**Terms of Reference**

**Consultancy Services to Provide Engineering Design and Supervision Services and Maintenance Planning and Policy Development for the Bahamas Technical and Vocational Training Institute (BTVI)**

1. **Background**
   1. The Bahamas Technical and Vocational Institute (BTVI), which was established in 1980 as the Industrial Training Centre, was incorporated by an Act of Parliament in April 2010 to come into operation on July 1, 2011. BTVI’s mandate, among other things, is to provide Technical and Vocational Education and Training (TVET) for employment and entrepreneurship in partnership with public and private sector stakeholders, including employers. Through the 2010 Act, BTVI is established as a statutory entity with a governance structure which includes a Board, whose Chairman and Deputy-Chairman are appointed by the Governor-General. The Institute is managed by a President, also appointed by the Governor-General, who is responsible for the administrative operations and instructional programmes. This 2010 Act confers on BTVI the authority to grant awards and was afforded greater autonomy for its financial and administrative affairs. The BTVI offers certificates, diplomas, associate degrees in a range of skills development programmes and has a student population of around 4,970. The Institute offers its programmes at campuses in New Providence and Grand Bahama. Periodically, outreach programmes are provided in the Family Islands.
   2. The structure of the New Providence BTVI campus has been in existence for over 50 years morphing into what is seen today as new structures have been added over the years. The campus is a collection of single-storey buildings of various types of construction. Several are steel-framed buildings over 50 years old and past their useful design life – although judicious maintenance has kept them in reasonable condition. Some of the newer buildings (constructed in the ‘80s) were intended to be temporary structures but have never been replaced or upgraded. Consequently, they are in poorer condition and less likely to be structurally sound than the older buildings. Most of the buildings on the campus are not designed to meet the needs of a modern TVET facility and substantial retrofitting has been done and continues to be done to enhance their utility. Given the limited land area available to BTVI, there is also a need to more efficiently and effectively utilise the site through the use of multi-storey structures and physical planning. Finally, replacement of ageing and inefficient equipment – particularly air-conditioning units - would support more efficient operation through reductions in operating expense.
   3. The rehabilitation of laboratories and workshop spaces around the institution would greatly enhance the delivery of TVET services. It should be underscored that a low quality of TVET provisions compounded by internal inefficiencies can, in some instances frustrate full certification of skills. The equipment, tools and materials in the TVET workshops and laboratories are currently inadequate and, in some cases, outdated, rendering those learning spaces non-compliant with regional facility standards. Additionally, while students are expected to procure their tools and equipment, many are unable to do so, resulting in a less than optimal competency-based instructional experience.
   4. The development of a long-term Comprehensive Maintenance Plan and Policy (5 years) for BTVI will assist the institution in maintaining current and identifying future tools and equipment needed for the operation of the campus. The Maintenance Plan and Policy should focus on preventative maintenance and include relevant guidelines, inspection audits, human resource arrangements during maintenance intervals and maintenance schedules for the general upkeep of the campus structures and equipment. This will include planning for the general maintenance and upkeep of individual building units and the maintenance schedule and support of major equipment and tools throughout the campus.
2. **Objective**
   1. The objectives of this Consultancy are as follows:
      1. To ensure that a proper design is developed and professional services sourced and contracted for the infrastructural works to be undertaken on the New Providence Campus and that these works are professionally supervised to provide the completion of quality infrastructural works within a defined budget and in a timely schedule.
      2. To assist with the selection of equipment and tools upgrades needed on the BTVI campus and align all requirements needed for proper selection, installation and future maintenance.
      3. To develop a comprehensive Maintenance Plan and Policy for the effective and efficient maintenance of its facility components and tools. The plan will assist in:
         1. Aligning maintenance costs with business planning and service delivery requirements;
         2. Ensuring the availability of adequate infrastructure and equipment in supporting the operations of BTVI; and
         3. Meeting any statutory compliance requirements.
3. **Scope of Services**
   1. In undertaking the assignment, the Consultant will work closely with the Project Coordination Unit (PCU), in particular the Project Coordinator, in carrying out the daily activities of this assignment. The Consultant should also work with the BTVI President, Senior Management officials, other managers and relevant heads of departments and staff at BTVI with responsibility for maintenance activities in order to obtain information on the campus infrastructure and services. The Consultant should also collaborate with Industry stakeholders including although not limited to, the Bahamas Contractor’s Association, the Ministry of Education, Science and Technology (MOEST), the Ministry of Works and parent representatives.
   2. The scope of services is understood to cover all activities necessary to accomplish the objectives of the consultancy, whether or not a specific activity is cited in this TOR. The services are to be conducted in accordance with generally accepted international standards and professional practices acceptable to GOCB. The scope of services for this Consultancy will include, but not be limited to, the following:
      1. Development of an inventory listing of buildings on campus and their major components/structural deficiencies along with CAD drawings of the buildings.
      2. Development of a list of major items of plant and equipment and an assessment of their conditions. The inventory shall include a list of the documentation required to support the maintenance activities (e.g. as-built drawings or equipment manuals). The inventory need not include all items of equipment but should be based on criteria such as whether an item is:
         1. Critical to the continued operation of the facility in terms of business need or safety;
         2. Carries a high repair or replacement costs or is difficult to purchase “off the shelf”.
      3. Assistance with identifying the infrastructure requirements and developing specifications needed for the procurement of new tools and equipment to be identified by BTVI for the support and enhancement of TVET delivery in laboratories and classrooms;
      4. Preparation of final designs, schedules, bid documents and cost estimates for the proposed infrastructural works;
      5. Assistance in the pre-qualification of contractors needed for infrastructural works, including the preparation of pre-qualification reports;
      6. Assistance in the evaluation of bids including the preparation of bid evaluation reports;
      7. Assistance in negotiation of the contract awards for infrastructural works;
      8. Inspection of infrastructural works for compliance with contract documents, including monitoring of safety and environmental issues and conditions/requirements as stipulated in the contract documents;
      9. Consultation and advice to BTVI on any revision of designs as appropriate to deal with unforeseen conditions which may arise during infrastructural works;
      10. Preparation of monthly reports on the progress of works indicating any works difficulties or contractual issues affecting their efficient and timely execution - commencing one month after the start date as defined in the construction contract;
      11. Issuance of the certification of payments for infrastructural works completed;
      12. Provision of certification of practical completion by the contractor(s) upon completion of construction contracts;
      13. Preparation of a Contract Completion Report, including as-built drawings, for each infrastructural works contract, within four (4) weeks of the works being completed;
      14. Development of a rolling 5-year programme of preventive maintenance (activities, frequencies, responsibilities and estimated costs) for each identified element and piece of equipment. These shall include, for each activity, the Personal Protective Equipment (PPE) that is required and, where necessary, recommendations for outsourcing where the activity cannot be efficiently performed in-house. The programme shall be structured so as to enable the development of annual work plans for each of the five (5) years that can be linked directly to the expected yearly maintenance budget for BTVI;
      15. Establishment of a schedule of inspections/reviews to support the assessment of the condition of items to be maintained and hence any changes in expected maintenance activities or costs. The schedule shall also identify any inspections and minimum requirements established by relevant regulatory authorities in The Bahamas (Ministry of Works) or applicable international organizations (e.g., ASME, ASHRAE, etc.).
      16. Development of a campus safety inspection and audit schedule and establishment of a remediation plan in accordance with OSHA requirements.
      17. Development of a list of critical spares and PPE and an estimate of their costs;
      18. Establishment of a system for ranking maintenance projects in order of priority and evaluating their costs using a life-cycle approach;
      19. Assessment and reporting on the competency of maintenance staff/managers and recommendations for necessary training to support maintenance activities;
      20. Provision of a training plan for BTVI maintenance staff in the application and execution of the maintenance activities required and compile a list of any related tools and necessary procedures for ongoing maintenance needs required;
      21. Organization of a training activity in the form of a workshop to assist key BTVI Senior Administration and Staff on the implementation and monitoring of the Maintenance Policy and Plan.
4. **Qualifications and Experience**
   1. The Consultant shall possess a graduate engineering qualification in a relevant field (Electrical Engineering, Mechanical Engineering, Structural Engineering, Civil Engineering or Building Services Management) and at least ten (10) years subsequent experience in Building Design Services, Construction Management or Facilities Maintenance Management. The Consultant should be capable of using Information and Communication Technology in order to conduct maintenance operations and should be able to produce CAD drawings for the project as requested. A project management designation would be an asset
   2. The Consultant should be a qualified and experienced professional who can conduct supervision duties of infrastructural works as a fully competent and independent unit. Knowledge of the region will be an asset.
   3. The Consultant to possess the following minimum qualifications:
      1. A Bachelor’s of Engineering degree or relevant degree post-graduate degree;
      2. A minimum of ten (10) years professional experience in the engineering, design or project management of buildings and works of a similar size and nature to those proposed under the Project;
      3. Strong spoken and written communication skills and fluency in the English language;
      4. A professional or chartered engineer designation from a recognized engineering professional organization is desirable.
5. **Timing** 
   1. The assignment is expected to require a maximum of 60 person-days over a six (6) month period.
6. **Deliverables and Reporting Requirements**
   1. The Consultant will be required to submit four (4) hard copies to BTVI and one electronic copy to BTVI and the Caribbean Development Bank for review and comment. The electronic copy should be submitted via email or on a flash drive and should have all text, tables and appendices saved in Microsoft Word/Excel format.
   2. An Inception Report is required, no later than four (4) weeks after the commencement of the assignment. The Consultant will review the infrastructural works needed for the classrooms and laboratories identified for upgrading at the start of the contract and report on the expected programming for the rehabilitation works that will be carried out. BTVI and CDB will provide feedback upon receipt of the Report;
   3. An Interim Report is required, no later than eight (8) weeks after the commencement of the assignment and should include recommendations on the contractor’s requirements for the infrastructural works along with criteria outlined to begin the pre-qualification process. The report should include a breakdown of the infrastructural works needed in key areas (electrical, structural, plumbing, etc.) along with a schedule of activities and anticipated timelines for completion. BTVI and CDB will provide feedback upon receipt of the Report.
   4. An Infrastructural Works Report is required no later than two (2) months after the works have been assigned providing an update on the works started, progress of schedule and expected completion date. BTVI and CDB will provide feedback upon receipt of the Report;
   5. A Draft Final Report on the Design and Supervision Consultancy for the Infrastructural Works executed along with the submission of the five (5) year Maintenance Policy and Plan with budgetary requirements and proposed training programs incorporated therein not later than sixteen (16) weeks after the commencement of the Consultancy. BTVI and CDB will provide comments upon receipt of the Report;
   6. A Final Report within twenty-four (24) weeks of commencement of the assignment, incorporating previous comments provided from the Draft Final Report Review as appropriate.

**Monthly Reports**: The Consultant will, no later than the specified date of each month, prepare a progress report for each contract summarizing the work accomplished for the preceding month. The report will detail progress of ongoing works, include analysis and summaries of all test results where applicable, and any problems encountered (administrative, technical or financial) with recommended solutions. The report shall also record the status of payment of all contractors’ monthly certificates, claims for cost or time extensions, and of actions required of BTVI, other agencies, utility companies and other stakeholders to permit unconstrained works implementation.