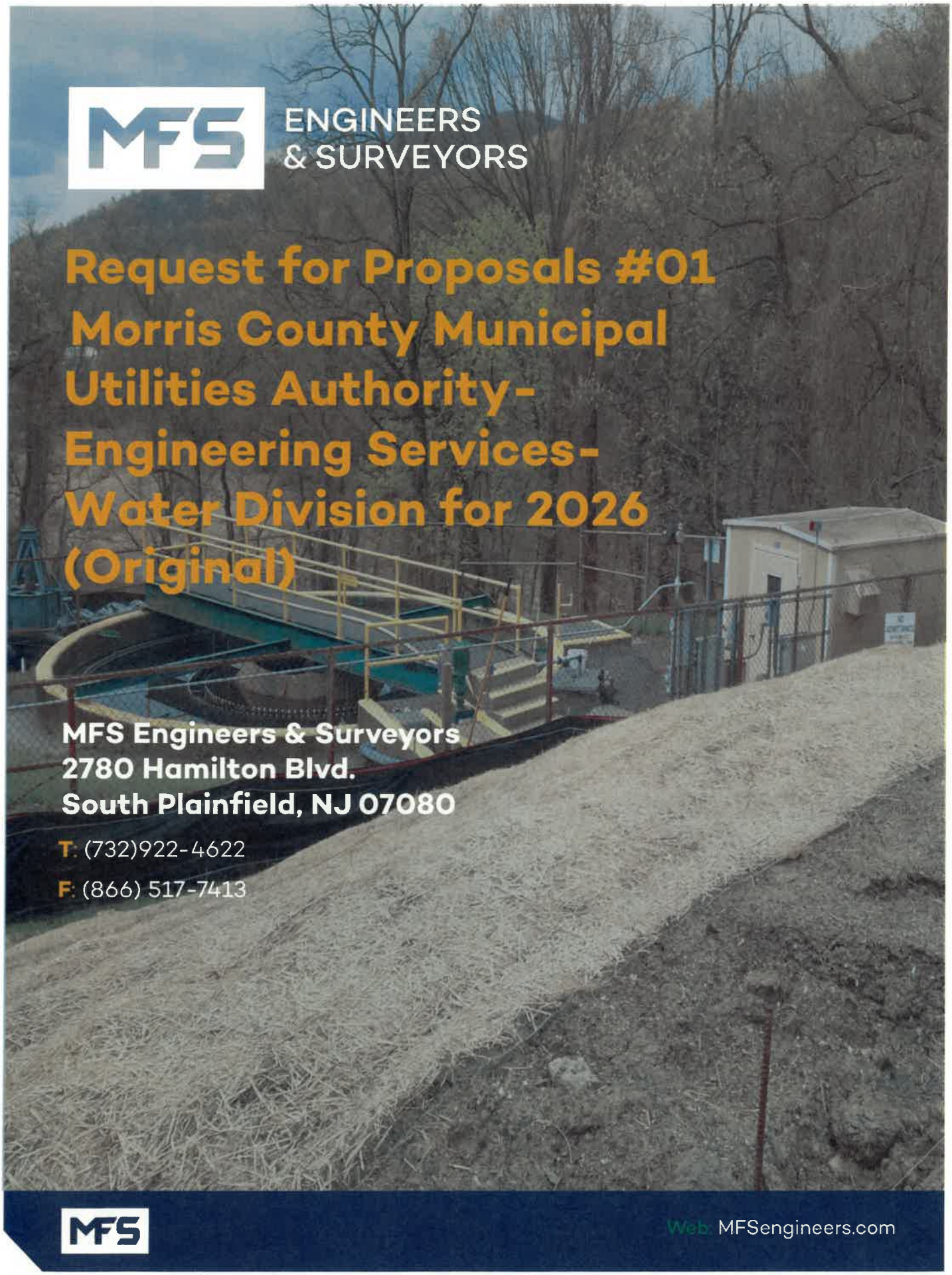

MFS ENGINEERS & SURVEYORS

Request for Proposals #01 Morris County Municipal Utilities Authority- Engineering Services- Water Division for 2026 (Original)

MFS Engineers & Surveyors
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MFS ENGINEERS & SURVEYORS

14 January 2026

Morris County Municipal Utilities Authority
Attn.: Mr. Larry Gindoff,
Executive Director
370 Richard Mine Road,
Wharton, NJ 07885

RE: RFP #01- Morris County Municipal Utilities Authority-
Engineering Services- Water Services for 2026
MFS Project No.: NJ26004

Dear Mr. Gindoff,

MFS Consulting Engineers & Surveyor, DPC (MFS) is pleased to submit our Qualifications and Proposal to the Morris County Municipal Utilities Authority for Engineering Services for the Water Division for 2026. We are confident that we have the expertise and means to perform and provide the required Project Management and Professional Engineering Services for this important On-Call Contract. MFS is familiar with the Public bidding process form previous contracts with the Bergen County Utilities Authority, Northwest Bergen County Utilities Authority, Jersey City Municipal Utilities Authority, Essex County, Union County, Morris County, Ocean County, Somerset County, Mercer County, Hunterdon County, Burlington County, PSE&G, Atlantic City Electric, Exelon Delmarva, BGE, NYC Department of Design & Construction, NYC Economic Development Corporation and NYC Department of Environmental Protection. In addition, from a qualification's perspective, MFS is listed in Engineering News Record as a top 100 New York City area Design Firm (#79).

MFS is comprised of geotechnical and foundation, structural, site/civil engineering, construction management and land survey divisions. **We are submitting in the categories for geotechnical, civil, structural engineering and surveying services for this RFQ**. The Firm employs knowledgeable engineering professionals, construction managers, technical support staff, land surveyors, and administrative personnel. MFS is a certified MBE and SBE Firm in the State of New Jersey. We look forward to the opportunity to assist you with this important series of projects with the Morris County Municipal Utilities Authority.

Very truly yours,
MFS Consulting Engineers & Surveyor, DPC

Michael L. Mudalel, P.E.
Principal Engineer

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2780 Hamilton Blvd.
South Plainfield, NJ 07080
Phone 908 922 4622
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Table of Contents

1. Executive Summary.....Page 2
2. Name, Address and Contact Person of Firm.....Page 3
3. Firm Background, Description and Capabilities.....Page 4
4. Project Management Approach.....Page 10
5. Firm Staffing and Resumes of Key Personnel.....Page 12
6. Client References.....Page 14
7. Hourly Rates Proposal.....Page 15
8. Required Forms, Certifications and Attachments.....Page 16

1. EXECUTIVE SUMMARY

SECTION 1 – EXECUTIVE SUMMARY

MFS Consulting Engineers' blend of geotechnical, structural and site/ civil engineering, surveying, and construction management has enabled the firm to participate in a number of major, complex projects. We routinely deploy these engineering capabilities in concert with our in-house multi-disciplinary design talents (or as part of a team of design firms) and, as a result, MFS has developed the technical expertise needed to deal with a broad range of challenging site conditions and constraints. MFS is well known for its experience and expertise in addressing the complexities of various urban and waterfront sites including issues associated with shoreline stabilization, dredging, natural features, the built environment, infrastructure projects or the unstable or structurally deficient soils that are often present in these areas. Previous MFS projects for Northwest Bergen County Utilities Authority, Bergen County Utilities Authority, Jersey City MUA, Ocean County, Morris County, Union County, Essex County, Camden County, Somerset County, Mercer County, Hunterdon County, Burlington County, The Port Authority of NY & NJ, NYC Department of Environmental Protection, PSE&G, Atlantic City Electric, BGE, Exelon, Northern New Jersey and the New York City Metropolitan area are highlighted in this proposal.

The depth of our experience is also reflected in our diverse staff. Resumes of key personnel that will be technical leads and a proposed organization chart are included in this package. Our Team has extensive Utilities Project experience in New Jersey and the New York Metropolitan area. The MBE/SBE status of MFS will help achieve the Bergen County Utilities Authority's MBE/SBE program goals. Our experience and expertise would enable the Passaic Valley Sewerage Commission to consult with MFS regarding overall strategies and aspects of geotechnical engineering, site/civil engineering, structural engineering, surveying and construction management services. MFS has the capability, expertise and diversity of staff to both lead and perform the various public projects to be undertaken by the Passaic Valley Sewerage Commission. This includes Infrastructure Projects, Utilities Projects and a variety of Public Facilities Projects. Our services will support the needs of the Passaic Valley Sewerage Commission in a comprehensive fashion that would focus upon protecting the interests and goals of the Commission. We will draw on our extensive Utilities Project experience that includes multiple projects for PSE&G, Atlantic City Electric and Exelon. We have the depth of experience to provide professional consulting engineering services for a variety of public projects drawing on our experience with government and agency clients in the region. MFS has fourteen years of experience for Consulting Engineering Services on public projects, having provided professional engineering services to a variety of clients in New Jersey, New York, Eastern Pennsylvania and Puerto Rico. Our Firm is headquartered out of South Plainfield, New Jersey, which enables a rapid response time of 24 hours for Project Meetings or for any issues that may arise at various project sites in Newark, NJ. **Thank you for your consideration of MFS Consulting Engineers & Surveyor, DPC in the Categories of Geotechnical Engineering, Civil Engineering, Structural Engineering Surveying Services.** We look forward to the opportunity of working with the Morris County MUA for this important series of On-Call Projects for Professional Engineering and Surveying Services.

2. NAME, ADDRESS AND CONTACT PERSON OF FIRM

SECTION 2 – NAME, ADDRESS AND CONTACT PERSON OF FIRM

FIRM NAME, ADDRESS AND CONTACT PERSON

The Professional Consulting Engineering and Related Services required for various anticipated projects for The Morris County MUA will be performed at:

MFS Consulting Engineers & Surveyor, DPC
2780 Hamilton Boulevard
South Plainfield, NJ 07080

The person responsible for managing our services and executing agreements is:

Michael L. Mudalel, P.E., Principal Engineer
Tel: (908)922-4624 / Cell: (732)586-7212 / Fax: (866)517-7413 / E-mail: mlm@mfsengineers.com

3. FIRM BACKGROUND, DESCRIPTION AND CAPABILITIES

SECTION 3 – FIRM BACKGROUND, DESCRIPTION AND CAPABILITIES

FIRM DESCRIPTION AND CAPABILITIES

MFS is a professional engineering, surveying and construction management firm founded in 2009. MFS is an innovative firm that provides personalized services and solutions to every challenge. Through the past sixteen years, the firm has grown from three co-founding partners to over 85 employees in 2026. MFS employs knowledgeable engineering, surveying and construction management professionals including engineers, construction managers, technical support staff, and administrative personnel. Our team of experienced technical staff has built a reputation of innovative, high-quality solutions, managing large, cross-disciplinary projects that combine multiple engineering, surveying, and construction services. NJBIZ has named MFS as one of the 2025 Best Places to Work in New Jersey and MFS has received this honor for eight consecutive years prior. MFS is headquartered at 2780 Hamilton Blvd. in South Plainfield, NJ 07080. The firm has three satellite offices, one (1) located in Newfoundland, NJ, one (1) located in New York, NY and one (1) located in San Juan, Puerto Rico. MFS is listed in Engineering News Record as a Top 100 New York City Area Design Firm (#79). MFS is also a Certified MBE and SBE Firm in the State of New Jersey.

MFS emphasizes strong project management. MFS' professionals use a variety of integrated systems for the purpose of controlling time, cost and quality on a project. These include systems showing the relationships and durations of activities required for project completion; computerized databases for maintaining a uniform cost estimating framework from project inception through construction; and specifications and procedures directed at achieving the reviews, inspections and tests necessary to verify compliance with design criteria, code/industry standards and permit conditions. MFS offers comprehensive project, program and construction management, multi-discipline professional engineering, and professional surveying services covering all stages of project development.

SPECIALIZED EXPERIENCE AND TECHNICAL COMPETENCE

At a minimum, all of our project management services, professional engineering analysis and designs will be prepared as required by NJ state regulations and statues. In addition, MFS will be able to accommodate any additional project specific requirements as may be requested by Morris County MUA and various applicable local Building Codes.

Our professional staff's active participation in the New York and New Jersey American Society of Civil Engineers (ASCE) and Structural Engineering Institute (SEI) organizations has provided us contacts with other professional engineers throughout New York/New Jersey region. We are also active in the New York/ New Jersey Chapter of the Construction Management Association of America (CMAA). These organizations have been beneficial in not only developing a strong reputation for the firm, but more importantly developing strong professional relationships with our peers, and for the continuing education of our staff. As previously mentioned, MFS has a variety of professional engineering experience including but not limited to the sectors of energy & utility, government, industrial & manufacturing, education and institutions, healthcare, real

estate development, roadways, bridges, waterfront & marine, ports, and resiliency. MFS has also supported our previous clients by providing contract document submissions including but not limited to reports with recommendations, construction specifications, and signed and sealed drawings with supporting engineering calculation reports for these applications.

CAPACITY TO PERFORM

Our ability to accomplish multiple task assignments under term contracts has been repeatedly demonstrated over the past several years, as seen in our numerous open-end task-oriented projects in New York, New Jersey and Pennsylvania. Regardless of the task, fast-tracked, or a more typical schedule, MFS will provide the Morris County MUA with quality services provided in the most efficient and timely manner.

MFS has developed engineering departments capable of providing complete project management, construction management and engineering consulting services in the metro New York/ Northern New Jersey area, and extending into all of New Jersey, Eastern PA, and a good portion of NY.

AVAILABLE PROFESSIONAL STAFF

MFS', internally, can provide up to 7 project managers and 3 assistant project manager/engineers with supporting staff engineers as may be required by the Morris County MUA. Additionally, we can provide up to 4 certified construction inspectors.

COMPUTER SYSTEM

MFS has state-of-the-art in-house computer facilities with all of the latest technological advances that are essential to keep pace with our dynamic environment. Communication with our clients is of paramount importance, and MFS provides several means which facilitate the efficient exchange of information. MFS' Project Managers and engineering personnel are able to communicate with the project team using individual e-mail addresses, as well as file sharing web sites, and NetMeeting capabilities. Each Project Manager and Senior Engineer is equipped with a laptop, if required. In addition, they have the capability to remotely connect to our company network server from any location that has cell phone or wireless connections available. Each of our offices accesses a central network server for storage of project files, making the files easily accessible from anywhere.

OFFICE SOFTWARE AND SERVICES

MFS provides CAD services on a variety of drafting platforms, including AutoCAD 2019 edition, and Revit 2019. In addition, the structural department staff are well versed in different structural and geotechnical analysis software including RISA 2D & 3D, DeepEX, MathCAD, and AllPile. MFS staff are also fully versed in the use of Microsoft Office Suite, including Word, Excel, Project and Outlook.

JUDGEMENTS/PROFESSIONAL MALPRACTICE STATEMENT

There have been no Judgements in the last five years against MFS Consulting Engineers & Surveyor, DPC. This includes any Judgements for Professional malpractice in any State within the last five years.

CONFLICT OF INTEREST STATEMENT

To the best of our knowledge, we know of no situation that could be construed to be a conflict of interest between the Morris County MUA and MFS Consulting Engineers & Surveyor, DPC and any of our affiliated firms. MFS Principal's and Associate Engineers' have no known immediate relatives that are Morris County MUA employees or Morris County MUA Board Members. If such a situation were ever to arise, MFS will make the Morris County MUA aware of it.

AFFIRMATIVE ACTION/EQUAL OPPORTUNITY STATEMENT

MFS Consulting Engineers & Surveyor, DPC is an Equal Opportunity Employer that does not discriminate on the basis of actual or perceived race, creed, color, religion, alienage or national origin, ancestry, citizenship status, age, disability or handicap, sex, marital status, civil union status, veteran status, sexual orientation, genetic information, arrest record, or any other characteristic protected by applicable federal, state or local laws. Our management team is dedicated to this policy with respect to recruitment, hiring, placement, promotion, transfer, training, compensation, benefits, employee activities and general treatment during employment.

SUB-CONSULTANTS

MFS Consulting Engineers & Surveyor, DPC will utilize MFS Construction, LLC, our affiliated MBE Firm for Drilling Services for this Contract. By using our in-house Drilling Contractor, MFS will provide seamless services for all Geotechnical Engineering and Drilling Services with a single point of contact. For Laboratory Services, MFS will utilize TerraSense, LLC of Totowa, NJ for Laboratory Services. MFS has worked with TerraSense many times previously and has a strong working relationship with this Laboratory on various projects.

PROJECT EXAMPLES

MFS has provided professional engineering support, project management and construction management services for projects associated with Northwest Bergen County Utilities Authority, Bergen County Utilities Authority, Jersey City MUA, Ocean County, Union County, Essex County, Essex County Improvement Authority, Hudson County Improvement Authority, PSE&G, Atlantic City Electric, Delmarva, Port Authority of New York & New Jersey, Dormitory Authority of the State of New York, NYS Office of General Services, NYC Economic Development Corporation, NYC Department of Design and Construction, NY Governors' Office of Storm Recovery, Hudson River Park Trust, US Merchant Marine Academy, MTA NYC Transit and others. All projects are/have been provided meeting the client's requirements, our high standard of quality, budget, and schedule. Immediately following this page are Project Sheets and examples of our work for Professional Engineering Services for MFS. This is followed by a list of additional public clients for MFS.

Middlesex Water Company – Western Transmission Main Project

— OWNER
Middlesex Water Company

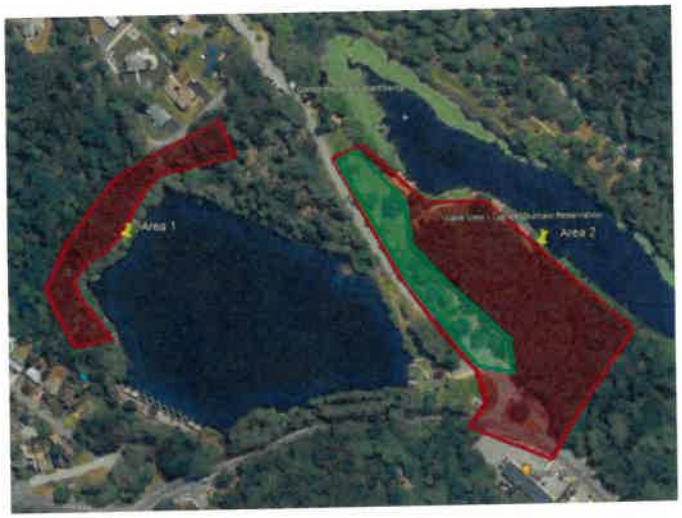
— LOCATION
Metuchen, New Jersey

— SERVICES PROVIDED
Geotechnical Engineering

MFS Engineers & Surveyors provided professional engineering services in support of the construction of the Middlesex Water Company Western Transmission Main Project. Specifically, MFS provided geotechnical and structural engineering services in support of a trenchless jack and bore crossing beneath four 54-inch concrete culverts in Metuchen, New Jersey.

The jack and bore will be for a large diameter casing to allow for the installation of a 42-inch water main. MFS completed a review of the planned water main alignment and proposed contractor equipment and means and methods. Upon completing our review, MFS prepared design calculations for the proposed jack and bore construction. MFS prepared calculations to clearly state the maximum calculated jacking resistance for the complete casing pipe. Based upon the calculations, MFS analyzed the structural capacity of the casing pipe wall thickness and material strength and demonstrated that the selected casing pipe material and thickness is capable of sustaining the anticipated installation loads.

PVWC Paterson Topographic Survey



— OWNER

Passaic Valley Water Commission (PVWC)

— LOCATION

Paterson, New Jersey

— SERVICES PROVIDED

Land Surveying

MFS Consulting Engineers & Surveyor, DPC (MFS) provided professional land surveying services for two areas of PVWC property around Rifle Camp Road.

The horizontal control was established in the field by GNSS RTK observations utilizing two primary control points. Additional control points were set and located by conventional traversing procedures. The horizontal control was tied to the appropriate State Plane Coordinate System NAD83, US Survey Feet. The vertical datum was tied to NAVD88 by a level run from known NGS Vertical benchmarks or GNSS RTK observations.

Within the limits of Survey Area 1 and 2, MFS performed a topographic field survey to locate the apparent accessible above-ground physical features, such as buildings, curbs, edge of pavement, drives, striping, sidewalks, fences, walls, utility/light poles, signs, street trees, and tree lines. First-floor/garage floor elevations were determined at doorways. Cross-sections of paved surfaces were surveyed at a minimum of 50-foot intervals and at low/ high points. Spot elevations were obtained at a spacing sufficient to develop contours at an interval of one foot. Breakline features such as top/ bottom of curb, edge of pavement, top/ bottom of slopes/ swales/ banks/ walls, etc. were located.

A table showing the wetland/SOW delineation line courses and distances was also included.

Jersey City MUA Temporary Force Main ByPass

— OWNER

Jersey City Municipal Utility Authority

— LOCATION

Jersey City, NJ

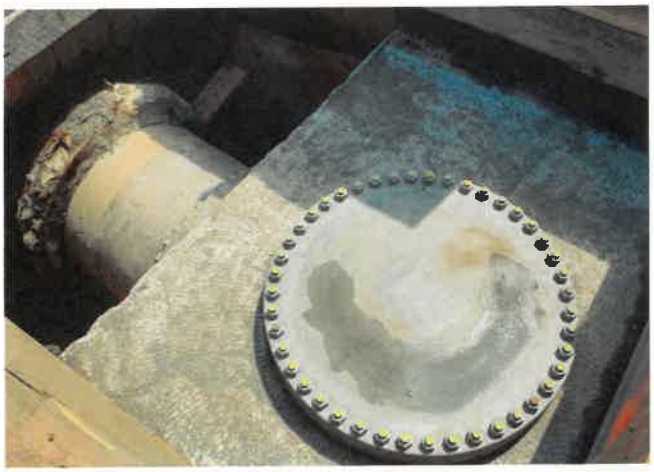
— SERVICES PROVIDED

•Site/Civil

MFS Engineers & Surveyors provided professional site/civil engineering services for the Cross Town Force Main Rehabilitation project's temporary force main by-pass in Jersey City, New Jersey. The planned construction consists of slip lining a 45" CCFRPM pipe through an existing 54" PCEP pipe. To complete this project, a 48" HDPE above-ground temporary bypass force main will provide temporary sewerage conveyance while the slip lining phase is completed.

MFS' civil engineering team support J. Fletcher Creamer & Son, Inc., in the project by providing site/civil engineering services for approximately 3,000 linear feet of a 48" diameter temporary by-pass force main along NJ Transit's rail service route. This included preparing construction documents with all necessary technical information to safely construct the temporary by-pass force main including schedules, elevations, and equipment capacity ratings. The documentation is to include an overall site plan, a temporary by-pass force main plan denoting all proposed temporary equipment and materials, and temporary by-pass force main profiles.

The deliverables package included construction documents depicting the intended pipe layout with the appropriate railway protection measures.



Camp Smith Wastewater Treatment Plant

— OWNER

New York Army National Guard

— LOCATION

Courtlandt Manor, New York

— SERVICES PROVIDED

- Structural Engineering
- Construction Inspections

MFS Engineers & Surveyors provided professional structural engineering services to The New York State Office of General Services (NYSOGS) on behalf of Woodard & Curran to assist in the proposed construction at the New York Army National Guard, Camp Smith Wastewater Treatment Plant in Cortlandt Manor, New York. The planned construction consisted of the installation of a new protective dome structure to cover three existing 35 foot diameter trickling tanks, with 8 inch thick concrete side walls. MFS was retained for the design review of the dome structure and investigation of the structure intensity, and design of the connections to the structure.

MFS' structural engineering services included review of available as-built construction drawings for the existing trickling tank, design review of dome structure, and design of connections to the tank. MFS reviewed the design for the dome to withstand live load snow, wind, and seismic loads. MFS was on site for full-time controlled inspections. The dome installation was checked for compliance with local governing codes and structural stability during construction. In addition, MFS analyzed the anchor bolt connection to the trickling tank to withstand the calculated wind and seismic loads.

Essex County - Vailsburg Park Renovations

OWNER
Essex County, New Jersey

LOCATION
Newark, New Jersey

SERVICES PROVIDED
- Site/Civil Engineering
- Survey
- Environmental Engineering
- Structural Engineering
- Construction Management

MFS Engineers & Surveyors provided professional engineering and survey services in support of the Vailsburg Park Bathroom and Basketball Courts Renovation project in Newark, New Jersey. The proposed project included redesigned basketball court with new overhead lighting and park improvements. Improvements included updated pedestrian walkways and new park amenities. MFS was retained by SM Design & Consulting PC to provide site/civil, structural and survey services in support of the project.

MFS' site/civil engineering services included the demolishing and the redesign of the existing basketball court and overhead lighting, redesign of park walkways, and the addition of park amenities such as drinking fountains, garbage receptacles and stadium seating for the court. The existing bathroom facilities required the design of a new sanitary sewer lateral and gas line. New pavement surfaces such as asphalt and concrete were incorporated into the design. Project oral presentation to Essex County Executive team was required in order to get final approval for the design. MFS also completed a soil erosion design and obtained approval from the local soil district.

MFS' structural engineering services included a design of the foundation for the proposed basketball hoops. The structural team prepared detailed drawings for the proposed foundation including work plans, elevations and section drawings.

Ocean County Justice Complex

— OWNER

Ocean County

— LOCATION

Toms River, New Jersey

— SERVICES PROVIDED

- Site/Civil Engineering
- Estimating
- Construction Administration

MFS Engineers & Surveyors provided professional civil engineering services for the Ocean County Justice Complex project. The project consisted of performing structural conditions and serviceability inspections of the existing wastewater line system within the OC clerk's office building. The goal of the inspection was to identify the wastewater lines requiring replacement. Subsequently, wastewater line replacement plans were developed for the inspected wastewater lines on floor level 1, floor level 2, and floor level 3 of the existing building.

MFS' civil engineering team performed field investigations to record measurements of all visible wastewater lines as well as record fitting counts where accessible due to site specific constraints. MFS provided a set of civil drawings depicting the building floor layouts and wastewater line locations. The plans depicted the current conditions of the waste lines. MFS also provided photo documentation services of any cracking, leaking or deterioration observed during the inspections of the wastewater line system. A wastewater line schedule and details were included in the construction bid set showing the pipe lengths and fitting types and quantities for each of the inspected floor levels. In addition, MFS provided an engineering cost estimate for the proposed replacement as well as pipe material specifications and installation procedures. MFS supported the client during the bidding process of the project and provided shop drawing review and approval based on compliance with the approved project documentation completed by MFS.

Morris County Head Start Program Interior & Exterior Alterations

— OWNER

Morris County

— LOCATION

Parsippany, NJ

— SERVICES PROVIDED

- Construction Management

MFS provided professional construction management consulting services for the County of Morris to aid in the management of Interior and Exterior Alterations to an existing county building set to house the County's Head Start Program. The Head Start Community Program of Morris County partners with families to provide comprehensive support for child development and school readiness as a federally funded child development program. This program currently provides services to pregnant women and children ranging from birth to 5 years of age. The County utilized MFS for professional management services during the pre-construction, construction, and close out phases. MFS was responsible for handling all contract administration, cost management, risk and claims, and providing inspection and reports of work in progress.

During the pre-construction and construction phases of each project, MFS was responsible for all project management and contract administration activities. MFS provided full time, on-site certified personnel to perform functions such as record keeping, schedule monitoring, document control, financial management, claim & dispute management, construction inspections, safety monitoring and closeout/ commissioning. MFS frequently administered coordination meetings with the county, architecture and engineering firms, and contractors to ensure timely progression of the project.

MFS additionally coordinated with the County and the project's A&E firm to complete a close-out program that documented the completion of project punch-list. MFS advised the County of Morris on a variety of issues related to the project's completion, ensuring stakeholders were aware of the necessary procedures to close out contracts, obtain permits, and occupy newly built spaces. MFS managed all project documents and correspondence via web-based document control system with all documents being turned over to the client upon project completion.

Mercer County Board of Social Services Inspection

— OWNER

Mercer County Board of Social Services

— LOCATION

Trenton, NJ

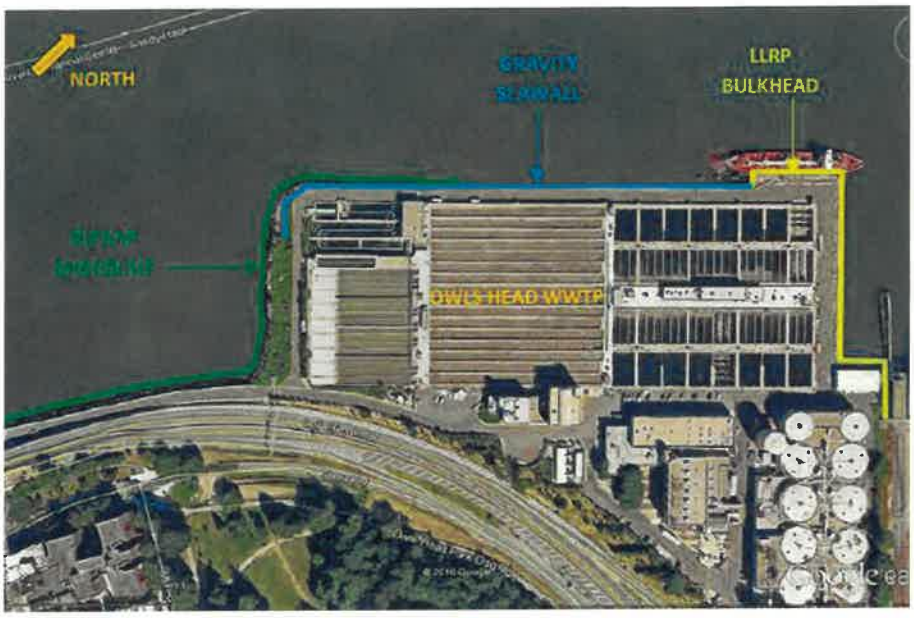
— SERVICES PROVIDED

- Structural Engineering

MFS Engineers & Surveyors provided professional structural engineering and inspection services for the Mercer County Board of Social Services (MCBOSS). The structural inspection was located in an approximately 100-year-old, 105,000 sq.-ft. building that was previously utilized as a factory and was later retrofitted to be converted into office space in the 1980's. An incident had occurred at the MCBOSS building, where an old pipe hanger and connection assembly fell and penetrated through the drop ceiling. To ensure safe working conditions for the MCBOSS employees, the client requested an independent structural inspection to be performed.

MFS' structural engineering team removed the drop ceiling tiles within the affected area and conducted a visual inspection to document the existing structural condition of the exposed structural framing elements, including any visible beams and girders, columns, bearing walls, and connections. MFS photo documented the inspected areas noting any cracking or deterioration observed and compiling all the observations obtained during the inspection into a Structural Inspection Report, which included the determination of the overall building structural integrity, detailed summary of findings with a supplemental photo documentation report, conclusions, and structural recommendations to ensure safe working conditions and prolonged service life of the building.

NYCDEP Owls Head Waste Water Treatment Plant



— OWNER

New York City Department of Environmental Protection (NYCDEP)

— LOCATION

Brooklyn, NY

— SERVICES PROVIDED

- Survey
- Geotechical Engineering
- Inspections

MFS Engineers & Surveyors provided professional geotechnical engineering and survey services for the New York City Department of Environmental Protection (NYCDEP) Owls Head Wastewater Treatment Plant (WWTP) sludge dock reconstruction project. The project consists of the phasing and reconstruction of the Low Level Relieving Platform (LLRP) that consists of approximately 850 linear feet of existing timber piles, pile caps, longitudinal wales, timber relieving deck, timber sheeting cut-off wall, and a cast-in-place concrete seawall.

MFS' survey services included providing topographic and utility survey at the project site. Project controls were established on site with Leica GS-15 GPS receivers configured for RTK with NYSNET. The client's desire to have a highly detailed survey of the piers, adjacent tank walls, and adjoining transfer bridge required the use of traditional total station, reflectorless measurements, and laser scanning to obtain to requested data. The level of detail included anchor blocks, monopiles, power stations, mooring bollards, mooring cleats, handrails, lights, conduits, walks, fences, pile bents, tanks, roads, and other physical features in the project area.

MFS' geotechnical engineering services included the research and review of historic investigations conducted in the vicinity of the project site, performing the full-time engineering special inspection services during the subsurface investigation in accordance with the New York City Building Code, and preparing a detailed geotechnical engineering report with recommendations for the reconstruction of the existing LLRP. The subsurface investigation consisted of four land borings, six water borings, four test pits, and various investigation probes.

At the conclusion of the investigation, MFS prepared a boring and test pit location plan, design and construction recommendations, and design soil parameters for use in the design of the reconstruction at the project site. In addition, MFS prepared and submitted the TR-1 and TR-4 forms for the investigation conducted at the project site.

NYCDEP Three Pump Stations, Staten Island, NY

— OWNER

New York City Department of Environmental Protection (NYCDEP)

— LOCATION

Staten Island, NY

— SERVICES PROVIDED

- Survey

MFS Engineers & Surveyors (MFS) provided professional surveying services to The New York City Department of Environmental Protection Department (DEP) at three pump stations sites located in Staten Island, New York.

In support of the design MFS performed boundary and topographic survey services at the Mersereau, Mayflower, and Richmond pump station sites. At each three sites, MFS provided the surveys along the existing force main routes. The Survey team additionally performed a utility survey to locate surface utilities such as manholes, catch basins, trench drains, valve covers, utility/light poles, hydrants, chamber covers, and exposed piping. A property survey was also undergone to determine the locations of the property lines adjacent to the project sites.

MFS utilized a subconsultant to prepare aerial photogrammetric mapping of the Mersereau and Mayflower pump station sites and its existing force main routes. New color digital aerial photography flown at an altitude resulting in a ground sampling distance (GSD) of 3.0cm resolution was obtained. MFS incorporated the aerial mapping into the survey mapping and delivered to the client one comprehensive base map of the entire project corridor. The project deliverables additionally included the survey prepared in AutoCAD Civil3 to meet NYCDEP BEDC CAD standards, along with a PDF of the signed and sealed survey.

NYCDEP - CSO Facilities for Gowanus Canal Bulkhead OH-007

— OWNER
NYCDEP

— LOCATION
Brooklyn, New York

— SERVICES PROVIDED
- Geotechnical Eningeering

MFS Consulting Engineers & Surveyor, DPC (MFS) was contracted by Posillico Environmental, Inc. to provide professional geotechnical engineering services for the New York City Department of Environmental Protection (NYCDEP) Combined Sewer Overflow (CSO) Facilities for Gowanus Canal Bulkhead OH-007 project. A proposed bulkhead system comprised of interlocking concrete filled pipe piles at the east and west extents of the bulkhead alignment and sheet piles with micropile supported concrete deadmen at the middle of the bulkhead alignment are to be constructed along the existing shoreline/bulkhead of the Gowanus Canal. In addition, a large CSO tank structure is proposed to be constructed at the project site.

MFS coordinated with our trusted drilling agency to complete a total of five (5) SPT borings and two (2) SCPT borings at the project site. The SPT borings were completed to depths ranging from 127 to 215 feet below grade. Where possible, 10 to 15 linear feet of rock core samples was obtained within the SPT borings

In addition, MFS coordinated with our trusted subcontractor to conduct two (2) SCPT borings at the project site. Each of the SCPT borings were advanced to depths of approximately 75 feet below existing site grade and each boring was conducted with shear wave velocity testing at five (5) foot intervals throughout the boring depth.

During SPT borings, MFS observed the subsurface conditions and generated test boring logs to include soil classifications in accordance with the Unified Soil Classification System and the New York City Building Code, groundwater observations, action of equipment, and other noteworthy observations. The boring logs showed borehole and sample diameters and depths at which drilling, or sampling methods or equipment change. Logs showed total depth of penetration, blow counts, groundwater level, and types of sampling. The drilling equipment make and model, drilling method, date and time drilled, casing, any heaving conditions, loss of circulation, voids, or any other conditions observed during drilling were also noted on the logs. In addition, rock coring logs were prepared to show the jointing and fractures of each rock core sample with percent recovery and percent rock quality designation (RQD).

During SCPT operations, MFS observed the cone tip resistance, friction resistance, friction ratio, soil classification and stratigraphy, seismic shear velocities, and pore water pressure at nearly continuous depth intervals until SCPT termination. The SCPT Data Report prepared by our subcontractor included the above-mentioned parameters, as well as cone diameter, rate of penetration, depth interval of recordings, CPT equipment make and model, and date and time of push operations.

Upon completion of the field subsurface investigation and laboratory testing, MFS prepared a geotechnical data report. The geotechnical data report briefly described the field methods used during the subsurface investigation and included an as-drilled boring location plan, typed boring logs, SCPT data report, and results of the laboratory testing conducted.

NYCDEP Four Wastewater Treatment Plants

OWNER

New York City Department of Environmental Protection (NYCDEP)

LOCATION

Various, NY

SERVICES PROVIDED

- Survey

MFS Engineers & Surveyors (MFS) provided professional survey services to New York City Department of Environmental Protection (NYCDEP) Hunts Point Wastewater Treatment Plant (WWTP), Port Richmond WWTP, Tallman Island WWTP, and Wards Island WWTP.

Within the survey limits MFS performed a topographic, wetlands, and utility survey at each WWTP site. MFS performed field surveys to locate physical features, such as, but not limited to; buildings, structures, walls, curbs, edge of pavement, walks, drives, fences, guide rails, bollards, handrails, ramps, and steps/stairs, also locating trees larger than 6" Diameter at Breast Height (DBH). Bulkheads and seawalls were also located in as much as they were accessible, as well as any visible pipe penetrations. MFS also performed a utility survey, locating surface utilities such as manholes, catch basins, trench drains, valve covers, utility/light poles, and hydrants.

Some sites additionally included a boundary survey and/or a bathymetric survey to map the bottom contours of those areas below water. The survey was performed with a multibeam sonar, providing dense data within the survey limits. The bathymetric survey was coordinated with the data from MFS' land side survey.

NYCDEP On-Call Design Services for the Reconstruction of Water Supply Facilities

— OWNER

New York City Department of Environmental Protection (NYCDEP)

— LOCATION

Various Locations, NY

— SERVICES PROVIDED

- Survey

MFS Engineers & Surveyors (MFS) provided professional surveying services in support of the New York City Department of Environmental Protection's (DEP) Bureau of Water Supply (BWS) Contract CAT-480: On-Call Design Services for the Reconstruction of Water Supply Facilities. The term contract included design services for upgrades, reconstruction, and replacement of several of structures and facilities built on the east and west side of the Hudson River in order to meet current agency standards.

MFS' services were retained by HDR to support a resulting task order for this on-call contract which included the design for a chlorine dioxide system at the Old Croton Gate House in Yorkstown, NY. MFS supported the project with topographic, utility, property surveys, as well as aerial photogrammetric mapping.

The MFS Survey team performed the topographic survey to locate physical features, such as, structures, buildings, walls, curb, drives, sidewalks, pathways, ramps, stairs, handrails, fences, and pavement markings. During the utility survey the team located surface utilities such as manholes, catch basins, trench drains, valve covers, utility/light poles, hydrants, chamber covers, and exposed piping. A property survey was completed to determine the locations of the property lines adjacent to the project. Additionally, a subconsultant was utilized to prepare aerial photogrammetric mapping of the natural areas and rock cuts that are located to the rear and sides of the gate house area.

NYCDEP DRNG-CW: SOS # 10: Bloomfield, Staten Island Drainage Plan

OWNER

New York City Department of Environmental Protection (NYCDEP)

LOCATION

Staten Island, NY

SERVICES PROVIDED

- Survey

MFS Engineers & Surveyors (MFS) provided professional surveying services in support of the New York City Department of Environmental Protection (DEP) DRNG-CW: Service Order Solicitation #10 – Bloomfield, S.I. Drainage Plan. The DEP Service Order solicitation included preparing a Drainage Plan for the area around Bloomfield Ave, S.I. for storm and sanitary sewers by the Bureau of Water & Sewer Operations (BWSO). The term contract included evaluation of existing sewers, field investigation and survey, and GIS data collection for works modeling and development of final drainage plans. Task orders included 10 Bloomfield Avenue in Staten Island, NY.

The MFS Survey team was contracted to provide field survey services, including the performance of manhole surveys, legal grade street surveys, and Dye Testing, including EHASP/JHA development assistance, as well as data collection. MFS was additionally required to provide surveys on manholes and in the culverts, for sanitary sewers, combined sewers, and storm sewers, as identified within the developed project plan, including determining all pipe sizes invert elevations, rim elevations, and flow direction.

As an additional part of the field investigation, MFS' services included surveys to obtain centerline of road and curb line elevations. The Survey team additionally obtained street grade maps from the Staten Island Borough Topographical Office, which showed the legal grades. A survey drawing and GIS shapefile showing the street and surveyed elevations, the trap and elevations, and street legal grades was delivered to the client.

NYCDEP Tallman Island WRRF

— OWNER
NYCDEP

— LOCATION
Bronx, New York

— SERVICES PROVIDED
Structural Engineering

MFS Consulting Engineers & Surveyor, DPC (MFS) provided professional structural engineering services for the Tallman Island Wastewater Resource Recovery Facility (WRRF) Flood Resiliency Project located in Queens, New York. The proposed construction included general improvements, plumbing improvements, and electrical improvements to the facility as part of the flood resiliency program. The general work included replacing doors with floor doors and the installation of metal stairs and platforms, flexible membrane covers, windows above the Design Flood Elevation (DFE), stop log barriers, and flood protection walls.

MFS' structural team worked in conjunction with the steel fabricator Empire Construction to analyze various structures including the stainless steel staircase, the east and west stainless steel staircases, and the galvanized steel elevated walkway at the north sludge thickener building. MFS reviewed structural adequacy of framing/connections of the various structures and all framing components including stringers, columns, connections, treads, grating, railings, column base plates and anchor bolts.

MFS provided a final calculation report supporting the analysis for the various structures and reviewed the steel shop drawings for Owner's review and approval for construction.

NYCEDC - NYCDEP HP-007 Bronx River Green Infrastructure

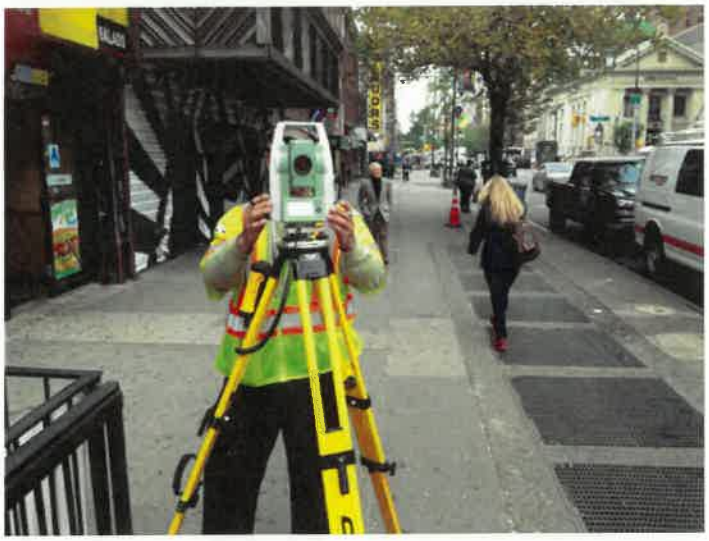
— OWNER
NYCEDC

— LOCATION
Bronx, NY

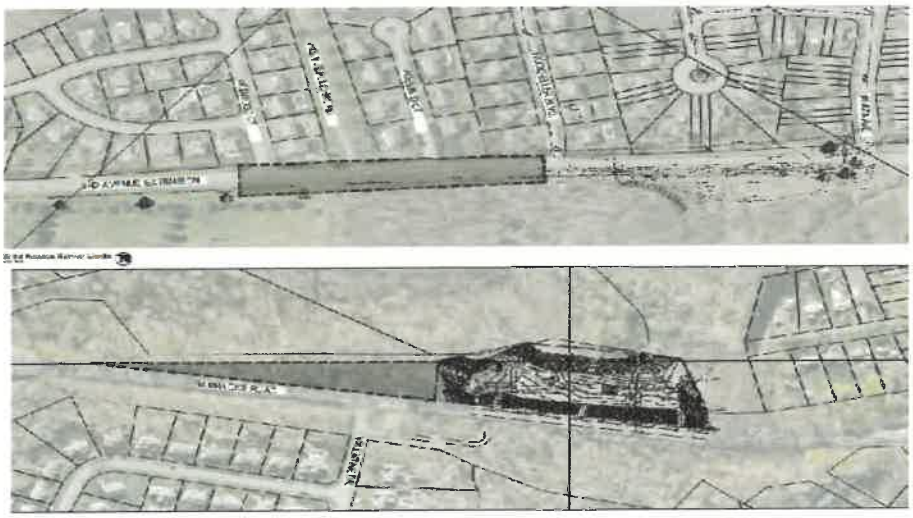
— SERVICES PROVIDED
- Survey

MFS Engineers & Surveyors provided land surveying services in support of Jacobs for New York City Economic Development Corporation Green Infrastructure Design Services Project HP-007 Bronx River. The project consisted of 153 sites including Right-of-Way Bioswales, Green Strips, and Right-of-Way Stormwater Greenstreets. MFS coordinated with the design team on project scheduling and deliverables and procedures to ensure timely completion of the surveys, meeting client expectations and NYCDEP BEDC GI "Procedure Governing Limited Survey for Green Infrastructure.

MFS' survey team performed field tasks consisting of survey of the GI sites in NY Long Island State Plane Coordinate System (NAD83) and NAVD1988 datum, utilizing GPS and total stations for data collection. Research was performed on-line and at borough offices to obtain record documents of utility infrastructure, tax maps, city maps, and water/sewer tap cards. Field data was processed, meeting NYCDEP BEDC GI standards, with final drawings and CAD files provided to the client depicting the results of the field survey, utility data from best sources, and property lines based on city map and tax map data.



Town of East Greenbush - Third Avenue & Barracks Road Pump Station Upgrade



— OWNER

Township of East Greenbush

— LOCATION

East Greenbush, NY

— SERVICES PROVIDED

- Geotechnical Drilling
- Structural Engineering

MFS Consulting Engineers & Surveyors, DPC was contracted by H2M architects + engineers to provide professional geotechnical and structural engineering services for the Town of Greenbush - Third Avenue and Barracks Road Pump Station Upgrade project.

The Third Avenue and Barracks Road Pump Stations were installed in the mid 1970's and were approaching the end of their useful service life. In addition, there was a need for additional capacity as a result of planned redevelopment and increased existing user needs. The Town of East Greenbush intended to complete upgrades to each of these stations that maximize the existing collection system's capacity and provide greater safety and efficiency for the maintenance staff.

Two (2) borings were conducted at the Third Avenue Pump Station and two (2) borings were conducted at the Barracks Pump Station. MFS coordinated with our in-house drilling agency, MFS Construction, LLC, to drill the four (4) test borings at the project sites to investigate the general subsurface conditions. Each of the borings were conducted within the footprint of the existing respective pump stations to depth up to approximately 97 feet below grade and no maintenance or protection of traffic was required.

MFS obtained samples continuously in the uppermost 12 feet below grade and at 5-foot intervals thereafter during each of the borings. MFS observed the subsurface conditions and generated test boring logs to include soil classifications in accordance with the Unified Soil Classification System, groundwater observations, action of equipment, and other noteworthy observations. MFS provided on-site, full-time oversight by an experienced geotechnical engineer during the subsurface field investigation consisting of four (4) test borings for proper documentation of inspections.

MFS provided structural and foundation designs of the structural components for each station, which included 25' long by 25' wide by 20' deep and 40' long by 25' wide by 18' deep reinforced concrete pump stations supported on pile foundations, reinforced concrete wet wells supported on pile foundations, and ancillary structures such as crane hoists, metal staircases, and handrails. Additionally, MFS provided an excavation plan to protect nearby utilities at the Third Avenue Pump Station and provided design criteria for the pre-engineered superstructures at both locations. MFS worked with the project team to determine locations of pumps, equipment, piping penetrations, and floor elevations.

Village of Suffern WWTP Upgrades

— OWNER

Village of Suffern

— LOCATION

Suffern, New York

— SERVICES PROVIDED

- Geotechnical Engineering
- Structural Engineering

MFS Consulting Engineers & Surveyor, DPC provided geotechnical engineering services in support of the Suffern Wastewater Treatment Plant (WWTP) Upgrades project in the Village of Suffern, New York.

MFS coordinated with our trusted drilling agency to drill six (6) test borings at the project site during two (2) subsurface investigations. The purpose of the test borings was to identify the general subsurface conditions at the project site to inform the project geotechnical and structural design components for the proposed floodwall construction. Each of the six (6) borings were conducted on land along the alignment of the proposed floodwall. Each boring was conducted to depths between ranging from 12 feet to 38 feet below existing grade. MFS obtained samples continuously in the uppermost 12 feet and at five-foot intervals thereafter during each of the borings conducted.

MFS provided on-site, full-time special inspections during the subsurface field investigation. MFS observed the subsurface conditions and generated test boring logs to include soil classifications in accordance with the Unified Soil Classification System, groundwater observations, action of equipment, and other noteworthy observations. The boring logs showed borehole and sample diameters and depths at which drilling or sampling methods or equipment change. In addition, the logs showed total depth of penetration, blow counts, groundwater level, and types of sampling. The drilling equipment make and model, drilling method, date and time drilled, casing, any heaving conditions, loss of circulation, voids, or any other conditions observed during drilling will also be noted on the logs.

Laboratory tests were performed to classify soils and obtain geotechnical physical characteristics for soils. The results of the field investigation and laboratory testing program, evaluation of the subsurface conditions, and MFS' geotechnical engineering recommendations were presented in a written geotechnical data report.

Following the subsurface investigation and geotechnical data report, MFS supported the design team by providing geotechnical and structural engineering design for the proposed sheet pile floodwall. MFS analyzed the earth and flood water loads on the proposed wall and provided design development and construction documents, technical specifications, and assisted the project team with design review meetings and coordination for the steel sheet pile floodwall.

Suffolk County DPW SCSD No. 6 Kings Park Smithtown Downtown Sewers

— OWNER

Sulfolk County Department of Public Works

— LOCATION

Smithtown, New York

— SERVICES PROVIDED

- Geotechnical Engineering
- Structural Engineering

MFS Consulting Engineers & Surveyor, DPC (MFS) provided geotechnical engineering and structural engineering services in support of the Suffolk County Department of Public Works (SCDPW) – Suffolk Counter Sewer District (SCSD) No. 6 Kings Park Smithtown Downtown Sewers project located in Kings Park and Smithtown, New York. The project consisted of the installation of a collection system of the Smithtown Downtown area up to 0.6 million gallons per day (MGD). The new collection system will convey flow to an existing pump station no. 3 that will be upgraded to handle the expanded capacity. In addition, new process tanks and buildings will be installed along with upsizing existing equipment for the expansion. Recharge basins on the Kings Park Psych Center will be constructed to dispose of the new 0.6 MGD treated effluent to the groundwater.

MFS coordinated with our trusted drilling agency to drill five test borings at the project sites: one for the pump station no. 3 upgrade and four for the sewage treatment plant expansion. The borings were conducted to depths between 22 and 37 feet below existing site grade. During the test boring operations, MFS observed the subsurface conditions and generated test boring logs to include soil classifications in accordance with the Unified Soil Classification System (USCS), standard penetration test results, action of equipment, and other noteworthy observations.

Following the field investigation, laboratory tests were performed to verify soil classifications and obtain geotechnical physical characteristics for soils. The results of the field investigation and laboratory testing program, evaluation of the subsurface conditions, and our geotechnical engineering recommendations were presented in a written geotechnical engineering report. The geotechnical engineering report included design and construction recommendations for the various site improvements.

MFS' structural team developed the analysis and design for the structural components for both the Kings Park Pump Station Expansion and Sewage Treatment Plant Expansion. At the Kings Park Pump Station Upgrade, MFS provided the structural and foundation designs for the structural components, which included three concrete valve vaults and one wet well, Control Building superstructure and foundation, and one emergency generator pad. At the Sewage Treatment Plant expansion, MFS provided the structural and foundation designs for the structural components, which included a one-story masonry Headworks Building superstructure and foundation with influent and effluent channels below the building slab, foundation design for two concrete SBR Tanks with a footprint of 76'x120', various size concrete valve vaults and wet wells, a one-story masonry Filter and UV Disinfection Building superstructure and foundation, and a one-story masonry Sludge Dewatering Building superstructure and foundation.

Nassau County DPW Cedarhurst Pump Station

— OWNER

Nassau County Department of Public Works

— LOCATION

Cedarhurst, NY

— SERVICES PROVIDED

- Structural Engineering

MFS Engineers & Surveyors (MFS) provided professional structural engineering services for the Cedarhurst Stormwater Pump Station, part of the Nassau County Department of Public Works (NCDPW) Five Towns Drainage Improvement Project located in the Village of Cedarhurst, New York. The project scope included the evaluation, design and construction of a new stormwater pump station and adjacent control building foundation. MFS supported the project by providing structural engineering services.

The MFS Structural Engineering Team provided the structural design of the 30-ft by 25-ft footprint by 22-ft deep underground reinforced concrete structure resulting in a stormwater pump station designed to accept flow from four (4) existing pipes and push flow out to a new stormwater outfall which discharges into the Canal. Additionally, MFS provided the structural foundation design of the pre-cast concrete control building, directly adjacent to the stormwater pump station, which houses an 820-gallon diesel fuel tank and generator that provides the necessary power for the pump station. MFS worked closely with the Project Team's Mechanical Engineer to determine locations of equipment, piping penetrations, floor elevations, and site restrictions.

MFS performed all necessary structural design calculations for use in preparing the Final Construction Document set, including construction notes, structural plans, sections and details as necessary to adequately depict what structural work would be required. The structural design calculations included a 3-D finite element model to determine the global structural behavior of the pump station experiencing a combination of dead, earth, live, wind, snow, and seismic loads in accordance with the governing building code.

Patchogue Main Street Sewer Reconstruction

— OWNER

Village of Patchogue

— LOCATION

Village of Patchogue, NY

— SERVICES PROVIDED

- Geotechnical

MFS Engineers & Surveyors (MFS) provided professional engineering services for the Village of Patchogue Main Street Sewer Reconstruction project, in Suffolk County, New York. The project consisted of a sanitary sewer reconstruction along West Main Street, West Avenue, and Hammond Street. As part of the reconstruction, pre-cast concrete sanitary manholes were proposed along the gravity sewer alignment. H2M Achitects and Engineers retained the services of MFS in support of the project design.

MFS' Geotechnical engineering team coordinated with a trusted drilling agency to drill 3 test borings and install 1 piezometer (monitoring well) along the alignment of the proposed gravity sewer reconstruction. The purpose of the borings and piezometer was to investigate the general subsurface conditions along the proposed alignment. The MFS team provided full-time inspections during the subsurface investigation for the project. Upon completion of the field investigation, MFS coordinated with a geotechnical laboratory to carry out testing required in consideration of the proposed reconstruction of the gravity sewer. MFS prepared a geotechnical engineering report complete with typed boring logs, a discussion and evaluation of the subsurface conditions, and design and construction recommendations for the proposed sewer reconstruction.

Route 6 Water Main

CLIENT
Woodard & Curran

LOCATION
Somers, New York

SERVICES PROVIDED
- Structural Engineering
- Geotechnical Engineering

MFS Engineers & Surveyors is providing professional engineering services in support of the construction of a 10-inch ductile iron water main along the existing Route 6 alignment in Somers, New York. MFS is providing geotechnical and structural engineering services as well as environmental permitting assistance in support of the proposed approximately 1,800 linear feet of proposed water main. Approximately 200 linear feet of the proposed alignment will be constructed using trenchless methods to cross beneath the Muscoot River.

MFS' geotechnical engineering services include a review of available information, a geotechnical investigation consisting of five (5) borings along the proposed water main alignment, and geotechnical laboratory testing. Upon completion of the field investigation, MFS will prepare a comprehensive geotechnical engineering report to include design and construction recommendations for the traditional cut-and-cover pipeline installation, underground vaults, and the horizontal directional drilling (HDD) beneath Muscoot River.

The information from the geotechnical investigation will be used by both the geotechnical and structural teams to prepare the design of the HDD. The HDD design will include construction documents complete with plan, profile, and detail drawings with supporting calculations. In the calculations, MFS will provide the maximum allowable pulling tensions on the pipeline, recommended pipeline materials, and the maximum allowable drilling pressures to prevent hydrofracture. In addition, MFS will prepare trenchless specifications to outline the construction requirements, products, submittals required, environmental requirements, and as-built drawing requirements. The HDD will be completed to provide an issued for bid set of project documents to complete the trenchless crossing.

During the design development phase, MFS will provide assistance and support for permits in association with the engineering and construction of the proposed trenchless crossing. MFS will assist in the development of a permitting matrix to identify permits required for construction for the proposed crossing alignment.

Cinnaminson Landfill Solar Project

— OWNER

PSE&G

— LOCATION

Cinnaminson, New Jersey

— SERVICES PROVIDED

- Geotechnical Engineering
- Structural Engineering
- Site/Civil
- Survey

MFS Engineers & Surveyors provided professional services in support of a large-scale solar project located in Cinnaminson, New Jersey. The proposed construction consisted of an 13 MW direct current ground mounted photovoltaic system on an existing 100 acre capped landfill.

MFS was retained by Conti Solar (Conti) to provide geotechnical engineering, structural engineering, and site/civil engineering in support of the project. MFS' responsibilities included performing a settlement analysis, foundation and subgrade design, site plans, grading design, sediment and erosion control, and construction administration efforts.

MFS' geotechnical engineering services included the review of available information, conducting a settlement and veneer stability analysis, and foundation subgrade design. Existing topographic surveys and subsurface investigation data were provided to MFS for review. Data was used to perform a settlement analysis to predict landfill settlement and provide geotechnical recommendations regarding differential settlement across the landfill. Upon completion of the landfill grading plan, the geotechnical team evaluated the slopes in the vicinity areas of the landfill that will be affected by the proposed solar array and the imported fill material.

MFS' structural engineering services included the structural analysis and economical design of the reinforced concrete foundations for the switchgear unit slab, inverter unit slabs, and the perimeter fence post ballasts. In doing so, MFS was able to provide a foundation design that would not only adequately support the heavy electrical equipment that service the 8.0 MW photovoltaic system, but also minimize anticipated settlements in an area where large magnitudes of settlement have been previously recorded.

MFS' site/civil team prepared construction documents including implementation of erosion and sediment control measures in key areas throughout the site. MFS also completed a comprehensive cut/fill analysis using modeling software to assist Conti in approximating appropriate fill quantities during grading operations. The proposed grading design considered areas with most propensity to future settlement and aimed to provide positive drainage in these critical areas in addition to providing an overall positive drainage pattern for the entire landfill.

PSE&G Q-1369 Anomaly Repair

OWNER
PSE&G

LOCATION
Elizabeth, New Jersey

SERVICES PROVIDED
- Geotechnical
- Structural Engineering
- Permitting Assistance
- Survey

MFS Engineers & Surveyors provided professional engineering services to Public Service Electric & Gas (PSE&G) in support of an underground utility project in Elizabeth, New Jersey. The proposed project included the repair of a transmission line with an anomaly located within an existing United States Army Corps of Engineers (USACE) levee. MFS was retained by the PSE&G to provide geotechnical and structural engineering services and permitting assistance in support of the project.

MFS' geotechnical engineering services included completing a subsurface investigation comprised of one boring within the extents of the existing USACE levee. In addition, MFS reviewed existing drawings of levee and associated cross sections. The team provided design lateral earth and water pressure calculations per USACE requirements and design recommendations for the proposed cofferdam construction. The MFS structural department completed the structural design and associated drawings for the design of the cofferdam within the levee to provide access to the transmission line for repair.

MFS' geotechnical team provided a drawing and analysis for the temporary dewatering system within the cofferdam work area. Additionally, MFS' permitting team coordinated with PSE&G's permitting consultants and assisted in providing the information needed to complete the permit process. MFS with The USACE oversaw the project from start to finish and assured that all work were conducted in compliance with the plans as approved by the USACE and the New Jersey Department of Environmental Protection.

MFS also provided full-time on-site field oversight during all construction. A detailed site inspection report was completed and submitted to the client on a daily basis during all field activities. MFS' survey team performed a mapping and survey of the underground circuit to determine the proper placement of the cofferdam structure.

PSE&G Geotechnical Investigation On-Call

OWNER

PSE&G

LOCATION

Various Townships, NJ

SERVICES PROVIDED

- Geotechnical Engineering

MFS Engineers & Surveyors (MFS) provided professional geotechnical engineering and geotechnical drilling services to Public Service Electric & Gas (PSE&G) for various projects located in the state of New Jersey. MFS completed on-call subsurface investigations to support utility crossings including trenchless underground crossings and overhead crossings consisting of laminated poles and steel monopoles for various utility upgrade projects throughout the PSE&G service area.

MFS' geotechnical team coordinated with our in-house drilling agency, MFS Construction, to complete investigative borings and provided field oversight during the field investigation for each of the various PSE&G projects. During each boring, samples were obtained via Standard Penetration Test and the borings were advanced using hollow stem augers and mud rotary drilling techniques. When required, rock cores were obtained to determine the strength and quality of the bedrock. Upon completion of the field investigations, MFS contracted and coordinated with a geotechnical testing laboratory to carry out a testing program.

Following the subsurface investigations, MFS' geotechnical division compiled the results of subsurface investigation and laboratory testing into detailed geotechnical engineering reports and geotechnical data reports as required by each specific project. The geotechnical engineering reports provided the client with design and construction recommendations for the proposed utility installation foundations consisting of deep or shallow foundation systems. Soil and rock design parameters were provided by MFS to support the foundation design and to be used in applicable foundation design software for the proposed structures.

PSE&G L-1364 Circuit Manhole Modification

OWNER

Public Service Electric & Gas

LOCATION

Passaic & Bergen Counties, New Jersey

SERVICES PROVIDED

- Structural Engineering
- Geotechnical Engineering

MFS Engineers & Surveyors provided professional engineering services to Public Service Electric & Gas (PSE&G) in support of the construction and modification of new and existing manholes along the L-1364, 138KV conductor in Passaic and Bergen Counties, New Jersey. The proposed construction and modifications included the conversion of four existing manholes into stop-joints and the construction of up to two new manholes depending on the locations chosen for the stop-joints.

Specifically, MFS' geotechnical services included a review of available information, a subsurface investigation, and special inspection. MFS' geotechnical team performed site assessments to provide recommendations on which manholes should be extended to be stop-joint manholes and potential locations for any new spare pipe termination manholes. The geotechnical team worked with MFS' structural department to perform inspections of the interior of the existing manholes to determine structural integrity. Four borings were completed, one at each of the manholes that will be converted to stop-joint manholes. MFS provided full-time, on-site oversight during the subsurface investigation activities.

Additionally, the MFS structural team conducted a study to determine the adequacy of the existing manholes on several PSE&G circuits. The team identified the governing codes of the time when the manholes were designed and complete analyses to determine whether or not the manholes were designed in accordance with the standards of the time. The conclusions of the study were compiled in a memorandum with the supporting analyses. In addition, the structural team completed the analysis of a manhole using HS-20 and HS-25 loading and prepared a cost-benefit analysis memorandum for submission to the client. The results of the analysis aided in determining the design truck loading that will be used in future PSE&G projects.

PSE&G M-1339 Circuit Manhole Modifications

— OWNER

Public Service Electric & Gas

— LOCATION

Bergen County, New Jersey

— SERVICES PROVIDED

- Geotechnical Engineering
- Structural Engineering

MFS Engineers & Surveyors provided professional engineering services to Public Service Electric & Gas (PSE&G) in support of the M-1339 circuit reconductoring project in Bergen County, New Jersey. MFS' scope of work consisted of three new manholes and the modification and reinforcement of 25 existing manholes. MFS was retained by PSE&G to provide geotechnical and structural engineering services in support of the project to design the existing manhole modifications to support the new HS-25 truck loading per AASHTO prevision.

MFS' geotechnical services included completing one test boring at each of the 25 manhole locations that did not have boring logs previously completed in their vicinity. MFS also provided full-time engineering oversight for each boring. The boring logs recorded during field operations and the corresponding boring location site plan was compiled and provided in a field report package to the client.

MFS' structural services included detailed design and construction documents for both rehabilitated or newly constructed manholes. Design and engineering was performed in accordance with the client's standards and specifications. MFS also provided structural design calculations in a final report in support for each manhole analyzed.

PSE&G Little Ferry Yard Corrosion Repair

— OWNER

PSE&G

— LOCATION

Ridegefield, New Jersey

— SERVICES PROVIDED

- Geotechnical Engineering
- Structural Engineering
- Site/Civil Engineering
- Survey
- Permitting Assistance

MFS Engineers & Surveyors is providing geotechnical, site/civil, and structural engineering, surveying, and permitting assistance services in support of an underground oil filled electric utility repair at a CSX rail yard and intermodal terminal in Ridgefield, New Jersey for PSE&G. The proposed project consisted of the repair of a corroded 36 inch diameter steel pipe casing housing an oil filled electrical conduit.

MFS' survey services included review of available documents, utility mark out, utility potholing, and field survey. The survey team used the potholing method to determine existing utility location and verify existing as-builds. The team completed a utility mark out prior to the start of the geotechnical field investigation. MFS' geotechnical and structural engineering services included the review of available documents, a field subsurface investigation, a cofferdam design, as well as construction drawings and oversight.

MFS' geotechnical team conducted one boring to verify subsurface conditions. This information was used to provide a geotechnical analysis for the proposed loads on the coff erdam sheet pile wall during excavation and construction. Loads were used by the structural engineering team to prepare construction drawings and supporting calculations for a cofferdam to provide access to the casing approximately 13 feet below grade to allow for casing repair. The design was completed in accordance with CSX specifications due to the adjacent rails and the location being with a rail yard. MFS field engineers provided full-time construction oversight throughout construction, pipeline repair, and backfilling operations.

MFS' site/civil services included a detailed dewatering and soil erosion control plan. The site/civil team provided design drawings with a supporting analysis for the temporary dewatering system within the cofferdam excavation area. The dewatering system was placed within the cofferdam workspace to pump out water within the excavated area to keep working surface dry. Discharged water was pumped into the appropriate on-site containment system or sedementation tank for temporary storage prior to removal and proper off-site disposal.

MFS' permitting assistance services included the coordination with Bergen County Soil Conservation District and the creation of the Soil Erosion and Sediment Control Plans in compliance with the established regulations. Additionally the environmental team worked with PSE&G to assure proper measures were taken to contain and dispose of potentially contaminated soils in compliance with regulations.

PSE&G Hudson Discharge CCTV Pipe Inspection

— FIRMS ASSOCIATED WITH

PSE&G

— LOCATION

Jersey City, New Jersey

— SERVICES PROVIDED

- Structural Engineering
- Survey
- Vibration Monitoring
- CCTV & Pipe Inspections

MFS Engineers & Surveyors provided CCTV & Pipe inspections, professional surveying, vibration monitoring, and structural inspection services at the Public Service Electric & Gas (PSE&G) Hudson Switchyard located in Jersey City, New Jersey. The proposed construction included the driving of approximately 1,350 piles to support foundations within the Hudson Switching Station. MFS was retained by PSE&G to provide vibration monitoring services on two discharge pipes during construction activities.

Prior to the commencement of construction activities in the Hudson switchyard, MFS was contracted to conduct a preconstruction structural inspection using a CCTV Rig of two 90 inch diameter prestressed concrete discharge pipes. The findings of the inspection were submitted to the client to be used to compare the results of a similar inspection to be completed at the conclusion of all construction activities at the site. Prior to commencement of construction activities, MFS coordinated with an earthworks contractor to hand excavate to the top of the two discharge pipes at various locations to allow for the installation of seismograph equipment. When the excavations were complete, MFS provided survey services to locate the two discharge pipes. The locations of the pipes were provided to the client.

MFS' vibration monitoring services included preparing a vibration monitoring plan and providing full-time onsite vibration monitoring. MFS' team completed an ambient and construction vibration monitoring study along the length of two functioning discharge pipelines. Twelve seismographs were used to monitor the discharge pipes and concrete head wall where water is discharged to a river. MFS compiled the vibration monitoring data on a weekly basis for submission to the client. Upon completion of the construction activities, MFS coordinated backfilling the exposed pipes in accordance with the Utility's standards and specifications.

Spectra NJ-NY Pipeline Expansion

OWNER
Spectra Energy

LOCATION
Multiple Locations, NY & NJ

SERVICES PROVIDED
- Structural Engineering
- Site/Civil Engineering
- Geotechnical Engineering

MFS Engineers & Surveyors provided engineering services during construction to Henkels & McCoy, Inc. (H&M) for the Spectra Energy Gas Pipeline Expansion Project in Bayonne, New Jersey. The proposed construction consisted of a 30 inch gas pipeline approximately 20 miles in length. H&M was responsible for the work on approximately eight miles of conventional lay, and six miles of horizontal directional drilling (HDD). MFS was contracted by H&M to provide lifting plans for the pipeline HDD pulls, pre- and post-construction surveying, vibration monitoring, hydrostatic testing plans, and subsurface investigations.

MFS' structural and site/civil departments provided lifting plans for the land to water HDD pipeline pull into the Hudson River entry consisting of staging areas, crane and barge locations, and horizontal and vertical pipeline alignments for six crossings: Hudson River Crossing HDD Pull, 18th Street Pull, First Street Pull, Kill Van Kull Pull, Merseles Pull, and the Bayonne Inlet Pull. For each pull, MFS provided supporting calculations and analyses showing allowable pipe support spans and bend radii. In addition, the pipeline was analyzed for installation stresses with induced loads to bend and pull the pipeline into the pipeline entry hole.

MFS' construction monitoring services included review of available information, site visits, photo documentation, pre- and post-construction monitoring reports, and vibration monitoring of an existing warehouse structure affected by the pipeline construction. MFS conducted pre- and post-construction surveys to document the structure before and after construction. A photo location plan was provided to express specific position relative to the proposed construction. MFS also developed a vibration monitoring plan with maximum allowable vibrations and manual data retrieval monitoring.

Additionally, MFS provided geotechnical engineering services in the form of subsurface investigations consisting of borings and test pits. Test pit and boring observations were documented on-site by a geotechnical engineer. Findings and documentation were compiled into recommendation reports and submitted to the client.

Atlantic City Electric – Cedar Substation FEP

— OWNER

Atlantic City Electric (ACE)

— LOCATION

West Creek, NJ

— SERVICES PROVIDED

- Survey
- Geotechnical
- Site/Civil

MFS Engineers & Surveyors (MFS) provided professional services for the Atlantic City Electric (ACE) FEP Project - Tier 1 Security Upgrades at the Cedar Substation in West Creek, New Jersey. The security upgrades included the construction of a new security control house and security fence. MFS supported the project with professional geotechnical engineering, civil engineering, and surveying services to assist in the design and construction of the proposed upgrades.

MFS performed a topographic and utility survey within the limits of the survey area at the Cedar Substation. MFS located physical features such as buildings, doors, foundations, ditches, curbs, roads, parking areas, walks, wooded areas, fences, gates, pipes, pipe racks, and chambers. At all buildings within the Cedar Substation, we located doors and provided elevations of finished floors at each door. Tops of exposed foundations and finished floors of the equipment buildings within the survey limits were also determined. In addition, MFS located surface utility structures such as manholes, inlets, headwalls, pull boxes, hydrants, valve covers, poles, and pipeline/cable markers.

MFS' geotechnical engineering team coordinated with our trusted drilling agency to drill three Standard Penetration Test (SPT) borings at the project site within the Cedar Substation. Each of the three borings were conducted to 25 feet below existing grade. During the boring operations, proper substation personal protective equipment and ACE safety guidelines were followed.

MFS provided on-site, full-time field oversight during the subsurface field investigation. MFS observed the subsurface conditions and generated test boring logs to include soil classifications in accordance with the Unified Soil Classification System, groundwater observations, action of equipment, and other noteworthy observations. Upon completion of the subsurface investigation, MFS completed geotechnical laboratory testing on selected samples and prepared a geotechnical engineering report. The geotechnical engineering report included the results of the field investigation and recommendations for the design and construction of the security control house and fence foundations.

NYCDDC Harper Street Maintenance Yard

OWNER
NYC Department of Transportation (DOT)

LOCATION
Flushing, New York

SERVICES PROVIDED
- Site/Civil

MFS Engineers and Surveyors provided professional site/civil engineering services to Thornton Tomasetti in support of the project at 32-11 Harper Street, Flushing, NY. The site location is currently used as the New York City Department of Transportation (NYC DOT) maintenance and storage yard. The project consisted of providing the NYC Department of Design and Construction (NYC DDC) pre-schematic design documents related to DOT fleet maintenance yard storm water and wastewater conveyance system upgrades.

MFS' Site/Civil Engineering Team supported the project by providing pre-schematic sanitary sewer evaluation reports and design for the replacement of the existing wastewater conveyance system. The report included a study and evaluation of the central sanitary sewer holding tank with the option of future connections to the city owned sanitary sewer system and a drawing sketch illustrating the possible locations for the underground sewer holding tank, sewer lines, manholes and all other items required for a functioning on-site sewer system. The evaluation additionally determined the feasibility of a force main from the site into the nearest city owned sanitary sewer system. MFS prepared Pre-schematic level design of the sanitary system for the facility along with a letter report and a simple drawing sketch demonstrating the sanitary system pre-schematic design.

NYSOGS Franklin Correctional Facility

OWNER
New York State Office of General Services

LOCATION
Malone, New York

SERVICES PROVIDED
- Geotechnical Engineering
- Structural Engineering

MFS Engineers & Surveyors provided professional engineering services to the New York State Office of General Services (OGS) on behalf of Woodard & Curran at the Franklin Correctional Facility in Malone, New York. The proposed construction included the replacement and expansion of a deteriorating wastewater pump station located outside the facility. The new pump station includes an equalization tank with aeration, a submersible pump chamber, a headworks building, a valve building, an electrical building, a blower equipment building, and the relocation of existing hot water/return lines. MFS was retained by Woodard & Curran to provide professional geotechnical and structural engineering services in support of the project.

MFS' geotechnical engineering services included drilling of geotechnical borings, full-time oversight, laboratory testing, and a geotechnical engineering report with recommendations. The field investigation consisted of three, 15 foot deep and two, 50 foot deep borings. MFS' structural engineering services included detailed design development for the building envelope and design of a 30 feet deep equalization basin and its supporting foundation. MFS also provided construction administration services including teleconferences with the OGS, review of contractor submittals, Request for Information (RFI), construction sketches, and attending site visits during construction to maintain project schedule.

Fishkill Correctional Facility

OWNER
New York State Departmental of Correctional and Community Supervision

LOCATION
Beacon, New York

SERVICES PROVIDED
- Survey
- Geotechnical Engineering
- Structural Engineering

MFS Engineers & Surveyors provided professional engineering and surveying services in support of a sewage grinder pump system located at the Fishkill Correctional Facility in Beacon, New York. The project consisted of the replacement of a sewage grinder pump station. MFS was retained by Woodard & Curran to provide structural, geotechnical engineering, and land surveying services.

MFS provided utility survey and partial topographic survey within a broad area of the Fishkill Correctional Facility grounds. MFS performed survey services for 19 sanitary manholes and 2 catch basins. In addition, we opened accessible manholes to measure depths to pipes and measure pipe diameters at the face of the manhole structure. Sanitary manholes were also surveyed within the southeast portion of the prison yard.

MFS' geotechnical engineering team provided full-time oversight during the subsurface investigation consisting of one test boring at the project site. The test boring log indicating the soil stratigraphy with classifications in accordance with the Unified Soil Classification System and sample depths. Information obtained from the field investigation and laboratory testing were evaluated and the results were confirmed in a geotechnical engineering report complete with recommendation for the design and construction of the proposed foundation and below grade structures.

MFS' structural engineering team provided the structural design development of the reinforced concrete sewer grinder structure and its various components including the retaining walls, slab, and foundation. Additionally, MFS developed the structural loading criteria for the prefabricated fiber reinforced polymer building, which serves as the enclosure for the sewer grinder structure.

Nepperhan Avenue Topographic & Utility Survey

— OWNER
City of Yonkers

— LOCATION
Yonkers, New York

— SERVICES PROVIDED
• Survey

MFS Engineers & Surveyors provided professional survey services for the City of Yonkers, Nepperhan Avenue water main project, in support of Woodard & Curran's design services for a new water main running along an approximately 2,500 foot portion of Nepperhan Avenue form Riverdale Avenue to Elm Street.

MFS' survey services included providing a topographic and utility survey of the project route. The width of the survey spanned up to the full seven lanes of city roads with concrete island, due to the width and extensive traffic a Maintenance and Protection of Traffic Plan was developed and utilized a part of an application to NYSDOT for a Highway Work Plan Permit. MFS utilized GPS to establish horizontal and vertical control at the project site and a total station to extend a survey traverse line along the project alignment. MFS performed a field survey to locate existing features within the project corridor; obtained spot elevations at 50 stations, and located surface utility structures such as manholes, inlets, valve boxes and chamber covers.

MFS retained a subcontractor to provide a subsurface utility investigation to mark out the utility lines in and crossing the project corridor. MFS located the paint marks and utilized the same to depict the locations of the subsurface utilities. MFS obtained pipe sizes and depth to inverts for storm and sanitary sewers. An AutoCAD Civil3D file was prepared and provided to the client for use in the design of the water main route. Hardcopy signed and sealed drawings were provided to the client.

DASNY Storm Resiliency Project at 44 Public Buildings

— OWNER

Dormitory Authority of New York

— LOCATION

Richmond, Kings, Queens, Bronx, Nassau and Suffolk Counties

— SERVICES PROVIDED

- Survey
- Geotechnical Engineering
- Site/Civil Engineering

MFS Engineers & Surveyors under a sub-contract with H2M architects + engineers performed survey, geotechnical and site/civil engineering services for a DASNY Storm Resiliency Project located in four NYC boroughs, and Nassau and Suffolk counties. The project involved the storm hardening/ flood proofing of 44 public buildings.

MFS' Survey Group provided topographic, utility, boundary, and NFIP Elevation Certificate surveys at each of the sites. Project control was established on site with Leica GS-15 GPS receivers configured for RTK with NYSNET. Coordinates were in NY Long Island State Plane Coordinate System (NAD83), with elevation in NAVD1988 (Geoid12B) datum. MFS performed deed and map research at the various county clerks offices. We performed a field survey to locate property corners and property line evidence. A determination by a NY Licensed Land Surveyor was made as to the locations of the property lines. MFS' subconsultant marked out subsurface utilities, and MFS surveyed the mark out. We performed a survey of surface utility structures, determined inverts and pipe sizes. MFS performed a topographic survey of each site, we located buildings, roads, curbs, fences, walks, and other physical features. Elevations of first floors were determined. MFS performed field survey and obtained data as required to complete a NFIP Elevation certificate for the site.

MFS' geotechnical engineering services included the review of existing material, conducting a subsurface investigation at each of the respective project sites, and preparing geotechnical engineering reports. Generally, two borings were conducted at each site in the vicinity of the proposed site developments. MFS provided full-time engineering special inspection services during the subsurface investigations in accordance with the New York City Building Code. At the conclusion of the subsurface investigation, MFS prepared detailed geotechnical engineering reports for each site. The reports included a boring location plan, design and construction recommendations, and soil design parameters for use in the design of the proposed foundations. In addition, MFS' geotechnical engineering services included the preparation and submission of TR-1 and TR-4 forms for the investigations completed at each project site.

MFS' Site/Civil Group provided site/civil engineering site work design and sanitary sewer work at two of the sites. Project design drawings and specifications were provided for the various improvements. MFS performed site inspections on both the Gerrittsen Fire station and Vollies Hall buildings which are part of the Storm Hardening program. MFS performed an as-built of the Fire station driveway apron and sidewalk, this information was used to design the new concrete apron fronting the building. At Vollies hall an MFS site survey was already completed therefore only photo documentation and an interior inspection was required.

USMMA Sewer Pump Station Rehabilitation

— OWNER
US Merchant Marine Academy

— LOCATION
Kings Point, New York

— SERVICES PROVIDED
- Design/Build
- Construction Management

MFS Engineers & Surveyors was contracted by the U.S. Merchant Marine Academy (USMMA) for design/build services at their campus in Kings Point, New York. The project was an assessment of existing conditions at a university sewage pump station, the design of modernized systems and construction management for design field implementation.

The project began with a thorough investigation of the existing pump station conditions which outlined all station equipment that would need to be addressed. Following this investigation, a detailed design was drafted outlining the replacement of grinder and lift pump motors, demolition and replacement of antiquated pump control equipment with state of the art controllers, upgrades to the emergency power and ventilation systems, and the relocation of all electrical equipment to an independent electrical control shed.

During the design, construction, and close out phases of the project, MFS maintained a detailed Critical Path Model (CPM) schedule to ensure timely construction completion. Phasing of this project was critical as out of the existing two grinder pumps and three lift pumps, one grinder and two lifts needed to remain operational at all times to handle campus sewage. Throughout construction, the USMMA campus retained sewer services. Following the completion of construction, MFS provided commissioning and start-up services. These services consisted of the coordination of service personnel from the manufacturers of all major equipment and proper documentation of equipment starting and systems operating as designed.

MFS implemented a strict document control plan throughout the project to ensure no project correspondence or document was overlooked. Additionally, MFS provided full-time construction management for onsite construction oversite and a construction engineer for the completion and proper documentation of regular site inspections.

U. S. Merchant Marine Academy- Design/Build of Grenwolde Loop Wastewater Lines

— OWNER

U. S. Merchant Marine Academy

— LOCATION

Kings Point, NY

— SERVICES PROVIDED

- Design/ Build
- Survey
- Site/Civil Engineering

MFS Engineers and Surveyors provided design/build services for modifications to sanitary system at the United States Merchant Marine Academy in Kings Point, NY. The project entailed the separation of the campus sanitary systems from a lift station operated by the adjacent municipality.

MFS began its operations by performing an investigation of the existing system in order to develop a concept design. Ground penetrating radar, electromagnetic utility mapping, dye testing and test pit operations were performed in order to confirm locations and elevations existing utilities as well as existing effluent routing. Concurrently, MFS provided survey services to record all utility mark-out as well as boundaries and surrounding topography. During the design development phase construction documents were produced in accordance with local codes and regulations. Construction cost and schedule estimates were prepared and submitted throughout design to ensure adherence to budget and schedule constraints.

During the construction phase, work included excavation, trenching, sanitary pipe installation, installation of manholes, interior plumbing modifications, and restoration operations such as grass seeding, asphalt paving, and concrete curb and sidewalk installation. Throughout construction, MFS provided a full-time superintendent for coordination and a construction field engineer for the completion and proper documentation of regular site inspections. The field operations team strictly followed a detailed, cost loaded, Critical Path Model (CPM) schedule to ensure construction was completed on time and under budget. The team also provided continuous safety and quality inspections to prevent work related injury and ensure client satisfaction. MFS additionally maintained a strict document control program from project inception through close-out.

Throughout the design, construction, and close out phases of the project, MFS maintained an exceptional relationship with the client, tenants, and private homeowners communicating on a daily basis the progress and planning for the project, primarily via detailed reporting.

GOVERNMENT AND OTHER PUBLIC CLIENTS OVER THE PAST FIVE YEARS

Passaic Valley Sewerage Commission Walkway Canopies, Newark, NJ

Bergen Co. Utilities Authority, On-Call Geotech. Eng. Ser., Little Ferry, NJ

Bergen Co. Utilities Authority, On-Call CM Services, Little Ferry, NJ

Sullivan County, New Communications Tower-Geotech. Ser., Monticello, NY

Ocean County Justice Complex Renovations, Toms River, NJ

Ocean County On-Call Land Surveying Services, Toms River, NJ

Union County on-Call General Engineering Services, Elizabeth, NJ

Union County On-Call Construction Management Services, Elizabeth, NJ

Essex County Vailsburg Park Improvements/Renovations, Newark, NY

Essex County Imp. Authority, On-Call Engineering Services, Fairfield, NJ

Essex County Imp. Authority, On-Call Surveying Services, Fairfield, NJ

Hudson Co. Imp. Authority, On-Call Engineering/CM Ser., Jersey City, NJ

Cooper's Ferry Partnership, On-Call CM Services, Camden, NJ

PSE&G Pier 6 Newport Marina Bulkhead Evaluation and Design, Jersey City, NJ

PSE&G Sewaren-Metuchen 230KV Conversion Project, Middlesex Co., NJ

PSE&G Bergen-Linden Cor. Newark Bay Crossing, Union-Hudson Co., NJ

PSE&G Sewaren Generation Station Shoreline Stabilization, Sewaren, NJ

Atlantic City Electric Cedar Substation FEP, West Creek, NJ

Exelon Delmarva LNG Plant Security Upgrades, Wilmington, DE

Elizabeth Public Schools, On-Call CM Services, Elizabeth, NJ

Rutgers University Solar Canopy System for Parking Lot, Piscataway, NJ

Stockton University Solar Canopy System for Parking Lot, Galloway Township, NJ

Montclair State University Retaining Wall Design, Little Falls, NJ

DASNY-CUNY City College of Staten Island, Reconstruction of 3 Campus Rds, Staten Island, NY

DASNY Storm Resiliency Project, Multiple Locations, NY

City College of New York, Schiff Daycare Center, New York, NY

Notre Dame High School Expansion Project, Lawrence Township, NJ

Lake Nelson School Expansion Project, Piscataway, NJ

Yonkers Nepperhan Avenue Project, Yonkers, NY

NYSDOT Maybrook Facility, Montgomery, NY

NYSDOT Bronx River Bridge Reconstruction, Greenburgh, NY

PANYNJ Laguardia Restricted Vehicle Service Road, Queens, NY

PANYNJ John F. Kennedy Airport - Survey Crew, Queens, NY

NYCDDC Jamaica Bay GI JAM-003 Ph. 2 Green Infrastructure, Queens, NY

DSNY Staten Island Compost, Staten Island, NY

Hudson River Park Trust Waterfront Structure, New York, NY

Governor's Island Preservation-Building 110 Rehabilitation, Gov. Island, NY

NYCDDC & NYCDEP Green Infrastructure Design Services, Brooklyn, NY

NYCEDC Interim Flood Protection Citywide, Five Boroughs, New York

NYC Dept. of Parks and Recreation Greenstreets, New York, NY

NYC EDC Fulton Landing Ferry Terminal, Brooklyn, NY

NYC EDC Brooklyn Navy Yards, Brooklyn, NY

NYC DEP Owls Head Wastewater Treatment Plant, Brooklyn, NY

4. PROJECT MANAGEMENT APPROACH

SECTION 4 – PROJECT MANAGEMENT APPROACH

PROJECT MANAGEMENT AND EXECUTION

All professional engineering services performed in NY and NJ will be performed under MFS Consulting Engineers & Surveyor, DPC (MFS), as the Prime. At the time of a request for a specific project, MFS will provide a Technical Proposal including an estimated cost, staffing level, starting and completion dates of engineering and inspection work, request of all available documents and facility operations and access arrangements along with other descriptive information as may be appropriate for the specific service such as necessary equipment and staging of equipment. MFS shall not proceed with any professional engineering services until receipt of written approval by the Morris County MUA Project Manager.

Upon approval to proceed, the MFS Team will meet with Morris County MUA staff to review project requirements or obtain data for a given project. All work at a site will be coordinated through the Morris County MUA's project manager and facility personnel or other Morris County MUA staff as the Authority's project manager may direct. All site visits, unless otherwise authorized by the Morris County MUA, will be performed between the hours of 8:00am through 4:00pm on weekdays. A workday shall be 8.0 hours, consisting of a 7.5 hour work period plus 0.5 hour for lunch on the project site. Travel to and from the project site from our office will be part of the workday and will not be charged to the project. No site visits will be performed on a legal holiday of the State of New Jersey. MFS will be responsive to the client's needs, keeping the client apprised of the project status and scheduled dates of deliverables.

MFS will invoice the client on a monthly basis, as work is completed. Invoices will be submitted to the client with supplemental backup such as timesheets and sub-consultant's invoices. The client will pay MFS invoices for its fees or services within 30 days from the date of the invoice. MFS will not exceed approved fees without prior authorization.

Security at the Morris County MUA's facilities is of high importance to the Authority. Work at certain facilities may require specific safety orientation training such as safety, security clearances and/or vehicle registration with Morris County MUA. MFS, at the Morris County MUA's direction, will seek to obtain any required clearances/registrations and attend any required training/orientation programs.

Safety is of the utmost importance to all. We will immediately inform the Morris County MUA of any unsafe condition and/or asbestos-containing materials that may be discovered during the course of performing our services. MFS understands the work may require work in permit and non-permit confined space. Accidents will be reported as soon as possible to the local law enforcement agency and to the Morris County MUA project manager. Interference with facility operations is to be avoided, unless absolutely required to complete a project. Interference of operations will not occur without the prior approval of the specific interruption by the Morris County MUA project manager.

Prior to beginning site visits, engineers will be briefed on the project, procedures to be followed, work hours, budgeted time, security and site safety. They will be provided with a Morris County MUA contact name and phone number to contact if there is a safety or security issue that may arise while on site. Office staff will be briefed on the project, deliverable requirements, time frame and budget. We will be pro-active in managing a project and in its execution. MFS' goals are to be able to anticipate and identify potential problems and unusual circumstances that would require a non-standard level of detail. Many of our staff have experience with design and construction projects, and as such are able to identify situations that may require special attention for a particular type of project.

MFS will complete daily narratives for all office work performed by our staff. The narratives will be submitted to Commission at the frequency required by the previously appointed project point of contact for the Morris County MUA. MFS timesheets, from which our invoices are based, will agree with the hours of work shown on the Daily Narratives.

PROJECT PERSONNEL AND RESPONSIBILITES

To ensure project accountability and quality control and assurance, MFS will provide key project personnel to assure quality control and scope is meeting the client's needs. Key personnel responsibilities are defined below:

The Project Manager is responsible for all technical operations. They possess a P.E. and have a minimum of ten (10) years of professional engineering experience and have extensive experience in design as well as all necessary training and certification requirements. The Project Manager is responsible for ensuring that all technical operations meet the Project specifics. They are also responsible for ensuring adequate resources for all operations, detailed and recorded review of all projects to ensure regulatory and contractual compliance, and timely scheduling of all work.

The Quality Control Engineer has experience in design and inspections of facilities meeting or exceeding the qualifications the Manager and has extensive experience and formal training in Quality Systems management. The Quality Control Engineer is responsible for maintaining the Quality Control and Quality Assurance, conducting reviews and audits of all operations, managing corrective and preventive actions, and ensuring that all supervisory and management personnel carry out their responsibilities in accordance with quality system requirements. They ensure that all staff understand that quality is everyone's responsibility, and act as a catalyst to implement this. They are responsible for all training programs, including quality training, and for maintaining records of training each individual receives.

Each project will have at least one (1) Team Leader who is responsible for all project work of the specific task order. The Team Leader will act as the liaison between MFS' Manager and the client, and is responsible for coordinating all activities between the site and the office. A designated Team Leader serves as the deputy for the Project Manager.

5. FIRM STAFFING AND RESUMES OF KEY PERSONNEL

SECTION 5 – FIRM STAFFING AND RESUMES OF KEY PERSONNEL

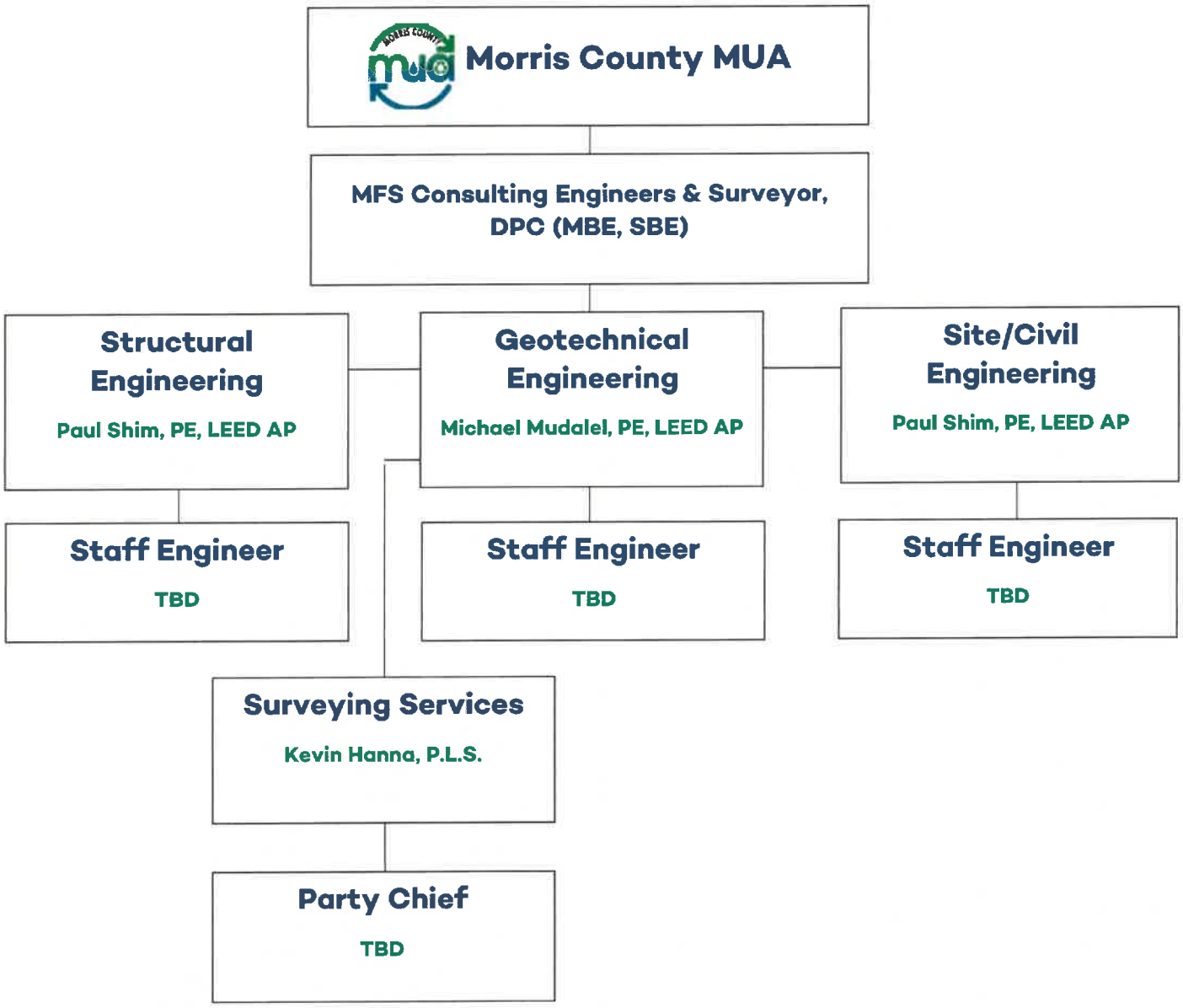
All professional engineering services to be provided by MFS Consulting Engineers & Surveyor, DPC (MFS) will be managed, from our South Plainfield, NJ office, under the supervision of Michael L. Mudalel, P.E., Principal Engineer. Mr. Mudalel's notable past project experience includes multiple projects with PSE&G, Atlantic City Electric, Delmarva, Essex County, Union County, Ocean County, Bergen County Improvement Authority, Bergen Community College, Rutgers University, Stockton University, Columbia University, NYC Department of Design & Construction, NYC Economic Development Corp., and NYC Department of Environmental Protection.

Our professional and technical staff have extensive experience in all types of project management, design, and inspection as demonstrated by the Organizational Chart and Professional Resumes that follow this section for MFS Consulting Engineers & Surveyor, DPC. The depth of our experience is also reflected in our diverse staff. MFS is certified as an MBE and SBE Consultant in the State of New Jersey. MFS takes a very high level of pride and satisfaction in the services that MFS provides, which is reflected in the quality and timely deliverables, meeting client needs, expectations and budgets.

MFS ENGINEERS & SURVEYORS

ORGANIZATIONAL CHART

Morris County Municipal Utilities Authority
Engineering Services-Water Division for 2026



Michael Louis Mudalel, P.E., LEED AP

Principal Engineer

Geotechnical Engineering

EDUCATION

M.S., Geotechnical Engineering,
Columbia University, Fu Foundation School of Engineering
B.S., Civil Engineering,
Rutgers University, School of Engineering

PROFESSIONAL REGISTRATION

Professional Engineer: CT, MD, NJ, NY, PR, VA DE
GBCI™ LEED® Accredited Professional

CERTIFICATIONS

OSHA 40-Hour HAZWOPER
OSHA 10-Hour

YEARS OF EXPERIENCE: 18

SUMMARY OF QUALIFICATIONS

Mr. Mudalel has a wealth of knowledge in geotechnical engineering including: specialization in subsurface investigations, preparing geotechnical engineering reports with recommendations, waterfront designs, support of excavation designs, deep and shallow foundation designs, geotechnical specifications, controlled construction inspections, preconstruction surveys, and construction instrumentation monitoring. In addition, Mr. Mudalel has a vast amount of experience in the energy generation and transmission sector, which includes electric, gas, wind, solar, and geothermal systems.

RELEVANT EXPERIENCE

Rutgers University 8.01MW Solar Carport System, Piscataway, New Jersey – Geotechnical Engineer responsible for the design and development of construction documents for the foundations to support 8MW of solar carport canopy structures. The proposed foundations were designed to withstand lateral and vertical loading from the canopy structures. Based on the loading and the subsurface conditions three varying lengths of 36-inch diameter precast concrete piers were designed to maximize cost effectiveness and reduce the construction schedule. The piers where precast with anchor bolt connections in the top which were designed to affix the carport column to the top of the concrete pier foundation after its placement in the soil. Upon the completion of the foundation design Mr. Mudalel coordinated and obtained approval of the foundation system with the owner and all authorities having jurisdiction for this project.

Middlesex Water Company - Western Transmission Main Project, South Brunswick, New Jersey – Under Mr. Mudalel's direction the analysis of a jack-and-bore crossing beneath 13 existing utilities crossing the alignment of the proposed water main was completed. The section of the water main that was to be installed utilizing jack-and-bore methods was approximately 10 feet below existing site grade. Mr. Mudalel utilized three (3) borings along the alignment of the jack-and-bore crossing and conducted an analysis to determine the maximum anticipated and allowable jacking forces on the casing pipe. In addition, the calculation package indicated a recommended pipe casing material and size to be used for the crossing.

PSE&G L-2238 Jackson Road to Cedar Grove Underground Geotechnical Services, Various Counties, New Jersey – Professional Engineer overseeing a field subsurface investigation consisting of 51 borings along the proposed circuit alignment within the public right-of-way. Throughout the investigation, Mr. Mudalel coordinated the MFS Project Management Team who managed the geotechnical drilling company, field boring inspectors, the geotechnical testing laboratory, and the environmental laboratory to have the soil, water, and concrete tested as per the project requirements. At the completion of field investigation and laboratory testing program, Mr. Mudalel reviewed and edited a geotechnical engineering report, complete with boring location plans, summary tables of all testing performed (geotechnical and environmental), appropriate figures, design

recommendations for the construction of the underground transmission circuit. Additionally, the design recommendations included design parameters for the subsurface conditions encountered along the proposed circuit alignment.

PSE&G Sewaren Generating Station Shoreline Stabilization – Sewaren, New Jersey – Senior associate responsible for managing a field subsurface investigation consisting of three land borings and two water borings. In addition, Mr. Mudalel managed the environmental sampling that was conducted within the footprint of a deteriorated pier at the project site. Prior to field mobilization, engineer oversaw the preparation and development of a soil sampling plan for review and approval of the project owner for disposal of the existing soil on site. At the completion of the subsurface investigation, Mr. Mudalel oversaw the preparation of boring logs in gINT and a summary of scope of services memorandum which was submitted to the client for the evaluation and stabilization of the existing shoreline and pier structure.

PSE&G M-1339 Manhole Rehabilitation and Construction, Bergen County, New Jersey – Engineer leading a field subsurface investigation and structural assessment of 25 existing manholes. Responsible for providing a detailed structural assessment of several manholes which included photographs and manhole layout drawings. Upon completion of field investigations, Mr. Mudalel assisted in the design of reinforcing existing manholes to support the proposed HS-25 loading and design new manholes capable of resisting the increased proposed loading scenario. He managed the design of closed ended pipe piles as deep foundation elements to support a manhole in an existing substation. Additionally, Mr. Mudalel reviewed and oversaw the development of all project drawings, attended all project required meetings, and provided construction administration services throughout the entire construction process.

PSE&G Q-1369 Anomaly Repair, Elizabeth, New Jersey – Engineer managing the subsurface investigation consisting of a single boring. Conducted a site visit prior to completion of boring to assist in the development of the boring location plan to be submitted to the United States Army Corps of Engineers (USACE) as the proposed boring was completed on an existing USACE levee. Preparation of the geotechnical engineering report based on the boring conducted and laboratory testing received. Upon the completion of the subsurface investigation, Mr. Mudalel led the development of the design for a proposed cofferdam to allow the contractors excavation access to the existing utility requiring repair. He attended project related meetings to discuss permitting constraints and requirements to ensure that all proposed field operations where conducted in accordance with the governing authorities.

PSE&G R-1344 CSX Anomaly Repair, Ridgefield, New Jersey – Geotechnical engineer leading in the development of the design of a proposed cofferdam to allow the safe excavation access to an existing utility to be repaired within an active train yard. He attended project related meetings to discuss construction and permitting constraints and requirements to ensure that all proposed field operations are conducted in accordance with the governing authorities. Mr. Mudalel also managed in the development of plans to locate the existing utilities in the area to be submitted to CSX for approval prior to the construction of the proposed cofferdam.

PROFESSIONAL AFFILIATIONS

Chi Epsilon Honors Society
Tau Beta Pi Honors Society
Sigma Phi Epsilon Society
American Society of Civil Engineers
American Council of Engineering Companies of New York

AWARDS & HONORS

40 Under 40 Award 2019, *NJBIZ*
Top Young Professionals Class of 2020, *ENR*

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State Of New Jersey
New Jersey Office of the Attorney General
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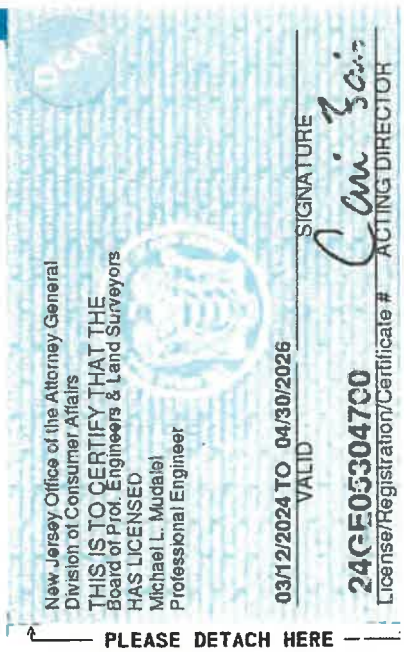
Board of Prof. Engineers & Land Surveyors

HAS LICENSED

Michael L. Mudalel
2780 Hamilton Blvd.
South Plainfield NJ 07080

FOR PRACTICE IN NEW JERSEY AS A(N): Professional Engineer



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Newark, NJ 07101

03/12/2024 TO 04/30/2026
VALID

24GE05304700
LICENSE/REGISTRATION/CERTIFICATION #

Signature of Licensee/Registrant/Certificate Holder

Cari Bais
ACTING DIRECTOR

PLEASE DETACH HERE

Michael L. Mudalel EXPIRATION DATE **2026**

YOUR LICENSE/REGISTRATION/CERTIFICATE NUMBER IS **24GE 05304700** . PLEASE USE IT IN ALL CORRESPONDENCE TO THE DIVISION OF CONSUMER AFFAIRS. USE THIS SECTION TO REPORT ADDRESS CHANGES. YOU ARE REQUIRED TO REPORT ANY ADDRESS CHANGES IMMEDIATELY TO THE ADDRESS NOTED BELOW.

Board of Prof. Engineers & Land Surveyors
P.O. Box 45015
Newark, NJ 07101

RINT YOUR NEW **ADDRESS OF RECORD** BELOW.
OUR ADDRESS OF RECORD IS THE ADDRESS THAT WILL PRINT ON OUR LICENSE/REGISTRATION/CERTIFICATE AND IT MAY BE MADE AILABLE TO THE PUBLIC.

HOME ☐
BUSINESS ☐

TELEPHONE
NCLUDE AREA CODE

PRINT YOUR NEW **MAILING ADDRESS** BELOW.
YOUR MAILING ADDRESS IS THE ADDRESS THAT WILL BE USED BY THE DIVISION OF CONSUMER AFFAIRS TO SEND YOU ALL CORRESPONDENCE

HOME ☐
BUSINESS ☐

TELEPHONE
INCLUDE AREA CODE

the law governing your profession requires the current license/registration/certificate to be displayed, it should be ithin reasonable proximity of your original license/registration/certificate at your principal office or place of business.

Paul B. Shim, P.E., LEED AP

Principal Engineer

Site/ Civil & Structural Engineering

EDUCATION

M.S., Structural Engineering, Columbia University,
Fu Foundation School of Engineering

B.S., Civil Engineering,
Rutgers University, School of Engineering

PROFESSIONAL REGISTRATION

Professional Engineer: New Jersey; New York; Pennsylvania; Texas
GBCI™ LEED® Accredited Professional

CERTIFICATIONS

ICC Special Inspector
OSHA 10-Hour
ICC Structural Steel & Bolting Inspector (S1)
ICC Structural Welding Inspector (S2)

YEARS OF EXPERIENCE: 18

SUMMARY OF QUALIFICATIONS

Mr. Shim is a civil and structural engineer who has expertise in structural analysis and design of structures, foundation systems, retaining walls, analyzing superstructure elements, designing support of excavation systems, and providing construction-engineering support. Mr. Shim and his team of site/civil and structural engineers has produced complete and final construction documents including construction specifications on various commercial, industrial, and waterfront development and infrastructure projects. He has performed numerous structural investigations including inspecting existing structural framing, slabs, columns, and foundations and has made repair design schemes and recommendations. Mr. Shim has successively led teams of engineers in the inspection of historic buildings and underground structures. In addition, he has created comprehensive structural assessment reports including investigation findings and recommendations for corrective measures. Additionally, Mr. Shim has expertise in various computer design programs such as AutoCAD, RISA 2D/3D, DeepEx, AllPile, and MathCAD.

RELEVANT EXPERIENCE

Essex County Vailsburg Park Improvement/Renovations, Newark, New Jersey – Professional Engineer provided professional engineering services for the Vailsburg Park Bathroom and Basketball Courts Renovation project. The proposed project included redesigned basketball court with new overhead lighting and park improvements. Improvements included updated pedestrian walkways and new park amenities. Provided the client with RFI and submittal deliverables during construction and attended weekly construction progress meetings. Reviewed change orders from the contractor for approval. Performed redesigns as needed if field conditions changed during construction.

Ocean County Justice Complex, Toms River, New Jersey – Project Engineer overseeing inspections of waste water lines conditions to determine the need of replacement for the Ocean County Justice Complex. Reviewed the Civil Drawings for each floor wastewater line in need of replacement and developed a material schedule prepared for bidding purposes. Oversaw the engineer's material cost estimate for waste lines based on the material schedules obtained during the field data compilation. Aided client (architect) on the bidding processes after the approval of plans by the County.

Mercer County Board of Social Servivces Structural Investigation, Trenton, New Jersey – Professional Engineer was responsible for the structural investigation to observe and assess the existing conditions of the structural framing for the approximately 100 year old, 105,000 square feet office building in Trenton, New Jersey occupied

by the Mercer County Board of Social Services. The existing structure is comprised primarily of hot rolled steel beams and girders, steel columns, and timber flooring. The MCBOSS building was previously utilized as a factory and was retrofitted and converted into office space in the 1980's. Mr. Shim reviewed the development of the structural investigation report including the photo documentation, summary of findings, conclusion and recommendations for repairs.

PSE&G Carrier Clinic Cooling Tower, Belle Mead, New Jersey - Professional Engineer responsible for the development of a new cooling tower which included the location for the new tower footprint and evaluated other purposed site improvements for suitability and design requirements, as well as a prepared a Site Plan Package (SPP) which consisted of a site demolition and removal plan, erosion and sedimentation control plan, prosed site plan, site utility plan and grading and drainage plan. Submitted site plan to the Montgomery Township for approval.

Nassau County DPW Cedarhurst Pump Station, Nassau County, New York – Professional Engineer responsible for the structural design of a new 50 cubic feet per second (CFS) stormwater pump station as part of the Nassau County Department of Public Works (NCDPW) Five Towns Drainage Improvements Project in Nassau County, New York. The approximate pump station footprint measured 25-ft by 25-ft by 20-ft deep and is comprised of reinforced concrete. The proposed 50 CFS stormwater pump station will accept flow from four (4) existing pipes and push flow out to a new stormwater outfall which discharges into the Park Drive Canal.

NYSOGS Camp Smith WWTP Dome Construction, Peekskill, New York – Structural Engineer was responsible for the analysis of a new protective aluminum dome structure to cover three existing 35-feet diameter trickling tanks, with eight-inch thick concrete side walls. The dome structures were installed for the Camp Smith Wastewater Treatment Plant on the grounds of Camp Smith military base owned by The New York State Office of General Services (NYSOGS). Mr. Shim analyzed the connection design of the dome to withstand the high wind speeds in that elevated region. Additionally, he reviewed available as-built construction drawings for the existing trickling tank and performed an inspection to determine its structural integrity to accommodate the new structure.

NYSDEC Salmon River Fish Hatchery, Altmar, New York – Professional Engineer responsible for the design approach and schematic to design development of the proposed renovation upgrades of the start tank area and installation of the outdoor bulk storage tank for the Salmon River Fish Hatchery cultural water recirculation system project. The proposed upgrades included the design of a raised catwalk platform to access the newly installed start tank and design of depressed slabs for the installation of the water treatment plant.

DASNY Storm Resiliency Project Gerrittsen Fire Station & Hall, Brooklyn, New York – Project manager responsible for developing construction documents and specifications for the proposed improvements at the Gerrittsen Fire Station & Vollies Hall buildings. MFS performed site inspections at both sites and then developed sidewalk improvement plans with details for the Fire Station and Vollies Hall. Specified backflow prevention for the sanitary sewer system at Vollies Hall. Worked with the lead architect in developing project document deliverables for submission to the NYC DDC for review and final approval.

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers (Metropolitan Section)
Structural Engineering Institute
United States Green Building Council

BACKGROUND AND MULTIPLE SECURITY FEATURES. PLEASE VERIFY AUTHENTICITY.

State Of New Jersey
New Jersey Office of the Attorney General
Division of Consumer Affairs

THIS IS TO CERTIFY THAT THE
Board of Prof. Engineers & Land Surveyors

HAS LICENSED

Paul B. Shim
2780 Hamilton Blvd
South Plainfield NJ 07080

FOR PRACTICE IN NEW JERSEY AS A(N): Professional Engineer

04/24/2024 TO 04/30/2026
VALID

Signature of Licensee/Registrant/Certificate Holder

24GE05054300
LICENSE/REGISTRATION/CERTIFICATION #

Cari Bais
ACTING DIRECTOR

New Jersey Office of the Attorney General
Division of Consumer Affairs
THIS IS TO CERTIFY THAT THE
Board of Prof. Engineers & Land Surveyors
HAS LICENSED
Paul B Shim
Professional Engineer
04/24/2024 TO 04/30/2026
VALID
SIGNATURE
Cari Bais
24GE05054300

Kevin Hanna, P.L.S.
Principal Land Surveyor

Surveying

EDUCATION
B.S., Engineering Technology (Surveying), New Jersey Institute of Technology, 2007
National Diploma and Certificate GEO-Surveying, Dublin Institute of Technology, 1986

PROFESSIONAL REGISTRATION
Professional Land Surveyor New Jersey

YEARS OF EXPERIENCE: 40

SUMMARY OF QUALIFICATIONS
Kevin Hanna, P.L.S., is the Principal in charge of the Land Surveying division at MFS. With nearly 40 years of experience from hands-on fieldwork to complex project leadership, Mr. Hanna's comprehensive background includes preparing land surveys for federal, state and local government agencies as well as for commercial entities, residential homeowners, and construction contractors. His portfolio of projects includes ALTA, boundary, topographic, hydrographic, and as-built surveys. His expertise in terrestrial laser scanning (HDS/LiDAR), iMMS, and BIM includes the planning, collection, and post-processing of scan data for both indoor and outdoor infrastructure. He is responsible for implementing department-wide surveying procedures as well as overseeing all cost and time estimates for land surveying projects. Mr. Hanna excels in large-scale critical projects, especially serving major transportation authorities, such as the NJDOT, NJTA, PANYNJ, NYSTA, and NYSDOT. His expertise encompasses all aspects of land surveying including topographic mapping, right-of-way (ROW) and boundary surveys, subsurface utility engineering (SUE) surveys, and their required control network establishment.

RELEVANT EXPERIENCE
NJDPMC Yellow Frame Maintenance Yard, Blairstown, Warren County, NJ - Principal Land Surveyor oversaw all surveying operations and ensured accurate data collection throughout the project. They directed the establishment of control using Leica SmartNet North America GPS tied to local NGS monuments and determined the horizontal and vertical datums for the project, adhering to the New Jersey State Plane Coordinate System NAD83 and the North American Vertical Datum NAVD 1988. They coordinated the use of both conventional and HDS laser scanning surveying techniques for supplemental requests, overseeing the survey of various features including buildings, curbs, guide rails, fences, tree lines, pads, surface utilities, and sanitary and drainage structures. Under the Principal Land Surveyor's leadership, the survey team meticulously located and recorded rim/grate elevations, invert measurements, pipe types, and sizes for the specified utilities, while adhering to strict guidelines for surveying accuracy. They identified and documented utility poles, roadway lighting, and manholes, taking care to avoid any interference with structures containing excessive debris or silt. Data was compiled and formatted in MicroStation V8, following NJDOT standards. The Principal Land Surveyor ensured the entire surveying process was conducted in compliance with NJDOT Article 51, with all operations carried out under the direct supervision of a certified Licensed Land Surveyor.

PVWC Paterson Topographic Survey, Paterson, New Jerey - Principal Land Surveyor managed all aspects of the surveying efforts. He oversaw the establishment of horizontal and vertical control, ensuring the survey data was accurate and properly tied to the appropriate coordinate systems. His team conducted topographic surveys for two separate areas, carefully locating physical features such as buildings, curbs, sidewalks, utility poles, and street trees. They also performed detailed cross-section surveys and spot elevation gathering to develop contours and identify breakline features. The project scope also required a tree survey for one area, which was managed by Mr. Hanna's team, alongside additional surveying tasks as necessary for the project. Mr. Hanna ensured that all survey efforts were completed to the highest standards, guiding his team through the necessary procedures and calculations. He communicated directly with the client and project manager to address any changes or additional needs that arose during the survey process. His oversight included attending the project kickoff meeting and providing continuous support throughout the survey stages. Mr. Hanna's

leadership in managing survey tasks contributed to the timely and successful delivery of high-quality survey data, which met the project's specifications and requirements.

Leland Terrace Pump Staton Tinton Falls, New Jersey - Principal Land Surveyor oversaw and managed a comprehensive survey and base mapping project for the Leland Terrace Pump Station upgrade in Tinton Falls. He directed a team of surveyors responsible for setting GPS control points, carrying elevations with data collectors, and establishing benchmarks for future recovery. His team surveyed the site to capture critical data including the locations and sizes of existing structures, utilities, trees, and drainage systems. The survey also included precise measurements for topography, such as edge of gravel areas, curb and gutter locations, and existing paving features. The surveyors worked in coordination with a DPW crew to access structures and gather necessary data for the design and construction of the pump station upgrade. In addition to managing the field survey, the Principal Land Surveyor supervised the creation of detailed base mapping deliverables. His team produced a Civil3D-based planimetric and topographic base map that incorporated all surveyed data points, divided into layers for easy interpretation.

Montclair State University, College Ave. & Carlisle Rd., Montclair, New Jersey - Principal Land Surveyor managed the field crews responsible for marking out utilities using lumber crayon and pin flags, ensuring no paint was used on paved surfaces. His team was also tasked with creating detailed field sketches of all discovered utilities, documenting their findings in accordance with the project's requirements. His leadership ensured the efficient execution of the project, with all work completed on schedule following final confirmation of the required date. He maintained direct communication with the client and handled the logistical and operational aspects of the job, ensuring a smooth workflow from start to finish.

Montclair University Amphitheater, Montclair, New Jersey - Principal Land Surveyor oversaw the utility mark-out operations at Montclair University's Amphitheater, ensuring precise identification and documentation of underground utilities within the designated project area. He managed field crews tasked with conducting thorough utility mark-outs using lumber crayons and pin flags, adhering to project specifications that prohibited paint markings on paved surfaces. His leadership ensured the team's efficiency and accuracy in detecting existing utilities while maintaining clear communication with stakeholders to meet project requirements. Under his direction, the field team successfully executed the scope of work, producing a comprehensive field sketch detailing all located utilities. He coordinated scheduling and project timelines, ensuring that the work was completed promptly upon confirmation of the required date.

Secaucus to Meadowlands Transitway Planning and Design Project, Phase 2, Meadowlands, New Jersey - Principal Land Surveyor oversaw the survey operations for three key project areas: Secaucus Train Station, Meadowlands Parkway, and the Meadowlands Parking Lot. He managed the establishment of project control across the sites, ensuring the integration of existing survey data and performing necessary field adjustments using terrestrial LiDAR and conventional survey methods. He directed his team in acquiring detailed topographic mapping, including the collection of site features such as curbs, pavements, walkways, fences, utilities, and storm sewer structures. The team also successfully carried out the stakeout of Lot E, converting provided plans into AutoCAD Civil 3D files, calculating the stakeout positions, and marking lines with specific paint colors for various features, ensuring clear demarcation for construction purposes. Throughout the project, the Principal Land Surveyor ensured all survey activities adhered to the specified project limits and the New Jersey State Plane Coordinate System. Under his leadership, the survey crew conducted comprehensive terrestrial LiDAR surveys, updated topographic base mapping, and provided essential deliverables, including digital copies of survey notes, point files, and point cloud data.

PROFESSIONAL AFFILIATIONS

New Jersey Society of Professional Land Surveyors
National Society of Professional Surveyors
American Congress on Surveying and Mapping
Irish Institute of Surveyors

State Of New Jersey
New Jersey Office of the Attorney General
Division of Consumer Affairs

DCA

THIS IS TO CERTIFY THAT THE

Board of Prof. Engineers & Land Surveyors

HAS LICENSED

Thomas K. Hanna
971 Ridge Road
Newton NJ 07860

FOR PRACTICE IN NEW JERSEY AS A(N): Professional Land Surveyor

03/20/2024 TO 04/30/2026
VALID

24GS04329200
LICENSE/REGISTRATION/CERTIFICATION #

Thomas K. Hanna
Signature of Licensee/Registrant/Certificate Holder

Cari Fais
ACTING DIRECTOR

6. CLIENT REFERENCES

SECTION 6 – CLIENT REFERENCES

CLIENT REFERENCES

Public Service Electric and Gas Company - 4000 Hadley Road Mail Code 430, South Plainfield, NJ 07080
Timothy Erway – Senior Project Manager – Delivery Projects and Construction
(908) 412-7691 –Timothy.Erway@pseg.com
Ronald S. Shute II, PMP – Senior Project Manager – Delivery Projects and Construction
(908) 712-2314 – Ronald.shute@pseg.com

Delmarva Power – New Castle Regional Office – PO Box 9239, Newark, DE 19714
Mark Okonowicz, PMP – Principal Project Manager
(302) 283-6115 - Mark.okonowicz@pepcoholdings.com
Jonathan Calhoun – Construction Manager
(302) 750-5678 - Jonathon.Calhoun@delmarva.com

NYS Office of General Services – Design & Construction – 33rd Fl, Corning Tower, ESP, Albany, NY 12242
Bruce Trobridge – Team Leader – Division of Design
(518) 408-1591 –Bruce.trobridge@ogs.ny.gov

Mercer Co. Board of Social Services – 200 Woolverton Street- Trenton, NJ 08650
Michael Danbury- Assistant Chief Clerk
(609) 989-4320- mdanbury@mcboss.org

County of Morris Department of Public Works-30 Schuyler Place, 3rd Floor, Room 333, Morristown, NJ 07963
Christopher J. Vitz, P.E., C.P.W.M. – Director of Public Works & County Engineer
(973) 285-6750 - Cvitz@co.morris.nj.us

7. HOURLY RATES PROPOSAL

SECTION 7 – HOURLY RATES PROPOSAL

For this On-Call Contract, MFS proposes using our 2026 Standard Municipal Hourly Rates Sheet, which immediately follows this page. The Rates submitted are all inclusive of travel expenses, including mileage and tolls. MFS anticipates preparing a Letter Proposal based upon the specific scope of work required to complete the planned project as the need arises for the Morris County MUA under this On-Call Contract. MFS will provide a Technical Proposal including an estimated cost, staffing level, starting and completion dates of engineering and inspection work, request of all available documents and facility operations and access arrangements along with other descriptive information as may be appropriate for the specific service. MFS is submitting in the Categories of Site/Civil Engineering, Geotechnical Engineering, Structural Engineering, Surveying Services for this Contract with the Morris County MUA.

MFS Consulting Engineers & Surveyor, DPC

2026 Design/Consulting Municipality Rates	
Title	**2026 Municipality Rates**
Principal Engineer	$ 260.00
Senior Associate Engineer	$ 240.00
Associate Engineer/Project Manager	$ 220.00
Project Engineer/Manager II	$ 185.00
Project Engineer/Manager I	$ 160.00
Assistant Project Engineer/Manager II	$ 150.00
Assistant Project Engineer/Manager I	$ 135.00
Senior Staff Engineer/Geologist/Designer II	$ 125.00
Senior Staff Engineer/Geologist/Designer I	$ 115.00
Staff Engineer/Geologist/Designer II	$ 110.00
Staff Engineer/Geologist/Designer I	$ 105.00
Principal Land Surveyor	$ 260.00
1 Man Survey Crew/Party Chief	$ 140.00
1 Man 3DLS Scanning Crew	$ 145.00
Project Manager - Survey	$ 185.00
Project Surveyor	$ 130.00
Instrument Operator	$ 110.00
Survey Technician II	$ 130.00
Survey Technician I	$ 90.00
Senior CAD Operator	$ 105.00
CAD Operator	$ 85.00
Technician/Inspector/Project Administrator	$ 85.00
Word Processor/Technical Typist	$ 65.00

Please note that the above Rates are All-Inclusive, and include mileage and tolls.

8. REQUIRED FORMS, CERTIFICATIONS AND ATTACHMENTS

SECTION 8 – REQUIRED FORMS, CERTIFICATIONS AND ATTACHMENTS

MFS has included required forms, certifications and attachments in this section immediately following this page as required by this RFP for the Morris County Municipal Utilities Authority for Engineering Services for the Water Division for 2026.

MORRIS COUNTY MUA

Administrative Documents

A. Please submit the following documents with your response to the RFP

Owner's Checkmarks		Bidder's Initials
X	Statement of Ownership Disclosure	PS
X	Non-Collusion Affidavit	PS
X	Disclosure of Investment Activities In Iran	PS
X	Certification of Non-Involvement in Prohibited Activities in Russia or Belarus	PS
X	Affidavit of Non-Debarred Status	PS
X	Affirmative Action Compliance Notice	PS
X	Mandatory EEO Language	PS
X	Americans with Disability Act of 1990 Form	PS
X	Anti-Discrimination Requirements	PS
X	Pay to Play Advisory Notice	PS
X	Certificate of Employee Information Report/AA-302	PS
X	W-9	PS
X	New Jersey Business Registration Certificate	PS
X	Proposal (document not provided)	PS

EXHIBIT A

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY LANGUAGE

N.J.S.A. 10:5-31 et seq. (P.L.1975, c.127)

N.J.A.C. 17:27 et seq.

GOODS, GENERAL SERVICES, AND PROFESSIONAL SERVICES CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

Such equal employment opportunity shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union of the contractor's commitments under this chapter and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to make good faith efforts to meet targeted county employment goals established in accordance with N.J.A.C. 17:27-5.2.

The contractor or subcontractor agrees to inform in writing its appropriate recruitment agencies including, but not limited to, employment agencies, placement bureaus, colleges, universities, and labor unions, that it does not discriminate on the basis of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, and that it

will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

In conforming with the targeted employment goals, the contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions. The contractor shall submit to the public agency, after notification of award but prior to execution of a goods and services contract, one of the following three documents:

Letter of Federal Affirmative Action Plan Approval;

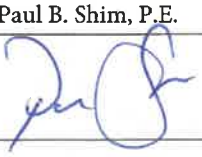
X **Certificate of Employee Information Report; or**

Employee Information Report Form AA-302 (electronically provided by the Division and distributed to the public agency through the Division's website at: http:// www.state.nj.us/treasury/contract_compliance.

The contractor and its subcontractors shall furnish such reports or other documents to the Division of Purchase & Property, CCAU, EEO Monitoring Program as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Purchase & Property, CCAU, EEO Monitoring Program for conducting a compliance investigation pursuant to N.J.A.C. 17:27-1.1 et seq

Business Name: MFS Consulting Engineers & Surveyor, DPC

Representative's Name (print): Paul B. Shim, P.E.

Representative's Signature: 

Date: 1/13/2026

MORRIS COUNTY MUA

Affirmative Action Compliance Notice

EXHIBIT A

GOODS, GENERAL SERVICES, AND PROFESSIONAL SERVICES CONTRACTS

This form is a summary of the successful vendor's requirement to comply with the requirements of N.J.S.A. 10:5-31 and N.JA.C. 17:27.

The respondent shall submit to the public agency, one of the following three documents as forms of evidence:

1. Letter of Federal Affirmative Action Plan Approval

X 2. Certificate of Employee Information Report

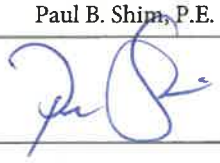
3. A photocopy of an Employee Information Report (AA302) provided by the Division and distributed to the public agency to be completed by the vendor in accordance with N.J.A.C. 17:27-4.

The vendor must submit the copies of the AA302 Report to the Division of Contract Compliance and Equal Employment Opportunity in Public Contracts (Division). The Public Agency copy is submitted to the public agency, and the vendor copy is retained by the vendor.

The undersigned vendor further understands that his/her proposal shall be rejected as non-responsive if said vendor fails to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27.

Business Name: MFS Consulting Engineers & Surveyor, DPC

Representative's Name (print): Paul B. Shim, P.E.

Representative's Signature: 

Date: 1/13/2026

MORRIS COUNTY MUA

Employee Information Report Instructions – Form AA302

If you have a current Certificate of Employee Information Report, please submit with your Bid Proposal.

For forms or more information: www.state.nj.us/treasury/contract_compliance

Certification **59652**

CERTIFICATE OF EMPLOYEE INFORMATION REPORT **RENEWAL**

This is to certify that the contractor listed below has submitted an Employee Information Report pursuant to N.J.A.C. 17:27-1.1 et. seq. and the State Treasurer has approved said report. This approval will remain in effect for the period of **15-Aug-2025** to **15-Aug-2028**

MFS CONSULTING ENGINEERS & SURVE
2780 HAMILTON BLVD.
S. PLAINFIELD NJ 07080

ELIZABETH MAHER MUOIO
State Treasurer

MORRIS COUNTY MUA

Americans with Disabilities Act of 1990

The CONTRACTOR and the OWNER do hereby agree that the provisions of Title 11 of the Americans With Disabilities Act of 1990 (the "ACT") (42 U.S.C. S12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs, and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereunto, are made a part of this contract. In providing any act benefit, or service on behalf of the OWNER pursuant to this contract, the CONTRACTOR agrees that the performance shall be in strict compliance with the Act. In the event that the Contractor, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the CONTRACTOR shall defend the OWNER in any action or administrative proceeding commenced pursuant to this Act. The Contractor shall indemnify, protect, and save harmless the OWNER, its agents, servants, and employees from and against any and all suits, claims, losses, demands, or damages, of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The CONTRACTOR shall, at its own expense, appear, defend, and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the OWNER grievance procedure, the CONTRACTOR agrees to abide by any decision of the OWNER which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the OWNER or if the OWNER must any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the CONTRACTOR shall satisfy and discharge the same at its OWN expense.

The OWNER shall, as soon as practicable after a claim has been made against it, give written notice thereof to the CONTRACTOR along with frill and complete particulars of the claim. if any action or administrative proceedings is brought against the OWNER or any of its agents, servants, and employees, the OWNER shall expeditiously forward or have forwarded to the CONTRACTOR every demand, complaint, notice, summons, pleading, or other process received by the OWNER or its representatives.

It is expressly agreed and understood that any approval by the OWNER of the services provided by the CONTRACTOR pursuant to this contract will not relieve the CONTRACTOR of the obligation to comply with the Act and to defend, indemnify, protect, and save harmless the OWNER pursuant to this paragraph.

It is further agreed and understood that the OWNER assumes no obligation to indemnify or save harmless the CONTRACTOR, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the CONTRACTOR expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the CONTRACTOR'S obligations assumed in this Agreement, nor shall they be construed to relieve the CONTRACTOR from any liability, nor preclude the OWNER from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

MORRIS COUNTY MUA

Americans with Disabilities Act of 1990

Furthermore, the contractor expressly understands and agrees that the provisions of this indemnification clause shall in no way limit the contractor's obligations assumed in this Agreement, nor shall they be construed to relieve the contractor from any liability, nor preclude the owner from taking any other actions available to it under any other provisions of the Agreement or otherwise at law.

Business Name (Print): MFS Consulting Engineers & Surveyor, DPC

Representative's Name (Print): Paul B. Shim, P.E.

Representative's Title: Principal Engineer

Representative's Signature:

Phone: 908-922-4622 **Date:** 1/13/2026

MORRIS COUNTY MUA

New Jersey Anti-Discrimination

Pursuant to N.J.S.A. 10:2-1:

a. In the hiring of persons for the performance of work under this contract or any subcontract hereunder, or for the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under this contract, no contractor, nor any person acting on behalf of such contractor or subcontractor, shall, by reason of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex, discriminate against any person who is qualified and available to perform the work to which the employment relates;

b. No contractor, subcontractor, nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee engaged in the performance of work under this contract or any subcontract hereunder, or engaged in the procurement, manufacture, assembling or furnishing of any such materials, equipment, supplies or services to be acquired under such contract, on account of race, creed, color, national origin, ancestry, marital status, gender identity or expression, affectional or sexual orientation or sex;

c. There may be deducted from the amount payable to the contractor by the contracting public agency, under this contract, a penalty of $ 50.00 for each person for each calendar day during which such person is discriminated against or intimidated in violation of the provisions of the contract; and

d. This contract may be canceled or terminated by the contracting public agency, and all money due or to become due hereunder may be forfeited, for any violation of this section of the contract occurring after notice to the contractor from the contracting public agency of any prior violation of this section of the contract.

Business Name (Print): MFS Consulting Engineers & Surveyor, DPC

Representative's Name (Print): Paul B. Shim, P.E.

Representative's Title: Principal Engineer

Representative's Signature:

Phone: 908-922-4622 **Date:** 1/13/2026

STATEMENT OF OWNERSHIP DISCLOSURE

N.J.S.A. 52:25-24.2 (P.L. 1977, c.33, as amended by P.L. 2016, c.43)

This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.

Name of Organization: MFS Consulting Engineers & Surveyor, DPC

Organization Address: 2780 Hamilton Blvd., South Plainfield, NJ 07080

Part I Check the box that represents the type of business organization:

☐ Sole Proprietorship (skip Parts II and III, execute certification in Part IV)

☐ Non-Profit Corporation (skip Parts II and III, execute certification in Part IV)

☒ For-Profit Corporation (any type) ☐ Limited Liability Company (LLC)

☐ Partnership ☐ Limited Partnership ☐ Limited Liability Partnership (LLP)

☐ Other (be specific): _____

Part II

☒ The list below contains the names and addresses of all stockholders in the corporation who own 10 percent or more of its stock, of any class, or of all individual partners in the partnership who own a 10 percent or greater interest therein, or of all members in the limited liability company who own a 10 percent or greater interest therein, as the case may be. (**COMPLETE THE LIST BELOW IN THIS SECTION**)

OR

☐ No one stockholder in the corporation owns 10 percent or more of its stock, of any class, or no individual partner in the partnership owns a 10 percent or greater interest therein, or no member in the limited liability company owns a 10 percent or greater interest therein, as the case may be. (**SKIP TO PART IV**)

(Please attach additional sheets if more space is needed):

Name of Individual or Business Entity	Address
Jose A. Fuertes, P.E.	Apt. 403, 404 Ave. De La Consti, San Juan, PR 00901-0000
Michael L. Mudalel, P.E.	136 Hillside Avenue, Metuchen, NJ 08840-2644
Paul B. Shim, P.E.	26 Stockmar Drive, Basking Ridge, NJ 07920

Part III DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II

If a bidder has a direct or indirect parent entity which is publicly traded, and any person holds a 10 percent or greater beneficial interest in the publicly traded parent entity as of the last annual federal Security and Exchange Commission (SEC) or foreign equivalent filing, ownership disclosure can be met by providing links to the website(s) containing the last annual filing(s) with the federal Securities and Exchange Commission (or foreign equivalent) that contain the name and address of each person holding a 10% or greater beneficial interest in the publicly traded parent entity, along with the relevant page numbers of the filing(s) that contain the information on each such person. **Attach additional sheets if more space is needed**.

Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s
N/A	N/A

Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II **other than for any publicly traded parent entities referenced above**. The disclosure shall be continued until names and addresses of every noncorporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to N.J.S.A. 52:25-24.2 has been listed. **Attach additional sheets if more space is needed.**

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Address
N/A	N/A

Part IV Certification

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder/proposer; that the ***Morris County Municipal Utilities Authority*** is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with ***Morris County Municipal Utilities Authority*** to notify the ***Morris County Municipal Utilities Authority*** 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, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the, permitting the ***Morris County Municipal Utilities Authority*** to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):	Paul B. Shim, P.E.	Title:	Principal Engineer
Signature:		Date:	1/13/2026

MORRIS COUNTY MUA

New Jersey Business Registration Certification

Pursuant to N.J.S.A. 52:32-44, the Morris County Municipal Utilities Authority is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the Morris County Municipal Utilities Authority with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the Morris County Municipal Utilities Authority prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

During the course of contract performance:

(1) the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.
(2) the contractor shall maintain and submit to the Morris County Municipal Utilities Authority a list of subcontractors and their addresses that may be updated from time to time.
(3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at http://www.state.nj.us/treasury/revenue/busregcert.shtml.

Before final payment is made under the contract, the contractor shall submit to the Morris County Municipal Utilities Authority a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of $25 for each day of violation, not to exceed $50,000, for each proof of business registration not properly provided under a contract with a contracting agency.

12/20/16

Taxpayer Identification# **972-131-266/500**

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)292-9292.

I wish you continued success in your business endeavors.

Sincerely,

James J. Fruscione
Director
New Jersey Division of Revenue

STATE OF NEW JERSEY

BUSINESS REGISTRATION CERTIFICATE

DEPARTMENT OF TREA
DIVISION OF REVENUE
PO BOX 252
TRENTON, N J 08646-02

TAXPAYER NAME:

MFS CONSULTING ENGINEERS & SURVEYOR CORP

TRADE NAME:

ADDRESS:

31 WEST 34TH ST STE 7071
NEW YORK NY 10001

SEQUENCE NUMBER:

2094530

EFFECTIVE DATE:

12/19/16

ISSUANCE DATE:

12/20/16

Director
New Jersey Division of Revenue

FORM BRC

MORRIS COUNTY MUA

Pay to Play Advisory

PAY TO PLAY ADVISORY
Disclosure Requirement
(N.J.S.A. 19:44A – 20.27)

Any business entity that has received $50,000 or more in contracts from government entities in a calendar year will be required to file an annual disclosure report with ELEC.

The report will include certain contributions and contract information for the current calendar year.

At a minimum, a list of all business entities that file an annual disclosure report will be listed on ELEC's website at www.elec.state.nj.us.

If you have any questions please contact ELEC at:
1-888-313-ELEC (toll free in NJ) or
609-292-8700

An analyst from ELEC's Special Programs Section will assist you.

Initials PS

BUSINESS ENTITY ANNUAL STATEMENT

NEW JERSEY ELECTION LAW ENFORCEMENT COMMISSION
Phone: (609) 292-8700

THIS FORM MUST BE ELECTRONICALLY FILED AT:
www.elec.nj.gov

FORM BE

This statement is required to be filed by a business entity which has received $50,000 or more in the aggregate during a calendar year through agreements or contracts with a public entity or public entities.

Part 1: General Information

Date of Statement 10/14/2025
format: MM/DD/YYYY

Activity for Calendar Year 2025

☒ Check if Amendment

Part 2: Business Entity Information

Business Name MFS Consulting Engineers & Surveyor, DPC

Business Type Other Business Organization

Address 1 2780 Hamilton Blvd.

Address 2

City South Plainfield State New Jersey Zip 07080

*(Area Code) Telephone Number 9089224622

ACKNOWLEDGEMENT

I have been authorized by the above named business entity to complete the annual statement, and certify that the statements and/or information contained herein are true. I am aware that if any of the statements or information are willfully false, I may be subject to punishment.

First Name Michael Last Name Mudalel

Title/Position Principal Engineer Date 10/14/2025

*(Area Code) Telephone Number (908)922-4622

☒ Check this box to certify the above acknowledgement.

A business entity which has received $50,000 or more in the aggregate during a calendar year through agreements or contracts with a public entity or public entities, but has made no contributions to candidates or committees, shall file the business entity annual disclosure statement with the Commission to report that no contributions were made during the calendar year.

☒ Check this box if the business entity has not made any reportable contributions during the calendar year.

*Leave this field blank if your telephone number is unlisted. Pursuant to N.J.S.A. 47:1A-1.1, an unlisted telephone number is not a public record and must not be provided on this form.

MORRIS COUNTY MUA

Certification of Non-Involvement in Prohibited Activities in Russia or Belarus

Pursuant to N.J.S.A. 52:32-60.1, et seq. and N.J.S.A.40A:11-2.2 (L. 2022, c. 3) any person or entity (hereinafter "Vendor") that seeks to enter into or renew a contract with a local contracting unit subject to the Local Public Contracts Law for the provision of goods or services, or the purchase of bonds or other obligations, must complete the certification below indicating whether or not the Vendor is identified on the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, available here: https://sanctionssearch.ofac.treas.gov/. If the Department of the Treasury finds that a Vendor has made a certification in violation of the law, it shall take any 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.

I, the undersigned, certify that I have read the definition of "Vendor" below, and have reviewed the Office of Foreign Assets Control (OFAC) Specially Designated Nationals and Blocked Persons list, and having done so certify

(Check the Appropriate Box)

(X) A. That the Vendor is not identified on the OFAC Specially Designated Nationals and Blocked Persons list on account of activity related to Russia and/or Belarus.

OR

( ) B. That I am unable to certify as to "A" above, because the Vendor is identified on the OFAC Specially Designated Nationals and Blocked Persons list on account of activity related to Russia and/or Belarus.

OR

( ) C. That I am unable to certify as to "A" above, because the Vendor is identified on the OFAC Specially Designated Nationals and Blocked Persons list. However, the Vendor is engaged in activity related to Russia and/or Belarus consistent with federal law, regulation, license or exemption. A detailed description of how the Vendor's activity related to Russia and/or Belarus is consistent with federal law is set forth below.

(Attach Additional Sheets If Necessary.)

Signature of Vendor's Authorized Representative	1/13/2026 Date
Paul B. Shim, P.E., Principal Engineer Print Name and Title of Vendor's Authorized Representative	46-4924682 Vendor's FEIN
MFS Consulting Engineers & Surveyor, DPC Vendor's Name	908-922-4622 Vendor's Phone Number
2780 Hamilton Blvd., Vendor's Address (Street Address)	866-517-7413 Vendor's Fax Number
South Plainfield, NJ 07080 Vendor's Address (City/State/Zip Code)	pbs@mfsengineers.com Vendor's Email Address

[i] Vendor means: (1) A natural person, corporation, company, limited partnership, limited liability partnership, limited liability company, business association, sole proprietorship, joint venture, partnership, society, trust, or any other nongovernmental entity, organization, or group; (2) Any governmental entity or instrumentality of a government, including a multilateral development institution, as defined in Section 1701(c)(3) of the International Financial Institutions Act, 22 U.S.C. 262r(c)(3); or (3) Any parent, successor, subunit, direct or indirect subsidiary, or any entity under common ownership or control with, any entity described in paragraph (1) or (2).

MORRIS COUNTY MUA

Disclosure of Investment Activities in Iran

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 the person or entity, or one of the person or entity's parents, subsidiaries, or affiliates, is not identified on a list created and maintained by the Department of the Treasury as a person or entity engaging in investment activities in Iran. If the Director finds a person or entity to be in violation of the principles which are the subject of this 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 person or entity.

I certify, pursuant to Public Law 2012, c. 25, that the person or entity listed for which I am authorized to bid/renew:

Bidder/Offeror: MFS Consulting Engineers & Surveyor, DPC

☒ is not providing goods or services of $20,000,000 or more in the energy sector of Iran, including a person or entity that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran; is not a financial institution that extends $20,000,000 or more in credit to another person or entity, for 45 days or more, if that person or entity will use the credit to provide goods or services in the energy sector in Iran.

In the event that a person or entity is unable to make the above certification because it or one of its parents, subsidiaries, or affiliates has engaged in the above-referenced activities, a detailed, accurate and precise description of the activities must be provided in part 2 below to the Division of Purchase under penalty of perjury. Failure to provide such will result in the proposal being rendered as non-responsive 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, 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.

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 Town/ Township/ Borough/Government Agency 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 MCMUA to notify the MCMUA 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 Morris County Municipal Utilities Authority, New Jersey and that the MCMUA at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Paul B. Shim, P.E. Signature: _____

Title: Principal Engineer Date: 1/13/2026

MORRIS COUNTY MUA

Non-Collusion Affidavit

STATE OF NEW JERSEY
MORRIS COUNTY MUNICIPAL UTILITIES AUTHORITY ss:

I certify that I am Principal Engineer

of the firm of MFS Consulting Engineers & Surveyor, DPC

the Respondent making this Proposal for the bid or proposal for the above named project, that I executed the said proposal with full authority to do so; 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 this affidavit are true, correct, and made with full knowledge that the Morris County Municipal Utilities Authority relies upon the truth of the statements contained in said Proposals 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 an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies.

Signature of Representative:

Paul B. Shim, P.E., Principal Engineer

Subscribed and sworn to before me this 13th day of January, 2026

Print Name of Affiant: Joyce Anderson

Notary Public of New Jersey

My commission expires 8/11/30

Joyce Anderson

JOYCE ANDERSON
NOTARY PUBLIC, STATE OF NEW JERSEY
COMMISSION # 2390262
MY COMMISSION EXPIRES 8/11/2030

MORRIS COUNTY MUA

Affidavit of Non-Debarred Status

STATE OF NEW JERSEY)
) SS:
COUNTY OF Middlesex)

I, Paul B. Shim, P.E. of the City/Town of South Plainfield, 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 Paul B. Shim, P.E. *(Name)*, a Principal Engineer *(Title, Position, etc.)*

of MFS Consulting Engineers & Surveyor, DPC *(Name of Firm, Company or Corporation)*, the Bidder making the Bid for the Morris County Municipal Utilities Authority (MCMUA) and that I executed the said Bid with full authority so to do; that said Bidder at the time of making this Bid is not included on the State of New Jersey, State Treasurer's List of Debarred, Suspended and Disqualified Bidders and Department of Labor's Workplace Accountability in Labor List ; and all statements contained in said Bid and in this affidavit are true and correct and made with the full knowledge that the Morris County Municipal Utilities Authority relies upon the truth of the statements contained in said Bid and in the Statements contained in this affidavit in awarding Contract for said project.

The undersigned further warrants that should the name of the firm, company or corporation making this Bid appear on the State Treasurer's List of Debarred, Suspended and Disqualified Bidders and Department of Labor's Workplace Accountability in Labor List at any time prior to, and during the life of the Contract, including the Guarantee Period, that the Morris County Municipal Utilities Authority (MCMUA) shall be immediately so notified by the signatory to this Eligibility Affidavit.

The undersigned understands that the firm, company or corporation making the Bid as a CONTRACTOR is subject to debarment, suspension and/or disqualification in contracting with the State of New Jersey and the Department of Environmental Protection if the CONTRACTOR, pursuant to NJAC 7:1-5.2, commits any of the acts listed therein, and as determined according to applicable law and regulation.

(Signature of Bidder)

Paul B. Shim, P.E., Principal Engineer
(Printed or Typed Name & Title of Bidder)

2780 Hamilton Blvd., South Plainfield, NJ 07080
(Address of Bidder)

(Seal if Corporation)

MFS CONSULTING ENGINEERS & SURVEYOR, DPC CORPORATE SEAL NEW YORK

State of New Jersey

DEPARTMENT OF THE TREASURY
DIVISION OF REVENUE & ENTERPRISE SERVICES
P.O. BOX 026
TRENTON, NJ 08625-026
PHONE: 609-292-2146 FAX: 609-984-6679

PHIL MURPHY
Governor

TAHESHA WAY, ESQ.
Lt. Governor

ELIZABETH MAHER MUOIO
State Treasurer

5-YEAR RECERTIFICATION

APPROVED

under the

Minority and Women Business Certification Program

This certificate acknowledges MFS CONSULTING ENGINEERS & SURVEYOR CORPORATION DBA:MFS Consulting Engineers & Surveyor Corp as a Certified Minority Business Enterprise (MBE) that has met the criteria established by N.J.A.C. 17:46.

In order for this certification to remain in effect **throughout the 5 year certification period,** the business **must submit annual verification statements** attesting that there has been no change in ownership, control, or any other factor of the business affecting eligibility for certification as a minority or women-owned business. The verification statements must be submitted **not more than 60 days** prior to the anniversary of the certification approval.

If the business fails to submit the annual verification statement by the anniversary date, or a renewal by its expiration date, the certification will lapse and the business will be removed from the system (SAVI) that lists certified minority and women-owned businesses. If the business seeks to be certified again, it will have to reapply by submitting a new application.

Peter Lowicki
Deputy Director

Issued: 10/28/2023

Certification Number: A0404-03

***Expiration:** 10/28/2028

***As noted above, in order to maintain its certification status, the business must submit verification statements for each of the five years**

State of New Jersey

DEPARTMENT OF THE TREASURY
DIVISION OF REVENUE & ENTERPRISE SERVICES
P.O. BOX 026
TRENTON, NJ 08625-026
PHONE: 609-292-2146 FAX: 609-984-6679

PHIL MURPHY
Governor

TAHESHA WAY, ESQ.
Lt. Governor

ELIZABETH MAHER MUOIO
State Treasurer

5-YEAR RECERTIFICATION

APPROVED

under the
Small Business Set-Aside Act

This certificate acknowledges MFS CONSULTING ENGINEERS & SURVEYOR CORPORATION DBA:MFS Consulting Engineers & Surveyor Corp as a Category 5 Approved Small Business Enterprise (SBE) that has met the criteria established by

In order for this certification to remain in effect **throughout the 5 year certification period,** the business **must submit annual verification statements** attesting that there has been no change in ownership, control, or any other factor of the business affecting eligibility for certification as a small business. The verification statements must be submitted **not more than 60 days** prior to the anniversary of the certification approval.

If the business fails to submit the annual verification statement by the anniversary date, or a renewal by its expiration date, the certification will lapse and the business will be removed from the system (SAVI) that lists small business entities. If the business seeks to be certified again, it will have to reapply by submitting a new application.

Peter Lowicki
Deputy Director

Issued: 9/21/2023

***Expiration:** 9/21/2028

Certification Number: A0404-04

***As noted above, in order to maintain its certification status, the business must submit verification statements for each of the five years.**

BACKGROUND AND MULTIPLE SECURITY FEATURES. PLEASE VERIFY AUTHENTICITY

State Of New Jersey
New Jersey Office of the Attorney General
Division of Consumer Affairs

THIS IS TO CERTIFY THAT THE
Board of Prof. Engineers & Land Surveyors

HAS LICENSED

MFS CONSULTING ENGINEERS & SURVEYOR CORP.
JOSE A FUERTES
2780 Hamilton Blvd
South Plainfield NJ 07080

FOR PRACTICE IN NEW JERSEY AS A(N): Certificate of Authorization

Engineering
Land Surveying

07/26/2024 TO 08/31/2026
VALID

24GA28274900
LICENSE/REGISTRATION/CERTIFICATION #

Signature of Licensee/Registrant/Certificate Holder

Cari Fais
ACTING DIRECTOR

New Jersey Office of the Attorney General
Division of Consumer Affairs
THIS IS TO CERTIFY THAT THE
Board of Prof. Engineers & Land Surveyors
HAS LICENSED
MFS CONSULTING ENGINEERS & SURVEYOR CORP
Certificate of Authorization
Engineering
Land Surveying
07/26/2024 TO 08/31/2026
VALID
SIGNATURE
Cari Fais
ACTING DIRECTOR
24GA28274900
License/Registration/Certificate #

PLEASE DETACH HERE

IF YOUR LICENSE/REGISTRATION/ CERTIFICATE ID CARD IS LOST PLEASE NOTIFY:
Board of Prof. Engineers & Land Sur
P.O. Box 45015
Newark, NJ 07101

PLEASE DETACH HERE

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ **Go to *www.irs.gov/FormW9* for instructions and the latest information.**

Give Form to the requester. Do not send to the IRS.

Print or type. See **Specific Instructions** on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
MFS Consulting Engineers & Surveyor, DPC

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☒ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.
2780 Hamilton Blvd

Requester's name and address (optional)

6 City, state, and ZIP code
South Plainfield, NJ 07080

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number

			–			–				

or

Employer identification number

4	6	–	4	9	2	4	6	8	2

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here **Signature of U.S. person** ▶ [signature] **Date** ▶ 10/03/2025

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 5/27/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Chadwick Brokerage LLC 350 Main Street, Suite 1 Bedminster NJ 07921	CONTACT NAME: Rich Standing PHONE (A/C, No, Ext): 908-766-6570 FAX (A/C, No): E-MAIL ADDRESS: rich@chadwickbrokerage.com
INSURED MFSCONS-01 MFS Consulting Engineers & Surveyor, DPC 2780 Hamilton Blvd. South Plainfield NJ 07080	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Travelers Property Casualty Co — 25674 INSURER B : Travelers Indemnity Company Of — 25682 INSURER C : Arch Insurance Company — 11150 INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 150236299 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR X Val Pap $505,500 X Contr Liab incl GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [ ] LOC OTHER:			680-9K121315	5/29/2025	5/29/2026	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 2,000,000 $ 1,000,000 $ 5,000 $ 2,000,000 $ 4,000,000 $ 4,000,000 $
B	AUTOMOBILE LIABILITY ANY AUTO OWNED AUTOS ONLY [ ] SCHEDULED AUTOS X HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY			BA-8R098698	5/29/2025	5/29/2026	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 1,000,000 $ $ $ $
A	X UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE DED [X] RETENTION $ 10,000			CUP-9K124089	5/29/2025	5/29/2026	EACH OCCURRENCE AGGREGATE $	$ 10,000,000 $ 10,000,000 $
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A					PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ $ $
C	Professional Liability incl. Pollution Liability			PAAEP0111506	5/29/2025	5/29/2026	Per Claim Aggregate	5,000,000 5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Evidence of Insurance

CERTIFICATE HOLDER

MFS Consulting Engineers & Surveyor, DPC

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE