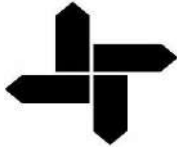




# GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA



## MINISTRY OF HIGHWAYS ROAD DEVELOPMENT AUTHORITY

### **INVITATION FOR EXPRESSIONS OF INTEREST(EOI) FOR INDEPENDENT ENGINEER(S) FOR THE DEVELOPMENT OF FOUR –LANE ELEVATED HIGHWAY FROM NEW KELANI BRIDGE TO ATHURUGIRIYA WITH LINK TO BASELINE ROAD AT DEMATAGODA ON DESIGN,BUILD,FINANCE,OPERATE,MAINTAIN AND TRANSFER (DBFOMT) SEMI-ANNUAL AVAILABILITY BASED SERVICE PAYMENT BASIS.**

The Cabinet Appointed Consultancy Procurement Committee on behalf of the Government of the Democratic Socialist Republic of Sri Lanka (GOSL), intends to obtain Expressions of Interest (EOI) from National/International Firms/ Joint Ventures to shortlist experienced and capable applicants as eligible Independent Engineer(s) to submit detailed proposals as Independent Engineer(s) for the development of Four-Lane Elevated Highway from New Kelani Bridge to Athurugiriya with Link to Baseline Road at Dematagoda on Design, Build, Finance, Operate, Maintain and Transfer (DBFOMT) Semi-Annual Availability Based Service Payment Basis.

The Independent Engineer's duties and functions shall include but not be limited to review of designs prepared by Concessionaire including drawings and specifications; but shall also include superintendence of the Concessionaire's performance under the Concession Agreement, progress monitoring, technical and quality control, evaluations of construction, certification and completion of the works by the Concessionaire, certification of payments and duties related to taking over and the operation and maintenance period. The IE shall be present at all times during the day to day implementation of the Design and Construction Periods and as required for the fulfilment of its assignment during the Operation and Maintenance Period.

The interested parties should submit an Expression of Interest as per the format given in the EOI document. Details of Expressways and National Highway Network in Sri Lanka are available in [www.mohsl.gov.lk](http://www.mohsl.gov.lk) and [www.rda.gov.lk](http://www.rda.gov.lk) . EOI document could be collected from the address given below or downloaded from the above **two websites from 29.09.2021 to 20.10.2021.**

**Project Director**  
**Elevated Highway Project (New Kelani Bridge to Athurugiriya)**  
**Road Development Authority**  
**No 428/1, Robert Gunawardena Mw,**  
**Koswatte**  
**Battaramulla.**  
**Contact [Tel: +94112882138](tel:+94112882138)**  
**Fax: +94112878019**  
**Email: [rdaehpnkb@gmail.com](mailto:rdaehpnkb@gmail.com)**

In the instance of submission of EOI, on outer envelope of the EOI application, "Elevated Highway from New Kelani Bridge to Athurugiriya "Should be indicated and also the applicant's name, address and contact details. The EOI application, in one (1) original, one (1) copy and one (1) soft copy should be delivered on or before **14.00 Hrs on 20.10.2021** to the address given below.

**The Chairman**  
**Cabinet Appointed Consultancy Procurement Committee**  
**C/O Secretary, Ministry of Highways**  
**Procurement Division,**  
**7<sup>th</sup> Floor, Maganeguma Mahamedura,**  
**No 216, Denzil Kobbekaduwa Mawatha,**  
**Battaramulla,**  
**Sri Lanka.**



**GOVERNMENT OF THE DEMOCRATIC  
SOCIALIST REPUBLIC OF SRI LANKA**

**MINISTRY OF HIGHWAYS**



**ROAD DEVELOPMENT AUTHORITY**

**EXPRESSION OF INTEREST (EOI)**

**FOR**

**INDEPENDENT ENGINEER**

**DEVELOPMENT OF FOUR-LANE ELEVATED HIGHWAY FROM  
NEW KELANI BRIDGE TO ATHURUGIRIYA WITH LINK TO  
BASELINE ROAD AT DEMATAGODA**

**ON**

**DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND  
TRANSFER BASIS**

**September 2021**

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# 1. PAPER ADVERTISEMENT

GOVERNMENT OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA  
**MINISTRY OF HIGHWAYS**  
**ROAD DEVELOPMENT AUTHORITY**

INVITATION FOR EXPRESSIONS OF INTEREST(EOI) FOR INDEPENDENT ENGINEER(S) FOR THE DEVELOPMENT OF FOUR –LANE ELEVATED HIGHWAY FROM NEW KELANI BRIDGE TO ATHURUGIRIYA WITH LINK TO BASELINE ROAD AT DEMATAGODA ON DESIGN,BUILD,FINANCE,OPERATE,MAINTAIN AND TRANSFER (DBFOMT) SEMI-ANNUAL AVAILABILITY BASED SERVICE PAYMENT BASIS.

The Cabinet Appointed Consultancy Procurement Committee on behalf of the Government of the Democratic Socialist Republic of Sri Lanka (GOSL), intends to obtain Expressions of Interest (EOI) from National/International Firms/ Joint Ventures to shortlist experienced and capable applicants as eligible Independent Engineer(s) to submit detailed proposals as Independent Engineer(s) for the development of Four-Lane Elevated Highway from New Kelani Bridge to Athurugiriya with Link to Baseline Road at Dematagoda on Design, Build, Finance, Operate, Maintain and Transfer (DBFOMT) Semi-Annual Availability Based Service Payment Basis.

The Independent Engineer's duties and functions shall include but not be limited to review of designs prepared by Concessionaire including drawings and specifications; but shall also include superintendence of the Concessionaire's performance under the Concession Agreement, progress monitoring, technical and quality control, evaluations of construction, certification and completion of the works by the Concessionaire, certification of payments and duties related to taking over and the operation and maintenance period. The IE shall be present at all times during the day to day implementation of the Design and Construction Periods and as required for the fulfilment of its assignment during the Operation and Maintenance Period.

The interested parties should submit an Expression of Interest as per the format given in the EOI document. Details of Expressways and National Highway Network in Sri Lanka are available in [www.mohsl.gov.lk](http://www.mohsl.gov.lk) and [www.rda.gov.lk](http://www.rda.gov.lk) . EOI document could be collected from the address given below or downloaded from the above **two websites from 29.09.2021 to 20.10.2021.**

**Project Director**

**Elevated Highway Project (New Kelani Bridge to Athurugiriya)**

**Road Development Authority**

**No 428/1, Robert Gunawardena Mw,**

**Koswatte**

**Battaramulla.**

**Contact [Tel: +94112882138](tel:+94112882138)**

**Fax: +94112878019**

**Email: [rdaehpnkb@gmail.com](mailto:rdaehpnkb@gmail.com)**

In the instance of submission of EOI, on outer envelope of the EOI application, "Elevated Highway from New Kelani Bridge to Athurugiriya "Should be indicated and also the applicant's name, address and contact details. The EOI application, in one (1) original, one (1) copy and one (1) soft copy should be delivered on or before **14.00 Hrs on 20.10.2021** to the address given below.

**The Chairman**

**Cabinet Appointed Consultancy Procurement Committee**

**C/O Secretary, Ministry of Highways**

**Procurement Division,**

**7<sup>th</sup> Floor, Maganeguma Mahamedura,**

**No 216, Denzil Kobbekaduwa Mawatha,**

**Battaramulla,**

**Sri Lanka.**

**Please be good enough to acknowledge project Director, EHP (NKB-Athurugiriya) with contact details for future correspondences, if you collect the EOI document from the web .**

## **2. REQUEST FOR EXPRESSION OF INTEREST (REOI)**

**Road Development Authority  
Ministry of Highways,  
Government of the Democratic Socialist Republic of Sri Lanka**

**No: RDA/EHP/IE/2021/01**

**Date: 2021.09.29**

# **REQUEST FOR EXPRESSION OF INTEREST (REOI)**

**for**

**Appointment of Independent Engineer(s) for Development of Four-Lane Elevated Highway from New Kelani Bridge To Athurugiriya with link to baseline road at Dematagoda on Design, Build, Finance, Operate, Maintain and Transfer (DBFOMT) Semi-Annual Availability Based Service Payment Basis**

The Government of the Democratic Socialist Republic of Sri Lanka had entrusted to the Road Development Authority (“Authority”) the Development of Four-Lane Elevated Highway from New Kelani Bridge to Athurugiriya with link to baseline road at Dematagoda on Design, Build, Finance, Operate, Maintain and Transfer (DBFOMT) Semi-Annual Availability Based Service Payment Basis. The Authority had resolved to take it the Design, Build, Finance, Operate, Maintain and Transfer (DBFOMT) of Four-Lane Elevated Highway from New Kelani Bridge to Athurugiriya with link to baseline road at Dematagoda (“Project”) in accordance with the terms and conditions set forth in the PPP Contract Agreement. The project duration will comprise 6 months development period, 36 months Construction period and 15 years in Operations & Maintenance period.

Road Development Authority intends to hire services of Independent Engineer for a period of around 42 months under the provisions of this contract, extendable for further period at the discretion of the Authority. The Independent Engineer will be selected as per Government of Sri Lanka’s Procurement Guidelines in a two-stage process comprising Request for Expression of Interest (REOI) and Request for Proposal (RFP). RFP shall be issued with invitation to participate only to those Consultants shortlisted from the REOI stage.

The Independent Engineer (IE) 's duties and functions shall include but not be limited to review of designs prepared by the Concessionaire including drawings and specifications; but shall also include superintendence of the Concessionaire's performance under the Concession Agreement, progress monitoring, technical and quality control, evaluations of construction, certification and completion of the works by the Concessionaire, certification of payments and duties related to taking over and the operation and maintenance period. The IE shall be present at all times during the day to day implementation of the Design and Construction Periods and as required for the fulfilment of its assignment during the Operation and Maintenance Period. The draft Terms of Reference is attached. Consultants shortlisted at RFP stage shall be provided access to Draft Concession Agreement and its Schedules.

Interested consultants must provide information indicating that they are qualified to discharge the said services (brochures, description of similar assignments, experience in similar conditions, availability of appropriate skills among staff, etc.). The information shall include details of completed or ongoing services to any public and private entities. The EOI also should include a brief presentation of the enterprise(s) including number of staff, turnover, years in business, Firm/Company Contact information (full name and address, country, telephone and fax numbers, email address, website); Contact Person

Information (name, designation, address for communication, email address, telephone number, FAX number).

The applicants shall be shortlisted based on the following criteria:

1. Annual Turnover – Audited annual turnover in any one of the last five financial years updated to the current financial year shall be more than US\$ 40 million. In case of JV, the lead member shall have more than US\$ 30 million of annual turnover (updated) in any one of the last five financial years. The threshold for each other member shall be US\$ 20 million.
2. Consultants shall have following successful experience as prime consultant in
  - a. atleast one duly completed independent engineer services in a similar project. Similar would mean such work involving civil construction of four lane expressways ,four-lane elevated highway/flyover bridges in urban area of length not less than 3km. In case of JV, the lead member should satisfy the criteria.
  - b. atleast one completed independent engineer services for a project under BOT/PPP format. In case of JV, the lead member should demonstrate atleast one such project.

The Consultants may form Joint Ventures with other firms to enhance their qualifications to be shortlisted for one or multiple projects. The authority will make shortlists consisting of not more than five consultants.

Interested Consultants may obtain further information, if required, at the address given below during office hours on working days.

In the instance of submission of EOI, on outer envelope of the EOI application, "Elevated Highway from New Kelani Bridge to Athurugiriya "Should be indicated and also the applicant's name, address and contact details. The EOI application, in one (1) original, one (1) copy and one (1) soft copy should be delivered on or before 14.00 Hrs on 20.10.2021 to the address given below.

**The Chairman**

**Cabinet Appointed Consultancy Procurement Committee**

**C/O Secretary, Ministry of Highways**

**Procurement Division,**

**7<sup>th</sup> Floor, Maganeguma Mahamedura,**

**No 216, Denzil Kobbekaduwa Mawatha,**

**Battaramulla,**

**Sri Lanka.**

Project Director,  
Road Development Authority



### **3. SAMPLE FORM FOR SUBMISSION OF EXPRESSIONS OF INTEREST**

**SAMPLE FORM FOR SUBMISSION**

**OF**

**EXPRESSIONS OF INTEREST**

**INDEPENDENT ENGINEER FOR DEVELOPMENT OF FOUR-LANE ELEVATED HIGHWAY FROM NEW KELANI BRIDGE TO ATHURUGIRIYA WITH LINK TO BASELINE ROAD AT DEMATAGODA ON DESIGN, BUILD, FINANCE, OPERATE, MAINTAIN AND TRANSFER (DBFOMT) SEMI-ANNUAL AVAILABILITY BASED SERVICE PAYMENT BASIS.**

**SEPTEMBER 2021**

## Information to be provided by Consultant in Expression of Interest

### Expression of Interest (EOI)

<b>Project Name</b>	<b>Development of Four-Lane Elevated Highway from New Kelani Bridge to Athurugiriya with link to Baseline Road at Dematagoda on Design, Build, Finance, Operate, Maintain and Transfer (DBFOMT) Semi-Annual Availability Based Service Payment Basis.</b>
<b>Assignment</b>	Independent Engineer

#### A. Consulting Firm Information

Consultant Name:	Country of Incorporation:
Acronym:	
EOI Submission Authorized by:	Position

#### Details of Individual Firms in the Associations (Joint Venture or Sub-consultancy)

Name of each Individual Firm	Acronym	Position in the Association- Lead Firm / Joint Venture Partner / Sub Consultant

# General Information

All individual firms and each partner of a joint venture expressing interest must complete the information in this form.

1. Name of Firm:	
------------------	--

2. Head Office Address:	
-------------------------	--

3. Telephone:		Contact:
4. Facsimile:		Telex:
5. Place of incorporation registration:		

6. Main lines of Business:	

7. Closely connected firms- (List all the closely connected firms):	
Parent Firm:	
Associate Firm:	
Subsidiary Firm:	

Present the rationale for and benefits of working in association (JV or Sub-consultant) with others rather than undertaking the assignment independently (as appropriate). Describe the proposed management and coordination approach of the association and the role of each firm.

We confirm that:

- Documentation regarding our corporate structure including beneficial ownership has been attached.
- A written agreement to associate for the purpose of this Expression of Interest has been signed between the consortium partners and has been attached.

Once your team is shortlisted and invited for submission of the Proposal, it is not permissible to transfer the invitation to any other firm, such as Consultant's parent companies, subsidiaries, and affiliates. RDA will reject a proposal if the Consultant drops a JV member without RDA's prior consent, which is given only in exceptional circumstances, such as debarment of the JV partner or occurrence of Force Majeure.

## **B. Assignment Specific Qualifications and Experience**

### **a. Similar Project Experiences**

---

Provide the technical qualifications of your entity/consortium under the Similar Project Experience given below .

- Experience in Highway Design and Long span bridge design and review of design works in Highway construction projects within last ten years.
- Experience as an Independent Engineer related to the Elevated Highways, and other roadways and Highways under BOT/PPP format within last ten years.
- Specific experience in elevated highways construction projects going through the marsh and waterway areas within last ten years.

### **b. Financial Capacity Details.**

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- Please specify your annual turnover details of last five years.

# Letter of Submission of Expression of Interest

Date:

To.

Chairman,  
Cabinet Appointed Consultancy Procurement Committee (CACPC)  
Ministry of Highways  
08<sup>th</sup> Floor, “MaganegumaMahamedura”,  
Denzil Kobbekaduwa Mawatha,  
Kosswatte  
Battaramulla,  
Sri Lanka.

Sir,

**Letter of Submission of Expression of Interest –Independent Engineer For  
Development Of Four-Lane Elevated Highway From New Kelani Bridge To  
Athurugiriya With Link To Baseline Road At Dematagoda On Design, Build,  
Finance, Operate, Maintain And Transfer (DBFOMT) Semi-Annual Availability  
Based Service Payment Basis.**

1. We, *(Name of Firm and Address)* , in association with *(Name of Firm and Address)* , hereinafter referred as the Interested Consultant, and having reviewed and fully understood all the information provided, the undersigned hereby expresses interest to be considered by yourselves as a potential candidate for the Independent Engineer contract, for **Development Of Four-Lane Elevated Highway From New Kelani Bridge To Athurugiriya With Link To Baseline Road At Dematagoda On Design, Build, Finance, Operate, Maintain And Transfer (DBFOMT) Semi-Annual Availability Based Service Payment Basis.**
2. Attached to this letter are copies of the original documents defining:
  - a) The interested consultant’s legal status;
  - b) The principle place of business and
  - c) The place of incorporation (for applicants that are corporations), of the place of registration and the nationality of the owners (for interested consultants that are partnership or individually owned firms)
  - d) Your Agency and its authorized representatives may contact the following persons for further information:

<b>General and Managerial Inquiries</b>			
<i>Name</i>	<i>Telephone No.</i>	<i>Fax No.</i>	<i>Email Address</i>
<b>Personal Inquiries</b>			
<i>Name</i>	<i>Telephone No.</i>	<i>Fax No.</i>	<i>Email Address</i>
<b>Financial Inquiries</b>			
<i>Name</i>	<i>Telephone No.</i>	<i>Fax No.</i>	<i>Email Address</i>

e) The undersigned declare that the statements made and the information provided in the duly completed expression on interest are complete, true and correct in every detail.

Signed .....

Signed .....

*Name and Designation*

*Name and Designation*

For and on behalf of (*Company Name*)

For and on behalf of (*Company Name*)

# Self Declaration

Date: .....

To,  
Chairman,  
Cabinet Appointed Consultancy Procurement Committee (CACPC)  
Ministry of Highways  
08<sup>th</sup> Floor, “MaganegumaMahamedura”,  
Denzil Kobbekaduwa Mawatha,  
Kosswatte, Battaramulla, Sri Lanka.

Dear Sir,

We,..... (name of all Consulting Firm) declare that we are legally eligible to participate in the procurement process of ***Independent Engineer For Development Of Four-Lane Elevated Highway From Development Of Four-Lane Elevated Highway From New Kelani Bridge To Athurugiriya With Link To Baseline Road At Dematagoda On Design, Build, Finance, Operate, Maintain And Transfer (DBFOMT) Semi-Annual Availability Based Service Payment Basis.*** We also declare that we do not have any conflict of interest in the said assignment.

We hereby also declare that we have not received any punishment while doing consulting business in the last ten years.

**Note:** *(If any member of the consulting Firm is not eligible to participate in procurement process or has conflict of interest in the said assignment or has received any punishment while doing consulting business in the last ten years, the same must be clearly mentioned in this form. Any history of litigation during the last five years shall also be declared here along with the relevant verdict.)*

Signature:

Name:

Designation:

For and on behalf of:

**C. EOI Attachments**

SN	Description
1	Certificate of Incorporation of the lead member
2	Certificate of Incorporation of the JV member (for each member)
3	Certificate of Incorporation of the Sub-Consultant (for each sub-consultant)
4	Letter of Association
5	Power of Attorney

(Please insert more rows as necessary)

**D. Eligibility Declaration**

We, the undersigned, certify to the best of our knowledge and belief:

- We have read the advertisement, including Terms of Reference (TOR), for this assignment.
- Neither the consulting firm nor its JV member or sub-consultant or any of its experts prepared the TOR for this assignment.
- We confirm that the project references submitted as part of this EOI accurately reflect the experience of the specified firm/consortium.
- Neither the consulting firm nor the JV member or sub-consultant has ever been convicted of an integrity-related offense or crime related to theft, corruption, fraud, collusion or coercion.
- JV member or sub-consultant named in this EOI confirmed their interest in this activity in writing.
- JV member or sub-consultant named in this EOI, authorized us in writing to represent them in expressing interest in this activity.
- We understand that any misrepresentations that knowingly or recklessly mislead, or attempt to mislead may lead to the automatic rejection of the proposal or cancellation of the contract, if awarded.
- We confirm our availability to commence work on the indicative commencement date specified in the consulting services recruitment notice for this assignment.



## 4. SHORTLISTING CRITERIA AND MARKING SYSTEM

### 4.1 Shortlisting Criteria

1. The marking system shown below shall be adopted to decide on the shortlist.
2. The maximum score shall be 100.
3. The maximum number of consulting firms to be shortlisted is five (05) firms.
4. Only the applicants who obtained more than 60 points shall be considered for shortlisting.
5. The country of the firm shall be decided by its place of incorporation.
6. In the case of a Joint Venture, the country of the lead firm shall be considered as the country of the JV.
7. In case of sub consultancy type association, only the experience of the Lead firm shall be considered, but in the case of JVs the experiences of all the partners of the JV shall be considered.
8. Following minimum qualification shall be fulfilled by the each EOI applicant.
  - Annual Turnover – Audited annual turnover in any one of the last five financial years updated to the current financial year shall be more than US\$ 40 million. In case of JV, the lead member shall have more than US\$ 30 million of annual turnover (updated) in any one of the last five financial years. The threshold for each other member shall be US\$ 20 million.
  - Consultants shall have following successful experience as prime consultant in
    - a. at least one duly completed independent engineer services in a similar project. Similar would mean such work involving civil construction of four lane expressways, four-lane elevated highway/flyover bridges in urban area of length not less than 3km. In case of JV, the lead member should satisfy the criteria.
    - b. at least one completed independent engineer services for a project under BOT/PPP format. In case of JV, the lead member should demonstrate at least one such project.

## 4.2 Marking System

The maximum of score of 100 shall be divided into the following categories:

- (a) Similar Experience 80
- (b) Financial Capacity 20

### (a) Similar Experience (Maximum 80 marks)

Marks will be given on quantitative basis and shall have experience in:

1. Design works and Review of the Design. ( 15 marks)

- Highway Design (Maximum 5 marks)

- 1. 1 Project 3 marks
- 2. 2 Projects 4 marks
- 3. 3 Projects 5 marks

- Design of long span bridges, Via Duct and Elevated Highway (Maximum 10 marks)

- 1. 1 Project 5 marks
- 2. 2 Projects 8 marks
- 3. 3 projects 10 marks

2. Experience as an Independent Engineer for BOT/ PPP Projects(55 marks)

- Highways (Maximum 30 marks)

- 1. 1 Project 20 marks
- 2. 2 Projects 25 marks
- 3. 3 Projects 30 marks

- Minimum Four Lane Elevated Highways and long span Bridges not less than 3 km. ( Maximum 25 marks)

- 1. 1 Project 15 marks
- 2. 2 Projects 20 marks
- 3. 3 Projects 25 marks

3. Environment Management- Marsh and Water way Areas.(10 marks)

- 1. 1 Project 5 marks
- 2. 2 Projects 7 marks
- 3. 3 Projects 10 marks

### (b) Financial Capacity (Maximum 20 marks)

- 1. Annual Turnover above US\$ 40 million. 10 marks.
- 2. Annual Turnover above US\$ 45 million 15 marks
- 3. Annual Turnover above US\$ 50 million 20 marks

## 5. TERMS OF REFERENCE FOR INDEPENDENT ENGINEER

### **I: Background**

The Government of the Democratic Socialist Republic of Sri Lanka had entrusted to the Road Development Authority (“Authority”) the Development of Four-Lane Elevated Highway from New Kelani Bridge To Athurugiriya with link to baseline road at Dematagoda on Design Build, Finance, Operate, Maintain and Transfer (DBFOMT) Semi-Annual Availability Based Service Payment Basis. The Authority had resolved to take it the Design Build, Finance, Operate, Maintain and Transfer (DBFOMT) of Four-Lane Elevated Highway from New Kelani Bridge To Athurugiriya with link to baseline road at Dematagoda (“Project”) in accordance with the terms and conditions set forth in this Agreement. The project duration will comprise 6 months development period, 36 months Construction period and 15 years in Operations & Maintenance period. The Independent Engineer will be appointed for a period of around 42 months under the provisions of this contract, extendable for further period at the discretion of the Authority.

### **II: Objectives of the Assignment**

- to ensure high quality designs and construction of all works as per the Concession Agreement and its Schedules;
- to undertake role of an independent project manager for timely implementation which conforms with applicable standards and technical specifications;
- to train and build capacity in the Authority’s staff and designated Concessionaire’s staff;

The Independent Engineer shall be required to read this Terms of Reference along with the Concession Agreement and its Schedules and is deemed to have familiarized itself with its responsibilities under the Concession Agreement and its Schedules. All such requirements, if not stated in this document but stated in Concession Agreement and its Schedules will be deemed to have been priced by the Independent Engineer its bid price.

All references to Articles and Clauses in this terms of reference indicates reference to such Articles and Clauses under Concession Agreement and its Schedule.

### **III: Scope of Services, Tasks, Components and expected deliverables.**

#### **1. Scope and standards of performance**

- 1.1 These Terms of Reference for the Independent Engineer (“IE”) relate to the Concession Agreement (“CA”) of the above-mentioned Project. The CA will be awarded competitively by the Authority to the lowest evaluated bidder in accordance with the provisions of Request for Proposal launched for procurement of Concessionaire to undertake the Project. The term the “Authority” which expression shall, unless repugnant to the context or meaning thereof, include its administrators, successors and assigns. The term “Concessionaire” refers collectively to any subcontractors, suppliers, designers, consultants, etc. employed by the Concessionaire in fulfillment of its obligations provided under the CA.
- 1.2 In taking actions and making decisions, the IE shall be guided by professional values of project management, encompassing responsibility, respect, fairness and honesty. The IE shall exercise its responsibility by taking ownership for decisions made, actions taken and the consequences that may result. The IE’s decisions and actions shall be based on the best interests of the parties to the CA, as well as public safety and social and environment safeguards. If necessary, the IE shall be ready to take ownership for errors and omissions, promptly communicate them to the affected parties and make corrections. The IE shall be fully familiar with and uphold the agreed policies, rules and the respective rights

and obligations of the Authority and the Concessionaire under the CA. The IE shall demonstrate respect by listening to and understanding the views of others, negotiating in good faith and not acting in an abusive and arbitrary manner. It shall always remain the duty of the I.E. to apply fairness through conduct which is conducive to consistent impartiality and objectivity. Transparency, truthfulness and avoidance and/ or disclosure of real or potential conflicts of interest shall complement the IE's reputation for honesty.

## **2. General duties and functions**

### **2.1. Role and Functions of the Independent Engineer**

2.1.1. The role and functions of the Independent Engineer shall include the following:

- (i) review of the Drawings and Documents as set forth in Paragraph 2.2;
- (ii) review, inspection and monitoring of Construction Works as set forth in Paragraph 2.3;
- (iii) conducting Tests on completion of construction and issuing Completion/ Provisional Certificate as set forth in Paragraph 2.3;
- (iv) review, inspection and monitoring of O&M as set forth in Paragraph 2.4;
- (v) review, inspection and monitoring of Divestment Requirements as set forth in Paragraph 2.5;
- (vi) determining, as required under the Agreement, the costs of any works or services and/or their reasonableness;
- (vii) determining, as required under the Agreement, the period or any extension thereof, for performing any duty or obligation;
- (viii) assisting the Parties in resolution of disputes as set forth in Paragraph 2.7; and
- (ix) Undertaking all other duties and functions in accordance with the Agreement.

The Independent Engineer shall discharge its duties in a fair, impartial and efficient manner, consistent with the highest standards of professional integrity and Good Industry Practice.

### **2.2. Development Period**

2.2.1. During the Development Period, the Independent Engineer shall undertake a detailed review of the Drawings to be furnished by the Concessionaire along with supporting data, including the geo-technical and hydrological investigations, characteristics of materials from borrow areas and quarry sites, topographical surveys and traffic surveys. The Independent Engineer shall complete such review and send its comments/observations to the Authority and the Concessionaire within 15 (fifteen) days of receipt of such Drawings. In particular, such comments shall specify the conformity or otherwise of such Drawings with the Scope of the Project and Specifications and Standards.

2.2.2. The Independent Engineer shall review any modified Drawings or supporting Documents sent to it by the Concessionaire and furnish its comments within 7 (seven) days of receiving such Drawings or Documents.

- 2.2.3. The Independent Engineer shall review the Drawings sent to it by the Safety Consultant in accordance with Schedule-L and furnish its comments thereon to the Authority and the Concessionaire within 7 (seven) days of receiving such Drawings. The Independent Engineer shall also review the Safety Report and furnish its comments thereon to the Authority within 15 (fifteen) days of receiving such report.
- 2.2.4. The Independent Engineer shall review the detailed design, construction methodology, quality assurance procedures and the procurement, engineering and construction time schedule sent to it by the Concessionaire and furnish its comments within 15 (fifteen) days of receipt thereof.
- 2.2.5. Upon reference by the Authority, the Independent Engineer shall review and comment on the EPC Contract or any other contract for construction, operation and maintenance of the Project Highway, and furnish its comments within 7 (seven) days from receipt of such reference from the Authority.
- 2.2.6. Upon reference by the Authority, the Independent Engineer shall review the status of permits and clearances to be obtained by the Concessionaire under Schedule E of the Concession Agreement. The Independent Engineer shall also facilitate and co-sign the Joint Memorandum and Appendix on Site handover under Article 10 of the Concession Agreement. The Independent Engineer shall also coordinate with Authority and the Concessionaire to prepare the land hand-over schedule under Article 10 of Concession Agreement and Schedule G, and shall ensure that the plans and programmes of the Concessionaire are compliant to such site availability as indicated in agreed land hand-over schedule.

### **2.3. Construction Period**

- 2.3.1. In respect of the Drawings, Documents and Safety Report received by the Independent Engineer for its review and comments during the Construction Period, the provisions of Paragraph 2.2 shall apply, mutatis mutandis.
- 2.3.2. The Independent Engineer shall review the monthly progress report furnished by the Concessionaire and send its comments thereon to the Authority and the Concessionaire within 7 (seven) days of receipt of such report.
- 2.3.3. The Independent Engineer shall inspect the Construction Works and the Project Highway regularly and make out a report of such inspection (the “Inspection Report”) setting forth an overview of the status, progress, quality and safety of construction, including the work methodology adopted, the materials used and their sources, and conformity of Construction Works with the Scope of the Project and the Specifications and Standards. In a separate section of the Inspection Report, the Independent Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in the construction of the Project Highway. The

Inspection Report shall also contain a review of the maintenance of the existing lanes in conformity with the provisions of the Agreement. The Independent Engineer shall send a copy of its Inspection Report to the Authority and the Concessionaire within 7 (seven) days of the inspection.

- 2.3.4. The Independent Engineer shall inspect the Project Highway more than twice in a month if any lapses, defects or deficiencies require such inspections.
- 2.3.5. For determining that the Construction Works conform to Specifications and Standards, the Independent Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests on a sample basis, to be specified by the Independent Engineer in accordance with Good Industry Practice for quality assurance. The Independent Engineer shall issue necessary directions to the Concessionaire for ensuring that the tests are conducted in a fair and efficient manner, and shall monitor and review the results thereof.
- 2.3.6. In the event that the Concessionaire carries out any remedial works for removal or rectification of any defects or deficiencies, the Independent Engineer shall require the Concessionaire to carry out, or cause to be carried out, tests to determine that such remedial works have brought the Construction Works into conformity with the Specifications and Standards, and the provisions of this Paragraph 2.3 shall apply to such tests.
- 2.3.7. In the event that the Concessionaire fails to achieve any of the Project Milestones, the Independent Engineer shall undertake a review of the progress of construction and identify potential delays, if any. If the Independent Engineer shall determine that completion of the Project Highway is not feasible within the time specified in the Agreement, it shall require the Concessionaire to indicate within 15 (fifteen) days the steps proposed to be taken to expedite progress, and the period within which the Project Completion Date shall be achieved. Upon receipt of a report from the Concessionaire, the Independent Engineer shall review the same and send its comments to the Authority and the Concessionaire forthwith.
- 2.3.8. If at any time during the Construction Period, the Independent Engineer determines that the Concessionaire has not made adequate arrangements for the safety of workers and Users in the zone of construction or that any work is being carried out in a manner that threatens the safety of the workers and the Users, it shall make a recommendation to the Authority forthwith, identifying the whole or part of the Construction Works that should be suspended for ensuring safety in respect thereof.
- 2.3.9. In the event that the Concessionaire carries out any remedial measures to secure the safety of suspended works and Users, it may, by notice in writing, require the Independent Engineer to inspect such works, and within 3 (three) days of receiving such notice, the Independent Engineer shall inspect the suspended works and make

a report to the Authority forthwith, recommending whether or not such suspension may be revoked by the Authority.

- 2.3.10. If suspension of Construction Works is for reasons not attributable to the Concessionaire, the Independent Engineer shall determine the extension of dates set forth in the Project Completion Schedule, to which the Concessionaire is reasonably entitled, and shall notify the Authority and the Concessionaire of the same.
- 2.3.11. The Independent Engineer shall carry out, or cause to be carried out, all the Tests specified in Schedule-I and issue a Completion Certificate or Provisional Certificate, as the case may be. For carrying out its functions under this Paragraph 2.3.13 and all matters incidental thereto, the Independent Engineer shall act under and in accordance with the provisions of Article 14 and Schedule-I of the Concession Agreement and its Schedules.
- 2.3.12. Upon reference from the Authority, the Independent Engineer shall make a fair and reasonable assessment of the costs of providing information, works and services as set forth in Article 16 of Concession Agreement and certify the reasonableness of such costs for payment by the Authority to the Concessionaire.
- 2.3.13. The Independent Engineer shall aid and advise the Concessionaire in preparing the Maintenance Manual.
- 2.3.14. In order to ensure proper contract administration, Independent Engineer shall develop suitable Contract Administration plan, Performance Assessment plan & Several Technical plans.

## **2.4. Operation Period**

- 2.4.1. In respect of the Drawings, Documents and Safety Report received by the Independent Engineer for its review and comments during the Operation Period, the provisions of Paragraph 2.2 shall apply, mutatis mutandis.
- 2.4.2. The Independent Engineer shall review the annual Maintenance Programme furnished by the Concessionaire and send its comments thereon to the Authority and the Concessionaire within 15 (fifteen) days of receipt of the Maintenance Programme.
- 2.4.3. The Independent Engineer shall review the monthly status report furnished by the Concessionaire and send its comments thereon to the Authority and the Concessionaire within 7 (seven) days of receipt of such report.

- 2.4.4. The Independent Engineer shall inspect the Project Highway once every month, preferably after receipt of the monthly status report from the Concessionaire, but before the 20th (twentieth) day of each month in any case, and make out an O&M Inspection Report setting forth an overview of the status, quality and safety of O&M including its conformity with the Maintenance Requirements and Safety Requirements. In a separate section of the O&M Inspection Report, the Independent Engineer shall describe in reasonable detail the lapses, defects or deficiencies observed by it in O&M of the Project Highway. The Independent Engineer shall send a copy of its O&M Inspection Report to the Authority and the Concessionaire within 7 (seven) days of the inspection.
- 2.4.5. The Independent Engineer may inspect the Project Highway more than once in a month, if any lapses, defects or deficiencies require such inspections.
- 2.4.6. The Independent Engineer shall in its O&M Inspection Report specify the tests, if any, that the Concessionaire shall carry out, or cause to be carried out, for the purpose of determining that the Project Highway is in conformity with the Maintenance Requirements. It shall monitor and review the results of such tests and the remedial measures, if any, taken by the Concessionaire in this behalf.
- 2.4.7. The Independent Engineer shall determine if any delay has occurred in completion of repair or remedial works in accordance with the Agreement, and shall also determine the Damages, if any, payable by the Concessionaire to the Authority for such delay.
- 2.4.8. The Independent Engineer shall examine the request of the Concessionaire for closure of any lane(s) of the carriageway for undertaking maintenance/repair thereof, keeping in view the need to minimise disruption in traffic and the time required for completing such maintenance/repair in accordance with Good Industry Practice. It shall grant permission with such modifications, as it may deem necessary, within 3 (three) days of receiving a request from the Concessionaire. Upon expiry of the permitted period of closure, the Independent Engineer shall monitor the re-opening of such lane(s), and in case of delay, determine the Damages payable by the Concessionaire to the Authority under Clause 17.7.
- 2.4.9. The Independent Engineer shall monitor and review the curing of defects and deficiencies by the Concessionaire as set forth in Clause 19.4. In addition, the Independent Engineer shall monitor the performance and make recommendations for deduction in line with Schedule M to the Concession Agreement.
- 2.4.10. In the event that the Concessionaire notifies the Independent Engineer of any modifications that it proposes to make to the Project Highway, the Independent Engineer shall review the same and send its comments to the Authority and the Concessionaire within 15 (fifteen) days of receiving the proposal.



The Independent Engineer shall undertake traffic sampling, as and when required by the Authority, under and in accordance with Article 22 and Schedule-O of the Concession Agreement and its Schedules.

## **2.5. Termination**

2.5.1. At any time, not earlier than 90 (ninety) days prior to Termination but not later than 15 (fifteen) days prior to such Termination, the Independent Engineer shall, in the presence of a representative of the Concessionaire, inspect the Project Highway for determining compliance by the Concessionaire with the Divestment Requirements set forth in Clause 38.1 and, if required, cause tests to be carried out at the Concessionaire's cost for determining such compliance. If the Independent Engineer determines that the status of the Project Highway is such that its repair and rectification would require a larger amount than the sum set forth in Clause 39.2, it shall recommend retention of the required amount in the Escrow Account and the period of retention thereof.

2.5.2. The Independent Engineer shall inspect the Project Highway once in every 15(fifteen) days during a period of 90 (ninety) days after Termination for determining the liability of the Concessionaire under Article 39, in respect of the defects or deficiencies specified therein. If any such defect or deficiency is found by the Independent Engineer, it shall make a report in reasonable detail and send it forthwith to the Authority and the Concessionaire.

## **2.6. Determination of Costs and Time**

2.6.1. The Independent Engineer shall determine the costs, and/or their reasonableness, that are required to be determined by it under the Agreement with the consent of the Authority.

2.6.2. The Independent Engineer shall determine the period, or any extension thereof, that is required to be determined by it under the Agreement with the consent of the Authority.

## **2.7. Assistance in Dispute resolution**

2.7.1. When called upon by either Party in the event of any Dispute, the Independent Engineer shall mediate and assist the Parties in arriving at an amicable settlement.

2.7.2. In the event of any disagreement between the Parties regarding the meaning, scope and nature of Good Industry Practice, as set forth in any provision of the Agreement, the Independent Engineer shall specify such meaning, scope and nature by issuing a reasoned written statement relying on good industry practice and authentic literature.

## **2.8. Other Duties and Functions**

The Independent Engineer shall perform all other duties and functions specified in the Agreement.

## **2.9. Miscellaneous**

- 2.9.1. The Independent Engineer shall notify its programme of inspection to the Authority and to the Concessionaire, who may, in their discretion, depute their respective representatives to be present during the inspection.
- 2.9.2. A copy of all communications, comments, instructions, Drawings or Documents sent by the Independent Engineer to the Concessionaire pursuant to this TOR, and a copy of all the test results with comments of the Independent Engineer thereon shall be furnished by the Independent Engineer to the Authority forthwith.
- 2.9.3. The Independent Engineer shall obtain, and the Concessionaire shall furnish in two copies thereof, all communications and reports required to be submitted, under this Agreement, by the Concessionaire to the Independent Engineer, whereupon the Independent Engineer shall send one of the copies to the Authority along with its comments thereon.
- 2.9.4. The Independent Engineer shall retain at least one copy each of all Drawings and Documents received by it, including 'as-built' Drawings, and keep them in its safe custody.
- 2.9.5. Upon completion of its assignment hereunder, the Independent Engineer shall duly classify and list all Drawings, Documents, results of tests and other relevant records, and hand them over to the Authority or such other person as the Authority may specify and obtain written receipt thereof. Two copies of the said document shall also be furnished in micro film form or in such other medium as may be acceptable to the Authority.
- 2.9.6. Wherever no period has been specified for delivery of services by the Independent Engineer, the Independent Engineer shall act with the efficiency and urgency necessary for discharging its functions in accordance with Good Industry Practice.

#### IV: Team Composition and Qualification Requirements

#	Key Expert Position	Number of Persons	Man Months			Total Man Months
			Development Period (3 months)	Construction Period (3 years)	O&M Period (3 months)	
1	Team Leader & Senior Bridge Engineer (Foreign)	1	3	33	3	39
2	Deputy Team Leader & Senior Highway Engineer (Local)	1	3	36	3	42
3	Senior Bridge / Structural Design Engineer (Foreign)	1	0	12	0	12
4	Senior Bridge / Structural Design Engineer (Local)	1	0	36	3	39
5	Senior Highway Design Engineer (Foreign)	1	0	6	0	6
6	Geotechnical Engineer (Local)	1	0	10	0	10
7	Senior Pavement Expert (Local)	1	0	3	1	4
8	Senior Quality cum Material Expert (Foreign)	1	0	30	0	30
9	Traffic and Safety Expert (Local)	1	0	32	3	35
10	Environmental & Social Expert (Local)	1	3	36	0	39
11	Contract Expert (Foreign)	1	3	7	1	11
12	Hydrologist (Local)	1	0	13	2	15
Total						282

Non-Key Staff requirement should be assessed by the bidder based on scope of work. Such CVs will not be evaluated but CV should be submitted for approval of the client prior to mobilization:

#	Indicative Positions	Primary Requirement phase wise			Indicative Number of Persons	Indicative aggregate man months
		Development	Construction	O&M		
1	Construction Engineer1 (Local)	0	36	3	3	117
2	CAD Experts	0	18	2	2	40
3	Quality cum Material Engineers	0	36	0	2	72
4	Quantity Surveyor	0	18	3	1	21
5	Surveyors	0	30	0	1	30
6	Laboratory Technicians	0	36	3	4	156
7	Project Secretary	3	36	3	1	42
8	Management Assistant	3	36	3	2	84
9	Office Aids	3	36	3	2	84
Total						646

Note: The above categories are indicative and the IE may decide upon the requirement based on the scope of work. The other inputs like support staff such as administrative, accounts, and assistants shall also be provided by the IE, of an acceptable type, and commensurate with the roles and responsibilities of each position to efficiently and effectively perform the services.

### Qualification Requirements of Key Experts:

#### 1. Team Leader & Senior Bridge Engineer (Foreign)

This is the senior most position and the expert engaged as the team leader shall be responsible for reviewing the entire Project preparation and implementation activities of the Concessionaire. The Expert shall check all the Designs being prepared by the Concessionaire, ensure execution of works on site as per specification and standards, and continuously interact with the Authority and the Concessionaire. The Expert shall undertake Project site visits and shall guide, supervise, coordinate and monitor the work of other experts in his team as well as those of the Concessionaire. The Expert is responsible for day to day supervision of works for implementing the project in accordance of Concession Agreement and report non compliances to both Concessionaire and Authority. Responsible for certifying the payments and help in resolving the disputes between Concessionaire and Authority. The candidate should have a proven record of supervising, organizing and managing of Project preparation and construction of highway projects of large magnitudes, as defined below. Knowledge of Project management shall be an added advantage.

#### Qualifications and Experiences:

- Minimum Post Graduate Degree in Civil, Structural Engineering or equivalent from a recognized University.
- Minimum total Professional Experience of 20 years in Structures.

- Including at least 2 years of experience in Highway Development in EPC, Annuity, or PPP Projects.
- He should have handled the assignments as Team Leader/ Deputy Team Leader or similar capacity of at least two construction supervision consultancy works and two Independent Engineer consultancy works of highways of EPC, Annuity, or PPP projects. Each of such project should have a value higher than US\$ 500 million and atleast one of the two projects should have component of 4-lane elevated corridor of length more than 10 km.
- His experience should include atleast 3 years on similar projects in developing countries. Experience in Sri Lanka shall be preferred.
- Experience in preparation of Detailed Project Reports (DPR's) of highway projects.
- Knowledge of international 'best practices' in latest conditions of contract, construction, contract management and modern highway construction technology.
- Experience in AASHTO and British Standards would be added advantage.
- Experience in Operation and Maintenance of Major Highway Projects.
- Experience in contract dispute management.
- He should also be familiar with implementation aspects of safety, Environmental Management Plans, Social Safeguard plans.
- The Project experience less than one year in any project will not be considered in determining the experience in number of projects.

## **2. Deputy Team Leader & Senior Highway Engineer (Local)**

The Expert shall check all the Designs being prepared by the Concessionaire, ensure execution of works on site as per specification and standards, and continuously interact with the Authority and the Concessionaire. The Expert shall undertake Project site visits and shall guide, supervise, coordinate and monitor the work of other experts in his team as well as those of the Concessionaire. The Expert is responsible for day to day supervision of works for implementing the project in accordance of Concession Agreement and report non compliances to both Concessionaire and Authority. The candidate should have a proven record of supervising, organizing and managing of Project preparation and construction of highway projects of large magnitudes, as defined below. Knowledge of Project management shall be an added advantage.

### **Qualifications and Experiences:**

- Minimum Post Graduate Degree in Civil, Highway, or Transportation Engineering or equivalent from a recognized University.
- Minimum total Professional Experience of 15 years in Highways.
- Including at least 2 years of experience in Highway Development in EPC, Annuity, or PPP Projects.
- His experience should include atleast 3 years on similar projects in developing countries. Experience in Sri Lanka shall be preferred.
- He should have handled the assignments as Team Leader/ Deputy Team Leader or similar capacity of at least one construction supervision consultancy works and one Independent Engineer consultancy works of highways of EPC, Annuity, or PPP projects. Each of such project should have a value higher than US\$ 500 million and atleast one of the two projects should have component of 4-lane elevated corridor of length more than 10 km.
- Experience in preparation of DPRs of highway projects.

- Knowledge of international ‘best practices’ in latest conditions of contract, construction, contract management and modern highway construction technology.
- Experience in Operation and Maintenance of Major Highway Projects.
- Experience in contract dispute management.
- He should also be familiar with implementation aspects of safety, Environmental Management Plans, Social Safeguard plans.
- The Project experience less than one year in any project will not be considered in determining the experience in number of projects.

### **3. Senior Bridge Design Engineer (Foreign)**

The Senior Bridge Design Engineer/ Senior Structural Engineer shall be responsible for checking the designs of all structure to be constructed in the Project highway, guiding the field supervision teams in checking of reinforcement, rectifying any apparent mistakes in respect of them, checking and controlling the proper mix designs, checking the adequacy of proper formwork, laying/compacting of concrete including curing operations. For this purpose, the Expert will work in close coordination with the Senior Quality cum Material Expert to effectively control the quality of execution. The Expert will be responsible for minor modifications in design of bridges, wherever required during execution. The Expert shall also review the rehabilitation measures to be proposed by the Concessionaire for existing structures based on site condition and structural requirement basis. His expertise shall include computer aided design methods for Civil/Structural Engineering with particular reference to structural design.

#### **Qualifications and Experiences:**

- Minimum Graduate in Civil Engineering and Post Graduate Degree in Structural Engineering from a recognized University.
- Minimum Professional Experience of 15 years.
- 8years out of total 15 years experience in similar capacity of Senior Bridge Design Engineer / Senior Structural Engineer for design of major highway bridges.
- Experience of designing of 4 major Highway Bridges or flyovers having length more than 10 km in aggregate during past 10 years. At least one of the experience should be in such project comprising elevated corridor of at least 3 km in length.
- He should have at least 4 years experience in rehabilitation/repair/ maintenance of bridges.
- Experience in innovative methods of construction of Bridges (Pre-cast Segmental, Cantilever Construction, Cable Stayed Bridge, Suspension bridges etc.), bridge Design methods and standards, bridge Design with use of Computer aided software, technical specifications and statistical Quality Control/Assurance procedures for construction of different component of bridges.
- Experience in AASHTO and British Standards would be added advantage.
- His experience as Senior Bridge Design Engineer / Senior Structural Engineer on a construction project in developed countries will be an added qualification.

### **4. Senior Bridge Design Engineer (Local)**

The Senior Bridge Design Engineer/ Senior Structural Engineer shall be responsible for checking the designs of all structure to be constructed in the Project highway, guiding the field supervision teams in checking of reinforcement, rectifying any apparent mistakes in respect of them, checking and controlling the proper mix designs, checking the adequacy of proper form-work, laying/compacting of concrete including curing operations. For this

purpose, the Expert will work in close coordination with the Senior Quality cum Material Expert to effectively control the quality of execution. The Expert will be responsible for minor modifications in design of bridges, wherever required during execution. The Expert shall also review the rehabilitation measures to be proposed by the Concessionaire for existing structures based on site condition and structural requirement basis. His expertise shall include computer aided design methods for Civil/Structural Engineering with particular reference to structural design.

#### **Qualifications and Experiences:**

- Minimum Graduate in Civil Engineering and Post Graduate Degree in Structural Engineering from a recognized University.
- Minimum Professional Experience of 15 years.
- 8years out of total 15 years experience in similar capacity of Senior Bridge Design Engineer / Senior Structural Engineer for design of major highway bridges.
- Experience of designing of 4 major Highway Bridges or flyovers having length more than 2 km in aggregate during past 10 years. Atleast one of the experience should be in such project comprising elevated corridor of atleast 1 km in length.
- He should have at least 4 years experience in rehabilitation/repair/ maintenance of bridges.
- Experience in innovative methods of construction of Bridges (Pre-cast Segmental, Cantilever Construction, Cable Stayed Bridge, Suspension bridges etc.), bridge Design methods and standards, bridge Design with use of Computer aided software, technical specifications and statistical Quality Control/Assurance procedures for construction of different component of bridges.
- Experience in AASHTO and British Standards would be added advantage.
- His experience as Senior Bridge Design Engineer / Senior Structural Engineer on a construction project in developed countries will be an added qualification.

#### **5. Senior Highway Design Engineer. (Foreign)**

The Senior Highway Design Engineer shall be responsible for the review of highway designs and drawings using sophisticated computer software, and also construction and O&M works. His expertise shall include computer aided design methods for Civil/Highway Engineering with particular reference to CAD application to the geometric design for highway projects.

#### **Qualifications and Experiences:**

- Minimum Graduate in Civil Engineering. Preferably, Post Graduate Degree in Highway Engineering from a recognized University.
- Professional Experience of 15 years in highway works.
- Experience of at least 8years (out of total 15 years) in Highway Designing works.
- He should have handled as Highway Design Engineer at least 2 Projects of major 2 lane/4 lane/ 6 lane Highway projects.
- Exposure of Computer Software Programmes for Design of Highways.
- Experience in at least two Highway Projects having a length not less than 25 kilometers equivalent on PPP Mode.
- Experience in developed countries would be preferred.
- The Experience in those projects served less than six months will not be considered.

## **6. Geotechnical Engineer (Local)**

The expert shall be continuously interacting with the Concessionaire, to ensure of planning, monitoring and coordinating of geotechnical and hydraulic investigations for the Elevated Highway and interpreting the findings thereof as per the standards and Specifications of Concession Agreement.

### **Qualifications and Experiences:**

- Minimum Graduate in Civil Engineering from a recognized University. Post Graduate Degree in relevant field is preferable.
- With total Professional Experience of 15 years in Design/ Construction/ Maintenance of Highways.
- Out of 15 years, experience of 5 years in similar capacity as Geotechnical Engineer in Construction Supervision consultancy or Independent Engineer for the projects having a minimum 25 Kms or equivalent highway projects.
- Experience as Pavement / Geotechnical Engineer in Construction Supervision consultancy or Independent Engineer for at least 2 major highway projects.
- Experience in DPR preparation is an added advantage.
- He shall have experience in soil exploration for structure foundations and for high embankments;

## **7. Senior Pavement Expert (Local)**

The expert shall be continuously interacting with the Concessionaire, to ensure life cycle cost effectiveness and viable design of pavement as per the standards and Specifications of Concession Agreement. The Expert is responsible for day to day supervision of works of pavement to ensure implementation of project as per the Concession Agreement and report non-compliance to TL if any. The Expert shall also be responsible for ensuring complete adherence to maintenance standards during Construction and Operation period. Thus, the position requires a pavement specialist with thorough knowledge and understanding of international 'best practices' in the field of Design, Construction and maintenance of flexible/rigid type of pavements including latest Codal stipulations and specifications.

### **Qualifications and Experiences:**

- Minimum Graduate in Civil Engineering from a recognized University. Post Graduate Degree in Highway Engineering / Pavement Design is preferable
- With total Professional Experience of 15 years in Pavement Design/Pavement Construction/Pavement Maintenance of Highways.
- Out of 15 years, experience of 5 years in similar capacity as senior pavement specialist in Construction Supervision consultancy or Independent Engineer for the projects having a minimum 25 Kms or equivalent or highway projects.
- Experience as Pavement / Geotechnical Engineer in Construction Supervision consultancy or Independent Engineer for at least 2 major highway projects.
- Experience in DPR preparation is an added advantage.
- Experience as a Pavement Specialist/Pavement Engineer in EPC, Annuity, or PPP projects and experience in external aided projects is desirable
- Experience in AASHTO and British Standards is desirable
- The Project experience less than one year in any project will not be considered in determining the experience in number of projects.



## **8. Senior Quality cum Material Expert (Foreign)**

The Senior Quality/Material Expert is responsible to monitor and supervise works for compliance to quality standards and report noncompliance to the TL if any. The Expert shall establish the standards and procedures for monitoring of quality works & Review the standards and procedures where necessary. The Expert shall review the test results of bore holes, quarry and borrow area material to find out their strength characteristics and suitability for using them in construction. The Expert shall inspect the Concessionaire 's field laboratories to ensure that they are adequately equipped and capable of performing all the specified testing requirements of the Concession. The Expert shall look into the quality assurance aspect of the construction works and supervise the setting-up of the various Concessionaire 's rock crushers and bituminous mixing plants to ensure that the specified requirements for such equipment are fully met.

### **Qualifications and Experiences:**

- Minimum Graduate in Civil Engineering from a recognized University. Post Graduate Degree in Geotechnical Engineering / Foundation Engineering / Soil Mechanics is preferable.
- With total Professional Experience of 15 years. Out of which at least 5 years as Senior Quality/ Material Expert or in similar capacity in Construction Supervision consultancy works or Independent Engineer Works of major highway projects.
- Experience as Senior Quality/ Material Expert or in similar capacity in handling of at least 2 similar highway projects.
- He should have exposure quality assurance programs in highway projects using modern technology.
- The candidate should have demonstrated capability of supervising the setting up, organization and layout of the various Concessionaire field laboratories, monitoring the mobilization of the testing equipment to ensure that the laboratories are adequately equipped and capable of performing all the specified testing requirements of the Concessions, and supervising the setting up of the various Concessionaire Ready Mix Concrete plants and Asphalt Concrete plants to ensure that the specified requirements for such equipment are fully met. The candidate should have at least three years of experience in flexible pavement and bituminous mix designs.
- The candidate must be familiar with properties of road construction materials, technical specifications and procedures of material tests and testing equipment and should have past experience in working on road projects running on expansive soils.
- Experience as a Senior Quality/ Material Expert in EPC, Annuity, or PPP projects is preferred.
- The Project experience less than one year in any project will not be considered in determining the experience in number of projects.

## **9. Traffic & Safety Expert (Local)**

The Traffic & Safety Expert shall review and check the traffic analysis, projection, and assignment exercises to be carried out by the Concessionaire. The Expert shall also review/design of intersections and interchanges, scheme for traffic management during construction period. The Expert shall also study and comment on safety audit report/ traffic management & Safety plans prepared by the Concessionaire. The Expert shall review and approve all the safety measures taken by the Concessionaire during the execution period at site. Conformity to the safety requirement as per Concession Agreement requirements and shall be checked and approved. This shall cover all the temporary structures, Overhead

Launching Girders, Cranes, Transverse Gantries, equipment at Pre-casting Yard and at site, Jack Pushing operations of underpasses and level of awareness/training of site staff of Concessionaire. The Expert will be also responsible for reviewing all temporary works / staging along with the structural / bridge engineer from the safety point of view. The safety Expert will guide the field supervision teams and the Concessionaire 's site officers in complying with adequate construction safety standards in worksites, plant sites and quarry locations (if quarries are independently operated by the Concessionaire s) and will undertake hands-on-training programs and conduct mock safety drills as required from time to time. The Expert will be coordinating and controlling, through the Team Leader's office, all construction safety issues with the road safety consultant deployed by the authority and will be responsible for reporting and following up on construction safety issues / lapses as appropriate. The Expert shall also look into the various accidents and other insurance coverages taken by the Concessionaire. The expert shall also look into the necessary precautions related to the healthcare. The Expert shall report non compliances to TL immediately for taking immediate contractual remedies.

#### **Qualifications and Experiences:**

- Minimum Graduate in Civil/Transportation Engineering from recognized University. Post graduate degree in Traffic /Transportation Engineering/Transport Planning is preferred.
- OSHAS certification will be preferred.
- With total Professional Experience of 15 years. Out of which 5years experience shall be as Traffic & Safety expert on Major Highway of similar nature.
- Worked as Traffic & Transport expert in at least two similar projects in similar capacity.
- Experience in Road Safety Audit of at least 2 nos highway project of similar complexity of projects having a minimum 25 kms or equivalent including 1 nos at design stage
- International Exposure in the field of Road Safety Management Plan and experience in working with external aided projects is preferred
- Experience of Road Safety Aspects and traffic management during various phases i.e. pre-construction, design/development/ construction stage, safety audit & studies of Highway Projects.
- Experience as a Traffic and Transportation Expert in EPC, Annuity, or PPP project and experience in external aided project is preferred.
- Experience and accreditation from iRAP would be added advantage.
- The Project experience less than one year in any project will not be considered in determining the experience in number of projects.

#### **10. Environmental & Social Expert (Local)**

Develop, organize and deliver environmental training programs and workshops for the project staff of Road Development Authority, Sri Lanka. Review the Concessionaire 's Environmental Management Plan (EMP) in accordance with the relevant requirements under laws of Sri Lanka. Supervise the implementation of the EMP by the Concessionaire. Hold regular meetings with the Authority and related Government of Sri Lanka agencies to exchange information on the issues emerging while implementing the EMP, marsh, and wildlife matters. Develop good practice construction guidelines to assist the Concessionaire in implementing the EMP and in certain instances, creation of EMP as well. Assist Authority for periodic Environmental Monitoring (air, noise, water, etc.) Programs to ensure compliance with the local laws and the EMP. Assist Authority to prepare and submit regular environmental monitoring and implementation progress reports. Assist Authority to prepare good practice dissemination notes based on the experience gained from site supervision.

Develop, organize and deliver social training programs and workshops for the Authority's Project staff Review and assist work at site, duly liaising between Concessionaire's staff and PMU, to monitor and review social and gender issues. Hold regular meetings with the relevant social development and resettlement agencies in Sri Lanka to exchange information on the issues in implementing the Concessions. Assist Authority to prepare and submit regular social monitoring and implementation progress reports. Assist Authority to prepare good practice dissemination notes based on the experience gained from site supervision. The Expert should demonstrate ability to engage with local communities.

### **Qualifications and Experiences:**

- Minimum Post Graduate degree in Environmental Engineering/Environmental Planning/environmental Sciences from a recognized university.
- Professional Experience of 15 years in Environmental/Social aspects of Similar Development projects e.g. Environmental Impact Assessment, etc.
- Experience in implementation of EMP in externally aided projects such as World Bank or ADB is essential.
- The Expert should have adequate experience in implementing EMPs and organizing training to Concessionaire and Authorities staff.
- The Expert should be familiar with requisite procedures involved in obtaining Environmental clearances for project roads passing through environmental sensitive areas.
- In the capacity of Environmental Engineer, the Expert should have handled at least 2 projects of similar size and complexity
- The Expert should have good knowledge of local laws/guidelines/requirements for mitigation measures.
- The Project experience less than one year in any project will not be considered in determining the experience in number of projects.
- Should be fluent in local language.

### **11. Contract Expert (Foreign)**

He is responsible for reviewing the financial and legal agreements furnished by the Concessionaire. Any non-conformities and contradictions with the Concession Agreement required to be reviewed and brought to the notice of the authority and Concessionaire through Team leader. The expert shall be available for giving his opinions on all contractual issues raised in administering the Concession Agreement. He is responsible for managing all project related claims. He is responsible for maintain & control all project related documents.

- Minimum Graduate in Bachelors in Civil/Cost Engineering from a recognized University.
- Having minimum 15 years' experience in contracts and financial documentation related to project financing and claim managements.
- Working experience in at least Two Annuity, PPP projects in similar capacity of reviewing the Concession documents and Project Finance agreements.
- Having experience in dispute resolution including International Arbitration.
- He shall be involved in implementing the Concession Agreements and review of financial and other legal agreements furnished by the Concessionaire.
- Advisory experience in transportation would be desirable.

## 12. Hydrologist (Local)

He is responsible to make site visits with the investigation teams to evaluate the ground situation and review the drainage structure designs. It is necessary to identify catchment area, waterway types, their locations, rainfall intensity, duration and distribution of rain in the catchment related to the project structures. Maximum flood levels for the design return period in project construction area should be determined. Undertake scour estimates and opening design of drainage structure should be calculated. He is responsible for preparation of methodology for hydrological analysis and conduct hydrological analysis and reports for project. His duties included the identify and analyse watershed runoff, channel analysis, floodplain delineation, erosion and sedimentation analysis. He is responsible for preparation of written and oral reports and make suggestions and recommendations for inclusion of hydrological study findings in the report. Review and comment of the concessioners hydrological analyse and report is under his duties. He should coordinate with other government organizations such as Central Environmental Authority, Sri Lanka Land Development Corporation etc.

- Minimum Graduate in Bachelors related to the above position from a recognized University.
- Having minimum 5 Years' experience as a Hydrologist in a similar capacity.
- Experience of Hydrological modelling and analysis is compulsory.
- Experience in similar project as same position is a added advantage.

### V: Reporting Requirements and Time Schedule of deliverables

#	Activity/ Output	Timeframe for Delivery
1	Inception Report	3 weeks of mobilization
2	Monthly Technical Report	7 <sup>th</sup> of each month
3	Quarterly Report	15 <sup>th</sup> of each quarter
4	Additional Technical Report as requested by Authority	Periodically as applicable
5	Draft Completion Report	3 weeks of completion of construction
6	Monthly Progress Report (O&M)	Monthly during operations period
7	Closure Report	One month prior to closure of IE Contract

### A Inception Reports - (5copies)

The Inception Report shall outline how the IE will implement the project. It shall illustrate the planning that the IE has done for the assignment, staffing and comments as deemed appropriate. The Authority will comment on the Report.

The Inception Report must be submitted within three (3) weeks after mobilization and should also describe the final format the IE propose to use for the Monthly Technical Reports.

## **B Monthly Technical Reports - (5 copies)**

The IE shall no later than the 7th of each month, deliver a brief progress report summarizing the work accomplished by each of the supervision teams for the preceding month. The Monthly Technical Report shall report on the health and safety, physical progress, all claims for cost or time extensions, and actions required by the Authority to permit unconstrained works implementation. It shall include problems encountered and recommended solutions and a summary of the log from the meetings with the Concessionaire. The draft outline for the monthly report is below.

- a) Health and safety in the work sites (the Concessionaire must keep a log of accidents by category)
- b) Physical progress vis-à-vis the planned progress, including time and costs; Also, weekly progress log and issues on the construction sites;
- c) Explanations for variances to the above;
- d) Expenditures vis-à-vis the cash flow forecast and budget; Further IE shall prepare a detailed report on draw down of equity and debt from the Escrow Account.
- e) Explanations for variances to the above;
- f) Status of Concessionaire claims and disputes, including Concessionaire claims for time extension and compensation, Variation order (Change of Scope) proposed and approved.
- g) Human resources, mechanical equipment and materials;
- h) Testing and quality control and inspections carried;
- i) Stakeholder issues;
- j) Environmental management plan;
- k) Summary of problems encountered (administrative, technical, financial, etc.) and actions already taken or expected to be taken by the IE, or requested from the Concessionaire to overcome these problems;
- l) Other relevant material and discussions, and
- m) Annexes: The Deviation Report, and other supporting information as necessary
- n) Summary of existing encumbrances like trees, electrical poles, water lines, underground utilities, public buildings etc. The time programme commensurate with Concessionaire work programme to relocate these encumbrances.
- o) Status of land acquisition.

## **C Quarterly Reports - (5 copies)**

The IE will prepare a report summarizing all supervision activities at the end of each quarter no later than the 15th of each quarter month. It should have roughly the same format as the monthly report, supplemented by the Third party Quality Monitoring team's key findings and the IE's responses to them.

The IE's quarterly report needs to contain quarterly cash flow projections in a format acceptable to the Authority. It should also identify updated budget estimates for all outstanding work.

The Quarterly Report shall also include the matrix of the Concessionaire's deviation report and results on the quality assurance program, showing both the recent performance and overall trends. The IE shall submit a draft format for this report in the inception report.

The IE shall prepare a separate bi-annual Environmental Social Safeguard Monitoring and Supervision Report, which includes changes in the environmental parameters supported by laboratory tests result as set out in the Environmental Management Plan (EMP). The report shall also quantify and assess the efficacy of the environmental impact mitigation measures and recommendation of the best practices.

**D Additional Technical Reports - (5 copies)**

The IE shall prepare design reviews and other technical reports during the project from time to time. In particular technical reports are necessitated by Authority. Approvals prior to the issuance of substantial changes need to be included. The cost of such reports shall be payable additionally by the Authority based on a mutually agreed price.

**E Draft Completion Report - (5 copies)**

The IE will prepare the Draft Completion Report within 3 weeks of the completion of the construction works and issue of completion certificate in terms of provisions of CA clause 14.2. The Draft Completion Report will provide an overview of the project and whether the project has been successful. The Report will include, but not limited to:

- a) Overall review of the project, including safety and health data during project execution;
- b) Project timeline for completion; physical progress vs. the original program;
- c) Project costs vs. the original budget;
- d) Key issues in the design and explanations for variances to the preliminary design;
- e) Description of additional work, and claims and their disposition
- f) The final Quality Deviation Matrix
- g) Other information that is requested by the Authority during project implementation.
- h) The Third party Quality Monitoring team's Final Report as an Annex
- i) The IE will also consolidate all forms of communications between the Project stakeholders and shall submit the same to the Authority segregated on a monthly basis

**F Monthly progress report during Operation and Maintenance Period - (5 copies)**

The IE shall submit the monthly progress report on O & M covering compliances against the maintenance requirements as provided under Schedule K and as per other relevant sections of the CA.

**G Closure Report - Project Hand-Back Report – (5 copies)**

The IE will prepare the Project Hand-Back Report within 3 weeks of the completion of the Concession Period. The Project Hand-Back Report will provide an overview of the project and whether the project has been successful. The Report will include, but not limited to:

- a) Overall review of the project, including safety and health data during project execution;
- b) Description of additional work, and claims and their disposition
- c) Other information that is requested by the Authority during project implementation.
- d) The IE will also consolidate all forms of communications between the Project stakeholders and shall submit the same to the Authority segregated on a monthly basis
- e) compliance by the Concessionaire with the Maintenance Requirements
- f) hand back of all materials, tools, plant, equipment, facilities, Highway O&M Manual etc, pertaining to the project highway that shall be handed over to the Authority by the Concessionaire
- g) report on any liabilities or defects or deficiencies pertaining to the project highway

**VI: Client's Input and Counterpart Personnel**

- a Services, Facilities and property to be made available to the IE by the Authority.
  - (a) Data and Services
    - i) The entire copies of Contract Package Concession Agreements including bidding documents will be made available to the IE.

ii) Necessary letters, which will be required for Visa's of foreign personnel and procuring other services by the IE for performing project services.

(b) Accommodation, communication and Vehicles

Concessionaire shall provide 7 (Seven) completely furnished individual houses with each house comprising of Master Bed room with attached bathroom ,03 bed rooms with attached bathrooms, Living, dining, pantry, kitchen, stores room, servant bathroom(minimum floor area to be 165 Square meters) for the accommodation of IE. Concessionaire shall provide office building with the minimum floor area of 600 Square meters including acceptable facilities. Transport facilities of the IE shall be provided by their own.

(c) Laboratory facilities

Access will be provided to the Concessionaire established quality control laboratory. The Concessionaire will establish and maintain laboratory including testing equipment, water supply, electricity and cooling/heating equipment, which shall be made available for use by the IE. Maintenance of the laboratory by the Concessionaire shall include the cost of electricity, water and all consumable for testing. The Concessionaire will be responsible for carrying out tests for quality of soils/materials, etc. The IE shall be required to monitor lab testing and to carry out test checks as necessary to verify compliance with the Concession Agreement.

**VII: PERFORMANCE CLAUSE**

Independent Engineers shall be expected to fully comply with all the provisions of the 'Terms of Reference', and shall be fully responsible for supervising the Designs, Construction and maintenance and operation of the facility takes place in accordance with the provisions of the Concession Agreement and other schedules. Any failure of the Independent Engineer in notifying to Authority and the Concessionaire on non-compliance of the provisions of the Concession Agreement and other schedules by the Concessionaire , non-adherence to the provision of ToR and non-adherence to the time schedule prescribed under ToR shall amount to non-performance.