



LAO PEOPLE'S DEMOCRATIC REPUBLIC  
PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY

Ministry of Public Works and Transport  
Department of Roads

Ref. No. 02178 /DOR  
Date: 05 Feb 2025

Name of RFB Process: Implementation Support and Work Supervision (ISWS) Consultancy Services for the Construction of 12 New Bridges Along NR13 South in Bolikhamxay and Khammouan Provinces  
RFB Reference No.: ISWS-NR13S-12Bridges-QCBS-2024  
Project Name: Lao Resilient Roads Framework Loan  
EIB Loan No.: 91.077, Allocation 02, Lao Resilient Roads Framework Loan  
Country: Lao Peoples Democratic Republic

### Addendum # 1

#### To: Consultants who received the Request for Proposals (RFP)

Dear All,

In accordance with Clause 13.1 – Clarification and Amendment of RFP, the following modifications to the RFB have been made by the Department of Roads, MPWT:

#	Clause Reference	Original Text	Revised Text
1	ITC 12.1	Proposals shall be valid until 30 June 2025.	Proposals shall be valid until 15 July 2025.
2	ITC 14.1.2	Estimated input of Key Experts' time-input: 119 person-months Estimated input of Non-key Experts' time-input: 186 person-months Total estimated input for staff: 305 person-months	Estimated input of Key Experts' time-input: 115 person-months Estimated input of Non-key Experts' time-input: 186 person-months Total estimated input for staff: 301 person-months
3	ITC 17.7 and 17.9	The Proposals must be submitted no later than: Date: 25 February 2025 ...	The Proposals must be submitted no later than: Date: 11 March 2025 ...
4		The opening shall take place at: DoR Building, Meeting Room on the 2nd Floor Department of Roads, Ministry of Public Works and Transport Lane Xang Avenue, Vientiane Capital, Lao PDR Date: 25 February 2025 Time: 14:15 o'clock, Vientiane local time.	The opening shall take place at: DoR Building, Meeting Room on the 2nd Floor Department of Roads, Ministry of Public Works and Transport Lane Xang Avenue, Vientiane Capital, Lao PDR Date: 11 March 2025 Time: 14:15 o'clock, Vientiane local time.

5	ITC 21.1	#	CRITERIA / SUB-CRITERIA	POINTS	#	CRITERIA / SUB-CRITERIA	POINTS
		(i)	Adequacy and quality of the proposed methodology, and work plan in responding to the Terms of Reference:	30	(i)	Adequacy and quality of the proposed methodology, and work plan in responding to the Terms of Reference:	30
		1	Technical approach and methodology	15	1	Technical approach and methodology	15
		2	Work plan	5	2	Work plan	5
		3	Organization and staffing	10	3	Organization and staffing	10
		(ii)	Key Experts' qualifications, skills and experience requirements for the Assignment:	70	(ii)	Key Experts' qualifications, skills and experience requirements for the Assignment:	70
		1	Team Leader / Bridge Engineer (TL/BE)	20	1	Team Leader / Bridge Engineer (TL/BE)	20
		2	Materials and Pavement Engineer (MPE)	6	2	Materials and Pavement Engineer (MPE)	6
		3	Bridge Design Engineer (BDE)	6	3	Bridge Design Engineer (BDE)	6
		4	Contract Specialist (CS)	5	4	Contract Specialist (CS)	5
		5	Geotechnical Engineer (GE)	5	5	Geotechnical Engineer (GE)	5
		6	Quantity & Cost Engineer (QCE)	5	6	Quantity & Cost Engineer (QCE)	5
		7	Resident Engineers - 1 (RE-1)	6	7	Resident Engineers - 1 (RE-1)	6
		8	Resident Engineers - 2 (RE-2)	6	8	Resident Engineers - 2 (RE-2)	6
9	Resident Engineers - 3 (RE-3)	6	9	Resident Engineers - 3 (RE-3)	6		
10	Senior Surveyor (SS)	5	10	Senior Surveyor (SS)	5		
6	Section 7 – Terms of Reference	Original ToR as per RFP issued on 17 January 2025.		Modified ToR as per this Amendment – refer to Attachment 1 (all modifications highlighted).			

The revised RFP incorporating the above amendments shall be forwarded to all Consultants at the same time, together with this Amendment. Please confirm receipt of this Addendum and of the revised RFB via return e-mail, as soon as possible.



Truly yours,  
**Mr. Ardnada BULOME**  
 Deputy Director General, Department of Roads  
 Head of Bid Committee.

## Section 7. Terms of Reference

### TERMS OF REFERENCE

#### National Road 13 South Project

#### Implementation Support and Work Supervision (ISWS) Consultancy Services for the Construction of 12 New Bridges Along NR13 South in Bolikhamxay and Khammouan Provinces

#### A. Introduction

National Road 13 is the most important highway in Lao PDR, connecting Laos with China in the North and Cambodia in the South, for a total length of 1,500 km.

Currently the Project Road of National Road 13 South (NR13 South) from KM 71 to KM 346 are getting strengthened and widened with the financing of the World Bank (through IDA), the European Investment Bank (EIB), the Asian Infrastructure Investment Bank (AIIB), and the GOL through the Road Maintenance Fund (RMF). However, most of the existing bridges with narrow width would remain same, which are potential blackspots, risking traffic safety along the Project Corridor. To mitigate this, Ministry of Public Works and Transport (Department of Roads) has identified 14 existing Bridges in the Project Corridor for duplication and finalized the detailed design & drawings.. Under the project, 12 nos of the identified bridges would be constructed parallel to the existing Bridges and following table presents the details of the bridges:

Sl. No.	Chainage	Location Name/ Bridge Name	Span Arrangements (m)	Total Length (m)	Existing Width (m)	Proposed Type of Bridge	Proposed Width (m)	Package
3	117+032	Nam Karp Bridge	3 x 26.4	78	7	PSC Girders	10.8	Pkg-2
4	121+959	Nam Thouay Bridge	20.4+26.4+26.4	72	7	PSC Girders	10.8	Pkg-2
5	123+850	Houay Dong Kham Bridge	28	28	7.18	PSC Girders	10.8	Pkg-2
6	140+200	Nam Ngiap Bridge	20.5+26.4+26.4+26.4+20.4	118	7	PSC Girders	10.8	Pkg-2
7	146+642	Nam Xan Bridge	20.4+20.4+26.4+26.4+20.3	113,5	7	PSC Girders	10.8	Pkg-2
8	194+571	Had SaiKham Bridge	25.4	25.5	7.5	PSC Girders	10.8	Pkg-3
9	217+578	Houay Deua2 Bridge	20.3+20.3+20.3	60.9	7.5	PSC Girders	10.8	Pkg-3
10	231+199	Nam Sang Bridge	20.3	20.3	7.5	PSC Girders	10.8	Pkg-3
11	239+051	Nam Thone Bridge	26.0+26.4+26.0	78.4	7.5	PSC Girders	10.8	Pkg-3
12	288+400	Nam Hinboun Bridge	39+46+39	124	7	Steel Composite Girders	10.8	Pkg-4
13	306+570	Houay Aek Bridge	25.5	25.5	7	PSC Girders	10.8	Pkg-4
14	325+800	Nam Don Bridge	26+26.5+26	78.5	7	PSC Girders	10.8	Pkg-4

The Superstructures of all these Bridges are made of Precast Pre-stressed Concrete Girder except Nam Hinboun Bridge, which is made of Steel Composite Superstructure. Construction of 8 Bridges in Packages 2 and 4 shall be executed through one FIDIC contract, to be tendered, financed from EIB loan whereas the 4 bridges in Package 3 shall be tendered under a separate procedure under AIIB financing. The Consultant Services subject to the present Request for Proposal, shall be overseeing the

works on all 12 bridges, and shall carry out the supervision and monitoring of the construction works, financed by EIB and AIIB.

## B. Background

The improvement works will include construction of new bridges parallel to existing bridges considering technical, social, environmental, safety and economical aspects. The width of bridges would be 10.8m. The bridge construction comprises of certain special features like erection of Precast Pre-stressed Concrete Girder, fabrication and erection of steel composite bridge, Deck Continuity, seismic arrestor, inspection platform etc. Construction of Bridge becomes challenging when the proposed new construction is in close proximity of the existing structure, as is the case here. Thus, these new bridge constructions would require superior knowledge and experience of specialist and experts to address the following critical aspects during execution of proposed bridges .

- i. **Construction near Existing Bridges:** Existing Bridges are old; in some cases it is more than 30 years old. Safety of existing Bridges is paramount during construction, which needs planned and careful approach and methodology. Any additional pressure/load on any components of existing Bridges requires to be avoided.
- ii. **Proposed Bridge Foundation:** The proposed bridges are parallel to the existing bridges, maintaining only 2.5 m clear distance from the existing bridge to minimize the land acquisition & impact on adjoining properties. Similarly, span arrangements are identical to the span arrangements of existing bridges to minimize hydraulic turbulence of flood and afflux. Most of the proposed Bridges are on pile foundation except in few locations where it is on open/isolated foundations. Type of proposed foundations may change during construction depending on the extent of existing foundation towards proposed Bridge side. Continuous monitoring and care would be essential to ensure that no influence/ impact of new foundations comes on existing foundation to maintain structural stability and safety.
- iii. **Erection of Superstructure:** Casting/Stressing, Launching and Erection are three major activities during Superstructure construction, which need special experience and skill and distinctive monitoring.
  - (a) *Casting/ Stressing:* Superstructure consists of Precast Pre-stressed Concrete (PSC) Girder in all the Bridges except Nam Hinboun Bridge at Pkg-4, which is made of Steel Composite Superstructure. At site cable profiling into the PSC Girder is to be done carefully to avoid any lateral eccentricity and thus lateral bending during pre-stressing operation.
  - (b) *Launching:* Proper Lifting Methodology is important for safety. Care shall be taken during lifting where special type of lifting arrangement has to be made by the Contractor.
  - (c) *Erection:* As proposed Bridges would be constructed very near to existing Bridges, extra precautions are required. Lifting and placing of Girders need to be such that existing bridges are safe and unaffected.
- iv. **Fabrication, Transportation & Erection of Steel Composite Superstructure:** Nam Hinboun Bridge at Pkg-4 consists of Steel Composite Structure, which is 3-span continuous bridge over Piers. High level specialized inspection would be crucial for Fabrication and Erection by a Steel Bridge Expert. Special care shall be taken in the packing, methods of supporting, lifting during handling and transportation of structural steelworks which is shop assembled before delivery, to ensure protection from damage.
- v. **Deck Continuity:** Out of 14 bridges, Deck Continuity in Superstructure is proposed in 10 bridges, which a state-of-the-art design and needs expertise knowledge and specialized experience during construction. Proper Planning and Methodology are important to achieve quality and performance.

## C. Objectives of the Assignment

The objective of the Assignment is to support the Employer in overall implementation of the Project and supervision of the civil works .

The services include but are not limited to:

- (a) monitoring compliance with requirement of technical specifications of the works (Construction works for duplication of

- 12 existing Bridges);
  - (b) Acting as FIDIC Engineer for the supervision of the 8 bridges under EIB and the 4 bridges financed under AIIB;
  - (c) advising the Employer on all facets of duplications works of Bridges
  - (d) review and recommend approval of the Contractor's Site-Specific Environment and Social Management Plan (SS-ESMP); #
  - (e) monitor the Contractor's compliance with the project safeguards requirements;
- The Services shall be carried out in compliance with best international practices.

#### **D. Scope of the Assignment**

The Consultant shall be responsible for supervision of Contractor's performance and implementation support to DoR/MPWT during the implementation of the Project of duplication of 12 existing Bridges on National Road 13 (South) including ensuring full compliance with the ESS measures as required by the EIB, AIIB and GOL.

The civil works for the Project comprise of construction of 12 parallel Bridges within the Project Corridor of NR13 South from km 117+000 to km 346+000, which is divided into three sections: (i) km 111-190; (ii) km 190-268; iii) km 268-346.

The dualling of the existing bridges shall be carried out in parallel with the ongoing maintenance phase of the OPBRC road contracts.

The construction work for duplication of 12 existing Bridges are expected to start from May 2025 on approval of detailed design and drawing, finalization of procurement, agreement in financing arrangement and concurrence of the Funding Agency. Start date of construction for the 2 contracts may not be same but in any case, not later than June 2025,. The duration of the supervision consultancy for the construction work of duplication of 12 existing Bridges is anticipated for 24 months.

#### **E. Detailed Tasks**

##### **Task 1: Construction Works Oversight**

The Consultants will set up a suitable organization to ensure that the works are completed in accordance with the FIDIC Conditions of contract and the role of the Resident Engineer, including sufficient staffing and the availability in the field of such staff.

The Consultants shall arrange a schedule of management meetings, site inspections and other jobs conference in liaison with the Contractor and notify those expected to attend. The Consultants shall take notes and circulate minutes thereof.

The Consultants shall: (a) Maintain orderly files for correspondence, reports of site visits and meetings and material submissions, documents including all addenda, variation orders, amendments, site instructions, inspections, and approvals, progress reports and other related documents; (b) keep the site diary or log book, keep the record of all correspondence, recording the Contractor's works main achievements, contractors quality control, quantity control on site, data related to questions and clarifications, list of visiting officials, daily activities, decisions and determinations,; and (c) maintain a set of drawings, "as built drawings," recording details of the works and maintenance actually executed. On E&S, the Consultant shall keep all related information and documents approved by EIB/AIIB and GOL especially those related to the safeguard documents (safeguard measures in bidding and contract documents, ESMPs, C-ESMPs, RAPs); and the implementation results/issues including safeguard monitoring and tracking of complaints and/or accidents (if any) and follow-up actions on the GRM process and E&S monitoring reports.

Specifically, the Consultants will be required to perform *inter alia* the following tasks:

- i) Assist DoR/MPWT to administer the execution of the bridge and road works in accordance with the contracts; prepare certificates of payments for the payments, as required by the contract; enter and maintain complete records of progress payments. The Team Leader of the Consultant will be the Engineer's Representative as outlined in the FIDIC contract;
- ii) Provide such information as is necessary for the Contractors to set out the works and check that the setting out of the road centerline by the Contractor is correct;
- iii) Review and recommend approval of the Contractor's work program and proposals, method statements, calculation notes if any, working drawings, specifications, proposed materials and their compliance to the specifications and the designs, traffic management plans, contingency plan, etc. to the extent required by the contract;

- iv) Ensure the approved systems of measurement of the Contractor during the Construction are followed, which include verification of the quantities placed and compliance with minimum contracts' requirements, and provide the relevant certificates;
- v) Keep and maintain up-to-date detailed Daily Site Diary and detailed records (making them available for inspection by the Employer or his representatives 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.
- vi) 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, and establish equipment availability figures for each category of equipment
- vii) Make recommendations to DoR/MPWT on the Contractor's claims for extension of time and other matters, based on the Contractor's requests substantiated with detailed information;
- viii) In the event of variations to the works being required, review the necessary documents prepared by the Contractor, consult with the Contractor and submit to DoR/MPWT with recommendation for approval or rejection;
- ix) Monitor the operations (including traffic management to ensure traffic flow safety and safety of workers and local communities) and works activities in the field of the Contractor to ensure quality of workmanship and compliance with the stipulations of the contract;
- x) Review and approve the proposed materials sources (borrow pits) and supplies (steel, cement, bitumen, road furniture etc..) to ensure they are in accordance with the specifications with regular supply and quality and appropriate for the use on site.
- xi) Review as appropriate the road quality tests in the field / laboratory which will be provided and operated by the Contractor under presence of the Consultant during the Construction; analyze and endorse the results or propose the appropriate procedures for re-testing and / or correction measures. Alternatively, arrange for third party tests in case of subsistence of doubt to be paid out of the Consultants contingencies.;
- xii) Maintain detailed daily diaries, photographs and other documents concerning relevant events and activities; and call and keep minutes of regular site meetings between the parties; Review conformity reports prepared by the Contractor and report to DoR/MPWT. Propose any rectification work or solution accordingly for implementation and check that it is implemented;
- xiii) Prepare monthly and consolidated quarterly progress reports for the civil works under the contracts in a form acceptable to DoR/MPWT and the EIB. These reports will include, as a minimum, details of the physical and financial status of the contract, details of delays and the budgetary effect of particular problems, with suggested solutions and comments on the quality of works in accordance with the contract. The reports will also include a section on the progress, issues, and follow-up actions related to safety and other ESS requirements;
- xiv) Work with PTI under MPWT (and contractors) to ensure E&S compliance, supervise and report the E&S implementation on monthly (technically brief) and on quarterly basis (full assessment of E&S aspects) and timely report any incidents or accidents.
- xv) Carry out final inspections of the works in cooperation with MPWT and advise MPWT on the issuance the substantial completion certificate;
- xvi) Review for accuracy the 'As-Built' drawings prepared by the Contractor for all the works, and convert the 'As-Built' information to a suitable form for input into the RMS. This includes, where appropriate, documents of a scale and layout suitable for scanning and consolidation into the DoR data base for later use by DoR/MPWT for planning and programming;
- xvii) Prepare a Completion Report for the works, when the Construction has been substantially completed. The report will also include a section on the progress, issues, and follow-up actions related to safety and other E&S requirements;
- xviii) Recommend and report to DoR/MPWT with respect to carrying out the works following any possible appeal to arbitration or litigation related to the works and/or E&S issues and follow-up actions; and
- xix) Provide any other specialized services as may be necessary and agreed upon with DoR/MPWT, and any other services as may be requested by DoR/MPWT;
- xx) Monitor the Contractors' safety implementation, precautions on the sites and safety training of their staff and laborers;
- xxi) As the bridge works will be implemented while the maintenance phase of the OPBRC roads contracts will still be ongoing, the ISWS will be responsible to oversee the coordination between the Civil Works on the Bridges and the Maintenance works performed by 3 other contractors along the Nr13S section.

## **Task 2: Review of the Contractor's Programs of Works**

The Consultants shall review the Contractor's Program of Works, including but not limited to:

- i) Review the Program of Works submitted by the Contractor for the execution of the works to determine whether the methods, arrangements, order and timing of activities are realistic and coherent, in relation to the conditions pertaining to the site and contractual timelines. The review will take into account the E&S activities and the C-ESMP to ensure full compliance of E&S requirements during construction and maintenance;
- ii) Identify from the approved program the necessary information to be provided to the Contractor and ensure that it is made available in a timely manner, including information on climate change impact forecasting, vulnerable road sections, E&S measures, etc.;
- iii) Review the Contractors work plan to ensure proper sequencing of the works allowing parallel operation of the existing bridges without hinderance due to the works.
- iv) Make sure that the Contractors mobilize the required equipment and qualified foremen and workers;
- v) Ensure that the Program of Works includes: time for mobilization, field investigations and tests where needed; deadlines for rehabilitation per bridge, monthly activities, critical path activities, regulatory clearances and permissions; quality control of works; allowance for adverse weather conditions; planned public, political or social events; a general description of the works method(s) the Contractor intends to adopt; and, the major stages in the execution of works. This will also include the implementation progress of E&S measures especially those related to the payment of compensation (if needed) and GOL approval;
- vi) Record and ensure that the Contractor is making available all documents in accordance with the contract;
- vii) Ensure that the Contractor conforms with contract requirements, standards, national and local requirements, and agreements with authorities and approvals regarding: choice of materials and resources; list of authorized sub-contractors; method logistics including earth moving related issues and materials; asphalt pavement; adequate responsibilities of foremen and key staff responsible for the works; labour requirements; ESHS measures including pollution control and waste management; health and safety issues including the fight against HIV Aids, Covid-19 prevention and contribution to the fight against gender-based violence, sexual harassment and child abuse and human trafficking, as relevant; and proper management of safety risks especially those related to UXO and hazardous materials such as collection and disposal of toxic substance, used oil, and explosives.

### **Task 3: Review of the Contractor's Quality Assurance Plan**

The Consultants shall review the Quality Assurance Plan of the Contractor, including but not limited to:

- i) Organization of the quality assurance tasks, the responsibility and authority for the management, who can sign letters and claims with responsibilities for quality assurance;
- ii) Attendance in meetings with DoR/MPWT and IFI;
- iii) Records and reporting;
- iv) Contract quality control documents, procedures for records and archiving;
- v) Management of suppliers and sub-contractors;
- vi) Inspection and testing of the works to ensure compliance with quality requirements, control method, extent of method, acceptance criteria; procedures to rectify any case of non-compliance;
- vii) Control of the quality and quantity of materials and timely delivery;
- viii) Non-conformance reports and proposed remedies;

### **Task 4: Review Claims for Time Extension and Variations**

The Consultants shall review and analyze claims for Time Extension and Works, including but not limited to:

- i) Advise and assist DoR/MPWT on issues relating to changes to the Contracts, including but not limited to any addition, extension and litigation/arbitration and assist on resulting consequences;
- ii) Review, investigate and prepare report on claims submitted by the Contractors within 21 days of the submission, establish admissibility to determine legitimate and justified costs and recommend, where appropriate, settlements;
- iii) Investigate fully all claims to establish admissibility under the Contracts to determine legitimate and justified costs, in case of emergency works;
- iv) Act as Mediator and aim at settling dispute quickly without involvement of external parties; and,
- v) Advise DoR/MPWT on the claims with proposed solutions.

### **Task 5: Review the Contractor Works Progress Reports**

The Consultants shall verify and make recommendations on the work progress during the Construction. The Consultants shall verify that work orders are delivered as per the expectations of DoR/MPWT and in full conformity with the Project requirements and provide recommendations as appropriate. Monthly progress reports should include a clear indication of interventions made during the reporting period. Such reports should comment on pattern of traffic, road alignment, prevention of accidents and include proposals to improve traffic safety and other safety measures during construction and maintenance works

#### **Task 6: Review the Contractor's Substantial Completion / Completion**

The Consultants shall review the reports on completed works prepared by the Contractor and advise DOR, as appropriate, to make the related payments. At time of review, the Consultants shall ensure completeness of the reports submitted by the Contractors to include an overall description of the implementation, major delivery events, and achievements including those related to safety and other E&S measures. The Consultant shall ensure when certifying payment claims that due remedies have been accounted for any noncompliance with the E&S contractual commitments and obligations.

The Consultant shall:

- i. Arrange for a formal joint inspection with the Contractor and the Employer, of completed works, for acceptance and/or identification of defects and/or testing purposes, both at substantial completion and upon the expiry of the Defects Liability Period and issue of Taking-Over certificates and Defect Liability Certificate in accordance with the civil works contract.
- ii. Review and approve and submit to the Employer, two full sets of complete records and as-built drawings, prepared by the contractor, within two months of substantial completion of the works detailing all structural drawings (including type and positions of reinforcement).
- iii. Inspect the works at appropriate intervals during the Defects Liability Period; and
- iv. Issue the Final Completion Certificate.

The Completion report issued at the end of the Construction shall include, but not be limited to:

- i) An executive summary;
- ii) Mobilization details; description of the works implementation; detailed financial cost of emergency works, if any; Details of works executed, technique employed and types, quality, quantity and sources of materials used, including any major works difficulties encountered. This shall include information on specific activities and designs related to sections identified as specifically vulnerable to climate change impact based on relevant vulnerability mapping, and road crash-prone locations;
- iii) Design changes (from approved by DoR/MPWT), if any;
- iv) The Consultants' appraisal of Contractor performance;
- v) Assessment of any complaints, accidents, disputes;
- vi) Occupational health and safety statistics (man-hours worked without Lost-Time Injuries (LTIs), number and gravity of LTIs and number of fatalities, etc.)
- vii) Reported implementation status of community health and safety (cases of sexual harassments, code of conduct);
- viii) Critical studies with remedies on significant technical problems which may have arisen during the improvement and rehabilitation period;
- ix) A summary of Contractor Safeguards Implementation Compliance Status;
- x) Works records, Quantities, and measurement sheets as required to support the IPCs;
- xi) Details on payments made;
- xii) As-built drawings;
- xiii) Planned and achieved work's program
- xiv) Conclusions.

#### **Task 7: Review Environmental and Social, Health and Safety Instruments and compliance by the Contractor**

The Consultants shall, when reviewing the Contractor documents and report especially those related to C-ESMP, the final ESCOP, ESHS and COC documents, as well as any other relevant plans and at the time of site visits, ensure that none of the safety and E&S regulations have been violated or otherwise ensure that appropriate measures are applied to prevent E&S, safety and security breaches resulting in impacts on environment or people and accidents (including to members of the public). The Consultants' review of ESS and safety issues shall include, but is not limited to:

- i) Assist the Client and work with local authorities to organize consultation events with residents/PAHs well ahead of the construction activities, as stipulated at the sub-project-level through respective RAP, C-ESMP and/or SEP and ensure that the work starts only once compensation has been made available;
- ii) Review and verify the accuracy of all permits and clearances (e.g. Construction permit; Water rights; Environmental permits; Land availability; Land acquisition in accordance to the RAP; Right of way, UXO Clearance etc.) that have been obtained prior to construction in order to ensure completeness;
- iii) Support MPWT and RC in establishment and monitoring of functioning of the Grievance Redress Mechanism (GRM), consistent with the project's SEP, including the follow-up on the resolution of any complaints or grievances in relation to environmental and/or social matters. Review the project-specific ESMPs, SEP and, when required, RPs, after 6/12 months of implementation and amend them based on outcomes;
- iv) Ensure that the C-ESMP reflects maintaining highest standards of pollution management and adhere to international standards on air, water, noise quality and vibration levels like those given in WBG EHSF Guidelines;
- v) Ensure that the C-ESMP has reliable and wide-ranging baseline data collected and reported on water (surface and ground) and air quality, noise, and vibration levels likely to be impacted during the project construction works;
- vi) Approve after due revision the contractor's ESMP, SEP and, when required, RAP, during the execution of the works, instruct the Contractor to update the ESMP, SEP and, when required, RAP, if it becomes necessary;
- vii) Supervise the contractor's implementation of the ESMP, C-ESMP, SEP and, when required, RAP, and report on compliance of the contractor with the ESMP, C-ESMP, SEP and, when required, RAP, ESHS Works Requirements, LMP and COVID-19 preventive measures;
- viii) Document Contractor's non-conformances, identify corrective actions and follow-up on correction/remediation;
- ix) Check if the Contractor provides instructions and required trainings to workers, subcontractors and suppliers on the respective ESHS requirements, in line with the Labor Management Plan (LMP) and comply with it including, among others, prevention on SEA/SH;
- x) Review the Contractor's progress reports, and check if detected non-conformities are documented and analyzed and are addressed by corrective actions;
- xi) Follow-up on the resolution of any complaints or grievances in relation to ESHS and LMP included at the project's ESMPs;
- xii) Inform the PMU on any ESHS related situation that might arise which could jeopardize the successful completion of the Project. Reflect such situations in the periodic reporting;
- xiii) Ensure that non-conformities are addressed through measures adapted to the severity of the situation;
- i) Undertake regular site visits to sub-project sites and workers camps for verifying the implementation of the specific E&S measure, including the verification of stakeholder engagement and provisions to prevent SEA/SH are in place, as well as ensuring that in the event of a noncompliance, agreed remedial actions are agreed to be applied and documented. Request the Contractor to remove any person employed on the site or works if the person persists in any conduct which is prejudicial to safety, health, in protection of environment or in the case of complaints of Sexual Exploitation and Abuse, sexual harassment, VAC.
- xiv) Re-act timely when seeing breaches with the safety regulations or when, in his own judgment, there is a prevailing event that may result in an accident, make timely and practicable recommendation on the spot;
- xv) Stop the works if the way of execution is endangering the life or limbs of any people;
- xvi) Organize and monitor the reporting of serious incidents and accidents and inform the Client as soon as practicable about any major accident;
- xvii) Monitoring, reporting and evaluation of the ESMP, C-ESMP, SEP and RAPs implementation by contributing to the regular progress reports throughout the Project implementation phase;
- xviii) Undertake other actions related to ESHS aspects of the Project, in order to ensure full compliance of the Project with the provisions stipulated by the project's LMP, included in the project's ESMP.

#### **Task 8: Review and Monitor Health and Safety Management Plans of the Contractor**

The Consultants shall review the HSMP proposed by the Contractors. The Consultants shall ensure that the C-ESMPs will incorporate adequate measures in line with the HSMP and key activities may include, but are not limited to:

- i) Ensuring that contractors and workers signed the "Codes of Conduct" before mobilizing manpower and receive training on their COC shortly after mobilizing;
- ii) Systematic identification of existing and new hazards on the works site;
- iii) Minimization of significant hazards, where elimination and isolation are both impractical;
- iv) Update method statements to describe and implement new work procedures as required to minimize hazards;
- v) Review the generic and site-specific traffic safety management plan prepared by contractors, taking into account safety

of road users, resident along the road and workers and including considerations on temporary access to and from houses and road sides during the works;

- vi) Ensure the provision and use of appropriate protection measures (PPE) and the availability for workers to be properly protected with safety supplies including, but not limited to, emergency kits with drugs and medicines, safety shoes, safety hats and appropriate protective clothing;
- vii) Make sure that the construction works include have provisions in place consistent with the WB's interim note on "COVID-19 considerations in construction/civil works projects" and/or current Covid-19 measures mandated in Lao PDR.
- viii) OCHS induction training material and on-going training modules, as well as specialized trainings for hazardous activities (e.g. operation of heavy machinery, working in confined space, lifting);
- ix) Ensure that the age of employment and the working conditions of the project workers comply with the project's LMP;
- x) Pre-determined and known to workers emergency procedures dealing with accidental spillage, pollution or imminent danger;
- xi) Ensure regular review and assessment of each hazard identified and monitor employees' exposure to these hazards;
- xii) Ensure that regular medical checks are done for workers and normal working hours are followed;
- xiii) Incident and accident reporting procedure and methodology for statistics compilation for OCHS performance;
- xiv) Ensure reporting and recording of work site incidents so health and safety problems can be addressed quickly and regularly;
- xv) Proper preventive signs significantly ahead of works zone for drivers to be informed of reduced speed and detours;
- xvi) Report to DoR/MPWT any significant issues related to Health and Safety; and
- xvii) Recommend sanctions in case of non-compliance with Environmental, Social Health and Safety (ESHS) measures.

#### **Task 9: Review the Emergency Procedures and Contingency Plan of the Contractor**

The Consultants shall review the Emergency Procedures and Contingency Plan to be submitted by the Contractor to ensure the Plan at the least includes:

- i) An effective communication and event recording system;
- ii) The name, contact number and specific duties of the Contractor's nominated Emergency Duty Officer who shall be fully authorized to respond to an emergency event 24/7;
- iii) Availability of priority contact numbers in case of emergency, e.g. police, hospitals, ambulances, fire brigades and others as may be needed;
- iv) Response procedures for emergency events including major climate events, road crashes during works and seismic events;
- v) Possible detour routes in the event of road closure;
- vi) Due consideration shall be made to minimize the potential negative impacts of the emergency works.

#### **Task 10: Review of Technical Documents Prepared by the Contractor**

The Consultants shall review all technical documents submitted by the Contractor (including the C-ESMP) within 14 days of receipt. The Consultants shall promptly provide DoR/MPWT with report/s, analysis and interpretations and provide in a reasonable time the proposed decisions on all claims, disputes and other matters in questions relating to the execution or progress of work or the interpretation of the contract documents.

#### **Task 11: Supervise Contract Changes and Variations**

The Consultants shall:

- i) Evaluate the Contractor's proposals for any modifications of drawings or specifications and report them to DoR/MPWT with recommendations,
- ii) Inform DoR/MPWT of intended variations including effects on time schedule, quality, durability and function including on design features specifically for climate change impacts, and get Employer approval for the intended change;
- iii) Examine the Contractor's proposals for changes and provide recommendations to DoR/MPWT for approval, in case of substantial changes affecting costs;
- iv) Under exceptional conditions, such as emergency works, issue Change Orders by instructions to the Contractor including, but not limited to, time schedule, payment terms, and any technical deviations and quality requirements;
- v) Supervise any works carried out with respect to a change and maintain detailed records of any such works;
- vi) Ensure that all relevant project documentation, including site drawings, is updated to reflect the change order and given to Contractors and DoR/MPWT;

- vii) Be responsible to follow up on all works under a change order and final acceptance at completion;
- viii) At completion of the works under a change order and final acceptance of completion, ensure that the payments to the Contractor are in line with the variation and in line with the rates and prices set out in the original contract;
- ix) In the event of disagreements on rates and prices between DoR/MPWT and the Contractor, the Consultant shall recommend rates and prices to be approved by DoR/MPWT and confirmed by an Amendment to the original contract; reasonable adjustments should consider the actual costs with evidence included.

### **Task 12: Quality Control of Materials and Workmanship**

The Consultants shall monitor/control the Contractors' testing and checking of the quality of the as-delivered materials and works implemented through the contractor's laboratory to verify compliance with all specified requirements and the contractor's own quality plan through intermittent testing and inspection of the works.

The Consultants shall arrange for the required external testing as needed to complement the contractors Quality Assurance.

### **Task 13: Verification of Materials Quality and Compliance with Specifications**

The Consultants shall verify that the Contractor is:

- i) Performing laboratory and/or field tests on the quality of the materials or have obtained from its suppliers, satisfactory materials specifications and quality assurance, testing and warranties.;
- ii) Using materials of satisfactory technical characteristics, quality and quantity and that the extraction is in conformity with the legislation and, as required, has obtained extraction authorization.

The Consultants shall monitor the compliance with the contracted specifications continuously during the assignment, and inform the Employer on any non-compliance. The Consultants shall issue notification and follow-up on remedies approved by the Employer and report thereon, with evidence given that the Contractors reacted fully or not to such notification. For determination of compliance with specifications and timely implementation of initial and remedial works, the Consultants shall, but not limited to:

- i) Check the quality of the materials and verify compliance with all specified requirements through intermittent random testing and inspection of the works;
- ii) Check that the workmanship is in compliance with the specifications and the method statements;
- iii) Check if the road sections are passable and open to traffic;
- iv) Check that all design standards are met at all times during the works;
- v) Check compliance with ESHS obligations, and that remedies have been accounted for any noncompliance with the ESF contractual commitments and obligations;
- vi) In liaison with the contractor, identify ways to address any ongoing or recurrent compliance issues.

### **Task 14: Monitor and Control Costs**

The Consultants shall monitor and control quantities/costs for the contract. The Consultant shall make measurements and maintain a permanent record of all measurements of work of current quantities executed for which payment is to be made, and of all quality control test results. They shall monitor the related cost estimate for the works executed, including for issuing Interim and Final Payment Certificates, work orders and invoices. In case of variation orders, the Consultants shall provide a summary of the agreed scope of the works that may be issued by DoR/MPWT.

The Consultants shall:

- i. Agree with the Contractor on drafts for the payment certificates
- ii. Review and certify the Contractor's Payment Applications and, after verifying the completion of Works in accordance with the Payment Schedules, accuracy of the measurement and cost calculations and the sufficiency of the supporting documentation, prepare, approve, sign and issue interim payment certificates for processing by the Employer within 7 days of receiving such statement from the Contractor.
- iii. Monitor the payment process and alert the employer when payment delays accrue to a point when; (a) interest charges will become due and (b) the employer will be in Default for late payment.
- iv. Prepare and issue final and other payment certificate.
- v. Receive and record evidence of payments. The Interim Construction Payments shall be numbered consecutively, and full completion of the works during the Construction Phase.

The Consultants shall make a thorough check of the payment certificates and their enclosures and attachments including checks on quantities and amounts. Any review of payment claims for the Contractor shall be in accordance with the OPBRC legal and technical conditions. Upon review and within a maximum of 14 days of receipt of claims, the Consultant shall forward the applications to DoR/MPWT with recommendations for payment (if appropriate). With respect to Emergency Works as well as any possible additional improvement works approved, the Consultants shall ensure that all applications detail the actual quantities and value of works completed to date compared with the Work Order and unit rate for each item and in accordance with the Contract. The Consultants shall also ensure that applications account for payment due to the Contractor including payment reduction, discounts if any, and retention for: other payments to which the Contractor is entitled.

#### **Task 15: Supervise and Monitor Implementation of Environmental and Social Management Plan of the Contractor (C-ESMP)**

In addition to Task 7 described above, the Consultant will monitor and report on implementation of the ESMP and its sub-plans during the rehabilitation and maintenance phase.

This will include:

- i) Provide guidance, orientation and training to the Contractors during the development of the Contractors' Site-Specific Environment and Social Management Plan (C-ESMPs) and the Alignment Sheet which shall be completed at least three months prior to the start of construction. Due attention shall be given to ensure compliance with the final ESCOP and COC to prevent Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH), and Violence Against Children (VAC) during construction phase.
- ii) Review the environmental and social instruments and develop a work plan and methodology to supervise and monitor the implementation of the C-ESMP to be submitted and implemented by the Contractor, including key performance indicators to measure the compliance of the Contractor and efficiency of all mitigation and management measures;
- iii) Review and approve the C-ESMPs and the Alignment Sheet in order to be compliant with the (a) ESS requirements of the construction contracts as reflected in the project ESMP approved by EIB, (b) the ECC approved by GOL, and (c) other ESS requirements as requested by EIB;
- iv) Review and approve the Contractor's documents related to ESCOP, ESHS and/or the HSMP, and COC related to SEA/SH VAC, and activities related to SEA, HIV/AIDs as well as other documents related to ESS activities under Contractor responsibility;
- v) Review the Contractor's Management of Change (MoC) procedure to address environmental and social risks and impacts induced by changes in design, planning and other activities;
- vi) Review the detailed design and work plan to be prepared by the Contractor to ensure that all operation areas, activities and material are generally considered in the C-ESMP and make recommendation for additional studies if required;
- vii) Review ESHS risks and impacts of any design change proposals and the implications for compliance with the Project ESMP, consent/permits and other relevant ESS requirements for the Project;
- viii) Review the ESS screening for siting of auxiliary and temporary facilities and Conduct a due diligence of the borrow pits proposed for use by the Contractor to ensure that the borrow pits meet requirements set out in the Project ESMP;
- ix) Before excavation works and removal of the existing pavement commences, review the re-utilization plan for removed material and undertake an inspection of and approve the contractors' disposal sites to ensure that the ESMP criteria for such sites are met;
- x) Review documentation, resolution and reporting of non-compliance issues and complaints. Supervise day-to-day implementation of the C-ESMP of the Contractor.
- xi) Carry out periodic environmental quality monitoring, e.g. noise level, water quality, and air quality as agreed with the EIB;
- xii) Prepare Environmental and Social Monitoring and ESMP Implementation reports as required by the EIB and/or GoL (per ESMP, IEE/EIA Procedures). As part of the report, document environmental and social issues and complaints and maintain a photographic record of sufficient quality and quantity of key issues identified and actions and timescales agreed upon for their resolution.
- xiii) Review and monitor employment of local labors and communities, specifically women and ethnic minorities and working conditions during construction and ensure that core labor standards and code of conducts are followed and monitored during implementation. This includes integrating necessary provisions in bidding documents and contracts to ensure that Project goals can be reached and indicators measured. Ensure that the Contractor complies with all applicable labor laws.

- xiv) The Consultant shall review and monitor all aspects of the establishment, reporting and operationalization of the Grievance Redress Mechanism (GRM) according to the requirements for the Project and in close consultation with EDPD/PTI and local authorities;
- xv) Ensure that the PAPs/PAHs are fully aware of the grievance redress procedure and the process of bringing their complaints, investigate the veracity of the complaints, and recommends actions/measures to settle them amicably, fairly and transparently before they go to the redress committee or the courts of law;
- xvi) Assist in establishing GRM for workers and monitor the labor working conditions and other rights in conformity with applicable Legislations and Funding Agencies' Social Policy; Coordinate and work closely in all of the ESS issues with EDPD/PTI of MPWT and the DPWTs, the Project Resettlement Committee (PRC), and local authorities of the project Provinces.

## **F. Time Schedules and Budget Management for Works**

The TOR for Consultant covers the construction phase for an estimated total 2-year period as well as the DLP of 12 months.

## **G. Consultants' Reporting Obligations**

The Consultant shall prepare reports identifying the data for each contract separately. It is to be noted that implementation timeline of the different contracts may differ.

### **G.1. Reports during construction phase for duplication of 12 existing Bridges of NR13S**

**Inception Report:** The Consultants will produce an inception report that will include a master plan for the entire assignment, detailed work plan and schedule of tasks based on the consultancy contract and a time table for the mobilization of the key experts, the non-key experts and the support staff, including reporting on E&S matters. A specific section of the inception report shall be dedicated to ESMP implementation. The Inception Report shall include a work plan for the assignment, team composition, challenges anticipated and comments to the TOR, if any. List of people met and minutes of meetings shall be provided in Annexes, if any. The draft Inception Report and Implementation Work plan shall be submitted to PMU and ESD/PTI within six weeks after the date of contract signing. The final Inception Report and the implementation Work Plan shall be submitted within one week after receipt of approval from the PMU and EDPD/PTI.

**Monthly Progress Reports:** The Consultants shall prepare a concise monthly progress report, in a format to be agreed with DoR/MPWT. These reports will be sent to DoR/MPWT within one week of the end of the month. Such reports shall summarize the activities of the Consultants including those related to ESS and H&S activities implementation progress, the progress of the works contract in terms of physical and financial progress, all contract and design changes, the status of Contractor claims (if any), brief descriptions of the technical and contractual problems being encountered (and solutions recommended) progress and issues related to the implementation of the ESS activities and other relevant information. The draft template of the Monthly Progress Report for each package/section shall be submitted to PMU and ESD/PTI within one month after the date of contract signing. The final template shall be submitted within one week after receipt of approval from the PMU and ESD/PTI.

**Quarterly Reports:** The Consultants shall prepare a comprehensive quarterly report summarizing all activities including financial and E&S aspects of the works contracts, at the end of each quarter (not later than the 14<sup>th</sup> day of next quarter), and at other times for the Periodic Report when considered necessary by either the Consultants or DoR/MPWT because of delays in the construction works or the occurrence of technical or contractual difficulties. The quarterly report shall also summarize the performance of the Consultant's staff in implementing their monitoring supervision responsibilities. In addition, the report will also include progress and issues related to the implementation of environmental and social safeguards, as well as works' compliance with requirements of GoL and EIB)

**Accident Reports:** : Reports of the circumstances of any significant accident occurring on the sites shall be promptly informed to DoR/MPWT, DPWT, and EDPD/PTI within 24 hours. Specific reports related to the incident will be prepared and submitted as required by the MPWT. The consultant will also conduct root cause analysis, make recommendations to avoid future incidence, as well as monitor and audit implementation of agreed recommendations

**ESHS Reports:** The Consultants shall ensure the immediate reporting to DoR/MPWT, DPWT, and EDPD/PTI of complaints related to GBV and/or child abuse, any pollution incident/accident, any fatality and/or bodily harm affecting Project (including contractor) staff or project affected people, any public opposition, and the issuance of any notice or fine for breach of

environmental, labor, health or safety laws and regulation or any significant Covid-19 outbreak. In close consultation with EDPD/PTI, the Consultants shall prepare and submit to the MPWT, EIB and other financiers (within 14 days after the end of the period) a consolidated semi-annual and annual monitoring report for each package/section summarizing all environmental and social safeguard activities (ESMP, RAPs, EGEP, etc.) including progress and records on GRM and other aspects related to road safety, workers OHS, employment, community health and safety, etc. The reports shall also summarize the performance of the Consultant's staff in implementing their supervision responsibilities. In addition to the monitoring reports, the Consultant shall prepare an independent RAP implementation completion report ("RAP Implementation Audit"). Preparation of separate RAP implementation and/or other monitoring reports may also be required during the Assignment as requested by the GOL and/or EIB.

**Claims Reports:** Reports detailing the assessment of every claim by the Contractor and submitted to DoR/MPWT.

**Completion Report:** The Consultants shall prepare a comprehensive Construction Completion Report. The Consultants shall prepare comprehensive Completion Reports for each Contract when the Civil Works have been completed. The reports, which shall be submitted immediately after the works completion of each contract, shall summarize the methods of construction, the field and laboratory tests carried out, the monitoring supervision services performed, and recommendations for improvement for future projects of a similar nature to be undertaken by DoR/MPWT, including specific recommendations on improvements relating to infrastructure resilience for road works and recommendations with regards to maintenance and operation of the bridges. The reports shall also provide information in traffic volume data and speed data, ESS issues, actions, and lessons learnt so that effective mitigation measures can be considered during the planning, design, and implementation of future road and bridge works.

**G.2. Copies of Reports and Language:** The numbers of hard and electronic copies of each report, and the distribution list will be advised by DoR/MPWT. It is envisaged that only a limited number of hardcopies will be required (not more than 2) and that distribution of electronic copies would be by email. Reports shall be written in English. All reports shall be provided in both MS Office (Word, Excel etc.) and PDF format. A copy of all reports will be also shared with EIB after acceptance by DoR/PMU.

**G.3. Proprietary Information:** The Consultants shall safeguard all proprietary information made available to any of their staff, personnel, employees, contracted persons or sub-consultants or any person or entity involved in delivering the services.

## H. Level of Efforts (LOE)

The Consultant shall employ qualified engineers and other professionals who shall be competent to carry out the duties in accordance with the responsibilities specified in this Terms of Reference.

The consultant shall take into account of the fact that two contracts will not start at the same time when consider level of efforts and mobilization plan. Prior to mobilization of any member of the Consultant's team, the consultant will obtain DOR permission.

Consultant staff will be mobilized only after the notice to commence the works has been issued to Contractor and only then on an as-needed basis, depending of the Contractor work program and his mobilization efforts. The Consultant shall manage staff inputs and reassign staff from time to time and as necessary, with permission from DoR/MPWT, to reflect the actual progress of the works. The Consultants shall assign the following key personnel:

Key Personnel	Number of Persons	Person-months	Presence at Site
<b>A) INTERNATIONAL</b>			
1) Team Leader / Bridge Engineer (TL/BE)	1	26	full-time during construction and part-time during DLP
2) Materials and Pavement Engineer (MPE)	1	6	part-time
3) Bridge Design Engineer (BDE)	1	4	part-time
4) Contract Specialist (CS)	1	1	part-time
5) Geotechnical Engineer (GE)	1	2	part-time
6) Quantity & Cost Engineer (QCE)	1	4	part-time

Key Personnel	Number of Persons	Person-months	Presence at Site
<b>B) NATIONAL</b>			
1) Resident Engineers (RE)	3	24 (each)	full-time
2) Senior Surveyor (SS)	1	6	Part-time
<b>TOTAL</b>		<b>115</b>	

The Consultant shall support the key personnel specified above with an appropriate number of non-key experts and other support staff, as necessary to properly perform the services timely and orderly. Only the CVs of the key personnel will be scored during technical evaluation.

Following Non-key experts shall be deployed:

Non-Key Personnel	Number of Persons	Person-months	Presence at Site
<b>A) INTERNATIONAL</b>			
1) Environmental & Social Specialist (ES)	1	18	part-time
<b>B) NATIONAL</b>			
1) Materials and Pavement Engineer (MPE)	1	24	full-time
2) Surveyor (S)	1	24	full-time
3) Site Engineers (SE)	3	24 (each)	full-time
4) Laboratory Technician (LT)	2	24 (each)	full-time
<b>TOTAL</b>		<b>186</b>	

The estimated Person-Months are indicatively **115** for Key-staff and for 186 non-key staff.

## 1. Key Experts – Tasks and Minimum Qualifications

Position	Required Qualifications
<b>1. Team Leader/ Bridget Engineer (TL/BE)</b>	Minimum preferable qualifications as <b>Team Leader/ Bridget Engineer</b> : <ul style="list-style-type: none"> <li>• Bachelor's degree in civil engineering;</li> <li>• 15 years of proven relevant international experience;</li> <li>• 10 years' experience as Team Leader / Bridge Engineer leading bridge construction under bridge or road &amp; bridge projects;</li> <li>• At least 2 team leadership assignments with experience on managing bridge construction projects will be an asset;</li> <li>• Fluency in written and spoken English.</li> </ul>
<b>2. Materials and Pavement Engineer (MPE)</b>	Minimum preferable qualifications as <b>Materials and Pavement Engineer</b> : <ul style="list-style-type: none"> <li>• Bachelor's degree in civil engineering;</li> <li>• 10 years' experience as the <b>materials/design/quality control supervision</b> engineer working in bridge or road &amp; bridge construction with asphalt concrete pavement;</li> <li>• 2 assignments as the Materials/Pavement Engineer;</li> <li>• Fluency in written and spoken English is mandatory.</li> </ul>
<b>3. Bridge Design Engineer (BDE)</b>	Minimum qualification requirements as <b>Bridge Design Engineer</b> : <ul style="list-style-type: none"> <li>• Bachelor's degree in civil engineering;</li> <li>• 10 years' international experience in bridge design, of which 5-year experience as lead design specialist of design teams, familiar with quality management systems and requirements.</li> <li>• Fluency in written and spoken English is an advantage</li> </ul>
<b>4. Contract Specialist (CS)</b>	Minimum preferable qualifications as <b>Contract Specialist</b> : <ul style="list-style-type: none"> <li>• A degree in engineering or related discipline</li> <li>• Minimum 10 years of overall experience</li> <li>• Minimum 8 years on procurement of works and quantity surveying in more than one country.</li> <li>• Minimum 5 years of experience on bridge construction projects funded by international lending agencies, involving FIDIC contracts.</li> <li>• English language, writing, reading and speaking is mandatory.</li> </ul>
<b>5. Geotechnical Engineer (GE)</b>	Minimum preferable qualifications as <b>Geotechnical Engineer</b> : <ul style="list-style-type: none"> <li>• At least a B.Sc. in Civil Engineering or related area such as geophysics</li> <li>• Minimum 10 years of experience in the field of geotechnical investigation in infrastructure projects.</li> <li>• Minimum 5 years on road infrastructure projects</li> <li>• Fluency in written and spoken English is mandatory.</li> </ul>
<b>6. Quantity &amp; Cost Engineer (QCE)</b>	Minimum preferable qualifications as <b>Quantity &amp; Cost Engineer</b> : <ul style="list-style-type: none"> <li>• At least a B.Sc. in Civil Engineering or related area</li> <li>• Minimum 10 years of experience in the field of QC and Cost Control under infrastructure projects.</li> <li>• Minimum 5 years on bridge infrastructure projects</li> <li>• Fluency in written and spoken English is mandatory.</li> </ul>
<b>7. Resident Engineers (RE – 3 positions)</b>	Minimum preferable qualifications as <b>Resident Engineer</b> : <ul style="list-style-type: none"> <li>• Bachelor's degree in civil engineering;</li> <li>• 10-year experience as the resident engineer working in road construction resp. <b>bridge construction</b> and/or maintenance projects with asphalt concrete pavement;</li> <li>• 2 assignments as the Resident Engineer of <b>road rehabilitation and improvement (or construction) projects of asphalt concrete pavements and bridges;</b></li> <li>• Fluency in written and spoken Lao is an advantage</li> <li>• Fluency in written and spoken English is mandatory.</li> </ul>
<b>8. Senior Surveyor (SS)</b>	Minimum preferable qualifications for qualified professional as <b>Senior Surveyor</b> :

Position	Required Qualifications
	<ul style="list-style-type: none"> <li>• Bachelor's degree in geodetic engineering (or related civil engineering degree);</li> <li>• With a 7-year experience as surveyor or senior surveyor;</li> <li>• Preferred to have minimum 2 assignments project experience of road construction with pavement construction and rehabilitation;</li> <li>• A minimum of 1 assignment experience working with international organizations;</li> <li>• Fluency in written and spoken Lao;</li> <li>• Fluency in written and spoken English is required.</li> </ul>

**Non-key Experts shall have the following qualifications and tasks:**

Position	Required Qualifications
<b>1. Environmental &amp; Social Specialist (ES)</b>	<p>Minimum qualifications as <b>Environmental &amp; Social Specialist (ES)</b></p> <ul style="list-style-type: none"> <li>• Degree in environmental or social sciences or equivalent;</li> <li>• Preferably 5 years' experience in conducting environmental and social impact assessments and implementation of environment and social mitigation plans and/or monitoring implementation of environmental and social mitigation measures during implementation of projects including highway projects funded by developing partners.</li> <li>• Knowledge on the IFI's (WB, EIB, AIIB, ADB) safeguard policies and relevant national legislation such as Ministry of Natural Resources and the Environment's (MONRE) Instructions on ESIA and IEE, 2016</li> <li>• Ability to effectively communicate and produce reports and documents in Lao and English;</li> <li>• Organizational and interpersonal skill with cultural sensitivity;</li> <li>• Fluency in written and spoken Lao and English.</li> </ul>
<b>2. Materials and Pavement Engineer (MPE)</b>	<p>Minimum preferable qualifications as <b>Materials and Pavement Engineer:</b></p> <ul style="list-style-type: none"> <li>• Bachelor's degree in civil engineering;</li> <li>• 10 years' experience as the materials/design engineer working in bridge or road &amp; bridge construction with asphalt concrete pavement;</li> <li>• 2 assignments as the Materials/Pavement Engineer;</li> <li>• Fluency in written and spoken English is mandatory.</li> </ul>
<b>3. Surveyor (S)</b>	<p>Minimum preferable qualifications for qualified professional as <b>Surveyor:</b></p> <ul style="list-style-type: none"> <li>• Bachelor's degree in geodetic engineering (or related civil engineering degree);</li> <li>• With a 5-year experience as surveyor;</li> <li>• Preferred to have minimum 2 assignments project experience of bridge construction with asphalt pavement;</li> <li>• Fluency in written and spoken Lao.</li> <li>• Fluency in written and spoken English is an asset.</li> </ul>
<b>4. Site Engineers (SE)</b>	<p>Minimum preferable qualifications as <b>Site Engineer:</b></p> <ul style="list-style-type: none"> <li>• Bachelor's degree in civil engineering;</li> <li>• 10-year experience as the site engineer working in road construction and/or maintenance projects with asphalt concrete pavement and/or bridge construction;</li> <li>• 2 assignments as the Site Engineer of road rehabilitation projects of asphalt concrete pavement with bridges;</li> <li>• Fluency in written and spoken Lao is mandatory</li> <li>• Fluency in written and spoken English is an advantage.</li> </ul>
<b>5. Laboratory Technician (LT)</b>	<p>Minimum preferable qualifications as <b>Lab Technician:</b></p> <ul style="list-style-type: none"> <li>• Bachelor's degree in civil engineering;</li> <li>• 10-year experience as Laboratory Technician;</li> <li>• 2 assignments as the Laboratory Technician of working in road or road &amp; bridge construction projects with asphalt concrete pavement;</li> <li>• Fluency in written and spoken Lao is mandatory</li> </ul>

Position	Required Qualifications
	<ul style="list-style-type: none"><li>• Fluency in written and spoken English is an advantage.</li></ul>

**Note: CVs of the no-key staff shall be also attached in the Technical Proposals . Non key-experts will not be individually scored as part of the evaluation, but considered as part of the overall Consultants Organization and Staffing.**

## **I. Facilities to be provided by DoR/MPWT**

The following facilities shall be provided by the Client:

- i) Project Offices within the Compound of the contractor. The compound will include 6 offices (for up to 20 persons), meeting room and related facilities.
- ii) Full time Project Manager, under DoR, a single point of contact within the MPWT for all communications and requests, as well as a technical staff person designated by him/her for daily administrative or support needs;
- iii) Necessary project documents;
- iv) Assistance for international experts to get visas, residence permits and other permits for the consultancy;
- v) Permission for consultation experts to enter relevant offices and construction sites and, where needed, MPWT staff to cooperate with them;
- vi) Consultation experts will be allowed to get all the data sources, project documents that are not-restricted and not containing proprietary and/or confidential information, reports, drawings and maps. For such access, the consultant experts will sign a Confidentiality Agreement for all information to remain confidential during the time of the Consultancy and for five years after the completion of the Consultancy.

## **J. Facilities to be provided by the Consulting Firm, the Consultants**

The following facilities shall be provided by the Consultant:

- i) Office Space in Vientiane and the necessary furniture such as desks, chairs, tables, shelves;
- ii) Furniture, supplies and municipal services for the site office;
- iii) Accommodation as needed to fulfill the consultancy assignment;
- iv) Transportation as needed to fulfill the consultancy assignment;
- v) All equipment and clothing, PPE, as required to fulfill the site duties;
- vi) The support staff;
- vii) Translation as required.
- viii) All other facilities and supplies required to carry out the services.