipated scheduled need for their services.**

Our Exclusive Teaming Partners

The AECOM | Mott MacDonald JV recognizes that two of the more critical components of the project are the moveable lift bridge and the deep drilled shaft foundations.

We have entered into an **exclusive agreement with Modjeski and Masters, Inc.** to provide expert Construction Management, and Commissioning and Testing, for this railroad vertical lift bridge. Modjeski and Masters is one of **the finest railroad moveable lift bridge firms** in the United States. They have assigned career professionals who easily meet the RFP requirements of 10 years of experience, to perform electrical, mechanical, bridge balancing and commissioning, testing and closeout. Upon completion of the project, NJ TRANSIT will receive a bridge that they can trust and depend upon. This project will receive the full support of Modjeski and Masters.

We have also entered into an **exclusive agreement with Dan Brown and Associates**. Dan Brown and Associates is known nationally as **the premier experts in drilled shaft foundations**. With 84 shafts to drill, NJ TRANSIT needs a firm they can count on. Dan Brown and Associates has provided expert design and construction field support locally in New Jersey and all over the United States. With the uncertainty of drilling shafts 8 feet in diameter and 200 feet deep, Dan Brown and Associates is the best team to provide CM services. This project will receive the full support of Dan Brown and Associates.

Extensive Transit/Rail Experience

Program and construction management services for this 1.5-mile link is an extension of the Newark Light Rail and connects the Broad Street Station with Penn Station in Newark.

This is a Railroad Project

The AECOM | Mott MacDonald JV understands this is a railroad project first. We have assembled a team with vast experience working for NJ TRANSIT. Our key staff know the NJT personnel and procedures better than any other team. We are comprised of experts that know track, electric traction and catenary systems, and communication and signal systems. Whether the work is performed by the Contractors' labor or NJT Force Account, it will be monitored by our expert inspection staff and the job will be delivered correctly. Additionally, Force Account labor will provide Flagging and Protection services and oversee Electric Traction and outages. Flagman will be provided by both NJ TRANSIT and Conrail. Our team will take the lead scheduling resources and tracking costs that are fair and accurate. We understand that Force Account labor is a real and substantial portion of the project

budget. Our team has delivered projects with extensive Force Account labor representation. We know how to work with unionized labor and we know how to get the job done.

Construction Management Structure

The Construction Manager and his Team– the Right Combination

For more than a year, the AECOM | Mott MacDonald Team has extensively evaluated the skill sets, experience, chemistry, attitude and commitment needed of its team leadership to succeed as the construction manager of the RRBR project. With the senior management we are proposing, we have identified the perfect combination of strong leadership, project focus and experience. Our Construction Manager, Tom O'Connor, PE will be supported by Project Director Al Baycora, and Safety Officer John Sikorski, several Resident Engineers, and Construction Services Manager and Project Controls Manager. This is an extremely strong pyramid of rail and bridge CM professionals, who are not interested in merely monitoring your project, but who instead are intent on proactively driving the RRBR project to a successful outcome. During and prior to the intensive preparation period for this proposal, AECOM | Mott MacDonald JV has seen a great collaboration of our key team leaders. We are confident that this complementing working relationship will be a strong one, focused on what is best for the project, NJ TRANSIT and the integrity and safety of Conrail operations.

Construction Manager, Tom O'Connor, PE

Tom O'Connor brings over 42 years of construction management expertise to this project, demonstrated on the recently completed and highly successful $2.5-billion NJTA Interchange 6 to 9 Widening Program in New Jersey, delivery on schedule and under budget. Tom has more than 40 years of experience in construction management and has led many major bridge and heavy highway replacement and rehabilitation programs. He has served as project principal and project manager on many large, complex projects. In addition to the widening program mentioned above Tom also served as project manager on the NJTA's Interchange 14 A Construction Management Project.

Tom's technical background and ability to manage mega projects will be key during the Pre-Construction Phase and staging and phasing issues. For the majority of his time, he will be interfacing with NJ TRANSIT and Conrail project management staff to make sure that all project needs are understood and met. He will work with his direct reports to see that all are aware of the needs of the project and have the resources necessary to do their work. He will provide specific support on the interface between contractors to ensure that all parties understand those linkages and are performing in such a manner that their work, staging and lay down does not have an adverse impact on others. He will provide support on the interface with Conrail and NJ TRANSIT Rail Operations to make sure that their staff are aware of the needs of scheduled Force Account, and will participate in settling any issues related to the availability of same. Fundamentally, Tom O'Connor's primary role is to head off and resolve issues, so that NJ TRANSIT doesn't have to.

Project Director, Al Baycora, PE

Al Baycora, our proposed Project Director is AECOM's National Movable Bridge Practice Leader, providing guidance and technical advice within the company on movable bridge projects. Al led the construction inspection services for the rehabilitation and reactivation of the Arthur Kill lift Bridge, a single- track vertical lift bridge between Elizabeth NJ, and Staten Island, NY—the longest lift bridge in the world. He also recently completed $6+ billion infrastructure assignment in Qatar, involving a project staff of approximately 350 and extensive interaction with major stakeholders, including utility companies, numerous government agencies and current/ prospective commercial developers.

Supporting Tom will be:

Resident Engineer for Rail, Patrick Dempsey, for rail. Pat will be leading the rail elements of the RRBR Project, including force account coordination, as our RE for Rail. In the past 15 years, Pat has demonstrated his ability to successfully manage all phases of highly complex, multiple-phase, large-scale rail and transit projects for the largest regional rail stakeholders in the tri-state area. He is no stranger to NJ TRANSIT, having served as RE for the Secaucus Junction Station project and the Northeast Corridor Enhancements and as CM for the nine follow-on contracts at the Secaucus Station. That work involved close coordination with both NJ TRANSIT and Amtrak force account personnel.

Resident Engineer for Movable Bridge, Ralph Eppehimer, PE, RE for the movable span construction. Ralph has 36 years of experience as a movable bridge expert specializing in railroad vertical-lift bridges. In his career, Mr. Eppehimier has either managed, inspected, or been the resident engineer for 236 railroad bridges, 44 of them being vertical-lift bridges. Within the recent past, he has supervised the construction of nearly a quarter of a billion dollars worth or movable railroad bridge construction, including the $83 million Galveston Railroad Bridge which was replaced on an alignment close to the existing bridge.

Resident Engineer for Geotechnical Deep Foundations/Ground Improvements, Mark Madgett, PE, RE for geotechnical deep foundation, ground improvements. Mark is a resident engineer with more than 24 years of experience in geotechnical deep foundations and ground improvements. He has worked in both consulting and construction for the last 24 years, focusing primarily on deep foundations in the Southeastern U.S. Mark has extensive field experience with deep foundation construction techniques and the impacts on design. In 2006, he began working for Seaboard Foundations, opening a green field office in Tri-Cities, Tennessee, as the district manager. In his role as design engineer, Mark has implemented design-build techniques to vastly improve the constructability and reduce the costs of deep foundations for the owners.

Resident Engineer for Fixed Bridge/Civil/Utilities, Natalie Barnhart, PE, RE for fixed bridge, civil, and utilities. She is a construction manager with over 28 years of experience. She has considerable knowledge of complex bridge construction (both new construction and rehabilitation), foundations, aerial and underground utility coordination and relocation (including boring and water crossing), drainage and stormwater management and facility construction. She is very familiar with working on federal aid contracts, and is fully knowledgeable of construction contract administration and documentation.

Project Controls Manager, Bassem Hanna, RE for Project Controls Manager, has significant expertise in the areas of program/project management and controls, contract negotiations, CPM scheduling, earned value management systems (EVMS), cost controls management, document controls, change order management and construction management. He is skilled and highly trained in identifying and mitigating construction problems and delays. He has extensive experience with claims management and claim avoidance, with strong analytical and investigative skills, and has managed and assisted with the preparation, presentation and evaluation of all types of construction additional work orders (AWOs), claims and disputes. He has worked on very large construction projects exceeding $1 billion.

Technical Experts

John Turner, PhD, PE. John possesses highly recognized expertise in ground improvements and deep foundations. He will bring his valuable and very relevant experience as the foundation lead for the design and construction phases for the Goethals Bridge Replacement (GBR) which is approximately 11 miles north of Perth Amboy, the GBR is also founded on rock-socketed drilled shafts, ranging in diameter from 4.5 to 10 feet. A total of 210 drilled shafts were installed. During the construction phase, John and

DBA provided oversight of drilled shaft inspection and integrity testing, and were responsible for approval of all foundation-related change orders, evaluation of different site conditions and final acceptance of drilled shafts on the basis of as-built records and nondestructive integrity testing.

Kevin Johns, PE, is a well-known movable bridge expert. In the past 5 years, Kevin has served as PM or task leader on 28 movable bridge projects, 19 railroad projects and 9 movable railroad projects. He has worked on all types of movable commuter and heavy freight railroad bridges, including vertical lift, swing and bascule, for transit clients including NJ TRANSIT.

Team's Competence and Application of Innovative Techniques

The qualifications of the AECOM | Mott MacDonald Team are unparalleled and ideally suited for this assignment. Our key staff include top professionals in the industry who will be by your side for the duration of the program and will give NJ TRANSIT the capability and commitment needed for the RRBR project's success. In addition, NJ TRANSIT and this program will reap the benefits of continuity and synergy that only this team can provide with its key staff from the Secaucus Transfer CM team, and other directly relevant NJ TRANSIT and Amtrak projects.

While we rely primarily on tried and true CM approaches which are largely based on diligence, solid relationships and communication, we will introduce technological advancement in project controls, documentation, and scheduling as described in this proposal. AECOM | Mott MacDonald Team will also employ GPS technology as warranted for field tracking and documentation.

The collective experience of our team on major transportation projects in New Jersey and nationally provides a proven and tested base to serve the needs of NJ TRANSIT on the RRBR project. This experience is described in Sections 2 and 3 of this proposal and can be verified by the references provided in Section 4.

Allocation of Resouces

Man-hours by firm and by individuals are presented on the following pages *Figure 6-3*.

STAFF HOURS BY FIRM AND TASK

FIRMS/TASKS	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
AECOM	480	1,240	9,427	41,185	1,760	520	1,264	938	550	662	1,258	254	59,538
Mott MacDonald	340	340	13,870	23,840	-	-	-	-	-	1,180	480	-	40,050
AmerCom Corporation	-	-	30,560	8,480	-	1,240	1,240	1,240	-	1,240	4,320	-	48,320
Certified Site Safety of NY, LLC	-	-	-	-	-	-	-	-	-	8,816	-	-	8,816
Collins Engineer, Inc.	-	-	-	20	-	-	-	-	-	-	-	-	20
Dan Brown and Associates	-	372	-	9,224	224	90	224	90	-	90	182	-	10,496
Garg Consulting Services	-	-	-	4,960	-	-	-	-	-	-	-	-	4,960
JHL Management Enterprises	-	-	880	-	-	-	-	-	-	-	-	-	880
Modjeski and Masters Inc.	-	332	672	12,788	176	70	176	520	-	70	142	-	14,946
Promatech, Inc	-	-	-	-	2,280	-	-	-	-	-	-	-	2,280
The Calladium Group	-	-	800	-	-	-	-	-	-	-	-	-	800
TY Lin Internaional Group	-	-	-	4,320	-	-	-	-	-	-	-	-	4,320
Stellar Services Inc	-	480	12,480	-	-	-	-	-	-	-	-	-	12,960
Total	820	2,764	68,689	104,817	4,440	1,920	2,904	2,788	550	12,058	6,382	254	208,386

STAFF HOURS AND PERCENTAGE BY FIRM

FIRMS/TASKS	Hours	Percentage
AECOM	59,538	28.57%
Mott MacDonald	40,050	19.22%
AmerCom Corporation	48,320	23.19%
Certified Site Safety of NY, LLC	8,816	4.23%
Collins Engineer, Inc.	20	0.01%
Dan Brown and Associates	10,496	5.04%
Garg Consulting Services	4,960	2.38%
JHL Management Enterprises	880	0.42%
Modjeski and Masters Inc.	14,946	7.17%
Promatech, Inc	2,280	1.09%
The Calladium Group	800	0.38%
TY Lin Internaional Group	4,320	2.07%
Stellar Services Inc	12,960	6.22%
Total	208,386	100%
DBE Total	78,156	37.51%

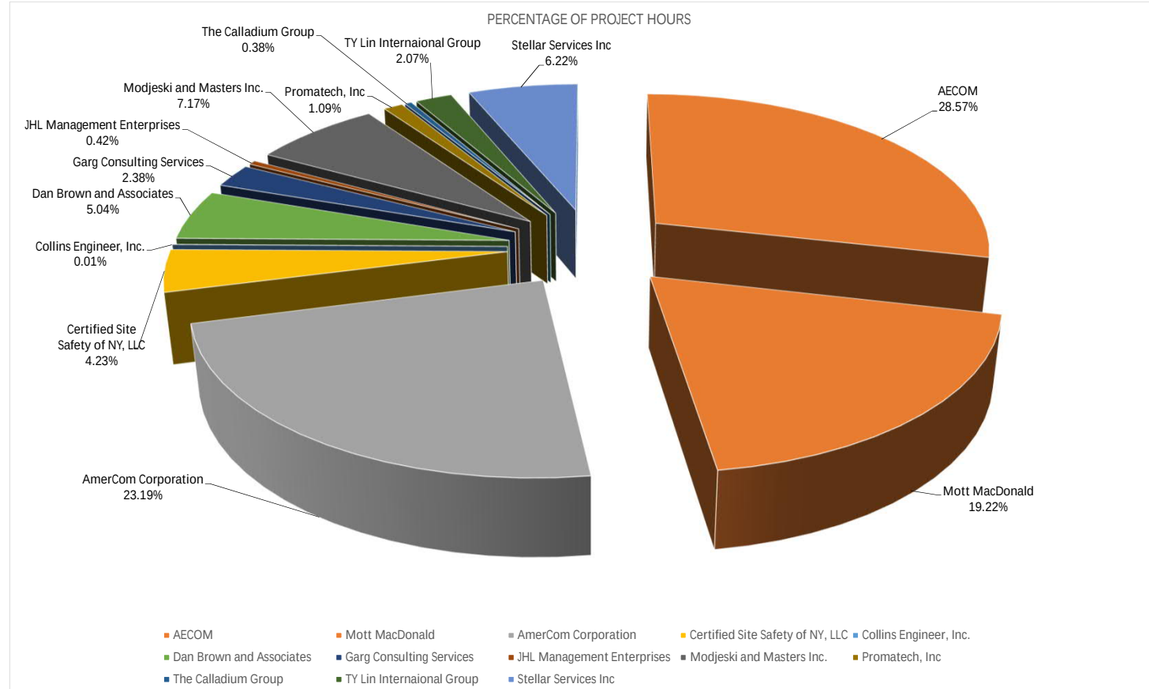


Figure 6-3

STAFF HOURS BY FIRM/INDIVIDUAL/PROJECT TITLE

FIRM: AECOM	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Barnhart, Natalie	Fixed Bridge/Civil/Utilties - Resident Engineer	0	320	0	6058	384	160	384	160	0	192	320	0	7,978
Baycora, Alim	Project Director	160	200	950	950	0	0	0	138	70	70	138	104	2,780
Derose, Chase	Cost Estimating	0	0	520	0	0	0	0	0	0	0	0	0	520
Clement, Cathy	Caternary & Electric Traction Power Lead	0	0	0	1920	0	0	0	0	0	0	0	0	1,920
Cotone, Tony	Fixed Bridge, Civil, Utilities - Chief Inspector	0	0	0	9440	0	0	0	0	0	0	0	0	9,440
Crincoli, Anthony	Geotechnical Support Services	0	0	540	0	0	0	0	0	0	0	0	0	540
Dempsey, Patrick	Rail - Resident Engineer	0	400	0	6160	400	160	400	160	0	160	320	0	8,160
Hand, Timothy	Environmental Permitting	0	0	800	0	0	0	0	0	0	0	0	0	800
Kassof, Gary	Maritime Coordinator Lead	0	0	800	0	0	0	0	0	0	0	0	0	800
Nilsen, Bonnie	Superstructure/Bridge Demolition Inspector	0	0	0	5120	0	0	0	0	0	0	0	0	5,120
O'Connor, Thomas	Construction Manager	320	320	4497	4497	976	200	480	480	480	240	480	150	13,120
Rocco, Robert	Risk Management Lead	0	0	800	0	0	0	0	0	0	0	0	0	800
Taveras, Doreen	DBE Compliance Lead	0	0	520	0	0	0	0	0	0	0	0	0	520
Cienski, Frank	Force Account	0	0	0	7040	0	0	0	0	0	0	0	0	7,040

FIRM: Mott MacDonald	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Atwood, Jerry	Superstructure/Bridge Demolition Inspector	0	0	0	5120	0	0	0	0	0	0	0	0	5,120
Bassem, Hanna	Project Controls Manager	340	340	12000	0	0	0	0	0	0	0	480	0	13,160
Crotty, Sean	Earthwork/Retaining Walls/Piles Inspector	0	0	0	2560	0	0	0	0	0	0	0	0	2,560
Gonzalez, Antonio	Electrical/Lighting/Utilties Inspector	0	0	0	2720	0	0	0	0	0	0	0	0	2,720
Koch, Kevin	HazMat Management Lead	0	0	520	0	0	0	0	0	0	0	0	0	520
Kroner, Gerard	Bridge /Structures Design Support Services	0	0	900	0	0	0	0	0	0	0	0	0	900
Landolfi, Ryan	Soil Management Inspector	0	0	0	4800	0	0	0	0	0	0	0	0	4,800
LiPuma, Sam	Earthwork/Retaining Walls/Piles Inspector	0	0	0	2560	0	0	0	0	0	0	0	0	2,560
O'Brien, John	Rail - Signals and Communications Inspector	0	0	0	3520	0	0	0	0	0	0	0	0	3,520
Robinson, Amiri	Earthwork/Retaining Walls/Piles Inspector	0	0	0	2560	0	0	0	0	0	0	0	0	2,560
Salvato, Mike	Federal Requirements Lead	0	0	450	0	0	0	0	0	0	0	0	0	450
Sikorski, John	Safety Officer	0	0	0	0	0	0	0	0	0	1180	0	0	1,180

FIRM: AmerCom Corporation	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Atkinson, Bryan	Foundation - Drilled Shafts Inspector	0	0	0	4160	0	0	0	0	0	0	0	0	4,160
Paszkiel, John	Ground Improvements - Inspector	0	0	0	800	0	0	0	0	0	0	0	0	800
Gyiraszi, Mike	CADD Support	0	0	0	0	0	0	0	0	0	0	3360	0	3,360
Corte, Sonia	Project Accounting & Administration	0	0	11520	0	0	0	0	0	0	0	0	0	11,520
Mcguire, Mike	Movable Brg- Towers and Flanking Spans Inspector	0	0	0	960	0	0	0	0	0	0	0	0	960
Allrich, Vlad	Office Engineer	0	0	12000	0	0	0	0	0	0	0	480	0	12,480
Dearing, Charles	Earthwork/Retaining Walls/Piles Inspector	0	0	0	2560	0	0	0	0	0	0	0	0	2,560
Finnegan, Gene	Assistant Office Engineer	0	0	7040	0	0	1240	1240	1240	0	1240	480	0	12,480

FIRM: Certified Site Safety of NY, LLC	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Robinson, Andrew	Safety Inspector	0	0	0	0	0	0	0	0	0	8816	0	0	8,816

FIRM: Collins Engineer, Inc.	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
O'Connor, Dan	Marine Diving	0	0	0	20	0	0	0	0	0	0	0	0	20

FIRM: Dan Brown and Associates	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Day, Taylor	Foundation - Drilled Shafts Inspector	0	0	0	4480	0	0	0	0	0	0	0	0	4,480
Leib, Alexis	Ground Improvements - Inspector	0	0	0	800	0	0	0	0	0	0	0	0	800
Madgett, Mark	Geotechnical Deep Foundations - Resident Engineer	0	180	0	3400	224	90	224	90	0	90	182	0	4,480
Turner, John	Drilled Shaft Foundation Technical Expert	0	192	0	544	0	0	0	0	0	0	0	0	736

FIRM: Garg Consulting Services	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Funk, Richard	Rail - Tracks & Interlockings	0	0	0	4960	0	0	0	0	0	0	0	0	4,960

FIRM: Modjeski and Masters Inc.	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Barrett, Dave	Movable Bridge Balancing Lead	0	0	0	960	0	0	0	0	0	0	0	0	960
Eppehimer, Ralph	Movable Bridge - Resident Engineer	0	140	0	2676	176	70	176	70	0	70	142	0	3,520
Johns, Kevin	Movable Bridge Technical Expert	0	192	672	0	0	0	0	0	0	0	0	0	864
Miller, Matthew	Movable Bridge Chief Inspector	0	0	0	3520	0	0	0	0	0	0	0	0	3,520
Papini, Marc	Contract Compliance Lead	0	0	0	0	0	0	0	450	0	0	0	0	450
Peters, Robert	Movable Bridge Electrical Systems Inspector	0	0	0	2080	0	0	0	0	0	0	0	0	2,080
Sample, Elizabeth	Movable Bridge Mechanical Inspector	0	0	0	2080	0	0	0	0	0	0	0	0	2,080
Vaskorilis, Jim	Movable Bridge Fabrication Inspector	0	0	0	1472	0	0	0	0	0	0	0	0	1,472

FIRM: Stellar Services Inc	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Sharon, Smith	Document Contol Specialist	0	480	12480	0	0	0	0	0	0	0	0	0	12,960

FIRM: Promatech, Inc	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Singer, James	Schedule Controls Lead	0	0	0	0	2280	0	0	0	0	0	0	0	2,280

FIRM: The Calladium Group	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Mesnick, Leslie	NEPA Support Lead	0	0	800	0	0	0	0	0	0	0	0	0	800

FIRM: TY Lin Internaional Group	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Ali, Muhammad	Temporary Trestles - Inspector	0	0	0	800	0	0	0	0	0	0	0	0	800
Gadara, Bharat	Superstructure Inspector	0	0	0	1760	0	0	0	0	0	0	0	0	1,760
Salfelder, Brian	Superstructure Inspector	0	0	0	1760	0	0	0	0	0	0	0	0	1,760

FIRM: JHL Management Enterprises	Project Title	P1 - Pre Award	P2 - Mngt Procedures Doc Control	C1 - Const Admin	C2 - Inspection and Testing	C3 - Schedule Control	C4 - Staging and Specific Work Plans	C5 - Shop Drawing and Material Review Handling	C6 - Project Change Management	C7 - QA/QC	C8 - Project Safety	C9 - Project Closeout	C10 - As Direct Services	Total
Herkloz Jody	Community Relations	0	0	880	0	0	0	0	0	0	0	0	0	880

7. Quality Assurance Plan

7. Quality Assurance Program

The AECOM | Mott MacDonald Joint Venture Team will perform the services required for the Raritan Bridge Replacement Project in strict conformance with NJ TRANSIT's standards of quality. The team has a long-standing commitment to quality as demonstrated throughout the services we have provided and in the processes we use in delivering previous projects for the NJ TRANSIT and other rail/transit clients in the metropolitan region. With this commitment in mind, the team has made the strategic decision to conform its quality management system to the requirements of ISO 9001-2015. Each firm individually is ISO 9001: 2015 certified by independent auditors.

Quality Assurance is a core value of this team, and our commitment to quality is an ongoing process where we regularly enhance the program to allow us to achieve the high standards of quality demanded by our clients. Achievement of quality standards for all work and services on the project is critical to both NJ TRANSIT and the AECOM | Mott MacDonald Team, which approaches quality assurance (QA) as a comprehensive process that begins with project start-up and continues through closeout. It is of prime importance that quality standards are in place, implemented and enforced from the outset of the project. Quality is achieved through specification, procedure, project controls, contract administration, and inspection

Management Commitment and Responsibility

The mission of the AECOM | Mott MacDonald Team is to perform this project in accordance with the established goals and requirements with an emphasis on safety, quality, and customer satisfaction, as well as meeting our commitments to costs and schedules. As with all projects we perform, our commitment to quality starts with our senior management. Our joint venture principals-in-charge have mandated that we perform and deliver this project with the utmost quality possible and to uphold the principles as set forth in our Corporate Quality Management System Plans and ISO certification standards. All of our quality functions will be monitored, and reviewed by our principal leadership.

Quality Assurance is a core value of the AECOM | Mott MacDonald Joint Venture Team

The AECOM | Mott MacDonald Team has a long-standing commitment to quality and will perform the work in a quality manner following the ISO 9001:2015 standard, as each firm of the JV has done on projects for NJ TRANSIT and other rail clients.

Our QA/QC Managers for this project, Steve Dempsey, PE and Frank Facciolo, PE, will report to the Construction Manager, Tom O'Connor, with oversight by the AECOM | Mott MacDonald JV Board, and the firms' Regional Quality Managers, and Chief Engineers.

Management Review

Principal leadership review of the quality system is an ongoing process that will be carried out by our senior project management organization identified in the organization chart. This review assesses program effectiveness and the need for system modifications, if any, through regular status meetings, correspondence, and quality review meetings.

These reviews assess the system's continued sustainability and effectiveness, identify deficiencies, propose necessary alterations or improvements, and establish quality targets and objectives for the project. The type of data reviewed includes:

- Results of Audits
- Changes in Project Scope
- Nonconformance Reports
- Corrective Action Reports
- Results and Required Actions From Previous
- Management Reviews
- Internal Feedback
- Recommendations for Improvement
- Changes in Internal Processes or Quality Objectives
- Results of Surveillances
- Results of Inspections
- RFI Log

Quality System

Our team's Quality System is designed so that our work is performed in a quality manner consistent with the ISO 9001:2015 standard. The Quality System consists of the following:

- Customer Focus
- Leadership Oversite
- Process Approach
- Quality Improvement System.
- Quality System Documentation

Quality System Documentation

Quality System Documentation consists of three tiers of publications and documents:

- **Quality Manual:** The Quality Manual specifies policy statements covering all aspects of operations, production and review for the project. The Quality Manual will be the basis upon which all quality will be controlled including the processing and review of documents, certain management procedures, document control, project auditing and corrective action identification and resolution. Other documents may be referenced in this Quality Manual and be used when additional guidance is desired. But they do not supersede the content of the Quality Manual. Since the Quality Manual is considered a "living document," the manual will be revised and appended as required to maintain all quality requirements during the life of the project.
- **Quality Procedures:** The Quality Procedures, as defined in the Quality Manual, define the minimum requirements for performance of specific quailty and management related activities. The procedures identified in this document apply to the entire RRBR project such that uniform standards and procedures are in place throughout. Where quality procedures are modified to suit the requirements of a particular contract condition, project-specific procedures will be documented and approved, and they will be recorded in the Construction Management Plan (CMP).
- **Construction Management Plan (CMP):** The CMP, which establishes more detailed requirements and procedures for project delivery, is required for each project we undertake. RRBR is no different. The team will develop and implement a project specific CMP which establishes the QA/QC organizational structure, functional responsibilities, levels of authority, and internal and external interfaces for all quality-related activities. Items specifically addressed will include roles and responsibilities of the various team members, quality training of staff, off-site inspection and test verification for fabricated components, reporting and documentation, identification and correction of non-conformances, quality records, periodic audits, and other elements. The CMP will be provided to all team members, and its consistent implementation will be monitored to verify compliance. Regularly scheduled team meetings will be held to review progress and quality, assess risks, identify dependent needs, resolve problems, and maintain a coordinated effort between the disciplines and stakeholders on the project.
  The CMP is updated and enhanced throughout the project duration as necessary to reflect current conditions and corrective actions. This is an important step as the Team knows that updating the CMP through lessons learned improves the quality of the project and reduces risk. The CMP will be executed by our Construction Manager, Tom O'Connor, PE, and its

compliance will be reviewed by our leadership and and monitored by our QA/QC managers, who will periodically seek feedback on our performance and take necessary actions to enhance performance. Highly experienced senior managers from our organizations will perform periodic Quality Peer Reviews of our project performance. Project quality records are project-specific quality documents. These documents may include records of design reviews, constructability reviews, CMPs, Project Quality Audit reports (defined below), and records of corrective and preventive actions. The project quality records will reside in the project files at the AECOM | Mott MacDonald JV main project office. These records will be controlled and maintained by our team's QA/QC managers, Steve Dempsey, PE and Frank Facciolo, PE, as outlined in the CMP.

Quality Controls

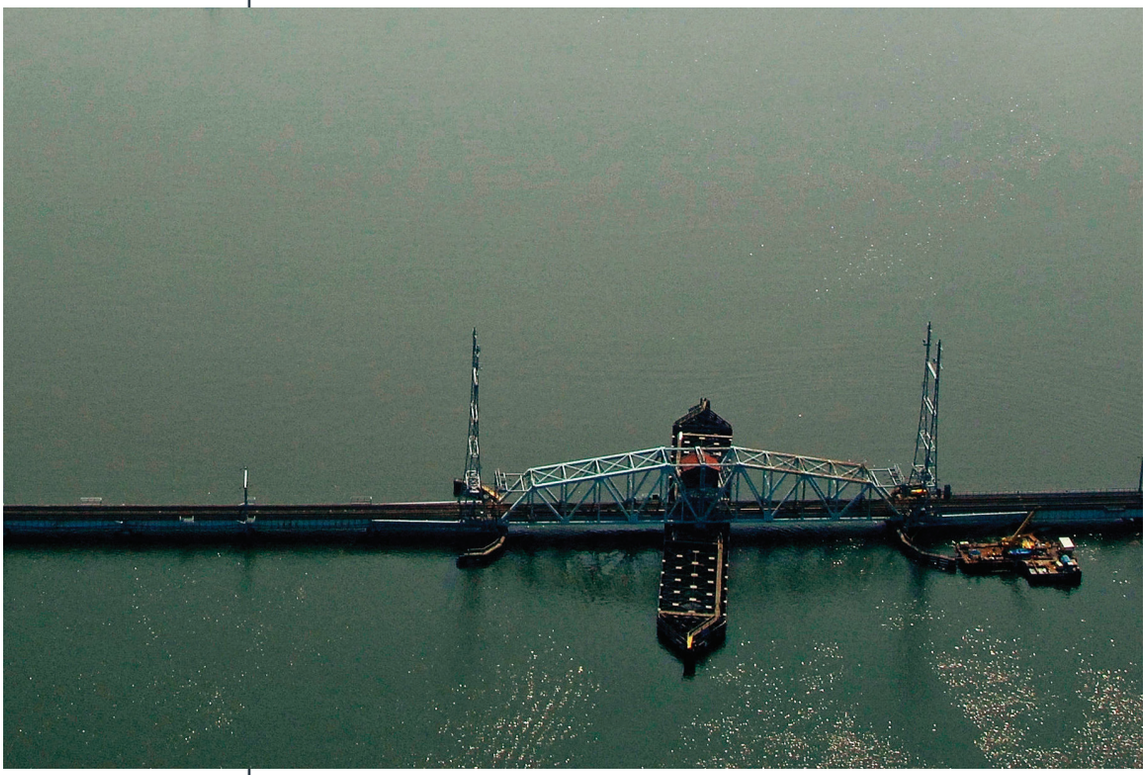
Controls are necessary to assess the level of conformance within the Quality System and to determine whether conformance is having the desired effect on the delivery of products and services to NJ TRANSIT. Our QA/QC managers will coordinate all internal, external and third party audits as needed. They will review audit reports, audit results, NJ TRANSIT's concerns and quality improvement matters, and will provide direction, guidance and corrective actions for quality improvement. The internal audits will be performed periodically as described below and in accordance with Quality System Audit and Project Quality Audit procedures.

Quality System Audit (QSA): QSAs will verify that the requirements of the Quality System are being addressed by the quality practices in use, objectively assess conformance, and subjectively assess (as required) the effectiveness of corrective and/or preventive actions. At the onset of the project, audits will be performed quarterly and may be adjusted based on the results of prior audits. Each audit will consist of introductory and summary meetings between our Project Director and Construction Manager and QA/QC managers. All findings are reviewed, understood and corrective action plans are determined in these summary meetings.

Corrective and Preventive Actions: The product of a quality audit is an audit report prepared by the our QA/QC Managers for use by the Construction Manager. Audits may identify areas of nonconformance or areas worthy of additional observation with respect to ISO Standards and Quality System policies and procedures.

When a nonconformance is identified, the Construction Manager and the QA/QC managers will coordinate the implementation of corrective and/or preventive action. Corrective or preventive actions will be identified, and a work plan will be developed to address the nonconformance within four weeks of the audit report. Corrective or preventive actions that require staff actions or decisions will be forwarded to the AECOM | Mott MacDonald JV Board for review and action. Nonconformances will be recorded on nonconformance report forms.

The QA/QC managers will be responsible for tracking the verification that all nonconformances identified by an audit have been acceptably addressed and reviewed on schedule. Similarly, the Construction Manager will implement corrective and/or preventive action for all issues raised by a QSA.



8. Conflict of Interest

8. Conflict of Interest

The AECOM | Mott MacDonald Team and its subconsultants have no conflicts of interest in pursuing this project.

9. Consultant Certifications

DBE Forms

First Tier DBE Utilization
Form A

MANDATORY FORM FOR BIDDER/PROPOSER/PRIME: COMPLETE ENTIRELY

FORM A (Fed)

First Tier DBE UTILIZATION - FORM A

Project Name: **Construction Management Services for the Raritan River Bridge Replacement Project**

NJT Contract No: **RFP No. 18-015**

Assigned DBE Goal %: **25%**

NJT Procurement Specialist: [redacted]

Contract Value ($): **TBD**

First Tier DBE must perform at least 51% of its subcontract value if subcontracting to a Second-Tier DBE or Non-DBE. Do not count Non-DBE portion toward the goal.

Name, Address, Telephone Number of DBE Subcontractor/Subconsultant	Provide Detailed Scope of Work to be Performed (Identify all suppliers)	Dollar Value of Subcontractor/ Subconsultant Work ($) Awarded	Percentage of Subcontract Work (%)
Advanced Infrastructure Design, Inc. 1 Crossroads Drive, Hamilton, NJ 08691 (609)838-2216 x214	Material Testing	TBD	TBD
AmerCom Corporation 259 Route 46 East, Parsippany, NJ 07054 (973)402-6111	Bridge inspection, drilled shafts, lift bridge and survey	TBD	TBD
Certified Site Safety of NY LLC 99 Lafayette Avenue, White Plains, NY 10603 (914) 437-5454	Safety Inspection	TBD	TBD
Garg Consulting Services, Inc. 1000 Crawford Place, Mount Laurel, NJ 08054 (856)429-8010	Railroad, signals and communications	TBD	TBD
Promatech, Inc. 506 R. 130 North, Cinnaminson, NJ 08077 (856)314-8468	CPM scheduling	TBD	TBD
Stellar Services, Inc. 70 West 36th Street, New York, NY 10018 (212)432-2848	Document controls	TBD	TBD
The Calladium Group 540 President St, Brooklyn, NY 11215 (646) 251-0285	Environmental, NEPA Support	TBD	TBD

To add Subs Use Additional Forms

MANDATORY FORM FOR BIDDER/PROPOSER/PRIME: COMPLETE ENTIRELY

FORM A (Fed)

First Tier DBE UTILIZATION - FORM A

Project Name: **Construction Management Services for the Raritan River Bridge Replacement Project**

NJT Contract No: **RFP No. 18-015**

Assigned DBE Goal %: **25%**

NJT Procurement Specialist: [redacted]

Contract Value ($): **TBD**

First Tier DBE must perform at least 51% of its subcontract value if subcontracting to a Second-Tier DBE or Non-DBE. Do not count Non-DBE portion toward the goal.

Name, Address, Telephone Number of DBE Subcontractor/Subconsultant	Provide Detailed Scope of Work to be Performed (Identify all suppliers)	Dollar Value of Subcontractor/ Subconsultant Work ($) Awarded	Percentage of Subcontract Work (%)

The undersigned will enter into a formal agreement with the DBE(s) listed in this schedule conditioned upon execution of a contract with NJ TRANSIT for the above referenced project. The undersigned understands that removal/replacement of the DBE(s) listed is NOT PERMISSIBLE for any reason (pre or post-award), without submitting a written request to the Office of Business Development and receiving WRITTEN APPROVAL from the Office of Business Development. Failure to obtain written approval shall result in the breach of contract and subject to corrective action to be determined by NJ TRANSIT.

Company Name: **AECOM | Mott MacDonald**

Company Address: **605 Third Avenue**

New York, NY 10158

Federal Tax ID #: [redacted]

Company Tel #: **(212)973-2900**

For the joint venture, by

Authorized Signature:

Print Name: **Anil Parikh, PE**

Title: **Vice President/Program Executive**

Prime Contractor's DBE Liaison Officer: **Doreen Taveras**

Date Signed: **November 26, 2018**

To add Subs Use Additional Forms

Bidder Solicitation & Contractor Information Form A1

MANDATORY FORM: COMPLETE ENTIRELY

Form A1 (Fed)

BIDDER SOLICITATION & CONTRACTOR INFORMATION - FORM A1

Project Title: **Construction Management Services for the Raritan River Bridge Replacement Project** Date: **October 17, 2018**

Prime Contractor/Consultant: **AECOM | Mott MacDonald** Telephone #: **(732) 564-3200**

Complete the information below for Bidder/Proposer/Prime(s) working on this project. Use Page 2 for all subcontractors/subconsultants

	Bidder/Proposer/Prime	Bidder/Proposer/Prime	Bidder/Proposer/Prime
Company's Full Name	AECOM Technical Services, Inc.	Mott MacDonald, LLC	
Address	30 Knightsbridge Rd Suite 520	111 Wood Avenue South	
City and State	Piscataway Township, NJ	Iselin, NJ	
Zip	08854	08830	
County	Middlesex County, NJ	MiddlesexCounty, NJ	
Phone	(732) 564-3200	(973) 379-3400	
Fax	n/a	(973) 376-1072	
E-mail	Anil.Parikh@aecom.com	americas@mottmac.com	
Owner	AECOM Technical Inc.	Mott MacDonald Group, Inc.	
Date Established	1930	1972	
Date Certified	n/a	n/a	
Ethnicity	n/a	n/a	
Gender	n/a	n/a	
Certification Status: **DBE or Non-DBE**	n/a	n/a	
Federal Tax ID # / SSN #	[redacted]		
Annual Gross Receipts: A – Less than $500K B - $500K to $1M C - $1M to $2M D - $2M to $5M E - $5M and over **indicate the letter that applies**	E	E	
Primary NAICS Code:	541330, , 541310, , 237310	541330, 237310	

To Add Subs Use Additional Forms

MANDATORY FORM: COMPLETE ENTIRELY

Form A1 (Fed)

BIDDER SOLICITATION & CONTRACTOR INFORMATION - FORM A1

Project Title: **Construction Management Services for the Raritan River Bridge Replacement Project** Date: **November 26, 2018**

Prime Contractor/Consultant: **AECOM | Mott MacDonald** Telephone #: **(732) 564-3200**

COMPLETE THE INFORMATION BELOW FOR "ALL" FIRMS INCLUDING SUPPLIERS SOLICITED; INCLUDING THOSE THAT WILL WORK ON THIS PROJECT.

	Subcontractor/Subconsultant	Subcontractor/Subconsultant	Subcontractor/Subconsultant
Company's Full Name	Modjeski and Masters, Inc.	Dan Brown and Associates, PC	
Address	100 Sterling Parkway, Suite 302	300 Woodland Rd.	
City and State	Mechanicsburg, Pennsylvania	Sequatchie, TN	
Zip	17050	37374	
County	Cumberland, Pennsylvania	Marion	
Phone	717.790.9565	423-942-8681	
Fax	717.790.9564	n/a	
E-mail	mfbritt@modjeski.com	cbedley@dba.world	
Owner	n/a	Employee Owned	
Date Established	1893	2004	
Date Certified	4.8.1988 Incorporated	2018 (in NJ)	
Ethnicity	n/a	n/a	
Gender	n/a	n/a	
Certification Status: **DBE or Non-DBE**	n/a	n/a	
Federal Tax ID # / SSN #	[redacted]		
Annual Gross Receipts: A – Less than $500K B - $500K to $1M C - $1M to $2M D - $2M to $5M E - $5M and over **indicate the letter that applies**	E	D	
Primary NAICS Code:	541330	541330	

To Add Subs Use Additional Forms

MANDATORY FORM: COMPLETE ENTIRELY

Form A1 (Fed)

BIDDER SOLICITATION & CONTRACTOR INFORMATION - FORM A1

Project Title: **Construction Management Services for the Raritan River Bridge Replacement Project** Date: **November 26, 2018**

Prime Contractor/Consultant: **AECOM | Mott MacDonald** Telephone #: **(732) 564-3200**

COMPLETE THE INFORMATION BELOW FOR "ALL" FIRMS INCLUDING SUPPLIERS SOLICITED; INCLUDING THOSE THAT WILL WORK ON THIS PROJECT.

	Subcontractor/Subconsultant	Subcontractor/Subconsultant	Subcontractor/Subconsultant
Company's Full Name	Advance Infrastructure Design	AmerCom Corporation	Certified Site Safety of NYCLLC
Address	1 Crossroad Drive	259 Route 46 East, Building # 2	99 Lafayette Avenue
City and State	Hamilton, NJ	Parsippany, NJ	White Plains, NY
Zip	08691	07054	10603
County	Mercer	Morris County, NJ	Westchester County, NY
Phone	609-838-2261	973-402-6111	914-437-5454
Fax	609-586-1301	973-588-7020	n/a
E-mail	mafzall@aidpe.com	fcole@emercom.org	dgroneman@certifiedsitesafety.com
Owner	Mojgan Mohtashami	Corporation	Lianna Imbrogno
Date Established	10/29/1998	1980	2008
Date Certified	10/29/1998	1980	2012
Ethnicity	Caucasian	Asian Pacific	Caucasion
Gender	Femal	Male	Female
Certification Status: **DBE or Non-DBE**	DBE	DBE	DBE
Federal Tax ID # / SSN #	[redacted]		
Annual Gross Receipts: A – Less than $500K B - $500K to $1M C - $1M to $2M D - $2M to $5M E - $5M and over **indicate the letter that applies**	D	E	E
Primary NAICS Code:	541330	54190	541690

To Add Subs Use Additional Forms

MANDATORY FORM: COMPLETE ENTIRELY

Form A1 (Fed)

BIDDER SOLICITATION & CONTRACTOR INFORMATION - FORM A1

Project Title: **Construction Management Services for the Raritan River Bridge Replacement Project** Date: **November 26, 2018**

Prime Contractor/Consultant: **AECOM | Mott MacDonald** Telephone #: **(732) 564-3200**

COMPLETE THE INFORMATION BELOW FOR "ALL" FIRMS INCLUDING SUPPLIERS SOLICITED; INCLUDING THOSE THAT WILL WORK ON THIS PROJECT.

	Subcontractor/Subconsultant	Subcontractor/Subconsultant	Subcontractor/Subconsultant
Company's Full Name	Collins Engineer, Inc.	Garg Consulting Services, Inc.	Promatech, Inc.
Address	101 Hammer Mill Rd.	1000 Crawford Place	506 Route 130 North
City and State	Rocky Hill, CT	Mount Laurel, NJ	Cinnaminson, NJ
Zip	06067	08054	08077
County	Hartford County, CT	Burlington County, NJ	Burlington County, NJ
Phone	(603) 918-3124	(856) 429 - 8010	(856) 314-8468
Fax	n/a	n/a	n/a
E-mail	danoconnor@collinsengr.com	gpristach@garginc.com	cstreahle@promatechinc.com
Owner	Thomas J. Collins	Eugen Chuang, Ph.D., PE	Carrie Streahle
Date Established	4/4/1979	3/16/1990	8/15/1985
Date Certified	4/4/1979	3/16/1990	4/6/1985
Ethnicity	n/a	Asian	Caucasian
Gender	n/a	Male	Female
Certification Status: **DBE or Non-DBE**	n/a	DBE	DBE
Federal Tax ID # / SSN #	[redacted]		
Annual Gross Receipts: A – Less than $500K B - $500K to $1M C - $1M to $2M D - $2M to $5M E - $5M and over **indicate the letter that applies**	E	E	C
Primary NAICS Code:	541330	541230, 541370, 541330	541611

To Add Subs Use Additional Forms

MANDATORY FORM: COMPLETE ENTIRELY

Form A1 (Fed)

BIDDER SOLICITATION & CONTRACTOR INFORMATION - FORM A1

Project Title: **Construction Management Services for the Raritan River Bridge Replacement Project** Date: **November 26, 2018**

Prime Contractor/Consultant: **AECOM | Mott MacDonald** Telephone #: **(732) 564-3200**

COMPLETE THE INFORMATION BELOW FOR "ALL" FIRMS INCLUDING SUPPLIERS SOLICITED; INCLUDING THOSE THAT WILL WORK ON THIS PROJECT.

	Subcontractor/Subconsultant	Subcontractor/Subconsultant	Subcontractor/Subconsultant
Company's Full Name	Stellar Services, Inc.	The Colladium Group	T.Y. Lin International
Address	70 West 36 Street, 7th Floor	540 President Street, Third Floor	One Edgeview Drive
City and State	New York, NY	Brooklyn, NY	Hackettstown, NJ
Zip	10018	11215	07840
County	New York	Kings County, New York	Warren, NJ
Phone	212-432-2848	718-865-9780	908-850-3366
Fax	212-4322846	n/a	877-453-3878
E-mail	contact@stellarservices.com	leslie@calladiumgroup.com	chandu.bhoraniya@tylin.com
Owner	Liang Chen	Leslie Mesnick	T.Y. Lin International
Date Established	12/07/1993	2015	06/01/1954
Date Certified	01/20/2015	1/11/2016	n/a
Ethnicity	Asian	Caucasian	n/a
Gender	Male	Female	n/a
Certification Status: **DBE or Non-DBE**	DBE	NJUCP DBE	n/a
Federal Tax ID # / SSN #	[redacted]		
Annual Gross Receipts: A – Less than $500K B - $500K to $1M C - $1M to $2M D - $2M to $5M E - $5M and over **indicate the letter that applies**	E	A	E
Primary NAICS Code:	541511	541620	541330

To Add Subs Use Additional Forms

Non-DBE
Subcontractor Utilization
Form A2

MANDATORY FORM FOR BIDDER/PROPOSER/PRIME: COMPLETE ENTIRELY

FORM A2 (Fed)

NON-DBE SUBCONTRACTOR UTILIZATION - FORM A2

Directions: To be completed by any Bidder/Proposer/Prime for "all" subs including suppliers participating on this contract.

Bidder/Proposer Prime Name: **AECOM | Mott MacDonald**

Project Title: **Construction Management Services for the Raritan River Bridge Replacement Project**

Date: **November 26, 2018**

Prime Contract Value: **TBD**

Name, Address, Telephone Number of All Subcontractor/Subconsultant	FEIN#	Provide Detailed Scope of Work to be Performed	Dollar Value of Subcontractor/ Subconsultant Work ($) Awarded	Percentage of
Modjeski & Masters, Inc. 155 E 3rd St, Moorestown, NJ 08057 (856) 608-7400	[redacted]	Movable Bridge, Resident Engineering	TBD	TBD
Dan Brown Associates, P.C. 300 Woodland Road Sequatchie, TN 37374 (423) 942-8681	[redacted]	Drilled Shaft Foundation	TBD	TBD
Collins Engineers, Inc. 101 Hammer Mill Road Rocky Hill, CT 06067 (603) 918-3124	[redacted]	Marine Diving	TBD	TBD
T. Y. Lin International Group One Edgeview Drive Hackettstown, NJ (908) 850-3366	[redacted]	Fixed Bridge, Civil Engineering	TBD	TBD
		TOTALS	$ TBD	TBD %

To Add Subs Use Additional Forms

Intent to Perform as A First Tier DBE Form B

INTENT TO PERFORM AS A 1ST TIER DBE - FORM B

The Bidder/Proposer/Prime is prohibited from completing any portion of this form and directing the DBE to sign a blank form.

DIRECTIONS: DBE(s) listed on the Form A must complete all information on this form.

AECOM | Mott MacDonald
Name of Bidder/Proposer/Prime:

Advanced Infrastructure Design
Name of DBE Firm:

Project/Contract Name: Const. Manag. Services For Raritan River Bridge Replacement

IFB/RFP Contract Number: 18-015

Does the undersigned DBE (Answer Accordingly):

Intend to perform subcontract work in connection with the above–mentioned project as a Joint Venture? Circle one. **(Yes or No)**

Intend to subcontract any portion of its scope of work to a DBE(s)? Circle one. **(Yes or No)**
If yes, DBE Sub-Primes must complete and submit Form AA. **At what percent? _____%**

Intend to subcontract any portion of its scope of work to a **Non-DBE(s)**? Circle one. **(Yes or No)**
If yes, must complete and submit Form AA2. **At what percent? _____%**

The undersigned will perform the following described work on the above-referenced project: (*Provide a detailed description of the type of work you will perform on your subcontract. Attach a copy of quote approved and signed by Bidder (optional)).*

Construction Material Inspection and Lab Testing

Dollar Value of DBE Subcontract: $_____

Total Quantity/Units (if applicable): _____ Per Unit Cost (if applicable): $_____

The undersigned based the above scope of work and subcontract value on detailed project specs received from the Bidder contractor named above. Circle one. **(Yes or No)**

The Prime Contractor *projected* the following commencement and completion date for such work as follows:

DBE Contract Start Date: _____ DBE Contract Completion Date _____

The undersigned DBE will enter into a formal agreement for the above work with the Prime Contractor conditioned upon execution of a contract with NJ TRANSIT. As a DBE subcontractor, I will cooperate with the certification, compliance and monitoring process set forth by NJ TRANSIT. I attest that I will perform at least 51% of my subcontract with my own workforce for the referenced project.

Signature of 1st Tier DBE **10/15/2018** **Date** **Executive VP** **Title**

Kaz Tabrizi, Ph.D., P.E **Print Name** **609 838 2216** **Telephone #:**

Failure to adhere to these instructions or the falsification of any information on this form shall result in breach of contract and subject to the appropriate penalties to be determined by NJ TRANSIT.

INTENT TO PERFORM AS A 1ST TIER DBE - FORM B

The Bidder/Proposer/Prime is prohibited from completing any portion of this form and directing the DBE to sign a blank form.

DIRECTIONS: DBE(s) listed on the Form A must complete all information on this form.

AECOM | Mott MacDonald, *a joint venture*
Name of Bidder/Proposer/Prime:

AmerCom Corporation
Name of DBE Firm:

Project/Contract Name: Construction Management Services for Raritan River Bridge Replacement

IFB/RFP Contract Number: 18-015

Does the undersigned DBE (Answer Accordingly):

Intend to perform subcontract work in connection with the above–mentioned project as a Joint Venture? Circle one. **(Yes or No)**

Intend to subcontract any portion of its scope of work to a DBE(s)? Circle one. **(Yes or No)**
If yes, DBE Sub-Primes must complete and submit Form AA. **At what percent? _____%**

Intend to subcontract any portion of its scope of work to a **Non-DBE(s)**? Circle one. **(Yes or No)**
If yes, must complete and submit Form AA2. **At what percent? _____%**

The undersigned will perform the following described work on the above-referenced project: (*Provide a detailed description of the type of work you will perform on your subcontract. Attach a copy of quote approved and signed by Bidder (optional)).*

Construction Inspection

Dollar Value of DBE Subcontract: $ TBD

Total Quantity/Units (if applicable): TBD **Per Unit Cost (if applicable): $**_____

The undersigned based the above scope of work and subcontract value on detailed project specs received from the Bidder contractor named above. Circle one. **(Yes or No)**

The Prime Contractor *projected* the following commencement and completion date for such work as follows:

DBE Contract Start Date: TBD DBE Contract Completion Date TBD

The undersigned DBE will enter into a formal agreement for the above work with the Prime Contractor conditioned upon execution of a contract with NJ TRANSIT. As a DBE subcontractor, I will cooperate with the certification, compliance and monitoring process set forth by NJ TRANSIT. I attest that I will perform at least 51% of my subcontract with my own workforce for the referenced project.

Signature of 1st Tier DBE **Date**

President
Title

Richard Lee
Print Name

973-402-6111
Telephone #:

Failure to adhere to these instructions or the falsification of any information on this form shall result in breach of contract and subject to the appropriate penalties to be determined by NJ TRANSIT.

INTENT TO PERFORM AS A 1ST TIER DBE - FORM B

The Bidder/Proposer/Prime is prohibited from completing any portion of this form and directing the DBE to sign a blank form.

DIRECTIONS: DBE(s) listed on the Form A must complete all information on this form.

AECOM | Mott MacDonald, *a joint venture*
Name of Bidder/Proposer/Prime:

Certified Site Safety of NY LLC
Name of DBE Firm:

Project/Contract Name: *Construction Management Services for the Raritan River Bridge Replacement Project*

IFB/RFP Contract Number: *NJ Transit RFP NO. 18-015*

Does the undersigned DBE (Answer Accordingly):

Intend to perform subcontract work in connection with the above–mentioned project as a Joint Venture? Circle one. **(Yes or No)**

Intend to subcontract any portion of its scope of work to a DBE(s)? Circle one. **(Yes or No)**
If yes, DBE Sub-Primes must complete and submit Form AA. **At what percent? _____%**

Intend to subcontract any portion of its scope of work to a **Non-DBE(s)**? Circle one. **(Yes or No)**
If yes, must complete and submit Form AA2. **At what percent? _____%**

The undersigned will perform the following described work on the above-referenced project: (*Provide a detailed description of the type of work you will perform on your subcontract. Attach a copy of quote approved and signed by Bidder (optional)).*

Safety Engineer

Dollar Value of DBE Subcontract: $_____

Total Quantity/Units (if applicable): _____ Per Unit Cost (if applicable): $_____

The undersigned based the above scope of work and subcontract value on detailed project specs received from the Bidder contractor named above. Circle one. **(Yes or No)**

The Prime Contractor *projected* the following commencement and completion date for such work as follows:

DBE Contract Start Date: _____ DBE Contract Completion Date _____

The undersigned DBE will enter into a formal agreement for the above work with the Prime Contractor conditioned upon execution of a contract with NJ TRANSIT. As a DBE subcontractor, I will cooperate with the certification, compliance and monitoring process set forth by NJ TRANSIT. I attest that I will perform at least 51% of my subcontract with my own workforce for the referenced project.

Signature of 1st Tier DBE **Date** | *CEO* **Title**

Penny Gianatasio **Print Name** | *(914) 437-5454* **Telephone #:**

Failure to adhere to these instructions or the falsification of any information on this form shall result in breach of contract and subject to the appropriate penalties to be determined by NJ TRANSIT.

INTENT TO PERFORM AS A 1ST TIER DBE - FORM B

The Bidder/Proposer/Prime is prohibited from completing any portion of this form and directing the DBE to sign a blank form.

DIRECTIONS: DBE(s) listed on the Form A must complete all information on this form.

AECOM | Mott MacDonald, *a joint venture*
Name of Bidder/Proposer/Prime:

Garg Consulting Services, Inc.
Name of DBE Firm:

Project/Contract Name: NJ Transit Construction Management Services for the Raritan River Bridge Replacement Project

IFB/RFP Contract Number: RFP No. 18-015

Does the undersigned DBE (Answer Accordingly):

Intend to perform subcontract work in connection with the above-mentioned project as a Joint Venture? Circle one. (**Yes or No**)

Intend to subcontract any portion of its scope of work to a DBE(s)? Circle one. (**Yes or No**)
If yes, DBE Sub-Primes must complete and submit Form AA. **At what percent? _____%**

Intend to subcontract any portion of its scope of work to a **Non-DBE(s)**? Circle one. (**Yes or No**)
If yes, must complete and submit Form AA2. **At what percent? _____%**

The undersigned will perform the following described work on the above-referenced project: (*Provide a detailed description of the type of work you will perform on your subcontract. Attach a copy of quote approved and signed by Bidder (optional)).*

Construction Management Services

Dollar Value of DBE Subcontract: $ TBD

Total Quantity/Units (if applicable): N/A **Per Unit Cost (if applicable): $_____**

The undersigned based the above scope of work and subcontract value on detailed project specs received from the Bidder contractor named above. Circle one. **(Yes or No)**

The Prime Contractor *projected* the following commencement and completion date for such work as follows:

DBE Contract Start Date: TBD DBE Contract Completion Date TBD

The undersigned DBE will enter into a formal agreement for the above work with the Prime Contractor conditioned upon execution of a contract with NJ TRANSIT. As a DBE subcontractor, I will cooperate with the certification, compliance and monitoring process set forth by NJ TRANSIT. I attest that I will perform at least 51% of my subcontract with my own workforce for the referenced project.

Signature of 1st Tier DBE 9/21/2018 **Date** CEO / President **Title**

Eugene Chuang, Ph.D., P.E.
Print Name

860-563-0582
Telephone #:

Failure to adhere to these instructions or the falsification of any information on this form shall result in breach of contract and subject to the appropriate penalties to be determined by NJ TRANSIT.

INTENT TO PERFORM AS A 1ST TIER DBE - FORM B

The Bidder/Proposer/Prime is prohibited from completing any portion of this form and directing the DBE to sign a blank form.

DIRECTIONS: DBE(s) listed on the Form A must complete all information on this form.

AECOM | Mott MacDonald, *a joint venture*
Name of Bidder/Proposer/Prime:

Promatech, Inc.
Name of DBE Firm:

Project/Contract Name: CM Services for the Raritan River Bridge IFB/RFP Contract Number: 18-015

Does the undersigned DBE (Answer Accordingly):

Intend to perform subcontract work in connection with the above–mentioned project as a Joint Venture? Circle one. **(Yes or No)**

Intend to subcontract any portion of its scope of work to a DBE(s)? Circle one. **(Yes or No)**
If yes, DBE Sub-Primes must complete and submit Form AA. **At what percent? _____%**

Intend to subcontract any portion of its scope of work to a **Non-DBE(s)**? Circle one. **(Yes or No)**
If yes, must complete and submit Form AA2. **At what percent? _____%**

The undersigned will perform the following described work on the above-referenced project: (*Provide a detailed description of the type of work you will perform on your subcontract. Attach a copy of quote approved and signed by Bidder (optional)).*

Scheduling, Cost Estimating

Dollar Value of DBE Subcontract: $ TBD

Total Quantity/Units (if applicable): _____ **Per Unit Cost (if applicable): $**_____

The undersigned based the above scope of work and subcontract value on detailed project specs received from the Bidder contractor named above. Circle one. **(Yes or No)**

The Prime Contractor *projected* the following commencement and completion date for such work as follows:

DBE Contract Start Date: _____ DBE Contract Completion Date _____

The undersigned DBE will enter into a formal agreement for the above work with the Prime Contractor conditioned upon execution of a contract with NJ TRANSIT. As a DBE subcontractor, I will cooperate with the certification, compliance and monitoring process set forth by NJ TRANSIT. I attest that I will perform at least 51% of my subcontract with my own workforce for the referenced project.

Signature of 1st Tier DBE **Date**

President
Title

Carrie Streahle
Print Name

856.314.8468
Telephone #:

Failure to adhere to these instructions or the falsification of any information on this form shall result in breach of contract and subject to the appropriate penalties to be determined by NJ TRANSIT.

INTENT TO PERFORM AS A 1ST TIER DBE - FORM B

The Bidder/Proposer/Prime is prohibited from completing any portion of this form and directing the DBE to sign a blank form.

DIRECTIONS: DBE(s) listed on the Form A must complete all information on this form.

AECOM | Mott MacDonald
Name of Bidder/Proposer/Prime:

Stellar Services, Inc.
Name of DBE Firm:

Project/Contract Name: Construction Management Services for Raritan river Bridge Replacement

IFB/RFP Contract Number: 18-015

Does the undersigned DBE (Answer Accordingly):

Intend to perform subcontract work in connection with the above–mentioned project as a Joint Venture? Circle one. **(Yes or No)**

Intend to subcontract any portion of its scope of work to a DBE(s)? Circle one. **(Yes or No)**
If yes, DBE Sub-Primes must complete and submit Form AA. **At what percent? _____%**

Intend to subcontract any portion of its scope of work to a **Non-DBE(s)**? Circle one. **(Yes or No)**
If yes, must complete and submit Form AA2. **At what percent? _____%**

The undersigned will perform the following described work on the above-referenced project: (*Provide a detailed description of the type of work you will perform on your subcontract. Attach a copy of quote approved and signed by Bidder (optional)).*

Document Controls

Dollar Value of DBE Subcontract: $ TBD

Total Quantity/Units (if applicable): _____ **Per Unit Cost (if applicable): $**_____

The undersigned based the above scope of work and subcontract value on detailed project specs received from the Bidder contractor named above. Circle one. **(Yes or No)**

The Prime Contractor *projected* the following commencement and completion date for such work as follows:

DBE Contract Start Date: _____ DBE Contract Completion Date _____

The undersigned DBE will enter into a formal agreement for the above work with the Prime Contractor conditioned upon execution of a contract with NJ TRANSIT. As a DBE subcontractor, I will cooperate with the certification, compliance and monitoring process set forth by NJ TRANSIT. I attest that I will perform at least 51% of my subcontract with my own workforce for the referenced project.

11/13/2018
Signature of 1st Tier DBE **Date**

President
Title

Liang Chen
Print Name

212-432-2848
Telephone #:

Failure to adhere to these instructions or the falsification of any information on this form shall result in breach of contract and subject to the appropriate penalties to be determined by NJ TRANSIT.

INTENT TO PERFORM AS A 1ST TIER DBE - FORM B

The Bidder/Proposer/Prime is prohibited from completing any portion of this form and directing the DBE to sign a blank form.

DIRECTIONS: DBE(s) listed on the Form A must complete all information on this form.

AECOM | Mott MacDonald, *a joint venture*
Name of Bidder/Proposer/Prime:

The Calladium Group
Name of DBE Firm:

Project/Contract Name: Construction Management Services for the Raritan River Bridge

IFB/RFP Contract Number: RFP 18-015

Does the undersigned DBE (Answer Accordingly):

Intend to perform subcontract work in connection with the above–mentioned project as a Joint Venture? Circle one. **(Yes or No)**

Intend to subcontract any portion of its scope of work to a DBE(s)? Circle one. **(Yes or No)**
If yes, DBE Sub-Primes must complete and submit Form AA. **At what percent? _____%**

Intend to subcontract any portion of its scope of work to a **Non-DBE(s)**? Circle one. **(Yes or No)**
If yes, must complete and submit Form AA2. **At what percent? _____%**

The undersigned will perform the following described work on the above-referenced project: (*Provide a detailed description of the type of work you will perform on your subcontract. Attach a copy of quote approved and signed by Bidder (optional)).*

Environmental Consulting Services

Dollar Value of DBE Subcontract: $ TBD

Total Quantity/Units (if applicable): NA **Per Unit Cost (if applicable): $** NA

The undersigned based the above scope of work and subcontract value on detailed project specs received from the Bidder contractor named above. Circle one. **(Yes or No)**

The Prime Contractor *projected* the following commencement and completion date for such work as follows:

DBE Contract Start Date: TBD DBE Contract Completion Date TBD

The undersigned DBE will enter into a formal agreement for the above work with the Prime Contractor conditioned upon execution of a contract with NJ TRANSIT. As a DBE subcontractor, I will cooperate with the certification, compliance and monitoring process set forth by NJ TRANSIT. I attest that I will perform at least 51% of my subcontract with my own workforce for the referenced project.

Signature of 1st Tier DBE **Date**

Principal
Title

Leslie Mesnick
Print Name

718-865-9780
Telephone #:

Failure to adhere to these instructions or the falsification of any information on this form shall result in breach of contract and subject to the appropriate penalties to be determined by NJ TRANSIT.

DBE Certificates

State of New Jersey

DEPARTMENT OF TRANSPORTATION
P.O. Box 600
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

RICHARD T. HAMMER
Commissioner

October 5, 2017

ADVANCED INFRASTRUCTURE DESIGN INC
MOJGAN MOHTASHAMI
1 CROSS ROADS DRIVE
HAMILTON, NJ 08691

RE: Renewal of DBE Certification - Anniversary Date: Annually on November 3

Dear MOJGAN MOHTASHAMI:

We are pleased to inform you that your firm has been found eligible to continue as a Disadvantaged Business Enterprise (DBE) by the New Jersey Department of Transportation on behalf of the New Jersey Unified Certification Program (NJ UCP).

Your certification status with the NJ UCP will remain in effect as long as your firm continues to meet all the DBE certification eligibility requirements established by Title 49 CFR 26. However, on an annual basis, you must submit an affidavit, along with a personal financial statement, affirming that there have been no changes within your firm that would affect your eligibility for certification as a DBE. These documents must be completed, signed and returned to our office before your anniversary date in order to continue your firms's eligibility as a DBE.

Additionally, if any time during the year there is a change in your firm, it is your obligation to notify this agency, in writing, within (30) days. Changes include, but are not limited to, ownership and/or control, officers, directors, management, key personnel, scope of work performed, daily operations, ongoing business relationships with other firms or individuals, or the physical location of your firm. Failure to do so may result in the removal of your DBE certification in accordance with 49 CFR Part 26, Section 26.83(j) of the Federal DOT Regulation.

Your firm will be listed in New Jersey's UCP DBE Directory which is located at https://njucp.dbesystem.com/Default.asp. Prime contractors and consultants can verify your firm's DBE certification status and identify the work area(s) for which the firm is DBE eligible through this Directory. The table below lists the North America Industry Classification System (NAICS) Code(s) and description(s) that have been assigned to your firm in accordance with the service(s) your firm render(s):

NAICS CODE	DESCRIPTION
541330	Engineering Services
541340	Drafting Services
541360	Geophysical Surveying and Mapping Services
541370	Surveying and Mapping (except Geophysical) Services
541380	Testing Laboratories
541420	Industrial Design Services
541511	Custom Computer Programming Services
541512	Computer Systems Design Services
541614	Process, Physical Distribution, and Logistics Consulting Services
541712	Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology

We are pleased to have you as a participant in the NJ UCP and wish you much success. Should you have specific questions concerning this process, please do not hesitate to contact our office at (609) 530-3882.

Sincerely,

Lydia Harper

Lydia Harper, Manager, DBE/ESBE Programs
Division of Civil Rights & Affirmative Action

Philip D. Murphy, Governor
Sheila Y. Oliver, Lieutenant Governor
Diane Gutierrez-Scaccetti, Acting Commissioner
Kevin S. Corbett, Executive Director

NJTRANSIT
One Penn Plaza East
Newark, NJ 07105-2246
973-491-7000

June 19, 2018

Richard Lee, President
Amer-com Corp.
1259 Route 46 East, Bldg 2
Parsippany, NJ 07054

Re: Disadvantaged Business Enterprise certification for Amer-com Corp.

Dear Mr. Lee:

Congratulations! We are pleased to inform you that your company has been found eligible for certification as a Disadvantaged Business Enterprise (DBE) by NJ TRANSIT, on behalf of the New Jersey Unified Certification Program (NJUCP). Provided your company continues to meet the eligibility criteria and comply with the participation requirements established in Code of Federal Regulations Title 49 Part 26, your certification will remain in effect until your firm graduates or you choose to withdraw from the program.

DBE Program Participation Requirements

On an annual basis, at the anniversary of your certification date, you must submit a signed and notarized "DBE No Change Affidavit" and supporting documentation affirming that there have been no changes within your company that would affect your eligibility or status as a DBE. It is your responsibility to notify this office in writing within 30 days of any significant changes to your company including but not limited to the ownership, control, address, and tax information.

NJ TRANSIT's Office of Business Development will provide you notice and reminders of when the information above is due and reserves the right under regulation to request information from you regarding your company at any time. Failure to provide information when due and/or respond to requests for information in a timely way, may result in decertification.

Note: This certification letter is to be utilized as evidence of your firm's DBE Certification under the NJUCP.

Your company's NJUCP Identification number is 0027994M
Certification Effective Date – June 19, 2001

The following table lists the North American Industry Classification System (NAICS) code(s) and classification(s) that have been assigned to your company in accordance with the service(s) your company render(s) and the business description giving details to the specific services your firm provides.

Business Description: Civil engineering, geophysical surveying, landscape surveying, GPS mapping, technical design engineering feasibility studies for highway, street, and bridges, engineering inspection services, traffic analysis counting surveys, and construction management.

NAICS 237310: Highway, Street, and Bridge Construction
NAICS 237990: Other Heavy and Civil Engineering Construction
NAICS 541330: Engineering Services
NAICS 541360: Geophysical Surveying and Mapping Services
NAICS 541370: Surveying and Mapping (Except Geophysical) Services

Your firm will continue to be listed on the NJUCP Directory **https://njucp.dbesystem.com/** which will indicate the type of work that your firm has been certified to perform.

We are pleased to have you as a member of the NJUCP and wish you much success. Should you have any questions, please contact Adonis Abreu at 973-491-8575.

Sincerely,

Adonis Abreu

Adonis Abreu
Office of Business Development

April 19, 2018

Ms. Penny Gianataso
CEO
Certified Site Safety of NY, LLC
99 Lafayette Avenue
White Plains, NY 10603

RE: ANNUAL AFFIDAVIT - CONTINUED DBE ELIGIBILITY

Dear Ms. Gianataso:

We are pleased to inform you that **Certified Site Safety of NY, LLC** continues to meet the eligibility criteria for Disadvantaged Business Enterprise (DBE) certification pursuant to U.S. Department of Transportation, Code of Federal Regulations Title 49 Part 26.

Annually, you must submit a signed and notarized Annual "No Change" Affidavit with supporting documentation. It is your responsibility to notify this office in writing within 30 days of any changes. Failure to do so may result in decertification of your business.

If you have any questions regarding this letter, you may contact me at (201) 395-3940 or via email at ppenaflor@panynj.gov.

Sincerely,

Peter Penaflor
Certification Analyst
Office of Business Diversity and Civil Rights

State of New Jersey

DEPARTMENT OF TRANSPORTATION
P.O. Box 600
Trenton, New Jersey 08625-0600

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

RICHARD T. HAMMER
Commissioner

January 16, 2018

GARG CONSULTING SVS INC
EUGENE CHUANG, PH.D, P.E.
2096A SILAS DEANE HIGHWAY
ROCKY HILL, CT 06067

RE: Renewal of DBE Certification - Anniversary Date: Annually on January 9

Dear EUGENE CHUANG, PH.D, P.E.:

We are pleased to inform you that your firm has been found eligible to continue as a Disadvantaged Business Enterprise (DBE) by the New Jersey Department of Transportation on behalf of the New Jersey Unified Certification Program (NJ UCP).

Your certification status with the NJ UCP will remain in effect as long as your firm continues to meet all the DBE certification eligibility requirements established by Title 49 CFR 26. However, on an annual basis, you must submit an affidavit, along with a personal financial statement, affirming that there have been no changes within your firm that would affect your eligibility for certification as a DBE. These documents must be completed, signed and returned to our office before your anniversary date in order to continue your firms's eligibility as a DBE.

Additionally, if any time during the year there is a change in your firm, it is your obligation to notify this agency, in writing, within (30) days. Changes include, but are not limited to, ownership and/or control, officers, directors, management, key personnel, scope of work performed, daily operations, ongoing business relationships with other firms or individuals, or the physical location of your firm. Failure to do so may result in the removal of your DBE certification in accordance with 49 CFR Part 26, Section 26.83(j) of the Federal DOT Regulation.

Your firm will be listed in New Jersey's UCP DBE Directory which is located at https://njucp.dbesystem.com/Default.asp. Prime contractors and consultants can verify your firm's DBE certification status and identify the work area(s) for which the firm is DBE eligible through this Directory. The table below lists the North America Industry Classification System (NAICS) Code(s) and description(s) that have been assigned to your firm in accordance with the service(s) your firm render(s):

NAICS CODE	DESCRIPTION
541330	Engineering Services
541340	Drafting Services

We are pleased to have you as a participant in the NJ UCP and wish you much success. Should you have specific questions concerning this process, please do not hesitate to contact our office at (609) 530-3882.

Sincerely,

Lydia Harper

Lydia Harper, Manager, DBE/ESBE Programs
Division of Civil Rights & Affirmative Action

State of New Jersey

DEPARTMENT OF TRANSPORTATION
P.O. Box 600
Trenton, New Jersey 08625-0600

PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

DIANE GUTIERREZ-SCACCETTI
Acting Commissioner

June 4, 2018

PROJECT MANAGEMENT TECHNOLOGIES, INC. D/B/A PROMATECH, INC
CARRIE STREAHLE
506 ROUTE 130N, SUITE 3
CINNAMINSON, NJ 08077

RE: Renewal of DBE Certification - Anniversary Date: Annually on May 30

Dear CARRIE STREAHLE:

We are pleased to inform you that your firm has been found eligible to continue as a Disadvantaged Business Enterprise (DBE) by the New Jersey Department of Transportation on behalf of the New Jersey Unified Certification Program (NJ UCP).

Your certification status with the NJ UCP will remain in effect as long as your firm continues to meet all the DBE certification eligibility requirements established by Title 49 CFR 26. However, on an annual basis, you must submit an affidavit, along with a personal financial statement, affirming that there have been no changes within your firm that would affect your eligibility for certification as a DBE. These documents must be completed, signed and returned to our office before your anniversary date in order to continue your firms's eligibility as a DBE.

Additionally, if any time during the year there is a change in your firm, it is your obligation to notify this agency, in writing, within (30) days. Changes include, but are not limited to, ownership and/or control, officers, directors, management, key personnel, scope of work performed, daily operations, ongoing business relationships with other firms or individuals, or the physical location of your firm. Failure to do so may result in the removal of your DBE certification in accordance with 49 CFR Part 26, Section 26.83(j) of the Federal DOT Regulation.

Your firm will be listed in New Jersey's UCP DBE Directory which is located at https://njucp.dbesystem.com/Default.asp. Prime contractors and consultants can verify your firm's DBE certification status and identify the work area(s) for which the firm is DBE eligible through this Directory. The table below lists the North America Industry Classification System (NAICS) Code(s) and description(s) that have been assigned to your firm in accordance with the service(s) your firm render(s):

NAICS CODE	DESCRIPTION
237310	Highway, Street, and Bridge Construction
541330	Engineering Services

We are pleased to have you as a participant in the NJ UCP and wish you much success. Should you have specific questions concerning this process, please do not hesitate to contact our office at (609) 530-3882.

Sincerely,

Lydia Harper

Lydia Harper, Manager, DBE/ESBE Programs
Division of Civil Rights & Affirmative Action

Chris Christie, Governor
Kim Guadagno, Lieutenant Governor
Jamie Fox, Board Chairman
Veronique Hakim, Executive Director

NJTRANSIT
One Penn Plaza East
Newark, NJ 07105-2246
973-491-7000

January 20, 2015

Liang Chen, President
Stellar Services- DBA: 4U Services Inc.
70 W. 36th Street, suite 702
New York, NY 10018

Re: Stellar Services

Dear Mr. Chen:

Congratulations! We are pleased to inform you that your company has been found eligible for certification as a Disadvantaged Business Enterprise (DBE) by **NJ TRANSIT** on behalf of the New Jersey Unified Certification Program (NJ UCP).

Your certification will remain in effect provided your company continues to meet the eligibility criteria established by Federal Regulation Title 49 CFR Part 26. On an annual basis, you must provide an affidavit and supporting documentation affirming that there have been no changes within your company that would affect your current eligibility as a DBE. It is your responsibility to notify this office in writing within 30 days of any changes. Failure to do so will result in a decertification process. **Your certification is renewable every three years from date of this letter.**

Please note this certification letter is to be utilized in lieu of NJ TRANSIT's Certification Certificate. Please save this letter as evidence of your firm's DBE Certification under the NJ UCP.

Your company's NJ UCP Identification number is 0018044M0697
Certification Anniversary Date - Annually on June 6th

The following table lists the North American Industry Classification System (NAICS) code(s) and classification(s) that have been assigned to your company in accordance with the service(s) your company render(s) and the business description giving details to the specific services your firm provides.

Business Description: Software Consultant, Computer Networking ,Integration Systems, And Computer System Designs

NAICS CODE	CLASSIFICATION(S)
541511	Custom Computer Programming Services
541512	Computer Systems Design Services
541513	Computer Facilities Management Services
541519	Other Computer Related Services
811212	Computer and Office Machine Repair and Maintenance
518210	Data Processing, Hosting, and Related Services

Your firm will continue to be listed on the NJ UCP Directory (WWW.NJUCP.NET) which will indicate the type of work that your firm has been certified to perform.

We are pleased to have you as a participant in the NJ UCP and wish you much success. Should you have any questions, please contact Ms. Jauhara Pressey at (973) 491-8069.

Sincerely,

Jauhara Pressey,
Business Development Specialist
Office of Civil Rights & Diversity
Business Development

L.A. Hernández,
Manager, Certification & Outreach
Office of Civil Rights Diversity
Business Development

THE PORT AUTHORITY OF NY & NJ

January 11, 2016

Ms. Leslie Mesnick
The Calladium Group, LLC
808 Union Street
Brooklyn, NY 11215

Dear Ms. Mesnick:

We are pleased to inform you that The Port Authority of NY & NJ has certified your business as a Disadvantaged Business Enterprise (DBE) on behalf of the New Jersey and New York State Unified Certification Program (NJ/NYS UCP) partners.

Your certification will remain in effect, provided your business continues to meet the eligibility criteria set forth in U.S. Department of Transportation, Code of Federal Regulations Title 49 Part 26. Annually, you must submit a signed and notarized "DBE No Change Affidavit" with supporting documentation. It is your responsibility to notify this office in writing within 30 days of any changes. Failure to do so may result in decertification of your business.

The following table lists the North American Industry Classification System (NAICS) code and description that have been assigned to your business in accordance with the services it renders.

NAICS CODE	DESCRIPTION
541620	Environmental Consulting Services

We have also added your firm to the NJ and NYS UCP directories, which can be accessed at http://www.njucp.net and http://www.nysucp.net, respectively.

If you have any questions regarding your certification, you may email the Office of Business Diversity and Civil Rights at certhelp@panynj.gov or contact me at (201) 395-3950.

Sincerely,

Jayson Ortiz
Certification Analyst
Office of Business Diversity and Civil Rights

Office of Business Diversity and Civil Rights
2 Montgomery Street, 2nd Floor
Jersey City, NJ 07302

New Jersey Unified Certification Program(NJUCP) Registration

Vendor Information

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Business & Contact Information

Business Name	ADVANCED INFRASTRUCTURE DESIGN INC
Owner	Ms. Mojgan Mohtashami
Address > Map This Address	1 CROSS ROADS DRIVE HAMILTON, NJ 08691
Phone	609-371-5000 Ext. 201
Fax	609-586-1301
Email	Mojgan@aidpe.com
Website	http://www.aidpe.com

Certification Information

Certifying Agency	New Jersey Department of Transportation
Certification Type	DBE - Disadvantaged Business Enterprise
Certified Business Description	CONSULTING ENGINEERING CIVIL, SOFTWARE DEVELOPMENT, TUNNEL TESTING AND STATISTICAL ANALYSIS

Commodity Codes

Code	Description
NAICS 541330	Engineering services
NAICS 541340	Drafting services
NAICS 541360	Geophysical Surveying and Mapping Services
NAICS 541370	Surveying and Mapping (except Geophysical) Services
NAICS 541380	Testing Laboratories
NAICS 541420	Industrial design services
NAICS 541511	Custom Computer Programming Services
NAICS 541512	Computer Systems Design Services
NAICS 541614	Process, Physical Distribution, and Logistics Consulting Services
NAICS 541712	Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)

Vendor Information

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Business & Contact Information

Business Name	**Amer-com Corp.**
Owner	**Mr. Richard Lee**
Address > Map This Address	**1259 Route 46 East Bldg 2 Parsippany, NJ 07054**
Phone	**973-402-6111**
Fax	**973-402-0611**
Email	**RLEE@AMERCOM.ORG**
Website	**http://www.amercomcorp.com**
County	**Morris (NJ)**

Certification Information

Certifying Agency	**New Jersey Transit**
Certification Type	**DBE - Disadvantaged Business Enterprise**
Certified Business Description	**Civil engineering, geophysical surveying, landscape surveying, GPS mapping, technical design engineering feasibility studies for highway, street, and bridges, engineering inspection services, traffic analysis counting surveys, and construction management.**

Commodity Codes

Code	Description
NAICS 237310	Highway, Street, and Bridge Construction
NAICS 237990	Other Heavy and Civil Engineering Construction
NAICS 541330	Engineering services
NAICS 541360	Geophysical Surveying and Mapping Services
NAICS 541370	Surveying and Mapping (except Geophysical) Services

Vendor Information

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Business & Contact Information

Business Name	**Certified Site Safety of NY LLC**
Owner	**Ms. Penny Gianataso**
Address > Map This Address	**99 Lafayette Avenue White Plains, NY 10603**
Phone	**914-437-5454**
Fax	**914-437-5455**
Email	**pgianatasio@certifiedsitesafety.com**
Website	**http://www.certifiedsitesafety.com**
County	**Westchester (NY)**

Certification Information

Certifying Agency	**The Port Authority of New York & New Jersey**
Certification Type	**DBE - Disadvantaged Business Enterprise**
Certified Business Description	**Consulting Services Construction Consulting Construction Site Safety and Risk Management**

Commodity Codes

Code	Description
NAICS 541690	Other Scientific and Technical Consulting Services

Vendor Information

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Business & Contact Information

Business Name	GARG CONSULTING SVS INC
Owner	Mr. Eugene Chuang
Address > Map This Address	2096A SILAS DEANE HIGHWAY ROCKY HILL, CT 06067
Phone	860-563-0582
Fax	860-563-0825
Email	garg-ct@gargengineering.com
Website	www.gargengineering.com

Certification Information

Certifying Agency	New Jersey Department of Transportation
Certification Type	DBE - Disadvantaged Business Enterprise
Certified Business Description	CIVIL ENGINEERING & DRAFTING SERVICES, BRIDGE INSPECTION; RAIL AND TRANSIT ENGINEERING

Commodity Codes

Code	Description
NAICS 541330	Engineering services
NAICS 541340	Drafting services

Vendor Information

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Business & Contact Information

Business Name	PROJECT MANAGEMENT TECHNOLOGIES, INC. D/B/A PROMATECH, INC
Owner	Ms. Carrie A. Streahle
Address > Map This Address	506 ROUTE 130N, SUITE 3 CINNAMINSON, NJ 08077
Phone	856-314-8468
Fax	856-461-3996
Email	CSTREAHLE@PROMATECHINC.COM
Website	http://www.promatechinc.com

Certification Information

Certifying Agency	New Jersey Department of Transportation
Certification Type	DBE - Disadvantaged Business Enterprise
Certified Business Description	CONSTRUCTION MANAGEMENT, CONSTRUCTION ENGINEERING SERVICES

Commodity Codes

Code	Description
NAICS 237310	Highway, Street, and Bridge Construction
NAICS 541330	Engineering services

Vendor Information

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Business & Contact Information

Business Name	**Stellar Services, Inc., DBA 4U Services, Inc.**
Owner	**Mr. Liang Chen**
Address > Map This Address	**70 West 36th Street Ste. #702 New York, NY 10018**
Phone	**212-432-2848**
Fax	**212-432-2846**
Email	**contact@stellar4.com**
Website	**http://www.stellarservices.com**
County	**New York (NY)**

Certification Information

Certifying Agency	**New Jersey Transit**
Certification Type	**DBE - Disadvantaged Business Enterprise**
Certified Business Description	**CUSTOM COMPUTER PROGRAMMING, COMPUTER NETWORKING SYSTEMS, COMPUTER INSTALLATION & INTEGRATION SYSTEMS, and COMPUTER SYSTEM DESIGNS**

Commodity Codes

Code	Description
NAICS 518210	Data Processing, Hosting, and Related Services
NAICS 541511	Custom Computer Programming Services
NAICS 541512	Computer Systems Design Services
NAICS 541513	Computer Facilities Management Services
NAICS 541519	Other Computer Related Services
NAICS 811212	Computer and Office Machine Repair and Maintenance

Vendor Information

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Business & Contact Information

Business Name	**The Calladium Group LLC**
Owner	**Ms. Leslie Mesnick**
Address > Map This Address	**540 President Street** **3rd Floor** **Brooklyn, NY 11215**
Phone	**646-251-0285**
Email	**leslie@calladiumgroup.com**
Website	**www.calladiumgroup.com**
County	**Kings (NY)**

Certification Information

Certifying Agency	**The Port Authority of New York & New Jersey**
Certification Type	**DBE - Disadvantaged Business Enterprise**
Certified Business Description	**Environmental Consulting** **Environmental permitting** **Environmental review** **Project management and coordination** **Public and agency outreach** **Consensus-based mitigation** **Technical editing services**

Commodity Codes

Code	Description
NAICS 541620	Environmental consulting services
NAICS 541820	Political consulting services
NAICS 541910	Public opinion research services
NAICS 561410	Technical editing services

AECOM

AECOM

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of October 9, 2018 and sets forth the understanding by and between AECOM USA, Inc. (***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. 18-015, for Construction Management Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality***. The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information***. This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
Signature	Signature
	Anil Parikh, PE
Printed Name	Printed Name
	Vice President/Program Manager
Title	Title
	October 9, 2018
Date	Date

EXHIBIT 2

ACKNOWLEDGMENT OF RECEIPT OF ADDENDA

Proposers are required to acknowledge receipt of all addenda issued prior to the proposal due date. This acknowledgment is made by the proposer, if an individual; by a partner, if a partnership; or by an officer of the corporation, if a corporation.

The undersigned acknowledges receipt of the following addenda.

Addendum Number	Date
Addendum No. 1	September 13, 2018
Addendum No. 2	September 28, 2018
Addendum No. 3	October 15, 2018
Addendum No. 4	October 23, 2018
Addendum No. 5	November 5, 2018

By: Anil Parikh

Signature of Company Official

Anil Parikh, PE, Vice President/Program Executive

Official's Title

AECOM Technical Services, Inc.

Company Name

EXHIBIT 5

STATEMENT OF JOINT VENTURE
FOR
PROFESSIONAL SERVICES

WE, THE UNDERSIGNED, BEING DULY SWORN ACCORDING TO LAW, UPON OUR RESPECTIVE OATHS DEPOSE AND SAY THAT:

1. THE CONSULTANT, UNDER WHOSE NAME WE HAVE AFFIXED OUR RESPECTIVE SIGNATURES, HAS DULY AUTHORIZED AND EMPOWERED US TO EXECUTE THIS STATEMENT OF JOINT VENTURE IN THE NAME OF AND ON BEHALF OF SUCH CONSULTANT FOR THE PURPOSES HEREIN FURTHER SET FORTH.

2. THE FOLLOWING NAMED CONSULTANTS:

(a)	.....; ( ) Individual	.....; ( ) Partnership	AECOM Technical Services, Inc.; (X) Corporation
(b)	.....; ( ) Individual	.....; ( ) Partnership	Mott MacDonald, LLC; (X) Corporation
(c)	.....; ( ) Individual	.....; ( ) Partnership	.....; ( ) Corporation

HAVE ENTERED INTO A JOINT VENTURE FOR THE SPECIAL PURPOSE OF CARRYING ON THE WORK AND PROFESSIONAL SERVICES HEREINAFTER DESCRIBED.

3. UNDER THE PROVISIONS OF SUCH JOINT VENTURE THE ASSETS OF EACH OF THE CONSULTANTS NAMED IN PARAGRAPH 2 HEREOF, AND IN CASE ANY CONSULTANT SO NAMED ABOVE IS A PARTNERSHIP THE ASSETS OF THE INDIVIDUAL MEMBERS OF SUCH PARTNERSHIP, WILL BE AVAILABLE FOR THE PERFORMANCE OF SUCH JOINT VENTURE AND LIABLE THEREFOR AND FOR ALL OBLIGATIONS INCURRED IN CONNECTION THEREWITH.

4. THIS STATEMENT OF JOINT VENTURE IS EXECUTED SO THAT THE NAMED CONSULTANTS MAY, UNDER SUCH JOINT VENTURE, PROPOSE TO PERFORM THE WORK AND PROFESSIONAL SERVICES HEREIN MENTIONED AND THEY MAY, IF THE SUCCESSFUL PROPOSER THEREFOR, BE AWARDED THE CONTRACT FOR SUCH WORK AND PROFESSIONAL SERVICES. ANY CONTRACT RELATING TO THE WORK AND PROFESSIONAL SERVICES HEREINAFTER SPECIFIED SHALL BE EXECUTED BY ANY PERSON AUTHORIZED TO BIND ANY MEMBER OF THIS JOINT VENTURE, AND WHEN SO EXECUTED SHALL BIND THIS JOINT VENTURE AND EACH AND EVERY CONSULTANT NAMED HEREIN, SEVERALLY AND JOINTLY. SIMULTANEOUS WITH THE EXECUTION OF THE CONTRACT THE JOINT VENTURERS SHALL DESIGNATE AND APPOINT A PROJECT MANAGER/DIRECTOR TO ACT AS THEIR TRUE AND LAWFUL AGENT WITH FULL POWER AND AUTHORITY TO DO AND PERFORM ANY AND ALL ACTS OR THINGS NECESSARY TO CARRY OUT THE WORK AND PROFESSIONAL SERVICES SET FORTH IN SAID CONTRACT.

STATEMENT OF JOINT VENTURE
FOR
PROFESSIONAL SERVICES
(Continued)

5. AS JOINT VENTURERS, WE BIND THE CONSULTANT FOR WHOM WE RESPECTIVELY EXECUTE THIS STATEMENT OF JOINT VENTURE IN FIRM AGREEMENT WITH NJ TRANSIT THAT EACH OF THE REPRESENTATIONS HEREIN SET FORTH IS TRUE.

6. THE WORK AND PROFESSIONAL SERVICES FOR WHICH THIS JOINT VENTURE HAS BEEN ENTERED INTO IS IDENTIFIED AS:

Construction Management and Construction Inspection

SUBSCRIBED AND SWORN TO BEFORE ME,

THIS 18th DAY OF

October, 2018

DENICE U ARENAS
Notary Public, State of New York
No. 01AR6220290
Qualified in Westchester County
Commission Expires April 12, 2022

(a) AECOM Technical Services, Inc.
(Name of Consultant)

BY
Anil Parikh, PE, Vice President/Program Executive

SUBSCRIBED AND SWORN TO BEFORE ME,

THIS 16TH DAY OF

October, 2018

Karen Marcotullio
KAREN MARCOTULLIO
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Oct. 24, 2020

(b) Mott MacDonald, LLC
(Name of Consultant)

BY
Arthur D. Silber, Executive Vice President

SUBSCRIBED AND SWORN TO BEFORE ME,

THIS ..... DAY OF

....., 20.....

(c) .....
(Name of Consultant)

BY .....
(Also type or print name of signer)

TO BE EXECUTED BY EACH JOINT VENTURER

AUTHORIZATION AND DESIGNATION OF RESPECTIVE AFFIANTS TO THE STATEMENT OF JOINT VENTURE HERETO ATTACHED TO ACT FOR AND ON BEHALF OF THE CONSULTANTS NAMED IN PARAGRAPH 2 THEREOF:

(a) AECOM Technical Services, Inc. HEREBY CERTIFIES THAT
(Name of Consultant)

Anil Parikh, PE, Vice President/Program Executive HAS BEEN AND IS HEREBY EMPOWERED
(Name of Representative)

TO SIGN THE STATEMENT OF JOINT VENTURE ATTACHED HERETO AS THE AUTHORIZED REPRESENTATIVE OF AECOM Technical Services, Inc.
(Name of Consultant)

FOR THE SPECIAL PURPOSE THEREIN EXPRESSED.

ATTEST .....

(SEAL NECESSARY IF CORPORATION)

• • • • • • •

(b) Mott MacDonald, LLC HEREBY CERTIFIES THAT
(Name of Consultant)

Arthur D. Silber, Executive Vice President HAS BEEN AND IS HEREBY EMPOWERED
(Name of Representative)

TO SIGN THE STATEMENT OF JOINT VENTURE ATTACHED HERETO AS THE AUTHORIZED REPRESENTATIVE OF Mott MacDonald, LLC
(Name of Consultant)

FOR THE SPECIAL PURPOSE THEREIN EXPRESSED.

ATTEST .....
MARK O'CONNOR

(SEAL NECESSARY IF CORPORATION)

• • • • • • •

(c) ..... HEREBY CERTIFIES THAT
(Name of Consultant)

..... HAS BEEN AND IS HEREBY EMPOWERED
(Name of Representative)

TO SIGN THE STATEMENT OF JOINT VENTURE ATTACHED HERETO AS THE AUTHORIZED REPRESENTATIVE OF .....
(Name of Consultant)

FOR THE SPECIAL PURPOSE THEREIN EXPRESSED.

ATTEST .....

(SEAL NECESSARY IF CORPORATION)

EXHIBIT 6

STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
DIVISION OF PURCHASE AND PROPERTY

33 WEST STATE STREET, P.O. BOX 230
TRENTON, NEW JERSEY 08625-0230

OWNERSHIP DISCLOSURE FORM

BID SOLICITATION #: NJ TRANSIT RFP No. 18-015 **VENDOR/BIDDER:** AECOM Technical Services, Inc.

PART 1

PLEASE COMPLETE THE QUESTIONS BELOW BY CHECKING EITHER THE "YES" OR THE "NO" BOX. ALL PARTIES ENTERING INTO A CONTRACT WITH THE STATE ARE REQUIRED TO COMPLETE THIS FORM PURSUANT TO N.J.S.A. 52:25-24.2

PLEASE NOTE THAT IF THE VENDOR/BIDDER IS A NON-PROFIT ENTITY, THIS FORM IS NOT REQUIRED.

		YES	NO
1.	Are there any individuals, corporations, partnerships, or limited liability companies owning a 10% or greater interest in the Vendor/Bidder?	☐	☒

IF THE ANSWER TO QUESTION 1 IS "NO", PLEASE SIGN AND DATE THE FORM.
IF THE ANSWER TO QUESTION 1 IS "YES", PLEASE ANSWER QUESTIONS 2 – 4 BELOW.

2.	Of those parties owning a 10% or greater interest in the Vendor/Bidder, are any of those parties individuals?	☐	☐
3.	Of those parties owning a 10% or greater interest in the Vendor/Bidder, are any of those parties corporations, partnerships, or limited liability companies?	☐	☐
4.	If your answer to Question 3 is "YES", are there any parties owning a 10% or greater interest in the corporation, partnership, or limited liability company referenced in Question 3?	☐	☐

IF ANY OF THE ANSWERS TO QUESTIONS 2 - 4 ARE "YES", PLEASE PROVDE THE REQUESTED INFORMATION IN PART 2 BELOW.

PART 2

PLEASE PROVIDE FURTHER INFORMATION RELATED TO QUESTIONS 2 – 4 ANSWERED AS "YES".

If you answered "YES" for questions 2, 3, or 4, you must disclose identifying information related to the individuals, corporations, partnerships, and/or limited liability companies owning a 10% or greater interest in the Vendor/Bidder. Further, if one or more of these entities is itself a corporation, partnership, or limited liability company, you must also disclose all parties that own a 10% or greater interest in that corporation, partnership, or limited liability company. This information is required by statute.

INDIVIDUALS

NAME				DATE OF BIRTH	
ADDRESS 1					
ADDRESS 2					
CITY		STATE		ZIP	

NAME				DATE OF BIRTH	
ADDRESS 1					
ADDRESS 2					
CITY		STATE		ZIP	

NAME				DATE OF BIRTH	
ADDRESS 1					
ADDRESS 2					
CITY		STATE		ZIP	

Attach Additional Sheets If Necessary.

PART 2 continued

PARTNERSHIPS/CORPORATIONS/LIMITED LIABILITY COMPANIES

ENTITY NAME					
PARTNER NAME					
ADDRESS 1					
ADDRESS 2					
CITY		STATE		ZIP	

ENTITY NAME					
PARTNER NAME					
ADDRESS 1					
ADDRESS 2					
CITY		STATE		ZIP	

ENTITY NAME					
PARTNER NAME					
ADDRESS 1					
ADDRESS 2					
CITY		STATE		ZIP	

ENTITY NAME					
PARTNER NAME					
ADDRESS 1					
ADDRESS 2					
CITY		STATE		ZIP	

Attach Additional Sheets If Necessary.

In the alternative, to comply with the ownership disclosure requirement, a Vendor/Bidder with any direct or indirect parent entity which is publicly traded may submit the name and address of each publicly traded entity and the name and address of each person that holds a 10% or greater beneficial interest in the publicly traded entity as of the last annual filing with the federal Securities and Exchange Commission or the foreign equivalent, and, if there is any person that holds a 10% or greater beneficial interest, also shall submit links to the websites containing the last annual filings with the federal Securities and Exchange Commission or the foreign equivalent and the relevant page numbers of the filings that contain the information on each person that holds a 10 percent or greater beneficial interest. N.J.S.A. 52:25-24.2.

CERTIFICATION

I, the undersigned, certify that I am authorized to execute this certification on behalf of the Vendor/Bidder, that the foregoing information and any attachments hereto, to the best of my knowledge are true and complete. I acknowledge that the State of New Jersey is relying on the information contained herein, and that the Vendor/Bidder is under a continuing obligation from the date of this certification through the completion of any contract(s) with the State to notify the State in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification. If I do so, I will be subject to criminal prosecution under the law, and it will constitute a material breach of my agreement(s) with the State, permitting the State to declare any contract(s) resulting from this certification void and unenforceable.

Signature (Do not enter vendor ID as a signature)

October 9, 2018

Date

Anil Parikh, PE, Vice President/Program Executive

Print Name and Title

[redacted]

FEIN/SSN

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: AECOM Technical Services, Inc. Contract Number: RFP No. 18-015

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: AECOM Technical Services, Inc.
[Name of Organization or Entity]

By: Title: Vice President/Program Executive

Print Name: Anil Parikh, PE Date: October 9, 2018

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: RFP No. 18-015 Bidder/Proposer: AECOM Technical Services, Inc.

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☐ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Anil Parikh, PE Signature: _____

Title: Vice President/Program Executive Date: October 9, 2018

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The AECOM Technical Services, Inc. (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

AECOM Technical Services, Inc. (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

Anil Parikh, PE
Type or Print Name

Vice President/Program Executive
Title

October 9, 2018
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

COUNTY OF

I, Anil Parikh of the City of Piscataway in the County of Middlesex and the State of New Jersey of full age, being duly sworn according to law on my oath depose and say that:

I am Anil Parikh of the firm Of AECOM Technical Services, Inc. the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by AECOM Technical Services, Inc.
(Name of Contractor).

Anil Parikh, PE, Vice President/Program Executive

Subscribed and sworn to before me this 26th day of September, 2018

Notary Public of

My commission expires 4/12 2022

DENICE U ARENAS
Notary Public, State of New York
No. 01AR6220290
Qualified in Westchester County
Commission Expires April 12, 2022

EXHIBIT 11

AFFIDAVIT OF COMPLIANCE

I, Anil Parikh (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

AECOM Technical Services, Inc.

(Print Name of Contractor)

(Signature of Authorized Principal or Officer)

Anil Parikh, PE, Vice President/Program Executive

(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 12th day of October, 2018

DENICE U ARENAS
Notary Public, State of New York
No. 01AR6220290
Qualified in Westchester County
Commission Expires April 12, 2022

EXHIBIT 12

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Authorized Official

Anil Parikh, PE

Print Name

Vice President/Program Executive

Title

AECOM Technical Services, Inc.

Firm

October 9, 2018

Date

Mott MacDonald

Mott MacDonald

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of September, 2018 and sets forth the understanding by and between Mott MacDonald, LLC (***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. RFP NO. 18-015, for Construction Management Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality.*** The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information.*** This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
Signature	Signature
	Albert N. Beninato
Printed Name	Printed Name
	Executive Vice President
Title	Title
	September 20, 2018
Date	Date

EXHIBIT 2

ACKNOWLEDGMENT OF RECEIPT OF ADDENDA

Proposers are required to acknowledge receipt of all addenda issued prior to the proposal due date. This acknowledgment is made by the proposer, if an individual; by a partner, if a partnership; or by an officer of the corporation, if a corporation.

The undersigned acknowledges receipt of the following addenda.

Addendum Number	Date
Addendum No. 1	September 13, 2018
Addendum No. 2	September 28, 2018
Addendum No. 3	October 15, 2018
Addendum No. 4	October 23, 2018
Addendum No. 5	November 5, 2018

By: _____
Signature of Company Official

Albert N. Beninato, PE, Executive Vice President
Official's Title

Mott MacDonald, LLC
Company Name

EXHIBIT 5

Please see Exhibit 5 in AECOM section

EXHIBIT 6

STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
DIVISION OF PURCHASE AND PROPERTY

33 WEST STATE STREET, P.O. BOX 230
TRENTON, NEW JERSEY 08625-0230

OWNERSHIP DISCLOSURE FORM

BID SOLICITATION #: RFP No. 18-015 **VENDOR {BIDDER}:** Mott MacDonald, LLC

PART 1

PLEASE COMPLETE THE QUESTIONS BELOW BY CHECKING EITHER THE "YES" OR THE "NO" BOX. ALL PARTIES ENTERING INTO A CONTRACT WITH THE STATE ARE REQUIRED TO COMPLETE THIS FORM PURSUANT TO N.J.S.A. 52:25-24.2

PLEASE NOTE THAT IF THE VENDOR/BIDDER IS A NON-PROFIT ENTITY, THIS FOR IS NOT REQUIRED.

	YES	NO
1. Are there any individuals, corporations, partnerships, or limited liability companies owning a **10% or greater** interest in the Vendor {Bidder}?	☑	☐

IF THE ANSWER TO QUESTION 1 IS "NO", PLEASE SIGN AND DATE THE FORM.
IF THE ANSWER TO QUESTION 1 IS "YES", PLEASE ANSWER QUESTIONS 2 – 4 BELOW.

2. Of those parties owning a 10% or greater interest in the Vendor {Bidder}, are any of those parties individuals?	☐	☑
3. Of those parties owning a 10% or greater interest in the Vendor {Bidder}, are any of those parties **corporations, partnerships, or limited liability companies**?	☑	☐
4. If your answer to Question 3 is "YES", are there any parties owning a **10% or greater** interest in the corporation, partnership, or limited liability company referenced in Question 3?	☑	☐

IF ANY OF THE ANSWERS TO QUESTIONS 2 - 4 ARE "YES", PLEASE PROVDE THE REQUESTED INFORMATION IN PART 2 BELOW.

PART 2

PLEASE PROVIDE FURTHER INFORMATION RELATED TO QUESTIONS 2 – 4 ANSWERED AS "YES".

If you answered "YES" for questions 2, 3, or 4, you must disclose identifying information related to the individuals, corporations, partnerships, and/or limited liability companies owning a 10% or greater interest in the Vendor {Bidder}. Further, if one or more of these entities is itself a corporation, partnership, or limited liability company, you must also disclose all parties that own a 10% or greater interest in that corporation, partnership, or limited liability company. This information is required by statute.

INDIVIDUALS

NAME _____
ADDRESS 1 _____
ADDRESS 2 _____
CITY _____ **STATE** _____ **ZIP** _____

NAME _____
ADDRESS 1 _____
ADDRESS 2 _____
CITY _____ **STATE** _____ **ZIP** _____

NAME _____
ADDRESS 1 _____
ADDRESS 2 _____
CITY _____ **STATE** _____ **ZIP** _____

Attach Additional Sheets If Necessary.

PART 2 continued

PARTNERSHIPS/CORPORATIONS/LIMITED LIABILITY COMPANIES

ENTITY NAME	Mott MacDonald Group, Inc.				
PARTNER NAME	N/A				
ADDRESS 1	111 Wood Avenue South				
ADDRESS 2					
CITY	Iselin	STATE	NJ	ZIP	08830

ENTITY NAME					
PARTNER NAME					
ADDRESS 1					
ADDRESS 2					
CITY		STATE		ZIP	

ENTITY NAME					
PARTNER NAME					
ADDRESS 1					
ADDRESS 2					
CITY		STATE		ZIP	

ENTITY NAME					
PARTNER NAME					
ADDRESS 1					
ADDRESS 2					
CITY		STATE		ZIP	

Attach Additional Sheets If Necessary.

In the alternative, to comply with the ownership disclosure requirement, a Vendor {Bidder} with any direct or indirect parent entity which is publicly traded may submit the name and address of each publicly traded entity and the name and address of each person that holds a 10 percent or greater beneficial interest in the publicly traded entity as of the last annual filing with the federal Securities and Exchange Commission or the foreign equivalent, and, if there is any person that holds a 10 percent or greater beneficial interest, also shall submit links to the websites containing the last annual filings with the federal Securities and Exchange Commission or the foreign equivalent and the relevant page numbers of the filings that contain the information on each person that holds a 10 percent or greater beneficial interest. N.J.S.A. 52:25-24.2.

CERTIFICATION

I, the undersigned, certify that I am authorized to execute this certification on behalf of the Vendor {Bidder}, that the foregoing information and any attachments hereto, to the best of my knowledge are true and complete. I acknowledge that the State of New Jersey is relying on the information contained herein, and that the Vendor {Bidder} is under a continuing obligation from the date of this certification through the completion of any contract(s) with the State to notify the State in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification. If I do so, I will be subject to criminal prosecution under the law, and it will constitute a material breach of my agreement(s) with the State, permitting the State to declare any contract(s) resulting from this certification void and unenforceable.

Signature (Do not enter vendor ID as a signature)

September 20, 2018
Date

Albert N. Beninato, PE, Executive Vice President
Print Name and Title

[redacted]
FEIN/SSN

Mott MacDonald, LLC

Officers

Nicholas M. DeNichilo	President
Albert N. Beninato	Exec. Vice President
David P. White	EVP & Asst. Secretary
Jeffrey T. Hilla	EVP & Treasurer
Michael M. Gennaro	EVP & Secretary
Michael Vitale	Senior Vice President
Richard Walker II	Senior Vice President
Randy Spence	Vice President
Garland D. Herring	Asst. Vice President
Mark G. O'Connor	Asst. Secretary

MOTT MACDONALD, LLC

STATEMENT OF OWNERSHIP

Mott MacDonald, through several of its wholly owned subsidiaries, has been providing engineering services in the United States for nearly 100 years. With more than 60 offices and 2300 employees in the United States and Canada, Mott MacDonald's North American subsidiaries combine to be ranked as one of the largest engineering companies in the United States.

Mott MacDonald, LLC, a Delaware limited liability company, is a wholly owned subsidiary of Mott MacDonald Group, Inc., a Delaware Corporation headquartered in Iselin, New Jersey. Mott MacDonald Group, Inc. is 100% owned by Mott MacDonald International Limited, a corporation organized under the laws of England. Mott MacDonald International Limited is 100% owned by Mott MacDonald Group Limited, a corporation organized under the laws of England.

No individual shareholder owns more than 10% of Mott MacDonald Group Limited.

MOTT MACDONALD, LLC

By: _____

Albert N. Beninato, P.E.
Executive Vice President

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: Mott MacDonald, LLC Contract Number: RFP No. 18-015

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country
Mott MacDonald, LLC	Construction Management	United States

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: Mott MacDonald, LLC
[Name of Organization or Entity]

By: _____ Title: Executive Vice President

Print Name: Albert N. Beninato Date: September 20, 2018

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: RFP No. 18-015 Bidder/Proposer: Mott MacDonald, LLC

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to*, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☒ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ Relationship to Bidder/Offeror _____

Description of Activities _____

Duration of Engagement _____ Anticipated Cessation Date _____

Bidder/Offeror Contact Name Contact Phone Number

Name _____ Relationship to Bidder/Offeror _____

Description of Activities _____

Duration of Engagement _____ Anticipated Cessation Date _____

Bidder/Offeror Contact Name Contact Phone Number

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Albert N. Beninato Signature: _____

Title: Executive Vice President Date: September 20, 2018

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The Mott MacDonald, LLC (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

Mott MacDonald, LLC (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

Albert N. Beninato
Type or Print Name

Executive Vice President
Title

September 20, 2018
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

COUNTY OF Middlesex

I, Albert N. Beninato of the City of Iselin in the County of Middlesex and the State of New Jersey of full age, being duly sworn according to law on my oath depose and say that:

I am Executive Vice President of the firm Of Mott MacDonald, LLC the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by Mott MacDonald, LLC

(Name of Contractor).

(Also type or print name of affiant under signature)
Albert N. Beninato, Executive Vice President

Subscribed and sworn to before me this
20th day of September, 2018

Anita J. Smith
Notary Public of New Jersey

My commission expires October 18 2022

ANITA J. SMITH
NOTARY PUBLIC
STATE OF NEW JERSEY
MY COMMISSION EXPIRES
OCTOBER 18, 2022

EXHIBIT 11

AFFIDAVIT OF COMPLIANCE

I, Albert N. Beninato (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

Mott MacDonald, LLC
(Print Name of Contractor)

(Signature of Authorized Principal or Officer)

Albert N. Beninato, Executive Vice President
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 20th day of September, 2018

Anita J. Smith

ANITA J. SMITH
NOTARY PUBLIC
STATE OF NEW JERSEY
MY COMMISSION EXPIRES
OCTOBER 18, 2022

EXHIBIT 12

08/2018 Federal

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Authorized Official

Albert N. Beninato

Print Name

Executive Vice President

Title

Mott MacDonald, LLC

Firm

September 20, 2018

Date

Modjeski and Masters, Inc.

Modjeski and
Masters, Inc.

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of September 25, 2018 and sets forth the understanding by and between Modjeski and Masters, Inc. (***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. 18-015, for Construction Management Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality.*** The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information.*** This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
	Michael F Britt
Signature	Signature
	Michael F. Britt
Printed Name	Printed Name
	President/CEO
Title	Title
	9/25/18
Date	Date

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: Modjeski and Masters, Inc. Contract Number: 18-015

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: Modjeski and Masters, Inc.
[Name of Organization or Entity]

By: Michael F. Britt Title: President/CEO

Print Name: Michael F Britt Date: 9/25/18

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: 18-015 Bidder/Proposer: Modjeski and Masters, Inc.

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☒ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Michael F. Britt Signature: Michael F Britt

Title: President/CEO Date: 9/25/18

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The Modjeski and Masters, Inc. (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

Modjeski and Masters, Inc. (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Michael F. Britt

Signature

Michael F. Britt

Type or Print Name

President/CEO

Title

9/25/18

Date

EXHIBIT 10

08/2018 Federal

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

COUNTY OF

I, Michael F. Britt of the City of Mechanicsburg in the County of Cumberland and the State of Pennsylvania of full age, being duly sworn according to law on my oath depose and say that:

I am President/CEO of the firm Of Modjeski and Masters, Inc. the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by Modjeski and Masters, Inc.

(Name of Contractor).

Michael F Britt

(Also type or print name of affiant under signature)

Michael F. Britt

Subscribed and sworn to before me this 25 day of September, 2018

Jennifer L. Beissel

Notary Public of

My commission expires Sept. 29 2019

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
JENNIFER L. BEISSEL, Notary Public
Boro of Mechanicsburg, Cumberland County
My Commission Expires September 29, 2019

EXHIBIT 11

AFFIDAVIT OF COMPLIANCE

I, Michael F. Britt (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

Modjeski and Masters, Inc.
(Print Name of Contractor)

Michael F. Britt
(Signature of Authorized Principal or Officer)

Michael F. Britt, President/CEO
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 25 day of September, 2018

Notary Public Jennifer L. Beissel

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
JENNIFER L. BEISSEL, Notary Public
Boro of Mechanicsburg, Cumberland County
My Commission Expires September 29, 2019

EXHIBIT 12

08/2018 Federal

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Michael F Britt

Signature of Authorized Official

Michael F. Britt, PE

Print Name

President/CEO

Title

Modjeski and Masters, Inc.

Firm

9/25/18

Date

Dan Brown & Associates, P.C.

Dan Brown and Associates, P.C.

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of 21 September, 2018 and sets forth the understanding by and between Dan Brown and Associates, PC (***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. 18-015, for _____Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality.*** The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information.*** This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
	John P. Turner
Signature	Signature
	John P. Turner
Printed Name	Printed Name
	Senior Principal Engineer
Title	Title
	21 September, 2018
Date	Date

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: Dan Brown and Associates, PC Contract Number: 18-015

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country
Dan Brown and Associates, PC	Foundation Construction Management	USA

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: Dan Brown and Associates, PC
[Name of Organization or Entity]

By: John P. Turner Title: Senior Principal Engineer

Print Name: John P. Turner Date: 21 September, 2018

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: 18-015 Bidder/Proposer: Dan Brown and Associates, PC

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON·RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☒ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): John P. Turner Signature: John P. Turner

Title: Senior Principal Engineer Date: 21 September, 2018

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The Dan Brown and Associates, PC (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

Dan Brown and Associates, PC (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

John P. Turner
Type or Print Name

Senior Principal Engineer
Title

21 September, 2018
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

COUNTY OF

I, John P. Turner of the City of Laramie in the County of Albany and the State of Wyoming of full age, being duly sworn according to law on my oath depose and say that:

I am Senior Principal Engineer of the firm Of Dan Brown and Associates, PC the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by Dan Brown and Associates, PC
(Name of Contractor).

John P. Turner
(Also type or print name of affiant under signature)

Subscribed and sworn to before me this

28 day of SEP, 2018

Notary Public of Wyoming

My commission expires 11/30 2019

Jordan Lee - Notary Public
County of Albany
State of Wyoming
My Commission Expires 11/30/2019

EXHIBIT 11

AFFIDAVIT OF COMPLIANCE

I, John P. Turner (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

Dan Brown and Associates, PC
(Print Name of Contractor)

John P. Turner
(Signature of Authorized Principal or Officer)

John P. Turner, Senior Principal Engineer
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 21 st day of September, 20 18

EXHIBIT 12

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

John P. Turner

Signature of Authorized Official

John P. Turner

Print Name

Senior Principal Engineer

Title

Dan Brown and Associates, PC

Firm

21 September, 2018

Date

Advanced Infrastructure Design, Inc.

Advanced Infrastructure Design, Inc.

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of September 25, 2018 and sets forth the understanding by and between Advanced Infrastructure Design, Inc(***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. 18-015, for Material Inspection Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality.*** The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information.*** This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
Signature	Signature
	Kaz Tabrizi, Ph.D., P.E.
Printed Name	Printed Name
	Executive VP
Title	Title
	09/25/2018
Date	Date

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: Advanced Infrastruture Design Contract Number: FRP No 18-015

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country
Advanced Infrastructure Design	Material Inspection and Pavement Engineering	USA

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: Advanced Infrastructure Design
[Name of Organization or Entity]

By: _____ Title: Executive VP

Print Name: Kaz Tabrizi, Ph.D., P.E Date: 09/25/2018

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: 18-015 Bidder/Proposer: Advanced Infrastructure Design

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☒ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Kaz Tabrizi, Ph.D., P.E. Signature:

Title: Executive Vice President Date: 09/25/2018

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The Advanced Infrastructure Design (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

Advanced Infrastructure Design (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

Kaz Tabrizi, Ph.D., P.E.
Type or Print Name

Executive VP
Title

09/25/2018
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

COUNTY OF

I, Kaz Tabrizi, Ph.D., P.E of the City of Hamilton in the County of Mercer and the State of New Jersey of full age, being duly sworn according to law on my oath depose and say that:

I am Executive Vice President of the firm Of Advanced Infrastructure Design the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by Advanced Infrastructure Design
(Name of Contractor).

Kaz Tabrizi
(Also type or print name of affiant under signature)

Subscribed and sworn to before me this
25th day of September, 2018

New Jersey
Notary Public of

My commission expires 02/09/2020

Nathalie Geffrard
Notary Public
New Jersey
My Commission Expires 2-9-2020

08/2018 Federal

EXHIBIT 11

08/2018 Federal

AFFIDAVIT OF COMPLIANCE

I, Advanced Infrastructure Design, Inc. (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

Advanced Infrastrcuture Design
(Print Name of Contractor)

(Signature of Authorized Principal or Officer)

Kaz Tabrizi, Ph.D., P.E., Executive VP
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 25th day of September, 2018

Nathalie Geffrard
Notary Public
New Jersey
My Commission Expires 2-9-2020

NATHALIE GEFFRARD NOTARY PUBLIC NEW JERSEY

EXHIBIT 12

08/2018 Federal

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Authorized Official

Kaz Tabrizi, Ph.D., P.E.
Print Name

Executive VP
Title

Advanced Infrastructure Design
Firm

09/25/2018
Date

AmerCom Corporation

AmerCom Corporation

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of Sept. 21, 2018 and sets forth the understanding by and between AmerCom Corporation (***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. 18-015, for Construction Management Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality.*** The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information.*** This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
Signature	Signature
	Richard Lee
Printed Name	Printed Name
	President
Title	Title
	9/21/2018
Date	Date

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: AmerCom Corporation Contract Number: 18-015

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country
AmerCom Corp.	Construction Inspection	United States

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: AmerCom Corporation
[Name of Organization or Entity]

By: _____ Title: President

Print Name: Richard Lee Date: 9/21/2018

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: 18-015 Bidder/Proposer: AmerCom Corporation

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☒ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ **Relationship to Bidder/Offeror** _____
Description of Activities _____
_____
Duration of Engagement _____ **Anticipated Cessation Date** _____
Bidder/Offeror Contact Name _____ **Contact Phone Number** _____

Name _____ **Relationship to Bidder/Offeror** _____
Description of Activities _____
_____
Duration of Engagement _____ **Anticipated Cessation Date** _____
Bidder/Offeror Contact Name _____ **Contact Phone Number** _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Richard Lee Signature: _____

Title: President Date: 9/21/2018

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The AmerCom Corporation (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

AmerCom Corporation (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

Richard Lee
Type or Print Name

President
Title

9/21/2018
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

COUNTY OF Morris

I, Richard Lee of the City of Parsippany in the County of Morris and the State of New Jersey of full age, being duly sworn according to law on my oath depose and say that:

I am President of the firm Of AmerCom Corporation the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by AmerCom Corporation
(Name of Contractor).

(Also type or print name of affiant under signature)

Richard Lee, President

Subscribed and sworn to before me this

21st day of September, 20 18

Notary Public of NJ

My commission expires 9/21 20 18

ALICE V COLLINS
ID # 2048125
NOTARY PUBLIC
STATE OF NEW JERSEY
My Commission Expires July 25, 2023

EXHIBIT 11

AFFIDAVIT OF COMPLIANCE

I, Richard Lee (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

AmerCom Corporation
(Print Name of Contractor)

(Signature of Authorized Principal or Officer)

Richard Lee, President
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 21st day of September, 20 18

Alice V. Collins

ALICE V COLLINS
ID # 2048125
NOTARY PUBLIC
STATE OF NEW JERSEY
My Commission Expires July 25, 2023

EXHIBIT 12

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Authorized Official

Richard Lee
Print Name

President
Title

AmerCom Corporation
Firm

9/21/2018
Date

Certified Site Safety of NY, LLC

Certified Site
Safety of NY, LLC

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of October 8, 2018 and sets forth the understanding by and between Certified Site Safety of NY, LLC (Name of Consultant) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. NJ Transit RFP No .18-015 for Safety Consulting Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality.*** The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information.*** This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
Signature	Signature
Printed Name	***Penny Gianatasio*** Printed Name
Title	***CEO*** Title
Date	***October 8, 2018*** Date

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: *Certified Site Safety of NY LLC* Contract Number: *NJ Transit RFP No. 18-015*

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country
Certified Site Safety of NY LLC	*Safety Engineer*	*Raritan River Bridge Project Middlesex Cty, NJ*

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: *Certified Site Safety of NY LLC*
[Name of Organization or Entity]

By: Penny Gianatasio Title: *CEO*

Print Name: *Penny Gianatasio* Date: *October 8, 2018*

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: *NJ Transit RFP No. 18-015* Bidder/Proposer: *Certified Site Safety of NY LLC*

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☑ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): *Penny Gianatasio* Signature: Penny Gianatasio

Title: *CEO* Date: *October 8, 2018*

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The *Certified Site Safety of NY LLC* (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

Certified Site Safety of NY LLC (Insert Name of Company) no ~~no~~ *known* exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

Penny Gianatasio
Type or Print Name

CEO
Title

October 8, 2018
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

COUNTY OF

I, *Penny Gianatasio* of the City of *Bedford Corners* in the County of *Westchester* and the State of *New York* of full age, being duly sworn according to law on my oath depose and say that:

I am *CEO* of the firm Of *Certified Site Safety of NY LLC* the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by *Certified Site Safety of NY LLC*
(Name of Contractor).

Penny Gianatasio
(Also type or print name of affiant under signature)

Subscribed and sworn to before me this

8th day of *October*, 20 *18*

Notary Public of

My commission expires *Nov 13* 20*19*

Denise Groneman
Notary Public, State of New York
No. 01GR6050659
Qualified in Westchester County
Commission Expires Nov. 13, 2019

EXHIBIT 11

08/2018 Federal

AFFIDAVIT OF COMPLIANCE

I, ***Penny Gianatasio*** (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

Certified Site Safety of NY LLC
(Print Name of Contractor)

(Signature of Authorized Principal or Officer)

Penny Gianatasio
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this ***8th*** day of ***October***, 20***18***

Denise Groneman Notary

Denise Groneman
Notary Public, State of New York
No. 01GR6050659
Qualified in Westchester County
Commission Expires Nov. 13, 2019

EXHIBIT 12

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Authorized Official

Penny Gianatasio
Print Name

CEO
Title

Certified Site Safety of NY LLC
Firm

October 8, 2018
Date

Collins Engineers, Inc.

Collins Engineers, Inc.

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of 10/10, 2018 and sets forth the understanding by and between COLLINS ENGINEERS, INC (***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. 18-015, for CONSTRUCTION MANAGEMENT Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality***. The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information***. This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
Signature	Signature
Printed Name	DANIEL O'CONNOR Printed Name
Title	VP Title
Date	10/10/18 Date

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: COLLINS ENGINEERS Contract Number: 18-051

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country
COLLINS ENGINEERS	DIVING INSPECTIONS	U.S.A

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: COLLINS ENGINEERS
[Name of Organization or Entity]

By: [signature] Title: VP

Print Name: DANIEL O'CONNOR Date: 10/10/18

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: 18-057 Bidder/Proposer: COLLINS ENGINEERS

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☑ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): DANIEL O'CONNOR Signature: _____

Title: VP Date: 10/10/06

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The COLLINS ENGINEERS (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

COLLINS ENGINEERS (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

DANIEL O'CONNOR
Type or Print Name

VP
Title

10/10/16
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

COUNTY OF

I, DANIEL O'CONNOR of the City of Portsmouth in the County of Rockingham and the State of New Hampshire of full age, being duly sworn according to law on my oath depose and say that:

I am Vice President of the firm Of Collins Engineers the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by Collins Engineers
(Name of Contractor).

(Also type or print name of affiant under signature)
DANIEL O'CONNOR

Subscribed and sworn to before me this
20th day of November, 2018

Notary Public of

My commission expires 4/12 2022

DENICE U ARENAS
Notary Public, State of New York
No. 01AR6220290
Qualified in Westchester County
Commission Expires April 12, 2022

08/2018 Federal

EXHIBIT 11

08/2018 Federal

AFFIDAVIT OF COMPLIANCE

I, DANIEL O'CONNOR (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

COLLINS ENGINEERS
(Print Name of Contractor)

(Signature of Authorized Principal or Officer)

DANIEL O'CONNOR, VP
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 10 day of Oct, 2016

DENICE U ARENAS
Notary Public, State of New York
No. 01AR6220290
Qualified in Westchester County
Commission Expires April 12, 2022

EXHIBIT 12

08/2018 Federal

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Authorized Official

DANIEL O'CONNOR
Print Name

VP
Title

COLLINS ENGINEERS INC
Firm

10/10/18
Date

Garg Consulting Services, Inc.

Garg Consulting Services, Inc.

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of october 8, 2018 and sets forth the understanding by and between Garg Consulting Services, Inc. (***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. 18-015, for CM Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality.*** The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information.*** This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
Signature	Signature
Printed Name	Frank Morse, PE Printed Name
Title	Operations Manager Title
Date	10/8/2018 Date

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: Garg Consulting Services, Inc. Contract Number: 18-015

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country
Garg Consulting Services, Inc.	Construction Management Services	U.S.A.

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: Garg Consulting Services, Inc.
[Name of Organization or Entity]

By: _____ Title: CEO / President

Print Name: Eugene Chuang, Ph.D., P.E. Date: 9/21/2018

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: 18-015 Bidder/Proposer: Garg Consulting Services, Inc.

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☒ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN N/A

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Eugene Chuang, Ph.D., P.E.

Signature: _____

Title: CEO / President

Date: 9/21/2018

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The Garg Consulting Services, Inc. (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

Garg Consulting Services, Inc. (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

Eugene Chuang, Ph.D., P.E.
Type or Print Name

CEO / President
Title

9/21/2018
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF Connecticut

COUNTY OF Hartford

I, Eugene Chuang, Ph.D., P.E. of the City of Rocky Hill in the County of Hartford and the State of Connecticut of full age, being duly sworn according to law on my oath depose and say that:

I am CEO / President of the firm Of Garg Consulting Services, Inc. the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by Garg Consulting Services, Inc.
(Name of Contractor).

(Also type or print name of affiant under signature)
Eugene Chuang, Ph.D., P.E.

Subscribed and sworn to before me this
21st day of September, 20 18

Notary Public of

My commission expires 4/12 20 22

DENICE U ARENAS
Notary Public, State of New York
No. 01AR6220290
Qualified in Westchester County
Commission Expires April 12, 2022

EXHIBIT 11

AFFIDAVIT OF COMPLIANCE

I, Eugene Chuang, Ph.D., P.E. (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

Garg Consulting Services, Inc.
(Print Name of Contractor)

(Signature of Authorized Principal or Officer)

Eugene Chuang, Ph.D., P.E. / CEO-President
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 21th day of Septemer, 2018

DENICE U ARENAS
Notary Public, State of New York
No. 01AR6220290
Qualified in Westchester County
Commission Expires April 12, 2022

EXHIBIT 12

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Authorized Official

Eugene Chuang, Ph.D., P.E.
Print Name

CEO / President
Title

Garg Consulting Services, Inc.
Firm

9/21/2018
Date

Promatech, Inc.

Promatech, Inc.

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of September 24, 2018 and sets forth the understanding by and between Promatech, Inc. (***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. 18-015, for CM Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality***. The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information***. This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
Signature	Signature
	Carrie Streahle
Printed Name	Printed Name
	President
Title	Title
	September 24, 2018
Date	Date

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: Promatech, Inc. Contract Number: RFP 18-015

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country
Promatech, Inc.	Construction Management	United States

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: Promatech, Inc.
[Name of Organization or Entity]

By: _____ Title: President

Print Name: Carrie Streahle Date: September 24, 2018

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: 18-015 Bidder/Proposer: Promatech, Inc.

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☒ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Carrie Streahle Signature: _____

Title: President Date: September 24, 2018

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The Promatech, Inc. (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

Promatech, Inc. (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

Carrie Streahle
Type or Print Name

President
Title

September 24, 2018
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

COUNTY OF

I, Carrie Streahle of the City of Cinnaminson in the County of Burlington and the State of New Jersey of full age, being duly sworn according to law on my oath depose and say that:

I am President of the firm Of Promatech, Inc. the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by Promatech, Inc.

(Name of Contractor).

(Also type or print name of affiant under signature)

Carrie Streahle, President

Subscribed and sworn to before me this

24 day of September, 20 18

MICHAEL G. MASSIE
NOTARY PUBLIC OF NEW JERSEY
Comm. # 50070592
My Commission Expires 10/23/2022

Notary Public of

My commission expires October 23 20 22

EXHIBIT 11

AFFIDAVIT OF COMPLIANCE

I, Carrie Streahle (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

Promatech, Inc.
(Print Name of Contractor)

(Signature of Authorized Principal or Officer)

Carrie Streahle, President
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 24 day of September, 20 18

DENICE U ARENAS
Notary Public, State of New York
No. 01AR6220290
Qualified in Westchester County
Commission Expires April 12, 2022

EXHIBIT 12

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Authorized Official

Carrie Streahle
Print Name

President
Title

Promatech, Inc.
Firm

September 24, 2018
Date

Stellar Services, Inc.

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of November 13th, 2018 and sets forth the understanding by and between Stellar Services, Inc. (***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. 18-015, for Construction Management Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality***. The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information***. This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information***. All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief***. The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous***. This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority***. Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
Signature	Signature
	Liang Chen
Printed Name	Printed Name
	President
Title	Title
	11/13/2018
Date	Date

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: Stellar Services, Inc. Contract Number: RFP #18-015

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country
Stellar Services, Inc.	Document Control	USA

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: Stellar Services, Inc.
[Name of Organization or Entity]

By: Title: President

Print Name: Liang Chen Date: 11/13/2018

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: 18-015 Bidder/Proposer: Stellar Services, Inc.

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☑ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Liang Chen Signature: _____

Title: President Date: 11/13/2018

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The Stellar Services, Inc. (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

Stellar Services, Inc. (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

Liang Chen
Type or Print Name

President
Title

11/13/2018
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF NEW ~~JERSEY~~ York

COUNTY OF New York

I, Liang Chen of the City of New York in the County of New York and the State of New York of full age, being duly sworn according to law on my oath depose and say that:

I am President of the firm Of Stellar Services, Inc. the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by Stellar Services, Inc.
(Name of Contractor).

(Also type or print name of affiant under signature)

Liang Chen

Subscribed and sworn to before me this

27th day of November, 2018

Notary Public of

My commission expires 06/19 2021

YINGLIN LIN
NOTARY PUBLIC-STATE OF NEW YORK
No. 01LI6360373
Qualified in Kings County
My Commission Expires 06-19-2021

EXHIBIT 11

AFFIDAVIT OF COMPLIANCE

I, Liang Chen (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

Stellar Services, Inc.
(Print Name of Contractor)

(Signature of Authorized Principal or Officer)

Liang Chen, President
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 13th day of November, 2018

YINGLIN LIN
NOTARY PUBLIC-STATE OF NEW YORK
No. 01LI6360373
Qualified in Kings County
My Commission Expires 06-19-2021

EXHIBIT 12

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Authorized Official

Liang Chen
Print Name

President
Title

Stellar Services, Inc.
Firm

11/13/2018
Date

The Calladium Group

The Calladium Group

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of 9/21, 2018 and sets forth the understanding by and between The Palladium Group LLC (***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. 18-015, for Construction Management Services for the Raritan River Bridge Replacement Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality***. The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information***. This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
Signature	Signature
	Leslie Mesnick
Printed Name	Printed Name
	Principal
Title	Title
	9/21/2018
Date	Date

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: The Calladium Group Contract Number: RFP 18-015

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country
The Calladium Group	Environmental Consulting Services	USA

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: The Calladium Group
[Name of Organization or Entity]

By: Leslie Mesnik Title: Principal

Print Name: Leslie Mesnik Date: 9/21/2018

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: 18-015 Bidder/Proposer: The Calladium Group

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☑ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Name _____ Relationship to Bidder/Offeror _____
Description of Activities _____
_____
Duration of Engagement _____ Anticipated Cessation Date _____
Bidder/Offeror Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Leslie Mesnik Signature: [signature]

Title: Principal Date: 9/21/2018

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The The Calladium Group LLC (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

The Calladium Group LLC (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

Leslie Mesnick
Type or Print Name

Principal
Title

9/21/2018
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

COUNTY OF

I, Leslie Mesnick of the City of New York in the County of Kings and the State of New York of full age, being duly sworn according to law on my oath depose and say that:

I am Principal of the firm Of The Calladium Group LLC the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by The Calladium Group LLC
(Name of Contractor).

(Also type or print name of affiant under signature)
Leslie Mesnick

Subscribed and sworn to before me this
21st day of Sept, 20 16

Notary Public of

My commission expires 10/14 20 20

PETER SU
Notary Public, State of New York
No. 01SU6194935
Qualified in Queens County
Commission Expires Oct. 14, 2020

EXHIBIT 11

AFFIDAVIT OF COMPLIANCE

I, Leslie Mesnick (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

The Calladium Group LLC
(Print Name of Contractor)

(Signature of Authorized Principal or Officer)

Leslie Mesnick, Principal
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 21st day of Sept, 2018

PETER SU
Notary Public, State of New York
No. 01SU6194935
Qualified in Queens County
Commission Expires Oct. 14. 2020

EXP 10/14/20

EXHIBIT 12

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Authorized Official

LESLIE MESNICK
Print Name

PRINCIPAL
Title

THE CALLADIUM GROUP LLC
Firm

9/21/2018
Date

TY Lin International Group

TY Lin International Group

ATTACHMENT D
Non-Disclosure Agreement

NONDISCLOSURE AGREEMENT

This Nondisclosure Agreement is dated as of October 8, 2018 and sets forth the understanding by and between T.Y. Lin International (***Name of Consultant***) ("Consultant"), and the New Jersey Transit Corporation ("NJ TRANSIT"), an instrumentality of the State of New Jersey, regarding the restrictions that are to be placed on the use, dissemination, and disclosure of certain proprietary and confidential information furnished by NJ TRANSIT, or received, accessed, or obtained by Consultant, in connection with services rendered by Consultant in connection with Request for Proposal ("RFP") No. 18-015, for Construction Management Services (collectively, the "Services").

1. ***Definition of "Proprietary Information."*** Proprietary Information is all information furnished by NJ TRANSIT to the consultant, or received, accessed, or obtained by Consultant, whether electronic or hard copy, in connection with the Services, specifically and solely with respect to Consultant's work on the Project Document Control System ("PDCS") and NJ TRANSIT's Electronic Content Management System ("ECMS"), as required for the Services, as further described in Section IV(C)(3), Task C1(d) of the RFP. The term Proprietary Information includes all information furnished by NJ TRANSIT to Consultant, or received, accessed, or obtained by Consultant, in connection with the PDCS and/or ECMS, without regard to whether the information obtained relates to the Services.

2. ***Confidentiality.*** The Consultant agrees to maintain in confidence all Proprietary Information as may be disclosed or made available to it by NJ TRANSIT. Except in accordance with the terms of this Agreement, the Consultant may neither use nor disclose any Proprietary Information without NJ TRANSIT's prior written permission. The Proprietary Information may be disclosed to employees, or agents within, or associated with, the organization of the Consultant who are involved in the Services, but only on a limited, need-to-know basis. In addition, the Consultant will exercise due diligence to maintain that Proprietary Information in confidence. In this Agreement, "due diligence" means at least the same precautions and standard of care which the Consultant uses to safeguard its own proprietary information.

3. ***No Obligation As to Certain Information.*** This Agreement is made with the understanding, however, that there is no obligation imposed regarding information that (a) now or later becomes generally known or available through no act or omission on the part of the Consultant; (b) is already known to the Consultant at the time it was first disclosed to it under this Agreement (as shown by the Consultant's files and records prior to disclosure); (c) is furnished by NJ TRANSIT to third parties with written permission to disclose provided by NJ TRANSIT; (d) is received by the Consultant from a third party under no obligation of confidence; (e) is independently created by the Consultant without reference to or reliance upon the Proprietary Information provided by NJ TRANSIT; or (f) was disclosed by the Consultant in response to a valid order by a court or other governmental body, such disclosure was otherwise required by law, or such disclosure was necessary to establish the rights of either party under

this Agreement (provided that the Consultant provided NJ TRANSIT with a reasonable opportunity to seek protective legal treatment for such information).

4. ***Term.*** This Agreement shall commence as of the date first set forth above and shall continue until terminated by NJ TRANSIT or until the information is released for dissemination to the general public. Notwithstanding the foregoing, the confidentiality obligations set forth in Section 2 herein shall survive termination, unless an exception, as described in Section 3, applies.

5. ***Return of Proprietary Information.*** All Proprietary Information furnished under this Agreement is and will remain the property of NJ TRANSIT and will be either returned to it by the Consultant promptly upon request, together with any copies of the Proprietary Information, or destroyed, as certified by the Consultant.

6. ***Right to Injunctive Relief.*** The parties recognize that any actual or threatened disclosure of Proprietary Information in violation of this Agreement may cause NJ TRANSIT irreparable harm for which monetary damages would be an insufficient remedy, and that NJ TRANSIT will be entitled to seek injunctive relief or a decree of specific performance upon a proper showing of such a violation, without the necessity of demonstrating actual monetary damage and without any requirement to post any bond or other security therefor.

7. ***Miscellaneous.*** This Agreement is binding upon the Consultant's officers, directors, employees, agents, subsidiaries, parent companies, successors-in-interest and other corporate affiliates. It may not be assigned by the Consultant. If any term of this Agreement is held to be illegal or unenforceable, such holding will not affect the validity of the remaining provisions of this Agreement. This Agreement contains the entire understanding of the parties regarding its subject matter, and it supersedes all prior agreements or understandings between the parties on such subject(s). This Agreement will be construed in accordance with the laws of the State of New Jersey, without regard to choice of law provisions. The parties acknowledge that this Agreement may not be modified except in writing and duly signed by the parties.

8. ***Authority.*** Each individual signing this Agreement warrants that he/she is authorized to and by his/her signature does intend to bind the corporation, limited liability company or other entity for which he/she purports to act.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first written above.

New Jersey Transit	**(Consultant)**
Signature	Signature
	Chandu Bhoraniya
Printed Name	Printed Name
	Vice President
Title	Title
	10/08/2018
Date	Date

EXHIBIT 7

N.J.S.A 52:34-13.2 CERTIFICATION

SOURCE DISCLOSURE CERTIFICATION FORM

Consultant: T.Y. Lin International Contract Number: 18-015

I hereby certify and say:

I have personal knowledge of the facts set forth herein and am authorized to make this Certification on behalf of the Consultant.

The consultant submits this Certification as part of its proposal in response to the referenced solicitation issued by NJ TRANSIT, in accordance with the requirements of N.J.S.A. 52:34-13.2.

The following is a list of every location where services will be performed by the consultant and all subconsultants.

Consultant or Subconsultant	Description of Services	Performance Location[s] by Country
T.Y. Lin International	Construction Services	New Jersey, U.S.

Any changes to the information set forth in this Certification during the term of any contract awarded under the referenced solicitation or extension thereof will be immediately reported by the consultant to the Director of Contracts, NJ TRANSIT Corporation, One Penn Plaza East, Newark, NJ 07105.

I understand that, after award of a contract to the consultant, it is determined that the consultant has shifted services declared above to be provided within the United States to sources outside the United States prior to a written determination by the Contracting Officer, that the services cannot be performed in the United States, the consultant shall be deemed in breach of contract, which contract will be subject to termination for cause pursuant to Article 16 of the Professional Services Agreement.

I further understand that this Certification is submitted on behalf of the consultant in order to induce NJ TRANSIT to accept a proposal, with knowledge that NJ TRANSIT is relying upon the truth of the statements contained herein.

I certify that, to the best of my knowledge and belief, the foregoing statements by me are true. I am aware that if any of the statements are willfully false, I am subject to punishment.

Consultant: T.Y. Lin International
[Name of Organization or Entity]

By: _____ Title: Vice President

Print Name: Chandu Bhoraniya Date: 10/08/2018

EXHIBIT 8

DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

IFB/RFP No.: 18-015 Bidder/Proposer: T.Y. Lin International

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the State of New Jersey, Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found at the following website:
http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf.
Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited *to,* imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

1. PLEASE CHECK THE APPROPRIATE BOX:

☒ I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

2. *OR*

☐ I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as nonresponsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION.
IF YOU NEED TO MAKE ADDITIONAL ENTRIES, PLEASE COPY AND COMPLETE THIS SHEET AND SUBMIT IT WITH YOUR BID.

Name N/A Relationship to Bidder/Offeror _____

Description of Activities _____

Duration of Engagement _____ Anticipated Cessation Date _____

Bidder/Offeror Contact Name _____ Contact Phone Number _____

Name _____ Relationship to Bidder/Offeror _____

Description of Activities _____

Duration of Engagement _____ Anticipated Cessation Date _____

Bidder/Offeror Contact Name _____ Contact Phone Number _____

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Chandu Bhoraniya Signature: _____

Title: Vice President Date: 10/08/2018

EXHIBIT 9

CONTRACTOR'S CERTIFICATION OF ELIGIBILTY

The T.Y. Lin International (Insert Name of Company) hereby certifies that it is not listed on the State of New Jersey, Department of Labor and Workforce Development, Division of Wages and Hour Compliance, Prevailing Wage Debarment List or on the State of New Jersey, Department of Treasury, Consolidated Debarment Report.

T.Y. Lin International (Insert Name of Company) no no exclusion on the consolidated U.S. Government, Systems for Award Management (SAM) database.

I, being duly authorized, certify that the information supplied above is complete and correct to the best of my knowledge. I certify that all of the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

Signature

Chandu Bhoraniya
Type or Print Name

Vice President
Title

10/08/2018
Date

EXHIBIT 10

NON-COLLUSION AFFIDAVIT

STATE OF NEW JERSEY

COUNTY OF

I, Chandu Bhoraniya of the City of Parsippany in the County of Morris and the State of New Jersey of full age, being duly sworn according to law on my oath depose and say that:

I am Vice President of the firm Of T.Y. Lin International the bidder making the Proposal for the above named project, and that I executed the said Proposal with full authority so to do; that said bidder has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in connection with the above named project; and that all statements contained in said Proposal and in this affidavit are true and correct, and made with full knowledge that the State of New Jersey relies upon the truth of the statements contained in said Proposal and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such contract upon agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by T.Y. Lin International

(Name of Contractor).

(Also type or print name of affiant under signature)
Chandu Bhoraniya

Subscribed and sworn to before me this

8th day of October, 20 18

Notary Public of Bergen County

My commission expires 9/12 2021

Miriam L. Eichler
Notary Public, State of New Jersey
Commission Number: 2455558
My Commmission Expires September 12, 2021

EXHIBIT 11

AFFIDAVIT OF COMPLIANCE

I, Chandu Bhoraniya (*name of individual*), executing this document on behalf of the undersigned company, partnership, corporation, or entity hereinafter referred to as "Contractor", presently seeking to do business with NJ TRANSIT by way of a Request for Proposals ("RFP") or Invitation for Bids ("IFB"), hereby warrant and affirm to NJ TRANSIT as follows:

1. I warrant and affirm that Contractor has received a copy of NJ TRANSIT's Code of Vendor Ethics and that I have read and studied this document and distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document. In addition, I further warrant and affirm that Contractor has received from NJ TRANSIT a document entitled "Important Notice to All Contractors and Consultants" and that I have read and studied this document, including the page setting forth various New Jersey statutory provisions, and that Contractor has distributed this document to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT and required said personnel to fully read this document.

2. Contractor warrants and affirms that it has issued written instructions to all of Contractor's personnel involved in seeking to do business with NJ TRANSIT instructing and requiring same to strictly adhere to the Contractor's responsibilities as set forth in NJ TRANSIT's Code of Vendor Ethics and in the "Important Notice to All Contractors and Consultants".

3. Contractor warrants and affirms that during the bidding or proposal process for the contract with NJ TRANSIT, no gratuities or other inducements have been offered or given or will be offered or given in any form including gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment, or any other thing of value or favors of any kind to any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT.

4. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT, Contractor has not and will not make any offers of employment to any member of the NJ TRANSIT Board of Directors, officer or employee directly involved with this contract or solicit or interview therefor, directly or indirectly, without first seeking and obtaining written approval from NJ TRANSIT's Ethics Liaison Officer.

5. The Contractor warrants and affirms that during the RFP or IFB process for the contract with NJ TRANSIT it has and shall promptly report in writing to NJ TRANSIT every instance that comes to the Contractor's attention and knowledge regarding any member of NJ TRANSIT's Board of Directors, officer or employee of NJ TRANSIT who has solicited or asked Contractor to provide gifts, gratuities, benefits, inducements, meals (other than *de minimis* valued snacks such as coffee, tea, soda, pretzels, cookies, or similar non-meal items), entertainment or any other thing of value or favors of any kind or has made any solicitation or request, directly or indirectly, for employment with or through the Contractor.

6. The Contractor acknowledges and accepts that for breach or violation of the foregoing warranties and affirmations, NJ TRANSIT shall have the discretion and legal right to disqualify Contractor from bidding or proposing for a contract between the Contractor and NJ TRANSIT.

T.Y. Lin International
(Print Name of Contractor)

(Signature of Authorized Principal or Officer)

Chandu Bhoraniya, Vice President
(Print Name and Title of Signator)

Sworn to and Subscribed to before me, this 8th day of October, 20 18

Miriam L. Eichler, Notary

Miriam L. Eichler
Notary Public, State of New Jersey
Commission Number: 2455558
My Commission Expires September 12, 2021

EXHIBIT 12

NEW JERSEY TRANSIT CORPORATION

CERTIFICATION FOR CONTRACTS, GRANTS, LOANS AND COOPERATIVE AGREEMENTS (BYRD ANTI-LOBBYING CERTIFICATION)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal Contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal Contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature of Authorized Official

Chandu Bhoraniya
Print Name

Vice President
Title

T.Y. Lin International
Firm

10/08/2018
Date

Business Registrations

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name:	AECOM TECHNICAL SERVICES, INC.
Trade Name:	
Address:	30 KNIGHTSBRIDGE ROAD, STE 520 PISCATAWAY, NJ 08854-3963
Certificate Number:	0096113
Effective Date:	July 01, 1991
Date of Issuance:	November 26, 2018

For Office Use Only:

20181126205508641

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name:	MOTT MACDONALD LLC
Trade Name:	
Address:	111 WOOD AVENUE SOUTH ISELIN, NJ 08830-4112
Certificate Number:	1169109
Effective Date:	August 01, 2005
Date of Issuance:	July 25, 2016

For Office Use Only:

20160725083242072

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name:	MODJESKI AND MASTERS, INC.
Trade Name:	
Address:	133 GAITHER DRIVE, SUITE O MOUNT LAUREL, NJ 08054
Certificate Number:	0090643
Effective Date:	January 14, 1992
Date of Issuance:	April 02, 2018

For Office Use Only:

20180402084610193

State of New Jersey

Division of Consumer Affairs

State Board of Professional Engineers and Land Surveyors

THIS CERTIFIES THAT

DAN BROWN AND ASSOCIATES

P.O. BOX 309

Jasper TN 37347

Has met the requirements of the State Board of Professional Engineers and Land Surveyors and is hereby issued a

CERTIFICATE OF AUTHORIZATION

to offer the following services

Engineering

Person in Responsible Charge: DAN A BROWN

For the names of other Responsible Charge Licensees, go to: http://www.njconsumeraffairs.com/pels/certrpt.pdf

Date: August 31, 2018

Certificate No. 24GA28203200

Expiration Date: 08/31/2020

Acting Executive Director

10/19/05

Taxpayer Identification# **223-616-643/000**

Dear Business Representative:

Congratulations! You are now registered with the New Jersey Division of Revenue.

Use the Taxpayer Identification Number listed above on all correspondence with the Divisions of Revenue and Taxation, as well as with the Department of Labor (if the business is subject to unemployment withholdings). Your tax returns and payments will be filed under this number, and you will be able to access information about your account by referencing it.

Additionally, please note that State law requires all contractors and subcontractors with Public agencies to provide proof of their registration with the Division of Revenue. The law also amended Section 92 of the Casino Control Act, which deals with the casino service industry.

We have attached a Proof of Registration Certificate for your use. To comply with the law, if you are currently under contract or entering into a contract with a State agency, you must provide a copy of the certificate to the contracting agency.

If you have any questions or require more information, feel free to call our Registration Hotline at (609)292-1730.

I wish you continued success in your business endeavors.

Sincerely,

John E. Tully, CPA
Director

STATE OF NEW JERSEY

BUSINESS REGISTRATION CERTIFICATE

DEPARTMENT OF TREASURY/
DIVISION OF REVENUE
PO BOX 252
TRENTON, N J 08646-0252

TAXPAYER NAME:

ADVANCED INFRASTRUCTURE DESIGN, INC.

TRADE NAME:

ADDRESS:

10 RICHARDSON LANE
HIGHSTOWN NJ 08520-4912

SEQUENCE NUMBER:

0103109

EFFECTIVE DATE:

10/29/98

ISSUANCE DATE:

10/19/05

Director

FORM-BRC(08-01)

This Certificate is NOT assignable or transferable. It must be conspicuously displayed at above address

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name:	AMER-COM CORP.
Trade Name:	
Address:	1259 ROUTE 46 EAST, BLDG.2 PARSIPPANY, NJ 07054
Certificate Number:	0078542
Effective Date:	February 06, 1991
Date of Issuance:	November 26, 2018

For Office Use Only:

20181126211328407

STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
DIVISION OF REVENUE AND ENTERPRISE SERVICES
SHORT FORM STANDING

COLLINS ENGINEERS, INCORPORATED
0100586843

I, the Treasurer of the State of New Jersey, do hereby certify that the above-named Illinois Foreign For-Profit Corporation was registered by this office on May 02, 1994.

As of the date of this certificate, said business continues as an active business in good standing in the State of New Jersey, and its Annual Reports are current.

I further certify that the registered agent and office are:

CORPORATION SERVICE COMPANY
PRINCETON SOUTH CORPORATE CTR
STE 160, 100 CHARLES EWING BLVD
EWING, NJ 08628

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal at Trenton, this 6th day of April, 2018

Elizabeth Maher Muoio
Acting State Treasurer

Certificate Number : 2324577558

Verify this certificate online at

https://www1.state.nj.us/TYTR_StandingCert/JSP/Verify_Cert.jsp

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name:	GARG CONSULTING SERVICES INC
Trade Name:	
Address:	1000 CRAWFORD PLACE, SUITE 380 MT LAUREL, NJ 08054
Certificate Number:	0078435
Effective Date:	April 25, 1990
Date of Issuance:	November 26, 2018

For Office Use Only:

20181126212120843

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name:	PROJECT MANAGEMENT TECHNOLOGIES, INC.
Trade Name:	PROMATECH INC
Address:	506 ROUITE 130 N STE 3 CINNAMINSON, NJ 08077
Certificate Number:	0073279
Effective Date:	August 29, 1985
Date of Issuance:	November 26, 2018

For Office Use Only:

20181126212514297

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name:	4 U SERVICES, INC.
Trade Name:	STELLAR SERVICES
Address:	57TH W 38TH STREET FL 11 NEW YORK, NY 10018
Certificate Number:	0058023
Effective Date:	September 21, 1998
Date of Issuance:	February 15, 2011

For Office Use Only:

20110215103032763

STATE OF NEW JERSEY
BUSINESS REGISTRATION CERTIFICATE

Taxpayer Name:	T.Y. LIN INTERNATIONAL
Trade Name:	
Address:	ONE EDGEVIEW DRIVE HACKETTSTOWN, NJ 07840
Certificate Number:	0843756
Effective Date:	January 01, 1978
Date of Issuance:	April 26, 2010

For Office Use Only:

20100426171558725