

. Terms of Reference

Project Implementation Support Consultant (PISC) for Rural Connectivity Improvement Project

1. Background:

1. The Government of the People's Republic of Bangladesh has applied for financing from the Asian Development Bank (ADB) for improving priority Rural Road Network in Bangladesh. The Ministry of Local Government, Rural Development and Cooperatives (MLGRDC) acting through Local Government Engineering Department (LGED) of the Government of Bangladesh (the Client) has initiated Rural Connectivity Improvement Project which aims to improve about 2,683.269¹ kilometres (km) of rural roads by widening and strengthening the existing rural road infrastructure.
2. The project is proposed to be implemented by LGED through the project management unit (PMU) set up at the headquarter level. The PMU will be assisted by project implementation unit (PIU) which will be set up at division level. The contract administration of the civil works is proposed to be carried out by LGED district/upazila offices.
3. The project will cover five divisions of Bangladesh spanning almost the entire country except the north eastern part. The project will enhance people's accessibility to the market thus creating opportunities for social and economic development apart from increased income. The project also proposes to enhance the access to basic services, such as for health and education of the rural population.
4. The five divisions covered are Dhaka, Chattogram, Khulna, Rajshahi and Rangpur. The roads to be improved under the project are located in 34 districts, and include improvements of upazila and union roads. These roads will be improved to paved and climate-resilient standards to provide all-weather road connectivity between agricultural production areas, growth center markets, and other parts of the country.
5. The project will have the following outcome: Transport efficiency on project roads increased. The key outputs include: (i) Rural road conditions between the selected rural communities, productive agricultural areas, and socio-economic centers improved; and (ii) Capacity of rural infrastructure agency and road users in project areas enhanced.

2. Objective of the Assignment:

6. The main objective of the project implementation support consultant (PISC) is to support the PMU, PIUs, the district- and upazila-level officials of LGED to implement the project. Broadly, the objectives are summarised below:
 - (i) review, check and if required do the engineering design of rural road infrastructure works necessary for implementation;

¹ "1,700 km to be financed under the Rural Connectivity Improvement Project (RCIP), with balance expected to be financed under ADB additional financing in 2019. The PISC will support the entire RCIP".

- (ii) assist the PMU/PIUs/district units/upazila units in the preparation and design of project activities;
- (iii) assist and advise the PMU/PIUs/district units/upazila units in all aspects of the contract administration of civil works;
- (iv) assist and advise the PMU/PIUs/district units/upazila units in the supervision of physical works, including improvement and upgradation of rural roads;
- (v) support the PMU/PIUs/district units/upazila units in project planning, monitoring, reporting and financial management;
- (vi) assist the PMU/PIUs/district units/upazila units to develop training programs for staff and other stakeholders in technical and non-technical areas to improve levels of competence and build a more community oriented and gender sensitive approach, adapting climate change, addressing road safety and taking up participatory approach to performing their duties and responsibilities;
- (vii) assist the PMU/PIUs/district units/upazila units develop cooperative linkages and partnership programs with concerned line agencies and private sector organizations associated with maximizing benefits to the poor from the infrastructure investment; and
- (viii) assist the PMU/PIUs/district units/upazila units in establishing an asset maintenance and management system.

3. Project Area

7. The project area is spread over 34 districts in 5 divisions. The division-wise road list along with the road length is shown in Table 1.

Table 1: Division-wise Road List

1. Dhaka Division

Sl. No.	Name of the District	Length of Road (km)
1.	Faridpur	59.521
2.	Gopalganj	78.405
3.	Madaripur	138.672
4.	Rajbari	70.67
5.	Shariyampur	47.955

Total 395.223 km

2. Chittagong Division

Sl. No.	Name of the District	Length of Road (km)
1.	B Baria	70.453
2.	Chandpur	40.139
3.	Chattogram	91.076
4.	Cumilla	94.313
5.	Cox's Bazar	37.954
6.	Feni	31.932
7.	Laxmipur	37.565
8.	Noakhali	55.761

Total 459.193 km

3. Khulna Division

Sl. No.	Name of the District	Length of Road (km)
1.	Chuadanga	107.700

2.	Jashore	201.269
3.	Jhenaidah	65.075
4.	Kushtia	78.835
5.	Magura	53.838
6.	Meherpur	13.081
7.	Narail	50.499

Total 570.297 km

4. Rajshahi Division

Sl. No.	Name of the District	Length of Road (km)
1.	Bogura	109.039
2.	Chapainawabganj	17.568
3.	Joypurhat	34.202
4.	Naogaon	103.199
5.	Natore	78.460
6.	Rajshahi	250.256

Total 592.724 km

5. Rangpur Division

Sl. No.	Name of the District	Length of Road (km)
1.	Dinajpur	203.741
2.	Gaibandha	87.690
3.	Kurigram	45.383
4.	Lalmonirhat	33.462
5.	Nilphamari	101.480
6.	Panchagarh	62.566
7.	Rangpur	54.129
8.	Thakurgaon	77.381

Total 665.832 km

4. Overall Scope of Services

8. The main task of the PISC can be broadly categorized under four heads, namely:
 - (i) Support/Assist LGED in engineering design and preparation of project specific safeguard documents.
 - (ii) Assist in preparation of documents related to procurement of works, goods and services.
 - (iii) Assist in supervision of civil works.
 - (iv) Develop capacity building measures for the client.
9. The PISC team shall work under the PMU's guidance to ensure completion of tasks assigned in a professional and time-bound manner.

10. The PISC team's scope of services shall include, but not be limited to the following:
- (i) Assisting LGED in necessary engineering surveys and investigation including subsoil investigation, hydrological and morphological study, if required for preparation of detailed engineering report.
 - (ii) Providing engineering support in designing various components (including road safety) required for execution of the project, based on surveys and investigations and 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, including software and formats to be adopted by LGED.
 - (iii) Assisting in preparation of engineer's estimates and tender documents for subsequent civil works under the project. The document must have provisions for road safety for upazila and union roads.
 - (iv) Assisting the PMU in preparing and implementing project activities, including planning, scheduling, procuring works, goods and services, setting methodologies, and training LGED staff for sustainable operations and maintenance of improved infrastructure, as well as operating the quality control regime.
 - (v) Assisting the PMU in planning, monitoring reporting and managing finances, including project framework techniques for planning, training and financial monitoring during project implementation.
 - (vi) Assisting and advising the PMU in all aspects of procurement including, evaluation of bids/proposals for goods and works, and contract awards.
 - (vii) Supporting in field supervision of civil works, developing and implementing procedures for regular on-site checking, quality control, testing and monitoring of works execution and construction methods.
 - (viii) Assisting and advising the PMU in administration of contracts.
 - (ix) Certifying payments to contractors and completion procedures; developing procedures for laboratory and field tests for materials quality control; support LGED materials laboratories operation; and certification of quality and work progress.
 - (x) Assisting the PMU in planning and implementing land donation scheme, where applicable, and reporting and documenting such; identifying and reporting adverse environmental and social impacts by carrying out initial environmental examination and initial social assessment for the subproject; modifying designs and practices to avoid land acquisition and mitigate the impacts, such as by preparing and updating environmental management plans (EMPs) and social mitigating plan; preparing monthly, quarterly and final reports including the draft project completion report that include a section on safeguards monitoring; and preparing semi-annual safeguards monitoring reports.
 - (xi) Assisting the PMU in preparation of overall project management plan, annual work plan including budget disbursement plan, and in preparing withdrawal applications to ADB.
 - (xii) Assisting the PMU in reviewing existing monitoring system and suggesting improvements on the monitoring system.
 - (xiii) Assisting the PMU in planning and implementing a training program including developing training manuals, preparing a training budget, and preparing training reports; assisting the PMU in preparing and implementing overseas training program under the project.
 - (xiv) Assisting the PMU in organizing semi-annual review meetings of the project.

- (xv) Preparing a Draft Completion Report at the end of the three-year maintenance activities of pilot projects. This report shall include, among other requirements, the traffic related survey on the newly constructed roads, pavement condition report. The data shall form the basis of future maintenance requirements after completion of the civil work contracts.
- (xvi) Preparing a Final Evaluation Report on the construction and 3-year maintenance activities.
- (xvii) Assisting the PMU in undertaking traffic survey, developing economic profile, undertaking economic and financial evaluation and all tasks related to a study of transport economics under the project.
- (xviii) Assisting the PMU in implementing the gender action plan including compliance monitoring; and preparing all social and gender related reports and other technical report as necessary.
- (xix) For smooth implementation of the project, the PISC is expected to perform any additional tasks/duties identified and assigned by the Project Director.

5. Institutional Arrangements:

11. Procurement of civil works will be executed through National Competitive Bidding. The Conditions of Contract will be the General Conditions of Contract followed by LGED. The “Project Manager” will be defined in the contract data, which normally will be the Executive Engineer of the district under which the project will be executed. The “Project Manager” will have his Authorized Representative at each upazila level who normally will be the Upazila Engineer of the project upazila.

12. The PISC will assist the executing agency, LGED, in the implementation of the project. The Consultant will work directly with LGED and support/assist the Project Director and his team in the PMU, Deputy Project Directors in PIUs at division level, and Executive Engineers at district level and in the project areas at the upazila level, in order to achieve the objectives of the project.

6. Duration of the Assignment:

13. The assignment of PISC is expected to commence in Q1 2019 and the services of the consultant team is required for 24 months during execution and 36 months during the maintenance period of five packages chosen on pilot basis.

7. Output and Reporting Requirements

14. The consultant’s outputs will include contributions to the project’s milestones, relating to the expertise of the consultants in the team.

15. The reporting requirements shall be as per Table 2:

Table 2: Reporting Requirements

Sl. No.	Report	Frequency	Due Period	No. of Copies	In CD or Flash Disk

1.	Inception Report	One time	Within 1 month after commencement date	5	2
2.	Monthly Report	Monthly	10th of the month following the reporting month	5	2
3.	Quarterly Report	Every 3 months	10th of the month following the reporting quarter.	5	2
4.	Annual Report	Four Times	1 month after the commencement month every year	5	2
5.	Midterm Report	One time	2.5 years after commencement date	5	2
6.	Construction and Maintenance Report	One time	After completion of construction plus three years of maintenance.	5	2
7.	Draft Project Completion Report	One time	At the commencement of Defects Liability Period.	5	2
8.	Project Completion Report	One Time	At the end of the assignment.	5	2

16. **Inception Report:** The report will include the consultant's proposals of the detailed project implementation arrangements and the planned activities for different components based on the initial assessment. The report will also include the detailed work program and approach towards the assignment.

17. **Monthly Report:** The consultant will submit a monthly report which must reflect all the activities undertaken during the month of the reporting period. The report must contain the targets and achievements.

18. **Quarterly Reports:** The consultant shall furnish quarterly progress reports on physical and financial progress and 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.

19. **Annual Reports:** The consultant shall furnish to the ADB and 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 shall include the Consultant's views on the strengths and weaknesses of the project implementation arrangements and remedial actions to be taken if any.

20. **Midterm Report:** The report will summarize the progress of achieving the physical and financial targets and DMF indicators. It will recommend actions to fill the gaps, if any. It will also review the project's compliance with environment and social requirements.

21. **Construction and Maintenance Report:** This report will consolidate the annual reports and focus on issues during implementation of the project. The report shall include, among other requirements, the traffic related survey on the newly constructed roads, and the Pavement Condition report.

22. **Draft Project Completion Report:** This report is to be submitted after completion of services but within the completion period. This report will include the project performance on technical and financial components including social and environmental issues.

23. **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.

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

25. **Manual for Project Implementation:** In addition to the reports mentioned above, the Consultant shall prepare a manual for administration, supervision and management of the project and the construction contracts to be implemented. It will serve as a guide and reference to the various officials in charge of the project management and supervision in discharging their duties in a smooth and systematic manner.

26. **Workshops and Training Sessions:**

- (i) **Seminars/Workshops.** The consultant shall conduct for LGED officials semi-annual seminars/workshops on key aspects of technical capacity improvement and progress to date. Workshops on social/environmental safeguards and social inclusion shall be conducted on a need basis.
- (ii) **Training sessions.** The consultant will provide on-the-job training to LGED officials on a day-to-day basis. Small class room style sessions shall be conducted monthly or quarterly as needed to supplement the daily trainings. The semi-annual seminars/workshops will present weaknesses and strengths of LGED officials identified during these training sessions, and the recommendations and suggestions from participants shall be used for improving the training methods.

8. STAFFING INPUTS

27. The consulting services will require the experts shown in Table 3 on an intermittent basis during 60 months, covering 24 months for construction period and 36 months for maintenance period for Pilot Packages selected for Construction and Maintenance.

Table 3: Required Consulting Services

Sl. No.	Particulars	Unit	Nos.	Estimated Man-Month
	A. Key Experts (International)			
1	Team Leader cum Senior Rural Road Specialist	PM	1	27
	Total for Key Experts (International)			27
	B. Key Experts (National)			

1	Deputy Team Leader cum Rural Road Engineer	PM	1	60
2	Contract Management Specialist	PM	1	30
3	Senior Safeguard Specialist	PM	1	24
4	Structural Engineer	PM	1	24
5	Financial Management Specialist	PM	1	44
6	Road Safety Specialist	PM	1	24
7	Resident Engineer cum Quality Control Engineer	PM	9	216
8	Transport Economist/ Benefit Monitoring and Evaluation Specialist	PM	1	18
9	Procurement Specialist	PM	1	24
10	Social Safeguard and Gender Specialist	PM	3	72
11	Environment Specialist	PM	5	45
12	Hydrologist	PM	1	12
13	Training Specialist	PM	1	24
	Total Key Experts (National)		27	617
	Total for Key Experts		28	644
	C. Non-key Experts (National)			
1	Assistant Resident Engineer	PM	34	1836
2	Field Supervising Engineer	PM	60	1764
3	Junior Engineer	PM	3	108
4	Training Coordinator	PM	1	24
5	Estimator	PM	5	156
6	CADD Operator	PM	2	24
7	MIS Manager	PM	1	60
8	Media Officer	PM	1	60
	Total for Non-Key Experts		107	4056
	Total for all Experts		135	4700

9. Qualification and Experience Requirements of Key Personnel

I. International Position

1. Team Leader cum Project Management Specialist Position at Head Quarter with PMU, LGED.

a) Qualification	Bachelor's degree in Civil Engineering with post graduate degree in transportation/highway/structural/pavement engineering. Contract Management degree will be preferred.
b) Total Professional Experience	20 years in planning, project management and implementation of rural infrastructure construction and maintenance works.

c) Project-related Experience	5 years' experience as a TL/PM. Experience of road construction and maintenance project financed by Multilateral Financing Institution will be an added advantage.
d) Overseas/Country Experience	Eight years overseas experience is required. Developing country experience preferred.

II. National Positions

1. Deputy Team Leader/ Rural Road Engineer

a) Qualification	Bachelor's degree in Civil Engineering with Post graduate degree in Transportation/Highway/ Structural engineering.
b) Total Professional Experience	20 years
c) Project-related Experience	10 years' experience in road sector in Bangladesh
d) Experience in working with international organizations/ agencies	Preferred

2. Contract Management Specialist

a) Qualifications	Bachelor's degree in Civil Engineering or other relevant fields. Preferable: Post graduate degree in Civil Engineering or other relevant fields; membership to professional institutions.
b) Total Professional Experience	10 years
c) Project-related Experience	6 years as contracts specialist in contract administration of highway or road construction contracts (at least two contracts administered under FIDIC contract or similar conditions of contract).
d) Experience in working with international org./ agencies	Preferred.

3. Senior Safeguard Specialist

a) Qualifications	Master's degree in Social science (Sociology/ Social Work/ Anthropology). Preferable: Post graduate degree in Environment Science or other relevant fields. Membership of professional institutions.
b) Total Professional Experience	15 years minimum
c) Project-related Experience	10 years of experience of working in community development and community awareness projects in linear highway project as Social Safeguard Specialist. Must be conversant with ADB's Safeguard requirement.

d) Experience in working with international organizations/ agencies	Preferred.
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4. Structural Engineer

a) Qualification	Bachelor's degree in Civil Engineering with Master's in Structural Engineering.
b) Total Professional Experience	15 years
c) Project-related Experience	10 years working experience in design of road, retaining walls, bridge/culvert and drainage structures.
d) Experience in working with international organizations/ agencies	Preferred

5 Financial Management Specialist

a) Qualification	Bachelor's degree in Finance/Accounts/Commerce/Business Administration /Chartered Accountant. Master's degree will be preferred. Professional designation in accounting (e.g., CPA/CA/CMA).
b) Total Professional Experience	15 years
c) Project-related Experience	5 years of practical experience in the field of rural infrastructure construction and financing system and accounting/auditing in Bangladesh. Knowledge of Computer based budgeting and accounting packages and direct working experience with rural infrastructure implementation project will be an advantage. Familiar with the financial rules and regulations of the Government of Bangladesh.
d) Experience in working with international organizations/ agencies	Preferred

6 Road Safety Specialist

a) Qualification	Bachelor's degree in Civil Engineering. Master's degree in Transportation will be preferred.
b) Total Professional Experience	15 years
c) Project-related Experience	10 years of extensive experience in design and implementation of rural road safety in Bangladesh. A certified Road Safety Auditor will be preferred.
d) Experience in working with organizations/ agencies	Preferred

7 Resident Engineer cum Quality Control Engineer

a) Qualification	Bachelor's degree in Civil Engineering. Post graduate degree in Transportation/Highway/Construction Management/Construction Material engineering will be preferred.
b) Total Professional Experience	15 years
c) Project-related Experience	7 years' experience in road up-gradation and improvement project as Resident Engineer or 10 years' experience as Assistant Resident Engineer in Bangladesh. Knowledge of country specific specifications with respect to quality control.
d) Experience in working with international organizations/ agencies	Preferred

8 Transport Economist/ Benefit Monitoring and Evaluation Specialist

a) Qualification	Master's degree in Economics/ Transport Economics/ Finance
b) Total Professional Experience	15 years
c) Project-related Experience	7 years' experience in analysing economic aspects of road project including economic analysis. Experience in Benefit Monitoring of road projects will be preferred.
d) Experience in working with organizations/ agencies	Preferred

9 Procurement Specialist

a) Qualification	Bachelor's degree in Engineering. Master's degree in Procurement will be preferred.
b) Total Professional Experience	15 years with 5 years in direct procurement related activities.
c) Project-related Experience	8 years' experience in procurement planning, preparation of bid documents, tendering, bid evaluation. Training on Public Procurement will be an added advantage. Understanding of Public Procurement Act-2006 and Public Procurement Rules 2008 of Government of Bangladesh is required.
d) Experience in working with organizations/ agencies	Preferred

10 Social Safeguard and Gender Specialist

a) Qualification	Master's degree in Sociology or other relevant field of Social Sciences.
b) Total Professional Experience	12 years with 5 years in sociological aspect/ resettlement issues in a linear project.
c) Project-related Experience	6 years' experience of Resettlement and Rehabilitation issues for a donor funded project. 5 years of experience in dealing with Safeguard and Gender related issues in a linear project as per Government of Bangladesh regulations and in accordance with the requirement of development partner; familiarity with the government system, profound communication skill with the local stakeholders.
d) Experience in working with organizations/ agencies	Preferred.

11 Environment Specialist

a) Qualification	Graduate in Civil Engineering/Environmental Science and Post Graduate degree in Environmental Engineering or Environmental Science or other relevant fields.
b) Total Professional Experience	10 years with 8 years extensive experience in the implementation of road projects.
c) Project-related Experience	5 years' experience concerning environmental issues for donor funded projects.
d) Experience in working with international organizations/ agencies	Preferred

12 Hydrologist

a) Qualification	Bachelor's degree in Civil/ Water Resources Engineering/ Hydrology.
b) Total Professional Experience	15 years
c) Project-related Experience	10 years of extensive experience of design and implementation of road in Bangladesh.
d) Experience in working with international organizations/ agencies	Preferred

13 Training Specialist

a) Qualification	Master's degree in any social science subject, preferably in development economics and planning.
b) Total Professional Experience	10 years
c) Project-related Experience	6 years' experience in training activities in transport sector and specific experience in training in rural infrastructure sector in Bangladesh.
d) Experience in working with international organizations/ agencies	Preferred

III. Non-Key Experts (National)

1 Assistant Resident Engineer (A.R.E.)

a) Qualification	Bachelor's degree in Civil Engineering. Post graduate degree in Transportation/Highway will be preferred.
b) Total Professional Experience	10 years
c) Project-related Experience	5 years' experience in road up-gradation and improvement projects as A.R.E./ Material Engineer in Bangladesh.
d) Experience in working with organizations/ agencies	Preferred

2. Field Supervising Engineer

a) Qualification	Diploma in Civil Engineering Bachelor's degree in Civil Engineering is preferred.
b) Total Professional Experience	8 years for Diploma Engineer/5 years for Bachelor's degree.
c) Project-related Experience	5 years as a site engineer or equivalent position on highway/road projects of similar nature.
d) Experience in working with international organizations/ agencies	Preferred

3. Junior Engineer

a) Qualification	Diploma in Civil Engineering
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	Bachelor's degree in Civil Engineering is preferred.
b) Total Professional Experience	5 years for Diploma Engineer.
c) Project-related Experience	3 years' experience (Diploma) and no experience (Bachelor's) as a site engineer or equivalent position in development projects of similar nature
d) Experience in working with international organizations/ agencies	Preferred

4. Training Coordinator

e) Qualification	Post-graduate degree in any social science subject, preferably in development economics and planning.
f) Total Professional Experience	10 years
g) Project-related Experience	8 years' experience in training activities in transport sector and specific experience in training in rural infrastructure sector in Bangladesh.
h) Experience in working with international organizations/ agencies	Preferred

5. Estimator

a) Qualification	Diploma in civil Engineering
b) Total Professional Experience	8 years
c) Project-related Experience	5 years' experience as an estimator in the relevant field.
d) Experience in working with international organizations/ agencies	Preferred

6. CADD Operator

a) Qualification	Diploma in Civil Engineering
b) Total Professional Experience	3 years
c) Project-related Experience	2 years as a CADD Operator or equivalent position on highway/rural road projects of similar nature.

d) Experience in working with international organizations/agencies	Preferred.
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7. MIS Manager

a) Qualification	Bachelor's degree in Economics/Statistics/Management.
b) Total Professional Experience	5 years
c) Project-related Experience	3 years' experience in development projects, especially in project processing, implementation, monitoring and evaluation. Experience in foreign aided projects will be preferred.
d) Experience in working with international organizations/agencies	Preferred.

8. Media Officer

e) Qualification	Master's degree in Communication/Mass media, or relevant subject with Bachelor's Degree in Journalism/IT/Communication/Mass media, or relevant subject.
f) Total Professional Experience	15 years
g) Project-related Experience	8 years' experience in the mass media development, multiplication, graphic design/audio-visual clip design, in development sector and related field.
h) Experience in working with international organizations/agencies	Preferred.

Position Based Tasks/Responsibility

28. The position-based tasks specified for each of the positions mentioned in Table 3 above are indicated in the Table 4 below. Consultants should note that the position-based tasks and responsibilities in Table 4 are only indicative and that the consultant needs to propose its own working arrangements as a team based on the overall requirements in the TORs.

Table 4: Position-based Tasks/Responsibility (Indicative Only)

Sl.No.	Position	Tasks/Responsibilities
I. Key International Expert		
1.	Team Leader (TL) Cum Senior Road Specialist	<p>Overall management of PISC team, acting as the Team Leader. The tasks typically include, but are not limited to, the following:</p> <ul style="list-style-type: none"> • Manage and guide the team of consultants; • Implement the tasks mentioned in the scope of works of the project; • Coordinate and consult with LGED and concerned stakeholders regularly; • Monitor the progress of the project in meeting the desired outcome and outputs; • Prepare improvement and financing plan for the rural road construction and maintenance; • Review and monitor progress of the design and monitoring framework; • Monitor the progress on fulfilling loan covenants if any and advise LGED on any issues; • Review the standard designs of LGED and suggest any modifications if required; • Assess the existing procurement method and strategy and suggest if any modifications are required; • Cooperate closely with the Project Director in planning, coordinating and monitoring project implementation; • Advise on the preparation of contract specifications in consultation with the Project Director, in accordance with Government requirements and Donor's Guidelines; • Assist the Project Director in the preparation of detailed budget for all project activities, and in project financial management control; • Advise and assist the Project Director in preparing a detailed project implementation plan and Annual Plans of Operation which will include training activities, taking account of the need for timely completion of preparatory tasks, and improvements and up-grading prior to the monsoon season; • Advise on any modifications or additions required to standard designs and technical specifications used by LGED in order to meet project requirements, and prepare design standards for innovative activities; • Prepare and operate a monitoring plan and reporting system on the performance of planned improvements of roads in the project area;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Advise on preparation of standard contract documents, contract packaging, management of survey and design consultants, tender evaluation and contract award; • Assist the Project Director in establishing effective road improvement planning and implementation procedures in the project districts, and assist the PMU staff to monitor the procedures for selection of structures on rural roads under the project; • Advise on land donation, if any, and environment safeguards, and assist the social team in monitoring participation, gender and development, poverty reduction and Benefit Monitoring Evaluation (BME) aspects of the project; • Advise the relevant specialist on design and conduct of training programs and orientation curriculum, employing participatory approaches and manuals for various courses and workshops in line with the project objectives including gender & social analysis, resettlement planning, environmental assessments, environmental management and climate change adaptation, road safety, and construction procedures, and other social development related areas in consultation with the PMU and other team members; • Ensure that poverty, social development and gender, as well as environmental and climate change issues, are integrated into all training/ orientation programs and courses where relevant; • Facilitate in arranging training and orientation programs at various levels in collaboration with relevant team members; • Prepare an annual training plan and budget and integrate the same into the overall annual plan of the project; • Act as resource person/ facilitator in different training courses; • Collect and compile training related data on a gender desegregated basis; • Assist the Transport/BME specialist in preparation of the BME of the project, • Advise on the coordination of project activities with relevant units and cells in LGED, and liaise with other development partners, in order to ensure that the project contributes to strengthening institutional capability in LGED; • Identify any actions to be taken to ensure achievement of the project's objectives, outputs and result;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Prepare Inception report and other periodic consolidated Monthly, Quarterly and Annual reports, and at the end of the assignment, prepare consolidated final report; • Assist with any other project relevant duties as may be reasonably assigned by the Project Director; • Assist the Employer in contract administration and management of the Project and civil work contracts including monitoring of validity of security deposit made by the contractor against advances if any; • Interpret the technical specifications and contract documents relevant to the project; • Obtain related approvals from concerned authorities for any redesign of road realignment, modifications; • Ensure receipt of requisite insurances as per contract requirements; • Review documentations and advance actions for handing over of site and advise on issuing notice to set the commencement date; • Ensure contractor effects and implements Quality Control System; • Issue approval to the Contractor's detailed work program, suggest modifications if any and ensure Contractor's compliance with the Program; • Issue approval to the Contractors' superintending personnel with modifications if any; • Scrutinize and approve Contractors' construction method statements; • Issue finalized or revised "Good for Construction Drawings" and additional detailed drawings required for the execution of the work; • Issue to the Contractor amended alignment plan and profile drawings based on review of tender drawings and updated topographic surveys; • Approve Contractor's working drawings based on setting out details; • Approve setting out data for the Works finalized as a result of ground verification and survey; • Monitor supervision of all works and ensure proper supervision as per contract requirement; • Monitor closely and regularly the progress of work and advise the Contractor about corrective measures; • Monitor status of Contractor's equipment, plant, machinery installations, housing and medical facilities;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Direct and/or advise Contractor to avoid and/or reduce the risk in case of any emergency; • Advise Contractor in all matters covering safety and care of work, environmental aspects and labour welfare; • Verify and recommend, if in order, Contractor's requests for advance and interim payment certificates; • Assist Employer in arranging relocation of services as may be needed; • Maintain a permanent record of all payments made to the contractors; • Approve "as built" drawings; • Inspect the works on completion of each milestone before accepting the work and report to the PMU; • Inspect works at appropriate intervals during Defects Notification Period and advise the PMU accordingly; • Ensure that contractors implement and maintain the environmental monitoring in compliance with the environmental management plan (EMP) as a part of the civil work contracts.
II	Key National Experts	
1.	Deputy Team Leader (DTL)/ Road Engineer	<ul style="list-style-type: none"> • Assist the Team Leader (TL) in all his roles and responsibilities mentioned above. • Act as TL during then TL's absence. • Act as TL during maintenance of Pilot Road Packages.
2.	Contract Management Specialist	<ul style="list-style-type: none"> • Assist TL/DTL in contract management. • Assist the team in resolving contractual issues related to Construction and Maintenance. • Assist in incorporating good practices in future contract documents.
3.	Senior Safeguard Specialist	<ul style="list-style-type: none"> • Train and provide guidance to the PMU/PIU and relevant LGED staff on principles of social and environment safeguard issues, GOB policy and ADB Safegaurd Policy Statement (2009) , and their implications for the project; • Provide specialist advise and support to the PMU for review and updating of the community participation framework; • Oversee the actual implementation of land donation with MOU through frequent field visits to check on progress and issues arising, and provide advice to the PMU/PIU on the implementation of the safeguard policy.

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Train the PMU officials, executive engineers and upazila engineers based in HQ, districts and Upazila in grievance procedures and regulations; • Assist LGED in preparing full land donation plan with MOU, as required; • Assist in establishing a system for administering the grievance procedures; • Support the BME survey and preparation of BME report by the Transport/BME Specialist; • Advise and assist the PMU/PIU and the LGED Executive Engineers in social aspects of the implementation of the land donation procedures, including participation by Project Affected Persons (PAPs); • Report regularly to the Project Director and the TL/DTL on the progress of land donation and issues arising, and advise on actions to address significant problems; • Support the PMU/PIU to prepare reports on the progress of land donation which will be submitted to ADB; • Assist PMU and TL/DTL in preparation of monthly, quarterly, semi-annual, and annual progress reports, and project completion report. • Review the project's safeguard systems assessment (PSSA) including the project's likely positive and negative environmental impacts and risks, identifying the safeguard principles; and prepare a matrix on how the environmental safeguards are triggered by the project; • Prepare a diagnostic assessment of applicable and relevant laws, regulations, rules, and procedures for managing and mitigating the likely impacts of the project (focusing on the SPS policy principles that are likely to apply to the project); • Assess the country's implementation practice, capacity, and commitment to plan, implement, monitor, and report on the safeguard measures; • Assess gaps in safeguard documents and prepare safeguard related action program to address the identified weaknesses, including consideration on the need for capacity strengthening measures; • Identify measures for monitoring environmental safeguard systems performance; • Undertake field monitoring visits to oversee the actions taken by the contractors in regard to the implementation of EMP and suggest corrective measures if necessary;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Assist PMU and TL/DTL in accumulating climate vulnerability data and information from various national and if possible from international sources; • Investigate the current status of climate change, vulnerability and impacts over the study area and analyse in detail future climate change projections and scenarios; • Make detailed investigation of climate change impacts on the project's rural roads and prepare the climate resilient criteria to be incorporated in the road design by considering future climate change scenarios; • Review periodically and report on the impact of project activities on the environment, and determine the nature and extent of environment impact, if and, caused by the Project; • Assist in facilitating participatory planning and the implementation of the initial environment examination recommendations; their proposed construction technology, and project implementation plan to identify any potential adverse impact; • Identify budget needs to strengthen LGED capacity for adequate environmental monitoring and management of the project; • Assist TL/DTL in reviewing all infrastructure design (climate resilient structure), their proposed construction technology, and project implementation plan to identify any potential adverse environmental impacts and climate risks; • Advise and support LGED in building in-house capacity for the training of LGED staff to carry out initial environmental examination for its projects, awareness-building of and motivating stakeholders/beneficiaries on environmental issues; • Monitor EMP and prepare compliance progress toward the expected outcomes, verify monitoring information to identify adverse environmental impacts, document results, identify the necessary corrective actions, and reflect them in a corrective action plan; • Keep liaison with institutions responsible for climate change issues in Bangladesh to keep abreast on all information necessary to assist the TL in planning and designing climate resilient infrastructure for the project; • Develop monitoring and guidance tools for climate resilient improvements of the rural roads including climate resilient check list; • Prepare training materials and provide training to the LGED engineers and stakeholders on environment and climate change, impacts and adaptation especially for climate resilient road maintenance;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Contribute to the training of LGED staff and contractors on implementation procedures and technical matters related to environment and climate change compliance; • Provide inputs into training course for the project as required; • Prepare environmental field monitoring report, quarterly, annual, and midterm progress reports, and project completion report; • Other duties as may be identified by the Project Director and TL/DTL.
4.	Structural Engineer	<ul style="list-style-type: none"> • Liaise with the PIU, district and upazila LGED staff and assist as required in the design of embankment, pavements, drainage structures and protection works; • Responsible for all types of design such as for roads, culverts, drainage structures and protection works; • Assist PMU and TL in developing standard design and technical specifications covering climate-resilient and road safety measures for all project civil works • Conduct engineering surveys and investigations as required for preparing designs of civil works under the project; • Prepare engineering drawings for roads, culverts, drainage structures and protection works to be executed under the project; • Prepare technical design criteria for roads and culverts specially in embankment design, protection measures, cross drainage capacity; • Report all unusual design conditions to the TL and DTLs and discuss solutions appropriate to the conditions; • Undertake special designs if necessary where standard design produced by LGED requires modification; • Undertake regular field visits to the project districts to review implementation and supervision of civil works and contribute to resolving any issues arising; • Arrange to carry out any necessary changes in design during the construction period; • Assist PMU/TL as necessary in all respect of design and specification; • In conjunction with PMU check all designs and documents prepared for the projects; • Contribute to the training of PMU and LGED district and Upazila staff on project implementation procedures and technical matters; • Provide inputs to developing a training course for the project as required; and

Sl.No.	Position	Tasks/Responsibilities
5.	Financial Management Specialist	<ul style="list-style-type: none"> • Work under supervision and guidance of PMU and TL/DTL, provide support and guidance to the PMU and LGED financial and accounting staff, including district accounting staff; • Develop a monitoring format for monthly progress monitoring of activities and tasks relevant to financial management of the project. • Effectively manage the financial aspects of the project in a timely and coordinated manner. • Be responsible for accurately monitoring and reporting actual and projected expenditures of funds (from government and ADB sources) on a monthly basis and quarterly basis. • Assist PMU to prepare monthly and quarterly financial statements, and quarterly, semi-annual, and annual progress reports and completion report. • Visit district accounting staff periodically for compliance monitoring of disbursement and accounting requirements and provide technical support. • Liaise with representatives of the ADB for the project, as necessary and directed by the Project Director. • Assist PMU to prepare annual project financial statements in the form acceptable to ADB. • Advise on actions to be taken to mitigate gaps in internal controls and effectively follow up on actions to be taken. • Advise on compliance with loan covenants and ensure that compliance with the covenants is maintained. • Advise and monitor audit observations, and effectively follow up and implement audit recommendations for resolving any audit issue. • Assist PMU to address issues raised by ADB on audited project financial statements and effectively follow up on actions to be taken. • Ensure adherence to ADB requirements and regulations in financial reporting and controls. • Perform any other relevant tasks given by the Project Director and TL/DTL. • Provide capacity building support to LGED (including PMU and district staff of the project). • Identify training needs of LGED staff, prepare tentative training program and coordinate with other relevant projects in preparing training modules, and implement the training program

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Prepare manuals for conducting continuous financial training and provide annual financial training to LGED staff • Ensure that relevant staff of LGED and other offices understand the differing requirement of the co financiers in budgeting and disbursing funds • Advise on the TORs for conducting internal audits • Assist with any other duties as may reasonably be assigned by LGED and agreed with the ADB • Prepare monthly report, quarterly report, annual report in connection to the financial management of the project's, including status of Financial Management Action Plan (in the Project Administration Manual) and LGED capacity building support. • Assist in monitoring of security deposit validity against advances made to the contractors if any
6.	Road Safety Specialist	<ul style="list-style-type: none"> • Take stock of the prevailing situation and trends by studying accident data and reviewing reports; • Review the Traffic Safety Plan and the accident statistics of the project area (district/upazila), and carry out detailed road traffic safety inspection and design works to meet the project objectives; • Assist the TL/DTL in his/her works and carry out the detailed design and cost estimates for the road safety component; • Conduct road safety audit/inspection on sample roads (at least two from each district) and document the issues and the counter measures (engineering and non-engineering); • Supervise the road safety works implemented in the project area and collect impact data following the monitoring data; • Identify project districts with higher accident rates and conduct road safety training in that district vigorously; • Assess the impact of the proposed activities in reducing accident incidents; • Provide training and workshops for LGED staff, stakeholder, beneficiaries, community people, LGIs representatives, vehicle operators and vehicle owner on road safety issues; • Contribute content on road safety activities, status and issues to prepare monthly report, quarterly report, annual, and midterm progress reports, and project completion report; • Assist LGED in formulating and applying an LGED-focused rural road safety policy and action plan; • Develop and oversee a road accident data management system for the RMRSU, including defining the data

Sl.No.	Position	Tasks/Responsibilities
		requirements and collection procedures, and conducting the initial data analysis;
7.	Resident Engineer cum Quality Control Engineer	<ul style="list-style-type: none"> • Assist the PMU/PIU and TL/DTL in implementation of all activities of the project; • Assist the PMU/PIU and TL/DTL in the preparation of annual road improvement plans of operations; • Assist the PMU/PIU and TL/DTL in planning, coordinating and monitoring project implementation including preparation of detailed budgets for all project activities; • Assist PMU/PIU and TL/DTL to assess, select and prepare the list of candidate road subprojects for improvement based on criteria and detailed road condition survey; • Assist the PMU/PIU and TL/DTL in developing standard contract documents for the project's civil works, contract packaging, preparation of tender/ bidding documents, and evaluation of tenders for the civil works; • Oversee and supervise the work of Assistant Resident Engineer and Field Supervising Engineers (FSEs); • Oversee and support the engineering survey (Topographical Survey and Detailed Road Condition Survey) and data collection for all rural infrastructure improvement subprojects, including sample site inspections, and recommend remedial actions to the PMU where problems arise; • Assist PMU and TL/DTL in developing standard design and technical specifications covering climate-resilient and road safety measures for all the civil works; • Assist PMU in verifying improvement cost estimates for selected roads including for climate proofing infrastructure proposed for improvement; • Monitor the progress and quality control of the improvement activities of subprojects administered by LGED District and Upazila Offices; • Undertake regular field visits to the project districts to review implementation and supervision of the civil works, and contribute to resolving any issues arising; • Assist PMU to monitor the progress of land acquisition or land donation with MOU; • Guide and oversee the work of Environment/Climate Change Specialist and check the effectiveness of the environmental mitigation measures; • Contribute to the training of PMU, LGED staff (District and Upazila level) and stakeholders on project implementation procedures, technical matters, environmental and climate change matters; • Assist PMU/PIU and TL/DTL in providing certification of the due quantity and quality of works based on cross checking of on-site approvals by the Field Supervising Engineers;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Inspect the existing LGED laboratories, and define any additional equipment requirements and improvements in operational procedures and staffing to meet project needs; • Define training requirements for LGED laboratory and field supervision staff on testing and quality control procedures, including preparation of training materials as necessary; • Contribute to the training of LGED staff and contractors on testing and quality control procedures; • Monitor and check on a continuous basis, through regular visits and on-site inspections, the performance of laboratory and on-site testing, and advise on remedial actions as needed; • Provide continuing advisory support, through the LGED executive engineers and Upazila engineers, to laboratory and on-site supervision staff, on improvements in quality control procedures; • Assist the PMU and the LGED executive engineers in reviewing and checking site investigations carried out by others; • Report regularly to the TL/DTLs on quality control matters, and identify any critical issues, which require attention; • Advise on the content and organize training courses where necessary for LGED district and Upazila staff and for contractors on construction methods, on-site supervision and quality control, laboratory testing procedures, environmental requirements and contract management; • Contribute to the preparation of monthly, quarterly, annual and midterm report; • Assist with any other duties as may be reasonably assigned by the Project Director.
8	Transport Economist/ Benefit Monitoring and Evaluation Specialist	<ul style="list-style-type: none"> • Confirm traffic volumes and modal mix through traffic surveys, determine economic and financial parameters, and assess economic benefits; • Prepare economic profiles of project districts and the transport network; advise on the methodology to be used to determine and verify socio-economic benefits expected from the project (e.g., definition of road influence areas, bases for determining increasing yield, analyses of farm-gate pricing with and without upgraded and maintained infrastructure); • Estimate the net value from improvement of roads and facilities on social aspects and agricultural production; • Assess and quantify detailed costs and benefits of the project, and prepare economic and financial assessments; • Undertake a detailed economic and financial evaluation with sensitivity analysis of the subprojects; • Prepare item-wise detailed budget of the project, total cost estimates, and investment plan based on the subproject design cost estimates in a format acceptable to PMU;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Monitor benefits of the already implemented subprojects, assess accrued benefits, and find out constraints, if any, and suggest remedial measures to be adopted for the upcoming subprojects. • Assist in the preparation and determination of economic data for input into road improvement and upgrading management systems operated by the LGED, and assist in operation of the system and examine outputs relative to the project; • In close cooperation with the PMU, develop, improve or refine detailed methodologies, data collection instruments and analytical procedures for monitoring and evaluation (M&E) of implementation progress in physical and financial terms, and the overall economic and social impacts of project investments. • Plan and supervise the regular collection of data to monitor and evaluate the effects on traffic and the economic benefits of road improvement and upgrading; • Design and manage the conduct of special studies on the economic and social impacts as may be required; • Develop detailed methodologies, data collection instruments, and analytical procedures for monitoring and evaluation of overall economic and social impacts of project investments for preparation of the Baseline, Midterm and Terminal (BME) report; • Train BME field supervisors and LGED enumerators in data collection procedures, as required during project implementation, and carry out the analysis of the BME data collected; • Prepare a reporting schedule that facilitates the analysis of the project development objectives progressively and implement approved schedule, and reports progress and any issues of concern; • Assist the PMU and TL/DTL in preparation of monthly, quarterly, semi-annual, and annual progress reports, and completion report; • Other project related duties as may be identified by the Project Director and TL.
9.	Procurement Specialist	<ul style="list-style-type: none"> • Review the procurement plan of the project according to the Government of Bangladesh's procurement thresholds, procurement methods and approval requirements (prior or post) in connection with procurement of goods and works under the project, and advise the PMU on its application; • Support and advise the PMU in preparing, monitoring and reporting on their annual procurement plans for works and

Sl.No.	Position	Tasks/Responsibilities
		<p>goods, and in resolving any significant problems and issues arising;</p> <ul style="list-style-type: none"> • Assist the PMU in the procurement of civil works, equipment and vehicles, including preparation of specification and bidding documents, tendering and contract award; and preparing bid evaluation reports in accordance with ADB's procurement requirements; • Assist the PMU in the preparation of tender and contract documents for all construction and maintenance civil works, and in the tendering process, contract award and contract management and administration, in accordance with the GOB Public Procurement Rules, 2008; • Advise the PMU in resolving any significant issues and problems that arise in procurement and contract management; • Prepare training materials and contribute to the training of relevant LGED staff on procurement and contract management; • Support the PMU and TL/DTL in monitoring and reporting on procurement and contract management; • Assist TL/DTL and PMU in updating the procurement plan annually for goods and works, and suggest methods to be used; • Assess ongoing procurement reforms including e-procurement in the country, and feedback from the donor funded projects on the systemic issues; • Suggest how the country's procurement process can be further strengthened through this project; • Assist PMU and TL/DTL in preparation of monthly, quarterly, semi-annual and annual progress reports, and project completion report; • Perform other project related duties as may be identified by the Project Director and TL/DTL.
10.	Social Safeguards and Gender Specialist	<ul style="list-style-type: none"> • Support the PMU to develop and operate monitoring and reporting formats for different social aspects of project implementation. • Guide and support PMU on the identification and involvement of disadvantaged women, the poor and indigenous communities in the project activities and the generation of benefits for them. • Provide support to the PMU in monitoring and reporting on social aspects of project implementation.

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Generally, provide specialized guidance and support as required to the PMU staff on other aspects of the Project with social dimensions such as road safety, land donation and environmental management and adaptation. • Support the PMU as required in training initiatives for capacity development of the poor, women and other disadvantaged groups. • Assess the progress on key social issues in project implementation through regular field visits and inspections, report to the Project Director and the TL/DTL, and advise on actions to address significant problems arising. • Provide guidance in developing policy, programs and procedures of the project to implement the Gender Action Plan and enhance contribution to social development; • Assist the TL/DTL to plan, design, prepare curriculum, deliver, monitor and evaluate training/orientation program on gender and social analysis, and support incorporating gender aspects in the training for the project targeted participants • Provide social and gender inputs for all the trainings both at institution and community levels; • Ensure implementation and monitoring of Gender Action Plan; • Assist in installing a gender-based monitoring system at all levels in collaboration with the PMU, TL/DTL and Resident-cum-Quality Control Engineer; • Undertake and initiate research and analysis of operational strategies and impact of the project in attaining the goal of gender, and social development both at project and community levels; • Review and if necessary revise the Gender Action Plan; • Prepare a component-wise annual plan and budget for gender and development activities, and integrate this in the overall annual plan of the project; • Prepare monthly, quarterly, semi-annual and annual progress, and project completion reports on social, gender and poverty aspects; • Assist the PMU/PIU and TL/DTL in preparation of monthly, quarterly, semi-annual and annual progress and project completion reports; • Perform other duties as may be assigned by the Team Leader in consultation with the Project Director.

Sl.No.	Position	Tasks/Responsibilities
11.	Environment Specialist	<ul style="list-style-type: none"> • Review ADB SPS 2009, Government of Bangladesh applicable environmental laws and regulations, project's initial environmental examination report including all environment checklists included in the DPRs with emphasis on the individual roads/packages' likely positive and negative environmental impacts and risks, identifying the safeguard principles, and prepare a matrix on how the environmental safeguards are triggered by the project; • Assess the country's implementation practice, capacity, and commitment to plan, implement, monitor, and report on the safeguard measures; • Assess environment gaps, if any, prepare safeguard related action program to address the identified weaknesses, including consideration on the need for capacity strengthening measures; • Identify measures for monitoring environmental safeguard systems performance; • Undertake at least semi-annual field monitoring visits to oversee the actions taken by the contractors in regard to the implementation of EMP and suggest corrective measures if necessary; • During preparation of bidding documents, clearly identify environmental responsibilities; • Assist LGED to review the Construction Contractor's Environmental Program to be prepared by the contractor in accordance with the EMP, relevant plans and ADB Environmental Guidelines, and to make recommendations to LGED regarding any necessary amendments for its approval; • Assist LGED to implement the measures identified in the EMP to include liaisons with concerned agencies to secure necessary clearances and permits (e.g., tree cutting, utility shifting, working near irrigation canals); • Monitor the effectiveness of EMP and negative impacts on environment caused by the construction works, and provide technical advice, including a feasible solution, so the LGED can improve the situation when necessary; • Prepare bidding documents which include the clauses to have the Contract comply with the requirements of the EMP and SPS 2009; • Assist PMU and TL/DTL for accumulating climate vulnerability data and information from various national and if possible from international sources;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Investigate the current status of the climate change, vulnerability and impacts over the study area and analyse in detail future climate change projection and scenario; • Make detailed investigation of the climate change impacts on the rural road subprojects and prepare the climate-resilient criteria to be incorporated in the designs by considering future climate change; • Review periodically and report on the impact of project activities on the environment and determine the nature and extent of environment impact, if caused by the Project; • Assist in facilitating participatory planning and the implementation of the initial environment examination recommendations; their proposed construction technology, and project implementation plan to identify any potential adverse impact; • Identify budget needs to strengthen LGED capacity for adequate environmental monitoring and management of the project; • Assist TL/DTL in reviewing all infrastructure design (climate resilient structure), their proposed construction technology, and project implementation plan to identify any potential adverse environmental impacts and climate risks; • Advise and support LGED in building in-house capacity for the training of LGED staff to carry out initial environmental examination for its projects, awareness-building of and motivating stakeholders/beneficiaries on environmental issues; • Conduct compliance inspections to monitor EMP and prepare compliance progress toward the expected outcomes, verify monitoring information to identify adverse environmental impacts, document results, identify the necessary corrective actions, and reflect them in a corrective action plan; • Keep liaison with institutions responsible for climate change issues in Bangladesh to keep abreast on all information necessary for to assist team leader in planning and designing climate resilient infrastructure for the project; • Develop monitoring and guidance tools (e.g., self-monitoring reports) for climate resilient improvement and upgrading of the rural roads including climate resilient check list; • Prepare training materials and provide training to the LGED engineers and stakeholders on environment and climate change, impacts and adaptation especially for climate resilient road maintenance;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Contribute to the training of LGED staff and contractors on implementation procedures and technical matters related to environment and climate change; • Provide inputs to developing a training course for the project as required; • Conduct at least 3 environmental inspections during the construction phase: (i) First report at pre construction stage, (ii) Second report after three months of start of construction or on completion of 25% construction, and (iii) Third report after seven months of start of construction or on completion of 75% of construction; • Prepare environmental field monitoring report, quarterly report, annual report, midterm report and project completion reports; • Support the TL/DTL in preparing the monthly, quarterly, annual, midterm and project completion reports; • Perform other duties as may be identified by the Project Director and TL/DTL.
12.	Hydrologist	<ul style="list-style-type: none"> • Develop baseline condition of hydrological features of the study area, establish the drainage pattern and catchments' boundaries; • Review past and present morphological processes, i.e., erosion and deposition patterns, flow dynamics and sediment transport; • Analyse rainfall-runoff, tide, wave, drainage basin, river water levels, frequency analysis and establishment of design flood event of the project area; • Collect and analyse relevant hydrological data, in consultation with LGED design cell, and assess the requirement for additional cross-drainage capacity on project roads in order to maintain natural drainage; • Based on analysis of hydrological data, assist the Senior Design Engineer in establishing technical design criteria for roads and bridges especially in embankment design, protection measures, and cross drainage capacity; • Establish potential areas for erosion of all road alignments in riverine and wetland areas, and assist in roadside plantation and turfing program under the project; • Review climate change scenario and available reports on climate change and work with Environment cum Climate Change Specialist in assessment of potential impacts of climate change and sea level rise; • Recommend options for improving design criteria of the rural infrastructures (roads, embankments, bridges, culverts, etc.)

Sl.No.	Position	Tasks/Responsibilities
		<p>related to hydro-morphological analysis considering climate change scenarios;</p> <ul style="list-style-type: none"> • Provide support to the design engineers to come up with an improved climate resilient rural infrastructure design; • Prepare relevant reports on the hydrological and morphological areas; • Assist PMU and TL/DTL in preparing the monthly, quarterly, annual, and mid-term progress reports, and project completion report; • Perform any other project related work, as may be advised by the Project Director and TL/DTL.
13.	Training Specialist	<ul style="list-style-type: none"> • Develop training programs for LGED staff and other stakeholders in technical and non-technical areas to improve levels of competence and build a more community oriented and gender sensitive approaches for climate change adaptation and road safety, and apply a participatory approach in performing their duties and responsibilities; • Co-ordinate with different training institute, individual trainers, agencies of GoB and facilitate in arranging training programs including in the logistics • Advise and coordinate with relevant experts in the design and implementation of basic training programs and orientation curriculum employing participatory approaches; compile handbooks and manuals for various courses in line with the project objectives; • Ensure that poverty, social development and gender as well as environmental issues are integrated in formal training programs and courses where related; • Assist in Training Needs Assessment: (TNA) of the representatives and officials of the various stakeholders, arrange formal training programs at various levels in collaboration with relevant team members; • Coordinate the training of PMU, LGED staff (district and upazila levels) and stakeholders on project implementation procedures, technical, environmental and climate change matters; • Coordinate formal training activities for LGED staff (district and upazila levels) at the relevant venue and ensure implementation and monitoring of the training activities; • Supervise and monitor district- and upazila-level training programs. • Prepare an annual training plan and budget and integrate the same into the overall annual plan of the project; • Act as resource person/facilitator in formal training courses and work as a trainer in training of trainers (TOT). • Prepare training program, materials or modules; • Collect and compile training related data/information;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Evaluate the effectiveness and assess impact of training programs with gender and environment perspectives; • Prepare the monthly, quarterly, annual, and mid-term training reports at different time to time and final report at the end of the project; • Assist PMU and TL on all matters related to training activities.
III	Non-Key National Experts	
1.	Assistant Resident Engineer	<ul style="list-style-type: none"> • Assist in management and contract administration of the assigned project road packages. • Scrutinize and / or review Contractor's superintending personnel and report to TL, on modifications, if any. • Interact with Employer's representative at divisions/districts. • Scrutiny, checking and verification of setting out data • Carry out supervision of all works as per approved method statements. • Examine Contractor's preparation and the completed position of work as per "request for inspection," and promptly advise the contractor. • Monitor closely and regularly the progress of work and report to the TL/Employer's representative at divisions/districts. • Carry out regular inspection of Contractor's equipment, plant, machinery, installations, housing and medical facilities. • Direct Contractor to carry out works, as may be necessary, to avoid or reduce the task in case of any emergency. • Supervise the Contractor on all matters concerning the safety of works, workmen and environmental aspects and labour welfare. • Witness sampling and testing being carried out by staff of the Contractor and undertake additional audit tests to ensure quality. • Monitor and review the test results/ certificates for all construction materials and/or sources of materials, and report to TL. • Examine the requests for advances and monthly statements of contractors and examine interim payment certificates. • Assist the Employer in correspondences, arranging meetings and preparation of details related to the assigned project road package. • Maintain a permanent record of all measurements for the works /quantities to be paid for and payment dates. • Assist TL in preparing reports. • Review "as-built" drawings prepared by the Contractor and maintain record of tests of all data and records.

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Maintain a permanent record of all tests carried out for monitoring the quality of works. • Maintain a day-to-day journal recording all events relevant to the works. • Assist the PMU/TL in planning, coordinating and monitoring of project implementation, including preparation of the annual plans of operations and detailed budgets for all project activities. • Undertake transect walk and prepare subproject-wise Detailed Project Reports (DPRs) if required on a particular road, with the assistance of the team of consultants and field-level LGED officials. Thereafter, submit these DPRs to the TL for submission to the Project Director, for approval of the ADB; • Identify project management issues arising from the monitoring of physical and financial progress, and bring these to the attention of the Project Director; • Assist in the development of standard designs and technical specifications for all the civil works; • Review detailed engineering designs and bills of quantities, and evaluate tenders for civil works; • Undertake regular field visits to all project districts to review implementation and supervision of the civil works, and contribute to resolving any issues arising; • Prepare procedures for the conduct of regular road surveys and traffic count surveys on bitumen-surfaced upazila roads (UZR) and prepare procedures for planning the annual program of UZR and UNR (Union Roads) for improvement works under the project; • Assist the PMU to monitor the progress of land acquisition/land donation if any, and the application and effectiveness of environmental mitigation measures; • Contribute to the training of PMU and LGED district and upazila staff on project implementation procedures and technical matters; • Advise on the establishment of sample on-site checks of the execution of civil works, and of quality and quantity control, and provide advice on remedial actions as required; • Assist with the certification of the due quantity and quality of all works, based on cross-checking of on-site approvals by the Field Supervision Engineers; • Assist the PMU and the executive engineers in identifying training requirements for LGED district and upazila staff and for local contractors; • Advise on the content and organization of training courses where necessary, and the conduct of training for LGED

Sl.No.	Position	Tasks/Responsibilities
		<p>district and upazila staff and for local contractors, on construction methods, on-site supervision and quality control, laboratory testing procedures, and contract management;</p> <ul style="list-style-type: none"> • Contribute to the preparation of quarterly, annual and mid-term reports, and participate in regular co-ordination meetings with project implementation staff; and • Assist with any other duties as may be reasonably assigned by the Project Director and agreed with the ADB.
2.	Field Supervising Engineer	<ul style="list-style-type: none"> • Assist in preparing the annual district improvement and upgrading program for civil works; • Assist in monitoring the progress of individual contracts and in taking remedial measures as required; • Assist in undertaking, guiding, checking and supervising detailed engineering (topographical, detailed road condition survey, traffic survey), social, environmental and economic survey; • Advise on determining contract package appropriate to contractors; • If required, assist in expediting land acquisition/land donation procedures; • Monitor on-site material and equipment storage and storage and handling procedures, and environmental practices, and advise on remedial measures if necessary; • Ensure the implementation of the EMP; • Assist site supervision of all improvement and upgrading works to ensure that design standards and technical specifications are achieved, including use of appropriate construction methods, on-site in the quality control, and proper checking and measurement of quantities and advise on remedial actions as required; • Jointly measure and check with LGED office all works presented for payment, jointly approve the quantity and quality of all improvement and upgrading works; • Contribute to the training of LGED district and upazila staff, and of contractors in on-site supervision procedures, construction methods and contract management; • Identify any issues related to laboratory testing which should be addressed by the Resident cum Quality Control Engineer; • Closely work under the instructions of Resident cum Quality Control Engineer; • Regularly and promptly report to the Resident cum Quality Control Engineer;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> Periodically inspect quality control tests of materials and works; Monitor if any grievances have been registered by the beneficiaries; Inform and suggest promptly any relevant information from the field which will improve the implementation of the project; Report regularly to the PMU and TL/DTL and Resident cum Quality Control Engineer on progress and performance of civil works, and identify any critical issues which require attention; Perform any other relevant assignments given by the Project Director and TL/DTL.
3.	Junior Engineer	<ul style="list-style-type: none"> Assist in preparing the annual district improvement and upgrading program for civil works; Assist in monitoring the progress of individual contracts and in taking remedial measures as required; Assist in undertaking, guiding, checking and supervising detailed engineering (topographical, detail road condition survey, traffic survey), social, environmental and economic surveys; Advise on determining contract packages appropriate to contractors; If required, assist in expediting land acquisition/land donation procedures; Maintain a permanent record of all measurements for the works /quantities to be paid for and payment dates. Assist the PMU/TL in planning, coordinating and monitoring of project implementation, including preparation of the annual plans of operations and detailed budgets for all project activities. Undertake transect walk and prepare subproject-wise Detailed Project Report (DPR) if required on a particular road, with the assistance of consultant team members and field-level LGED officials. Thereafter, submit these DPRs to the TL for submission to the Project Director, for approval of the ADB; Ensure the implementation of the EMP; Assist site supervision of all improvement and upgrading works to ensure that design standards and technical specifications are achieved, including use of appropriate construction methods, on-site quality control, and proper checking and measurement of quantities, and advise on remedial actions as required;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Review of detailed engineering designs and bills of quantities, produced by others, and evaluation of tenders, for civil works; • Jointly measure and check with LGED office all works presented for payment; jointly approve the quantity and quality of all improvement and upgrading works; • Contribute to the training of LGED district and upazila staff, and contractors in on-site supervision procedures, construction methods and contract management; • Identify any issues related to laboratory testing which should be addressed by the Resident cum Quality Control Engineer; • Monitor if any grievances have been registered by the beneficiaries; • Inform and suggest promptly any relevant information from the field which will improve the implementation of the project; • Report regularly to the PMU and TL/ on progress and performance of civil works, and identify any critical issues which require attention; • Assist with any other duties as may be reasonably assigned by the Project Director.
4.	Training Coordinator	<ul style="list-style-type: none"> • Advise and coordinate with relevant experts in the design and implementation of basic training programs and orientation curriculum employing participatory approaches; compile handbooks and manuals for various courses in line with the project objectives; • Ensure that poverty, social development and gender as well as environmental issues are integrated in formal training programs and courses where related; • Assist in Training Needs Assessment: (TNA) of the representatives and officials of the various stakeholders, arrange formal training programs at various levels in collaboration with relevant team members; • Coordinate the training of PMU, LGED staff (district and upazila levels) and stakeholders on project implementation procedures, technical, environmental and climate change matters; • Coordinate formal training activities for LGED staff (district and upazila levels) at the relevant venue and ensure implementation and monitoring of the training activities; • Supervise and monitor district- and upazila-level training programs. • Prepare an annual training plan and budget and integrate the same into the overall annual plan of the project; prepare training program, materials or modules; • Collect and compile training related data/information;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Evaluate the effectiveness and assess impact of training programs with gender and environment perspectives; • Assist to prepare the monthly, quarterly, annual, and mid-term training reports at different time to time and final report at the end of the project; • Assist PMU and TL on all matters related to training activities.
5.	Estimator	<ul style="list-style-type: none"> • Assist in preparing the annual district improvement program for civil works; • Assist in monitoring the progress of individual contracts and in taking remedial measures as required; • Assist in undertaking, guiding, checking and supervising detailed engineering (topographical, detail road condition survey, traffic survey), social, environmental and economic surveys; • Advise on determining contract package appropriate to contractors; • If required, assist in expediting land acquisition/land donation procedures; • Maintain a permanent record of all measurements for the works /quantities to be paid for and payment dates. • Assist the PMU/TL in planning, coordinating and monitoring of project implementation, including preparation of the annual plans of Operations and detailed budgets for all project activities. • Undertake transect walk and prepare subproject-wise Detailed Project Reports (DPRs) if required on a particular road, with the assistance of consultant team members and field level LGED officials. Thereafter, submit these DPRs to the TL for submission to the Project Director, for approval of ADB • Ensure the implementation of the EMP; • Assist site supervision of all improvement works to ensure that design standards and technical specifications are achieved, including use of appropriate construction methods, on-site quality control, and proper checking, and measurement of quantities, and advise on remedial actions as required; • Review and check cost estimate, bills of quantities, produced by others, and evaluation of tenders, for civil works; • Jointly measure and check with LGED office all works presented for payment; jointly approve the quantity and quality of all improvement works;

Sl.No.	Position	Tasks/Responsibilities
		<ul style="list-style-type: none"> • Contribute to the training of LGED district and upazila staff, and contractors in on-site supervision procedures, construction methods and contract management; • Identify any issues related to laboratory testing which should be addressed by the Resident-cum-Quality Control Engineer; • Monitor if any grievances have been registered by the beneficiaries; • Inform and suggest promptly any relevant information from the field which will improve the implementation of the project; • Report regularly to the PMU and TL/ on progress and performance of civil works, and identify any critical issues which require attention; • Assist with any other duties as may be reasonably assigned by the Project Director.
6.	CADD Operator	Assist PMU and TL on all matters relating to computer-aided designs and outputs.
7.	MIS Manager	<ul style="list-style-type: none"> • Monitor and assist the PMU in using all the apps and softwares which will be used under this project; • Identify core information needs; • Develop monitoring framework for project outputs and outcome indicators; • Prepare a program monitoring and evaluation system assessment according to the ADB standard format; • Determine appropriate mechanisms/systems for independent verification of DMF indicators; • Seek to determine whether a system is in place for adequately monitoring and evaluating progress on results including DMF indicators; • Assist the Team leader in day-to-day operation of the project.
8.	Media Officer	<ul style="list-style-type: none"> • assist the PMU to manage the public awareness campaign and implement related activities and prepare printed and audio-visual materials regarding the project and its components; • preparation of publishable reports on different development activities/input/output/outcome of the project as well as LGED; • Assist PMU and TL on all matters related to media and awareness activities.