



Experts in the Industry

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Graphite Engineering Ltd. is a leader in the Engineering community in The Bahamas. We are a diverse and dynamic team of professionals that taken individually are accomplished but as a unit we are unmatched. We remain very nimble and flexible and can be as small or big as we need to be.

Each client is assured of focused and individual attention as we always aim to assemble the perfect team for your specific project.

Our services include complete Mechanical and Electrical Engineering Consultancy Services for buildings of all types.

First Class Service

We are driven to deliver a very high level of service to our customers at each stage of the project. Experience has taught us that clients want to work with professionals that are reliable, accessible and easy to work with and our goal is to exceed your expectations by; a) having a clear understanding of your needs, b) establishing good dialogue early on, and c) attaining feedback after project completion to ensure we consistently improve our services.

On Time Service

Our company's policy has always been to avoid taking on more work than we can turnover in a reasonable and agreed time frame.



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Rigorous Internal Peer Review

We have a checklist of components that should be included in a drawing based on the building type and this is utilized to reduce eliminations and errors. There is a process of having the drawings undergo a rigorous peer review to ensure the quality of the overall design.

Coordinated Designs

One of the most critical factors that affect staying within schedule and on budget is careful coordination of building systems. This is an area we pay keen attention to by working with all team members to ensure a comprehensive and cohesive design.

Complete Service

In addition to providing expert engineering design and documentation we can assist with a full level of construction administration. We view the site meetings as being extremely important in heading off any future problems when finish work is in place and equally important in advising the clients of the potential impact that proposed changes can have on time and on budget. By following the course of the project from concept to completion we remain committed to ensuring our clients receive a first class product.

SERVICES

Full Range of Mechanical and Electrical Consultancy Services

Project Consulting Services are offered to clients who are looking for assistance in transforming an idea to reality. We work closely with our clients to ensure that these essential building systems are designed and installed to function as efficiently as possible and at the same time mesh with the building envelope. Design and Project Management Services in the following disciplines for new construction or renovations are offered:

Consultancy Services are offered in all of the following areas.

- Air-Conditioning and Ventilation
- Water Supply and Distribution
- Drainage, Waste and Venting
- Fire Protection
- Electrical



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Contract Administration Services would include:

- Preparing bid documents
- Tendering
- Bid analysis and review
- Payment certification
- Inspections
- Punch listing



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Statement of Experience

We have selected two projects for your information.

Lynden Pindling International Airport

Graphite was involved in this project that was completed over a five year period to construct a new international airport for New Providence, The Bahamas. We provided services as Engineer of Record in the Mechanical division and additionally provided Construction Administration services for this \$400 million project.

In this role we were responsible for review of the mechanical design drawings and specifications, ensuring compliance with the local codes and making key recommendations as it relates to optimizing the design to best suit the local requirements, ease of maintenance and durability.

In the construction phase we oversaw the installation over the three phases, conducting field inspections, attending meetings as required, review of submittals and shop drawings.

At the end of each phase we assisted with punch lists and were responsible for signing off to signify substantial completion.

Project Cost: \$400 million

Timeline: 5 years

Baha Mar Resort

Graphite is the Mechanical, Electrical, Plumbing and Fire Protection (MEPFP) Engineer of Record for this \$3.6 billion project being undertaken on Cable Beach. We also have responsibility for the MEPFP Construction Administration for the entire project.

We assembled a team of professionals to assist us with review of drawings and specifications during the design phase. Once we were satisfied that the drawings complied with the relevant codes we stamped, signed and dated the drawings and facilitated approval of the same by the Buildings Control Department.

For the construction administration phase we expanded our team to cover inspection required for air-conditioning, ventilation, plumbing, fire protection, electrical (including IT, fire alarm and low voltage systems), elevator and LPG.



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We ensure compliance with local codes and project specifications. We work closely with the contractor and our client aid in the execution of this project of national significance.

On this project we worked with AECOM who is the Executive Architect of the entire project.

We had an opportunity to work closely with their design team on the Convention Center as we were tasked with review of the engineering drawings for this aspect of the works. We enjoyed a very good working relationship with this team and look forward to the opportunity to work with them again.

Project Cost: \$3.6 billion

Timeline: 2011- present (Ongoing)

Statement of Staff Qualifications

LEADERSHIP

Sonia Brown, PE is the Principal of Graphite Engineering Ltd, a leading engineering firm in The Bahamas. She was educated at the College of The Bahamas and the University of The West Indies and has twenty years' experience in the engineering industry. She began her career in engineering soon after earning a degree in Mechanical Engineering with honours.

The Ministry of Public Works proved an invaluable stepping stone where, for seven years, she developed and contributed to many projects of national significance. She further expanded her experience during a rewarding three-year term as Director of Projects in the Facilities Division at Atlantis, Paradise Island Resort, maintaining responsibility for the management and execution of a multi-million-dollar capital budget for the entire property on Paradise Island.

A former president of the Bahamas Society of Engineers, Brown credits the Society for encouraging a significant number of Bahamians to attain Engineering licenses from international bodies and for advancing the passing of the Engineering Bill.

Graphite Engineering Ltd is the Engineer of Record for the \$3.6 billion Baha Mar development and was Engineer of Record for the recently completed \$400 million redevelopment of the Lynden Pindling International Airport. Graphite is also involved in the construction of the two mini hospitals that are underway in Abaco and Exuma and was involved in the new worship space for Holy Family Catholic Church.

Brown who is registered with the Florida State Board of Engineering and the Professional Engineers Board of The Bahamas is also a member of the American Society of Heating Refrigerating & Air Conditioning Engineers, National Fire Protection Association; President of the PACE Foundation; Member of the Bahamas Women's Forum, and International Women's Forum.



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She is a weekly columnist in the Nassau Guardian. The "Green Files" covers matters related to sustainability.

TEAM MEMBERS

Mechanical Engineer

Ramon Bain, PE is a graduate of both the College of the Bahamas and West Virginia University where he received his Associate of Arts degree in Pre-Engineering and subsequent Bachelor of Science degree in Mechanical Engineering and has completed his Masters degree in Building Services Engineering with Sustainable Energy from Brunel University, UK.

Mr. Bain has ten years' experience in the Engineering field with varied experience in both the built environment and manufacturing. His tenure at Ministry of Works has provided valuable experience in Mechanical and Electrical Engineering design and project management. He has also served as Engineer and Chief Engineer with primary quality control responsibilities for an international castings and forgings trading company that serviced various manufactures in North America with bearings, leaf springs and other machine components.

He is a registered Professional Engineer in both the State of Florida and The Commonwealth of The Bahamas. He is also a graduate member of the Chartered Institute of Building Services Engineers in London and Member of the American Society of Mechanical Engineers.

Assistant Project Manager

D'Shanti Pinder, a graduate of The College of The Bahamas, initially joined Graphite Engineering Ltd. in 2008 where she was employed as a Technical Assistant. During this time she assisted with delivering high quality MEP Engineering drawings inclusive of plumbing drainage and water supply layouts, drainage isometric diagrams and water supply risers. In addition to this, she also assisted with the preparation of technical specifications, basic

plumbing calculations, drawing review and as-built drawings. She currently holds an Associate of Science degree in Architecture and has a combined total of 6 years drafting experience in both Mechanical and Architectural fields.

Re-joining the team in 2012, she currently holds the position of Assistant Project Manager for the company at Baha Mar. Here she assists with the preparation of various field and non-compliance reports, document control, liaising with the client and contractor project teams, carrying out site inspections and review of project information.



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Administrative & Technical Assistant

Shakera Forbes, a graduate of the New England Technical School in West Palm Beach, Florida joined Graphite Engineering Ltd. in 2006. She holds an Associate's Degree in Engineering Design and Drafting and has worked in engineering firms both locally and in South Florida and has twelve years of experience in the built environment.

She assists at all levels of the firm to help deliver to our clients MEP Construction documents of the highest quality. She is proficient at drawing plumbing drainage and water supply layouts, drainage isometric diagrams, water supply risers, fire protection layouts, preparation of technical specifications, basic plumbing calculations and drawing review.

Draftsman

Deael Bowe, received his tertiary education at the College of The Bahamas. He is a very talented and prolific draftsman who very quickly and expertly learns new techniques. He has worked in various sectors of the construction industry as a drafting technician.

He assists our firm in delivering high quality engineering drawings. He is proficient at drawing all aspects of plumbing drawings, fire protection layouts, electrical layouts, ventilation and air-conditioning layouts, field measurements, basic plumbing calculations and drawing review.

Associates

Wellington R. Neely, C. Eng is a graduate of both the College of The Bahamas and the University of The West Indies and has over twenty years experience in Building Services Engineering and Facility Maintenance. Professional qualifications obtained include registration on the Engineering Council UK register and membership in the Chartered Institute of Building Services Engineers.

Mr. Neely has developed and maintained membership in several professional industry associations among which are National Fire Protection Association (NFPA), American Society for Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE), Bahamas Society of Engineers (BSE) and the American Association of Airport Executives. He has participated in continuing education seminars provided by these organizations.

More than eighteen years have been spent as Chief Engineer for the Lynden Pindling International Airport, the Princess Margaret Hospital and Government facilities throughout the Bahamas involved in both design, maintenance and capital development.

This education and experience has positioned Mr. Neely to offer his services to the local community in the areas Building Services Engineering with special emphasis on fire protection



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plan review during design and construction, NFPA Code review and, design for maintainability and cost effectiveness.

He is a Registered Engineer by the Professional Engineers Board of The Bahamas.

Thomas Frazer is an Associate of Graphite Engineering Ltd.

He was educated at the College of The Bahamas and Morgan State University in Baltimore, Maryland U.S.A. He holds a Bachelor of Science Degree in Electrical Engineering.

Although he specializes Electrical Engineering, Mr. Frazer has a wealth of experience in Building Services, Architectural Drafting and Contract Management; having received much of his training from the Ministry of Works.

He is currently the president of the Long Cay Home Coming Committee, a member of the Institute of Electrical and Electronics Engineers (IEEE), and a Graduate Member of The Chartered Institute of Building Services Engineers (CIBSE). He has also been granted Interim Registration in the Chartered Engineer section of the Engineering Council UK.