

**Proposal for End to End Solution for Implementation of
Major CIVIL Engineering Works in the State of West
Bengal.**

Request for Proposal Document

**Panchayat and Rural Development Department
Govt. of West Bengal
63, N. S. Road, Jessop Building (1st Floor)
Kolkata – 700 001.**

March 2012

RFP DOCUMENTS

FOR

Proposal for End to End Solution for Implementation of Major CIVIL Engineering Works in the State of West Bengal.

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**GOVERNMENT OF WEST BENGAL
PANCHAYAT AND RURAL DEVELOPMENT DEPARTMENT**

**DETAILED NOTICE
FOR
INVITATION OF EXPRESSION OF INTEREST FOR END TO END
SOLUTION FOR IMPLEMENTATION OF MAJOR CIVIL ENGINEERING
WORKS IN THE STATE OF WEST BENGAL**

N.I.T. No. 645-WBSRDA/2E-15/10

Dated 21-03-2012.

P&RD Department invites Expression of Interest (EOI) from **domestic consulting firms** for the End to End Solution for **Implementation of Major Civil Engineering Works**. Based on the information supplied in the E.O.I., the firms would be short-listed and the short-listed firms would be invited to give Technical & Financial offers on approved Terms of Reference. Selection of consultant will be made on Quality and Cost based selection method (QCBS). Consultancy Services would include Structural Engineers, Architects, Geo-Technical Experts, Highway Engineers, Road Safety Specialists, Social Development/Monitoring Specialists, Environmental Specialists, Road Maintenance Experts. Consultancy services are expected to cover the activities for a period of about 3 years (2012-2015) and services of experts may be required intermittently.

The intending participants may download the detailed documents for EOI from website www.wbprd.nic.in free of cost or may obtain from the office of the undersigned on application on any working day on & from 29-03-2012 to 20-04-2012 free of cost.

The Expression of Interest along with required information and documents must be delivered to the address below not later than **3 p.m. on 30-04-2012 (Monday)** in sealed envelope marked clearly “**Expression of Interest for End to End Solution Services**”. Application Fees in the shape of Bank Draft amounting to Rs.10,000/- (Rupees Ten thousand only) drawn in favour of “**WBSRDA**” **Payable at Kolkata**. This application Fee is **non-refundable**. The said sealed envelopes will be opened **at 3 p.m. on 02-05-2012 (Wednesday)**. However, if for any reason that day becomes a holiday, sealed envelopes will be opened on the next working day at 3 p.m. The sealed envelope must be submitted in the **Tender Box kept in the office of the undersigned at ‘Jessop Building’, 63, N.S. Road, Kolkata-700001.**

The Authority reserves the right to reject any or all the EOIs without assigning any reason thereof..

Outline Scope of Work:

- (A) 1. Preparation of D.P.R.
- (B) Vetting from I&WD Department, Environment Department, Fire Department & any other statutory bodies as required,
- (C) Approval from Administrative Department and Govt. of India
- (D) Preparation of Tender Documents And uploading them in web site
- (E) Checking of quality of construction work during entire period of execution and taking measurement and to recommend the bill to the concerned authority for payment
- (F) Submission of in-built drawings

Chief Engineer
P&RD, Kolkata

Panchayat and Rural Development Department Govt. of West Bengal

63 N.S. ROAD, JESSOP BUILDING, KOLKATA-700001

NOTICE INVITING BIDS FOR CONSULTANCY OF BUILDING WORKS

NIB No. 646-WBSRDA/2E-15/10

Date : 28.03.2012

1. Chief Engineer, P & RD Deptt, (hereinafter referred to as “Employer”) invites RFP for End to End Solution from Reputed Consultant having experience of providing similar services to Central/State Govt.
2. Consultants shall be entrusted the job to provide End to End solution for construction of Roads, Bridges, Buildings and any other major Civil Engineering Structures.

The brief Scope of work shall be as follows :

- i) Preparation of DPR
- ii) Vetting of Waterway from I & WD Department (in case of Bridges, Causeways and other CD Structures).
- iii) Environmental Clearance, Fire clearance and any other statutory body if required.
- iv) Approval from Administrative Department and Govt. of India, if required.
- v) Preparation of Tender documents and uploading data in website.
- vi) Checking of quality of construction work during entire period of execution taking measurements and recommend the bill to the competent authority for payment.
- vii) Submission of In-built drawings.

Selection of Consultancy Firms will be made on Quality and Cost Based Selection Method (QCBSM). The Consultancy Firm, so selected, must have an office in Kolkata. The Consultancy Firm will be required to provide sufficient qualified and experienced personnel as per list annexed – (Annexure-I)

The prequalification documents will be opened on 02.05.2012 (Wednesday) at 3-00 PM by the Chief Engineer / Superintending Engineer, WBSRDA in presence of the Bidders who chose to be present. The sealed cover comprising Cost of Bid Documents and Earnest Money will be opened first and the Technical Documents will be opened after that.

Name of Technically qualified bidders under State-I on the basis of information furnished by bidders will be displayed in the Notice Board.

The Consultancy Firms may download the Form/Documents for RFP from the website www.wbprd.nic.in free of cost or may obtain from the office of the undersigned on application on any working day on & from 29.03.2012 to 20.04.2012 up to 3 p.m. and submit/deliver the / RFP & other documents along with **non-refundable cost of Bid Documents for Rs.10,000/- (Rupees Ten thousand only) in the form of Bank Drafts drawn in favour of “WBSRDA” payable at Kolkata to be submitted with the RFP in separate sealed cover.**

Earnest Money amounting Rs 1,00,000.00 (Rupees One Lack only) in the form of Bank Drafts drawn in favour of “WBSRDA” payable at Kolkata should be submitted in a separate sealed cover.

The bid document shall be placed in a sealed envelope marked clearly **“Request For Proposal for Providing Consultancy Services under End to End Solution.”** (*containing two separate sealed envelopes – one for Technical Qualifications along with required amount of 2 separate Bank Drafts for Bid Documents & Earnest Money and the other for Financial Bids enclosed in a sealed envelope*) and shall be submit in the **Tender Box kept in the office of the undersigned at ‘Jessop Building’, 63, N.S. Road, Kolkata – 700001. not later than 3-00 PM of 30.04.2012 (Monday)**

For further information, if any, may be obtained from the persons with telephone Nos. given below.

The Authority reserves the right to reject any or all the RFPs without assigning any reason(s) thereof.

Contact Persons:

- 1) Shri Ajoy Kr. Dutta, Chief Engineer, P&RD Deptt. / WBSRDA
(Phone No. 033-2213-8943);

Chief Engineer
P&RD Deptt. / WBSRDA, Kolkata

VOL. I – SECTION 2
INSTRUCTIONS TO BIDDERS

VOL. I SECTION 2. INSTRUCTIONS TO BIDDERS

A. GENERAL

2.1 Background:

Panchayat & Rural Development Department is entrusted to carry out Social & Economical Development of the Rural areas throughout the state of West Bengal. Many major Civil Engineering works are being executed under different schemes of State of West Bengal and Govt. of India. For smooth running of projects End to End Solution for implementation of major Civil Engineering work is invited.

Scope of Work

The scope of work for providing end to end solution under consultancy services rendered by the selected consultant shall be under rural Road, Bridge more than 15m total length and building elaborated as follows :-

A) Scope of work for Rural Road

A. Rural Roads:

- 1) The consultant shall collect the road list as proposed by the district. They will make an initial physical verification of the road and submit their feasibility report regarding acceptance of the proposal. The consultant shall make all required online and offline verification regarding the proposal and collect all necessary recommendation. Finally the list shall be made approved from central or State government as applicable. The Consultant shall assist the entire processes.
- 2) As soon as clearance given by the State Government the consultant shall organize a detail survey work using Total Station. The Survey data should cover the existing alignment of the road, curves with existing radius and chain ages, Topographical features of the proposed alignment, existing ponds and ditches present along the alignment, Ordinary flood level, High Flood level and all other necessary features shall be surveyed correctly as essential for DPR preparation.
- 3) After conducting the survey work the consultant shall carry out an extensive soil investigation work along the proposed alignment and collect soil sample for CBR, Proctor Density, Atterberg Limit, moisture content, soil classification and all necessary test required for DPR preparation for roads including bridges total length not exceeding 15 meter.
- 4) On the basis of data collected above the DPR should be prepared on the following guidelines.
- 5) The Core Network drawing should be clearly shown in DPR. The proposed road must be shown with red ink in the Core Network drawing. If the length stated in Core Network differs from length obtained by Survey then please specify that in the Core Network drawing with start and end chain ages.
- 6) The target Habitation should be as per direction. The Habitation codes mentioned in the check list should be similar that mentioned in the Core Network.

- 7) In the report it should be clearly stated that the proposed road should be falls under new connectivity and the existing road condition is either track or poor moorum. In case of up gradation proposal the consultant needs to submit the CUPL and PCI of the respective road as mentioned in operation Manual of MORD.
- 8) The existing width of the road as mentioned in DPR should match with the earth work cross section and the calculation proposed in DPR.
- 9) Three days traffic count shall be done on the proposed road. If sufficient traffic likely to be generate shall not available than the traffic survey may be carried out on an existing completed PMGSY road in the vicinity with similar socio economic condition and knowing the population served as well as agricultural/Industrial produce to be transported.
- 10) In case of assessment of future traffic growth due consideration should be given the possibility of developing new material/Sand quarries.
- 11) In the traffic survey report the date of traffic survey should mentioned clearly. It should be taken into account that if survey done in lean period as mentioned in SP:72 than the traffic calculation must be followed the rule of lean period else vice versa. The date of traffic survey should be similar both in traffic report and check list.
- 12) In traffic data the total number of HCV should not exceeds 5% of total motorized vehicle as per clause 3.1 of SP:72- 2007.
- 13) In traffic data the total number of HCV should not exceeds 20% of CVPD where CVPD stands for Commercial Vehicle per day and comprises of only HCV and MCV.
- 14) If T4 category (i.e ESAL 100,000 to 200,000) of traffic encountered than proper reason should be given in the DPR why such traffic encountered.
- 15) In the soil report the 4 days soaked CBR value should match respective to the sand content of the soil. A Nomograph must be submitted with the soil report showing 4 days soaked CBR of the soil depending upon soil gradation and which should match with the original test result. The MDD also varies depending upon the sand content of the soil and which should also reflects correctly in DPR, i.e MDD should not decreased when sand content increased.
- 16) The locations of the CD must be technically justified by the Hydraulic calculation depending upon drainage requirement of the surrounding catchments. In case of pipe culvert one typical calculation needs to be shown and other catchment areas along with respective discharges to be given in tabular form.
- 17) In case of slab culvert separate hydraulic calculation to be provided as per rational / Dicken's method. The drawing of CD structure should be clearly given in DPR for understanding the estimate. The quantity should be followed as per standard estimate approved by this office.
- 18) In case of pipe culvert where providing cushion more than 600 mm not possible, the structural strength factor checking of the pipe bedding is being essential.
- 19) In case of culvert 6m and above and upto 15 meter the detailed hydraulic calculation on the basis of provision given in SP:13 should be followed. The linear waterway and the span fixation to be done accordingly. If effective linear waterway provided is less than the required regime width than scour calculation and afflux must be shown in the DPR and the deck level and founding level may be fixed accordingly.

- 20) In the rate analysis of U.C.ballah piling the number of gunny bag should not exceeds 22 numbers in 1 m length. The volume of gunny bags must be deducted from the total volume of Earth Work.
- 21) In case of concrete works shuttering to be considered 4% for foundation, 10% for substructure and superstructure less than 5 m height and 20% for superstructure for height above 5.0 m for culverts. In case of protection work shuttering always to be taken as 4% although concrete protective work has not been allowed to be constructed in water body.
- 22) All protection work to be shown on earthwork cross section in volume-II and location of CD and culverts must be shown on long section of earthwork profile. The side drain chain ages should match with the earthwork cross section.
- 23) All the lead distances and lead chart must be certified by concerned EE. The End to End Consultant shall obtain all this formalities.
- 24) The length of built up area must match with the length given in the check list and detailed list.
- 25) The volume of earthwork should be obtained strictly depending upon the Pre and Post level calculation. In case earthwork calculation in flood prone area, OFL must be furnished with the DPR.
- 26) The GSB should comprises of local material and attention should be given such that the rate of GSB should be sufficiently economical.
- 27) The nearest quarry/ Railway yard should be considered for stone material such that cost of WBM should be economical.
- 28) The detailed calculation for extra widening at curves along with design speed should be given in tabular form and the number of traffic safety items shall be calculated accordingly. The item of boundary pillar need not to be incorporated in DPR.

The DPR should be prepared on the basis of latest IRC publications and guidelines issued by the Govertment. After obtaining the approval from the district the Consultant shall submit the DPR before S.E. at this Office for verification and signature. After obtaining the necessary approval from this office the consultant shall place the DPR to STA for obtaining necessary vetting. The Consultant shall help the Department for necessary data uploading in online. After obtaining the STA approval the consultant procure necessary approval from NRRDA and MORD. As soon as the projects made cleared by MORD the consultant shall help the Department for online tendering, contractor selection award of contract etc. The consultant shall be entirely responsible for work supervision, bill certification till the completion of the project. In case of non PMGSY road the consultant shall be responsible for providing similar services as applicable.

B. SCOPE OF WORK FOR BRIDGE 15M TOTAL LENGTH AND ABOVE.

The consultant engaged for DPR Preparation for bridges shall be rendered the following services.

1) Survey work (Maps & Plan)

The Survey comprises of the following

- a) Name of the channel/river, name of road, road code, location of the bridge (chain-age of the road with corresponding Km.), block, police station and district. The latitude and longitude of the bridge site should also be furnished.
- b) The Long Section and Cross Section of the approach road for at least 500m for both side should be surveyed.
- c) The consultant should prepared An Index Map drawn into a scale of 1 Cm – 0.5 Km. (1 : 50,000) showing the catchment area at the site of the proposed bridge, all topographical features, bridges and hydraulic structures within 5 Km. u/s and d/s of the proposed site should be clearly mentioned with dimension.
- d) A site plan should be prepared to a suitable scale showing details of the site selected and the extent of which not less than 100m on u/s and d/s side. The extent of the boundary should be selected as per the catchment area of the bridges. The following table may be referred. (Table 3.1 of SP-13-2004)

<u>Catchment Area</u>	<u>Distance (u/s and d/s from bridge point)</u>
1. Up to 3.0 Km ²	100 m
2. From 3.0 Km ² to 15 Km ²	300 m
3. Over 15 Km ²	500 m

The site plan should comprises of the following

- i) Out lines of the banks
- ii) High Water Channels
- iii) Low water channels
- iv) Direction of the flow at maximum discharge
- v) Location and alignment of the existing bridge crossing the stream.
- vi) Proposed alignment of the bridge preferably normal crossing the stream.
- vii) The locations of the long section & cross sections taken with section number.
- viii) The plan of proposed approach road along with location/markings of long & cross section. The cross section of existing approach should be taken at 30m interval.

2) Collection of Hydrological data of the catchment :

All hydrological data should be collected in consultation with the local Irrigation Sub-divisional office at the bridge site. The following data should be collected.

- a) Highest flood level with respect to the GTS as per record of Irrigation Department.

- b) Ordinary flood level with respect to GTS as per I & WD record.
- c) Low water level with respect to GTS as per record of I & WD.
- d) Maximum velocity corresponding to highest flood discharge as per record of I & WD .
- e) The level of deepest Scour hole observed at site/maximum scour during highest flood discharge as per record of I & WD.
- f) Silt factor of bed material as per record of I & WD.
- g) The River long section data starting from upstream side from the extent of boundary demarcated in site plan upto the extent of down stream side along the approximate centre line of the river/channel.
- h) Longitudinal slop (Energy slop) i.e. the equivalent stream slop/statistical mean stream slope of the river or channel showing HFL, LWL and bed level at suitable interval.
- i) The c/s of the river/stream to be furnished at 30m interval for both upstream and downstream side upto the extent of the boundary located in site plan. The data related to the catchment should be furnished as follows. :
- j) The slope of the catchment both longitudinal and cross slope.
- k) The fall in level from the extreme point to the bridge point.
- l) The nature of the catchment whether under forests or under cultivation. This parameter is essential for assuming approx. correct value of drainage co-efficient.

3) Joint site Inspection of Consultant, SE & STA

On the basis of hydrological survey and Irrigation & Waterway sub division data the design discharge at the bridge site shall be fixed up. The site shall be jointly inspected by SE and STA in presence of Consultant and Consultant shall note their (SE & STA) valuable instruction regarding the span fixation of the bridges. The following criteria shall be verified at site.

a) Site Selection

Normally selection of site for bridges guided by existing road alignment for minimize the land acquisition however the following point should be verified.

- The site should situated on a straight reach to stream, sufficiently downstream at the bends.
- The site should be sufficiently away from the confluence of large tributaries as to be beyond their disturbing influence.
- The site should have a well defined banks.
- The site shall make approach roads feasible on the straight.
- It should be properly verified whether the stream have a tendency to change the course to ascertain proper protection work if required.
- The site should offer a square crossing.

b) Existing Drainage structure :

If there is an existing structure than it should be carefully verified for maximum flood level mark, occurrence of afflux, the tendency of scour and development of scour hole, the likelihood of collection of brushwood during floods and if any other special features available which could be effect the design.

c) Channel Condition

The condition of channel should also verified carefully for obtaining data regarding the silt factor and rugosity co-efficient.

All the reports shall be noted during site inspection and which shall be included in the body of Preliminary Project Report after compiling the recommendation of SE and STA.

4) Preliminary Project Report

The consultant who will engage for DPR preparation shall submit the preliminary project report to the Superintending Engineer for obtaining approval prior to the waterway vetting. The Preliminary Project Report shall be comprises of the following

- a) Connectivity requirement of the bridge along with the habitations benefited, topography of the site and surroundings, Social and economical aspect of the area, traffic survey data, PCU calculation, description of the channel, location of the bridge along with geo-referenced co-ordinate, condition of existing road, description of catchment and other relevant points connected with the preliminary design.
- b) Hydraulic calculation at the proposed bridge site for calculating the design discharge. The hydraulic calculation shall be made as per the following three steps.
 - i) Using the any one of the impirical formula as per Article 4 of IRC : SP-13-2004 suitable for the respective catchment. The catchment area should preferably be estimated from the Topo-sheet of G.S.I. In case of non availability of the topo sheet the catchment area shall be obtained from the record of respective Irrigation sub divisional office / by actual boundary determined by the consultant during survey work. In such cases the catchment area shall be verified by local Irrigation sub division.
 - ii) Using the rational formula for peak run-off through the catchment as per Article 4, cl 4.7.9 of IRC:SP-13-2004.
 - iii) Using the method of conveyance factor and slop of the stream as per cl. 5.5 of IRC:SP-13-2004.

The design discharge shall be fixed up as per cl. 6.2.1 of IRC:SP-13-2004. The design discharge should be prepared in consultation of local irrigation sub divisional office.

- c) On the basis of the design discharge calculation of Lacey's regime linear waterway shall be made. If the constriction of waterway is made than the amount of afflux generated should be calculated.
- d) A Preliminary scour calculation should be furnished in the PPR on the basis of silt factor obtained from the local irrigation sub division or as per IRC:78-2000. The design discharge should be enhanced as per recommendation of IRC:78-2000 depending upon the catchment area. The scour calculation must be made on the basis of restricted waterway.
- e) On the basis of span Arrangement adopted and other data calculated in PPR the General Arrangement Drawing shall be prepared. In GAD both long section/Elevation, Cross view, Plan should clearly mentioned. All important levels with RL should be clearly mentioned in GAD.
- f) A preliminary cost estimate should be provided in PPR.
- g) A preliminary Soil Investigation report with probable type of foundation proposed, should furnished in PPR.

The consultant shall accord necessary approval for PPR & GAD from Concerned EE & SE prior to the submission for waterway vetting.

5) Vetting of Waterway.

The consultant shall obtained the necessary approval of waterway of the bridge from the Central Design office of the Irrigation and Waterway Directorate-prior Preparation of the Detailed Project report.

6) Soil Investigation

All the soil Investigation work should be carried out as per guidelines laid down in Appendix – 2 of IRC:SP-78-2000. The sub surface exploration should be carried out in two stages.

- i) Preliminary Investigation
- ii) Detailed Investigation.

The preliminary investigation shall include the study of existing geological information, previous site reports, geological maps and surface geological examination. Based on the preliminary soil data the probable type of foundation recommendation should be made by the consultant in PPR.

Now based on the data obtained during preliminary investigations, the bridge site, type of structure with span arrangement and the location and type of foundation the schedule of detailed investigation shall be prepared. The exploration shall cover the entire length of the bridge as decided in approved GAD including a distance of Zone of influence at the end of the bridge i.e. about twice the depth below bed of the last main foundation to assess the effect of the approach embankment on the end foundations. The depth of exploration shall be carried out more than one and half times the width of foundation from the lowest level of the deep foundation. However where such investigations end in any unsuitable or questionable foundation material, the exploration shall be extended to a sufficient depth into firm and stable soils or to rock. Where the data made available by detailed exploration indicate appreciable variation, the additional holes shall be drilled as per guideline of Cl. 3.2.1 of IRC : 78-2000 to provide a comprehensive guideline to the designer for the estimate of the following.

- (i) Engineering properties of soil / rock.
- (ii) Location and extent of weak layers and cavities, if any, below the hard founding strata.
- (iii) The sub surface geological condition such as type of soil / type of rock, structure of rock if presents i.e. folds, faults, fissures, shears, fractures, joints, dykes and subsidence due to mining or presence of cavities.
- (iv) Ground water table.
- (v) artesian conditions, if any
- (vi) Quality of water in contact with the foundations.
- (vii) Depth and extent of scour. The capacity of the Deep foundation must be determined in corresponding to the anticipated scour depth. The skin friction in case of pile foundation and earth pressure of adjacent soil in case of well foundation must be neglected upto the maximum scour level.
- (viii) Suitable foundation level
- (ix) Safe bearing capacity of founding structure, pile capacity / allowable pressure below well foundation.
- (x) Probable settlement and differential settlement of proposed foundation.
- (xi) Likely sinking and driving effort.
- (xii) Construction difficulties may occur.

All exploration work should be carried out as per cl. 6.3 of IRC:78-2000. The requirement of soil data to be furnished in the DPR shall be as per Table 1 under cl. 6.3.3 of IRC:78-2000.

The recommendation of foundation should be made as per guideline given in IRC:78-2000 with latest amendments.

7) Detailed Project Report

The detailed Project report shall comprises of the following :

- a) The Preliminary Project Report as approved by the Department
- b) Soil Investigation Report with recommendation of foundation type proposed.

c) Design of Superstructure

It is advisable to adopt superstructure as per standard drawing of MOST. However if essential than superstructure shall be designed as per following criteria.

- i) In case of bridge having total length more than 60m the dimension of the superstructure shall be selected as per specification given in IRC:5 and with relevant amendment with minimum carriage way width of 7.5m and footpath on both side.

All load calculation for superstructure should be made as per the guideline laid down in IRC:6-2010. The load calculation should comprises of the following loads for design of superstructure.

- Dead load of superstructure including railing/crash barrier
- Dead load of wearing coat.
- Imposed load (Live Load) for two lane of Class A or 70R tracked vehicle which ever produced the severer condition including impact.
- Live load on footpath for design of footway slab.
- Wind load on superstructure applying Gust factor.
- Seismic load on superstructure with appropriate condition. The vertical seismic should also considered if applicable.
- Loading expected to occur during construction stage any other loading relevant to IRC:6-2010 for superstructure design.

The design of superstructure shall be made as per relevant latest codes publication of IRC. The superstructure designed with R.C.C/P.S.C members shall only be accepted. No superstructure with steel/composite members shall be allowed. The analysis and design of superstructure should consist the following parts :-

- 1) Longitudinal Girder
- 2) Cross girder/diaphragm
- 3) Deck slab
- 4) Cantilever Portion.
- 5) Footway slab.
- 6) Railing or Crash barrier.

The load analysis for different members should be submitted by either manually or by finite element analysis with "STAAD Pro" Software only. Analysis made by using any other relevant software shall not be accepted. The design of various members required to be submitted manually as per relevant Codes/Publications of IRC. Design of members made by latest STAAP Pro shall not be accepted.

d) Design of Substructure :

The substructure shall be designed as per provision given in IRC:78-2000 including latest amendments. The following loads should be considered for substructure design as per IRC:6-2010.

- i) Dead load from superstructure
- ii) Dead load of Pier/Abutment Cap
- iii) Self wt of pier and Abutment
- iv) Live load including impact upto 3.0m depth from deck.
- v) Horizontal load due to breaking
- vi) Vertical reaction due to breaking
- vii) Horizontal load due to temperature/shrinkage on bearing
- viii) Earth pressure load on Abutment
- ix) Live load surcharge loading on Abutment
- x) Force due to water current on pier and the same for Abutment due to all round scour condition.
- xi) Force due to bouncy on pier and Abutment for all round scour.
- xii) Seismic load on pier and Abutment if applicable. When seismic load considered the combination of seismic responses to be made as per IRC:6-2010 including vertical component.
- xiii) For bridges located in seismic Zone-IV and V hydro dynamic pressure and additional earth pressure behind Abutment needs to be considered as per IRC:6-2010.
- xiv) Wind load including Gust factor. The severer between wind and seismic needs to be considered in design.
- xv) Any other loading like to be occurred as per IRC: 6-2010.

The Consultant require to submit the design of the following component.

- i) Design of bearing. If standard superstructure as per MOST is considered than bearing may also selected from standard Drawing.
- ii) Design of Pedestal
- iii) Design of Pier & Abutment Cap
- iv) Design of Pier. The Pier section should be checked under one side superstructure (dislodge condition) also.
- v) Design of Abutment
- vi) Design of Wing/Return wall
- vii) Design of Dirt wall
- viii) Design of Bracket as corbel.

All design should done in correspondence with IRC:78-2000 with latest Amendment and IRC:21 along with relevant IRCs Publications.

e) Design of foundation

The bridge foundation shall be designed as per provision laid down in IRC:78-2000, IRC:21, IRC:45 as applicable with latest publication along with any other relevant IRC: publications. All loads considered for design of pier and Abutment should considered for foundation design.

All the design of superstructure and substructure should be made in correspond to the relevant latest IRC codes viz IRC: 5, IRC:6-2010, IRC:18, IRC:21, IRC:78, IRC:45, IRC:83 and any other latest relevant IRC: publications. All necessary load combination shall be made as per cl..... of IRC:6-2010.

f) Design of Approach

The consultant needs to submit the design of approach road on either side with a gradient not higher than 1 in 30. On the basis of traffic data obtained the consultant needs to submit the design of pavement section on the basis of CBR achieved after compaction. The consultant needs to perform the CBR test from the sample collected during soil exploration from approach portion. The pavement section shall be designed as per SP:72-2007. If high embankment designed with side slope and sub-bank than the global stability of the slope (Slip circle) should be shown in DPR. It is advisable to proposed approach road in such a way that will minimize the load width requirement. Reinforced earth may be used for reducing the bottom width of approach. The design of the reinforced earth as per relevant standard should be submitted under approach design.

The DPR should contain a detailed and Abstract cost estimate. The rates should be taken from latest PWD schedule for Road and Bridges including latest amendments and the final rate shall be achieved after detailed analysis.

The Consultant shall bound to submit any other documents in DPR as directed by the Department.

8) Technical Vetting :

The consultant shall obtained technical vetting of the proposed bridge DPR from Chief Engineer, P & RD. The Consultant required to incorporate all the observations raised by the Department against the DPR submitted, before obtaining the technical vetting.

The Consultant shall prepare and submit the final GAD and R.C detail drawing of all components after incorporating the observations raised by the department. The corrected DPR and drawings including the detailed drawing for approach road shall be vetted.

9) Administrative Approval :

After obtaining the technical vetting the DPR along with the drawings and estimate shall be forwarded by this Department to the State Govt. / Govt. of India/Statutory Body as applicable for obtaining the Administrative approval. The Consultant shall help the employer to accord necessary approval from Finance. The Consultant shall be bound to incorporate the necessary observations in DPR if raised by the Finance Department.

10) Preparation of Tender Documents :

The consultant shall be responsible for preparation of the tender document for online tendering. The Consultant shall be responsible to prepare the technical bid comprising of

- i) Standard Bidding Document for Bridge works.
- ii) Schedule of Quantity.

The Consultant shall be bound to prepare the Standard Bidding Document Comprises of the following

- a) The Notice Inviting tender for bridge works.
- b) Selection Criteria for the Bidders as directed by the Department
- c) Special Instruction to the bidders related to the works.
- d) Specifications of the works as per Schedule of items.
- e) Condition of Contract as directed by the Department.
- f) Format of Bank Solvency
- g) Format of Formal Agreement
- h) Format of Performance guarantee.

The Schedule of Quantity Shall be prepared on the basis of approved estimate. The financial bid i.e. BOQ should be prepared on the basis of Schedule of Quantities.

11) Monitoring / Supervision / Quality Control

The consultant shall be entirely responsible for the Supervision, Monitoring and Quality Control of the entire project starting from Bridge Layout to commissioning of the bridge before made it open to the traffic. The Consultant shall be responsible for supervise the progress of work as per work programme submitted by the Contractor duly approved by concerned Executive Engineer. The Consultant shall be monitor the correctness of the work as per approved drawing. The contractor shall follow the direction of the consultant during execution. The consultant shall engage qualified bridge Engineer having minimum experience not less than 10 years in bridge construction at the site. The consultant shall certify all the Bills raised by the contractor. No payment shall be made to the contractor if the bills are submitted without certification/recommendation of the consultant. The consultant also check the quality of the work and the contractor shall be bound to follow the instruction of the consultant regarding the quality aspect. The consultant shall be responsible to provide fit certificate after completion of the each stage viz. a) Foundation, b) Sub-structure, c) Super-structure, d) Approach Road. No construction for the next step shall be performed if necessary certificate not given by the consultant.

2.2 C: SCOPE OF WORK FOR BUILDING

The scope of the work under these terms of reference would consist of but not limited to the provisions laid down below. The Architect/Consultancy firm shall provide comprehensive planning and design services in respect of the work as awarded to them including other development work as follows :-

- i) Site evaluation and analysis, including site surveying and carrying out soil tests etc.
- ii) Environmental Impact Assessment including NOC from Environmental Department, if essential.
- iii) Architectural work and site development, proposals.
- iv) Structural engineering work (RCC design work). The buildings shall be designed as per applicable norms. The design should have provisions of National Building Code / Local bye-laws and conform to latest Indian Standard Code of practice for various disciplines.
- v) Sanitary, plumbing, drainage, water supply, sewerage work, drainage arrangement at site and premises.
- vi) Electrical work, Air conditioning wherever required / fire fighting arrangements, Internet, E-net, cabling etc. and its laying and installation drawings.
- vii) Landscape work – Planning of road, gutter, compound wall and garden and sculpture etc. The Architectural design will utilize a “green” concept suitable to the tropical conditions, including utilizing sustainable energy sources, eco-friendly materials, landscaping etc.
- viii) Preparation of a detailed estimate on basis of Schedule of Rates of WBSRDA), West Bengal. Preparation of draft tender document with all accomplishment including all the working drawings. Obtaining technical sanction from WBSRDA HQ. The designs shall be as per B.I.S. Code and I.R.C. for rural roads as applicable and building byelaws and all other specific separate codes to be made applicable, as well as rules / specifications of WBSRDA, P.W.D./ P.W(Roads), West Bengal. All specialized works shall be done through professional experts to be employed by the Consultancy Firm.

- ix) Special attention shall be given to energy saving devices / designs with maximum natural lighting and ventilation, renewable energy sources and eco-friendly features and cutting edge technology with green feature.

- 3.4 Fire safety norms in accordance with local fire bye-laws/codes are to be followed by the Consultant for the project.
- 3.5 The consultancy firm must have a permanent Office in Kolkata.
- 3.6 The Consultant shall submit all the reports, design calculations and drawings in 8 (eight) sets of hard copies and 2 (two) sets of soft copies in the form of CD.
- 3.7 Preparation of Detailed Project Report (DPR) consisting of following:
 - Main Report
 - Detailed Design Report
 - Technical Specification
 - Drawings (Architectural, Structural and detailed working drawings)
 - Rate Analysis
 - Detailed Estimate
 - Details of Measurement & Bill of Quantity (BOQ)

Since this is a time bound project, no time overrun is acceptable. The bidder should submit a phase wise work plan mentioning their schedule of providing their services in respect of different items of work.

2.3 C: TECHNICAL SPECIFICATION FOR BUILDING WORKS

SURVEYING:

The Surveying works include the followings:-

- i) Carrying out contour Survey, topography survey fixing the grid lines, preparation of survey plan of the total plot showing all relevant details e.g. existing modulations, levels, structures, adjacent road and footpath, etc.
- ii) Demarcation of property line and pegging of same, construction of survey pillars at reasonable intervals to facilitate construction of boundary wall.
- iii) The survey will be required to prepare the drawing on Auto Cad and submit both Soft copy and Hard copy within 15 days from the date of issue of work order including report.
- iv) The survey must provide a 'key plan' of the site showing surrounding existing buildings, roads and Railway Station as per requirement of the employer.
- v) The survey must show the existing utility services (underground), if any, at the site in the relevant drawings. If no underground utility services exist, certificate from the Competent Authority is required.

SOIL TESTING:

- i) **BORING:** This should be carried out using shell and Auger equipment with mechanized winch in accordance with IS: 1982 having diameter of 150mm / 200mm, sides of the bore holes to be lined by flush joined casing to prevent cave-in of solid inside the bore hole. The collection of all disturbed and undisturbed soil samples including their handling or transport to laboratory should be carried out in accordance with the standard practice. The Consultant shall mark the positions of the bore holes at site based on the locations shown in the drawing and get those approved before commencing the boring work. The undisturbed samples shall be collected at intervals staggered as far as possible with respect to other bore holes. Disturbed and undisturbed soil samples should not be taken from one layer.

ii) **PENETROMETER TEST:**

Standard Penetrometer Test shall be carried out in accordance with IS:2131. Generally SPT reading to be taken at least 3.0m intervals suggested as far as possible in respect with other bore holes or at every change of stratum.

iii) **LABORATORY TESTS:**

Following laboratory test shall be conducted in accordance with the relevant part of IS : 2720 or as advised by the Employer / Architect.

- a) Natural Moisture content;
- b) Bulk and Dry density;
- c) Liquid Limit and Plastic Limit;
- d) Specific Gravity;
- e) Unconfirmed Compressive Stress in nature state;
- f) Triaxial Test;
- g) Particle size distribution test (both sieve and hydrometer);
- h) Consolidation Test.

i) **Chemical Test:**

- (i) Sulphate and chloride contents of water samples;
- (ii) Sulphate, carbonate, chloride and organic matter content of soil samples;
- (iii) PH value.

1. **REPORT:**

On completion of field work and laboratory testing a detailed report shall be submitted in three copies incorporating the followings:

- a) Classification of Strata;
- b) Cross section of soil profile;
- c) Result of all field and laboratory tests together with their interpretations;
- d) Any other information of special significance encountered during investigation and likely to have a bearing on the design and construction of foundations.
- e) Observation of standing ground water level;
- f) Recommendation for bearing capacity of soil for strip / pile / isolated foundation of different sizes indicating allowable settlement as per relevant IS Standard & Publication Sample calculation for the determination of bearing capacity is to be submitted.
- g) Recommendation for bearing capacity of soil for Strip / raft / isolated type of foundation. Considering allowable settlement of R.C. frames structure as per N.B.C.
- h) Recommendation for the load function for ground acceleration parameter needs to be submitted for the standard dynamic analysis of the R.C. frame structure as IS: 1893 – 2002.

2. **SPECIFIC INFORMATION:**

BORE HOLES:

3 Nos. or as per recommendation of Geotechnical Consultant.

3. **LABORATORY TEST:**

On selected disturbed and undisturbed samples from all the bore holes. All types of laboratory testing as mentioned are to be done from the sample of all bore holes.

Architectural Design

- a. Preparation of master layout plans indicating features like internal and external, water supply, sanitary installations, storm water drainage, rain water harvesting system, landscaping, internal roads, paved areas, culverts, compound walls, internal and external electrical installations compound lighting etc. complete, which shall be in accordance with local bye-laws and obtaining approval of client.

- b. The I bidder shall submit the final conceptual plan based on the finally selected approved model submitted during the technical evaluation stage-II. After approval by the client the final conceptual scheme with plan of floor, all elevations, sections through important parts etc. and perspective view of the project have to be submitted along with conceptual design and preliminary cost estimate of the projects.
- c. The bidder shall submit the master plan, layout model and the final building model based on the finally accepted conceptual drawing.
- d. The layout plan shall include an area statement giving details of permissible FAR, ground coverage, setbacks etc. and actual built up area generated vis-à-vis schedule of accommodation. The site plan shall show the existing underground utility services such as water supply, clearance supply lines, underground tank including overhead lines etc. (True to scale). If no such utility services are found than the Architect shall obtain the necessary certification from the competent authority regarding the non presence of such services.
- e. Preparation of preliminary drawings using AutoCAD/similar compatible software for various floors, toilets, staircases, etc. explaining the general planning with schedule of internal and external materials and finishes and dimensions. Plumbing/Electrical layout indicating internal and external pumps, engine alternator, fire fighting system, UPS and location of channels for electric cables, telephone, LAN and other conduits for services, complete in accordance with the relevant National Building Code/local bye-laws including 2D drawings and 3D views and obtaining approval of client.
- f. Preparation and submission of plans/drawings to local civic bodies for obtaining approval of the Local/Statutory authorities according to the applicable acts, laws, regulations etc. and make any changes desired by such authorities at no extra cost. The approved documents in original shall be submitted to client for its reference and record.
- g. The consultant shall be responsible for arranging and obtaining of all approvals from all Local/Statutory authorities like Municipality, Fire, Post & Telecommunication, Airport Authority etc. according to the prevailing bye-laws, Laws and Regulations etc. The client shall pay all statutory fees payable to the Statutory Authorities required for obtaining the necessary approval.
- h. Preparation of detailed drawings consisting of floor plan at each level, reflected ceiling plans at each level including coordinated lighting and service features, external elevations, internal elevations, cross sections and longitudinal sections, terrace plans, lighting outfit/switching plan, plumbing and schematics, interior fit out including structural, electrical & other equipment, communication systems, security system, fire detection and fire fighting systems, power management systems, wastewater management system, rain water harvesting, landscaping and horticulture etc. all pertaining to various specialist services and disciplines.
- i. Preparation and submission of detailed designs, drawings and documents for all internal utility services like plumbing, fire fighting, electrification, fire detection, telephones, PABX, public address system, acoustics and other specialized services etc. as per the requirements of the Project suitable for construction and release to site.
- j. Preparation and submission of detailed designs, drawings and documents for all external utility services like water supply, sewerage, storm water drainage, fire hydrants schemes, rain water harvesting, water supply intakes arrangements, telephone system, electrical substation and other related schemes and any other specialized services as per Project requirement suitable for construction and release to site including getting necessary approvals from client. All Architectural design shall be made as per relevant clause of National Building code latest publication.

Structural Design

- a. The building shall be designed to withstand static/dynamic loading (wind/seismic) and the design shall be strictly in accordance with the latest Indian Standard Code of Practices/National Building Code. The structural analysis and design shall be done by using latest version of software packages such as STAADPRO. The provisions in various BIS Codes shall override the packages output.
- b. The consultant shall supply all design documents calculations/ computer input and output giving specific reference to BIS/NBC and all design and drawings (architectural, structural & others) in hard copies as well as in soft copies in requisite numbers. All soft copies of the drawings shall be submitted in AutoCAD or any other Auto Cad compatible software alongwith the softcopy of the Staad file for approval. Subsequent modification/revisions to be made should be made incorporated both in drawing and design and finally "As-built drawings" to be prepared in later stage. The structural drawing showing the reinforcement details / bar bending schedule shall be prepared as per latest edition of SP: 34 (S&T). All overriding conditions prescribed by IS : 13920 or any other BIS code shall be taken into account while preparing the structural drawings.

Services Design

The design for the following services shall be carried out as per the provisions of the design brief for respective services and shall be approved by client.

- a. **Fire detection & Fire fighting system:**
Fire safety norms in accordance with local fire bye-laws/National Building codes are to be followed by the consultant.
- b. **Environmental Protection:**
Cautious effort shall be made to ensure positive contribution to the Environment and confirm to local pollution control norms.
- c. **Landscaping:**
Appropriate hard and soft landscaping shall be designed to be in harmony with the surrounding Environment and neighborhood. The objective is to provide a harmonious and friendly environment with green area and landscape features.
- d. **Other Services:**
Any other services connected with the work shall be designed as per standard practice.

Construction Stage

During construction of the project, the consultant shall visit the site for any clarifications/modifications/suggestions/Supervision etc. and for consequent revision of working drawings arising from site requirement. For revision/ modification of drawings no extra payment will be made.

2.4 **Time for completion**

As specified under specific work order for different projects.

2.5 D:REFERENCE CODES TO BE FOLLOWED FOR BUILDING DESIGN

Main specifications will be followed from “NATIONAL BUILDING CODE – 2005” SP-7 with special importance on the followings:-

1) FIRE ADD LIFE SAFETY – PART-4:

- i) Automatic fire detection and alarm system;
- ii) Dry riser;
- iii) Automatic sprinkler system for Auditorium (if necessary);
- iv) Emergency exist, etc. as per part-4.

2) BUILDING MATERIALS – PART – 5:

All Building Materials such as Bricks, Steel, Aluminum, concrete, etc. shall be as per Part-5;

3) LOADS – PART-6:

All types of loads including seismic loads, wind loads, etc. shall be as per Part – 6.

4) CONSTRUCTION AND SAFETY MEASURES TO BE ADOPTED AS PER PART-7:

5) LIGHTING AND VERTILATIONS: - PART – 8: (BUILDING SERVICES):

These should comply with provisions in Part-8 of the NBC.

6) WATER SUPPLY DRAINAGE AND SANITATION – PART – 9:

(INCLUDING SOLID WASTE MANAGEMENT)

These should comply with provisions contained in Part-9 of NBC.

7) LANDSCAPE PLANNING AND DESIGN – PART-10:

(SECTION I & II):

These should be done with great care including ‘Environmental code of Practice’.

2.6 ELIGIBLE BIDDER

The proposals for this contract will be considered only from those bidders (proprietorship firms, partnership firms, companies, corporations, or joint ventures) who meet requisite eligibility criteria subject to complying with the provisions in Clause under section 3 of eligibility and qualification criteria.

2.7 Bidder must not have been blacklisted or deregistered by any central/state government department or public sector undertaking. Also no work of the bidder must have been rescinded by client after award of contract during last 5 years. The bidder should submit undertaking to this effect in proforma as given in Vol. I, Section 3D.

2.8 Joint Venture Company or the Consortium must not have more than two members. The least partner selected by the company shall qualify all the eligibility and qualification criteria at its own capacity to the extent of 30%. The Joint venture as a whole must satisfy all the criteria. Legal and valid agreements between the partners of Joint Venture Company/Consortium will be made indicating lead partner and the duties and responsibility of each of the partner shall be specifically included in the agreement. Copy of agreement duly self attested shall be submitted along with the Technical Bid.

3. QUALIFICATION OF THE BIDDER : STAGE-I

- Eligibility and Qualification Criteria – The project must be completed successfully.

3.1 Consultancy Experience:

a) The required consultancy experience for qualification successfully completed within last 5 years shall be as follows for each category.

i) Two project minimum 20 crore each or one project minimum 30 crore in case of building.

ii) Two project minimum 20 crore each or one project minimum 30 crore in case of Road.

iii) Two projects valued minimum 10 crore each or one project minimum 15 crore in case of bridge.

Experience of completed projects shall be submitted in the following format:

Sl. No.	Name of the project	Name & address of Client with Telephone No.	Detail of the project, Total covered area of the project, Facilities provided	Total Cost of the Project (in Rs.)	Date of start & completion of the consultancy services

Completion certificates and documentary evidences with photographs of Structures completed duly self attested, should be attached in support of the above submission.

3.2 Financial Capacity:

a) The bidder should have minimum average annual turnover during last 3 (three) years (2008-09, 2009-10 & 2010-11) in the work of consultancy services only to the tune of Rs. 15.00 crores. The turnover must be supported by the payment certificate of the particular year for consultancy work and project implementation consultancy.

b) The firm should be profit making and shall submit audited balance sheet, profit & loss account and statement of turnover for the last 3 (three) years (2008-09, 2009-10 & 2010-11) duly certified by Chartered Accountant.

The particulars of Annual Turnover may be submitted in the following format:

Sl. No.	Financial Year	Turn Over in (Rs. Crore)	Details of attachments (Certified by C.A.)
1.	2008-2009		
2.	2009-2010		
3.	2010-2011		

3.3 The intending bidder must produced the service tax registration certificate xerox copy) along with the copy of upto date clearance challan.

(Self attested

The intending bidder must produce the self attested copy of Pan Card.

The bidder must provide information about the existing commitment of the firm i.e ongoing work in the specified format mentioned below under Format-A

Format-A

For Ongoing works:-

Sl. No.	Name of the services	Cost of Project	Stipulated date of commencement	Stipulated Date of completion	Person month inputs			Employer (Client)	Location (Address)	Specific Service rendered
					Team Leader	Expert	Assistant			

C. Technical Manpower Deployment:

b) The consultant must give undertaking that they will deploy the following key personnel as per Annexure-I for carrying out the consultancy services in connection with the projects at locations if the contract is awarded to them eventually. The key technical personnel must be on their regular pay roll of the firm/consultancy for at least one year prior to the date of bid submission. Besides, the consultancy firm will also undertake to deploy non-technical manpower and provide adequate design and drafting facilities including software. Letter of undertaking should be attached with the proposal.

Annexure-I

Minimum Nos. of Experts/ technical personnel to be provided:-

Sl.No.	Designation of Experts / Technical Personnel	No. of Experts/Technical Personnel & required experience in the field.
1.	Highway Engineer minimum 20 years Experience	1 No.
2.	Highway Design Engineer 10 Years Experience	2 Nos.
3.	Highway Engineer (Supervisor) 5 years Experience	5 Nos.
4.	Bridge Design Engineer 20 years Experience 20 years Experience	2 Nos.
5.	Bridge Design Engineer 10 years Experience	4 Nos.
6.	Bridge Supervisor Engineer 10 years Experience	2 Nos.
7.	Structural Auto Cad draftsman	5 Nos.
8.	Senior Architect	1 No. having at least 20 years of experience
9.	Architects	2 Nos. having at least 10 years of experience
10.	Architectural Draftsman	2 Nos. conversant with CAD & experienced in preparation of Architectural Drawings for at least 5 years.
11.	Sr. Civil / Structural Engineer	1 No. having at least 20 years of experience
12.	Civil Engineer/ Structural Engineer	2 Nos. having at least 10 years of experience
13.	Soil Expert	1 No. having experience in soil exploring & analysis for at least 5 years.
14.	Land Surveyor	1 No. having experience for at least 5 years.
15.	Junior Engineer (Civil/ Structural)	2 Nos. having 5 years of experience
16.	Quantity Surveyor	1 No. having experience of 5 years.
17.	Sr. Electrical Engineer	1 No. having 20 years of experience.
18.	Electrical Engineer	1 No. having 10 years of experience.
19.	Junior Electrical Engineer.	2 Nos. having 5 years of experience.
20.	Environmental Specialist	1 No. – M.Sc. in Environmental Science with 5 years experience.

Note: The CV of the above key personnel should be submitted signed by the key personnel and counter signed by the bidder. The CV should give all details in order to satisfy the requirements mentioned above

VOL. I SECTION 3A.

FORM OF BID

Name of Contract: End to End Solution for implementation of major Civil Engineering works in the State of West Bengal

To
The Chief Engineer,
WBSRDA, HQ
63, N. S. Road,
Jessop Building (1st Floor)
Kolkata – 700 001.

Gentlemen,

1. In accordance with the Conditions of Contract and Specifications furnished by WBSRDA and drawings as furnished by WBSRDA, and Addenda for execution of the above named works, we the undersigned offer to conduct the Consultancy Services for Architectural Planning and Detailed Design for the amount of (insert amount first in numbers and then in words)

.....
.....

quoted by us in the Financial Offer as prescribed by WBSRDA in accordance with the said Conditions and other bid documents.

2. We undertake, if our Bid is accepted, to commence the Works as soon as possible after the receipt of the notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Bid.

3. We agree to abide by this Bid until, 2012 and it shall remain binding upon us and may be accepted at any time before the expiration of that date.

4. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding Contract between us.

6. We understand that you are not bound to accept the lowest or any bid you may receive.

Dated this day of, 2012

Signature..... in the capacity of

..... duly authorized to sign bids for and on behalf of
..... (in block
letters or typed)

Address:

.....

Witness:

Address:

.....

Occupation:

VOL. I SECTION 3B.
FORM OF AGREEMENT

This CONTRACT (hereinafter called the "Contract") is made the _____ day of the month of _____, 2012 between, on the one hand, The Chief Engineer, West Bengal State Rural Development Agency, 63, N. S. Road, Jessop Building (1st Floor) Kolkata – 700 001. (hereinafter called the "Client") and, on the other hand, _____ (hereinafter called the "Consultants")

WHEREAS

(A) the Client has requested the Consultants to provide certain consulting services as defined in the General Conditions attached to this Contract (hereinafter called the "Services");

(B) the Consultants, having represented to the Client that they have the required professional skills, personnel and technical resources, have agreed to provide the Services on the terms and conditions set forth in this Contract;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this contract:

- a) The Agreement
- b) Letter of Acceptance
- c) Addenda to the Tender Document, if any
- d) Form of Bid duly filled up
- e) Instructions to Bidder
- f) The General Conditions of Contract
- g) Financial Offer with Payment Schedule
- h) Drawing
- i) Notice Inviting Request For Proposal
- j) Other Documents as agreed upon

2. The mutual rights and obligations of the Client and the Consultants shall be as set forth in the Contract; in particular:

- (a) the Consultants shall carry out the Services in accordance with the provisions of the Contract, and
- (b) the Client shall make payments to the Consultants in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

**FOR AND ON BEHALF OF
[CLIENT]**

By _____
Authorized Representative

**FOR AND ON BEHALF OF
[CONSULTANTS]**

By _____
Authorized Representative

VOL. I SECTION 3C.
FORM OF BANK GUARANTEE FOR PERFORMANCE SECURITY

WHEREAS (Name of Bidder) (hereinafter called "the Consultant") has submitted his bid dated (Date) for "Architectural Planning and Detailed Design Consultancy Services for Construction of the Proposed Architectural Planning and Detailed design Consultancy Services for Construction of the Proposed RRNMU (ADB TA 7237) building at Barasat N24P and Construction of proposed RCTRC (ADB TA 7237) building at Kalyani, Nadia in the State of West Bengal (hereinafter called "the Bid") by Chief Engineer West Bengal State Rural Development Agency, 63, N. S. Road, Jessop Building (1st Floor) Kolkata – 700 001 (hereinafter called the employer which expression shall unless repugnant to or inconsistent with the context mean and include its successors and assigns).

KNOW ALL MEN by these presents that, We, (Name of Bank) having its registered office at (hereinafter called "the Bank") are bound unto (Name of Employer) (hereinafter called "the Employer") in the sum of Rs. (Amount of Guarantee) for which the payment well and truly to be made to the said Employer the Bank binds himself, his successors and assigns by these presents.

Sealed with the Common Seal of the said Bank this day of 2012.

THE CONDITIONS of this obligation are:

1. If the bidder having been notified of the acceptance of his Bid by the Employer during his period of validity:
 - (a) fails or refuses to execute the Form of Agreement in accordance with the Information to Consultancy Firm.
 - (b) fails or refuses to furnish the performance security in accordance with the Instruction to Bidders,

Or

2. If the bidder fails or refuses to execute the assignment as specified in the contract.

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of one or both of the two conditions, specifying the occurrence condition or conditions.

This Guarantee will remain in force upto or as it may be extended by the Employer, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

NOTWITHSTANDING anything contained hereinabove,

(i) Our liability under this Bank Guarantee shall not exceed Rs.
(Rupees only)

(ii) This Bank Guarantee shall be valid upto and

(iii) We are liable to pay the Bank Guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before

DATE.....

.....
(SIGNATURE OF THE BANK)

WITNESS
(BANK SEAL)

.....
(Signature, Name and Address)

VOL. I SECTION 3D.
UNDERTAKING FOR NOT BLACKLISTED

We do hereby undertake that we have not been blacklisted or deregistered by any central/state government department or public sector undertaking and also that none of our work was rescinded by the client after award of contract during last 5 years.

.....
STAMP & SIGNATURE OF AUTHORIZED SIGNATORY

- NOTE:
1. In case of JV/Consortium, the undertaking shall be submitted by each member of the JV/Consortium.
 2. The undertaking shall be signed by authorized signatory of the tenderer or constituent member in case of JV/Consortium.

4. Participation in Bids

4.1 Bidder shall submit only one bid either by himself, or as a partner in a joint venture. A bidder who submits or participates in more than one bid shall be disqualified.

5. Cost of Bidding

5.1 The bidder shall bear all costs associated with the preparation and submission of his bid and the Employer will in no case be responsible or liable for those costs.

6. Site Visit

6.1 The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for himself on his own responsibility all information and data for preparing the bid and entering into a contract for the captioned works. The costs of visiting the Site and collection of information and data shall be at the bidder's own expense.

C. RFP Documents

7. Content of RFP Documents

7.1 The RFP documents are those stated below, and should be read in conjunction with any Addenda, if any, issued in accordance with Clause 9.

1. Notice Inviting RFP
2. Instructions to Bidders
3. General Conditions of Contract
4. Financial Offer with Payment Schedule
5. Forms of Bid and Bid Security
6. Form of Agreement
7. Form of Bank Guarantee for Performance Security
8. Letter of Undertaking for Technical Manpower Deployment
9. Undertaking for Not Blacklisted
10. Drawing

7.2 The bidder is expected to examine carefully the contents of the RFP documents. Failure to comply with the requirements of bid submission will be at the bidder's own risk. Pursuant to Clause 25, bids which as per opinion of the employer are not substantially responsive to the requirements of the bid RFP documents will be rejected.

8. Clarification of RFP Documents

8.1 A prospective bidder requiring any clarification of the RFP documents may contact the office of WBSRDA and get their issues clarified.

9. Amendment of RFP Documents

9.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the RFP documents by issuing addenda.

9.2 Any addendum thus issued shall be part of the RFP documents pursuant to Sub- Clause 9.1, and shall be communicated in writing or by cable or through website to all purchasers of the RFP documents. Prospective bidders shall acknowledge receipt of each addendum by writing or through e-mail by cable to the Employer.

Preparation of Bids

10. Language of Bid

10.1 The RFP shall be prepared in English language. All the documents related to bids supplied by the bidder should also be in English language.

11. Bid Prices

11.1 Unless stated otherwise in the RFP documents, the Contract shall be for the whole Works as described in Sub-Clause 1.2, based on the lump sum consultancy fees submitted by the bidder. The accepted bid shall be the finally arrived contract price.

11.2 All duties, taxes and other levies as well as service tax payable by the Consultant under the Contract, or for any other cause, shall be included in the lump sum consultancy fees to be quoted by the bidder, and the evaluation and comparison of bids by the Employer shall be made accordingly. WBSRDA will not make any payments towards taxes, levies, service tax etc. or any other kind of taxes.

11.3 The lump sum consultancy fees quoted by the bidder are FIRM for the entire contract period including extensions if allowed.

12. Currencies of Bid and Payment

13.1 The lump sum consultancy fees shall be quoted by the bidder entirely in Indian Rupees.

13. Bid Validity

13.1 Bids shall remain valid for a period of **120 (one hundred and twenty)** days after the date of Bid opening.

13.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request that the bidders extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing or by cable. A bidder may refuse the request without forfeiting the bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for the period of extension, and in compliance with Clause 14 in all respects.

14. Bid Security

14.1 The intending bidder shall submit the bid security in the form of Earnest Money amounting **Rs 30000.00 (Rupees thirty thousand only)** as a part of the bid document.

14.2 The bid security shall be furnished in the form of Demand Draft drawn on Nationalized Bank or Scheduled Bank in India to be acceptable to WBSRDA in favour of '**WBSRDA**', payable at Kolkata.

14.3 Any bid not accompanied by an acceptable bid security shall be rejected outright by the Employer as non-responsive.

14.4 The bid securities of unsuccessful bidders will be returned as promptly as possible, after issuance of LOA to the successful bidder.

14.5 The Bid security of the successful Bidder will be returned when the bidder has furnished performance security and signed the agreement.

14.6 The bid security may be forfeited

- (a) if the bidder withdraws his bid during the period of bid validity;
- (b) in the case of a successful bidder fails within the specified time limit to
 - (i) sign the Agreement
 - (ii) furnish the required performance security

15. Pre-bid Meeting

The Prebid meeting shall be held on 17.04.2012(Tuesday) at 12-30 PM in WBSRDA, HQ, 63, N. S. Road, Kolkata – 700 001.

16. Format and Signing of Bid

16.1 The bidder shall prepare only one copy of the RFP documents comprising the bid as described in Clause 7 of Instructions to Bidders.

16.2 The bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the bidder, pursuant to Sub-clauses 3.1(a). All pages of the bid shall be initialed by the person or persons signing the bid.

16.3 The bid shall contain no alterations, omissions or additions, except those to comply with instructions issued by Employer, or as necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person or persons signing the bid.

Submission of Bids

17. Sealing and Marking of Bids

17.1 The bidder shall seal Technical and Financial proposals in two separate envelopes. The envelopes are to be marked as Packet 1: 'TECHNICAL BID' and Packet 2: 'FINANCIAL BID' respectively.

The Packet 1 envelope should contain:

1. Particulars relating to Qualification of Bidder – Eligibility and Qualification Criteria as per Clause 3 of Instructions to Bidder.
2. Self attested copies of PAN CARD and Service Tax Registration Certificate including copy of challan.
3. Bid security of Rs.1,00,000.00 in the form of Bank Draft.
4. A written of Power of Attorney authorizing the signatory of the bid.
5. Letter of Undertaking for technical manpower deployment.
6. Undertaking for not blacklisted as per Vol-I
7. The cost for bid document Rs 10000.00 in the form of Bank Draft.
8. The Vol-I and Vol-III of the original RFP document signed by bidder.

The Packet 2 envelope shall include:

The Vol-II of the RFP document containing the Financial offer.

Both the Packet 1 and Packet 2 envelopes shall be finally sealed in a outer single envelope and shall be dropped in the Tender Box which is kept in the office of WBSRDA, HQ.

17.2 The sealed envelope shall

(a) be addressed to:

The Chief Engineer

West Bengal State Rural Development Agency

63 N.S Road, Jessop building

(b) bear the following identification:

i) Name of the Work

ii) Name & Address of the bidder

17.3 If the envelope is not properly sealed and marked as above, the Client will assume no responsibility for the misplacement and all consequences shall rest on the bidder including rejection of the bid.

18. Deadline for Submission of Bids

18.1 Bids must be received by the Employer at the address specified above not later than 15-00 hrs. on 30.04.2012 (Monday)

18.2 The Employer may, at his discretion, extend the deadline for submission of bids, by issuing an addendum in accordance with Clause 9, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

19. Late Bids

19.1 Any bid received by the Employer after the deadline for submission of bids prescribed in Clause 18 will be rejected and returned unopened to the bidder by Registered Post with A/D, which shall be treated as the fulfillment of obligation by the employee.

20. Modification and Withdrawal of Bids

20.1 No withdrawal of Bid shall be allowed.

21. Bid Opening and Evaluation

Bid Opening

21.1.1 The Employer or his authorized representative will open the envelope containing the proposal, including withdrawals and modifications made pursuant to Clause 21, in the presence of bidder's representatives who choose to attend, at 15-00 hrs. on 02.05.2012 (Wednesday) at the chamber of Chief Engineer / Technical Advisor at WBSRDA, HQ, 63 N.S Road Jessop Building, Kolkata-700001.

Technical Evaluation Stage-I

21.2 The technical evaluation shall be made by a Committee headed by Chief Engineer. The technical evaluation shall be made in two stages. Under stage-I the documents submitted by the bidder in packet-I shall be verified and if found appropriate as per required criteria prescribed under section 3B stage-I then the respective bidder shall be considered qualified under stage-I.

Stage-II

The Bidder found qualified under Stage-I shall be asked for interview/discussion with their key technical personal. The final selection shall be made after evaluation of Stage – II where marks shall be provided on the basis of Interview.

Opening of Financial Bid

21.3 The financial bid of the technically qualified bidders shall be opened. The date and time of the opening shall be given in the office Notice Board and intimated to the eligible bidder after completion of the technical evaluation.

22. Process to be Confidential

22.1 Information relating to examination, clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced. Any effort by a bidder to influence the Employer's processing bids or award decisions may result in the rejection of the bidder's bid.

23. Examination of Bids and Determination of Responsiveness

23.1 Prior to the detailed evaluation of bids, the Employer will determine whether each bid (i) meets the eligibility criteria (ii) has been properly signed; (iii) is accompanied by the required securities; (iv) is substantially responsive to the requirements of the RFP documents; and (v) provides any clarification and/or substantiation that the Employer may require pursuant to Sub-Clause 22.1

23.2 A substantially responsive bid is one, which conforms to all the terms, conditions and specifications of the RFP documents, without material deviation or reservation. A material deviation or reservation is one (i) which affects in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the RFP documents, the Employer's rights or the bidder's obligations under the Contract; or (iii) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

23.3 If a bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

23.4 The criteria of non-responsiveness are as stated below but are not limited to them:

- i) Failure to comply with the Scope of Work given in RFP.
- ii) Failure to comply with the requirements of bid submission
- iii) Failure to submit Bid Security as per Clause 14
- iv) Failure of Bid to conform to all the terms, conditions of RFP documents
- v) A bid which materially deviates from the requirements of the RFP documents or is a conditional offer
- vi) Any other reason which in the opinion of the Employer / Committee renders the bid non-responsive.

The Employer's/ Committee members decision as to the non-responsiveness of any bid shall be final.

F. Award of Contract

24. Award

24.1 Subject to Clause 25, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest rate favourable to the Govt at Evaluated Bid Price, provided that such bidder has been determined to be eligible and qualified in accordance with the provisions of Clause 3. The

Employer not bound to accept the lowest rate offered by any bidder without assigning any reason whatsoever.

25. Employer's Right to Accept any Bid and to Reject any or all Bids

25.1 Notwithstanding Clause 24, the Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the Employer's action.

26. Notification of Award

26.1 Prior to expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder by e-mail confirmed by registered letter that his bid has been accepted. This letter (hereinafter and in the Conditions of Contract called the "Letter of Acceptance") shall name the sum which the Employer will pay the Contractor in consideration of the execution of the Works by the Consultant as prescribed by the Contract (hereinafter and in the Conditions of Contract called "the Contract Price").

26.2 The notification of award will constitute the formation of the Contract.

26.3 Upon the furnishing by the successful bidder of a performance security, the unsuccessful bidder may apply for the release of Bid security.

27. Signing of Agreement

27.1 At the same time the Employer notifies the successful bidder that his bid has been accepted, the Employer will send the bidder the Form of Agreement provided in the RFP documents, incorporating all agreements between the parties.

27.2 Within 15 (fifteen) days of receipt of the Form of Agreement, the successful bidder shall sign the Form and return it to the Employer in non-judicial stamp paper amounting Rs 100.00 (Rupees hundred only) purchased after the date of receiving notice from employer stated under sub-claus 27.1.

28. Performance Security/Guarantee

Within seven days of receipt of the notification of award from the Employer, the successful bidder shall furnish to the Employer a performance security of an amount of 1% of the accepted total consultancy cost in the form of acceptable Bank Guarantee. The form of performance security provided in Section 3C of the RFP documents may be used or some other form acceptable to the Employer. Validity of Bank Guarantee shall cover entire duration of consultancy period including extended period, if any. The Bank Guarantee shall be released after satisfactory completion of assignment.

29. Annulment of the Award

Failure of the successful bidder to comply with the requirements of Clauses 27 or 28 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security.

30. Issue of Notice to Commence

After receipt of Performance Security from the contractor as stipulated in Clause 28 of Instructions to Bidders or even after award of the contract through issue of Letter of Acceptance the Engineer will notify the consultant to commence work as soon as reasonably possible with due expedition and not later than 15 days from the date of receipt of the work order. If the consultant fails to commence works within the stipulated date, that will constitute a breach of contract and in that case the Employer will have right to annul the contract with forfeiture of Performance Security and if the same is not deposited forfeiture of Bid Security.

VOLUME – I

SECTION 3

GENERAL CONDITIONS OF CONTRACT:

1. GENERAL PROVISIONS

1.1 EMPLOYER :

The Employer shall mean Chief Engineer, Panchayat & Rural Development Department, Govt. of West Bengal, 63, N.S. Road, Kolkata – 700001.

1.2 End to End Consultant :

To be selected.

1.3 GENERAL PROPOSAL:

Building, Bridge and Rural Road as awarded to End to End Solution Consultant.

1.4 NAME OF WORK:

Providing End to End Consultancy Services.

1.5 WATER, POWER & EQUIPMENT:

The water, power and all the necessary equipments at site for the soil investigation, survey work and other works shall be arranged by the successful End to End solution Consultant at their own cost.

1.6 SITE OFFICE:

The employer may allow to use the land at site to the Consultant for making site office during soil investigation and survey work. All such arrangements shall be made by the Agency at their own cost. Any incidental charges, if required at site, for executing the work shall be borne by the Agency. The Contractor shall clear the site within 7(seven) days after completion.

2. DISPUTES AND TERMINATION

2.5 Suspension

The Client may, by written notice of suspension to the Consultants, suspend all payments to the Consultants hereunder if the Consultants fail to perform any of their obligations under this Contract, including the carrying out of the Service provided that such notice of suspension (i) shall specify the nature of the failure and (ii) shall request the Consultants to remedy such failure within a period not exceeding thirty (30) days after receipt by the Consultants of Such notice of suspension.

2.6 Termination

2.6.1 By the Client/Employer

The Client may terminate the contract by thirty (30) days' written notice of termination to the Consultants. Such notice is to be given after the occurrence of any of the events specified paragraph (a) through (f) of this Clause 2.6.1, terminate this contract

- (a) if the consultants fail to remedy a failure in the performance of their obligations hereunder, as specified in a notice of suspension pursuant to Clause 2.5 hereinabove, within thirty (30) days of receipt of such notice of suspension or within such further period as the Client may have subsequently approved in writing;
- (b) if the Consultants become insolvent or bankrupt or enter into any agreement with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;
- (c) if the Consultants fail to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause 3 hereof;
- (d) if the Consultants submit to the Client a statement which has material effect on the rights, obligations or interests of the Client and which the Consultant know to be false;
- (e) if, as the result of Force Majeure, the Consultants are unable to perform a material portion of the Services for a period of not less than sixty (60) days; or
- (f) if the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.

2.6.3 Cessation of Rights and Obligations

Upon termination of this Contract pursuant to Clause 2.6 hereof, or upon expiration of this Contract pursuant to Clause 2.2 hereof, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Clause 3.3 hereof, (iii) the Consultants' obligation to permit inspection, copying and auditing of their account and records set forth in Clause 3.7 (ii) hereof, and (iv) any right which a Party may have under the Applicable Law.

3.0.0 Settlement of Disputes

The parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this contract or interpretation thereof. Any disputes between the parties as to matters arising pursuant to this contract which cannot be settled amicably may be referred to grievance redressal committee to be constituted by the employer with 3 members. The decision of grievance redressal committee will be binding in both parties.

VOLUME – II

FINANCIAL

TERMS OF PAYMENT FOR RURAL ROADS

For each of the services in the scope as mentioned above, the End to End Consultant shall be paid in the following stages consistent with the work done. The payment made to the Consultant are on account and shall be adjusted against the final amount payable. The payable percentage shall be calculated on Quoted rate.

Sl. No.	Payment Stages	Fee Payable	Cumulative Fee Payable	Remarks
1	Mobilization Advance on issuance of work order on submission of Bank Guarantee.	5%		
2	On Approval of DPR from concerned Executive Engineer	5%	10%	Less amount paid under SL.No. 1
3	After obtaining the vetting from STA/other Statutory Authority	20%	30%	Prorata Payment shall be released based on payment already made.
4.	After obtaining approval from NRRDA/other Statutory Authority	10%	40%	Prorata payment shall be released based on payment already made.
5	After obtaining Technical Sanction from SE/CE before Tendering.	5%	45%	Prorata payment shall be released based on payment already made..
6	Preparation and submission of tender documents for online tendaring	15%	60%	Prorata payment shall be released based on payment already made.
7	After completion of Award of contract to the selected Contrator.	10%	70%	Prorata payment shall be released based on payment already made.
8	Construction Stages			
	a) Completion of 25% of construction Work.	5%	75%	Less payment already made.
	b) Completion of 50% of construction work.	5%	80%	Less payment already made.
	c) Completion of 75% of construction work.	10%	90%	Less payment already made.
	d) After completion of the work and submission of as built drawing both in hard & soft copy as required	10%		

TERMS OF PAYMENT FOR BRIDGE

For each of the services in the scope as mentioned above, the End to End Consultant shall be paid in the following stages consistent with the work done. The payment made to the Consultant are on account and shall be adjusted against the final amount payable. The payable percentage shall be calculated on Quoted rate.

Sl. No.	Payment Stages	Fee Payable	Cumulative Fee Payable	Remarks
1	Mobilization Advance on issuance of work order on submission of Bank Guarantee.	5%		
2	On completion of Survey and Soil Investigation and after submission of Preliminary Project Report.	5%	10%	Less amount paid under SL.No. 1
3	After obtaining Approval from I & WD for vetting of Waterway	20%	30%	Prorata Payment shall be released based on payment already made.
4.	After obtaining Preliminary approval from Department.	10%	40%	Prorata payment shall be released based on payment already made.
5	After obtaining the Administrative Approval as required.	5%	45%	Prorata payment shall be released based on payment already made..
6	After obtaining technical sanction	15%	60%	Prorata payment shall be released based on payment already made.
7	After Completion of award of contract.	10%	70%	Prorata payment shall be released based on payment already made.
8	Construction Stages			
	a) Completion of 25% of construction Work.	5%	75%	Less payment already made.
	b) Completion of 50% of construction work.	5%	80%	Less payment already made.
	c) Completion of 75% of construction work.	10%	90%	Less payment already made.
	d) After opening of the bridge to traffic and submission of final fit certificate.	10%	100%	

TERMS OF PAYMENT FOR BUILDINGS

For each of the services in the scope as mentioned above, the Architect shall be paid in the following stages consistent with the work done. The payment made to the Architect are on account and shall be adjusted against the final amount payable. The payable percentage shall be calculated on actual quoted rate.

Sl. No.	Payment Stages	Fee Payable	Cumulative Fee Payable	Remarks
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1	Mobilization Advance on issuance of work order on submission of Bank Guarantee.	Rs. 1.00 Lac (Rupees one lac only)		
2	On submission of Architectural and structural Drawings along with design documents and preliminary cost estimate for obtaining preliminary approval from WBSRDA, NRRDA & ADB as per scope of work.	10%	10%	Less amount paid under SL.No. 1
3	Approval of Competent Authority of Statutory bodies like Municipal Authority etc. including clearance from Firefighting Authority, Govt. of W.B.	20%	30%	
4.	After obtaining the final approval of the already sanctioned drawing and other relevant documents from NRRDA, ADB etc.	10%	40%	Prorata payment shall be released based on payment already made.
5	On submission of Basic Working Drawing with details of specifications, Bill of Quantities together with detailed estimate of cost for Inviting Tender for Civil/Electrical / Sanitary & Plumbing works including Landscaping /Compound Road and Beautification works including environmental safeguards for obtaining technical sanction from WBSRDA, HQ.	5%	45%	Prorata payment shall be released based on payment already made..
6	After Obtaining technical sanction from WBSRDA and submission of final working drawing both Architectural & Structural.	15%	60%	Prorata payment shall be released based on payment already made.
7	Preparation and submission of correct Tender Documents for item rate contract as per norms of ADB.	10%	70%	Prorata payment shall be released based on payment already made.
8	Construction Stages			
	a) Completion of 25% of construction Work.	5%	75%	Less payment already made.
	b) Completion of 50% of construction work.	5%	80%	Less payment already made.
	c) Completion of 75% of construction work.	10%	90%	Less payment already made.
	d) Completion of work and obtaining completion certificate / occupation certificate from the competent authority including submission of as built drawings including utility services in the form of hard copy/softcopy in quintuplicate.	10%	100%	