

ORIGINAL

January 16, 2017

Mr. Gregory A. Tramontozzi Passaic Valley Sewerage Commission 600 Wilson Avenue Newark, New Jersey 07105

Dear Mr. Tramantozzi:

The undersigned hereby submits the enclosed proposal for DESIGN SERVICES AND DESIGN SERVICES DURING CONSTRUCTION OF STORMWATER COLLECTION SYSTEM IMPROVEMENTS.

The undersigned hereby undertakes and promises to provide DESIGN SERVICES AND DESIGN SERVICES DURING CONSTRUCTION OF STORMWATER COLLECTION SYSTEM IMPROVEMENTS and to do all work requested as appropriate and required herein as well as the contract documents concerning the same, including all written amendments and changes thereto, if any, which are incorporated herein by reference and made a part of this proposal.

Paulus, Sokolowski and Sartor, LLC
Business Name

James R. Wancho
Full Name

Title

732-560-9700
Telephone

Paulus, Sokolowski and Sartor, LLC
Business Name

716/17
Title
Date



Qualification Proposal for

Design Services and Design Services During Construction for Stormwater Collection System Improvements

Passaic Valley Sewerage Commission
Newark, New Jersey

January 18, 2017

67B Mountain Blvd Ext Warren, NJ 07059

www.psands.com



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Executive Summary

The qualifications and experience presented within this document clearly demonstrate the ability of Paulus, Sokolowski and Sartor (PS&S) to provide Design Engineering services and Design Services during Construction as requested by the Passaic Valley Sewerage Commission (PVSC). The PVSC Stormwater Collection System Improvements is an integral project in PVSC's overall goal in mitigating against the future risk of storm damage and consequent risk of service disruption. PS&S recognizes the importance of this project and the challenges faced in its implementation and will respond to this challenge by providing recognized leaders and talented professionals with years of project experience that can meet the technical and management requirements of this stormwater collection system improvement and upgrade project.

PS&S is specifically qualified to provide the required services for the following reasons:

- PS&S has a successful and long-term history with PVSC facilities and operations with most of our key Team members having familiarity with the PVSC, their staff and procedures.
- PS&S assisted PVSC with the preliminary design of this project to secure funding from FEMA. Many elements
 of this preliminary design are reflected in the Basis of Design Document for which the scope of services for
 this proposal has been based. This has provided PS&S with an in-depth knowledge of the PVSC's existing
 stormwater collection system and the challenges that will be faced as the project design and construction
 progresses.
- PS&S's Project Manager is a Professional Engineer in the State of New Jersey and has over 40 years of
 experience in complex facility design projects in the Water Resources field, firsthand knowledge of the PVSC
 site and geotechnical conditions, background in site and structural engineering evaluation/design and
 served as PS&S Project Manager for the preliminary design and permitting of the FEMA mitigation work
 including the stormwater collection system.
- PS&S has a vast portfolio of successfully designed/permitted large and small scale stormwater collection system projects.
- · Our Team is local and can provide staffing and resources in close proximity to the PVSC facilities.

We believe that the key to successfully establishing a "partnering" environment is to develop and maintain effective communication and coordination with PVSC from the outset. Throughout the course of any assigned project, the Team of professionals will be available for meetings with PVSC personnel, AECOM-HDR the other project design professionals, construction contractors and other related entities, to make certain that all issues are discussed and resolved. PS&S will be staffed with personnel that are experts with the proposed type of work. We will constantly aim to anticipate problems and make recommendations in order to avoid having them develop into major issues that may impact the schedule or the cost.

PS&S's in-depth knowledge of the site and FEMA mitigation program components including the stormwater pump stations and flood wall will ensure successful coordination of the stormwater collection system improvements with these critical projects.



1.0 Technical Competence

Project Team

An organization chart of the Project Team with brief biographies of the identified Team members is included in Section 1.2.

Paulus, Sokolowski and Sartor, LLC - Project Management, GIS, Survey, Structural Engineering, Hydraulic Modeling, Civil/Site Design, Permitting, NJEIT Experience and Construction Phase Services

Paulus, Sokolowski and Sartor, LLC was established in 1962. PS&S is a multi-disciplined firm with a professional staff of 250. We provide total Engineering, Architectural/Interiors, Regulatory and Environmental Compliance services to our clients. The firm is headquartered in Warren, New Jersey, and has regional locations in Cherry Hill, Newark, Wall, and Atlantic City, New Jersey; Lake Success and Yonkers, New York; and Puerto Rico. PS&S is ranked among the Top National Design Firms by Engineering News Record.

The broad range of technical expertise within PS&S allows us to draw upon individual engineering, and environmental specialties to address a wide variety of issues. The full range of services offered by PS&S provides their clients with a single source for all design and permitting needs for any type of building project. Their ability to provide quality services that are innovative, yet economical, is the guiding philosophy that keeps PS&S at the forefront of the industry.

During PS&S' 54-year history, PS&S has provided services for more than 5,000 projects with a construction value of more than \$8 billion. Beyond the firm's experience, we offer clients the experience of our staff. PS&S comes to the table with an understanding of its clients' needs and the parameters that define success for their projects. The quality of our people is PS&S' greatest asset.

PS&S recognizes the Water Resources challenges faced by our clients and has responded by securing recognized leaders and talented professionals with years of project experience that can meet the technical and management requirements of all types of projects. Numerous clients, including local and regional municipal authorities, private utility companies, along with numerous private sector firms, have awarded PS&S continuing assignments, attesting to the firm's proficiency in meeting these challenges.

PS&S is unique – they are a broadly based firm with true expertise, united in a desire to provide innovative design solutions and to serve all their clients well.

PS&S will be teaming with Renaissance Global who will head the land use permitting portion of the work. Rennaissance Global is a Service Disabled Veteran Owned Small Business and employs Tom Zetkulic. Mr. Zetkulic will head the land use permitting efforts for this project as he is familiar with PVSC through his efforts on the FEMA Environmental Assessment, Federal Consistency Determination process for the resiliency work.



1.1 Team Qualifications and Overview

PS&S understands the Scope of Work and shall provide and apply all engineering disciplines, and specialists necessary to provide a complete and comprehensive design, construction documents, permitting and construction phase services.

PS&S is committed to providing the PVSC experienced personnel for all aspects of the project. The Project Manager, Donald Sharp, P.E., R.A. has worked on multiple projects with PVSC and understands the procedures and standards that are expected. The key supporting staff responsible for resource allocation, project coordination and QA/QC include the PS&S Principal in Charge James Wancho, PE and QA/QC Coordinator Carroll J. Oliva, P.E., R.A. Don Sharp is a Professional Engineer in the State of New Jersey with over 40 years of experience in complex facility design projects in the Water Resources field with first-hand knowledge of the PVSC site and geotechnical conditions. The PS&S Management Team, with extensive PVSC experience, is committed to providing PVSC with the most qualified professionals and a strong management structure to complete the project and meet the objectives, budgets and schedules of PVSC.

The key PS&S Team members have previously worked on projects for PVSC and have first-hand knowledge of the facilities, operations, as well as the policies and procedures that are expected. The team will adhere to all requirements set forth in this Request for Qualifications and Proposals for Professional Engineering Services Design Services and Design Services During Construction for the Stormwater Collection System Improvements Project.

Our Project Organization Chart (Figure 1-1) can be found following this page. Full details of the qualifications, education and training are included on the resumes of Proposed Team Members are provided in the section entitled "Resumes of Key Personnel" in Appendix C. PS&S Team members who will be performing the work for this project and their primary functions are identified on Figure 1-1. A brief biography of each of the key Team members is included in Section 1.2.



WHY RENAISSANCE GLOBAL SERVICES?

Mission objectives: Investigate. Evaluate. Develop. Design. Manage.

Renaissance Global Services is a project management, construction inspection and site remediation consulting firm with a concentration in the utility, pharmaceutical/life science, real estate and environmental industries. Our team of experts leve rages decades of experience and a military-inspired discipline to evaluate, develop and manage projects for both the private and public sectors. We work closely with our clients to technically review and develop site issues across multiple disciplines from the ground up. The Renaissance Global Services model is efficiency-centric with a focus on quality. We are committed to ensuring best practices and the highest standards across all areas of service.

PILLARS OF SERVICE

PHARMACEUTICAL PROJECT MANAGEMENT

Renaissance Global Services manages facility and campus construction projects of any size, scope or complexity. Delivering our clients' projects at the lowest cost, with the highest quality control is at the forefront of every decision we make. Project elements may include construction oversight, construction and implementation, evaluations, technical services, scheduling, and project planning.

CONSTRUCTION INSPECTION

Our meticulous attention to detail and extensive knowledge in construction budgets, risks and coordination gives Renaissance Global Services a unique position to manage site inspections. We meet with key representatives to determine project objectives, review estimates and monitor milestones and progress, as well as manage all aspects of contract procedures, dispute resolution and safety plans.

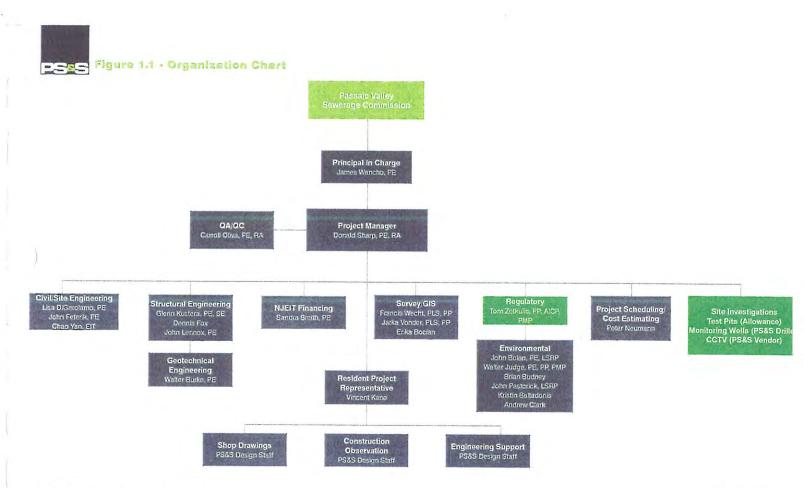
SITE REMEDIATION & ENVIRONMENTAL RESTORATION

With effective environmental remediation and restoration practices, a project cannot only meet state and federal guidelines, it can exceed them. With our expert knowledge of laws and regulations governing distressed sites, as well as environmental regulations, Renaissance Global Services highly trained staff can manage a multitude of environmentally-related projects, including remediation and restoration of contaminated sites.

THE RENAISSANCE GLOBAL SERVICES PROMISE

Renaissance Global Services is a Service-Disabled Veteran-Owned Small Business (SDVOSB), certified by the Veterans Administration. We target the mission and the people—fully committed to delivering effectively and efficiently, with our partners' and employees' best interests in mind. We value honesty, loyalty, integrity and leadership. The Renaissance Global Services promise is to deliver first-rate project completion meeting your financial, environmental and developmental needs at every level.





Resumes for all personnel are included in Appendix C.

Passaic Valley Sewerage Commission
Design Services and Design Services During Construction for the Starmwater Collection System Improvements
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1.2 Qualifications and Key Personnel

Principal in Charge – James R. Wancho, PE: Mr. Wancho, a Vice President/ Principal in Charge of Water Resources at PS&S, has over 30 years of engineering experience and has been with PS&S for more than 25 years. As head of the Utility Services Department at PS&S, he is responsible for the management of projects related to the design, permitting, construction and operation of wastewater treatment facilities. He also has extensive experience in NJ Local Public Contracts Law and all phases of the NJEIT funding process.

Mr. Wancho has worked on multiple projects with the PVSC and truly understands the procedures and standards that are expected. Mr. Wancho has worked on the following PVSC projects:

- FEMA HMGP Mitigation Plan Principal in Charge of PS&S engineering and permitting work. In response to Superstorm Sandy, PVSC, Witt/O'Brien's, PS&S and FEMA developed preliminary design of a floodwall, standby power system, stormwater collection system upgrades, sump pump hardening and tunnel bulkheads to mitigate against potential future flood damage to the PVSC's Newark plant.
- Secondary Treatment Facilities Evaluation Improvements Project Engineer participating in various phases
 of a study to develop positive solutions to obtain short and long-term effluent discharge permit compliance.
 Involvement in related capital projects.
- Polymer Storage and Feed Facilities
 — Principal-in-Charge and Project Manager for PS&S services provided
 for the installation of new Polymer Storage and Feed Facility.

*Estimated percentage of time to be spent on this project: 5% (over total project duration)

Project Manager – Donald E. Sharp, PE: Mr. Sharp has over forty (40) years of diverse experience in civil/sanitary engineering, planning and architecture. He has provided project management and process, structural and architectural designs for numerous infrastructure projects in New Jersey, New York, Vermont, New Hampshire, Maine and Florida. Mr. Sharp is a licensed Professional Engineer and a Registered Architect in the State of New Jersey. He has managed various large-scale multi-disciplined projects involving wastewater and sludge treatment, conveyance infrastructure and building structures including the \$137.6 M upgrade to the Rahway Valley Sewerage Authority WWTP. Mr. Sharp worked closely with PVSC staff, NJDEP and FEMA to prepare the Hazard Mitigation Plan to protect the plant from a 500 year tidal event, including the preliminary improvements to the stormwater collection system. *Estimated percentage of time to be spent on this project: 20% (over total project duration)

Quality Assurance/Quality Control - Carroll J. Oliva, PE, RA: Mr. Oliva is a Senior Director for Water Resources at PS&S. Since 1975 Mr. Oliva has been actively involved in the design of facilities at PVSC including the Sludge Thickeners, Sludge Heat Treatment, Decant, Sludge Pumping and Storage, and Supernatant Treatment Facilities. In 1996 Mr. Oliva took a lead role in the design and construction of renovations to the Operations-Engineering-Maintenance Building; Warehouse-Training Facilities, and Head-End Incinerator Building. In 1998 Mr. Oliva was part of a team undertaking the design of the Centrifuge Thickening Facilities at the Sludge Heat Treatment Building. In 2011 Mr. Oliva was assigned to the PVSC Office of the Executive Director to provide engineering expertise and guidance during a period of administrative change. During the latter part of that 22 month assignment, Mr. Oliva assisted the PVSC Engineering Department with various projects on an as-needed basis including the design of the Yantacaw Pump Station Rehabilitation. Mr. Oliva experienced first-hand the impacts on PVSC's facilities due to Superstorm Sandy and made some of the early evaluations on future hardening approaches of an emergency nature. Mr. Oliva, through his nearly 40 years of involvement with PVSC, has gained in depth knowledge of PVSC's facilities, operations and staff. Mr. Oliva's experience with PVSC and many other wastewater facilities was gained through a "hands-on" approach based on more than 55 years in the wastewater field. *Estimated percentage of time to be spent on this project: 25% (over total project duration) Passaic Valley Sewerage Commission



1.2 Qualifications and Key Personnel continued

Civil/Site Engineering – Lisa DiGerolamo, PE: Ms. DiGerolamo is a Vice President and Senior Project Manager, responsible for all aspects of project development. She has experience with various types of infrastructure projects requiring complex stormwater management solutions. Ms. DiGerolamo's responsibilities include engineering design, client contact, project budgets, schedule and supervision of a technical design team. Ms. DiGerolamo has extensive experience with hydrology and hydraulics including watershed analysis HEC1 and stream modeling HECRAS. She has experience with culvert replacement projects and complex stormwater management system designs including multiple interconnected facilities. Ms. DiGerolamo also has extensive experience with the NJDEP Flood Hazard Area Section with the permitting for stormwater management and floodplain management. *Estimated percentage of time to be spent on this project: 15% (over total project duration)

Civil/Site Engineering – John Feterik, PE: Mr. Feterik is a senior level design engineer with more than 38 years of experience working on major water and wastewater and other environmental engineering related projects. His experience includes evaluation, design and construction phase services for wastewater collector and trunk sewer facilities, wastewater pump stations and forcemains, wastewater treatment facilities, sludge management facilities and chemical treatment systems and controls. Mr. Feterik served as Project Engineer on the extensive Stormwater Collections System Improvements implemented at the Rahway Valley Sewerage and Monmouth Park Racetrack. *Estimated percentage of time to be spent on this project: 15% (over total design duration)

Civil/Site Engineering - Chao Yan: Mr. Yan joined PS&S in 1996 as an Engineer/CAD Designer in the Civil Department. He is experienced with hydrologic/hydraulic design calculations and reports and his extensive engineering experience has proven to be invaluable to PS&S on many projects. Mr. Yan has excellent background knowledge of AutoCAD/LDD and other design software. He also has experience with HEC-HMS, HEC-RAS in hydrology/hydraulics analysis and stream encroachment analysis. *Estimated percentage of time to be spent on this project: 20% (over total design duration)

Structural Engineering - Glenn P. Kustera, PE, SE: Mr. Kustera serves as Principal-in-Charge of PS&S's Structural Group and is responsible for project oversight, concept planning, code analysis, design guidance and QA/QC procedures. Mr. Kustera's experience encompasses a diverse range of project types and all facets of structural design including shallow and deep foundation systems, concrete, steel, timber, masonry construction and rehabilitation and strengthening of existing structures. Mr. Kustera joined PS&S in 1999 and has been a member of the Structural Department for over fifteen years. *Estimated percentage of time to be spent on this project: 5% (over total project duration)

Structural Engineering - Dennis Fox: Mr. Fox serves as a Structural Project Manager for the design of a wide range of projects ranging from renovations to larger commercial, educational, and industrial facilities. Mr. Fox structural engineering design and construction phase services for the BRSA Pump Station Rehabilitation and North Bergen MUA WWTP Upgrade projects. His duties include design support, preparation of construction documents, shop drawing review, coordination, site visits and responding to construction issues. *Estimated percentage of time to be spent on this project: 15% (over total project duration)

Structural Engineering - John Lennox, PE: Mr. Lennox serves as Project Engineer for the structural evaluation and design of a wide range of commercial, educational, infrastructure, institutional, and industrial facilities. He is responsible for specification writing, and all facets of structural design. He has been responsible for various structural damage assessments due to storm flooding, also handles construction administration duties including job site visits and construction issues. *Estimated percentage of time to be spent on this project: 20% (over total design duration)



1.2 Qualifications and Key Personnel continued

Environmental - John Bolan, PE, LSRP: Mr. Bolan has 40 years of broad-based environmental experience and has served as project manager on significant multi-disciplinary environmental/remediation projects in New Jersey and New York. Mr. Bolan also has extensive experience in the management of on-call services including as General Environmental Consultant for the New Jersey Turnpike Authority (nine years) and Former New Jersey Highway Authority (six years), General Consulting Engineer (GCE) for the Bergen and Union County Utilities Authorities (six years each) and currently as GCE for the Hudson County Improvement Authority (since 1991). Mr. Bolan has worked with NJ Transit on the Port Imperial Ferry Terminal, Secaucus Interchange/Seaview Drive, the Frank Lautenberg Transfer Station, THE Tunnel Project and the Portal Bridge Project. *Estimated percentage of time to be spent on this project: 2% (over total design duration)

Environmental - John Pastorick, LSRP: Mr. Pastorick serves as a Project Manager at Paulus, Sokolowski and Sartor. During his 25 years of experience, his responsibilities have included underground storage tank closures, groundwater and soil contamination investigation, ISRA projects, remedial investigation/action work plan preparation, submission and implementation, document review, contractor selection, bid solicitation, Phase I and Phase II Assessment of commercial and residential properties. Mr. Pastorick has first-hand knowledge of the PVSC site through his efforts on the FEMA EA. *Estimated percentage of time to be spent on this project: 2% (over total design duration)

Environmental - Land Use - Kristin Baltadonis, PMP: Ms. Baltadonis is an Associate with ten years of experience in multi-disciplinary engineering and permitting projects; with a focus on infrastructure improvements, environmental regulatory compliance, construction permitting, and land use planning/permitting. Ms. Baltadonis has first-hand knowledge of the PVSC site trough her efforts on the FEMA EA and NJDEP Land Use Permit Application. *Estimated percentage of time to be spent on this project: 10% (over total design duration)

Environmental - Andrew Clark: Mr. Clark is an Environmental Scientist and a land use regulatory specialist with more than 30 years of professional experience, including 26 years with the NJDEP, Division of Land Use Regulation. Nine years supervisory experience (Staff of 5) as Supervisor of the Northeast Region (6 NJ Counties) within the NJDEP Bureau of Inland Regulation. Mr. Clark's responsibilities included signing all final decision documents, i.e. permits, for the Northeast region, training Land Use staff in wetland delineation techniques, coordinating with staff to ensure efficient processing of permit applications, attending pre-application meetings to give prospective applicants advice on state regulations, verifying wetlands delineations and reviewing all submitted work products for compliance with the applicable Land Use Rules, such as Freshwater Wetlands Protection Act Rules, Flood Hazard Area Control Act Rules, Rules on Coastal Zone Management and Highlands Rules. As a permit review specialist Mr. Clark wrote countless Freshwater Wetlands permits, environmental reviews for Flood Hazard Area permits, Individual Permit summary analyses and Waterfront Development permit summary analyses. Mr. Clark also reviewed wetland mitigation sites for compliance with State regulations as well as performed ecological assessments on mitigation sites. *Estimated percentage of time to be spent on this project: 2% (over total project duration)

Environmental - Walter Judge, PE, PP, PMP: Mr. Judge joined Paulus, Sokolowski and Sartor, LLC in 1992 and was named Associate Principal in 2005. Mr. Judge is involved in large-scale multidisciplinary engineering permitting projects focused on utility infrastructure, hotel/casino property development, mixed-use development, environmental and land use planning/permitting and facility engineering and maintenance. As a senior project manager, Mr. Judge provided various regulatory compliance activities for PVSC as part of the HMP work. *Estimated percentage of time to be spent on this project: 10% (over total design duration)



1.2 Qualifications and Key Personnel continued

Environmental - Brian Budney: Mr. Budney is an Environmental Scientist with over 15 years of professional experience. His responsibilities include land use planning and permitting services and environmental due diligence assessments for public and private clients, including site redevelopment projects, public utility infrastructure upgrades, and regulatory compliance matters. His specialties include Land Development Regulatory Compliance (USACE, NJDEP, NYSDEC, regional, local), Jurisdictional Wetlands Evaluations and Mitigation compliance/oversight, and Site Constraints Evaluations. *Estimated percentage of time to be spent on this project: 10% (over total design duration)

GIS - Erica Bocian: Ms. Bocian is responsible for leading the GIS Program at PS&S. In this capacity, Ms. Bocian has been involved in developing innovative GIS solutions in large-scale, multi-disciplinary projects focusing on environmental and cultural resource regulatory compliance, electric/gas utility infrastructure improvements, environmental contamination and remedial investigations. Ms. Bocian will be the lead in creating the GIS database for all existing stormwater components to remain. *Estimated percentage of time to be spent on this project: 2% (over total project duration)

Resident Project Representative - Vincent E. Kane: Over 40 years of experience working on virtually all major types of wastewater projects, assuming a wide range of positions with various levels of responsibility. These assignments have included facilities design, budget establishment and maintenance, coordination of staff, project management, construction administration and observation. Mr. Kane has significant experience working at the PVSC WWTP including over 8 years of on-site assistance to PVSC on construction administration/observation projects as well as the documentation of PVSC's work related to Superstorm Sandy recovery/relief and FEMA coordination. Vince Kane will be responsible for performing all duties required of the resident project representative position. With over 8 years of personal on-site experience with PVSC staff and facilities combined with his extensive wastewater design and construction experience, Vince will be a valuable asset to the Project Team. *Estimated percentage of time to be spent on this project: 100% (over total construction duration)

Project Scheduling/Cost Estimating – G. Peter Neumann: Mr. Neumann is a Civil Engineer with 18 years of heavy construction experience in urban areas; he has filled roles including Project Engineer, Scheduler, Cost Accountant, Schedule Manager and Project Controls Manager on large multi-phased construction and design projects with values exceeding \$500 million. Mr. Neumann will lend his expertise in assisting with the development of construction staging, development of the project MOPO and creating and managing the project schedule and engineer's opinion of probable construction cost for this project throughout the design phase. Mr. Neumann will also assist in the construction phase by reviewing the Contractor's submitted construction schedule and schedule of values. Estimated percentage of time to be spent on this project: 20% (over total project duration).



1,3 Execution of Requirements and Procedures

Please see Proposal Section 3.0 for PS&S's Project Approach.

1.4 Geographic Location

- PS&S will provide all engineering and permitting work including sanitary, civil, environmental, structural, and
 geotechnical services from our Warren, NJ office. Our Warren office is located approximately twenty (20)
 miles from the PVSC's plant. PS&S will ensure all needs of the client are sufficiently serviced and, as the
 Warren office is in close proximity to the PVSC plant and the project site, will have no issue in responding to
 any site needs within a moment's notice.
- Renaissance Global is also located in the same office complex as the PS&S Warren office and will be performing all work from that location.

2.0 Firm Experience

2.1 Familiarity with PVSC

The following summarizes the work that PS&S has performed for PVSC, highlighting our Team's familiarity with the facilities, staff, procedures and operations of the office.

PS&S is specifically qualified to provide design services and design services during construction for the proposed Stormwater Collection System Improvements for the following reasons:

- PS&S has a successful and long-term history with PVSC facilities, processes and operations; this work is summarized below.
- PS&S Project Manager Donald Sharp served as PS&S Project Manager for the preliminary design and permitting of the FEMA mitigation work including the stormwater collection system. For a full description of this project, see Section 2.3.

Our specific experience includes the following:

Hurricane Sandy Response/FEMA Assistance: PS&S provided support to PVSC personnel tasked with providing information on damaged elements within the plant to FEMA Project Specialists. PS&S identified conditions which existed in the 140 acre plant prior to the storm. The extent of the damage was such that information on the tunnel system and 35 buildings had to be gathered with a combination of field surveys and a review of the plants as-built documents.

As part of PS&S's overall work efforts, PS&S assisted PVSC with the design development, cost estimating and submittal of several mitigation projects to FEMA for potential HMGP funding. PS&S provided engineering and environmental permitting assistance to develop documents needed to support the BCA and to comply with the federal NEPA process, including environmental and cultural resource evaluation of alternatives. PS&S also assisted PVSC with a Federal Consistency Determination, which was approved by NJDEP as well as the NJDEP Freshwater Wetlands, Flood Hazard Area Waterfront Development permits for the mitigation project. PS&S also designed required wetlands mitigation plans for the project.

PS&S has also prepared an Environmental Assessment, covering a wide range of environmental and cultural resource issues.



2.1 Familiarity with PVSC continued

As part of our FEMA assistance services PS&S also provided the following design/permitting services:

- Assistance with environmental permitting, FEMA consultation and NJEIFP Planning Documents for the Yantacaw Pump Station.
- · Assistance with permitting for temporary overhead electrical utility power.
- · Environmental permitting, design and related services for development of temporary contractor parking lots.
- · Preparation of dredging sampling plan, permit application and contract documents.
- Wetlands mitigation design and permitting plans to offset required impacts to regulated wetlands and transition areas.

Sump Pump Relocation and Generator Provisions: Responsible for contract documents, NJEIT funding application and FEMA funding application for providing multiple stand-by power connections for six portable generator sites to interface with electrical distribution via automatic transfer switches to power critical flood protection pumps in tunnels, basements and galleries throughout the PVSC facility under Contract A921.

Tunnel Bulkhead Doors: The tunnel bulkhead project incorporated into Contract A939, involves installing doors at 12 different locations in the tunnels so that the major process areas can be isolated in the event of a pipe break (which could allow a tank to drain into the tunnel) or other flooding event.

WAS Pump Control System Investigation: PS&S investigated the existing variable speed control system for the PVSC's WAS pumps. The system consisted of four 200 hp WAS pumps, each driven by a 200 hp wound rotor motor. Concerns with the existing system were the heat generated by the "Reacto-speed" panels, and the flexibility of controls. The recommended solution was replacement of the existing wound rotor motors with current high efficiency true induction motors and VFDs

PS&S also participated in the design and/or construction phase services for the following projects:

- Sodium Hypochlorite Facility Improvements
- Contract A54: Renovations of the Operation and Maintenance, Warehouse and Head-End Incinerator Buildings
- Contract A53: Rehabilitation of Existing Oxygenation Tanks
- Contract 978: Modifications and Rerouting of Primary Skimmings System
- Contract A172: Demonstration of Final Clarifier Rotary Ducking Skimmer
- · Contract A186A: Rehabilitation of the Existing Final Clarifiers
- Contract A200: Floating Dock and Off-Loading Facilities
- · Contract A233: Thickening Centrifuge Facilities
- Contract A645: Polymer Storage and Feed Facilities



2.2 Experience with Public Entities/Governmental Agencies

PS&S has extensive experience in providing engineering design services and design services during construction to public entities and governmental agencies. We have served as consulting engineer for various entities ranging from small municipalities such as the Borough of Mendham to large sewerage agencies such as the Bergen County Utilities Authority, Rahway Valley Sewerage Authority and the Joint Meeting of Essex and Union Counties. We have a proven record of successful performance in the planning, permitting, design, public bidding and construction of sanitary sewerage facilities. PS&S is currently the named general engineering consultant for the following Authorities:

Warren Township Sewerage Authority 46 Mountain Blvd, Warren, NJ 07059 Deborah Catapano, Authority Administrator 908-753-8000, x258

Hudson County Improvement Authority 830 Bergen Ave, Jersey City, NJ 07306 Norman Guerra, Chief Executive Officer 201-795-4555 Two Rivers Water Reclamation Authority
1 Highland Avenue, Monmouth Beach, NJ 07750
Michael Gianforte, PE, Executive Director
732-229-8578

Joint Meeting of Essex and Union Counties 500 South First Street, Newark, NJ 07202 Samuel McGhee, Executive Director 908-353-1313 Essex County Improvement Authority
Building M, 27 Wright Way, Fairfield, NJ 07004
James R. Paganelli, Esq.
973-575-0952

In addition to the above General Engineering assignments, PS&S is currently providing engineering services for these public entities:

Passaic Valley Sewerage Commission John Rotolo, PE, Chief Engineer 973-344-1800

Bayshore Regional Sewerage Authority Robert Fischer, Executive Director 732-739-1095

Township of West Orange Leonard Lepore, Director of Public Works Municipal Engineer 973-325-4160 Borough of Mendham

Doug Wright, WWTP Superintendent

973-543-7030

North Bergen Municipal Utilities Authority Frank Pestana, Executive Director 201-392-9229

Toms River MUA Stephen Acropolis, Executive Director 732-240-3500 Secaucus MUA
Brian Bigler, Executive Director
201-330-2089

Jackson Township MUA
David Harpell, Executive Director
732-928-2222 Ext. 240

A complete listing of current public sector clients with similar needs to PVSC is included in Section 1.1 of this proposal.



PVSC HMP Amendment Services- Stormwater Collection System Improvements: As a component of the PVSC Hazard Mitigation Plan Amendment PS&S analyzed the existing site, the storm drainage systems and the existing utility tunnel protective measures under various hydrological and hydraulic conveyance conditions and determined that further improvements and modifications, not contemplated under the approved HMP, were necessary to protect the Plant from a major rainfall event. On site modelling was conducted using Bentley StormCAD V8i and AutoCAD Hydraflow Hydrographs V11. The existing onsite drainage systems only have the capacity to handle stormwater for up to a ten year storm. Localized flooding currently occurs on the PVSC site during lesser storms. After the floodwall is constructed, without additional improvements, flooding will occur throughout the site. In order to improve the situation it will be necessary to upgrade the onsite drainage systems to be able to handle the runoff from a 100 year rainfall event.

In order to provide the appropriate documentation for the FEMA HMP Amendment PS&S developed preliminary design drawings (plan and profile) for the upsizing of more than two miles of drainage pipes, installation of additional catch basins and re-grading of the site and prepared a corresponding preliminary cost estimate. Design was performed in Autodesk AutoCAD Civil 3D V2012. Implementation issues caused by the numerous existing below ground piping, electrical conduit and structures limited the ability to upgrade the storm drainage systems to the full extent necessary to prevent all flooding during major rainfall events greater than a 100 year event. PS&S conducted a preliminary conflict review of the drainage improvements utilizing existing PVSC as-built/contract document information.

Monmouth Park Racetrack, Stormwater Management System - Oceanport, NJ: Providing planning, design, permitting, project funding assistance, bid phase and construction phase services for new facilities to properly handle stormwater flows from the 200-acre Monmouth Park Racetrack in Oceanport, NJ, owned by the New Jersey Sports and Exposition Authority (NJSEA). New Jersey Department of Environmental Protection (NJDEP) mandated compliance with New Jersey Pollution Discharge Elimination System (NJPDES) Concentrated Animal Feeding Operation (CAFO) regulations. These regulations required on-site handling and treatment of horse stable area stormwater runoff for up to a 25-year storm (171 cfs), significantly reducing contaminants to local waters.

Existing facilities at the site were designed to collect horse wash-water and "first flush" stormwater runoff for conveyance to the Two Rivers Water Reclamation Authority (TRWRA) WWTP. However system was unable to control runoff of contaminants during major storms. A major challenge was that the TRWRA WWTP could only accept up to 500,000 gpd at a maximum rate of 1,200 gpm. The project challenge was how to collect all the contaminated runoff and yet limit the discharge to TRWRA while eliminating overflow discharges to local streams. Additional challenges addressed by PS&S during planning and design included handling of on-site contamination, avoidance of impacts to the racing/horse management operations, a major NJ Transit line that bisected the site infrastructure, high groundwater tables and environmental/permitting constraints.

The PS&S scope of work included significant grading to contain stormwater runoff, new separate roof drainage and CAFO stormwater runoff collection piping, improvements to infield pond, stormwater treatment, a 111 MGD stormwater pump station to convey peak flows, and a 8 MG vegetated basin to detain flows from up to a 25-year storm. The stormwater pump station includes two automatic mechanical coarse bar screens; five 19,300 gpm submersible pumps with VFDs; four 1,800 gpm submersible pumps with VFDs; and a 1,250 KW diesel generator.



After hydraulic modelling of the existing storm drainage systems PS&S developed a phased infrastructure separation/replacement/upgrade program in order to manage the storm runoff during construction, address soil movement/management and maintain track operations. The design included approximately 1,450 linear feet (LF) of 72" RCP interceptor for interconnection of the stormwater collecting piping to the pond and pump station with 180 LF installed by jack and bore under a NJ Transit line. Overall over 36,000 LF of RCP, PVC, DIP and HDPE piping ranging in diameter from 4" to 72" was installed.

Permitting assistance included preparation of NJDEP Land Use permit applications including CAFRA, Waterfront Development, Flood Hazard Area, Freshwater Wetlands and Water Quality Certification as well as NJDEP TWA and Soil Erosion Sediment Control Plan Certification and NJDCA Building Permits.

The \$22.0 M project was approved by the NJDEP and funded by the NJ Environmental Infrastructure Trust with PS&S providing NJDEP/NJEIT assistance during the application process, prepared a Level Two Environmental Assessment and documented the project through bidding and construction.

Novartis Site Storwmater Management Studies and Design – East Hanover, New Jersey: PS&S prepared Sitewide Stormwater Management Study as well as extensive site improvements and infrastructure modifications at the East Hanover Campus. Initially PS&S prepared an existing condition site stormwater management assessment of the existing facilities and drainage patterns for the 200 plus acre site which included more than 50,000 linear feet of stormwater pipe and five stormwater impoundments. The site subdrainage basins and site discharge points were each analyzed under the current applicable regulations and jurisdictions. The performance of the stormwater management facilities for the entire site was summarized in a Report Site Stormwater Management Study as a tool for future development of the campus.

As the campus transformed over the past 15 years site stormwater management systems were removed, modified and constructed to meet the needs of the campus evolution and site infrastructure improvements. A total of three new stormwater basins were incorporated into the sitewide stormwater management system including an underground facility requiring a capacity of approximately 156,000 cubic feet. On site stormwater conveyance systems were designed, redesigned and rerouted to accommodate new building construction while maintaining the balance of stormwater discharge from the four discharge points from the site. The rerouting and installation of new underground utilities required great sensitivity to the existing network of underground utilities and utility tunnels which created the lifelines of the facility. Significant coordination was required to keep existing services in operation as new facilities were installed and to knit the new utilities within the existing utility corridors of the site.

Additionally several improvement/expansion projects required approvals from the New Jersey Department of Environmental Protection for Freshwater Wetlands and Floodplains for the installation of buildings, roadways and culverts within these environmentally sensitive areas.



Schering/Merck Site Stormwater Management Studies and Design – Kenilworth, New Jersey: PS&S has provided civil engineering design and permitting services for the Kenilworth campus of this major pharmaceutical client. We have provided engineering support from the initial conceptual planning of projects to the preliminary design, local and state permit process to construction documents and through construction administration for various projects throughout the campus. Projects included corporate headquarters building, utility building expansions, parking garage expansions and research building expansions. For each of these projects we have provided design of site roadway modifications, utility crossings, stream crossings, sidewalks stormwater management facilities and parking areas. The majority of the campus is located with a regulated NJDEP floodplain requiring a design for the site expansion and development with sensitivity to the environmental concerns of flooding.

Prior to a major site expansion phase for the campus PS&S prepared a site wide stormwater management study to understand the current conveyances and impoundment facilities and plan stormwater management improvements which would allow the continuing evolution and improvement of the campus. PS&S prepared an existing condition site stormwater management assessment of the existing facilities and drainage patterns for the 100 plus acre site which included more than 15,000 linear feet of stormwater conveyance system (pipe and open ditch) and two existing stormwater management ponds. The site subdrainage basins and site discharge points were each analyzed under the current applicable regulations and jurisdictions. The report further analyzed the expansion of existing drainage facilities and incorporation of new facilities to meet the needs of the anticipated future development of the site. Several of these options were ultimately incorporated into campus expansion projects including the construction of a new stormwater basin and the expansion of an existing stormwater pond. The extensive stormwater management conveyance system was further modified to accommodate the new development and coordinate with the numerous existing site underground utility networks.



2.3 Relevant Experience

Project Name	Project Description	Stormwater Design Description
Cadbury- Schweppes R&D Center Hanover, NJ	Lead Civil Engineer for the renovation and expansion of existing facility for Cadbury Schweppes. Responsibilities include all aspects of site design including layout, grading, stormwater management and utility coordination. PS&S was also responsible for the local and state approvals process.	Stormwater Management Design for the 15 acre site included design of the site stormwater conveyance system with 2,000 linear feet for the facility and design of underground water quality structures to meet NJDEP stormwater criteria.
Federal Business Centers, Multiple Projects Edison, NJ	Responsible for all aspects of site plan development and permitting for various projects throughout the center including new warehouse and industrial development. Additional responsibilities include development of various hydraulic/hydrologic studies and designs throughout for Raritan Center. Tasks included hydrologic watershed analysis, stream hydraulics for culvert replacement and floodplain delineation, and stormwater management detention basins.	PS&S has been responsible for multiple major stormwater management projects throughout the 2,000+ acre Raritan Center including stormwater conveyance system design for the accommodation of the 100 year storm from the upper reaches of the Center to the tidal Raritan River. We have prepared stormwater improvements, roadway designs and numerous site plans throughout the cent which included multiple detention basin designs and design of tens of thousands of linear feet of stormwater conveyance piping. We have prepared multiple applications to NJDEP for floodplain delineation, stormwater quality, and stormwater detention.
Gan Eden Monticello, NY	Project manager for site plan development for 528-unit residential development, including site layout, utilities, stormwater management and grading. The project is located on a site with significant grade changes, the concept design was developed to maximize the unit distribution while respecting the site topography.	PS&S developed an overall stormwater management design for the 198 acre site for 528 townhouses and apartments which included the overall stormwater conveyance system and five individual stormwater management basins addressing water quality and peak flow attenuation. The stormwater conveyance system exceeded 10,000 LF of new pipe.



Greenwood Lake Turnpike Realignment and Stream Reconstruction West Milford, NJ	Project Manager responsible for all aspects of the project through construction. Project included the realignment of approximately one mile of roadway through environmentally sensitive areas. Stormwater management solutions for the project required incorporation of several water quality basins as the project was adjacent to a trout production stream. The project also included two new culvert crossings and the relocation and design of 400 linear feet of trout production stream.	PS&S designed the roadway stormwater conveyance system for the approximate one mile improvement of the Roadway through West Milford. The stormwater management for the project also included a water quality basin. In addition PS&S designed and received approved from NJDEP for the relocation of approximately 300 linear feet of trout production stream.
Hillsborough Promenade Hillsborough, NJ	Project Manager responsible for site plans and permits for 400,000 sf of retail development. Project included all aspects of site development including stormwater management, vehicular and pedestrian circulation, sanitary, site lighting, soil erosion and retaining walls.	PS&S designed the stormwater conveyance system for the 95 acre 400,00 SF retail center and the downstream stormwater management basins addressing water quality and peak flow attenuation. The site/stormwater conveyance required more than 11,000 LF of storm piping and included 4 stormwater management basins. PS&S coordinated closely with PSE&G to construct the basins within the agency ROW containing overhead power lines.
Confidential Pharmaceutical Client New Brunswick, NJ	Project Manager responsible for the preparation of a site wide flood impact study, preparation of permit documents to implement study recommendations and the preparation of construction plans and specifications for the approved improvements. Project Manager for reconstruction/improvement of site for child care center.	Following Hurricane Floyd site evaluation was required to provide improved flood proofing in the future. PS&S worked with the site representatives to identify points of breach during the storm event and options and opportunities to improve future conditions. PS&S prepared a Study Report and moved forward to the design of improvements to protect the site including oversize storm pipe with tide flex valves, floodwall and berm.



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Old Bridge, NJ

Project Manager responsible for the all aspects of the site plan development drawings and process including offsite improvement plans for a 425 home residential development in Old Bridge. The project required multiple stormwater management basins/ facilities throughout the development to address NJDEP stormwater management compliance. A new roadway crossing was also developed over the Burnt Fly Brook. NJDEP flood hazard delineation and culvert design was completed for the roadway crossing. The development further required extensive improvements to the water supply infrastructure of the Old Bridge Municipal Utilities Authority (OBMUA) to provide adequate capacity and pressure to the new development. The project also required the addition of a booster pump at one of the authorities' water storage tank facilities. Approvals from NJDEP BSDW were obtained for all aspects of the project.

PS&S prepared a full stormwater management design for the development of 389 homes and 200+ acre site. The stormwater system included the design of 7,000 LF conveyance system throughout the development and design of 7 stormwater management basins throughout the development to address peak flow attenuation and water quality. In addition a major waterway, Burnt Fly Brook, crossing was designed and permitted with NJDEP.

Monticello **Drive and Race** Club

Monticello, NY

Project Manager responsible for the preparation of site plans for an approximate 4-mile race track with associated infrastructure and amenities in Monticello New York. The project included horizontal and vertical alignment design to create a challenging driver course integrating stormwater management solutions to manage runoff and water quality from the track.

PS&S designed the stormwater conveyance system for the approximate 4 mile racetrack on a 315 acre site incorporating 6,000 LF of pipe system and 12,000 LF of open swales throughout the length of the track. The swales provided water quality in addition to the 4 water quality and peak flow attenuation basins provided for the development.

Saw Mill River Daylighting

Yonkers, NY

Project Manager responsible for all project aspects including hydrologic/hydraulic designs and construction plan development. The daylighting of the 26 square mile watershed through a new public park required the interception of base flow and lower storm events to a series of water features including weirs, freshwater pools, tidal pool and riffles and reconnection with the flume. The park would provide views of the water from the daylighting through the various pools and features to the confluence with the main River. PS&S also completed design of the replacement of the utility systems within the surrounding roadway, replacing the aged infrastructure with new facilities.

PS&S designed the waterway which daylighted a portion of the Sawmill River which had been enclosed underground for decades. We worked with local environmental groups, and local and federal agencies throughout the process. The daylighting included the design of weirs, freshwater pools, tidal pool, and riffle sections. The project required attention to detail in the shunting of the flows from main channel to the daylighting and then the re connection with the main channel before discharge to the Hudson River.



2.4 Experience with Similar Size Projects

References and project profiles for projects similar in size and scope are included below. For a listing of projects specifically associated with Stormwater Collection System Improvements please see Section 2.3 of this proposal.

Organization	Contact Name	Phone Number	Relevant Project Name
Rahway Valley Sewerage Authority	Robert Valent, Superintendent	732-388-0868	WWTP Improvement/Upgrades (Contract 155) - \$137.6 M
Merck Corporation	Dawn Green	908-740-2809	Total Cost of All Projects – in Excess of \$10 million
Novartis Pharmaceuticals	Stephen Hotra	862-778-7814	Total Cost of All Projects – in Excess of \$10 million
New Jersey Sports and Exposition Authority	John Duffy, P.E., VP of Engineering, Construction & Regulatory Affairs	201-842-5115	Monmouth Park Racetrack Stormwater Management System - Elkwood Stormwater Pump Station \$22.0 M

Rahway Valley Sewerage Authority (RVSA) Contract 155 WWTP Upgrade: PS&S was hired by RVSA to lead a team of professionals to design and permit an upgrade and expansion of its wastewater treatment plant in Rahway, NJ. The RVSA experiences high influent flows in its trunk sewer system during wet weather conditions. This often caused surcharging due to limited capacity of the downstream facilities. Decades ago, combined sewer overflows (CSOs) were installed in the system to prevent sewage backups into homes and businesses. While this protected the public from direct exposure to raw sewage, untreated sewage was being released into the Rahway River. The RVSA's goal was to eliminate the CSO discharges, increase the treatment efficiency of its plant, and meet upgraded NJDPES permit conditions,

With all CSOs in the sewerage system sealed, peak instantaneous influent flows to the plant were estimated to be 105 million gallons per day (MGD), while the average daily flow would remain at only 27 MGD. The "activated sludge" biological secondary treatment system would need to be protected from being "washed out" by excessive instantaneous flows through the facility. Yet all influent flows to the plant, up to a 105 MGD instantaneous rate, would need to be treated to maintain compliance with the NJPDES permit.

The PS&S team of professionals designed new influent pumping, screening facilities, aerated grit tanks with FRP covers, and primary treatment process units to support treatment of peak flows up to 105 mgd. The design included secondary treatment facilities, specifically modification of existing aeration tanks to include new blowers, fine bubble diffusers and a DO control system, two new final settling tanks and new effluent filters capable of handling flows of approximately 52 mgd. A new 105 MGD effluent pump station was needed to accommodate hydraulic discharge conditions. Ultraviolet disinfection and post-aeration facilities were also designed to treat 100% of the plant flow. Sludge processing facilities and new odor control and SCADA facilities were also included.

Novartis Site Storwmater Management Studies and Design – East Hanover, New Jersey: See description in Section 2.3.

Monmouth Park Racetrack - CAFO Stormwater Management System: See description in Section 2.3.

Schering/Merck Site Stormwater Management Studies and Design – Kenilworth, New Jersey: See description in Section 2.3.



We have prepared a detailed table that includes a list of utility crossings that may be impacted by the construction of the storm drainage improvements. The list was developed using the BODR plans, plans developed by PS&S as part of the preliminary HMP design, and corresponding reference drawings available to PS&S as part of that work. The table is included at the end of the Project Approach Section. It is anticipated that conduits carrying electric power, communication and security wiring; sanitary laterals and collection sewers, water mains, gas mains, roof leaders and process piping will be encountered during excavation for the storm drainage improvements. Many of these utilities will not be impacted by the new construction. However, some may be running perpendicular, others may be running parallel to the storm sewers, requiring relocation or reconfiguration of either utility or the storm sewer.

The most difficult utilities to relocate are the electrical conduits and gravity sewers. Relocation of electrical conduits will require the installation of temporary wiring connected at both ends of the impacted conduit. Many of the conduits are in concrete encased duct banks that could be pile supported. The new conduits will have to be run between existing junction manholes or new junction manholes will need to be installed along the existing conduit runs. It may also be possible to abandon the conduits and provide another source of power or point for connections. Sanitary sewer conflicts present a similar problem. There is little flexibility with gravity systems. Either the sanitary sewer or the storm sewer will have to lowered or relocated. The installation of a ejector pump and force main could replace a lateral that conflicts with the storm sewer pipe. Water mains, gas mains and process piping are more easily relocated. Other possible solutions to conflict resolution include use of multiple storm sewer pipes and use of alternate pipe materials.

Obviously, it is imperative to have identified and resolved all the conflicts before construction starts. To accomplish this proposed to complete a comprehensive investigation during Task1 to obtain all the necessary information to identity and resolve the conflicts .The investigations will start with the review of existing documentation and photographs, supplemented by additional field surveys, CCTV of the existing storm sewers, ground penetrating radar and test pits.

Construction Phasing and Sequencing Plan

The construction of the floodwall and stormwater pumping stations will take several years. The construction will impact every aspect of the plant's operations. A phasing plan for the construction of these major components for storm mitigation will be need to be prepared to address security, maintenance of plant operations, customer access, employee parking, delivery of materials and contractor staging and coordination with other ongoing construction contracts. It is anticipated that the EOR for the stormwater improvement project will work closely with the PM and PVSC to assist with the preparation of a phasing plan by the PM. PS&S will utilize the in-house services of an experienced heavy construction project scheduler to assist in developing the phasing and sequencing plan.

Ideally, construction of any gravity sewer system should proceed in a linear fashion starting from the discharge end of the system then working upstream. However, other activities on the site will impact the sequence of construction. In order to accommodate plant operations, customer access, deliveries etc. The contractor may be directed to work in many different areas that impact the flow of construction activities. For example, a pile driver may be mobilized to install piles for a single run of pipe and demobilize and then remobilize later for another run of pipe. It would be



much more for efficient and less costly to install the required piles at one time. Obviously, this will not be possible on a very active site. But, careful planning could minimize the number of times for mobilization and demobilization would be required.

Depending on the timing of the construction of the floodwall and stormwater pumping stations it may be necessary to provide temporary facilities for handling stormwater onsite. The temporary facilities could include bypass pumping and diversion swales. The construction of temporary overflow structures at the discharge ends of the new collector storm sewer may be needed to permit the discharge of the stormwater to Jasper Creek and Newark Bay, while the construction of the stormwater pumping stations are being completed. PS&S will evaluate options for temporary stormwater conveyance.

Historic and Archaeological Resources

During the preparation of the Application for the FEMA-406 Public Assistance Hazard Mitigation Grant program, the PS&S Cultural Resource Specialists found significant historic resources on-site in the area where many of the new storm sewers are to be constructed. Conditions of the NJDEP permit require PVSC to report any unanticipated adverse effects on cultural resources. In order to accomplish this, a Cultural Resource Consultant (as provided by PVSC) will need to visit the site, photograph the findings and contact NJ SHPO. PS&S will work with PVSC, the PM and the Contractor to accommodate the necessary inspection.

City of Newark Wilson Avenue and Avenue "P" Drainage Systems

Construction of the flood wall on the eastern portion of the site will require modification to the City of Newark storm drainage system along Wilson Avenue so that the City drainage systems are segregated from the on-site PVSC systems. PS&S is aware of these existing conditions and will resolve these issues as part of our design.

Currently a portion of the Wilson Avenue Drainage System east of Doremus Avenue runs through the PVSC site. In order to construct the floodwall, this drainage system will be relocated into the Wilson Avenue ROW and a new storm sewer outfall structure to Newark Bay will be constructed as part of this project. The section of Wilson Avenue west of Doremus Avenue has already been reconstructed by the City.

At the present time, there are two existing 60" diameter drainage pipes in Avenue "P" that convey stormwater from more than 100 acres of the Ironbound Section of Newark to Jasper Creek and finally to Newark Bay. These pipes run through the PVSC site. Several of PVSC drainage systems connect directly to one of the 60" diameter pipes. As part of the storm drainage improvement project, the PVSC drainage systems that connect to the Newark system will be closed. The section of 60" diameter drainage pipes that presently pass through the site will be located outside of the floodwall under the floodwall contract.

Construction Dewatering

During the construction and installation of the stormwater collection system, it will be necessary to dewater the excavations, lower the water table and manage the groundwater discharge from dewatering activities. PS&S will develop plans for the management/handling of the dewatering water as part of the design development. The water



generated from dewatering activities during construction of the stormwater management system will be conveyed to and discharged into the headworks of the wastewater plant. Therefore, a permit to withdraw groundwater will be required, while a discharge permit will not be required since PVSC will accept the groundwater.

The NJDEP Bureau of Water Allocation and Wells (NJDEP-BWA&W) regulates dewatering under its regulations provided in N.J.A.C. 7:19. The NJDEP BWA&W will require a water allocation permit, if the anticipated flow is greater than 100,000 gpd or pumping more than 69 gpm. The NJDEP has general permits (BWA-003 and BWA-005) and a temporary dewatering permit (BWA-002). The BWA-003 Short Term Water Use Permit By-Rule allows for the withdrawal of greater than 100,000 gpd for less than 31 days on an annual base. The BWA-005 Dewatering Permit By-Rule allows for the withdrawal of greater than 100,000 gpd associated with dewatering utilizing a coffer dam or interlocking sheet piles) where the impacts of dewatering are contained within a confined area. The BWA-002 Temporary Dewatering allows for the withdrawal of greater than 100,000 gpd on a continuous basis for more than 30 days (however long the dewatering is projected for the project). However, if the groundwater is considered to be salt water, the NJDEP-BWA&W will not require a water allocation permit. The NJDEP-BWA&W defines salt water as having a chloride concentration of greater than 10,000 mg/l.

In the absence of recent geotechnical investigations or hydrogeologic studies of the saturated soils in the areas of the proposed stormwater management system, a focused hydrogeologic study will be implemented in the areas of the pump station. This focused hydrogeologic investigation will include the performance of soil boring and installation and development of observation wells in order to conduct short duration hydraulic tests to assess aquifer parameters of the saturated soils for purposes of estimating withdrawal and preparing the WAP application. In addition it is recommended that groundwater samples be obtained to assess if the groundwater is salty enough (greater than 10,000 mg/l) so that a WAP is not required.

PS&S recently completed a combined geotechnical and focused hydrogeologic investigation for a new underground utility line in Foundry Street and Doremus Avenue, located approximately ¼ mile to the north of the PVSC site. The subsurface conditions there included a surficial layer of granular fill material (historical fill), placed over compressed meadow mat (peat and organic silts) deposited over fine to medium sand with some silt that was deposited over silty clay to clay layer.

During Task 1, PS&S proposes to install two shallow observation wells (approximately 25 to 30 feet deep) to evaluate groundwater levels, aquifer parameters and groundwater quality. One well will be installed adjacent to two of the proposed stormwater pump stations. The two shallow observation wells will be installed by a New Jersey Licensed Well Driller with a truck mounted drill rig using hollow stem auger drilling method. A soil boring will be performed to a depth of approximately 25 to 30 feet below ground surface (bgs) to collect soil samples for visual classification and to confirm stratigraphy and the placement of the well screen. The observation wells will be 2-inch diameter PVC with 15 to 20 feet of well screen.

After well development is completed, a limited water level monitoring program will be performed by installing a combination pressure transducer and data logger (Insitu Troll or Level Troll) in each of the two observation wells to record water level data for up to three days to assess tidal flux in the area immediate future work area. The data will be compared to the surface water level data being collected by National Oceanic Atmospheric Administration



(NOAA). Following the limited water level monitoring program, each observation well will be subjected to short duration hydraulic test to assess aquifer parameters for the purposes of preparing the technical report to accompany the WAP. Depending on the subsurface conditions encountered during the boring either slug test or short duration pumping test will be implemented. Short duration pumping test will be run for a minimum of 100 minutes, followed by a water level recovery test.

Near completion of the pumping tests, a groundwater sample from each observation wells will be performed for analysis of chlorides, sodium and total dissolved solids.

The laboratory results of the groundwater sampling will be tabulated and evaluated with regards to the NJDEP-BWA&W criteria for salt water. If it is determined that the groundwater contains more than 10,000 mg/l chlorides, then correspondence will be made to NJDEP BWA&W indicating that a WAP would not be required for the Project.

In the event that the WAP is required based on the groundwater monitoring data and estimates of dewatering, PS&S will prepare the Temporary Groundwater Permit (BWA-002) application for submittal to NJDEP.

Drainage from the Witco Property

At the present time a significant section of the Witco Property drains to a stormwater pumping station located on the east side of Doremus Avenue. The pumping station pumps this stormwater through a 10" diameter force main to catch basin on the east side of the PVSC site. The RFP calls for a study for the elimination of this existing pumping station and force main. In order to eliminate the pumping station and force main, a new stormwater collection system with a direct discharge to Newark Bay will need to be constructed. This will require new permits.

Site Contamination/ Historic Construction Debris

There is the potential of finding contaminated soils during the construction of the flood wall, pump station, and power generating facility. The berm area along Jasper Creek is believed to contain unclassified, historic fill that may have materials from previous uses of the site and demolition. During the replacement of the storm sewer that runs along the north side of the berm, contaminated materials may be encountered. If contaminated soils are encountered, it will be necessary to have an LSRP certified specialist prepare a site remediation program to meet the FEMA eligibility requirements.

No	No apparent conflict for entire profile run.	629 No a	E-PR-MH-011	E-PR-MH-005 E-	South	#7	
				Н			
Yes	Crossings with 6" sleeve and 1" water line. No inverts.		E-PR-MH-012	Н	_	#6	
No	Crossings with three electric and telephone lines and 6" pipe. Vertical location shown with approximately 3' separation.		H	_		#6	
Yes	Crossing with 2-12" active sludge lines with Invert given with approximately 1.5' separation.			_		#6	
Yes	Crossings above effluent conduit with approximately 1' separation.	129 Cros		E-PR-MH-003 E-		#6	
Yes	Crossings with four (4) electric and telephone lines, 6" pipe, 4" NPW and 8" water. Vertical locations shown with approximately 1.5' separation.	50 Cros	E-PR-MH-003			舒	
Yes	Crossings with two (2) electric lines and two (2) 8" sludge lines. Vertical locations shown with approximately 1.5' separation.		E-PR-MH-013	E-PR-MH-004 E-	Northeast	8	
	The state of political analysis of the state of th		+	4			
Yes	Crossing existing 8" water line. No invert.		1	-	Northeast	#5	
Yes	Crossing existing 8" water line. No invert.		E-PR-IN-007	_	Northeast	#5	_
	No apparent conflicts.	315 No i	-	_		#4	
Š	Crossing 14" forcemain from storm water pump station - Approximately 2' separation as shown.		E-PR-IN-006	E-PR-HW-002 E		#4	
	And the second s				West/Northeast	#4 and #5 1	East
	The department of the second o				2001		•
ē	No. appropriate the transfer of the transfer o	3147 000	╀	+	_	5 0	
Yes	COSSING WILL DESCRIBE THE DIRECT CONTROL OF THE CON	1	\dagger	+	1	\$ 0	
Vac	No appaient crossing unites, may fun over / paraner to tunner and entitient computs. Existing min-via at edge of tunner and an available for the new to have a		+	╀		5 3	
Voc	and the state of t	L	2	- -	-	5	
res	Crossings with electric line and 6" water. Suspect 6" is 10". No inverts.	72 Cro	W-PR-IN-018	W-PR-MH-015 V	Center	#2	
řes	Crossing with sanitary line. Suspect line does not exist.		W-PR-MH-015	+-		#2	
Yes	End of run over utility tunel with approximately 1' separation.		-PR-IN-020	-	Center	#2	
Yes	Continues over utility tunnel. Crosses oxygenation tank effluent concluits with 1' separation. Suspect sanitary crossing.		W-PR-IN-022	<u> </u>	Center	#2	
Yes	Crossings with 8" DW pipe and 6" NPW. 6" NPW located in profile. No inverts. Begins running over utility tunnel.	L	W-PR-IN-023	╀	Center	#2	
RO	Crosses utility tunnel with approximately 5' separation.	L	W-PR-IN-024	\vdash	Center	#2	
Yes	Runs over utility tunnel. Good separation except W-PR-IN-028 to N-PR-IN-027 separation approximately 2'		W-PR-IN-026	Ë	Center	#3	
Yes	Crosses under 8" senitary line and over 42" STSR. No inverts, minimal separation.		W-PR-MH-021	W-PR-MH-022 W	Center	#2	
No	Towards end of section, begins running over utility tunnel.		W-PR-MH-022	W-PR-MH-023 W	Center	#2	
Yes	Crossing with electric line, No invert.		W-PR-MH-023	Н	Center	#2	
No	Crossing utility tunnel. Separation approximately 5:	20 Cro	W-PR-IN-030	H	Center	#2	
Yes	Crossing with 15 KV electric line and 6" gas. Electric line indicated at 3', no invert for gas.	Ц	W-PR-IN-031	W-PR-IN-032 V	Center	#2	
	Control to the contro			+	_		
Yes	Crossing with 10° water line. No invert.	_	W-PR-MH-014	+		*	
Yes			_	+	North	#1	
Yes	Crossing over south side interceptor, two (2) electric lines, 4" gas, 10" water, and 24" septage line. Separation with intercepter with approximately 2'. No inverts.		+	-	North	*	
Yes	Crossing over south side interceptor with approximately 2' separation. Both Inlets over interceptor.		W-PR-IN-016	+	North	#	
Yes	Crossings with 8" sanitary line, electrical line, 6" PVC line, and 6" water line. No inverts. Crossing over south side interceptor with approximately 2' separation.		W-PR-IN-015	+	North	=	
Yes	Crossings with falling to wet weather pumps at approximately 3 separation), electrical and telephone lines, 8" pipe, 4" sump pipe. No inverts, Crossing with electrical duct bank - suspect location and vertical location. Crossings with falling to wet weather pumps station (approximately 3 separation), electrical and telephone lines, 8" pipe, 4" sump pipe. No inverts, Crossing with electrical duct bank - suspect location and vertical location.		W-PR-MH-012	W-PR-IN-012 W	North	# ;	
Yes	Cossings with electrical duct pank, ruce (a) 1 1/2" PVL pipes, one or PVL piper, one	er Cro	W-PR-MH-011B	╁		2 2	
řě	Crossings with two (2) electric utility lines, 8" NPW line and telephone line. No inverts.		W-PR-MH-011A	╁	L	2	_
Yes	Suspect crossings with 2" water and electrical duct bank (not in 80DR profile).	L	W-PR-MH-011	├		#	
řes	Crossings with four (4) electric lines. Suspect additional crossing with 5" sleeve (not in BODR profile). No invert.	L	W-PR-IN-011	W-PR-MH-010 V	North	1#1	Į
Yes			W-PR-MH-010	M-bs-WH-000 M	North	#1	_
Yes	Crossings with 5" steeve and utility line. No inverts.		W-PR-MH-009	W-PR-IN-010 W	North	#1	
Yes	Crossings with 2" gas line. No invert,		W-PR-MH-008	-	North	#1	
Yes	Crossings with 6" sanitary line and two (2) utility lines. No invert for sanitary. Vertical location shown for utility line with approximately 2' separation.		W-PR-MH-005	Н	North	#1	
Yes	Crossing with 72" Jersey City force main. Vertical location shown with approximately 3' separation.		W-PR-MH-003	Н	North	#1	
Yes	Crossing with 5" electric line. No invert.		W-PR-IN-005	-	North	#1	
Yes	Crossing with 5" sleeve. No invert.		907	ŭ	North	#	
Required	Comment / Issue	Length, ft Con	To (1)	From (3)	Location (2)	Profile (1)	Basin
Test Pit		artion		Pipe Section	Profile	Storm	Diane

Notes: (1) Storm Profile - Per Basis of Design Report Drawings.
(2) Geographic Location of profile in basin.
(3) Structure Number per Basis of Design Report Drawings.



Scope of Work

PS&S has carefully reviewed services to be provided under each task and will provide all of service requested for each task. The RFP has listed ten tasks to be completed by the consultant. These tasks include the following:

- TASK 1 REVIEW & COMPILATION OF DATA
- TASK 2 PROJECT WORK PLAN, SCHEDULING, AND REPORTING
- **TASK 3 DESIGN SERVICES**
- TASK 4 DESIGN SERVICES DURING CONSTRUCTION (DSDC)
- TASK 5 RESIDENT PROJECT REPRESENTATIVE (RPR)
- TASK 6 OTHER DIRECT COSTS
- TASK 7 ALLOWANCES
- TASK 8 -ADMINISTRATION OF PVSC FUNDING REQUIREMENTS
- TASK 9 SPECIALTY CONSULTING SERVICES

The scope of Tasks 1 through 5 is summarized below.

Task 1: Review & Compilation of Data

Subtask 1.1 - Investigation

As a part of this task, and as discussed in the project approach above, the PS&S Team will conduct a review of and perform a thorough field investigation to verify the information provided in the documentation supplied by PVSC. To this end, the PS&S Team will conduct multiple site visits by Water Resources, Geotechnical, and Structural field staff/engineers. It is our understanding that in addition to the documents provided with this RFP, PVSC shall supply access to the various documents which will be field verified, including but not limited to:

- · Plans and Specifications of prior Construction Contracts.
- Shop drawing records.
- As-built drawings and construction photos.
- Operation and Maintenance records.
- Boring data soils reports.
- Other relevant documents.
- Previous TV inspections

This Task will also include geotechnical subsurface investigation, as discussed in our project understanding section above and review of BODR and Hydraulic Model, obtain test pit information, perform CCTV inspection of all existing drainage pipes, and field verify inverts, diameters and lengths of existing storm sewers.



During this task the hydraulic model will be rerun and the conceptual plans will be revised to reflect any changes that need to be made to the storm sewer alignments to accommodate new information obtained from the investigations.

The possibility using alternate pile types shall be investigated to reduce costs and streamline the construction schedule.

At the end of Task 1, PS&S shall prepare a supplemental report summarizing the findings of the investigations and evaluations. The revised Hydraulic Model and conceptual plans, profiles and details will be included in the supplemental report for PVSC review.

Task 2 - Project Work Plan, Scheduling, and Reporting

Subtask 2.1 Project Work Plan

As a part of this Task, the PS&S Team will develop a Project Work Plan, including a schedule and proposed reporting for the Project. The PS&S Team understands that the plan must comply with the requirements of the Project Management Plan, Program Procedures Manual, and PVSC Safety Manual. The work plan will also include sections related to QAQC. It is the intent of this Proposal that the schedule for the Project will be updated on a monthly basis and submitted along with monthly invoice requests. The project schedule shall all major milestone dates for design and construction. The schedule will be submitted to the PVSC Project Manager in Microsoft Project format.

PS&S will prepare a construction dewatering Work Plan that will be implemented by the Contractor during the construction and implementation of the stormwater collection system. The construction dewatering workplan will require background survey and inspection of onsite structures and foundations prior to the start of any dewatering. The background survey will also include the need for physically surveying various site features and equipment with respect to settlement or movement that might occur as a result of dewatering activities. The construction dewatering workplan will also have a requirement for Contractors experience in performing dewatering operations and conducting background studies.

Task 3 - Design Services

Task 3.1 Design

GENERAL

Under this phase of the project, the PS&S Team will prepare bid ready plans, specifications and an Engineer's Opinion of Probable Construction Cost for the scope of work included above. The plans and specifications will be signed and sealed by a certified licensed New Jersey Professional Engineer. It is anticipated that this project will need the expertise of civil engineers to review the hydraulic model and make recommendations for the size and shape of the new storm sewers; structural engineers to design pipe support, drainage structures and modifications to other structures needed to accommodate the storm drainage system improvements; geotechnical engineers to provide recommendations for support of the pipeline and drainage structures; electrical engineers to prepare plans



and details for the relocation of electrical, telephone and communication conduits; and surveyors to provide physical information along the alignment of each pipe run.

During this phase of the Project, the PS&S Team will stay in contact with the PVSC and hold monthly progress meetings to detail the specifics of the Project scope. Any comments from these meetings will be incorporated into the design plans prior to finalizing. Prior to start of Design, a kickoff meeting will be held with appropriate stakeholders to define manufacturing supplier and obtain PVSC's approval. Based on PS&S's review of the regulatory requirements related to the above scope of design, only minor modifications to the NJDEP permits will be needed.

Estimates prepared at 30% will identify the anticipated cost magnitude of construction cost. Estimates submitted with the 60% submission will be more refined, but will still carry a 20% contingency, estimates completed at the end of 90% will carry a 5% contingency, and the 100% estimate will be adjusted to reflect any changes made after the 90% submission.

Design Documents consisting of Construction Drawings (22x34 drawings) and technical specifications will be provided in accordance with paragraph 3.1.1.3.a of the RFP. The specifications will use the 6-digit format.

A list of the anticipated technical specifications that will be needed are included in this proposal. Location of all existing storm sewers that are to remain will be included in ESRI GIS database.

Subtask 3.1.1

Given the site is a highly developed site, the following issues will be addressed in the design and preparation of the construction documents for the project.

- Buried pipelines, electrical communication conduits and structures must be addressed along the alignment of each pipe run.
- The proximity of the new storm drainage pipes to the proposed floodwall and existing process tankage is a concern. The BODR detail for the proposed floodwall indicates it will be supported by battered pin piles.
 If the new storm sewers are constructed along the footing of the floodwall, the piles for the storm sewer pipe supports may impact the floodwall pin piles.
- On a similar note, several of the new storm sewers will be running along existing process tankage. Many of the tank structures also have battered pipe pile and rock anchors. The pipe support piles could impact these piles and rock anchors.
- The BODR for the storm drainage project states that the timber pile caps supporting 18" to 30" diameter pipes that are to be lowered more than 3' are to be load tested. Load testing is expensive and time consuming. Set up and take down time frame for a single pile could take a week. There may be as many as 200 piles that would need to be tested. The use of alternate types of pile supports could save time and money and will be evaluated as part of our design.



- Even if the existing timber piles could be reused, the definite location and even the existence of the timber pile support will not be determined until construction. Details for the spacing shown in the BODR indicate that piles are to be 7' to 9' on center and that pile supports are to be provided at the pipe joints.
- The BODR indicates that there may be 75 utility crossings that may be encountered during the installation of the new storm sewer pipes. By our count, there are 6 water mains, 33 electric/ telephone/communication conduits, 5 sanitary sewers, 4 gas mains, 15 process pipes and 2 storm sewer crossings. Details and elevations of 55 of these utility crossings are unknown. Relocation of electric/telephone, communication conduits, sanitary sewers and storm sewers may be difficult, resulting possible re-alignment of the new storm sewers.
- The BODR also indicates that there will be 95 new drainage structures to be constructed on the west side of the plant and 22 new drainage structures to be constructed on the east side of the plant.
- Other considerations that will be addressed are Wilson Avenue drainage and modification to the drainage system in Avenue 'P'. Any work within the right-of-ways of these streets will be coordinated with the City of Newark and Essex County.
- Phasing of the actual construction of the storm drainage improvements is another concern that could impact
 the construction schedule and will be addressed by development of a detailed Construction Phasing and
 Sequencing Plan.

In order to provide a comprehensive set of drawings, PS&S will prepare a plan and profile for each run of storm sewer. The plans shall show as-built information compiled during Task 1, alignment pipe size and inverts for new storm sewers, location of new pile caps, key notes referring to each type of drainage structure and references to details for work associated with utility crossing. The horizontal for the plans and profiles will be 1"=10'-0" and the vertical scale for the profiles will be 1"=2'-0". The relationship to remaining structures and protection of existing structures, temporary work to be done, equipment, conduits, structures to be removed or relocated will also be shown on these plans and profiles.

Because of the cost and time associated with the testing of the existing piles and the unknown location of the existing pipe supports, the PS&S plans will show new pile support for all new pipes and structures. And pre-cast concrete drainage manholes, inlets and structures supported by cast-in-place base slab and new timber piles.

Phasing plan will be included with the construction plans for the onsite drainage improvements. The phasing plan will be based on information provided by the PM and will show all temporary and permanent construction activities. The plans will also show temporary utilities or connections. Notes pertaining to Maintenance of Plant Operations (MOPO) associated with the construction of the new storm drainage improvements will also be included on the drawings.

AutoCADD Civil 3D will be used to prepare the Contract Drawings. The 3D representation of the storm drainage improvements will help identify and resolve any potential utility interferences prior to the completion of the design and will be a model to be used during bidding and a visual representation of the final construction of the improved drainage system.



Subtask 3.2 Meetings

Communication and close coordination with PVSC and the PM is a critical component of a successful project. The RFP calls for attendance at a kick-off meeting, monthly meetings for the duration of the project, review meeting at the 30%, 60% and 90% milestones, attend framing workshop as part of the Program Management Plant and the PM Web Program Management Information System.

In addition to these meetings, PS&S shall work closely with PVSC and PM on a daily basis if necessary to ensure that every issue is addressed in order to provide clear and complete information to the Contractor.

Subtask 3.3 - Value Engineering

As a part of this Task, the PS&S Team will attend Value Engineering up to three (3) workshops and will present the Project to the V.E. team. Based on the feedback from the V.E. team, The PS&S Team will prepare a response document to the V.E. team suggestions. The PS&S Team will respond to inquiries by the VE team for additional information during the course of the VE review. The PS&S Team understands that the VE review will be conducted shortly after the 30% design review has been completed and accepted, and will be performed by a team under separate contract with PVSC. It is assumed that the V.E. Team will follow the protocols of a normal forty (40) hour V.E. study as established by the Society of American Value Engineers (SAVE).

Subtask 3.4 - Permitting

PS&S worked closely with the PVSC and FEMA to obtain NJDEP land use permits for the rehabilitation, repair and restoration of the PVSC facility damaged by Superstorm Sandy. A list of the permits/approvals that were obtained and are in force today are shown on page 45 of the BODR.

The conceptual plans prepared by PS&S for the proposed stormwater collection system improvements were contemplated and included in the permit plans submitted to agency for approvals. Revisions to the permit plans for the collection system improvements may trigger the need for modification of the issued permits. The PS&S Team will review the project design plans for conformance to the NJDEP Coastal Zone Management, wetland and flood hazard area rules, and confirm compliance/conformation with the issued permits and approvals. If required, the Team will prepare modification(s) to the issued permits and approvals. These Land Use Permit application services will include coordination with the review agencies to identify required content of permit modification documents, to stream line the review and approval process. The permitting phase of the project will be conducted in conformance with the RFP.

A Temporary Dewatering Permit (BWA-002) may be required for the withdrawal of groundwater more than 100,000 gpd for more than 31 days on an annual base. Given the anticipated duration of the Project, the BWA-002 would give the most flexibility in performing dewatering activities during construction. The BWA-002 permit requires significantly more administrative and technical information to complete the application. The BWA-002 permit application requires a technical report of the hydrogeologic conditions, assessment of aquifer parameters, estimates of dewatering flow rates, a well record search for water supply wells within ½- mile of the site (summary table and mapping), NJDEP Known Contaminated Sites and Landfills within ½-mile of the site (summary table and



mapping), information on the dewatering system (method, configuration, depth, etc.) and the disposition of the water. The technical report will require information from the dewatering contractor in support of the permit application.

This permit application will take approximately 3 to 4 weeks to complete (providing information from the dewatering contractor is provided). The BWA&W has 20 days to deem the application administratively complete. Once the permit application is administratively complete, it will be submitted to a BWA&WP case manager for technical review. The BWA&W technical review generally takes about a month to complete. Providing the application is acceptable, the BWA&W will approve the application and then issue a draft permit for client review. The draft permit will need to be reviewed for content and any discrepancies addressed with BWA&W, prior to public comment period. The BWA&W will then initiate mandatory two week public comment period. If there are no significant public comments to be addressed, the BWA&WP will then close the public comment period and issue the final WAP in about one to two weeks. Overall review time the Water Allocation Permitting process can take approximately 2 months, but can take up to 3 months to complete depending on case load. The Water Allocation Permit application requires a fee (e.g., \$7,275 for up to 62 million gallons per month (mgm) (up to Class 3)). This proposal assumes that PVSC will provide the permit application fee.

PS&S will attend one meeting with PVSC and the contractor to discuss dewatering activity permitting and operations. PS&S will prepare narrative outlining the conditions of the WAP for PVSC and Contractor. After the permit application are approved by NJDEP, PS&S will provide assistance to PVSC and their Contractor for one Quarter (3 months) regarding the implementation of the permit conditions, compilation of flow data from the contractor, upload of flow data to NJDEP BWA, and response to questions posed by PVSC and their contractor. PS&S anticipates providing these services for a period of approximately 3 months.

Subtask 3.5 Bidding Assistance

- Provide twenty-five (25) sets of contract documents for bidding;
- Assisting the PVSC with the public bid advertisement:
- · Prepare and administer a pre-bid meeting and site walk-through;
- · Issue Contract Clarification, maintain log of information requested, and/or addenda, if required;
- Attend the bid opening;
- · Tabulate and analyze the bid results;
- · Furnish a recommendation of award of Construction Contract;
- Prepare request for Authorization to Award letter to NJEIT;
- Obtain Authorization to Award the Contract from the NJDEP;
- Assist in Agreement preparation;
- Provide eight (8) sets of Contract Documents.

Subtask 3.6 Asset Management



Task 4- Design Services During Construction

- Provide general communication with the PVSC and Contractor throughout the duration of construction regarding such issues as progress, submittal status, construction issues and their resolution;
- · Provide communication and correspondence with the NJDEP;
- Maintain Project files as required for periodic inspection by the NJDEP;
- · Coordinate with Federal, State, and Local Governments of jurisdiction;
- · Conduct pre-construction meeting, establish agenda, issue Notice to Proceed (NTP);
- Review and approve Progress Schedule, Schedule of Submittals, Schedule of Values required to be submitted by the Contractor;
- Review shop drawings and other submittals as required to evaluate that the proposed materials and equipment conform to the Contract Documents. The review of a maximum of 40 shop drawings is anticipated.
- Evaluation of Contractor Initiated Substitutions;
- · Review laboratory, shop and mill test reports of materials and equipment;
- Review and respond to 50 Contractor RFI's;
- Review and prepare approval recommendation for Contractor Payment Requests;
- Review of Design Related Change Orders (five (5) Change Orders are assumed);
- Prepare record drawings at the completion of the Project (based on Contractor's red lined drawings depicting all changes from original design);
- Conduct a substantial completion inspection and prepare a punch list;
- Prepare and ensure proper execution of Declaration of Substantial Completion.
- Conduct final inspection;
- Provide start-up assistance;
- Provide Contract Closeout Assistance;
- Final Notice of Acceptability of the Work, provide report with photographs and update the Asset Management Plan.
- Post Construction Operational Support Assistance

During the first year of operation, The PS&S Team will assist PVSC operations personnel in connection with testing and operation of the facility equipment, revising the O&M Manual to reflect actual operating problems and experience, advising the PVSC as to whether the new equipment is meeting the Project performance standards, certifying Project performance standards after one (1) year of operation of the facility and undertaking corrective actions, if the applicant fails to achieve compliance with the Project performance standards;

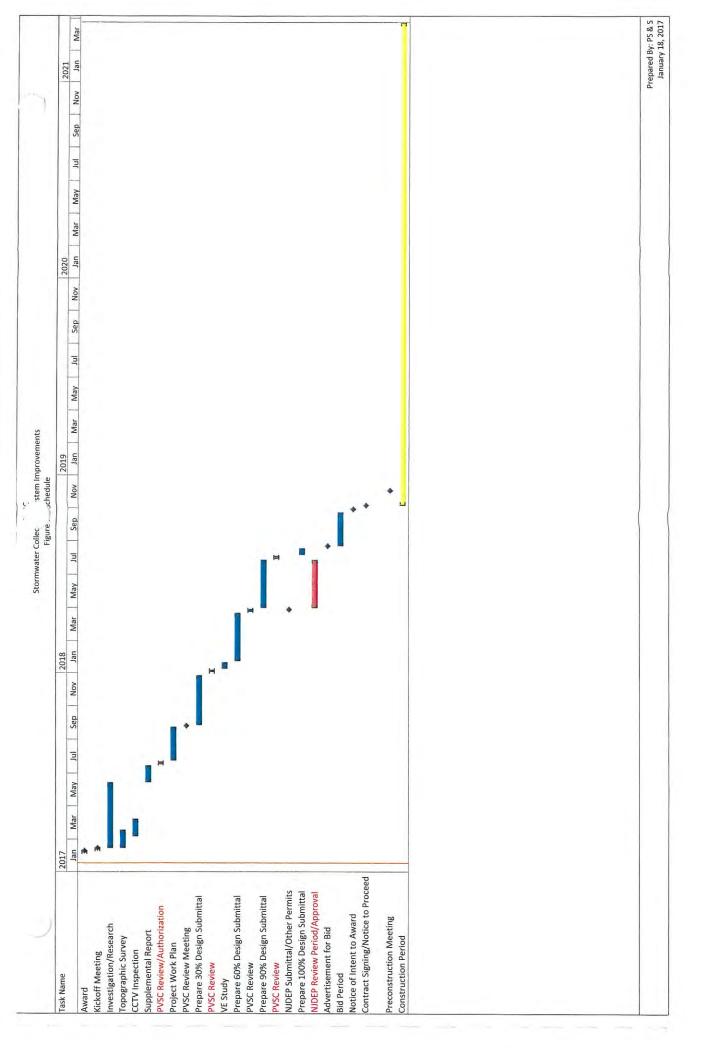
Provide assistance during initial operation to optimize new processes and ancillary equipment.



Task 5 - Construction Observation Services

Provide full time construction inspection/observation services during periods when the Contractor is on site (for those work items as required by the NJDEP) to monitor the Contractor's progress and compliance with the Contract Drawings and Specifications, including the Contractor's environmental protection and restoration measures;

- · Conduct a weekly construction meeting with the Contractor and Owner to discuss scheduled activities;
- · Prepare daily inspection reports;
- · Review monthly payment requests including the final payment request;
- Participate in the review and evaluation of up to five (5) potential Change Orders, including detailed review of cost proposals;
- Participate in the resolution of issues involving unforeseen field conditions;
- Witness testing and startup of equipment and systems;
- Coordinate vendor training;
- · Prepare punch list of remaining work items;
- Evaluate substantial and final completion and issue certificates of substantial and final completion as appropriate.



DRAWING LIST

General

Title Sheet (T-101) (1 drawing)

- · Project title, date,
- · Commissioners names,
- · Contract number,
- · Location maps,
- · Submission level.

Drawing Index and Legend (G-101) (1 drawing) (1 drawing)

- Overall Site Plan Key Map and Legend (G-102)
 - · Boring locations
 - · Staging areas
 - · Plant access

· Plant layout with work areas identified

Boring Logs (G-201 thru G-203)

(3 drawings) (6 drawings)

Drainage Piping Schedules (G-301 thru G-306)

Drainage Structure Schedules (G-401 thru G-404)

(4 drawings)

Civil/Site

Site Plans - Existing Conditions (C-101 thru C-108) (8 drawings)

- · Above-ground structures referred to benchmarks and property lines.
- Below-ground structures and utilities including runs to and from buildings, feeders, connections at existing manholes and site equipment.
- · Limit lines for excavation and backfill.
- · Electrical conduit and fiber optic routing/trenching
- Existing and proposed trees, shrubbery and lawn areas.
- · Temporary structures and utilities.
- · Site and road lighting.
- North Arrows, datum points, & Graphic Scale.

Demolition Plans (C-201 thru C-208)

(8 drawings)

- · Relationship to remaining structures and protection of existing structures.
- · Temporary work to be done
- Equipment, conduit, structures, etc. to be removed or relocated.

Phasing Plans (C-301 thru C-308)

- Sequence of construction activities (temporary and permanent).
- · Intent of methods to maintain continued operation in the facility
- Relocation of the PVSC activities during each phase.
- · Temporary utilities or connections
- Maintenance of Plant Operations (MOPO)

Site Plans - New Work (C-401 thru C-408)

(8 drawings)

- Layout and general arrangement of drainage system improvements.
- Keynotes indicating drainage structure numbers.
- · Identification of each run of drainage piping.

Plan and Profiles (C-501 thru C-540)

(40 drawings)

• Scale: I"=10'-0" horizontal, 2'-0" vertical Utility Crossing Details (C-601thru C-604)

(4 drawings)

Miscellaneous Details (C-701thru C-704)

(4 drawings) (3 drawings)

Typical Site Details (C-801 thru C-803)

Structural

Structural Notes and Legend (S-101) (1 drawing)

Pipe Support Details (S-201 thru S-202) (2 drawings)

Drainage Structure Details (S-301 thru S-304) (4 drawings)

Miscellaneous Details (S-401 thru S-424) (24 drawings)

Typical Structural Details (S-501 thru S-504)

(4 drawings)

Schedules (S-601)

(I drawing)

Total Number of Drawings - 135

OUTLINE TECHNICAL SPECIFICATIONS

DIVISION 00 - BIDDING AND CONTRACT REQUIREMENTS

00010	mvitation to bid
00100	Instructions to Bidders
00200	Check List for Bidders

00300 Bid Form

00301 Bid Bond

00302 Consent of Surety

00010 Invitation to Did

00302A Surety Disclosure Statement and Certification

00303 Bidder's Affidavit 00304 Non-Collusion Affidavit

00305 Statement of Ownership Affirmative Action Affidavit 00306

00307 Acknowledgement of Receipt of Changes to

Bid Document Form

00308 Certification of Non-Segregated Facilities

00309 Certification of Bidder's Status 00400 Bidder's Qualification Form

00401 Subcontractor Listing

00402 Public Works Contractor Registration

00403 Certificate of Equal Opportunity

00404 Certification of Affirmative Action Plan for Contractors and Subcontractors

00405 American Iron and Steel Certifications

00406 Certification of Disclosure of Investment Activities in Iran

00500 Contract Agreement

00600 Performance and Payment Bonds

00601 Maintenance Bond

00602 Environmental Maintenance Bond

00700 General Conditions

Supplemental Conditions 00800

State Prevailing Wage Rate Determination Exhibit 1 -

Federal Wage Rates

Exhibit 2 -List of Debarred Subcontractors and Contractors

Exhibit 3 -Davis Bacon Act - Labor Standard Provisions for Federally Assisted_Construction Contracts USEPA Attachment 6 - Requirements for Subrecipients that are Government Entities

Contract Modification Proposal and Acceptance NJAC 7:22-9 and NJAC 7:22-10.11, 12 Exhibit 4 -

Exhibit 5 -

SED Participation Building Phase Quarterly Report (Form OEO-002) Exhibit 6 -

SED Participation Monthly Progress Report (Form OEO-003) Exhibit 7 -

Exhibit 8 -**PVSC SED Utilization Plan**

NJAC 7:14.2 Exhibit 9 -

Exhibit 10 - NJSA 2A: 44-143, 144

Exhibit 11 - List of Drawings

DIVISION 01 - GENERAL REQUIREMENTS

01010 Summary of Work

01025 Measurement and Payment

01046 Control of Work

01110 **Environmental Protection Procedures**

01170 Special Provisions

01300 Submittals

01311 Construction Schedule

01325 Construction Photographs

01330 Operation and Maintenance Manuals

01340 Identification

01350 Record Documents

01360 Schedule of Values

01500 Temporary Facilities

01600 Materials and Equipment

01700 Contract Closeout 01740

Warranties and Bonds Maintenance and Plant Operations During Construction 01750

DIVISION 02 – EXISTING CONDITIONS

023000 Subsurface Investigation

024100 Demolition

024116 Structure Demolition

Removal and Salvage of Construction Materials 024200

026500 Underground Storage Tank Removal

DIVISION 03 - CONCRETE

031000 Concrete Forming and Accessories

032000 Concrete Reinforcing

033000 Cast in Place Concrete

033500 Concrete Finishing 034000 Precast Concrete

034800 Precast Concrete Specialties

034900 Glass-Fiber Reinforced Concrete

036000 Grouting

DIVISION 06 - WOOD, PLASTICS AND COMPOSITES

061323 Heavy Timber Construction

DIVISION 31 - EARTHWORK

3	11	100	•	:::	~	دما	rin	~

Site Clearing
Clearing and Grubbing 311000

312000 312200 Earth Moving

Grading

312300 Excavation and Fill

312319

Dewatering Erosion and Sedimentation Controls 312500

Shoring 314100

Excavation Support and Protection
Timber Piles
Concrete-filled Steel Pipe Piles
Special Foundations 315000

316219 316223

316600 316800

Foundation Anchors

DIVISION 32 - EXTERIOR IMPROVEMENTS

321000 Bases, Ballasts and Paving

Asphalt Paving 321216

321313

Concrete Paving
Curbs, Gutters, Sidewalks and Driveways

321600 321700 Paving Specialties

323000 Site Improvements

329000 Planting

DIVISION 33 - UTILITIES

Common Work Results for Utilities
Water Utilities

331000

333000

Sanitary Sewerage Storm Utility Drainage Piping 334100 334200

Stormwater Conveyance

334400 Stormwater Utility Equipment

ATTACHMENT G SUMMARY OF TOTAL MAN-HOUR ESTIMATE

Estimate of Man Days									
DESCRIPTION OF WORK	Project Director	Project Manager	Project Engineer	Engineer/ Scientist	Designer/ Drafter	Technician	Support	Resident Rep.	Total Man Hour
Title>									112000
Staff Name>									
Hourly Rates>									
Fask 1 - Review and Compilation of Data	Part of the last o	PO INCHES	STATE OF THE PARTY	Leave II		of the second		Decision in	
1.1 Investigation	48	80	210	376	182	120	132	0	11
Subtotals	48	80	210	376	182	120	132		11
Fask 2 - Project Work Plan and Reporting				16-6-31	SASTER STATE		15 - 3 - 1		100000
2.1 Project Work Plan	12	64	200	284	368	12	128	0	10
Subtotals	12	64	200	284	368	12	128		10
Fask 3 - Design Services	-								
3.1 Design									
3.1.1 Design Requirements									
3.1.1.1 Engineer's Cost Estimate	4	8	50	20	0	0	4		
3.1.1.2 Update ESRI GIS Database	0	2	8	32	0	0	4		
3.1.1.3.a Preparation of Plans and Technical Specifications	16	12	120	452	2544	452	68		36
3.1.1.1.b Design and Preparation of Construction Documents	24	104	158	116	312	8	20		
3.2.1 Submissions	4	8	12	24		8			7
2 Meetings	24	40	108	24	16 32	8	24		
3 Value Engineering	8	8	40	0	0	0	16		2
4 Permitting	2	4	20	40	0	0	14		
.5 Bidding Assistance	4	8	20	0	10	8	8	0	
.6 Asset Management	2	4	40	12			6	0	
Subtotals	88	198	576	720	2918	484	166	0	51
Sult A Buller Contine Buller Control (DEDE)									
Task 4 - Design Services During Construction (DSDC)				11					
.2 Liaison and Administration	1	2	0	0	0	0	4	0	
.2 Claison and Administration	72	144	52	0	0	0	32		3
.4 Baselines and Benchmarks	36	144	160	0	0	0	48		3
5 Approval of Manufacturers/Vendors	2	4	4	8	0	0	0	7	
6 Shop Drawings	16	32	108	28 176	0	0	0		
7 Contractor Initiated Substitutions	4	20	36	40	16	24	32	0	4
8 Testing	2	8	36	80	0	4	8	0	1
9 RFI's and Field Orders	8	16	56	144	0		0		1
10 Change Orders	8	12	16			0	12		2
11 Payment Requests	8	32	8	16	32	4	8	0	
12 Start-Up Sertvices	4	16	12	8		8	8	0	
13 Post Construction Assistance	16	8	24	0	0	0	8	0	10
Subtotals	181	446	518	500	48	40	23 183	0	19
/							703	111-11	- 17
ask 5 - Resident Project Representative (per Scope of Work)					the same of the last	-	1/4	The state of the s	
esident Project Representative	0	0	0	0	0	0	0	4000	400
art Time Administrative Assistant	0	0	0	0	0	2000	0	0	200
Subtotals	0	0	0	0	0	2000	0	4000	600



Appendix A - New Jersey Business Registration Certificate



07/03/15

Taxpayer Identification# 900-590-653/000

Dear Business Representative:

Congratulations! You are now registered with the New Jersey Division of Revenue.

Use the Taxpayer Identification Number listed above on all correspondence with the Divisions of Revenue and Taxation, as well as with the Department of Labor (if the business is subject to unemployment withholdings). Your tax returns and payments will be filed under this number, and you will be able to access information about your account by referencing it.

Additionally, please note that State law requires all contractors and subcontractors with Public agencies to provide proof of their registration with the Division of Revenue. The law also amended Section 92 of the Casino Control Act, which deals with the casino service industry.

We have attached a Proof of Registration Certificate for your use. To comply with the law, if you are currently under contract or entering into a contract with a State agency, you must provide a copy of the certificate to the contracting agency.

If you have any questions or require more information, feel free to call our Registration Hotline at (609)292-9292.

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

AND THE PROPERTY OF THE PROPER

DEPARTMENT OF TREASURY/ DIVISION OF REVENUE PO BOX 252 TRENTON, N J 08646-0252

TAXPAYER NAME:

PAULUS, SOKOLOWSKI AND SARTOR, LLC

ADDRESS:

67B MOUNTAIN BLVD EXT. WARREN NJ 07059-2642 EFFECTIVE DATE:

08/28/01

TRADE NAME:

SEQUENCE NUMBER:

0100526

ISSUANCE DATE:

07/03/15

New Jersey Division of Revenue

FORM-BRC

This Gertificate is NOT assignable or transferable. If must be conspicuously displayed at above address



Appendix B - Required Forms



ATTACHMENT A

CERTIFICATION OF INSURANCE

I HEREBY CERTIFY THAT MY OFFICE CARRIES INSURANCE ADEQUATE TO COVER PASSAIC VALLEY SEWERAGE COMMISSION ("PVSC") AND PROTECT PVSC FOR ANY ERROR OR OMISSION BY THE UNDERSIGNED THAT CREATES LIABILITY TO PVSC. THIS INCLUDES ERRORS AND OMISSIONS POLICY AND ANY OTHER TYPE OF POLICY WHATSOEVER THAT CAN BE UTILIZED TO PROTECT THE INTERESTS OF PVSC. I HAVE ATTACHED HERETO COPIES OF THE DECLARATION PAGES OF EACH SUCH POLICY THAT I ASSERT DOES OR CAN PROTECT ANY ERROR, OMISSION OR ACTIVITY IN WHICH I OR ANYONE FROM MY OFFICE MIGHT ENGAGE ON BEHALF OF PVSC.

I FURTHER CERTIFY THAT THE POLICIES OF INSURANCE THAT ARE CARRIED BY MY OFFICE SHALL CONTINUE TO BE CARRIED DURING THE ENTIRE TERM OF MY APPOINTMENT AS <u>DESIGN SERVICES AND DESIGN SERVICES DURING CONSTRUCTION FOR STORMWATER COLLECTION SYSTEM IMPROVEMENTS, IN THE EVENT THAT MY OFFICE IS SELECTED TO SERVE IN THAT CAPACITY. IN THE EVENT THAT THE DECLARATIONS PAGE(S) SUBMITTED HEREWITH SHOWS THE POLICY OR POLICIES OF INSURANCE WILL LAPSE DURING THE COURSE OF THE TERM OF MY APPOINTMENT, I WILL PROVIDE TO PVSC A COPY OF THE RENEWAL POLICY DECLARATION PAGE. I FURTHER CERTIFY THAT THE RENEWED POLICY SHALL HAVE THE SAME OR GREATER LIMITS OF LIABILITY AS THE ONE PROVIDED FOR THE BEGINNING OF MY APPOINTMENT.</u>

CERTIFYING OFFICIAL:	NAME: Renard E. Barnes, Esq.
	TITLE: General Counsel/Secretary
	SIGNATURE: Smal E8
	DATE: January 13, 2017

ATTACHMENT B

CONFLICT OF INTEREST CERTIFICATION

THE UNDERSIGNED CERTIFIES TO PASSAIC VALLEY SEWERAGE COMMISSION ("PVSC"), COUNTY OF ESSEX, STATE OF NEW JERSEY THAT IN PERFORMING SERVICES TO PVSC HE/SHE IS AWARE OF NO CIRCUMSTANCE THAT WOULD CONSTITUTE A CONFLICT OF INTEREST, FINANCIAL OR OTHERWISE, BETWEEN HIMSELF/HERSELF (OR HIS/HER FIRM) AND THE INTERESTS OF PVSC. THE UNDERSIGNED CERTIFIES THAT HE/SHE HAS MADE A SEARCH OF HIS/HER FIRM'S CLIENT BASE AND HAS EXECUTED THIS CERTIFICATION SUBSEQUENT TO SUCH SEARCH.

THE UNDERSIGNED ACKNOWLEDGES THIS IS A CONTINUING CERTIFICATION, AND SHALL REMAIN IN EFFECT FOR THE TERM OF THE SERVICES CONTAINED IN THE SOLICITED REQUEST FOR PROPOSAL. I CERTIFY THAT THE FOREGOING STATEMENTS MADE BY ME ARE TRUE. I AM AWARE THAT IF ANY OF THE FOREGOING STATEMENTS MADE BY ME ARE FALSE, PVSC IS FREE TO TERMINATE ANY PROFESSIONAL SERVICES AGREEMENT ENTERED INTO WITH THE UNDERSIGNED AND/OR HIS OR HER FIRM.

Applicant Paulus, Sokolowski and Sartor, LLC	
Signature: Run EP	
Typed: Renard E. Barnes, Esq.	
Firm Name: Paulus, Sokolowski and Sartor, LLC	
Title: General Counsel/Secretary	
Date:	

ATTACHMENT C

I HEREBY CERTIFY THE INFORMATION CONTAINED IN THIS PROPOSAL IS CORRECT AND ACCURATE TO MY PERSONAL KNOWLEDGE. I AM MAKING THIS CERTIFICATION IN GOOD FAITH.

CERTIFYING OFFICIAL:	NAME: Renard E. Barnes, Esq.
	TITLE General Counsel/Secretary
	SIGNATURE: Keyand & B
	DATE: January 13, 2017

Certification

2215

CERTIFICATE OF EMPLOYEE INFORMATION REPORT

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-DEC-2015 to 15-DEC-2018

PAULUS, SOKOLOWSKI & SARTOR, LLC 67B MOUNTAIN BLVD. EXT. WARREN NJ 07059 Robert de Lomano

Robert A. Romano, Acting State Treasurer

ATTACHMENT I

ACKNOWLEDGEMENT OF RECEIPT OF CLARIFICATIONS

The undersigned Respondent hereby acknowledges receipt of the following clarifications to the Request for Qualifications and Compensation (Fee) Proposal. By indicating date of receipt, Respondent acknowledges the submitted qualifications and proposal takes into account the provisions of the issued clarification(s). Note that the PVSC's record of clarification(s) issued shall take precedence and that failure to include provisions of changes in qualifications and proposal may be submit for rejection of the qualifications and proposal.

PROFESSIONAL SERVICES FOR DESIGN SERVICES AND DESIGN SERVICES DURING CONSTRUCTION FOR STORMWATER COLLECTION SYSTEM IMPROVEMENTS

Directions: Complete Part I or Part II, whichever is applicable

PART I: LISTED BELOW ARE T CLARIFICATION REC RFQ/RFP:		
CLARIFICATION #1, DATED	January 10	, 2017
CLARIFICATION #2, DATED	January 11	, 2017
CLARIFICATION #3, DATED		,
CLARIFICATION #4, DATED		·

PART II:	NO CLARIFICATION WAS RECEIVED IN CONNECTION WITH THIS RFQ/RFP.
DATE:J	anuary 16, 2017
NAME James	R. Wancho, Vice President SIGNATURE



Appendix C - Resumes of Key Personnel





James R. Wancho, PE

Vice President/Principal in Charge Water Resources

Mr. Wancho has significant experience working at the PVSC WWTP, including Principal in Charge of PS&S engineering and permitting work, responsible for oversight/coordination and documentation of PVSC's work related to Superstorm Sandy recovery/ relief, FEMA coordination, HMGP funding, regulatory assistance, permitting and design services. He provided project engineering/management services for Evaluation of Secondary Treatment Facilities Study/Plan in addition to involvement in construction of the Rehabilitation of Existing Oxygenation Tanks, Building Renovations, Modifications and Rerouting of Existing Primary Skimmings System, Demonstration of Final Clarifier Rotary Ducking Skimmer, Thickening Centrifuge Facility and Final Clarifier Polymer Storage and Feed Facilities projects.

Mr. Wancho served as General Consulting Engineer for the Rahway Valley Sewerage Authority for nine years, responsible for engineering oversight of the Authority's treatment and collection/outfall systems and had integral involvement in the development and implementation of the Authorities' \$250 Million Capital Improvement Program. He also participated in Value Engineering studies for over \$200 Million in water resources projects, including the Rahway Valley Sewerage Authority WWTP expansion, Parsippany Troy Hills WWTP Upgrade and Great Neck Water Pollution Control District WWTP Upgrade/ Expansion.

James Wancho will be responsible for overall project management, coordinating technical review of design documents, and providing technical guidance and expertise on the identified projects. He has over 30 years of water resources engineering experience and first-hand knowledge of the overall HMGP Mitigation Program as well as several other PVSC design projects. He has been involved in on going FEMA coordination activities and is knowledgeable in the scope and status of most of the anticipated projects. Jim has extensive experience in NJ Local Public Contracts Law and all phases of the NJEIT funding process.

Relevant Experience

Principal in Charge, FEMA Support Services, PVSC, Newark, NJ. Served as Principal in Charge of PS&S engineering and permitting work with Witt/O'Brien's Associates. In response to Superstorm Sandy, PVSC, PS&S and FEMA worked toward the design of a floodwall, standby power system, and stormwater management system to mitigate against potential future flood damage to the PVSC's Newark plant. Through PS&S's efforts the NEPA Environmental Assessment had a Finding of No Significant Impact and HMGP Mitigation Plan funding was approved/obligated.

Project Manager/Lead Project Engineer, Evaluation of Secondary Treatment Facilities, PVSC, Newark, NJ. Lead project engineer for PS&S, participating in various phases of a study to develop positive solutions to obtain short and long-term effluent discharge permit compliance. Project tasks included: influent sewer and outfall hydraulic evaluations; statistical analysis of effluent data to determine target effluent concentrations; recommendations to improve performance of oxygenation tank mixing and sludge pumping systems; skimmings removal/treatment alternatives; and evaluation of oil and grease violations.

Education

Manhattan College: B.S., Civil Engineering/1983 M.E., Environmental Engineering/1988

Credentials

Professional Engineer: New Jersey and New York

Affiliations

New Jersey Water Environment Association

New York Water Environment Association

Association of Environmental Authorities

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James R. Wancho, PE

continued

Project Engineer, Thickening Centrifuge Facility, PVSC, Newark, NJ. Project Engineer for the construction phase of installation of new thickening centrifuge facilities at the treatment plant to thicken primary and waste activated sludge prior to further processing at the Zimpro wet air oxidation process.

Principal in Charge, Wastewater Treatment Plant Expansion, Rahway Valley Sewerage Authority, Rahway, NJ. Principal in Charge for the planning and design of a major expansion to the treatment plant from a peak flow capacity of 60 mgd to 105 mgd. The PS&S led design team designed new influent pumping, screening and grit removal facilities; a primary settling tank; aeration system improvements; two final settling tanks; effluent filters; UV disinfection; effluent pumping and cascade aeration systems. The project also included replacement of sludge handling, mechanical, HVAC, and electrical systems, in addition to SCADA facilities and odor control systems.

Principal in Charge, Monmouth Park Racetrack Stormwater System, New Jersey Sports and Exposition Authority, Oceanport, NJ. Principal in Charge for design of facilities to achieve compliance with CAFO regulations, which prohibit the direct discharge of horse stable area runoff to receiving waters, up to a 25-year storm. The design included approximately 1,450 lineal feet (LF) of 72" RCP interceptor for interconnection of the stormwater collecting piping to the pond and pump station, about 12,000 LF of HDPE storm water collection piping ranging in diameter from 15" through 42", about 21,000 LF of PVC storm water collection piping from 4" to 12" in diameter and about 2,100 LF of DIP storm water collection piping from 6" through 18" in diameter.

Principal in Charge, Grist Mill Pump Station Replacement, Great Neck Water Pollution Control District, Great Neck, NY. Served as Principal in Charge of PS&S engineering and permitting work for the replacement of the Grist Mill Pump Station which is located adjacent to the Saddle Rock Grist Mill, a 1780 structure listed on the National Register of Historic Places. In response to Superstorm Sandy, PS&S and FEMA worked toward the design of a resilient pump station design, with standby power system to mitigate against potential future flood damage. Through PS&S's efforts the HMGP Mitigation Plan funding was approved/obligated.



Donald Sharp, PE, AIA

Senior Associate Water Resources

Shortly after Super Storm Sandy, Donald served at the Governor's Office for Reconstruction and Rebuilding New Jersey, working closely with the Office of Homeland Security to review and make recommendations for greater resiliency of the Emergency Action Plans of critical infrastructure. He also worked with NJDEP to prepare a guidance document for greater resiliency of water supply and wastewater treatment facilities.

Mr. Sharp's work with the Governor's Office provided a strong understanding of the FEMA 404 and 406 Hazard Mitigation Grant Programs of the Stafford Act. Using this knowledge, PS&S was able to assist a number of municipalities and wastewater treatment facilities in preparing flood hazard mitigation plans that have been approved by FEMA

At PVSC, Mr. Sharp worked closely with PVSC staff, NJDEP and FEMA to prepare. The flood hazard mitigation plan to protect the plant from a 500 year storm. The plan includes construction of a flood wall around the plant perimeter, construction of two storm water pump stations having capacity to pump more than 200,000 gpm, and construction of a standby power generating facility. The flood hazard mitigation plan has been approved by FEMA, and it has been said that the plan is the largest 406 mitigation plan ever approved by FEMA.

During his career, Mr. Sharp has managed the design and construction of many large infrastructure and water resource related projects that include more than fifteen wastewater and water treatment facilities ranging in size from from 1.0 mgd to 150 mgd.

Relevant Experience

Donald Sharp will provide project management of any required design services related to the stormwater collection system improvements. He served as Project Manager on PS&S' efforts related to the PVSC HMGP mitigation plans, developing the preliminary design of the stormwater pump stations, hydraulic modeling of the on-site storm drainage systems, modifications to the on-site drainage piping and related permitting efforts. He is both a Licensed Professional Engineer and Registered Architecture with more than 40 years of experience in design, management and construction of infrastructure related projects. During the early years of his career, Donald worked as a structural engineer on a number of wastewater and water treatment projects, including the structural design of the PVSC sludge treatment facilities, supernatant treatment facilities and the sludge loading dock.

In addition to his infrastructure and water resource experience, Donald has extensive experience with the planning, design and construction of major land development projects that have included a number of large planned residential communities, office complexes and industrial parks. His extensive knowledge of all aspects of civil engineering and his design sensitivity as an architect are a great resource to any project.

Project Manager, Superstorm Sandy Recovery & Mitigation, Passaic Valley Sewerage Commission (PVSC), Newark, NJ. Earlier this year, in response to damage caused by Hurricane Sandy, Mr. Sharp led a team of engineers at the PVSC wastewater treatment plant to work with FEMA on a daily basis. Mr. Sharp was responsible to manage design of temporary flood-proofing measures including bulkheads with flood doors in the utility

Education

New Jersey Institute of Technology, NJ School of Architecture: M.S., Architecture/2007

New Jersey Institute of Technology: B.S., Civil Engineering/1975

Muskingum College: B.S., Mathematics/1970

Credentials

Professional Engineer: New Jersey

Registered Architect: New Jersey and Vermont

Affiliations

American Institute of Architects



Donald Sharp, PE, AIA

continued

tunnels and relocation of pump motor controls centers above the 100-year ABFE elevation, among other provisions. More recently, Mr. Sharp was responsible for the preparation of FEMA 404 Flood Hazard Mitigation Plans for the construction of a flood wall around the entire PVSC treatment facility and the construction of a power plant to generate enough electricity to run the entire facility.

Project Manager, Monmouth Park Racetrack Stormwater Management System, New Jersey Sports and Exposition Authority (NJSEA), Oceanport, NJ. NJDEP mandated that the NJSEA bring the 200-acre Monmouth Park Racetrack into compliance with New Jersey Pollutant Discharge Elimination System (NJPDES) regulations, which required on-site handling and treatment of horse stable area storm water runoff from a 25-year storm. Mr. Sharp developed a multi-project program that included separation of stable roof runoff. The design included approximately 1,450 lineal feet (LF) of 72" RCP interceptor for interconnection of the stormwater collecting piping to the pond and pump station, about 12,000 LF of HDPE storm water collection piping ranging in diameter from 15" through 42", about 21,000 LF of PVC storm water collection piping from 4" to 12" in diameter and about 2,100 LF of DIP storm water collection piping from 6" through 18" in diameter. Mr. Sharp was project manager throughout the design and construction of the \$22.0 million program.

Project Manager, Wastewater Treatment Plant Upgrade and Expansion, Rahway Valley Sewerage Authority, Rahway, NJ. Project manager and lead PS&S engineer for the design of the expansion of the existing peak 60 MGD WWTP to handle a peak instantaneous flow of 105 MGD, The WWTP expansion included a new headworks facility, which included installation of five dry pit submersible pumps to replace existing influent pumps. Developed the plans for maintenance of the plant influent during the construction of the headworks and decommissioning of the existing pumps. Donald's role in the project included the conceptual design, coordination of all aspects of the design including sub-consultants, and preparation of contract documents for the project.

Project Manager, New Municipal Building; Borough of Lavallette, NJ. Project Manager and Architect of Record for the design of a new 12,000 SF Lavallette Municipal Complex to replace the municipal building that was destroyed during Superstorm Sandy. Donald prepared the conceptual plans, supervised the design and is currently providing construction phase services.

Project Manager, Montclair State University, Sewage Pump Station – Montclair, NJ. Project Manager for the Montclair State University 2,000 bed dormitory project that included connection into the Montclair sewer system, and included over 10,500 LF of new gravity sewer, both on-site and in Montclair, a new 400 gpm pump station, 4,200 linear feet of force main and over 6,500 LF of cured in place sewer lining. Responsible for all hydraulic evaluations, detailed design and preparation of plans and specifications for the pumping station and interconnection into the Township of Montclair sewer system, and provided construction phase services including shop drawing review and field inspections.



Carroll J. Oliva, PE, RA

Senior Director Water Resources

Through nearly 40 years of involvement with PVSC, has gained in depth knowledge of PVSC's facilities, operations and staff. Mr. Oliva's experience with PVSC and many other wastewater facilities was gained through a "hands-on" approach based on more than 50 years in the wastewater field.

Since 1975, Carroll Oliva has been actively involved in the design of facilities at PVSC including the Sludge Thickeners, Sludge Heat Treatment, Decant, Sludge Pumping and Storage, and Supernatant Treatment Facilities. In 1996, Mr. Oliva took a lead role in the design and construction of renovations to the Operations-Engineering-Maintenance Building; Warehouse-Training Facilities, and Head-End Incinerator Building. Finally, in 1998, Mr. Oliva was part of a team undertaking the design of the Centrifuge Thickening Facilities at the Sludge Heat Treatment Building.

In 2011, Mr. Oliva was assigned to the PVSC Office of the Executive Director to provide engineering expertise and guidance during a period of administrative change. During the latter part of that 22-month assignment, he assisted the PVSC Engineering Department with various projects on an as-needed basis. Mr. Oliva experienced first-hand the impacts on PVSC's facilities due to Superstorm Sandy and made some of the early evaluations on future hardening approaches of an emergency nature.

Mr. Oliva was a contributor to the Water Environment Federation's most recent (2010) edition of MOP-8, Design of Municipal Wastewater Treatment Plants.

Relevant Experience

Mr. Oliva has had involvement with several projects identified in the RFQ: The Administration Building Rehabilitation, Sump Pump Panel Modifications and Emergency Generators, and the Tunnel Flood Doors. He evaluated and reported on the Architectural Constructability Review by others to make it more FEMA-fundable for the Administration Building Rehabilitation; conducted the Quality Assurance/ Quality Control review of the 95% complete construction documents for the Sump Pump and Emergency Generator (six sites) Work, and had a role in the Tunnel Flood Door design by calculating water levels to be experienced above the sills due to catastrophic failures of process tanks or piping and conduit systems. Due to his many years of design work on PVSC facilities and other large and small wastewater facilities, Mr. Oliva has the capability to evaluate design/constructability for the other identified projects in the RFQ. He has an excellent understanding of PVSC's facilities, has a strong background in design having held highly responsible positions in several large engineering firms, and also spent in excess of ten years handling construction phase services for those firms. Mr. Oliva has an understanding of how complex construction is carried out, especially when associated with large, active wastewater facilities.

Engineer/Architect, Sludge Heat Treatment Facilities (Zimpro), PVSC, Newark, NJ*. Responsible to develop the preliminary equipment layout for the twelve element wet air oxidation process. As the design development advanced, a multi-level five element structure was proposed consisting of a main core, two throat-connected reactor bays, a boiler house and a main core to boiler house connector which served as a large bay, drive through for equipment access. Following the acceptance of the equipment layout, Mr. Oliva took the lead in completing the facility architectural design. At the time it was the

Education

Newark College of Engineering (NJIT): B.S., Civil Engineering/1974

Value Engineering, ACEC/ AIA, 40 hour workshop; Atlanta, GA: 1976, VE Studies

Credentials

Professional Engineer: New Jersey, New York, Pennsylvania, Illinois, Florida, and Ohio

Registered Architect: New Jersey

Conveyance and Wastewater Treatment Operations: S4 License: New Jersey C4 License: New Jersey

Affiliations

American Society of Civil Engineers, ASCE, Life Member (44 Years)

Water Environment Federation, WEF Life Member (37 Years)

American Water Works Association, AWWA, Life Member (52 Years)

American Institute of Architects, AIA, 1976 -1996

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Carroll J. Oliva, PE, RA

continued

largest wet-air oxidation (Zimpro) facility in the world.

Project Architect, Sludge Thickening Facilities, PVSC, Newark, NJ*. Led the architectural team in the design of the multi-level core structure which supports twelve, 100' diameter by 14'-6" side-water depth sludge thickeners. The multi-level structure is approximately 750' x 50' with a basement, main floor, and combination roof and multiple, partial superstructure upper level. This facility handles all the equipment for conveying, screening, equally distributing, and pumping thickened solids to the Sludge Heat Treatment Facilities. It was initially designed to be the control center for all sludge processing as well as the sludge side O&M Staff's center for worker's showers, toilet facilities, break rooms, storage and maintenance shops, nurses' station and Operations Managers offices. Adequate space was provided for electrical power and distribution, heating and ventilation, stair towers, elevators and equipment hoist-ways.

Project Architect, Thickening Centrifuges at Sludge Heat Treatment Facilities, PVSC, Newark, NJ. In 1998, PVSC determined, in conjunction with their Consultants, that they would enhance their sludge thickening capabilities by adding three 40" bowl diameter thickening centrifuges. These new units were to be added downstream of the existing Gravity Thickeners and upstream of the existing Sludge Heat Treatment Facilities. The most ideal location for the new centrifuges was the Sludge Heat Treatment Facilities, and after careful study, it was determined that the structural system and foundations had adequate capacity to support the new work. The difficulty would be access space between the Sludge Thickening Facilities and the Sludge Heat Treatment Facilities for construction and equipment placement by crane. The top floor of the Sludge Heat Treatment was occupied by odor control and ancillary equipment which had been out of service for many years. That equipment was to be removed to make place for the new thickening centrifuges.

Project Manager, 12 MGD Wastewater Treatment Plant, Rockaway Valley Regional Sewerage Authority (RVRSA), Parsippany, NJ*. Given the assignment to manage the design of new Oxidation Ditch Treatment Facilities and be ready to bid in twelve months with all permits in hand. At the end of eleven months, over 400 contract drawings had been completed, approved, and authorized for bid by RVRSA. Took an active, hands-on role in both the engineering and architectural design of the project which was constructed for \$32.8 million, with less than 1.4% overrun due to Change Orders.

Project Engineer, Joint Meeting of Essex and Union Counties (JMEUC), Elizabeth, NJ. Provided design and engineering management of various projects including rehabilitation of various aged interceptor sewers throughout the Agency's conveyance system; oversaw the investigation, evaluation, and remedial activities for the emergency repairs and permitting of the 42" Supplemental Sewer. Designed the improvements to the Joint Meeting's Screen Facilities including the controlled demolition, flow maintenance, replacement of belt conveyors with both belt and shaft-less screw conveyers, and various other improvements to this facility.

PVSC, Newark, NJ: Mr. Oliva was responsible for the concept design of the Sludge Heat Treatment Facilities, (Zimpro) in 1975, and did the Architectural design of the Thickener Facilities, Sludge Heat Treatment, Decant Tanks, Sludge Storage and Pump Station, and the Supernatant Treatment Facilities.





Lisa DiGerolamo, PE

Vice President Civil Engineering

Ms. DiGerolamo is a Vice President and Senior Project Manager, responsible for all aspects of project development. She has experience with various types of infrastructure projects requiring complex stormwater management solutions. Ms. DiGerolamo's responsibilities include engineering design, client contact, project budgets, schedule and supervision of a technical design team.

Ms. DiGerolamo takes a project from concept development through design, agency approval, public presentations and construction phase. Ms. DiGerolamo has extensive experience with hydrology and hydraulics including watershed analysis HEC1 and stream modeling HECRAS. She has experience with culvert replacement projects and complex stormwater management system designs including multiple interconnected facilities. Ms. DiGerolamo also has extensive experience with the New Jersey Department of Environmental Protection Flood Hazard Area Section with the permitting for stormwater management and floodplain management.

Relevant Experience

Novartis Site Storwmater Management Studies and Design – East Hanover, New Jersey – Project Manager for Sitewide Stormwater Management Study as well as extensive site improvements and infrastructure modifications for more than 15 years at the East Hanover Campus. For further details regarding this project lease see teh relevant experience section of the proposal.

Schering/Merck Site Stormwater Management Studies and Design – Kenilworth, New Jersey – Project Manager for providing civil engineering design and permitting services for the Kenilworth campus of this major pharmaceutical client for more than 20 years. We have provided engineering support from the initial conceptual planning of projects to the preliminary design, local and state permit process to construction documents and through construction administration for various projects throughout the campus. Projects included corporate headquarters building, utility building expansions, parking garage expansions and research building expansions. For each of these projects we have provided design of site roadway modifications, utility crossings, stream crossings, sidewalks stormwater management facilities and parking areas. The majority of the campus is located with a regulated NJDEP floodplain requiring a design for the site expansion and development with sensitivity to the environmental concerns of flooding.

Cadbury-Schweppes R&D Center – Hanover, NJ: Lead Civil Engineer for the renovation and expansion of existing facility for Cadbury Schweppes. Responsibilities include all aspects of site design including layout, grading, stormwater management and utility coordination. We were also responsible for the local and state approvals process.

Federal Business Centers, Multiple Projects – Edison, NJ: Responsible for all aspects of site plan development and permitting for various projects throughout the center including new warehouse and industrial development. Additional responsibilities include development of various hydraulic/hydrologic studies and designs throughout for Raritan Center. Tasks included hydrologic watershed analysis, stream hydraulics for culvert replacement and floodplain delineation, and stormwater management detention basins.

Education

Stevens Institute of Technology: B.E./1987

Montclair State University: M.B.A./1993

Credentials

Professional Engineer: New Jersey and New York

Affiliations

American Society of Civil Engineers



Lisa DiGerolamo, PE

continued

Gan Eden – Monticello, NY: Project manager for site plan development for 528-unit residential development, including site layout, utilities, stormwater management and grading. The project is located on a site with significant grade changes, the concept design was developed to maximize the unit distribution while respecting the site topography.

Greenwood Lake Turnpike Realignment and Stream Reconstruction – West Milford, NJ: Project Manager responsible for all aspects of the project through construction. Project included the realignment of approximately one mile of roadway through environmentally sensitive areas. Stormwater management solutions for the project required incorporation of several water quality basins as the project was adjacent to a trout production stream. The project also included two new culvert crossings and the relocation and design of 400 linear feet of trout production stream.

Hillsborough Promenade – Hillsborough, NJ: Project Manager responsible for site plans and permits for 400,000 sf of retail development. Project included all aspects of site development including stormwater management, vehicular and pedestrian circulation, sanitary, site lighting, soil erosion and retaining walls.

Confidential Pharmaceutical Client – New Brunswick, NJ: Project Manager responsible for the preparation of a site wide flood impact study, preparation of permit documents to implement study recommendations and the preparation of construction plans and specifications for the approved improvements. Project Manager for reconstruction/improvement of site for child care center.

K. Hovnanian, Oakwood at Old Bridge – Old Bridge, NJ: Project Manager responsible for the all aspects of the site plan development drawings and process including offsite improvement plans for a 425 home residential development in Old Bridge. The project required multiple stormwater management basins/facilities throughout the development to address NJDEP stormwater management compliance. A new roadway crossing was also developed over the Burnt Fly Brook. NJDEP flood hazard delineation and culvert design was completed for the roadway crossing. The development further required extensive improvements to the water supply infrastructure of the Old Bridge Municipal Utilities Authority (OBMUA) to provide adequate capacity and pressure to the new development. The project also required the addition of a booster pump at one of the authorities' water storage tank facilities. Approvals from NJDEP BSDW were obtained for all aspects of the project.

Saw Mill River Daylighting – Yonkers, NY: Project Manager responsible for all project aspects including hydrologic/hydraulic designs and construction plan development. The daylighting of the 26 square mile watershed through a new public park required the interception of base flow and lower storm events to a series of water features including weirs, freshwater pools, tidal pool and riffles and reconnection with the flume. The park would provide views of the water from the daylighting through the various pools and features to the confluence with the main River. PS&S also completed design of the replacement of the utility systems within the surrounding roadway, replacing the aged infrastructure with new facilities.



John J. Feferik, PE

Senior Engineer Water Resources

Mr. Feterik is a senior level design engineer with more than 39 years of experience working on major water and wastewater and other environmental engineering related projects. His experience includes evaluation, design and construction phase services for wastewater collector and trunk sewer facilities, wastewater pump stations and forcemains, and wastewater treatment plants.

Relevant Experience

Passaic Valley Sewerage Commission 9PVSC) – Newark, NJ. Performed a study on the RAS screw pumps. The study focused on the physical condition of the pumps and to evaluate the feasibility of replacing the bottom journals with an alternate design. The study also included interfacing with the screw pump manufacturer regarding the alternate design and for a site visit by the manufacturer to assess the condition of the screw pumps and prepare a report with their assessment of the condition of the screw pumps and recommendations on the alternate design and addressing their physical condition.

Passaic Valley Sewerage Commission (PVSC) – Newark NJ: Skimmer for final settling tank. Provided design services for the installation of a "Ducking Skimmer" for one (1) of the plant's final settling tanks. The installation also included the installation of a pumping unit for handling the skimmings and also included piping modifications.

Passaic Valley Sewerage Commission (PVSC) – Newark NJ: Modification of drains in the Operations and Maintenance Building. Provided design services for modifying drains to address foam issues associated with sampling operations.

Passaic Valley Sewerage Commission (PVSC) — Newark NJ: Participated in developing conceptual designs for flood investigation to protect the treatment plant from flooding as a result of damage caused by "Superstorm Sandy". The conceptual designs were developed along with a study for submission to FEMA to obtain funding for flood protection mitigation. Activities included evaluating means of protecting individual plant facilities from flooding, the conceptual design of stormwater pump stations within the plant, and upgrading of the existing stormwater system in conjunction with providing a floodwall around the entire treatment plant to protect against overflow flooding.

Passaic Valley Sewerage Commission (PVSC) – Newark NJ: Participated in the design for the installation of bulkheads within the plant's pipe tunnel complex. The project included the installation of concrete bulkhead walls with flood doors at various locations throughout the pipe tunnel complex. The purpose of the bulkheads was to provide a means to isolate areas and protect vital areas of the treatment plant in the event of the pipe tunnel complex being subjected to flooding.

Passaic Valley Sewerage Commission – Newark, NJ: Hydraulic capacity evaluation of main influent trunk sewer (11' brick/concrete), south side interceptor (84"-RCP) and plant out fall (96"-concrete). Designed new primary scum lines to convey primary scum from primary settling tanks to influent wet wells of the "Zimpro" sludge treatment system and performed hydraulic analysis of the treatment plant as part of a flow maximization study. Provided office construction engineering services for the Polymer Storage and Feed Facility Project.

Education

Rutgers University: M.S., Environmental Engineering/1983

Stevens Institute of Technology: B.E., Civil and Environmental Engineering/1977

Credentials

Professional Engineer: New Jersey

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John J. Feterik, PE

continued

Passaic Valley Sewerage Commission (PVSC) – Newark NJ: Participated in a study to evaluate the physical conditions within the plants piping tunnel complex. The study focused on the structural conditions as well as the conditions of the piping to assess effects of the pipe tunnel complex flooding as a result of "Superstorm Sandy".

Port Imperial North Development – West New York, NJ: Responsible for evaluation of pump performance curves, development of system curve, and preparation of plans and specifications for new pump stations and force mains to convey wastewater from the development to the North Hudson Sewerage Authority West New York WWTP. Pump Station No.1 was designed to handle 1.5 MGD, and is pumped via a 10" diameter approximately 2,200 LF force main to Pump Station No. 2. Pump Station No. 2 serves the remainder of the development and was designed to handle 2.7 MGD. Pump Station No. 2 conveys all flow via a 14" diameter approximately 600LF force main to the WWTP.

Mayfair District Storm Sewer Improvements – West Orange, NJ: This project consisted of installation of new storm sewer infrastructure within existing easements and rights of way of Nestro Rd., Midro Way, Mayfair Dr., and Rosemont Terrace in the West Orange. Project purpose was to improve drainage conditions in these areas. The project included the installation of approximately 3,580 LF of 15-inch to 60-inch RCP, and associated manholes, special structures and inlets. The contract award for this project is \$1,343,700 contract was funded through NJEIT. Served as resident engineer for the project construction, responsible for contract administration and construction inspection.

NJSEA Monmouth Park Racetrack Stormwater Pump Station – Oceanport, NJ: The New Jersey Sports and Exposition Authority hired PS&S to design facilities to control the discharge of horse stable area (CAFO) runoff at the Monmouth Park Racetrack. The design included approximately 1,450 lineal feet (LF) of 72" RCP interceptor for interconnection of the stormwater collecting piping to the pond and pump station, about 12,000 LF of HDPE storm water collection piping ranging in diameter from 15" through 42", about 21,000 LF of PVC storm water collection piping from 4" to 12" in diameter and about 2,100 LF of DIP storm water collection piping from 6" through 18" in diameter. Responsible for hydraulic evaluations, pump selection/design and preparation of plans and specifications for the pump station. Also performed shop drawing review under construction phase services.

Montclair State University Student Housing Wastewater Conveyance System – Montclair, NJ: This project involved the construction of a new 2,000 student dormitory complex and cafeteria requiring new wastewater infrastructure onsite and upgraded infrastructure within the Township of Montclair. Provided detailed design of a new on-site wastewater pump station and force main, hydraulic analysis of the downstream gravity systems to determine upgrade requirements, design of new and replaced/upgraded sanitary sewer systems, review of shop drawings and construction observation of the on-campus and off-site construction work.

Rahway Valley Sewerage Authority (RVSA), Gravity Relief Sewer – Rahway, NJ: Designed a 42-inch relief sewer to divert flow from a portion of the Authority's trunk sewer system and convey the diverted flow to the treatment plant. This relief sewer allowed the closure of an existing overflow. Design work included hydraulic evaluation, pipe selection and means for flow diversion. Design work also included design of a crossing of the Rts 1 & 9 and Rahway River, and was installed by microtunneling. Also performed shop drawing review under

mga.com



Chao Yan, EIT

Designer V Civil Engineering

Mr. Yan joined Paulus Sokolowski & Sartor in 1996 as an Engineer/CAD Designer in the Civil Department. He is responsible for CAD design work related to all aspects of land development projects including preparation of preliminary and final site plans for commercial, residential, industrial and public works projects. He is experienced with hydrologic/hydraulic design calculations and reports; cost estimates, agency coordination and construction services.

His extensive engineering experience has proven to be invaluable to PS&S on many projects. Mr. Yan has excellent background knowledge of AutoCAD/LDD and other design software. He also has experience with HEC-HMS, HEC-RAS in hydrology/hydraulics analysis and stream encroachment analysis.

Relevant Experience

Green Brook Daylighting – Scotch Plains NJ: Created a new river with 540 cfs conveyance capacity from buried storm sewers in existing amusement park into a proposed residential community.

Greenwood Lake Turnpike – West Milford, NJ: Participated in the design of this site, located in Passaic County. Responsibilities included the geometric design of 1.2 miles of highway including two intersections, traffic analysis, super elevation modeling, utility design, earthwork analysis and preparation of specifications and bid documentation while complying with NJDOT and AASHTO standards.

Greenwood Lake Turnpike – West Milford, NJ: Provided Civil Engineering services and cost control for 1.5 miles Passaic County highway with 2 intersections. Project realigned a high accident rate road into safe and comfort highway in reasonable budget. Responsibilities include geometric design, grading, drainage and storm water managements. Responsibilities also including roadside stormwater system.

Honeywell Hangar in Morris Airport: Provided layout and storm water management.

Lakeside – North Haledon, NJ: Provided Civil Engineering services and cost efficiency design for a multi-phase mixed use neighborhood area immediately adjacent to a lake and previous quarry site. The project received national award for outstanding civil engineering design. Responsibilities also included access road and intersection design.

Mill Street Courtyard and Saw Mill River Daylighting Phase 2 – Yonkers, NY: Project Hydraulic Engineer for design of phase 2 of the "daylighting" of the Saw Mill River Yonkers, New York. Project included complex hydraulic and hydrologic evaluation, incorporating new retaining walls and vehicular and pedestrian bridges into the modeling. Hydraulic solutions considered the various storm events from the 2, 10, 50 and 100 year events.

Monticello Motor Club – Thompson, NY: CAD designer for a 4.5 mile race track and its facilities. The project achieved NYSDEC stormwater management standards without disturbing the onsite wetlands. Enhanced existing horizontal and vertical features of the existing airport complex to efficiently transform the site into a world class race club in the northeast region.

Education

New Jersey Institute of Technology: M.S., Transportation Engineering/1995

Chinese Academy of Social Sciences: M.A., Engineering Economics/1986

Jianxi Polytech University: B.S., Civil

Credentials

Engineer in Training: Delaware

Affiliations

American Society of Civil Engineers



Chao Van, EIT

continued

Novartis Pharmaceuticals – East Hanover, NJ: Participated in the development of conceptual roadway and utility relocation studies during the concept phase for the West Village Expansion. Participated as the designer for numerous site improvement projects on the campus and stormwater management studies.

Port Imperial – West New York, NJ: CADD designer for the subdivision and infrastructure design for the 4,000-unit residential community on the Hudson River. Road, utility, stormwater management and sanitary pump station designs were part of this project.

Port Imperial – West New York, NJ: Provided Civil Engineering services pertaining to the infrastructure design and master planning of approximately 150 acres of developable land in an urban area along the Hudson River. The overall project is multi-phased and multi-block that includes 4,000 residential units, commercial and recreation areas including sport fields and waterfront walkways, and realignment of Port Imperial Blvd.

Saw Mill River Daylighting – Yonkers, NY: Prepared hydrological/hydraulic analysis of the river with 26 square miles of watershed area. Modeling of conveying system with flow intercept under environmental, tidal, flood and public safety constraints for the contemporary water park in downtown section of the City of Yonkers.

Schering-Plough K-1 Building – Kenilworth, NJ: CADD designer for a Pharmaceutical Executives office building in a highly constrained, well-developed industrial campus. Responsible for site layout utilities design and stormwater management design.

Sparta Middle School: CADD designer for the site plan including utility, storm water management, sanitary pump station and County Road 517 improvements.

*Work performed prior to joining PS&S



Glenn P. Kustera, PE, SE

Vice President/Principal in Charge Structural Engineering

Mr. Kustera serves as Principal-in-Charge of PS&S's Structural Group and is responsible for project oversight, concept planning, code analysis, design guidance and QA/QC procedures. Mr. Kustera's experience encompasses a diverse range of project types and all facets of structural design including shallow and deep foundation systems, concrete, steel, timber, masonry construction and rehabilitation and strengthening of existing structures. Mr. Kustera joined Paulus, Sokolowski & Sartor in 1999 and has been a member of the Structural Department for over fifteen years.

Mr. Kustera will be responsible for the Structural Engineering required for this project. Mr. Kustera will be responsible for the pump station buildings including the cast-in-place concrete wet wells and the electrical building designs; the monorail support system; all piping supports; etc. Mr. Kustera's experience provided herein shows that he is more than qualified to provide the required Structural Engineering required for this project. In addition, he has provided Structural Engineering services for PVSC projects.

Relevant Experience

PVSC – Newark, NJ: Design of cast in place concrete bulkheads within underground network of highly congested access tunnels. Bulkheads with submarine doors designed to resist hydrostatic head pressure of up to 25 feet.

Rahway Valley Sewerage Authority (RVSA) – Rahway, NJ: lead structural Principal for design and related services for WWTP expansion including headworks building and 6.2 MW cogeneration and sludge Drying Facility, housing digester gas pretreatment, natural gas/digester gas bleeding, four 1.5 MW spark ignited gas engine generators with a paddle type sludge dryer. Structural steel framed building with precast wall panels. Steel mezzanine and composite slab roof to support numerous pipes and equipment.

Bayshore Regional Sewerage Authority: Flood proofing of pump stations consisting of cast-in-place concrete flood walls constructed along perimeter of existing structures. Design compliance with ASCE 24 Flood Resistant Design and Construction for A Coastal and V Zones.

Two Rivers Water Reclamation Authority – Monmouth, NJ: Flood proofing of pump stations consisting of aluminum framed opening covers and steel reinforcing to increase flood load capacity of exterior masonry walls.

Bally's Wild West Casino & Transportation Center – Atlantic City, NJ: two-story, 180,000 sf themed casino. Structural steel framing, long span trusses, dome structure. Conventional spread footings protected by jet-grouted sea wall. Services also provided for eight-story, 350,000 sf parking garage/bus station. Precast and cast-in-place concrete structure, footing foundation. Structural steel architectural features.

BAPS – Robbinsville, NJ: Multi building development with steel and masonry structures utilized for assembly, classroom, religious and multipurpose uses. 100,000 sf stone temple utilizing ancient Hindu construction practices and materials consisting of sandstone and carved marble. Auger cast pile supported mat foundation with reinforced concrete shear

Education

Rutgers University, College of Engineering: B.S., Civil Engineering/1991

Credentials

Professional Engineer: New Jersey, New York, Texas, and Nevada, Florida and Illinois

Affiliations

American Institute of Steel Construction

American Concrete Institute

Precast/Prestressed Concrete Institute



John R. Lennox, PE

Associate

Structural Engineering

Mr. Lennox serves as Project Engineer for the design of a wide range of commercial, educational, infrastructure, institutional, and industrial facilities. He is responsible for client contact and relations, specification writing, and all facets of structural design. He has been responsible for various structural damage assessments due to storm flooding, also handles construction administration duties including job site visits and construction issues.

Education

Cornell University: M.S., Structural Engineering/1980 B.S. Civil Engineering/1979

Credentials

Professional Engineer: New Jersey

Affiliations

American Institute of Steel Construction

American Concrete Institute

Relevant Experience

Bally's Park Place Transportation Center – Atlantic City, NJ: 8-story, 350,000 sf parking garage/bus station. Pre-cast and cast-in-place concrete structure, footing foundation. Structural steel architectural features.

Bayshore MGP site – Bayshore, NY: 8-acre MGP remediation site including over 700 linear feet of 80 foot deep sheet pile cut-off walls.

Bergen County, New Agency Building – Hackensack, NJ: 6-story structural steel administration/support building with pedestrian bridge connection to existing building, pile foundations.

Bergen Switching Station – Ridgefield, NJ: Foundation and equipment support structures design for new electric power substation.

College of New Jersey (formerly Trenton State College) – Trenton, NJ: 3-story structural steel buildings, music building, administration building, and student activities building, conventional foundations.

Continental Airlines Air Cargo Facility – Newark, NJ: 110,000 sf steel framed building supported on piles. The building contains a material handling and storage systems for transfer of container from aircraft to over the road trucks.

Harrah's Bayview Tower – Atlantic City, NJ: 45-story pre-cast/reinforced concrete composite (Filigree) hotel tower and 3-story structural steel low-rise, pile foundations.

Montclair State University, Sewage Pump Station – Montclair, NJ: PS&S provided fast-track design and permitting for the Montclair State University 2,000 bed dormitory project that included a new 400 gpm sewage pump station to connect into the Montclair sewerage system for ultimate conveyance to the Passaic Valley Sewerage Commission. Responsible for structural design including plans and specifications of the pump station and also provided construction phase services including shop drawing review and field inspections.

NJSEA, Monmouth Park Racetrack Stormwater Pump Station – Oceanport, NJ: Responsible for structural design including plans and specifications for a new stormwater pump station including five 19,300 gpm and four 1,800 gpm submersible pumps with VFDs; and a pad for a 1,250 KW diesel generator. The pump station was designed to collect stormwater runoff from horse stable areas, up to a 25-year storm, in a detention basin for later conveyance to a local treatment plant.



Walter W. Burke, PE

Vice President and Principal in Charge Geotechnical Engineering

Mr. Burke has 38 years of experience and is the Principal in Charge of PS&S' Geotechnical Department. He has a diverse geotechnical and geo-environmental background encompassing geotechnical/foundation engineering studies, shallow and deep foundations systems, slope stability, ground improvement measures, solid waste disposal facilities, landfill closure and environmental engineering. His duties include quality control, management and technical oversight of field and office staff, engineering analysis, design recommendation and report and proposal preparation. Mr. Burke has authored and/or presented technical articles, case studies and publications to numerous professional organizations.

Walter Burke will provide geotechnical guidance during the design of the storm water collection piping pile foundation, coordinate project team geotechnical staff and provide quality control review of geotechnical work product. He will interface with and coordinate geotechnical vendors and subcontractors and formulate geotechnical recommendations. These tasks are consistent with his diverse geotechnical and geo-environmental background and his current role as Principal in Charge of PS&S's Geotechnical Department.

Relevant Experience

Principal Geotechnical Engineer, PVSC Hazard Mitigation Program, Passaic Valley Sewerage Commission, Newark, NJ. Principal geotechnical engineer responsible for review of existing geotechnical site information and development of conceptual geotechnical pile foundation recommendations used to develop preliminary flood wall mitigation concepts following Super Storm Sandy.

Geotechnical Engineer of Record, Comprehensive Strategic Plan Implementation Services, Rahway Valley Sewerage Authority, Rahway, NJ. Geotechnical engineer of record responsible for geotechnical investigation and foundation recommendations (i.e., footings, piles, mini-piles and drilled shafts) for the \$200 million capital improvement program including, 6,100-foot-long 42-inch diameter relief sewer, WWTP headworks facility, influent pump station, primary tank, effluent filtration, UV treatment building, final settling tanks and post-aeration/effluent pump station structure.

Geotechnical Principal in Charge, Flood Control Levee Geotechnical Study, Ansonia and Derby, CT. Geotechnical Principal in Charge of a geotechnical evaluation performed in conformance with National Flood Insurance Program requirements of Title 44, Section 65.10 of Code of Regulations. The evaluation included a site conditions assessment, a test boring investigation and geotechnical analysis of settlement, seepage and slope stability of a levee system located along portions of the Housatonic and Naugatuck Rivers.

Geotechnical Engineer of Record, Ocean Beach Club Flood Wall, Ocean Beach Club, Long Branch, NJ. Geotechnical engineer of record responsible for geotechnical foundation recommendations to facilitate the design of a flood protection wall to replace structures damaged by Super Storm Sandy. Tasks also included a pile load test program and report.

Geotechnical Engineer of Record; Pier C, Michael Van Valkenburgh Associates, Inc., Hoboken, New Jersey. Geotechnical engineer of record responsible for geotechnical

Education

Purdue University: M.S., Civil Engineering/1979

Rutgers University: Graduate Studies Geotechnical/1975-1977

Northeastern University: B.S., Civil Engineering/1975

Credentials

Professional Engineer: New Jersey, Pennsylvania and Washington

OSHA 40-Hour HAZWOPER Certified

Affiliations

American Society of Civil Engineers, Member

National Brownfield Association

Association of Dam Safety Officials

Solid Waste Association of North America

USEPA Landfill Methane Outreach Program

Deep Foundations Institute



Watter W. Burks, PE

continued

investigation, pile foundation recommendations and pile load test program for a waterfront facility. High capacity, large diameter piles were driven to depths over 100 feet to support the structure which is sited in a challenging over-water marine setting.

Geotechnical Engineer of Record, Borgata Hotel Casino and Spa, Marina District Development Corporation, Atlantic City, New Jersey. Geotechnical engineer of record responsible for numerous geotechnical investigations, development of pile foundation recommendations and pile load test programs. Following initial construction in the early 2000s, this major entertainment venue has undergone several expansions and now encompasses 50 acres. In addition to nearly 12,000 high capacity piles, geotechnical challenges included a major ground improvement program to mitigate detrimental settlement due to buried landfill materials and soft marine sediments.

Geotechnical Engineer of Record, Belle Freeman Pier, Seaside Heights, New Jersey. Geotechnical engineer of record responsible for geotechnical investigation and recommendations for a 70,000 square foot pier to replace an existing structure destroyed by fire as a result of Superstorm Sandy. Geotechnical recommendations included piles to resist loads resulting from location of proposed structure within a V-Zone.

Geotechnical Principal, Northeast Grid Reliability Project, PSE&G, Roseland to Hudson, New Jersey. Geotechnical principal responsible for review of geotechnical investigation and development of geotechnical foundation recommendations for over 100 new steel monopole transmission towers with tower heights up to 180 feet and overturning moments up to 42,000 foot-kips. The project alignment extended across multiple geologic regions consisting of dense glacial till, residual soils, shallow rock, and deep soft glacial lake sediments. Foundations included high capacity piles and large diameter roc-socket drilled shafts. Scope also included full-time geotechnical consultation during foundation construction.

Geotechnical Engineer of Record, Casino Pier Expansion, Seaside Heights, New Jersey. Geotechnical engineer of record responsible for geotechnical investigation and recommendations for 41,000 square foot upland addition to the existing pier to replace an offshore portion of the existing structure damaged during Superstorm Sandy. Geotechnical recommendations included piles to resist loads resulting from location of proposed structure within a V-Zone.

Geotechnical Engineer of Record, New Jersey State Aquarium – Camden, NJ. Project Manager and Engineer of Record responsible for geotechnical investigation and geotechnical construction inspection for project located along Delaware River waterfront. Concrete-filled steel pipe piles support the main structure and a surcharge/preload program was undertaken for the outdoor exhibits embankments.

Principal Geotechnical Engineer and Principal in Charge, National Grid, Orchard Substation Expansion Geotechnical Investigation with Retaining Wall Design, Glen Cove, NY: A 30 foot high, pile supported retaining wall was required to expand an existing substation located in a residential area to accommodate new electrical switchgear. In additional to a detailed investigation, a Plaxis finite element analysis was used to model the proposed construction sequence and estimate lateral deflections and possible impacts to nearby structures.



Sandra Smith, PE

Project Engineer III Water Resources

Ms. Smith is a Project Manager with over 13 years of design and management experience of water, wastewater and storm water treatment and conveyance projects throughout the proposal, preliminary design, permitting, and bid and construction phases.

Relevant Experience

Passiac Valley Sewerage Commission Sump Pump Relocation and Generator Provisions – Newark, NJ – Project Engineer who assisted in the preparation of design documents, NJEIT funding application and FEMA funding application for providing a stand-by generator setup for a roll-in generator system and interface with electrical distribution via automatic transfer switch. The project consists of providing a stand-by power electrical system setup with a roll-in stand-by generator system (brought to certain locations) which can be tied into temporary stand-by power electrical distribution to power sump pumps and de-watering pumps located in tunnels, basements, galleries throughout the PVSC facility.

Passiac Valley Sewerage Commission Utility Tunnel Piping Inspection – Newark, NJ – Due to the events of Superstorm Sandy, portions of the PVSC utility tunnel were flooded. PS&S was contracted to perform an assessment throughout the utility tunnels to identify any conditional deficiencies that may have been caused by the effects of Superstorm Sandy, or as a result of deteriorations due to normal use. PS&S was responsible for inspecting the process piping throughout utility tunnels of PVSC and preparing an assessment report. The assessment report characterized the pipe conditions, pipe restraint, and pipe supports, in addition to providing a recommendation for remediation and assigning priority where applicable. Pipe condition criteria included presence of corrosion, leaks, evidence of leaks, or other deficiencies. Supports and restraints were inspected for direction and presence. While all deficiencies were accounted, the priority system provided a time frame for addressing items.

North Bergen Municipal Utilities Authority, Woodcliff Wastewater Treatment Facility Improvements – North Bergen, NJ*: Proposal, submission of NJEIT funding application, preliminary design and design phase services associated with various improvements and rehabilitation to an existing 3.06 MGD wastewater treatment facility. Major scope items include preparation and painting of equipment, piping, stairways, etc. upgrades/rehabilitation to an existing pump station, replacement of the existing odor control systems, upgrades/rehabilitation to the existing automated sludge withdrawal system, upgrades/rehabilitation of existing trickling filters, and various other improvements and rehabilitation throughout the plant.

Bayshore Regional Sewerage Authority, Main PS and Sludge Return Building and PS No. 1 Repairs and Mitigation: Project Engineer responsible for preparation of public bid ready plans, specifications and an engineer's opinion of probable cost; obtaining funding through the New Jersey Environmental Infrastructure Trust; providing documentation required to obtain funding through FEMA; and engineering services through the bid and construction phases. The scope of work for this project included mitigation and restoration work for both the Main and the Return Sludge building & Pump Stations No 1 from damage caused by

Education

Stevens Institute of Technology: Bachelors of Engineering, Environmental Engineering/2003

Credentials

Professional Engineer: New Jersey

Affiliations

American Water Works Association (AWWA)

Water Environment Federation (WEF)



Sandra Smith, PE

continued

Superstorm Sandy. Some of the elements of the scope of the project included restoration of all of the process and electrical equipment, bypass pumping, and maintenance of plant operations. Mitigation work including dry proofing all three structures to elevation 14.00. This included raising electrical and control equipment, construction of an interior/exterior flood wall around the structures, raising of exit doors and construction of safe means of entry and egress, and raising the electrical room floors approximately four (4) feet.

Franklin Township Sewerage Authority Franklin Boulevard Sanitary Sewer Main Rehabilitation – Franklin, NJ*: Project Engineer working on design, permitting and bidding for replacement of approximately 20,000 lineal feet of existing sanitary sewers, rehabilitation of approximately 10,000 lineal feet of existing sanitary sewers and replacement of approximately 3,000 lineal feet of existing water main.

East Orange Water Commission, Water Main Replacement Over Garden State Parkway – East Orange, NJ*: Design, bid and construction phase services for demolition, repair and/ or replacement of fifteen existing water mains and appurtenances hanging below nine bridge crossings.

Stafford Township Water and Sewer Department – Ocean Acres Phase 5 – Stafford, NJ*: Project Engineer working on design, permitting and construction management phases of approximately 63,000 lineal feet of 8" DIP water main extension in the Ocean Acres section of Stafford Township. The project included installation of new services, paved and unpaved surface restoration. Plans include details, asphalt restoration for Township and County and traffic control and detour plans.

Stafford Township Water and Sewer Department, Mill Creek Road Water Main Replacement – Stafford, NJ*: Project Engineer who oversaw the construction management for replacement of over 16,000 lineal feet of existing water main including new water services and fire hydrants.

Stafford Township Water and Sewer Department, Morris Boulevard Water Main Replacement – Stafford, NJ*: Project Engineer working on the design, permitting, bidding and construction management phases for replacement of approximately 5,300 lineal feet of 8" DIP water main on Morris Boulevard in Stafford Township. The project included new water services, curb to curb pavement restoration and unpaved surface restoration. Plans include installation details, asphalt restoration for Township roads and traffic control plans.



Francis C. Wecht Jr., PLS, PP

Vice President/Director Survey Services

Mr. Wecht is responsible for direction of the surveying services. Experienced in all aspects of site development from conceptual design to construction, Mr. Wecht has a thorough knowledge of all aspects of survey operations, including both field and office procedures. He is experienced in dealing with state regulations pertaining to the construction industry, including Land Use Law, D.E.P. and D.O.T. requirements. Services provided include the preparation of subdivision and boundary maps, topographic surveys, utility locations and construction layout.

Relevant Experience

Bell Laboratory Facilities - Murray Hill, NJ: Project Surveyor for monitoring well program.

Bergen County Utilities Authority – Lyndhurst, NJ: Topographic and control surveys for landfill and leaf composting site.

Borgata Casino/Hotel; Atlantic City, NJ. Boundary, Topographic, and Environmental Surveys Provided various surveys for development of a former Brownfield site for a major casino project.

Casino Reinvestment Development Authority: Preparation of boundary surveys for 12 lots in support of the Smuggler's Cove project.

Harrah's Casino/Hotel, Atlantic City, NJ. Provided various surveys in support of a major renovation and additions to the gaming site, including construction monitoring of the towers during the pile installation.

Harrah's Casino/Hotel – Atlantic City, NJ: Provided boundary and topographic survey for major expansion project, including additional Casino floor space and a 415-room Hotel Tower.

HNRA Tract: Provided boundary and topographic surveys for the Huron North project in Atlantic City. Also prepared subdivision documents and exhibits for the project's Riparian Grant application.

Hudson County Improvement Authority, former Koppers Site, Kearney, NJ. Provided surveys for conveyancing and development of a former Brownfields site.

Martin Luther King Federal Building - Newark, NJ: Boundary, topographic and utility surveys.

Meadowlands Mills – Carlstadt NJ: Boundary and topographic surveys for major retail and commercial center.

NJ Turnpike Authority – Linden, NJ: Prepared boundary and topographic surveys in support of the Piles Creek Wetland mitigation project.

Prudential Office Park Development – Parsippany, NJ: Surveyor responsible for right-of-way plans and interstate highway improvements.

Education

New Jersey Institute of Technology: B.S., Civil Engineering/1984

Credentials

Professional Land Surveyor: New Jersey

Professional Planner: New Jersey

Affiliations

American Congress of Surveying and Mapping

New Jersey Society of Professional Land Surveyors

North Jersey Chapter of New Jersey Society of Professional Land Surveyors

New Jersey Society of Professional Planners

Past Member Madison, New Jersey Planning Board (1982 1984)



Francis C. Wecht Jr., PLS, PP

continued

West New York Sewage Treatment Facility – West New York, NJ: Topographic bathymetric and construction surveying for the sewage treatment facility improvements.

Menlo Park Mall - Edison NJ: Topographic and utility surveys for major expansion.

NJTA: Tidelands and wetlands surveys for the Secaucus Interchange.

NJ Turnpike Authority; Piles Creek Wetlands Mitigation Project, Linden, NJ. prepared parcel maps for acquisition of a major wetlands mitigation site. Also participated in the Tidelands Grant application process to address Riparian Claims affecting the site.

NJTA: Topographic surveys for several maintenance yards.

*Work performed prior to joining PS&S



Jarka Vonder, PLS, PP

Associate Principal Survey Services

Ms. Vonder joined PS&S in 1987. As a Director of Surveying, she is responsible for execution and supervision of surveying projects including boundary surveys for residential and commercial development, ALTA/ACSM Surveys, right-of-way acquisition, GIS applications, control for aerial photography, topographic and wetlands survey. She has substantial experience in subdivision design and layout, deed research, and map filing laws. She interfaces with other departments within PS&S and coordinates work of field crews and clients.

Relevant Experience

1111 Marcus Avenue – Lake Success, NY: Responsible for preparing boundary, topographic and utility survey of 95 acres business campus. Including the site Environmental Easement Area survey and various restrictive covenants boundary surveys for NYDEC.

American Cyanamid: Responsible for aerial photogrammetry control, wetland location and existing underground utilities as-built. Provided ACAD data base for future expansion.

ARCORP Properties Development – Hudson River, Weehawken and West New York, NJ: Responsible for boundary survey and map of 365-acre site, research of riparian grants, preparation of supporting documents for riparian grants, establishment of pierhead and bulkhead lines.

Atlantic County Utilities Authority (ACUA), Brigantine Force Main Relocation – Atlantic City, NJ: Prepared topographic, utility and as-built surveys in support of the Brigantine Force Main relocation. In addition, prepared legal descriptions and exhibits of utility easements and rights-of-way.

BayShore Facilities – Islip Suffolk County, NY; Responsible for Boundary, topographic and utility survey, surveying services to support environmental clean out.

Coney Island Former Gas Plant – Brooklyn, NY: Responsible for topographic, boundary, bathymetric and construction survey. Coordinate with MTA railroad Bridge monitoring during the Creek dredging.

Elizabethtown Gas Company – Middlesex & Union Counties, NJ: Managed the preparation of detailed topographic and utility surveys to support twenty-nine miles of gas main replacement. Detailed surface and sub-surface utility locations.

Elizabethtown Gas Company, New Village – Warren Glen NJ: Managed preparation of base mapping including the existing utility easements in support of five miles transition line replacement. Coordinating the office and field activities during the construction phase.

Joint Meeting of Essex and Union Counties – Elizabeth, NJ: Responsible for boundary survey of a treatment plant, coordination of all necessary tasks for aerial photogrammetry for entire service area sewer system. Incorporated existing as-built information into the plan and profile and provided ACAD data base for ongoing maintenance.

Education

Fairleigh Dickinson University: M.B.A.

Rutgers University: Certificate in GIS

Technical College for Land Surveying, Prague: Diploma, Geodesy and Cartography

Credentials

Professional Land Surveyor: New Jersey, New York, and Connecticut

Professional Planner: New Jersey

Affiliations

New Jersey Society of Professional Land Surveyors

Connecticut Association of Land Surveyors

National Honor Society in Business Administration

Garden State Land Surveyors Alliance

National Society of Professional Surveyors

Geospatial Information and Technology Association



Jarka Vonder, PLS, PP

continued

Menlo Park Mall – Edison, NJ: Responsible for coordinate geometry layout, coordinating between other consultants involved in the project and the architect to establish construction baselines.

New Jersey Highway Authority Service Area – Atlantic County, NJ: Responsible for topographic survey of existing sewage treatment plant and preparation of right-of-way map for a new sewer line and pumping station.

Orange & Rockland Utilities – Route 59, Village of Tallman, NY: Responsible for preparation of base mapping surveys in support a half a mile of gas main replacement design.

Passaic Valley Sewerage Commission (PVSC) – Newark, NJ: Responsible for preparing supportive documents for riparian license for a barge docking facility.

Rahway Valley Sewerage Authority (RVSA) – Rahway, NJ: Prepared legal descriptions and exhibits of utility easements and rights of way in support of gravity relief sewer design and trunk sewer rehabilitation. Generated utility maps from surveyed features and record utility plans.

Woodbury Common Premium Outlets – Woodbury, NY: Responsible for a complete utility as-built of existing sanitary and storm utility system for the entire campus including utilities marked by radar penetrating equipment.

*Work performed prior to joining PS&S



John T. Bolan, PE, LSRP

Associate Principal/Chief Environmental Engineer Environmental Services

Mr. Bolan has 40 years of broad-based environmental experience and has served as project manager on significant multi-disciplinary environmental/remediation projects in New Jersey and New York. Mr. Bolan also has extensive experience in the management of on-call services including as General Environmental Consultant for the New Jersey Turnpike Authority (nine years) and Former New Jersey Highway Authority (six years), General Consulting Engineer (GCE) for the Bergen and Union County Utilities Authorities (six years each) and currently as GCE for the Hudson County Improvement Authority (since 1991). Mr. Bolan has worked with NJ Transit on the Port Imperial Ferry Terminal, Secaucus Interchange/Seaview Drive, the Frank Lautenberg Transfer Station, THE Tunnel Project and the Portal Bridge Project.

Relevant Experience

15WA Landfill Disruption – Lyndhurst, NJ: Served as Project Manager of the environmental and geotechnical investigation of a former solid waste landfill, slated for use as an expressway interchange. The work effort on this project included the acquisition of NJDEP landfill disruption permits, preparation of bid documents for the selection of laboratory and soil boring contractors, field and office coordination of a 10-person project team, and the completion of more than 100 field monitoring wells, and piezometers, test pits and landfill gas measurements.

Confidential Utility Client, Coney Island Former MGP Site – Brooklyn NY: Served as Project Manager to client for the planning, permitting remedial design services, technical specifications preparation, assistance with contractor procurement and remedial construction oversight for a 16-acre former MGP site (a NYSDEC Class 2 Inactive Hazardous Waste site) that contained three operational units (OU–1, OU–2, and OU–3). Managed a technical team including environmental engineers, civil engineers, ecological scientist, structural engineers, geotechnical engineering and environmental permitting experts to implement the site remediation including: more than 3,700 linear feet of a perimeter sealed steel sheet pile barrier to depths of 35 feet; excavation and disposal of 80,000 cubic yards of on-site NAPL impacted soil; the dredging, on-site processing, amendment and re-use of 58,000 cubic yards of impacted creek sediments as on site as backfill, a 2,200 linear foot NAPL collection trench, a site-wide multi-component low permeability cap, a 50-feet wide eco-buffer separating the site from the creek and a three feet thick sediment quality cap to replace the dredged creek sediments and the acquisition of US Army Corps of Engineers permits for the dredging of Coney Island Creek.

Hudson County Improvement Authority (HCIA): Serving as Project Manager for all client services. Serving as Project Manager for all services on the Koppers site since 1995, including review and analysis of remedial action work plans, and groundwater monitoring, and oversight of contractor activities to implement remedial action work plan. Implemented sampling and testing of processed dredged material. Implemented and provided oversight of PS&S activities to obtain a revised wetlands delineation and new USACE wetlands fill permit. Provided expert report to Hudson County Superior Court for SK Services default of remediation, including review of remaining remedial construction and its costs.

Education

Stevens Institute of Technology: M.E./1972 B.E./1970

DPCC Short Course (also an Instructor)/1992

USEPA National Training Center Certificate Program, Cincinnati, OH /1973

Credentials

Professional Engineer: New Jersey

Licensed Site Remediation Professional: New Jersey

Underground Storage Tank License: New Jersey

OSHA 40-Hour HAZWOPER Certified

OSHA 8-Hour Annual Refresher

Affiliations

American Society of Civil Engineers

American Society of Mechanical Engineers

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John T. Bolan, PE, LSRP

continued

New Jersey Turnpike Authority (NJTA): Served as PS&S Project Manager for general environmental consulting services to the authority for a period of nine years under a task order contract. PS&S developed the Authority's task order process known as the work request authorization form (WRAF) which has been subsequently used by the Authority for all of its consulting services. The work effort included the management of a broad range of environmental services including permitting, field sampling, regulatory compliance, technical consulting and litigation support for the Authority.

New Meadowlands Stadium – East Rutherford, NJ: Served as a consultant Project Manager to the New Jersey Sports Exposition Authority during the construction of a football stadium, at the Meadowlands Sports Complex. Services included the oversight of the excavation, importation and disposal of fill materials; oversight of the removal of areas of contamination, including the actual execution of removal; paper and on-site audits of disposal facilities; review of manifests, bills of lading and permits and licenses for transporters and disposal sites; oversight of the remedial action work plan, preparation of bid specifications for remediation contracts and performance of several remedial/site investigations. On behalf of the NJSEA, also provided services for third party review and comments on the EIS prepared for the stadium, attended public hearings, reviewed and analyzed public comments on EIS and assisted in the review of a Hearing Officers Report on behalf of the NJSEA.

Recycling Specialists, Inc. – Jersey City, NJ: Served as Project Manager for environmental permitting and engineering services on the implementation of a 1,500 ton per day multimedia solid waste recycling facility. Provided expert testimony before the County Solid Management Authority and prepared permit submittals to the NJDEP Office of Recycling and to the County Solid Waste Management Authority.

Seaview Drive Extension – Secaucus and Jersey City, NJ: Serving as Project Director for the environmental permitting services for the Seaview Drive Extension which connects the Secaucus Interchange and Seaview Drive. The work effort includes the preparation of a modification to the US Army Corps of Engineers wetland permit, coordination of required wetlands mitigation, completion of a site investigation, technical assistance to General counsel for a memorandum of agreement with NJDEP, preparation of a remedial action work plan for contaminated soils within the proposed right of way, preparation of specifications for remedial activities to be included within contracting documents and preparation of riparian instrument applications.

Secaucus Interchange (15X) – Secaucus and Jersey City, NJ: Served as Project Manager for environmental services on this new interchange. The work efforts included preparation of an Executive Order 215 EIS and supplemental air quality studies, preparation of a US Army Corps of Engineers Section 404 wetlands permit and two subsequent modifications to facilitate design improvements for the alignment of the interchange, coordination of wetlands mitigation, technical assistance to General Counsel for a memorandum of agreement with NJDEP, completion of a site investigation, preparation of a remedial action work plan for contaminated soils within the proposed right of way, preparation of specifications for remedial activities to be included in contracting documents and preparation of an NJDEP riparian instrument application.

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Walter F. Judge, PE, PP, PMP

Associate Principal Environmental Services

Mr. Judge joined Paulus, Sokolowski and Sartor, LLC in 1992 and was named Associate Principal in 2005. Mr. Judge is involved in large-scale multidisciplinary engineering permitting projects focused on utility infrastructure, hotel/casino property development, mixed-use development, environmental and land use planning/permitting and facility engineering and maintenance. As a senior project manager, Mr. Judge acts as the primary client contact, identifies work scopes and regulatory constraints, prepares proposals, manages project resources, schedules and budgets, and provides technical assistance to the client and client legal counsel.

Relevant Experience

Atlantic County Utilities Authority – Atlantic City, NJ: Environmental and engineering services for the siting of five wind turbines on the Atlantic County Utilities Authority's City Island Treatment Plant. The 7.5 MW Jersey-Atlantic Wind Farm is the first commercial wind farm in New Jersey and the largest coastal wind farm in the United States.

Borgata Hotel Casino and Spa/Water Club – Atlantic City, NJ: Beginning in 2004, managed the environmental/land use permitting effort on the phased \$600M expansion of the Borgata Hotel, Casino and Spa culminating with the opening of the Water Club in 2008. This expansion project, located upon the former municipal landfill, included the 365,000 square foot gaming/retail podium, the Employee Parking Garage and the Water Club Tower. Project managed PS&S's full architectural-engineering design and permitting services on the Water Club Valet Garage, an 850-space, structured parking garage.

Confidential Utility Client – Central NJ: Program manager for master services contract. Managed projects involving substation expansion site engineering/permitting, right-of-way vegetative/infrastructure maintenance permitting for client service territory, geotechnical investigations for substation equipment and monopoles, development of web-based GIS application to schedule/track regulatory compliant ROW vegetative maintenance efforts, survey mapping of transmission line rights-of-way.

Harrah's Casino Hotel – Atlantic City, NJ: Project Manager for PS&S multi-disciplinary design efforts on the \$552M Bayview Tower II expansion project. Managed PS&S civil, geotechnical, sanitary facilities, mechanical and electrical engineering services as well as environmental and land use planning/permitting services for this 47-story, 964-guest-room tower, associated Podium, parking garage and parking lot expansion.

Hudson, Bergen, Union Counties – NJ: Team leader for three county solid waste stream studies. Study analyzed various waste stream constituent characteristics of Type 10 (Household) and Type 13 (Construction and Demolition) wastes to quantify the nature of the waste and determine its Btu value.

New Jersey Turnpike Authority, Energy Needs Analysis – Multiple Sites, NJ: Energy needs analysis of NJ Turnpike and Garden State Parkway facilities. Project Manager: Study 123 Turnpike/Parkway roadway support facilities, identifying annual energy consumption, expenditures, and greenhouse gas emissions.

Education

University of Hartford: B.S., Civil Engineering/1987

Stevens Institute of Technology: M.E., Environmental Engineering/1994

Credentials

Professional Engineer: New Jersey

Professional Planner: New Jersey

Project Management Professional

Affiliations

Project Management Institute



Walter F. Judge, PE, PP, PMP

continued

Showboat Casino Hotel – Atlantic City, NJ: Project Manager for the civil, geotechnical engineering design and environmental/land use permitting effort for the House of Blues project at the property's Boardwalk façade.

Showboat Casino Hotel – Atlantic City, NJ: Project Manager for the civil, geotechnical engineering design and environmental/land use permitting effort for the 20-story, 544-guest-room, Premier Lite Tower project.

Union County Utilities Authority (UCUA) – Rahway, NJ: Responsible for the preparation of the Solid Waste Facility Permit Renewal Application for the Union County Resource Recovery Facility (UCRRF), a state-of-the-art 1440 ton per day solid waste incinerator which began operations in 1992. The UCRRF thermally destroys all Type 10 and 25 solid waste generated within Union County, New Jersey.

*Work performed prior to joining PS&S



John Pastorick, LSRP

Senior Associate Environmental Services

Mr. Pastorick serves as a Project Manager at Paulus, Sokolowski and Sartor. During his 25 years of experience, his responsibilities have included underground storage tank closures, groundwater and soil contamination investigation, ISRA projects, remedial investigation/action work plan preparation, submission and implementation, document review, contractor selection, bid solicitation, Phase I and Phase II Assessment of commercial and residential properties. Project billing and budget oversight.

Education

Montclair State College: B.S., Geoscience/1988

Credentials

Licensed Site Remediation Professional: New Jersey

New Jersey UST Certification in Subsurface Evaluation and Closure

NJ Underground Storage Tank Program

OSHA 40-Hour HAZWOPER Certified

OSHA 8-Hour Annual Refresher Certified

OSHA 8-Hour Site Supervisor Certified

OSHA Confined Space Entry Certified

OSHA Trenching and Excavation Certified

Relevant Experience

Confidential Client, Commercial Facility: Conducted Phase I and Phase II Environmental Assessment of a property for the proposed buyer. Work effort included site reconnaissance, review of aerial photography, database search, records review, Phase I findings report, soils investigation in areas of suspected contamination identified during Phase I and preparation of Phase II findings report. Translated Phase I and Phase II reports into Preliminary Assessment and Site Investigation reports for submission and review by NJDEP for ultimate case closure, pursuant to an MOA.

Federal Business Centers: Project Scientist for environmental site assessment and remediation of 3 sites for commercial redevelopment within the former US Army Raritan Arsenal. Responsibilities included field implementation of soil, surface water and groundwater sampling, environmental assessments, evaluation of laboratory data and preparation of findings reports.

Former Commercial Truck Driving School – Cherry Hill, NJ: Serving as Project Manager/LSRP for the remedial action oversight services for the Remedial Investigation and remedial action. Services include soil and groundwater sampling, preparation of Remedial Investigation Report, waste classification sampling and analysis, on-site oversight and documentation of excavation of impacted soils, importation and placement of Alternative backfill, preparation of a Remedial action Work Plan and Remedial Action Report.

Former MGP/Coke Site – Philadelphia, PA: Conducted soil sampling program of a 67-acre parcel along the Delaware River. This program consisted of the installation of 30 test pits to characterize site conditions and determine the potential for the presence of soil contamination, as well as a field survey and a topographical survey. The analytical results were tabulated and compared to PA ACT 2 soil criteria to evaluate potential remediation/redevelopment options. Conducted a soil and groundwater sampling program of a 67-acre parcel along the Delaware River. This program consisted of the installation of 110 test pits, 58 soil borings, 33 groundwater monitoring wells and 23 soil vapor sampling locations to characterize site conditions and determine the potential for the presence of soil and groundwater contamination, as well as a field survey and a topographical survey. The analytical results were tabulated and compared to PA ACT 2 soil and groundwater criteria to evaluate potential remediation/redevelopment options.

Hudson County: Conducted site audits at each of the county facilities and compiled pertinent information to evaluate the compliance status with respect to state and federal



John Pastorick, LSRP

continued

regulations of each UST owned by the County. Prepared Closure Plans for the USTs at eight of the facilities. Assisted in the preparation of bid documents for the UST closure sections. Observed and documented the closure of the USTs, collected post-excavation soil samples, conducted an assessment of soils in the excavation for the presence of "free product", and preparation of site assessment reports. Coordinated the installation and sampling of groundwater monitoring wells for laboratory analysis. PS&S coordinated these activities with the NJDEP in accordance with applicable state regulations.

Industrial Facilities, Phase I and II: Phase I assessment of a 600-acre engineered carbons; a 30-acre polymer manufacturing facilities and a 600-acre clay mining and processing facility for owner for prospective sale of properties. Conducted Federal, State and local records search and review; review of aerial photography and environmental database search; prepared findings report Phase II; Soil investigations in areas of suspected contamination revealed during Phase I; Coordination with analytical laboratory and driller; Review of laboratory analytical data; and preparation of findings report.

Confidential Utility Client, Former MGP Site – New York: Project Manager for scheduling and conducting a Preliminary Site Assessment (PSA) in accordance with New York State Department of Environmental Conservation (NYSDEC) guidelines. The PSA consisted of a historical records review, a surface and subsurface soil sampling program, soil vapor sampling, groundwater sampling, field survey and a topographical survey. The data resulting from the analytical testing was managed and evaluated relative to NYSDEC guidance. The investigation derived waste (IDW) was sampled for waste characterization parameters and disposal of the IDW was managed by PS&S. Project also included implementation of a Site Specific Health and Safety Plan which included air monitoring. The findings of the PSA were documented in a comprehensive report for submission to NYSDEC.



Andrew Clark

Environmental Scientist VI Environmental Services

Mr. Clark is an Environmental Scientist and a land use regulatory specialist with more than 30 years of professional experience, including 26 years with the State of NJ Department of Environmental Protection, Division of Land Use Regulation. Nine years supervisory experience (Staff of 5) as Supervisor of the Northeast Region (6 NJ Counties) within the NJ DEP Bureau of Inland Regulation. Mr. Clark's responsibilities included signing all final decision documents, i.e. permits, for the Northeast region, training Land Use staff in wetland delineation techniques, coordinating with staff to ensure efficient processing of permit applications, managing staff workload, preparing staff performance evaluations, attending pre-application meetings to give prospective applicants advice on state regulations, verifying wetlands delineations and reviewing all submitted work products for compliance with the applicable Land Use Rules, such as Freshwater Wetlands Protection Act Rules, Flood Hazard Area Control Act Rules, Rules on Coastal Zone Management and Highlands Rules. As a permit review specialist Mr. Clark wrote countless Freshwater Wetlands permits, environmental reviews for Flood Hazard Area permits, Individual Permit summary analyses and Waterfront Development permit summary analyses. Mr. Clark also reviewed wetland mitigation sites for compliance with State regulations as well as performed ecological assessments on mitigation sites. Mr. Clark also checked for Threatened and Endangered species habitat on wetland delineations as part of his job duties.

Relevant Experience

Bettie Haar, Dixie Dale Farm, Chatham Township, NJ – Project Manager. Performed wetland delineation on 40 acre parcel. Prepared NJDEP Letter of Interpretation application.

Gan Eden Estates – Town of Thompson, Sullivan County, NY: Project Manager. Performed wetland delineation on a 200 acre parcel in NY. Prepared submission of Jurisdictional Determination (JD) request to NY District Army Corps of Engineers (ACOE).

Governor's Passaic River Basin Flooding Task Force – Multiple counties and towns within the Passaic River Drainage Basin, NJ*: Supervisor. Managed outreach and permit coordination within NJDEP to work with County and Township entities on stream cleaning permitting within the Passaic River Drainage Basin.

Kaplan Co., Camelot at Riverside – Riverside Township, NJ: Project Manager. Preformed wetland delineation on 12 acre property. Prepared NJDEP Letter of Interpretation application.

Mack-Cali, Dryden Way, Parsippany-Troy Hills Township, NJ: Project Manager. Performed wetland delineation on 30 acre parcel. Prepared NJDEP Letter of Interpretation application.

State of New Jersey, Green Brook Flood Control Project – Multiple locations in Somerset, Middlesex, and Union Counties, NJ*: Supervisor. Ran project coordination within NJDEP. Worked with the NY District ACOE, EPA, USFWS as well as NJDEP Bureau of Floodplain Management to coordinate the issuance of State land use permits.

Transco, Skillman Loop – Princeton Township, Mercer County and Montgomery Township, Sussex County, NJ: Supervisor. Oversaw Wetlands and Flood Hazard Area permitting for installation of approximately 5 miles of 42 inch natural gas pipeline.

Education

Kean University: B.A., Earth Science/ Geology/1983

Affiliations

Society of Wetlands Scientists

Association of State Wetland Managers

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Brian C. Budney

Environmental Scientist V/Associate Environmental Services

Mr. Budney is an Environmental Scientist with over 15 years of professional experience. His responsibilities include land use planning and permitting services and environmental due diligence assessments for public and private clients, including site redevelopment projects, public utility infrastructure upgrades, and regulatory compliance matters. His specialties include Land Development Regulatory Compliance (USACE, NJDEP, NYSDEC, regional, local), Jurisdictional Wetlands Evaluations and Mitigation compliance/oversight, and Site Constraints Evaluations.

Relevant Experience

Confidential Utility Client – Various Locations, NJ: Provided permit compliance and permitting services for various power generation projects in New Jersey. Projects/tasks where some or all of the technical services have been provided included: Johnson & Johnson Consumer Products, Skillman, NJ and 3M/Gibraltar Rock Quarry, Skillman, NJ Substations.

Borough of Seaside Heights, Fremont Avenue Pier – Borough of Seaside Heights, NJ: Project manager in support of United State Army Corps of Engineers Individual Permit Application to authorize a public pier.

Confidential Utility Client, Burlington — Croyden 230kV Reconductor — Burlington, NJ: Replacement of an existing electrical transmission tower closest to the Delaware River at the PSE&G Burlington Switching Station with a new 308 foot tall H-frame tower. New 230kV transmission cables were also installed spanning the Delaware River between Pennsylvania and New Jersey.. Responsible for NJ Department of Environmental Protection Waterfront Development, Freshwater Wetlands, and Flood Hazard Area Land Use permitting.

Confidential Wastewater Utility Client – Somerset County, New Jersey: Two mile trunk sewer extension project. Prepared an NJDEP Treatment Works Approval (TWA) application and a NJDEP Freshwater Wetlands Individual Permit, Flood Hazard Area Permit, and Green Acres Diversion applications. Conducted long term wetlands mitigation monitoring for compliance with NJDEP permits.

FedEx Ground, Access Road and Parking Lot Expansion – Woodbridge, NJ: Improvements to existing infrastructure to support expanding operations. Responsible for NJ Department of Environmental Protection Wetlands and Flood Hazard Land Use permitting.

Master Planning – Various Locations, NJ: Provided Master Planning consulting services to public and private educational institutions and private corporate campus'. Services provided included the mapping of site development constraints and wetlands delineation and floodplain & riparian zone mapping necessary for obtaining an NJDEP Letter of Interpretation (LOI) and Flood Hazard Area (FHA) Verification. Additional services included the preparation of a comprehensive land use permitting analysis for Federal, State, County and Municipal land use permitting for specific projects.

Education

Kean University: B.A., Earth Science/ Meteorology/1995

Edward J. Bloustein School of Planning & Public Policy, New Brunswick, NJ: Continuing Education Studies, Masters of City & Regional Planning Program/2007

Credentials

Rutgers Wetland Delineator Certification

Rutgers University: Geomatics GIS Certification

OSHA 40-Hour HAZWOPER Certified

OSHA 8-Hour Annual Refresher

Affiliations

Society of Wetland Scientists

American Planning Association, APA

APA New Jersey Chapter
– Environment, Natural
Resources, and Energy
Division



Brian C. Budney

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Municipal Clients – Various Locations, NJ: Conducted wetlands delineations, alternatives analysis, and prepared NJDEP wetlands/FHA/CAFRA & USACOE permitting services for various municipal projects throughout New Jersey. Projects included public facility upgrades, utility infrastructure upgrades, water allocation compliance, and road maintenance/widening.

Confidential Utility Client, Greenport to Shelter Island 13kV Underground Feeder Cable – Shelter Island and Southold, NY: Environmental permitting support for United States Army Corps of Engineers Nationwide Permit 12, Jurisdictional Determination, and State Environmental Quality Review Act (SEQRA) applications for a 3.11 linear mile dedicated underground feeder cable and the crossing of navigable waters at the Shelter Island Sound North.

Seaside Park Yacht Club, Maintenance Dredging –Project manager in support of United States Army Corps of Engineers Nationwide Permit Application and NJDEP Waterfront Development Permit to authorize the maintenance dredging of a private marina.

*Work performed prior to joining PS&S



Erika Bocian

GIS Group Manager Environmental Services

Ms. Bocian is responsible for leading the GIS Program at PS&S. In this capacity, Ms. Bocian has been involved in developing innovative GIS solutions in large-scale, multi-disciplinary projects focusing on environmental and cultural resource regulatory compliance, electric/gas utility infrastructure improvements, environmental contamination and remedial investigations. Other GIS-specific projects that Ms. Bocian has led have included the development of GIS applications for analysis in neighborhood/site development, marketing, transit, survey, environmental management, land use planning, and commercial and retail business. She also is responsible for administering web mapping applications, geospatial data creation and interpretation, spatial analysis, subsurface data, modeling, and programming mobile GIS applications.

Relevant Experience

Carney's Point – Salem County, NJ: For a private client, performed a build out analysis utilizing state agency datasets to determine best possible scenarios for development. Examined available environmental constraints data to exclude sites that had cultural, historic, or environmental sensitivity and also referred to the adopted New Jersey State Development and Redevelopment plan to analyze areas deemed smart growth.

Confidential Utility Company – Multiple Locations within the NJ Area: Senior GIS Analyst; conducted a complex viewshed study for a linear project totaling over 27 miles that compared historic and current lines of sight against future lines of sight resulting from impacts to proposed project. Performed GIS services that assisted with environmental regulatory compliance, natural resource planning, and vegetation mapping. Transmission lines were tracked in GIS with PS&S assistance. GIS work has been performed that demonstrates state regulatory compliance for new proposed transmission lines and for existing transmission line yearly vegetative maintenance.

Confidential Suffolk County Underground Transmission Project – Suffolk County, NY: Provided extensive GIS support to an Article VII application, prepared by PS&S's environmental department to a Long Island electric utility for the construction and operation of a new 345 kilovolt underground electric transmission facility over 30 miles in length. Mapping tasks included the production of a large number of supporting maps and graphics for the application, land use analyses, historical sites mapping, spatial data acquisition and compilation, mapping of wetlands delineation, and technical GIS support of the multi-disciplinary project team.

Federal Business Centers – Woodbridge and Edison, NJ: For a developer firm, used GIS to compile wetland delineation data from numerous sources to determine potential developable sites in a study area totaling over 1,000 acres. Created wetland transitional areas based on NJ State ranking of the wetlands to highlight areas with restricted development.

Education

Northwest Missouri State University: M.S., Geographic Information Sciences/ 2012

Mesa College, San Diego CA: GIS Specialist Certification/2004

State University of New York at Buffalo: B.S., Environmental Sciences/2000

Affiliations

Urban and Regional Information Systems Associations (URISA)

Association of American Geographers (AAG)



Erika Bocian

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Jersey Central Power & Light Company (JCP&L): Project Manager/Website: Administrator for JCP&L's vegetative maintenance web mapping application in support of scheduling annual vegetation maintenance work, tracking completed maintenance activities, and supporting compliance with NJDEP Land Use Program permits. The web mapping application serves as a central database containing work window dates for vegetation maintenance and permitted cutting/spraying maintenance prescriptions for each rights-of-way span and integrates JCP&L's transmission line rights-of-ways with NJDEP-mapped GIS layers, providing the tools necessary for efficient environmental constraint determination and analysis.

Joint Land Use Study – Ocean County and Burlington County, NJ: Responsible for geospatial database management for the ongoing land use study focusing on the surrounding lands of the newly defined Joint Base McGuire, Dix, Lakehurst base in Central New Jersey. The study will identify and plan for compatible land uses for the 10 municipalities within the two counties adjacent to the base. The study will also support current and future base operations and focus on controlling encroachment by identifying appropriate locations for development and redevelopment consistent with base operations.

Meadowlands Golf Redevelopment Project – Meadowlands, NJ: Performed hydrologic and spatial analysis following an aquifer test that spanned over 800 acres. Created profiles from well lithology, construction, and geophysical logs. Created and maintained an inventory of supply wells, observation wells, and surface water intakes within the specified aquifer test program. Utilized available state data to determine if any public wells may be affected by future groundwater pumping in the area, researched and mapped known contaminates, and created multiple contour maps of water level drawdown in bedrock aquifer.

National Grid (Formerly KeySpan Energy) Electrical Substations: Created visual simulations for city officials and the general public that combined existing site elements with the visualization of completed substation construction. For existing substations, conceptual mitigation measures such as sound barriers were also rendered within the existing site. Simulations were performed for the Newbridge Road site, Bagetelle Road site, and the Town of Bridgehampton site.

) Confidential Utility Client – Multiple Sites, NJ: Performed a complex viewshed analysis to determine the difference of visual impact between existing conditions and proposed transmission lines upgrade. The analysis used LIDAR (light detection and ranging) data and took into consideration features such as buildings and tree cover. Also provided GIS services to the client's Licensing and Permitting Department that assisted with environmental regulatory compliance. These services included vegetative maintenance mapping, threatened and endangered species span by span analysis, and riparian area analysis.



Vincent E. Kane

Associate/Construction Administration Water Resources

Over 40 years of experience working on virtually all major types of wastewater projects, assuming a wide range of positions with various levels of responsibility. These assignments have included facilities design, budget establishment and maintenance, coordination of staff, project management, construction administration and observation. Mr. Kane has significant experience working at the PVSC WWTP including over 8 years of on-site assistance to PVSC on construction administration/observation projects as well as the documentation of PVSC's work related to Superstorm Sandy recovery/relief and FEMA coordination.

Vince Kane will be responsible for providing construction administration/observation for the proposed stormwater collection system improvements. With over 8 years of personal on-site experience with PVSC staff and facilities combined with his extensive wastewater design and construction experience, Vince will be a valuable asset to the Project Team.

Relevant Experience

Construction Field Specialist, Thickening Centrifuge Facility, Passaic Valley Sewerage Commission (PVSC), Newark, NJ. Provided construction administration and observation services associated with the construction of sludge thickening centrifuge facilities, and associated major modifications to the existing Sludge Heat Treatment Building. Services included detailed inspection, coordination of shop drawings, change orders, payment requisition review and schedule maintenance.

Construction Field Specialist, Polymer Storage and Feed Facility, Passaic Valley Sewerage Commission, Newark, NJ. Responsible for construction administration and observation associated with new polymer storage and feed facilities to enhance secondary settling during wet weather events. The project included two 7,500 gallon polymer storage tanks, progressive cavity pumps, three blending units, local controls and SCADA integration, and a polymer delivery receiving facility. Services included on-site inspection, coordination of shop drawings, payment requisition review and NJEIT coordination.

Construction Field Specialist, Renovation of the Operations and Maintenance, Warehouse and Head-End Incinerator Buildings, Passaic Valley Sewerage Commission, Newark, NJ. Provided construction administration and observation services associated with renovations to the existing Operations and Maintenance, Warehouse and Head-End Incinerator Buildings. The renovations were associated with locker room facilities, operator training facilities and general office and meeting room space. The work also included an extension to the second floor of the O&M Building. The construction work involved architectural, plumbing, HVAC, and electrical disciplines.

Project Specialist, FEMA Coordination for Sandy Recovery, Passaic Valley Sewerage Commission, Newark, NJ. Recently assigned to the field to assist PVSC with their recovery efforts, which included the assessment of damages caused by Superstorm Sandy and the preparation of FEMA project worksheets for 406 funding.



Vincent E. Kane

continued

Construction Field Specialist, Additional Construction Administration Projects, Passaic Valley Sewerage Commission, Newark, NJ. rehabilitation of existing oxygenation tanks, modifications and rerouting of existing primary skimmings system and demonstration of final clarifier rotary ducking skimmer.

Construction Field Specialist, Outfall Repairs, Rahway Valley Sewerage Authority (RVSA), Rahway, NJ. Responsible for construction administration of repairs of the 66" RCP outfall from the RVSA wastewater treatment plant to the Arthur Kill. Responsible for detailed inspection, coordination of shop drawings, change orders, payment requisitions and schedule maintenance.

Construction Field Specialist, Renovation of Digester Facilities, Rahway Valley Sewerage Authority, Rahway, NJ. Provided construction administration and inspection services for renovations to the existing digesters and control building. Renovations included mechanical and electrical upgrades as well as replacement of deteriorated brick, and energy efficiency upgrades including a new roof.

Construction Field Specialist, Phase III Wastewater Treatment Plant Expansion, Bayshore Regional Sewerage Authority (BRSA), Union Beach NJ. Provided construction administration services for this \$40 million project, which included new various reinforced concrete tanks, a new pumping station, chemical storage and feed facility, incinerator, laboratory, office building and two off-site pumping stations. The project also included site re-grading and site utilities. The structures were reinforced concrete, block and brick and one "Butler Building". Responsible for detailed inspection, coordination of shop drawings, change orders, payment requisitions and schedule maintenance.

Construction Field Specialist, Renovation of Old Laboratory, Rahway Valley Sewerage Authority (RVSA), Rahway, NJ. Provided construction administration and inspection services for renovations to an existing laboratory into a two story administrative building. The renovations converted the 7,500 sf masonry building into a functional space for management personnel, including a new building entryway, bathrooms and offices. The construction also involved energy efficiency upgrades, including window replacements. Responsible for detailed inspection, coordination of shop drawings, change orders, payment requisitions and schedule maintenance.

Construction Field Specialist, Kean University Dormitories, Union, NJ: Responsible for on-site construction administration of \$72 million 852 bed project. The project involved construction of a new 8-story freshman dormitory, a 7-story upper-class dormitory and included new site re-grading and new site utilities. Amenities include a 300-seat cafeteria, a 70-seat multi-media center, computer study areas, game rooms, lounges and collaborative study rooms. The dormitories were constructed of precast concrete supported by a reinforced concrete foundation and caisson system. Responsible for detailed inspection, coordination of shop drawings, change orders, payment requisitions and schedule maintenance.



G. Peter Neumann

Project Controls Manager

Mr. Neumann is a Civil Engineer with 18 years of heavy construction experience in urban areas; he has filled roles including Project Engineer, Scheduler, Cost Accountant, Schedule Manager and Project Controls Manager on large multi-phased construction and design projects with values exceeding \$500 million. Mr. Neumann has spent his career specializing in Project Controls, with experience in all aspects of scheduling from baseline creation to forensic delay analysis. Mr. Neumann also has extensive experience with construction cost accounting, contract administration, and entitlement reviews for both simple and complex delays.

- 18 years' experience in Heavy Construction in and around the New York Area, with a focus on Project Controls.
- · Managed schedule portfolio of over 3 Billion Dollars in work.
- Adept at forensic schedule techniques as per AACEI, PMI and industry standards.
- Expert in scheduling large multi-disciplined projects including resource allocation, risk management and TIA's.
- Specialist in evaluation of cost estimates, claims and forecasting of Project Costs.
- Part of numerous on-site construction teams building complex multi-million dollar Projects.

Relevant Experience

Kiewit, Eastern District Main Office - Woodcliff Lake, NY*: Worked as the Eastern District Scheduling Manager, with responsibility for the overall schedule portfolio of 3 billion dollars, basic and advanced training, review of contract administration entitlement and quantification for Project delays. Jobs ranged in size from \$150 K to 1 Billion Dollars.

Port Authority of New York and New Jersey, confidential project*: Part of Equitable Adjustment (EA) team on \$750 million dollar Project, which experienced various delays from the start of construction work. Primary responsibility was development of forensic schedule analysis to determine the extent of delays on the Project and the controlling delay pushing the completion date. Developed entitlement arguments for the delays encountered during construction. Developed time related overhead costs based on the forensic schedule analysis.

New York State Thruway Authority, Tappan Zee Bridge Reconstruction Proposal – Tarrytown NY*: Part of the estimating team on the Kiewit, Skanska, Weeks, JV in pursuit of the 3.9 billion dollar design build contract for the new Tappan Zee Bridge, which was ultimately awarded to another bidder. Responsible for the development of the design build integrated schedule that was cost and resource loaded. In addition, worked with the estimated costs to assist Kiewit's Financial department in understanding the Project's financing requirements. During the course of the estimate, was responsible for the Project's equipment buy/sell equipment determination, risk analysis, 4D Scheduling and Linear Scheduling.

Metropolitan Transit Authority, 2nd Ave Subway Program, 72nd Street Cavern and Tunnel Project – NY, NY*: Responsible for the Project Control functions on the \$447 million dollar 72nd Street Cavern and Tunnels Project for the MTA. Responsibilities included set up and

Education

Union College: Bachelor of Science, Civil Engineering/1996

Credentials

40-Hour Health & Safety for HAZWOPER

Compliance Training

First Aid/CPR

OSHA 10-hour Construction Safety & Health

Primavera Contract Manager

Primavera Planning & Scheduling with P3

Project Management in Primavera P6

Affiliations

Association for the Advancement of Cost Engineering (AACE)



G. Peter Neumann

continued

approval of the Baseline Schedule, establishing MTA's Schedule of Values for Contract Payment and the JV's control budget setup. Successfully developed and got approval of two time extensions for the Project. The first based on denial of site access when MTA was unable to assist the JV in coordinating access to the local buildings to place survey prisms on them for monitoring during the blasting. The second was for additional time related to a change in a no blast window on site that was directly related to the late arrival of a Tunnel Boring Machine (TBM) which was working under a different contract under the Second Avenue Subway Program.

New York City DOT, Willis Avenue Bridge Replacement over Harlem River Dr - NY, NY^* : Brought onto the \$626 million dollar Project to assist the team in meeting a major Milestone for floating in the Swing Span and placing lightweight concrete before the winter season. In addition, was tasked with bringing the CPM submissions up to date which were lagging approximately six months behind the data date. Performed several delay analysis on the Project related to various differing site conditions found throughout the Project Boundaries.

Triborough Bridge and Tunnel Authority (TBTA), Reconstruction of the Bronx Approach to the Whitestone Bridge – Bronx NY*: Responsible for all Project Controls on the project. Building and maintaining the schedule, developing schedule of values, establishing and maintaining the control budget and forecasting the Project's Cost to Complete. In addition In charge of implementing Contract Manager for paperless submissions of required documentation.

New Jersey Turnpike Authority (NJTA), Rehabilitation of the Driscoll Bridge – Keasbey NJ*: Brought onto the Project, following a request by the Resident Engineer for a more accurate and detailed schedule after rebaselining the Project to reflect the current sequence of operations. Following the rebaseline, got owner buy off on constructive acceleration, related to a dispute regarding loss of production due to difficulties with the jacking of the bridge to replace the bearings.

Previous Employers: Kiewit Construction, Woodcliff Lake NJ: Conti Construction Company, South Plainfield, NJ: Paulus, Sokolowski and Sartor, Warren NJ: Grow Tunneling Corp, Park Ridge NJ: New York State Department of Transportation, Albany NY.

*Work performed prior to joining PS&S



Thomas C. Zetkulic, PP, AICP, PMP

Vice President/Senior Project Manager Environmental Services

Mr. Zetkulic has a professional focus on land use and environmental planning, impact assessment, and wetlands delineation, assessment, and mitigation. His experience in many areas of coastal resource management and environmental planning, including the preparation of State and Federal environmental permits for the New Jersey Department of Environmental Protection, including CAFRA, Waterfront Development, Coastal and Freshwater Wetlands, U.S. Army Corps of Engineers and New Jersey Pinelands. Mr. Zetkulic also has experience in the field of hazardous site remediation, specifically the bio- assessment of Superfund sites.

Tom Zetkulic will oversee regulatory compliance issues associated with implementing the storm water pump station design. His involvement as project lead for the NEPA and NJDEP approvals will make for a smooth transition to manage the regulatory process for this project. Tom will serve as liaison with the agencies and coordinate with PVSC and the project team to ensure that permit and approval conditions will be properly monitored and addressed throughout the build process. Environmental regulatory issues that may arise over the course of the project will be assessed and addressed to move the project forward toward successful completion.

Tom's project experience involves daily coordination with federal, state and local agencies, including NJDEP, USACE, FEMA, and City of Newark. His post-Sandy recovery work on the PVSC site has established good rapport with representatives of the agencies reviewing approvals for this project.

Relevant Experience

Senior Project Manager, FEMA Support Services, Passaic Valley Sewerage Commission (PVSC), Newark, NJ. Tom led the permitting and FEMA NEPA environmental process for the Passaic Valley Sewerage Commission's Superstorm Sandy relief program. As Senior Project Manager, Mr. Zetkulic coordinated with FEMA and NJDEP environmental specialists, and directed a resource team to evaluate environmental impacts and obtain the requisite NEPA and land use permits for the effective recovery and repair of the facility. The permit team spearheaded a baseline environmental and cultural resource survey on behalf of FEMA. Efforts ensured that practical means and measures to protect, restore and enhance the environment in the event of future disasters were employed to the best efforts possible.

Senior Project Manager, Environmental Permitting, Federal Business Centers, Raritan Center, Edison, NJ. Project management and preparation of permit application documents for federal, state and local approvals for the continued redevelopment of the former Raritan Arsenal. Project involves a large scale wetlands greenbelt mitigation plan associated with industrial/commercial redevelopment of the Raritan River Waterfront.

Provided assistance to FBC and CPV in the routing of CPV's transmission line across FBC's holdings within Raritan Center.

Principal-In-Charge, Site Development, Federal Business Centers, Raritan Center, Edison, NJ. Principal-in-Charge of major development projects within the 2,000+ acre industrial complex of Raritan Center, with projects ranging from 100,000 sf of new transportation warehouses to 700+ acre wetlands restoration/greenbelt enhancement and mitigation.

Principal-In-Charge, Environmental Permitting, Fisherman's Point, Pennsauken, NJ. Principal-In-Charge of the redevelopment of the Pennsauken Delaware River Waterfront, including local General Development Plan approvals



Thomas C. Zetkulic, PP, AICP, PMP

Vice President/Senior Project Manager Environmental Services

and subsequent NJDEP and Army Corps permitting for a 1,500-unit residential and commercial reuse of a Brownfields property. Project involved detailed analysis and mitigation for wetlands and critical species habitat.

Project Manager, Atlantic City Brigantine Connector, Atlantic City, NJ. Project Manager for the NJDEP permitting of a connector roadway proposed to connect the Atlantic City Expressway with Brigantine and Atlantic City's Marina District. Permitting included CAFRA, Waterfront Development, Coastal Wetlands and Freshwater Wetlands for this urban roadway.

Project Manager, Mirage Atlantic City, Huron North Redevelopment Area, Le Jardin Hotel and Casino, Atlantic City, NJ. Senior Project Manager for the redevelopment of the 170+ acre former Atlantic City Municipal Landfill. The project proposal sited a world class 4,000 room hotel casino complex, within a designated Brownfields redevelopment. Managed all facets of the redevelopment project, from preliminary environmental investigations, site civil and geotechnical engineering, through application for major land use permits and remediation approvals, including Landfill Disruption and Closure, CAFRA, and Atlantic City site plan approval.

Principal-In-Charge, Renaissance Pointe Casino Hotels, Huron North Redevelopment Area, Atlantic City, NJ. Principal-in-Charge for the redevelopment of the 170+ acre former Atlantic City Municipal Landfill. The project has sited world class hotel casino complexes, within a designated Brownfields redevelopment. Managed all facets of the redevelopment project, from preliminary environmental investigations, site civil and geotechnical engineering, through application for major land use permits and remediation approvals, including Landfill Disruption and Closure, CAFRA and Atlantic City site plan approval.

Project Manager, Visy Paper, Inc., Staten Island, NY. Project Manager for siting and environmental permitting for 500,000 sf waste paper recycling facility. Project involved State of New York SEQRA, Tidal Wetlands, Protection of Waters, State and City Air Permitting and Federal Army Corps permitting for this state-of-the-art facility which utilizes improved waterfront structures to transfer waste by barge.

Project Manager, Sony/Blockbuster Amphitheater, Camden, NJ. Project Manager for large scale waterfront redevelopment project involving preparation of federal and state applications for rehabilitation of existing structures, new waterfront amenities and public access to Camden's redeveloping waterfront.

Education

Rutgers University: M.B.A., Land Use Planning/1992

Oregon State University: M.S., Marine Resource Management/1986 University of Vermont, B.A., Zoology and Environmental Science/1983

Credentials

Professional Planner: New Jersey Project Management Professional

Affiliations

American Institute of Certified Planners

Exhibit D



Compensation Proposal for

Design Services and Design Services During Construction for Stormwater Collection System Improvements

Passiac Valley Sewerage Commission
Newark, New Jersey

January 18, 2017

67B Mountain Blvd Ext Warren, NJ 07059

www.psands.com

			TTACHMENT OF TOTAL PR	гн Roject Cost	r					
	Estimate of Labor Costs									
DESCRIPTION OF WORK	Project Director	Project Manager	Project Engineer	Engineer/ Scientist	Designer/ Drafter	Technician	Support	Resident Rep.	Subconsultant	Total Labor Cost
Tale>	Director		Sagarti.	General				· · · · · · · · · · · · · · · · · · ·	1	
Staff Name>			 	,——	,					
South Rates	\$210.00	5 185.00	\$ 165 00	\$ 130.00	\$ 140,00	\$ 123.00	\$ 70.00	\$ 135,00	· · · · · · · ·	
int 1 - Review and Compileries of Dates				<i>i</i>						
Investigation	\$10.080	\$14,800	\$14,650	556,400	\$25,480	\$15,000	\$9,240	50	\$40,250	\$205,90
I investigation Subtotals	\$10,080	\$14,800		\$\$6,400	\$25,480	\$15,000	\$9,240	20		\$205.90
and I . Traight Work Then mad Reporting										5161.0
I Project Work Plan	\$2,520	S11,840			\$51,520	\$1,500	\$8,960	20		\$151,9
Subjoints	\$2,520	311,840	\$33,000	\$42,600	551,520	\$1,500	28,960	50	 	\$151,9
ask 3 - Smiles Services					SSS Company of the same of the		Address of the second			2000
1 Design			 					 	 	
3 1 1 Desga Requirements 3 1 1 1 Engineer's Cost Estimate	\$840	\$1.480	\$8,250	\$3,000	\$6	50	5280			\$13,8
1 1 1 2 Undate ESRI GIS Database	30	\$370					528n	50		\$5,7
3 1 1 3 Preparation of Plans and Technical Specifications	\$3,360	\$2,220					\$4,760			\$510,6
3.1.1.1.b Design and Preparation of Construction Documents	\$5,040	\$19,240				\$1,000	\$1,400			8,6112
3 1 2 Submissions	\$840	084,12			\$2,240		\$1,680			512,8
2 Meetings	\$5,040	\$7,400	517,820	\$3,600			\$1,120			\$40,4
3 Value Engineering	083,12		\$6,600	20			\$980			\$10,7
4 Permitting	\$420									\$11,0
5 Bidding Assistance	\$840						\$420			58,4
.6 Asset Management	\$420	\$740								\$10,2
Suboale	\$18,480	\$36,610	\$95,040	\$108,000	\$408,520	\$60,500	\$11,620	50	4	\$738.7
nak 4 - Bankja Zurvicus During Construction (DSDC)										
Notice to Proceed	5210	\$170	\$0	SU	02	50	5280	50		58
2 Liaison and Administration	\$15,120									\$\$2,5
2 Laison and Administration 3 Meetings	\$7,560									263,9
3 Meetings 4 Daselines and Benchmarks	\$420									\$3,0
4 Baselines and Benchmarks 3 Approval of Manufacturers/Vendors	\$840	2111								\$7.5
S Approval of Manufacturers Vendors	53,360									\$60.5
1.6 Shop Drawings 1.7 Contractor Initiated Substitutions	\$340						\$560			\$17,5
A Testing	\$420									\$19,5
9 RFI's and Field Orders	\$1,690							02	j	\$36,3
10 Change Orders	\$1,6¥0						\$560			\$14,4
11 Payment Requests	\$1,680				.50	\$1,000	\$560	50	y	\$11.6
1.12 Start-Up Services	\$840									\$6,3
13 Post Cunstruction Assistance	\$3,360	\$1,480								510,4
Subtotols	\$38,010	\$82,510	\$85,470	\$75,000	\$6,720	\$5,000	\$12,810	20	4	\$305,5
A SEC SECURIOR OF PROPERTY OF THE SECURIOR OF										
Task 5 - Ansident Project Representative (per Seeps of Work)	\$0	Samulam Saw Infordatist rambians and	Di 50	3 50	ol \$0) 50	20	\$540,000	25 535 WARRANT ATTOCK AND ASSETT (No. 2)	5540.
Resident Project Representative	50									\$250.0
Part Time Administrate Assistant Subsessit										5790,0
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Summary of Costs						
Description		Cost				
Task 1 - Review and Compilation of Data	\$	205,900.00				
Task 2 - Project Work Plan and Reporting	5	151,940.00				
Task 3 - Design Services	5	738,790.00				
Task 4 - Design Services During Construction (DSDC)	2	305,520,00				
Task 5 - Resident Project Representative (per Scope of Work)	S	790,000.00				
Task 6 - Other Direct Costs	5	50,000,00				
Task 7 - Allowances						
Unforseen Contingencies	3	450,000,00				
Test Pits	5	50,000 00				
Utility Drawings	2	100,000 00				
Task 8 - Admin. Of PVSC Funding	\$	30,000.00				
TOTAL PROJECT COST	S	2,872,150,00				