##### *GOVERNMENT OF THE PEOPLE’S REPUBLIC OF BANGLADESH*

**MINISTRY OF LOCAL GOVERNMENT RURAL DEVELOPMENT AND COOPERATIVES**

##### *LOCAL GOVERNMENT ENGINEERING DEPARTMENT*

**SECOND RURAL TRANSPORT IMPROVEMENT PROJECT (RTIP-II) - Additional Financing**

**TERMS OF REFERENCE (TOR)**

**FOR**

**DESIGN AND SUPERVISION CONSULTANCY (D&SC)**

**(Package No. AF-S1)**

**October 2018**

**Terms of Reference (TOR)**

**Design & Supervision Consultancy Services for RTIP-II (Additional Financing)**

# BACKGROUND

The People’s Republic of Bangladesh received a credit from the International Development Association (IDA) in 2012 for the Second Rural Transport Improvement Project (RTIP-II). This recognition has been successfully being implemented since then by the Local Government Engineering Department (LGED) under Local Government Division (LGD) of the Ministry of Local Government, Rural Development and Co-operatives (MLGRD&C). RTIP-II is aimed to improve and maintain/rehabilitate rural transport related infrastructure including inland water transport in 26 districts, covering mainly eastern parts of Bangladesh (excluding Chittagong Hill Tracts). The total project cost was estimated to be about US $417 million with IDA credit facilities of about US$ 300 million and the GoB contribution of US$ 117 million.

In 2017, Bangladesh has experienced widespread, devastating and prolonged flooding due to the extensive rainfall recorded from April to October as well as due to excessive water flow from the upstream rivers in India disrupting people’s normal life and damaging the properties. The flood resulted in interruption in the transportation network of Bangladesh damaging numerous LGED roads, bridges and culverts constructed and maintained under RTIP-II and other projects. This circumstance needs urgent rehabilitation and maintenance of rural infrastructuresin order to support the smooth connectivity of road network in the rural area. As a result, IDA and GoB decided to come forward with additional financing under RTIP-II to rehabilitate/maintain the damaged roads with an aim to improve rural accessibility in the 18 districts out of 26 RTIP-II project districts in Bangladesh. These districts are Pabna, Sirajgonj, Tangail, Dhaka, Manikgonj, Gazipur, Narayangonj, Narsingdi, Mymensingh, Jamalpur, Sherpur, Netrokona, Kishoregonj, Munshigonj, Sylhet, Hobigonj, Sunamgonj and Moulvibazar. The total cost of RTIP-II (Additional Financing) is, therefore, estimated at about US$170 million (US$100 million from IDA and the remaining US$70 million from GoB funding).

This Term of References (ToR) intends to procure Design and Supervision Consultancy (D&SC) Services with a view to implementing the ‘Accessibility Improvement Component’ of the project including Climate-Resilient Rural Roads Design.

# PROJECT COMPONENTS

The project will include three components:

Component A - Accessibility Improvement

Component B - Institutional Strengthening, Capacity Building and Governance Enhancement

Component C - Rural Transport Safety

1. Component A - Accessibility Improvement:

The component finances:

1. rehabilitation and periodic maintenance of about 1500.00 km of Upazila and Union roads in 18 districts;
2. project supervision and monitoring consultants.
3. Component B - Institutional Strengthening, Capacity Building and Governance Enhancement:

This component covers:

1. capacity building to enhance the Local Government Engineering Department (LGED) performance, governance and accountability; and
2. performance monitoring and training.
3. Component C - Rural Transport Safety:

The Component includes:

1. technical assistance support for integrating road safety engineering measures and awareness building to ensure improved safety along project roads; and
2. technical assistance for strengthening road safety capacity of the LGED.

# OBJECTIVE OF CONSULTING SERVICES

The main objective of the consultancy service under this Terms of Reference (TOR)is to provide technical, socio-environmental and management support to the PMU, the district level officials and the upazila level officials of LGED to implement the project ensuring compliance with the policies / guidelines of the Government of Bangladesh (GoB) and the International Development Association (IDA). Broadly the objective is summarized below:

1. Prepare detailed design of Climate-Resilient Rural Road works and prepare tender documents of the subprojects following GoB/IDA's social and environmental safeguard policies; Ensure high standards of quality assurance in execution of works and completion of work within stipulated time limit;
2. Conduct comprehensive supervision of project implementation activities carried out by the contractor(s) to ensure total compliance with the drawings, technical specifications and various stipulations in the contract documents;
3. Support the PMU/district units/upazila units in project planning, monitoring, reporting and financial management;
4. Assist the PMU/district units/upazila units to develop training programs for its staff and other stakeholders in technical and non-technical areas.These programs functions are to improve levels of competence and build a more community oriented, gender sensitive, climate change adaptation, road safety and participatory approach to their duties and responsibilities;

# SCOPE OF THE WORK

**(a) General Requirements**

In accordance with the Act / Rules & Regulation / Guidelines/ Operational Directives (ODs) / Operational Policies (OPs) of the Government of Bangladesh and the World Bank, the Design &Supervision (D&S) Consultants shall carry out their tasks with accepted professional standards, utilizing sound international engineering and economic practices. The Consultant shall deliver timely sound and diligent services.

Any monetary loss incurred owing to their sub-standard services will be compensated from the consultant through penalizing as per conditions of the contract. In conducting this work, the D&S Consultants shall cooperate fully with Government officials related to the project who will provide the data and requirements; the D&S Consultants shall be solely responsible, for the analysis and interpretation of all data received and for the conclusions and recommendations contained in their reports. The Consultant will carry out the following main tasks but not necessarily be limited to:

1. Prepare Engineering Design and Estimate of different sub-projects
2. Conduct social and environmental impact assessment and prepare all project specific Safeguard documents.
3. Prepare tender documents of works.
4. Supervise all project implementation activities carried out by the contractor(s).

**(b) Social Safeguard Compliance**

The consultants will carry out the Social Impact Assessment as needed by GOB and World Bank Guidelines. Based on findings of the Social Impact Assessments (SIAs), major activities to be carried out will include, but not limited to the following:

* 1. Design and conduct social screening, stakeholder analysis and consultation, PAP census, baseline socio-economic survey and assess other social issues deemed necessary for better design and implementation of the project's social component. Identify the impacts that are to be mitigated and those that are to be strengthened to enhance the project's positive social outcomes. Also identify the adverse impact of the PAPs on the socio-economic conditions due to the project facilities during construction as well as after completion.
  2. Prepare integrated and sequenced land acquisition and resettlement and the civil works schedule for the entire project, and phase-wise land acquisition proposals and prepare / update the RAPs and establish the management information systems to monitor the land acquisition and RAP implementation processes, according to the requirements and guidelines agreed in the Resettlement Framework.
  3. All LA Plan must be submitted within 06 months from the date of commencement of D&S Services as per requirement of the client. The LA plans must be prepared after physical verification and finalization of proposed alignment of roads in consultation with the concerned Executive Engineer and Upazila Engineer followed by a detailed and accurate survey of LA requirements. Consultants shall be accountable for any conflict between the LA plan and actual field conditions arising further. All LA plans must be prepared within 45 (forty five) days from the date of issuance of request letter from the Project Director (PD).
  4. Collect basic data needed for preparation of RAP; this would include: (a) full census of affected persons—landowners (resident and non-resident), family members; (b) full inventory of assets affected—land, structures, crops, productive trees; (c) estimate of impact of loss on income of each household; (d) census of those who have already been compensated for lost assets and left the immediate area; (e) assessment of impact on income/standard of living of those who have already been compensated for lost assets and left the immediate area; (f) compilation and analysis of laws pertaining to land valuation, acquisition and expropriation; (g) analysis of standard practices for land valuation, acquisition and expropriation; (h) documentation of efforts made to minimize land acquisition/resettlement; and (i) fully articulated options available to affected persons.
  5. Prepare cost estimates of RAP implementation separately identifying the administrative costs and compensation under major categories, such as land, houses, trees, other property, etc. The RAP would be updated and modified time to time and once a year showing the status of it implementation, changes in the RAP implementation that would be necessary due to changes on ground over the previous period;
  6. Prepare Schedule and coordinate social screening, stakeholder analysis and consultation, PAP census and public disclosure matters in order to provide timely inputs to the project design team.
  7. Conduct surveys to determine any “cultural property” (according to definition of GOB and United Nations) including sites having archeological, paleontological, historic, religious, and unique natural values in the project area and prepare proper documentation for such a cultural property; determine effect, if any, the project may have on the cultural project and develop plan for its preservation.
  8. Provide support in implementation of RAP activities including preparation of documentation, monitoring and maintaining database at field as well as in the PMU levels.
  9. Monitor progress in land acquisition by following through the legal acquisition process and assess any potential issues that LGED should resolve for timely acquisition.
  10. Actively participate in the RAP implementation, including market price surveys, verification and valuation of losses, grievance hearings and other tasks as and when deemed necessary.
  11. Assess the impact details of land acquisition and displacement, prepare/update the Resettlement Action Plans (RAPs), resettlement budgets and the RAP implementation schedules.
  12. Monitor and report the acquisition process and implementation of Re-settlement Action Plan (RAPs).
  13. Apply effectively the GAD (Gender and Development) action plan of the Government of Bangladesh(GOB) and World Bank.

**(c) Environmental Safeguard**

1. Carryout comprehensive environmental analysis taking into account of the direct, indirect, induced and cumulative impacts to identify any major environmental conflicts with the selected schemes. Give adequate weight in the selection and design of schemes considering all environmental and associated regulations and guidelines related to the project governing environmental quality, health and safety, protection of sensitive areas, protection of endangered species, land use control etc as set out in the Environmental Management Framework (EMF).
2. Supervise and monitor the Implementation of Environmental Management Framework (EMF), inclusive of Environmental Management Plans (EMP), and / or Environmental Code of Practice (ECP) addressing the mitigation measures during construction leading to destruction or temporary or permanent degradation of existing and potential environmental assets; update / prepare mitigation measures if required.
3. Submit Quarterly Environmental Monitoring Report ( in addition to monthly progress report) mentioning the changes of environmental parameters supported by laboratory tests result as set out in the Environmental Management Framework (EMF). The report shall also quantify and assess the efficacy of the environmental impact mitigation measures and recommendation of the best practices.
4. Ensure that all materials, tools, plant, equipment, facilities, etc, which have to be handed over to the client after completion of the works are properly dismantled, packed, stored and maintained until the official handing over to the client. Furthermore, the consultant shall arrange for the handing over of these items to take place as provided in the works contract

**(d) Preparation of Engineering Design and Tender Documents:**

1. Carry out Topographic Surveys, Hydrological and Geo-technical Investigations of roads in consultation with the LGED Upazila and District level officials; prepare detailed engineering designs based on the defined technical specifications after duly conducting hydrological, morphological (where applicable ) and other relevant studies as required and addressing duly the environmental and social safeguards of IDA/GOB. In all cases the Consultant will make close liaison with LGED’s Design Cell and incorporate the best practices into the engineering design.
2. Investigate and test the existing subgrade and strength for pavement.
3. Determine/design the appropriate pavement structure for roadways, bazaar areas, intersection points.
4. Design various components (considering climate resilience and road safety) required for the execution based on the surveys and investigations, preparing detailed engineering drawings. The design and drawings shall be prepared based on standards of LGED and awareness of latest international practice in rural road design to LGED.
5. Review, analyze and revise (if required) the detailed design already prepared by the previous D&S consultant of RTIP-II (parent project).
6. Prepare engineer's estimates and proper tender documents for civil works under the project except the packages already prepared by parent project consultants.

**(e) CONSTRUCTION SUPERVISION OF PHYSICAL WORKS**

1. With due diligence and efficiency supervise fully the construction of the works which are to be executed in accordance with sound technical administration, financial and economic practices. The consultant shall perform all duties associated with such tasks to ensure that only the best construction practice is followed and that the final product is in all respects equal to that specified, at the most economic costs and is executed in full compliance with the specifications
2. Supervision of contracts that are already designed by the consultants of RTIP-2 parent project.
3. Check that the contractor follows safe working practices in all operations and immediately draw attention to any instances where this policy is not followed, directing the contractor to carry out all such works deemed necessary in case of emergency/ affecting the safety of personnel, works and adjacent property. Ensure that the minimum impediment is caused to the flow of traffic and that safe acceptable detours are provided and maintained at all times.
4. Organize the supervision of the works contract with proper allocation of responsibilities to individual members of the supervision team and supervise their work in order to ensure that it is effectively executed.
5. Establish a systematic construction procedure for different civil works set out in the specification following the GoB / Bank's environmental and social safeguards through demonstrating and conducting on the job training to the contractor and LGED officials. They shall also establish procedures for systematic on-site checking and monitoring of quality and quantities of all work items, including field checks to confirm integrity of survey data, application of improved methods for embankment, pavement construction and bridge/culvert construction. The quality control works may include performing laboratory and field tests.
6. Ensure road safety measures are duly performed in accordance with design and specification. Assist client to improve performance and understanding on road safety issues.
7. Prepare Variation Order (VOs) in light of contract agreement and recommend for approval, if required. In this case proper attention should have to be paid during design and preparation of BOQ so that the numbers of Variations could be kept minimum.The consultant shall attach a precise technical justification with their recommendation for variation.
8. Check and verify in a regular basis the validity of all insurance/guarantees which the contractor is obliged to have in place.
9. Approve the Contractor’s setting out of the Works and preparation for the Works, prior to issuing approval to construct the Works.
10. Carry out soils and materials investigations in collaboration with LGED as necessary or advisable to minimize overhaul, to optimize the use of available resources, to enhance economy etc. For all soils and materials proposed and used by the Contractor in the Works conduct all necessary and advisable inspection, sampling, testing and analysis for compliance with the Technical Specifications at source and in the laboratory and approve or reject the use of the soils or materials proposed for or used in the Works. Whenever necessary order removal and substitution of unsatisfactory material and workmanships.
11. Routinely inspect the Works both under construction and completed, for compliance with the Specifications and the agreed method of working, as a basis for payment. Formally arrange joint inspections with LGED and the Contractor for acceptance and/or identification of defects of the works executed or under construction.
12. Keep and maintain up-to-date detailed Daily Site order book and detailed records (making them available for inspection by LGED when requested to do so) of all contractual correspondence and data; all work stoppages or delays; accidents on Site; official visitors to Site; weather records; all activities in progress at any time on site showing the start and end time and full details of the resources employed per activity.
13. Keep and maintain detailed records (and make available for inspection) of the Contractor’s equipment on Site and its precise date of arrival or removal from Site, its date of manufacture, previous hours worked and condition, the date commissioned to commence work, its availability, and utilization. Establish equipment availability figures for each category of equipment.
14. Continuously monitor the Contractor’s progress against programme and his method of working in respect of each and all construction activities and produce a resource analysis against production needs. Advise the Contractor when additional resources or revised methods of working or revised programme of the works are deemed to be required.
15. Review the Contractor’s proposed working drawing/plans and associated calculations. Approve or reject the proposals accordingly and identify any changes required.
16. Assist LGED to review and check the Contractor’s Payment Applications through verifying the accuracy of the measurement and costing calculations and the sufficiency of the supporting documentation. Also certify the contractor's eligible payments. Advise LGED on whether liquidated damages are due from the Contractor or not. Also help LGED to prepare and issue final completion certificate.
17. Thoroughly review and analyze the Contractor’s applications for extensions of time (if required) and provide necessary recommendation along with justifications in the light of the Contract Agreement.
18. In the event of adjudication or arbitration, provide the necessary personnel and expertise to advise and assist the Employer in any such process and prepare any further analysis of the Contractors claims submissions as may be necessary to assist the Employer in the presentation of his case.
19. Take digital color progress photographs throughout the duration of the Contract, keep and maintain an official photographic record (available for inspection) of monthly progress at set locations and also of any construction activity of technical or contractual interest at any time. Each photograph to be captioned with: reference number, time, date, precise location, subject, and points of particular note. All digital negative data should be stored on diskette in a record system, together with copies of the captions.
20. Submit progress reports, special report (to fully acquaint the client with all aspects likely to affect the Technical and Financial implementation of the project), final reports and records, and other hard outputs regarding construction progress and the status of the Works Contract.
21. Review, approve and submit two full sets of as-built drawings within two months of completion of the Works detailing all alignment and level information, position and sizes of drainage structures, services information, and structural drawings (including type and positions of reinforcement).
22. The consultant shall establish a quality assurance system to ascertain the desired quality standards at all stages of the service. To this end a quality assurance manual needs to be developed at early stages of the service.

# REPORTING REQUIREMENTS

The reporting requirement shall be as per below:

1. **Inception Report**: The Consultant shall submit and present an **inception report** within one month after signing the contract. The report will include the consultant’s proposals on the detailed project implementation arrangements and the planned activities for different components based on the initial assessment. The report will also include a detailed work program and approach towards the assignment. The report needs to be finalized within 15 days after receiving the comments from LGED.
2. The consultant shall submit draft **environment, social, gender and road safety related issues for** all sub-projects as well as the overall project. The report needs to be finalized within 15 days after receiving the comments from LGED.
3. The consultant shall submit the draft **engineering design report** including all survey reports, cost estimate, detail environment management plan, social management plan and road safety for all sub projects. The report needs to be finalized within 15 days after receiving the comments from LGED.
4. The consultant shall submit **tender documents** of all sub-projects with 15 days of finalization engineering design.
5. **Monthly Report:** The consultant will submit monthly report which must reflect all the activities undertaken during the month of report. Report must contain the target and achievement.
6. **Quarterly Reports:** The consultant shall furnish quarterly progress reports on physical and financial progress and also on implementation progress including achievements and problems faced, if any, and the measures to overcome the constraints. The quarterly reports shall be factual and concise with recommendations for the subsequent quarter.
7. **Annual Reports**: The consultant shall furnish to LGED an annual report covering all activities in the last 12 months. In addition to summarizing key facts and issues presented in the 4 quarterly reports for the reporting period, the annual report should include the Consultant’s views on the strengths and weaknesses of the project implementation arrangement and remedial actions to be taken if any.
8. **Midterm Review Report**: This report will consolidate the annual reports and focus on issues during implementation of the project. Midterm review report shall include among others requirements, the traffic related survey on the newly constructed road, and the Pavement Condition report.
9. **Project Completion Report:** The consultant shall prepare a comprehensive completion report of all components of the project including civil works and consulting services. The report shall incorporate summaries of the methods of construction, the construction supervision performed, problems encountered and solutions undertaken thereon and recommendations for future projects of similar nature to be undertaken by LGED. The report shall also contain final evaluation report of the construction and maintenance related aspect for the relevant packages.

Consultant shall include the self-appraisal in the report in compliance with WB requirements for project completion report of executing agencies, including detailed data and information gathered and recorded during the project implementation.

# TIME SCHEDULE

It is envisaged that Consultants services will commence around May 2019, with project completion in June 2021.

# PROFESSIONAL STAFFING INPUTS

All the Consultant’s personnel shall be fluent in (i.e. writing, reading and speaking) the contract language, which is English. In addition, all the key staff described herein, shall be computer literate regarding word processing and spread sheets, with at least one staff member must have working computer knowledge with full time accessibility.

The Consultant shall provide competent personnel for the services, who shall be managed by the Team Leader and who will represent the Consultant in performing the services. The team shall comprise the following experts showing Table 1and 2 but not be limited to:

**Table 1: International and National Key Experts (To be Evaluated)**

| **Sl. No.** | **Position** | **Qualifications & Experience** | **Number** | **Person-Months** |
| --- | --- | --- | --- | --- |
|  | Team Leader (TL)/Senior Highway Engineer | * Bachelor’s degree in Civil Engineering, post graduate degree in transportation/highway engineering is preferred, * 20 years professional experience with 10 years overseas experience * 15 years experience in planning, preparation, design and construction supervision of highway/rural road projects with at least 5 years experience as team leader. | 1 | 26 |
|  | Deputy Team Leader (DTL)/ Highway Engineer (HE) | * Bachelor’s degree in Civil Engineering, post graduate degree in transportation/highway engineering is preferred * 20 years of professional experience * 10 years experience in road pavement design, maintenance and construction supervision works. | 1 | 26 |
|  | Maintenance Management Specialist | * Bachelor’s degree in Civil Engineering or equivalent; * 15 years of professional experience; * Proven skill in asset management ; * 8 years experience inplanning, managing and supervising infrastructure maintenance, preferably with a focus on rural road; | 1 | 26 |
|  | Quality Assurance Specialist | * Bachelor’s degree in Civil Engineering or equivalent * 15 years of professional experience; * 10years of experience in Quality Control/ Quality Assurance * 5 years’ experiencein road work’s quality control. | 1 | 26 |
|  | Procurement Specialist | * Bachelor’s degree in engineering, post graduate degree in procurement/contract management is preferable. * 7 years of professional experience * 5 years of experience in preparation/management of construction contracts and procurements. | 1 | 26 |
|  | Environmental Specialist | * Bachelor’s degree in environmental engineering or environmental science * 12 years of professional experience * 10years experience in environmental impact assessment for road projects | 1 | 26 |
|  | Social Scientist cum Resettlement Specialist | * Master’s degree in Sociology or any relevant social science discipline * 12 years of professional experience * 10 years of experience in resettlement/ land acquisition for road / infrastructure projects and familiar with the World Bank’s social safeguards policies | 1 | 26 |
|  | Road Safety Specialist | * Bachelor’s degree in Civil Engineering, preferably master’s degree in Transportation * 12 years of professional experience * 5 years experience in road safety design/Audit | 1 | 26 |

**Table 2: National Non-Key Experts**

(CVs to be evaluated on pass/fail basis during negotiation)

| **Sl. No.** | **Position** | **Qualifications & Experience** | **Number** | **Person-Months** |
| --- | --- | --- | --- | --- |
|  | Pavement & Structural Design Engineer | * Bachelor’s degree in civil engineering, Post graduate degree on relevant topic is preferred * Min. 15 years of professional experience * Min. 10 years of experience in road pavement and structure design | 1 | 12 |
|  | Assistant Resident Engineer | * Bachelor's degree in Civil Engineering; * 12 years of professional experience; * 10 years experience in supervising road and infrastructure maintenance, construction, improvement work, preferably with a focus on rural road; | 18 | 468 |
|  | Junior Monitoring Officer | * Bachelor's degree in Civil Engineering or equivalent; * 5 years experience in project monitoring, report generation and other office works preferably on road and other infrastructure maintenance/construction/improvement project; | 3 | 78 |
|  | Junior Environmental Specialist | * Bachelor's degree in environmental engineering or environmental science * 5 years experience on environmental impact assessment and management in road projects | 1 | 26 |
|  | Junior Training Expert | * Bachelor's Degree in Civil Engineering or in any relevant discipline from any recognized university. * 5 years of general working experience * 2 years of experience in training activities | 1 | 26 |
|  | Field Supervising Engineer | * Bachelor’s Degree in civil engineering with 5 years professional experience or Diploma in civil engineering with 10years of professional experience * Experience in supervisingroad and infrastructure maintenance, construction, improvement work, preferably with a focus on rural road/infrastructure projects | 18 | 468 |
|  | Junior Highway Design Engineer | * Bachelor’s degree in civil engineering, post graduate degree ispreferred * 5 years of experience in road pavement design | 2 | 16 |
|  | Laboratory Inspector / Technicians | * Diploma in civil engineering * 10 years of professional experience * 5 years of experience as Laboratory technician | 18 | 468 |
|  | Estimator | * Diploma in civil engineering * 8 years of professional experience * 5 years of experience as estimator in the relevant field. | 2 | 52 |
|  | CAD Operator | * Diploma in civil Engineering * 5 years as CADoperator | 2 | 52 |

**H. SUPPORT STAFF**

The D&SC will provide necessary support staff like Surveyors, Accountant, Manager, Office boys etc. required to carry out their tasks and fulfill their responsibilities effectively and efficiently within the stipulated time.

**I. SUPPORT SERVICES**

The consultant will include cost for vehicles and communication services for the effective implementation of their assignment including operation and maintenance cost of those in the financial proposal.

# J. COUNTERPART SUPPORT

* All officials under the PMU will be the key government’s counterpart officials. The existing staff of LGED at HQ, Division, Region, District, and Sub-district level will also work as the counterpart staff.
* Both the counterpart government officials at PMU and regular LGED set-up will provide all kinds of assistance to the D & S consultant team in rendering their services.
* The executing agency (LGED) will provide the consultants with suitable office space, if available, only. LGED will provide project data and reports available with it to the consultant.
* Office furniture, hardware and software, lighting, electricity including consumption bill, air conditioning, communication and other consumables will be at the cost of the consultant.
* Any non-consumable items purchased under this consultancy package shall be handed over to LGED after completion of the contract.
* Consultant team will propose support staff (Accountant, Manager, Office boys) in its proposal for PMU level.