### Schedule of Quantity

**Name of Work:** Structural design, issue of GFC drawings for structure prior to P-101 in structure ‘J’, structure RE-11 to RE-20 in structure ‘K’, steel bridge for pedestrian crossing near CVC building and connected work.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description of work</th>
<th>Unit</th>
<th>No.or Qty.</th>
<th>RATE (Rs.)</th>
<th>AMOUNT (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lump sum fees for preparing structural design and drawings including Good for Construction Drawing as per provisions of IRC/IS Codes as per direction of Engineer-in-Charge for all the components of the scheme as mentioned in scope of work, time frame and payment schedule attached for various activities. (Excluding fee for proof checking)</td>
<td></td>
<td>1 job</td>
<td>Lump-sum</td>
<td></td>
</tr>
</tbody>
</table>

**TERMS AND CONDITIONS:**

1. Above costs should be quoted inclusive of all prevailing taxes and fees except the statutory service tax, which shall be reimbursed on production of proof of payment to the concerned department.
2. Stage payment for all the components of the scheme as mentioned in time frame and payment schedule.
3. The work shall be carried out as per CPWD Specifications and direction of Engineer-in-Charge.
4. Time allowed for the work is **30 days**.
5. The statutory recovery like Income Tax, Labour cess etc. will be deducted from the gross amount of work done.
6. Geotechnical investigation shall be provided by the Client.
7. The quoted fee of this consultancy agreement will not be increased either due to cost overrun of the main project, extension of time or due to any reason whatsoever.
8. Payments to the consultant will be released as per the scope of work, time frame and payment schedule. However, for part work done during any stage, payments will be permitted on pro-rata basis. Decision of Engineer-in-Charge will be final and binding in this regard.
9. Security deposit @2.5% of the gross amount of each running bill of the consultant will be deducted and released after completion of main civil construction work. Earnest Money shall be adjusted first in the security deposit and further recovery of security deposit shall commence only when the up to date amount of security deposit starts exceeding the earnest money.
10. The consultant shall be responsible for accuracy of the data collected and the design, drawings and construction drawings prepared by him as a part of the project.
11. a) If the work remains un-commenced / or incomplete at any stage with reference to time schedule, a compensation at the rate of 1.50% (one decimal five zero percent) of the agreed fee for every month of delay subject to maximum of ten percent of agreed fee shall be levied on the
consultant. The decision of Superintending Engineer of the project as to the period of delay on the part of the consultant and the quantum of compensation for such delay shall be final and binding on the consultant.

11. b) If the consultant is unavoidably hindered in carrying out the designs / drawings on account of delayed decision or the approval by the department which is necessary to carry out further work, he shall be allowed suitable extension of time by the Engineer-in-Charge of the project, whose decision shall be final and binding on the consultant. Consultant shall not have any claim against the department for such delayed approvals / decisions, except suitable extension of time.

12. Consultant shall depute qualified personal working on the project on site for any clarification as and when required and informed by the Engineer-in-Charge.

13. All drawings as listed in Annexure ‘A’ are to be checked and further design and drawings to be made in conjunction with the same.

14. Super structure is to be designed in conjunction with foundation already completed at site as per attachment (Annexure ‘B’).

15. Earnest Money of **Rs. 50,000/- (Rupees Fifty Thousand only)** shall be in the form of Treasury Challan or Demand Draft or Pay order or Banker’s Cheque or Deposit at call receipt or fixed deposit receipt. The EMD will have to be deposited in the shape prescribed above issued by a scheduled bank issued in favour of Executive Engineer, Flyover Project Division F-121 which shall be dropped in the tender box along with the quotation document shall be dropped in tender box of the division in envelop up to 3.30 P.M. on 12.08.2015, failure to furnish the original DD/FDR before the closing of the bid, will entail rejection of bid.

16. The intending bidders should have experience in design of prestressed concrete and composite steel bridge / flyover works. The credentials to this effect to be submitted along with the quotation. Failure to furnish the attested credentials shall entail rejection of the bid.

17. The consultant shall adhere to international standards and norms pertaining to quality of work, specifications, procedures, project management etc. Following works are included

17 a) To review and approve design and drawings of temporary works and any other work as per the requirement submitted by the contractor whichever required. Review proposals on construction technology of various items of work and suitable modifications shall be suggested keeping in view the technical requirements, contractual provisions, safety measures, sequential operation of various items, time frame, compatibility of work programme, proposed deployment of personnel and equipment and site conditions.

17 b) To review and recommend any changes in design, if proposed by the contractor during execution of project.

17 c) To review the designing of structure, if required at any stage due to any reason.

17 d) To review method statements, maintenance manuals, ‘As built drawings’, and suggest modifications, if required.

17 e) To assist PWD (GNCTD) to review progress achieved.

18 The consultant should have regular interaction with the PWD (GNCTD) and other departments as directed by PWD (GNCTD) for formulating the design basis, design philosophy and parameters, preparation of detailed designs / drawings / guidelines as stated herein including obtaining approval from the Proof Consultant appointed by the Department. The consultant will submit two bound sets of approved design calculations and drawings for the entire scheme.
The consultant shall specify, with the approval of the Engineer-in-Charge, the system of prestressing as and when necessary. He shall give the details of prestressing, procedure, design elongations, proforma for recording such post tensioning elongations at site etc. The consultant shall also analyze the elongation data and submit the proposal for stressing the dummy cables as and when necessary at a future date based on actual recorded data of prestressing at the construction stage.

The consultant shall indicate the system and type of bearings and Expansion Joint along with load data adequate for design for the system by the respective manufacturers. Further, the design and drawings of bearing supported by approved manufacturers will be vetted by consultant. Necessary installation details shall include the corresponding fixing arrangement in the sub-structure including leaving of sleeves, grouting etc. where required. Provision should also be made in the design for replacement of bearings at a later date whenever required.

After the design and drawings are approved by the Proof Consultant, the corrected design calculations should be submitted in three sets and drawings in six sets shall be submitted. The drawings ‘Good for Construction’ be submitted in additional 10 (ten) sets and their soft copies. The lumpsum cost of the consultancy shall be inclusive of all these sets.

In case more detailed drawings / design calculations are required by the department, the same shall have to be supplied by the consultant. The pattern and manner in which the drawings shall be submitted, shall be decided by the Engineer-in-Charge and his decision shall be final and binding on the consultant. An amount of Rs. 100/- per A2 size, drawing will be paid by Engineer-in-Charge for supply of drawings by consultant beyond 10 sets.

The specifications for the various items of works and the design criteria should be as per latest MoRTH guidelines and IRC’s design specifications for Road and Bridge work and the design criteria or current prevailing international standard practices. For any item not covered in the aforesaid specifications and guidelines, the consultant shall draft the appropriate specifications and propose to PWD (GNCTD) for approval.

The consultant will assist in preparing workshop drawings as and when required at no extra cost. He will also approve the workshop drawings submitted by the executing agency.

During construction period, traffic will continue in all directions at the intersections as being allowed at present. Only local diversion of traffic shall be allowed during construction. The consultant has to carry out the design work keeping in view the traffic constrains, limitations of space available and other features existing in the surroundings areas and the difficulties involved in shifting of existing services.

The consultant shall prepare detailed drawings in digital format for various components and sub-components of the work as per guidelines laid down by the Engineer-in-Charge. Consultant shall submit one soft copy in CD’s of all the final approved drawings.

The consultant shall also specify the method of construction and salient technology features to be incorporated at the time of construction.

It will be the responsibility of the consultants to get the designs and drawings approved from the Proof Consultant. The Design Consultant shall furnish all the relevant supporting documents, additional design calculations required by the Proof Consultant at no extra cost to be department, as the same is deemed to be included in the lumpsum fee.

The design and drawings approved by the Proof Consultant shall not be used by the consultant for any work other than for which it was approved without the specific approval of Engineer-in-Charge.

Assistant Engineer
F-1231, PWD

Assistant Engineer (P)
F-1230, PWD

Executive Engineer
PWD, F-123
**Scope of work, time frame and payment schedule**

Name of Work: Structural design, issue of GFC drawings for structure prior to P-101 in structure ‘J’, structure RE-11 to RE-20 in structure ‘K’, steel bridge for pedestrian crossing near CVC building and connected work.

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<tr>
<th>Sr. No.</th>
<th>Activity</th>
<th>Time frame from date of start</th>
<th>Admissible payment (% of total fee)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Submission of concept, design philosophy and the structural system including foundations for various components of the scheme including making a presentation of the scheme, if required.</td>
<td>7 Days</td>
<td>10%</td>
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</tbody>
</table>
| 2       | Submission of detailed design/drawings of foundation and preliminary design of Superstructure for Proof Checking.  
Foundation  
Sub-structure including Piers and Bearings.  
Super-structure and Expansion Joints  
All remaining drawings. | 10 Days                      | 10%                                 |
| 3       | Submission of the detailed design/drawing for Proof Checking.  
Sub-structure including Piers and Bearings.  
Superstructure and Expansion Joints  
All remaining drawings. | 20 Days                       | 15%                                 |
| 4       | Submission of detailed design/drawings of foundation covered in the scheme after Proof Checking.  
Foundation | 20 Days                       | 15%                                 |
| 5       | Submission of detailed design / drawings of Sub-structure including piers and bearings, Superstructure and Expansion Joint.  
All remaining drawings | 25 Days                       | 15%                                 |
| 6       | Issue of Good for Construction drawings after duly proof checking.                                                                                                                                              | 30 Days                       | 25%                                 |
| 7       | During construction stage and after approval of As Built Drawings.                                                                                                                                              |                               | 10%                                 |