Assem Elsayed

Principal Geotechnical Engineer - Technip France

Downingtown, PA - Email me on Indeed: indeed.com/r/Assem-Elsayed/3e477e9514267c0c

Principal Geotechnical Engineer & Project Manager on numerous projects with 21 years of experience. Acquired skills in planning, organizing, problem solving, and communication. Experienced in construction management for heavy civil engineering work. Provided technical direction to construction engineers and superintendents in a wide range of construction engineering and design functions relating to multi-discipline engineering in an area or to a single discipline on the overall project. Participated in formulating and drafting documentations, policies, goals and strategies for multiple projects. Interpreted design drawings and specifications. Reviewed and evaluated work methods and activities to serve projects' goals and plans. Assisted with the improvements and soundness of project management. Supervised field verification of materials such as soil, asphalt and concrete. Has experience in concrete inspection work. Experienced in barracks/ and headquarters construction, fencing construction, designing of foundations, soil stability for concrete structures, construction of telecomm lines, emplacement of fiber optics cables, pavement design, waterfront-Naval ports and dredging projects, marine structures, berths and cofferdams, underpinning and jacking, anchors, underground facilities, earth structures; performing soil modeling, subsurface investigations, seismic investigations, using of cadastral records, geophysical investigations, seepage analyses, stability analyses, dewatering analysis and finite element modeling; and performing and analyzing the results of field and laboratory tests. Managed subsurface investigation programs. Supervised drilled shafts, driven piles and micropiles in the field for several projects. Witnessed verification and proof tests for several soil nail walls, anchors and micropiles. Has technical expertise in the use of, Grapher, SLOPE/W, SEEP/W, LPILE, GROUP, PY-WALL, EMBANK, FB-Deep, Driven, Shaft, Abaqus and PLAXIS software.

WORK EXPERIENCE

Sr. Geotechnical Engineer

Abu Dhabi marine operating company - Abu Dhabi - June 2014 to Present

Project manager for development of geological and geotechnical zoning maps for the oil fields of Zakum, Umm Shaif, Nasr and Umm Lulu. The project includes interpretation of available ground data, development of a geotechnical database, identification of key geological units, production of geological and geotechnical zone maps, provision of design soil profiles with geotechnical parameters, calculation of pile axial capacities, and production of geohazard maps, punch-through hazard maps for the fields, undertaking of a probabilistic seismic hazard assessment, deterministic tsunami hazard assessment, and development of seismic and tsunami design parameters for the fields.

Responsible for issuing and reviewing the scope of works for performing geotechnical investigations for the development of the new offshore oil fields of Nasr and Umm Lulu in the Arabian Gulf. Responsible for reviewing pile design, installation methods and mudmat systems.

Responsible for investigating cavities and sinkholes that developed in Zirku Island in the Arabian Gulf that will host Tank farms as part of a new refinery on top of the Island. Issued the scope of works and reviewed the mitigation measures taken to grout the cavities underneath the tank foundations.

Responsible for reviewing all the barges spudcan leg penetration analyses, on a daily basis, that move all around the entire oils fields. Evaluating the risks of punch through and providing mitigation measures and advice to the oil field assets.

Principal Geotechnical Engineer

Technip - Abu Dhabi - March 2011 to Present

Lead Geotechnical Engineer for the new Emirates LNG (ELNG) terminal near The Port of Fujairah in UAE. Specifically, the project included the offshore geotechnical investigation for the construction of causeway, mooring dolphins, breasting dolphins, flare line/stack, platform and quay wall. Bathymetry, Metocean and geophysical investigations were also included. In addition, onshore geotechnical investigations for onshore buildings, pipeline and storage tanks were also prepared under that task. Issued scope of work for the probabilistic seismic hazard analysis for the Site and followed up with Subcontractors.

Evaluated Pile capacity for Platforms associated with Umm Lolo project. The purpose is to retrofit the pile capacity of existing piles to accommodate extension of the Platform.

Geotechnical Expert for the Artificial Island project with Zadco. Took part in a design workshop to set the design basis for shallow and deep foundations. Designed pile foundations in island revetment and proposed a renovated technique to eliminate the need for permanent casings for each pile. The technique is using CLSM (controlled low strength material) instead of permanent casings and this will have a huge cost savings for bidding for the EPC phase.

Working on a task force for the purpose of mitigating defects during installation of submarine power cable with Aramco Gulf Operations Company Limited ("AGOC") and Kuwaiti Gulf Oil Company (K.S.C.) ("KGOC"), jointly operating at and from Al-Khafji, Saudi Arabia for oil and gas exploration, development and production in the offshore area of the divided ex-Neutral Zone between Saudi Arabia and Kuwait. Reviewed and issued scope of work for the subsea geophysical investigation of the existing cable to accommodate the required contractual burial depth of 1.5 m.

Reviewed deep dynamic compaction for soil improvement in Satah Oil Field. Raised some issues with the subcontractor "Menard" regarding the effectiveness of the deep dynamic compaction effectiveness below the water table. Also, raised the issue of cut off trench effectiveness which will be used to intercept the dynamic wave propagation from affecting the adjacent structures. Currently is part of the team for the EPC for the same project. Issued SOW for underground detection and ground improvement by Stone columns. Succeeded to convince COMPANY to eliminate the need to perform soil improvement for the whole site. Ground improvement will be only limited to underneath compressor foundations. This will have a positive impact on cost and time schedule.

Redesigned foundations for storage tanks in Angola. CLIENT requested to eliminate pile foundations. Thus, designed a jet grout program to increase soil capacity below the Tanks and reduce the settlement.

Reviewed foundation adequacy for MRO facility in Al Ain International Airport and provided expert opinion to utilize shallow foundation rather than deep foundation option.

Currently reviewing the geotechnical reports and design for the New Refinery Project-EPC3 for Kuwait National Petroleum Company at Al-Zour, Kuwait.

Recommended surcharge method for bullets earth mound to reduce settlement to acceptable limits for Yemen LNG project.

Issued geotechnical and underground investigation scope of work for new refinery project as part of FEED in Iraq.

Evaluated bidders proposals for Offshore geotechnical investigation and coastal erosion studies for several pipelines projects. Evaluated several options for the construction of sheet piles to act as a cofferdam.

Senior Civil/Geotechnical Engineer-Project Manager

Gannett Fleming INC - Springfield, MA - January 2008 to March 2011

Adesta/ The Massachusetts Highway Department (Mass Highway). Geotechnical Engineer of Record and Project Manager. Responsible for designing the foundation system for the proposed CCTV cameras, variable multi signals (VMS) structures, concrete slabs and footings for node pads & barbed wire fencing. Managed the subsurface investigation and oversaw the construction project management and vendor performance. The foundation system consisted of drilled shafts with variable diameters and depths to withstand the dead load of the signs and a 120 mile per hour wind load in variable soil conditions. Ensured preparation and submission of required financial and administrative reporting regarding the project in a timely manner.

South Florida East Coast Corridor (SFECC) Alternatives Analysis, Miami-Dade, Broward, and Palm Beach Counties, FL, Florida Department of Transportation, District 4. Senior Civil Engineer responsible for conceptual engineering in support of the Tier 2 SFECC Regional and Sectional Alternatives Analyses. The 85-mile corridor is centered along the existing Florida East Coast Railway from the Government Center in downtown Miami to Indiantown Road in Jupiter and consists of 264 grade crossings with 17 waterway crossings and 64 proposed station stops. Responsibilities included alternatives analyses for different Tunnel options for the New River Crossing, which lies in Fort Lauderdale in Broward County. Performed conceptual design for different tunnel options, which consisted of cut and cover, submerged tube and bored tunnel. Submitted a report to the client and to the Coast Guard along with conceptual cost analyses for the three options.

Automated Train, Phoenix Sky Harbor International Airport, Phoenix, AZ, City of Phoenix Sky Harbor International Airport. Senior Geotechnical Engineer responsible for providing geotechnical recommendations for the deep foundations of an elevated guideway for a new automated train and the related stations and maintenance facilities, as well as for providing subgrade recommendations for at-grade track sections. Participated in the drafting/compilation of the project documentation, reviewed and evaluated the work methods proposed by the contractor. Supervised geotechnical investigation. Duties, also, include coordinating work efforts with airport personnel, verifying boring log information, evaluating laboratory test data, developing geotechnical design parameters, and providing design and construction oversight services for drilled shafts. Designed a micropile wall to support the existing abutment of a railroad bridge as part of relocating the 44th street underneath the bridge. Modeled the micropile wall using the computer program PLAXIS and compared the results to the results obtained from the computer program LPILE. Also, the geotechnical analyses were performed to assist in making recommendations for shallow and deep foundations, retaining walls, soil nail walls, shoring systems and embankment fills, as well as in making recommendations concerning pavement, utilities, and conflicts with existing structures. Modeled the conflicts between a proposed drilled shaft foundation system and an existing baggage cart tunnel, using the computer program Plaxis, and recommended a resolution for the problem. Reviewed drilled shafts concrete integrity testing such as cross sonic logging,

gamma density logging and 3D tomography and recommended solutions for any non- compliance concrete. Designed micropiles foundations system for a connector bridge connecting Terminal 3 to the train guideway. Designed soldier pile and lagging system to support 20 feet high of soil adjacent to Taxiway S. Managed construction activity for a part of stage 1 of the project. Parts of the construction management includes overseeing daily activities of the site, supervising staff engineers, running regular weekly meeting with the subcontractors, providing guidance on arisen technical complex construction issues. Acted as the liaison among the other project managers to assist with several project managerial issues.

Service Plaza Strategic Plan for Florida's Turnpike, Various Locations, FL, Florida Department of Transportation, Florida's Turnpike Enterprise. Geotechnical/Pavement Project Manager for the rehabilitation and new construction of eight service plazas on Florida's Turnpike. Managed subsurface investigations program; evaluated laboratory testing results; analyzed and designed foundations for convenience stores, restaurants, fueling area canopies, lift stations and fuel farms; developed flexible and rigid pavement designs for car and truck parking facilities and access roads; and provided design recommendations for stormwater retention ponds and facilities. Signed and sealed the final geotechnical reports for the eight plazas. Participated in formulating the policies and goals of the project with the design-build team

York River Wastewater Treatment Plant (WWTP) Expansion, York County, VA, Hampton Roads Sanitation District/Malcolm Pirnie, Inc. Civil/Foundation Engineer responsible for reviewing shop drawings of deep foundations. Specific tasks included review of wave equation analyses and dynamic results of pile tests and evaluation of driving criteria of piles. The project involved both the expansion of existing plant facilities and the construction of new facilities. The new facilities included aeration, digester, chlorine, and thickener tanks; clarifiers; headworks; and filters. The project included the design of deep foundations, as well as the preloading of foundation sites to control postconstruction settlement. Evaluated soil stability for the foundations of the several tanks.

Modifications to S.R. 90 (U.S. Route 41/Tamiami Trail), Miami-Dade County, FL, U.S. Army Corps of Engineers, Jacksonville District/EAC Consulting, Inc. Geotechnical Engineer/Task Civil Manager responsible for performing geotechnical analyses involving roadway modifications and foundations for culvert extensions. This project involved raising approximately eight miles of the existing roadway about three feet and replacing approximately three miles of roadway with bridge structures to allow additional hydraulic conveyance from the L-29 (Borrow) Canal into the Everglades National Park. The existing roadway was founded on zero to seven feet of peat. The placement of the additional embankment was expected to cause long-term settlement and stability problems for both the embankment and its foundation. Work included determining the anticipated magnitude of the consolidation settlement, the time required for primary and secondary consolidation and the necessary embankment modifications to permit the required construction. Responsible for pavement design for the new layout of roadway. Responsible for performing Independent Technical Review (ITR) task on the design methodology used in the project.

Failure Investigation of Structure S-375, Palm Beach County, FL, South Florida Water Management District. Geotechnical Engineer responsible for reviewing and cataloging the existing information concerning Structure S-375 and performing preliminary geotechnical analyses for Stage I of this project. Structure S-375 is located in Levee IL-8 within Stormwater Treatment Area 1 East (STA1E). It is triple-gated and includes three box culverts used to convey water from the East Distribution Cell (EDC) to the West Distribution Cell (WDC) within STA1E. In March and August 2008, depressions were observed on the top of the levee over the culvert area. Further inspections indicated that many of the box culvert segments had moved vertically relative to each other by as much as six inches, joints had separated, and bells and/or spigots had sheared off in some cases. Tasks include gathering and reviewing available information concerning the design and construction of Structure S-375, performing preliminary geotechnical analyses to determine the mechanisms that may have triggered

the failure of the culverts, and performing preliminary seepage and stability analyses prior to the dewatering of the structure and the completion of repairs.

S.R. 5 (U.S. Route 1) South, Design-Build, Miami-Dade County, FL, Florida Department of Transportation, District 6. Geotechnical Engineer responsible for performing preliminary design calculations related to piles for bridge foundations, mechanically stabilized earth wall designs, and global stability analyses for bridge approach embankments.

Ragged Mountain Dam, Albemarle County, VA, Rivanna Water and Sewer Authority. Geotechnical Engineer responsible for performing settlement analyses on the existing I-64 rockfill embankment, which crosses the proposed reservoir for the new Ragged Mountain Dam. Tasks included reviewing geological information for the site, as well as subsurface investigation results; determining rock and soil strength parameters; and performing preliminary settlement analyses of the embankment using Plaxis v.8 software to determine the level of hazard associated with water seepage through the embankment when the new reservoir is filled.

Beach Dune Restoration, Volusia County, FL, Taylor Engineering, Inc. Civil Engineer responsible for providing services for a beach dune restoration project in New Smyrna Beach in which a hydraulic dredge was used to move approximately 850,000 cubic yards of sand onto 5.5 miles of public beach. As part of the quality assurance/quality control services provided to the client, monitored the contractor's safety, methodology, production, and environmental practices and made certain that the work met all the requirements of applicable local, state, and federal permits.

Construction/Geotechnical Project Manager

WPC, INC - Jacksonville, FL - July 2006 to December 2007

Evaluated a deep foundation system for a project that involved enlarging an aircraft hangar and extending a parking apron at the Naval Air Station in Jacksonville, Florida. Used FB-Deep and LPILE software to evaluate axial and the lateral pile capacities. Involved in the design of barbed wire fencing for the apron.

Project Managed Tamiami Trail highway subsurface investigation, oversaw pavement and concrete work for 5 miles of the project for the U.S. Army Corps of Engineers with a budget of approximately $1,000,000.00. Oversaw excavation for fiber optics cable along the highway. Participated in the compilation of project documentation, reviewing and evaluating different options during construction.

Project managed a subsurface investigation, which included completing slug tests using vibrating wire piezometers, collecting soil samples and monitoring concrete work in the Indian River Lagoon area in Fort Pierce, Florida, for the U.S. Army Corps of Engineers. This work was completed as part of an effort to determine the feasibility of constructing a new lake.

Prepared a 90 percent submittal of a geotechnical exploration report for the new I-295 collector-distributor roadway in Jacksonville, Florida. Prepared a geotechnical exploration report and making recommendations for the design of piles for widening a CSX Railroad overpass bridge, the Blanding Boulevard Bridge, and the Ortega Bridge in Jacksonville, Florida.

Prepared a geotechnical exploration report and making recommendations for the rehabilitation of the Jacksonville sheriff office's target range training facility in Jacksonville, Florida. This work included completing a slope stability analysis and designing an earth-reinforced geosynthetic wall.

Prepared a geotechnical exploration report and making recommendations for the design of drainage improvements for Moncrief Creek in Jacksonville, Florida.

Interpreted the results of cone penetration soundings using CPT-pro software for a project involving the Lexington Park, Phase I, residential development in Jacksonville, Florida.

Monitored the drilling of soil borings at Savannah/Hilton Head International Airport for a project involving the construction of a new hangar for Gulfstream Aerospace Corporation.

Recommended capacities for steel H-piles needed for emergency repairs to the Northbank Riverwalk in downtown Jacksonville, Florida.

Estimated the capacities of prestressed concrete piles for a new fire station overlooking the St. Johns River in Jacksonville, Florida. This work took into consideration the negative skin friction from the downdrag forces resulting from the settlement of the surrounding organic soils.

Performed axial and lateral capacity analyses of augered, cast-in-place piles for a satellite alert facility at the Cape Canaveral Air Force Station in Florida. Total service loads were of 3,500 and 350 tons vertically and horizontally, respectively.

Recommended slab-on-grade design parameters for a new running track at the University of North Florida in Jacksonville, Florida.

Recommended a surcharge program to accelerate the settlement of clayey soils underneath a proposed distribution center in Jacksonville, Florida.

Oversaw triaxial and consolidation tests on soils obtained from a proposed site for the Target distribution center in Charlotte, North Carolina.

Research/Teaching Assistant

Tufts University - Medford, MA - September 2003 to June 2006

Laboratory manager for a task assignment included instructing graduate students on a variety of concrete and soil testing.

Conducted research on an innovative aggregate made of recycled materials (waste plastics encapsulate in flyash) called synthetic lightweight aggregates for use in the paving industry.

Ran triaxial and consolidation tests on synthetic lightweight aggregates using state-of-the-art, fully automated, triaxial and consolidation units.

Developed a new technique to test the strength of cohessionless soil in a triaxial cell, which was based on controlling the volume of the soil samples prior to the shearing phase in the triaxial tests.

Designed a geosynthetic barrier and filter material for the green landscaping at Hill and Lane Halls at Tufts University.

Research/Teaching Assistant

University of Massachusetts Lowell - Lowell, MA - January 2001 to August 2003

Instructed graduate students in laboratory experiments related to classes in experimental soil mechanics.

Conducted research involving peat and organic soils. Ran index tests on large, cylindrical, samples of peat, which were 70 millimeters in diameter. This work included performing engineering classification, Atterberg limits, specific gravity, permeability, fiber content, organic content, consolidation, direct shear, and triaxial undrained compression tests on samples oriented both vertically and horizontally.

Performed laboratory tests on peat and organic soils and recommending engineering parameters for use in numerical method analyses/finite element modeling.

Ran triaxial tests on Boston Blue Clay samples as part of experimental soil mechanics class.

Presented a seepage model using a finite difference analysis with Excel as part of experimental soil mechanics class.

Geotechnical Engineer

Geosciences Testing and Research, INC - North Chelmsford, MA - January 2002 to January 2003

Supervised concrete pouring for precast concrete piles in the warehouse. Inspected and installed instrumentation gages (load cells and strain gages) inside the piles.

Analyzed the liquefaction potential of a soil for the relocation of U.S. Route 44 in Carver, Massachusetts.

Reviewed deep dynamic soil compaction test results for the relocation of U.S. Route 44 in Carver, Massachusetts.

Interpreted the results of dilatometer and cone penetration tests on peat soils for the relocation of U.S. Route 44 in Carver, Massachusetts.

Performed site visits, and conducted inclinometers and instrumentation readings for a sheet pile wall that supported the Route 44 in Carver, Massachusetts.

Oversaw drilling operations, continuous soil sampling and vane shear tests on Boston Blue Clay for a proposed bridge over Mystic River in Revere, MA.

Performed consolidation and triaxial tests on Boston Blue Clay samples obtained from Mystic River in Revere, MA.

Geotechnical Engineer

Massachusetts Highway Department - Boston, MA - 2003 to 2003

2003 (2 months assignment)

Designed foundation, prepared a geotechnical report, evaluated liquefaction potential, and recommended engineering parameters for the seismic design of a bridge in South Hadley, Massachusetts. Recommended a management plan for dismantling of the granite abutment of the bridge.
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Civil Engineer

Dr. H. E. Abou Gad Architectural Firm - 1991 to 2000

Civil and consulting engineer for the Arab Academy for Science, Technology and Maritime Transport in Abu Kir, Alexandria, Egypt. Oversaw the construction of the (Simulator) building. Supervised the construction of

5 stories hotel, an Olympic size swimming pool, a gymnasium and a cafeteria. Oversaw the construction of several berths and slips for the academy.

Oversaw the construction of 6 multi stories buildings and a headquarter building for the Sugar Factory in Gamasa, Egypt. Coordinated the mobilization to the site and the movement of personnel and equipment. This project included the construction of two on-ground water tanks and several barracks for the construction workers.

Designed and oversaw the construction of highways and secondary roads in the ancient city of Cairo, Egypt. Conducted geotechnical explorations for several roadway projects in Alexandria, Egypt. Designed rigid and flexible pavement for a chemical plant in Cairo, Egypt.

Designed and supervised the construction of foundations for several multistory buildings in Alexandria, Egypt. Profiled soils at different sites, seawalls, and retaining structures in the city of Alexandria, Egypt. Made foundation recommendations for sea wave protection structures in Alexandria, Egypt.

Reviewed final construction drawings and as-built plans, monitored project schedules, and performed on-site inspections of work in progress.

Geotechnical Engineer

Herbert Hoover Dike Rehabilitation and Repair - 1995 to 1998

Reach 1B, Palm Beach County, FL, U.S. Army Corps of Engineers, Jacksonville District/EAC Consulting, Inc. Geotechnical Engineer responsible for performing geotechnical analyses on Reach 1B of the Herbert Hoover Dike, which surrounds Lake Okeechobee in southern Florida. The project involves performing seepage and slope stability analyses and designing improvements for the dike along Reach 1B and at two structures, including a culvert (C-13) and the spillway (S-352). Significant seepage and piping events along the southern and southeastern portions of the dike were observed in 1995 and 1998 during high-water events, which resulted in significant maintenance on the dike. A relatively impervious and light blanket of peat and organic silts and clays is located at the landside toe of the dike, which increase the groundwater pressure and therefore the exit gradients and uplift pressures. Different solutions to improve the stability of the dike, including the construction of relief wells, a seepage berm, a cutoff wall, and a deep drainage trench, have been evaluated.

Improving Hurricane Protection Program, New Orleans Levee Systems, New Orleans, Louisiana, U.S. Army Corps of Engineers, New Orleans District/Eustis Engineering Services, L.L.C. Geotechnical Engineer responsible for performing slope stability analyses for the design of new sections and the rehabilitation of existing sections of the levee system for the West of Algiers Canal, the Inner Harbor Navigation Canal and the Cousins Outfall Canal. This work is part of the Improving Hurricane Protection program that the U.S. Army Corps of Engineers is performing in New Orleans, Louisiana. These analyses were performed to evaluate the stability of reinforced, unreinforced, T-wall and I-wall levees.

Harris Bayou Reconnection Project-Outlet Channel Upstream, Leesburg, FL, St. Johns River Water Management District. Civil Engineer responsible for designing of Articulating Blocks (AB) Mat- AB400, which is typically used to protect canals, rivers, and lakes. They are also used to protect marine structures from propeller wash, currents, and high velocity flows, checking the factor of safety to accommodate the expected flow from the seepage underneath the existing weir, checking factor of safety against piping and uplifting of the mats at the downstream of the existing weir, designing the apparent opening size (AOS) of the AB mats, and running the slope stability analysis of the AB mats on a natural soil sloped at 4H: 1V and 3H: 1V at the downstream and upstream of the existing weir.

Babylon Train Wash Facility Design Modifications, Babylon NY, MTA Long Island Rail Road (LIRR). Geotechnical/Civil Engineer responsible for designing of a dewatering system for the wash bay foundations and reviewing the specifications for the bracing / sheeting required during construction along with the dewatering specifications. The description of the LIRR project is as the following: The LIRR facility is to be located on a yard lead track adjacent to the Montauk main lines; LIRR requested the design be updated to allow for weekday train operations on the lead track through the washer. This required updating the design to precast building foundations and sectionalized track slabs to allow for weekend installation. The facility design was also updated to extend the wash bay by 80 feet to allow for additional dwell time on detergent application. The wash facility was designed to wash electric trains ranging from 6 to 12 cars and diesel-hauled trains ranging from 4 to 8 coaches. The design included a wash bay housing the detergent arch, front-wash arch, brush wash, high-pressure wash arch, rear-wash arch, pre-rinse arch, final-rinse arch, and water stripper and a one-story equipment building housing detergent storage and mixing, wash and rinse water recycle treatment, and effluent water treatment.

Fells Landing Investigation and Repairs Baltimore City, Department of Transportation. Geotechnical Engineer responsible for designing of steel H-piles to support a concrete slab for the repair of a two-year-old bulkhead that had started to fail.

Rail Runner Commuter Rail Project, Santa Fe County, NM, Mid-Region Council of Governments. Geotechnical Engineer responsible for reviewing the design of soil nailing wall for 17 miles of new commuter rail near Santa Fe, New Mexico.

U.S. Routes 1 and 9, Sections 1K and 3M, Middlesex and Union Counties, NJ, New Jersey Department of Transportation. Geotechnical Engineer responsible for providing review of shop drawings for drilled shafts and evaluate submittals by subcontractors. The project consists of realigning U.S. Routes 1 and 9 to meet a new bridge over the Rahway River, which was built under a separate contract. The project includes the total reconstruction and widening of the roadway, one roadway bridge replacement, three new retaining walls, two new culverts, and new and modified signalized intersections.

North Jacksonville Force Main and Water Main Project, FL, JEA. Civil Engineer responsible for determining of the feasibility of installation of 48- inch steel pipe under CSX rail road using directional drilling methods and checking the pipe ring deflection, pipe buckling stress versus applied load, and settlement at the ground surface.

Three Rivers Regional Landfill, Aiken, SC, Davis and Floyd, Inc. Geotechnical Project Manager responsible for performing stability re-evaluation of the Three Rivers Landfill due to increased final cover slopes from 4H:1V to 3H:1V. Specific tasks included review of existing/prior design information, evaluation of geosynthetic clay liner, selection of design parameters for waste / soil / and various geosynthetic interfaces, evaluation of bearing capacity of the landfill subgrade, evaluation of the differential settlement of the leachate collection pipes using the finite element analysis computer program Plaxis, performing seismic response / liquefaction analysis of the landfill site, performing global stability analysis under static and seismic conditions using the computer program Slope/W and performing veneer analysis of the final cover system that sloped 3H:1V.

Civil/Geotechnical/Field Engineer

Dr. H. E. Abou Gad Architectural Firm - 1995 to 1997

Was on a leave of absence from the above company

Managed the whole field operations and coordinated multidiscipline work efforts and vendors for constructing a new electrical substation (called substation 6) in Saudi Aramco Headquarters in Al Dhahran, Saudi Arabia.

Some of the work involved: managing the mobilization of the work team and construction workers to the site, excavation for foundations, inspecting the wooden frames for the foundations, columns and roofs, supervision of concrete pouring operations, supervision of internal and external plaster work, surveying of underground duct banks, constructing barrier walls and barbed wire fencing around the generators and transformers, inspecting the internal and external drywall, overseeing the layout of the manholes for the storm water management, inspecting the sewer lines layout and performing the As-built documentations.

Managed the field operations and coordinated multidiscipline work efforts for constructing a new electrical substation in Khamis Moushait, South of Saudi Arabia. The work conducted is similar to the aforementioned description.

Oversaw and inspected finishing works for a medical laboratory in King Abdulaziz Airbase Hospital, Dhahran, Saudi Arabia.

Reviewed design plans for residential projects in Riyadh, Saudi Arabia. Oversaw the construction activities and architectural finishing activities for residential villas and palaces in Riyadh, Saudi Arabia.

Designed foundations and structural elements (columns and roof slabs) for several residential houses, multistory buildings and villas in Jubail, Al Khobar and Al Damam, Saudi Arabia.

Intern Engineer

Style Design Firm - 1990 to 1991

Inspected concrete work for several small size buildings in Alexandria, Egypt.

Worked with a surveying crew on collecting data for several land developments in Alagami, outside of Alexandria.

Supervised and witnessed several pavement operations for small developments in the vicinity of Alexandria, Egypt.

Witnessed the clearance operations of some canals and creeks in Rashid, Alexandria.

EDUCATION

Ph.D. in Geotechnical Engineering

Tufts University
2006

M.Sc. in Geotechnical Engineering

University of Massachusetts Lowell - Lowell, MA
2003

B.Sc. in Civil Engineering

Alexandria University
1992