



Government of Saint Lucia

Department of Economic Development, Transport and Civil Aviation

Disaster Vulnerability Reduction Project

TERMS OF REFERENCE FOR CONSULTING SERVICES SUPERVISION FOR CONSTRUCTION OF PIAYE BRIDGE SLU-DVRP-CS-CQS-SUPCPB-01-21

**June 10, 2021
Updated June 24, 2021**

1) Background

Natural disasters present a serious obstacle to achieving sustainable, social and economic development in Saint Lucia. Like many other Caribbean islands, Saint Lucia is particularly vulnerable to the effects/impacts of natural hazards and extreme climate events such as tropical storms, hurricanes, earthquakes, floods, landslides and increasingly intense heavy rainfall. These hazards often result in significant and recurrent damages to national infrastructure including the road/transportation network. Over the past several years, such disasters have not only severely impacted the physical environment, but have also had serious negative impacts on the country's economy.

The Government of Saint Lucia (GOSL) obtained financing from the European Union (EU) through the World Bank (WB) towards the implementation of the Disaster Vulnerability Reduction Project (DVRP). The DVRP aims to reduce the Country's vulnerability to natural hazards and the adverse impacts of climate change [disasters] and builds resilience to adapt to such impacts. The DVRP consists of a comprehensive package of infrastructural sub projects and technical assistance activities designed to strengthen Saint Lucia's resilience to climate related impacts, including reconstruction of critical bridges.

To this end, the Piaye Bridge has been identified as one of the critical structures to be constructed and is one of the sub-activities under Component 1. The Piaye Bridge is in the district of Laborie along the Soufriere – Vieux Fort Highway which connects Vieux Fort to Soufriere. Detailed designs for the structure were completed in February 2021.

The GOSL, through the Department of Economic Development, Transport and Civil Aviation (DEDTCA) seeks to engage a suitably qualified and experienced consulting firm thereafter referred to as "the consultant" to provide supervision services to ensure quality assurance, contract management and construction management services to ensure consistency with the contract documents and certification of works for the proposed construction of the Piaye Bridge.

2) Objectives of the Assignment

The objectives of the consultancy are to provide construction management, contract management and supervision services to ensure that the Piaye Bridge is constructed in accordance with the drawings, technical specifications, and the contract documents.

3) Scope of Services

Job Summary of the Consultant

The consultant shall be responsible for the contract management, supervision and certification of works for the Piaye Bridge as detailed in the signed contract document contract. The consultant shall perform the functions and duties in accordance with these terms of reference.

The consultant shall be employed on a time-based contract and should take this into consideration when calculating cost estimates, list of personnel and schedule of rates for performing the services. The contract shall be established based on the understanding that it includes all the consultant's cost and profits including any tax obligations.

The Consultant shall perform all of the services hereafter described as expeditiously and with the highest professional skills and care to ensure timely completion of the works.

4) General Responsibilities and Duties

The Consultant will be required to provide technical assistance to the DEDTCA with the construction and contract management, supervision of the execution of works to ensure a) quality in delivery of the works contract, b) compliance by the selected contractor to the works contract and, c) certification of all works. The consultant shall also ensure adherence by the Contractor to the ESHS (environmental, social, health and safety) requirements contained in the contract, including the ESMP and other relevant information.

During all stages of the services the Consultant shall make all efforts to maintain full coordination with the Client and the beneficiary agency to ensure a common understanding on the requirements of the assignment and as such shall designate appropriate personnel to serve as liaison.

5) Specific Responsibilities and Duties

The consultant shall be responsible for services as follows:

Construction services:

Under the direct supervision of the Civil Works Manager, Disaster Vulnerability Reduction Project, the Consultant will undertake the construction and contract management services, supervision and certification of works:

- a) Review the designs (drawings), contract and technical information prior to mobilization of the contractor and the commencement of works to check for completeness of the designs and contract documentation. Such review to include site visits of the project site;

- b) Develop an erosion control protection plan to include sedimentation controls (haybales, silt-fences, berms etc) and temporary re-routing of the river to minimize or avoid works directly in the riverbed; the plan should include turbidity (up-and-down stream), with contingencies for corrective measures;
- c) Review and or Develop a Traffic Safety and Routing Plan, including proposed bypass routes during construction and signage requirements (day and night);
- d) Prepare an implementation programme before construction starts for all construction activities over the lifetime of the project showing how the construction can be completed within the project period (Note: if the Consultant consider that the construction programme cannot be completed within the project period then he/she must alert the DEDTCA to this fact as soon as possible);
- e) review the contractor's construction programme;
- f) Coordinating, interacting and reporting at least weekly with the Client. Copies of coordination meetings, reports should also be forwarded to the PCU;
- g) Carry out technical inspections and supervision of the various activities included in the contract and be responsible for ensuring scheduled delivery and compliance with the contract;
- h) Carry out ESHS inspections and supervision of the works and associated activities to ensure that the contractor comply with the ESMP and all relevant ESHS requirements;
- i) Prepare a quality assurance plan in consultation with the contractor, consistent with the conditions of the contract. The Plan should be reviewed and approved by the Civil Works Manager. The Civil Works Manager will also review the contractor's work schedule, monthly progress report and results of laboratory testing, in accordance with the agreed quality assurance plan;
- j) Adhere to the Standard Operating Procedures for ProCore
- k) Upload all approved plans and reports onto the ProCore Platform;
- l) Prepare in accordance with the works implementation program safety plans to keep users and other key stakeholders informed of ongoing works;
- m) Prepare, implement and supervise the ESMP (environmental and social management plan) and requirements as described in the ESIA for the project and the contract documents;
- n) Certify all completed physical works, ensuring quality and standards are maintained before acceptance by the Department of Economic Development, Transport and Civil Aviation;

- o) Represent the interest of the Government vis-à-vis the contract in any manner related to the construction contracts and the proper execution thereof;
- p) Ensure that the contractor mobilizes and supplies to the contract all personnel and equipment that has been committed in the Contract and that all such items remain on site until the appropriate approval for release is granted;
- q) Check the adequacy of the Contractor's equipment / materials to ensure proper execution of the works contracts;
- r) Review and approve any workshop drawings required from the works contractor;
- s) Approve all sources of materials including technical inspections and the results of laboratory testing of all construction materials prior to approval;
- t) Examine any technical proposals by the contractor and furnish the employer with the necessary technical advice and recommendation in respect of materials as compared with the specifications and bill of quantities;
- u) Maintain a complete set of field records, diary and minutes of site meetings. Arrange for site meetings to be held virtually and for the "live streaming" of works as and when is required and complete and update the form for virtual site meetings;
- v) Maintain site diaries for recording daily weather conditions, instructions issued to the contractor, problems occurring, delivery of materials, progress on site, workers on site, visitors, equipment on site etc;
- w) In carrying out inspections check that the buildings are correctly located and that the works are correctly set out;
- x) Inspections and supervision of the construction of works shall be done ensure that the buildings are constructed in accordance with the drawings and specifications and within the contract amount;
- y) Verify periodic and final payment statements submitted by the contractor and certify the quality and quantity of completed work activities for payment after checking their consistency with the technical specifications, terms of contract and agreed quality assurance plan;
- z) Examine and make recommendations to DEDTCA on all claims from the Contractors for extension of time, compensation, work or expenses or other similar matters;
- aa) Review and prepare any necessary variation orders after securing the employer's approval and prepare all relevant amendments to the drawings to suit any modifications to the existing approved works;

- bb) Review the breakdown of unit rates and justification submitted by the contractor for the unit price of those work activities that are not included in the original contract (including variation orders) and recommend for the approval of the employer;
- cc) Preparation of progress reports and consultation with the employer on the progress of the works;
- dd) Certify practical completion and issue completion certificate to the contractors and prepare as built drawings for (DEDTCA)'s approval;
- ee) Report to the management committee responsible for oversight of the works on the progress of works and contractor' performance and quality of works; highlight problems and make recommendation for corrective actions;
- ff) Provide timely assistance and direction to the Contractors on all matters related to the interpretation of the Contract Documents, ground survey controls, quality control, laboratory testing of construction material, work performance and other matters related to contract compliance and progress of the project;
- gg) Inspect the occupational health and safety aspects of the construction and temporary works to ensure that adequate measures have been taken to protect life and property and to ensure compliance with COVID-19 protocols;
- hh) Ensure the strict compliance of the specified traffic safety measures under all conditions and, if deemed necessary, adapt or reinforce these dispositions in order to guarantee the utmost public safety conditions at all times during the construction period and beyond;
- ii) Promote, implement and report to the PCU, on the Grievance Redress Mechanism;
- jj) Before the issuance of the Defects Liability Certificate, the Consultant shall carry out the necessary inspection, specify and supervise any remedial works to be carried out and recommend upon completion the inspection with representatives of PCU and (DEDTCA);
- kk) Perform all other tasks not specifically mentioned above but which are necessary and essential to successfully supervise and control all construction activities in accordance with the terms of the works contract;

The Consultant's services shall be executed to the best ability in accordance to approved and recognized international codes and ethics of the profession. The Consultant shall carry out the services in a proper and work man like manner with due diligence and efficiently with the best engineering practices used in similar operations. The Consultant's responsibility for the works shall expire upon the issuance of the Final Acceptance Certificate by the Department of

Economic Development, Transport and Civil Aviation.

Note: The Consultants will not issue any instructions to the contractors that will change the agreed design or construction of the buildings; that will impede the progress of the works; that will lengthen the contract period or that will add to the cost of the works without first agreeing these measures with and obtaining the written authority of the DEDTCA.

Services during the Defects Liability Period:

The Consultant shall carry out inspections during the defects liability period of 365 days to assess the quality of the whole works completed. This would require for the Consultant to undertake the following:

- a) Inspection of works periodically prior to the expiration of the Contractor's one year defects liability.
- b) Preparation of a final deficiency list for correction by the contractor, where required;
- c) Advise on the extension of the performance security
- d) Supervision of remedial works and make recommendations to the Client, as to the date of the final inspection of the whole works.
- e) Carrying out Completion Inspection of Works together with the representatives of the Department of Infrastructure, Ports and Energy and the Department of Economic Development, Transport and Civil Aviation.
- f) Preparation and Issuance of the Defects Liability Certificate
- g) Review and update the Maintenance Manual in accordance with the final scope of the works.
- h) Preparation of the Final Payment Certificate (Final Account)

6) Deliverables

The Consultant shall prepare and submit the following reports:

Inception Report: Desk Reviews

Two weeks after signing the contract the Consultant shall submit the report on the outcome of the desk review. The report should clearly detail all changes to be made to the contract and the associated costs and time implications.

Site Possession Report

Two weeks after commencement of the works by the Contractor the Consultant shall submit a report on the condition of the site (highlighting any changes) for the proposed works, and report on the available equipment, signage and staffing provided by the Contractor, any breaches to

the contract.

Monthly Progress Reports

The Monthly progress reports shall be brief and concise and provide means of closely monitoring project progress and forecasting construction costs and shall cover percentage completion of the proposed works, detail the progress of works including revised cost estimates (if any), cash flow statements. Generally, the report should include but not limited to the following:

- Quantity of works completed as the date there of
- Observations on the progress of works sharing what is actually taking place in the execution of the contract
- Photographic pictures
- Results of laboratory testing reports
- Variation orders issued to date
- Payments received by the contractor and consultant, including project accounting balances as at the date there of
- Define achievements, setbacks, problems, shortages, impediments, and means of rectification
- Number of skilled and ordinary labourers and their attendance; number of female and male workers
- Minutes of site and progress meetings, including extra ordinary meetings
- Works schedules and duration
- Reports of incidents, accidents, grievances;
- Adherence to ESHS and COVID-19 protocols

The Consultant is expected to provide a statement in support of works certified based on claims submitted by the Contractor

Final Report

The Final Report shall be submitted within two weeks after Practical Completion of the works. This report will detail the level of achievement made and provide an assessment of the contractors' performance under the contract. Generally, the report should include all the points required in the interim report given above but not limited to the following:

- Quantity of works completed as the date there of
- Photographic pictures
- Statement of Accounts Payments received by the contractor and consultant,
- Minutes of site and progress meetings, including extra ordinary meetings

- As built drawings.
- The arrangement for inspection during the defect liability period if required.
- Lessons learnt.

The Client will take no longer than 10 days to review and provide feedback to the reports submitted by the Consultant.

- ❖ *All reports shall be submitted in English.*
- ❖ *All reports and documents relevant to the Consultant's services, computer programmers, etc. shall become the property of the Government of Saint Lucia.*
- ❖ *All Reports including photographs must be uploaded onto ProCore (access will be provided once the contract is signed)*
- ❖ *The reports should be submitted electronically onto the PROCORE Platform*
- ❖ *The monthly and Final reports should be submitted electronically onto the PROCORE Platform by the 7th day of the following month*

7) Duration of Services

The consultancy is to be undertaken over a period of seventeen (17) months which includes the defects liability period of three months.

Supervision services during the construction period, will be carried out over a period of fourteen (14) months during which the Consultant will be required to provide full time services.

During the defects liability period of three hundred and sixty five days (365) days, the Consultant will be required to perform quality assurance assessments and participate in the periodic inspection of works along with the Contractor and the Client's team covering an estimated duration of three (3) man-months.

8) Working Arrangements

The Consultant will be supervised by the Civil Works Manager – Department of Economic Development, Transport and Civil Aviation. The Civil Works Manager will provide the necessary instructions to the Consultant.

1. Client's Responsibility

- i) Ensure timely review of the reports submitted by the Consultant and within the stipulated duration stated in the Terms of Reference.
- ii) Initiate the consultation and co-operation of other agencies required to provide support to the consulting firm for realization of the relevant aspects of the assignment.

iii) Facilitate access to the site for effective delivery of the assignment.

iv) The Contract Management and Monitoring Officer, PCU will be responsible for the circulation of all reports to relevant key stakeholders.

2. Consultant's Responsibility

- i. Make provision for a full-time engineer (structural or civil) to serve as resident engineer during the construction of the works.
 - a. The Resident Engineer (RE) will work full-time at the site during the construction of the work. He/she will be responsible for supervising the construction of the works; resolving problems on site; supervising the testing of materials; keeping a site diary and attending site meetings. He/she will prepare a list of defective and outstanding works at practical completion and will carry out inspections of the work required to rectify any defective and outstanding works during the defects liability period together with a further inspection at the end of the defects liability period.
 - b. The RE will provide inputs for the certification of as-built drawings, final acceptance certificates and all other technical documentation. The RE will have responsibility for monitoring the contractor's work plans, quality assurance, quality control and documentation. The RE will communicate directly and regularly with the Civil Works Manager, the PCU and the contractor to ensure that the targets set for the provision of services are met. The RE will agree on payment certificate amounts with the contractor for approval. The RE will be responsible for uploading all reports onto PROCORE.
- ii. The Consultant shall submit at the outset the expected outputs, as well as ensure their timely submission to the Client for review.
- iii. Be responsible for the supervision of its technical staff including providing all office space, equipment, materials, accommodation, office requirements and transportation.
- iv. Shall engage the appropriate qualified and experienced technical and administrative staff and other resources necessary to undertake the services.
- v. The Consultant shall execute the services in accordance with the laws, customs and practices of Saint Lucia and use the appropriate international standards for carrying out the services.

9) Qualification Requirements

The minimum required qualifications and experience for selection of the legally established consulting firm are:

- **General Experience: (15 points)**

At least seven (7) years' experience in contract administration management and supervision of civil works contracts including the construction of works related to roadworks and bridges **(15 points)**

- **Specific Experience: (30 points)**

Demonstrated experience with implementation of ESHS and ESMP within the last 5 years **(25 points)**

Demonstrated experience in the use of the PROCORE Software **(5 points)**

- **Similar Experience: (55 points)**

At least two (2) successfully completed contracts during the past ten (10) years which entailed contract administration and supervision of construction of road and bridge works in flood risk areas **(35 points)**

At least one (1) successfully completed contract during the past ten years which entailed the use of rip rap for riverbank and bed protection **(20 points)**

To be selected, the Consulting Firm shall propose a multidisciplinary team of key experts with the following qualifications and experience:

WORK TEAM MINIMUM REQUIREMENTS		
POSITIONS	QUALIFICATIONS	SPECIFIC EXPERIENCE
Team Leader (Resident Engineer/Manager)	BSc in Civil Engineering/ and Project Management Certification	Professional experience in contract administrative management and supervision of civil works contracts for the construction of bridges. Experienced in working with multilateral organizations. Experience not less than ten (10) years
Environmental Specialist	Certification in the relevant area	At least seven (7) years working experience with at least one completed similar assignment
Public Relations /Social Specialist	Certification in the relevant area	At least seven (7) years working experience with at least one completed similar assignment

Clerk of Works	Associate Degree/Diploma in Civil Engineering; / Diploma in Construction Engineering/Building Services/Quantity Surveying	At least five (5) years working experience with at least one completed similar assignment.
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