

**REQUEST FOR PROPOSAL (RFP)**

FOR

APPOINTMENT OF 3<sup>rd</sup> PARTY INSPECTION & QUALITY CONTROL  
ASSURANCE AGENCY / FIRM

FOR

ALL ENGINEERING WORKS

OF

TELANGANA STATE INDUSTRIAL INFRASTRUCTURE CORPORATION LIMITED  
(TSIIC)



**TELANGANA STATE INDUSTRIAL INFRASTRUCTURE CORPORATION  
LIMITED**

(Govt. of Telangana State Undertaking)

Regd. Office: “Parisrama Bhavanam”, 5<sup>th</sup> Floor, 5-9-58/B, Fateh Maidan Road,  
Basheerbagh, Hyderabad-500 004, Telangana ,India.

**VOLUME - I**  
**(TO BE SUBMITTED IN SEALED COVER 'A')**

**NAME OF WORK** : Appointment of 3<sup>rd</sup> Party Inspection & Quality Assurance Agency/ Firm for All Engineering works of Telangana State Industrial Infrastructure Corporation Limited (TSIIC)

Name of the Agency/Firm to Whom Bid Document issued:	
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1. Processing fee to be paid **Rs.11800.00** vide DD/BC Bearing No. \_\_\_\_\_  
Date \_\_\_\_\_ of \_\_\_\_\_ Bank which is non refundable.
2. Bid Security deposit for **Rs.2,00,000.00** drawn in favour of TSIIC Limited Bearing No. \_\_\_\_\_ Dated \_\_\_\_\_ of \_\_\_\_\_  
Branch \_\_\_\_\_.

## CHAPTER - I

### TELANGANA STATE INDUSTRIAL INFRASTRUCTURE CORPORATION LIMITED

#### **OPEN BID NOTIFICATION FOR APPOINTMENT OF 3<sup>RD</sup> PARTY INSPECTION & QUALITY ASSURANCE AGENCY / FIRM FOR ALL ENGINEERING WORKS OF TSIIC**

TENDER NOTICE NO:

, Dt: 04-2023

#### INVITATION FOR OPEN BID

Name of the work: Appointment of 3<sup>rd</sup> Party Inspection & Quality Assurance Agency / Firm for all Engineering Works of TSIIC.

### **1. INTRODUCTION**

1.1 TSIIC (Telangana State Industrial Infrastructure Corporation) also known as TSIIC is a Telangana State Government initiative for providing infrastructure through development of industrial areas. TSIIC was established in the year 2014 for identifying and developing potential growth centers in the Telangana State fully equipped with developed plots/sheds, roads, drainage, water, power and other infrastructural facilities; providing social infrastructure, like housing for workers near industrial zones, co-coordinating with the agencies concerned for providing communication, transport and other facilities. The Corporation also has active projects in the Public-Private Partnership Mode. The Industrial Areas range from 15 acres to 2500 acres in different locations of the State. The Corporation has presence in each and every Mandal Head Quarters of the District. A large number of leading industrial houses have their presence in these Industrial Areas.

1.2 TSIIC is organized into nine (9) Zones for administration purpose as mentioned below. The works in respective Zones are administered by the Zonal Managers (Engineering) who will report to the Chief General Manager (Engineering) / Chief Engineer located at TSIIC Head Office. The particulars of TSIIC Organization set up can be viewed at web site of TSIIC ([www.tsiic.telangana.gov.in](http://www.tsiic.telangana.gov.in)).

S.No	Name of the Zone	Jurisdiction of the TSIIC Zone.
1	CYBERABAD (HQ : Cyberabad)	Vikarabad, Hyderabad Districts and (Serilingampalli, Rajendranagar, Moinabad, Gandipet and Shankarpalli mandals of) Ranga Reddy District

2	SHAMSHABAD (HQ : Shamshabad)	Ranga Reddy District (excluding Serilingampalli, Rajendranagar, Moinabad, Gandipet, Chevella and Shankarpalli Mandals), Mahaboobnagar, Wanaparty, Gadwal and Nagarkurnool Districts
3	Medchal – Siddipet (HQ : Jeedimetla)	Siddipet and Medchal – Malkajgiri Districts
4	PATANCHERU (HQ : Patancheru)	Medak and Sangareddy Districts
5	WARANGAL (HQ : Warangal)	Bhupalapalli, Warangal (U), Warangal (R) and Jangaon Districts
6	KHAMMAM (HQ : Khammam)	Khammam, Kothagudam and Mahabubabad Districts
7	Yadadri (HQ : Bhongir)	Nalgonda, Yadadri and Suryapet Districts
8	KARIMNAGAR (HQ : Karimnagar)	Mancherial, Karimnagar, Peddapally, Jagityal and Sircilla Districts
9	NIZAMABAD (HQ : Nizamabad)	Adilabad, Komaram Bheem, Nirmal, Nizamabad and Kamareddy Districts

- 1.3 A brief description of the assignment and its conditions are specified in the Scope of services of this RFP.

The basic concept of this job / Assignment is that the existing executing Agency performs inspection & testing as per specifications to ensure a quality product and the Third Party Inspection Agency (TPQA) performs testing and Inspection as per the Guidelines on Quality Systems to ensure that the Contractor's Quality Control test results are in order. The system requires that both the existing executing Agency and the TPQA have technical personnel who are competent in testing and inspection of all technical works. The general idea is that the existing executing Agency has to perform the necessary tests and inspection to ensure the likelihood that all works in his scope meet the specifications instead of “after the fact” testing to see if all works meets the specifications. This approach enables the contractor much more control over his operations. He is responsible for his product from the beginning to the end till the final acceptance of all the works. The TPQA monitors and audits his process of testing to make sure that what he is doing is adequate and accurate. Ensuring & Assuring production of a quality work of durability and uniform performance by executing Agency is the most important aspect of the quality supervision assignment of a TPQA.

The TPQA agency has to ensure that the executing and implementing agencies have taken adequate and proper steps to ensure control of quality and have evolved a proper quality assurance plan and the work is being executed accordingly. It has to be further ensured by the TPQA agency that the work is being carried out as per Contract specification and relevant BIS specifications by deputing skilled and experienced

Engineers who are experts in individual fields.

- 1.4 With the above background, TSIIC invites open bid tenders from the Registered Private Firms / Institutions, Government Firms, Non-Governmental Organizations for undertaking said 3<sup>rd</sup> Party TPQA assignment. The interested bidders who are having past experience in providing Quality Assurance services of similar nature and having requisite financial capability to undertake this job, can download the open bid tender schedule documents from the website **www.tsiic.telangana.gov.in**

1.5 **Description of Selection Process**

The Authority has adopted a two stage selection process (collectively the “Selection Process”) in evaluating the Proposals comprising technical and financial bids to be submitted in two separate sealed envelopes. In the first stage, Technical Proposal will be evaluated on the basis of Applicant’s experience, its understanding of Scope of Work and Project, proposed methodology and Work Plan, and the experience of Key Personnel. Only those Applicants who’s Technical Proposals score 75 points or more out of 100 shall be shortlisted for further evaluation.

The scoring criteria to be used for technical evaluation shall be as follows:

S. No.	Particulars	Marks	Criteria
1	Write-up on Firm’s understanding of the project requirements and Approach & Methodology	20	Marks shall be awarded based on the quality of approach and methodology proposed by the Applicant and their understanding of the project requirements and its credentials.

S. No.	Particulars	Marks	Criteria
2	<p>Relevant Experience of the Applicant and availability of Laboratory equipment.</p> <p>Applicant must have own NABL accredited fully equipped Quality Control Laboratory at Hyderabad / Secunderabad to cover all engineering works executed under the jurisdiction of nine Zones of TSIIC.</p>	45	Marks will be awarded based on the overall capability of the firm, and Laboratory equipment availability and experience of similar assignments etc. Proof of having NABL accredited own testing laboratory with address shall be furnished.
2.a	Assignments on providing Quality Assurance services and should have successfully completed such similar assignments in last 5 years preceding the RFP	30	Each completed eligible assignment shall carry 5 (Five) marks.
2.b	Overall turnover of the firm from Quality Assurance Business in any one year in last five years	15	<p>Equal to Rs. 1 Crore = 5 (Five) marks</p> <p>Rs.1 Crore to 3 Crore = 10 (Ten) marks</p> <p>3 Crores and above = 15 (Fifteen) marks</p>
3	Relevant Experience of the Key Personnel	35	Key Personnel having desired Educational qualification and No. of years' experience shall be considered. Each Key Personnel will be eligible for marking (as below) only if each of them is existing employee of the Applicant firm (Permanent employee) and meets the Minimum Specific Experience for Eligibility.
3.a	Team Leader with an Professional Experience of	15	The CVs the staff members qualifying minimum criteria shall only be evaluated

S. No.	Particulars	Marks	Criteria
	15-20 years and relevant Quality Assurance of 5-8 years		as per following weightage <ul style="list-style-type: none"> <li>Total Years of Professional Experience (10%)</li> <li>Experience of Eligible Assignments (60%)</li> <li>Experience of Working in Telangana State (30%)</li> </ul>
	Structural Engineer with an Professional Experience of 8-10 years and relevant Quality Assurance of 3-5 years	05	
	Electrical Engineer with an Professional Experience of 8-10 years and relevant Quality Assurance of 3-5 years	05	
	Quality Engineer with an Professional Experience of 8-10 years and relevant Quality Assurance of 3-5 years	05	
	Support Engineers (2Nos.) with an Professional Experience of 2-3 years and relevant Quality Assurance of minimum 2 years	05	

Based on this technical evaluation, a list of short-listed applicants shall be prepared. In the second stage, financial Proposals of technically qualified proposals will only be opened for consideration under Quality and Cost Based System (QCBS) evaluation. Proposals will finally be ranked according to their combined technical and financial scores. The weightages for Technical & Financial proposals will be in the ratio of 80:20 (80% technical and 20% financial). The first ranked Applicant shall be selected for negotiation (the “Selected Applicant”) while the second ranked Applicant will be kept in reserve.

#### 1.6 Schedule of selection process

The Client would endeavor to adhere to the following schedule:

Down load of Bid Document from TSIIC website starts on:	<b>19.04. 2023 from 3.00 PM onwards</b>
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Receipt of Bids	<b>04.05. 2023 Up to3:00 PM</b>
Opening of Technical Bids	<b>04.05. 2023 @ 3.30 PM</b>
Opening of Financial Bids of technically qualified bidders	<b>Will be intimated to qualified bidders</b>

- 1.7 If the office happens to be closed on the date of receipt of the bids as specified, the bids will be received and opened on the next working day at the same time and same venue.
- 1.8 The **CHIEF ENGINEER, TSIIC** has right to reject, cancel, postpone, advance, any or all bids without assigning any reasons thereof .
- 1.9 The selected bidders is expected to commence the assignment on the date and at the location specified in the work order.

### **INFORMATION TO THE CONSULTANTS**

Offers are invited from the eligible an interested Firms/Agencies/ Consultants for rendering 3<sup>rd</sup> Quality Control Assurance services for all engineering works of TSIIC.

1. The bid shall be submitted in two covers Viz cover ‘A’ – Technical bid and cover ‘B’ – Financial bid.
2. Technical bid in cover ‘A’ shall comprise of technical evaluation information and lab equipment details and views of the consultant
3. The following technical evaluation information shall be furnished in cover ‘A’.
  - a. Company overview – A brief corporate profile is to presented along with details of similar work experience with his clients, lists of similar projects completed and in progress and work experience in Telangana State.
  - b. Certified Audited Financial Statements (certified by Chartered Accountant) for last 5 years along with PAN , GST & PF Numbers.
  - c. Approach and methodology detailed description of each service/work being offered by the consultant as part of their scope.
  - d. Photographs of similar works handled by the agency.
  - e. Project teams staffing – Indicate the resources that are planned for this project and



a scheme for project resourcing, Identification of the key project participants. CVs shall be enclosed signed by Authorised Person of the Firm.

- f. QMS & software's – The consultant should present their quality management system and access to new technologies that would bring about value addition to this project in the disciplines of Quality Control Assurance.
  - g. A Demand Draft in drawn in favour of TSIIC Limited payable at Hyderabad for Rs.11800.00 (Rs.10000.00 + 18% GST) towards non refundable bid processing fee .
  - h. A Demand Draft drawn in favour of TSIIC Limited payable at Hyderabad for Rs. 2,00,000.00 towards Bid Security/ EMD. The EMD of unsuccessful bidder will be returned by TSIIC after award to Consultancy Assignment to the Successful bidder. The EMD of successful bidder will be retained as Security Deposit till completion of the Assignment.
  - i. Comprehensive List of equipment owned by the Agency / Firm / Consultant.
  - j. Experience certificates for the last 5 years in similar nature of Quality Assurance issued by the Government or Semi – Government organizations.
  - k. The bid shall be submitted within the stipulated date. No extension of submission date will be considered. Offers received after the deadline of submission will not be accepted and shall be returned to the bidder unopened.
4. The technical information furnished in cover 'A' shall be evaluated for technical eligibility and proposals in cover 'B' for all technically qualified and eligible tenders will be opened.
5. TSIIC reserve to reject any or all of the bids without assigning any reason whatsoever.
6. If it I found at any stage, that the bidder has furnished false information, then the bid is liable for rejection.
7. The bidder shall bear all the costs associated with the preparation of the bid.
8. The bidders are required to quote fee for the job inclusive of all prevailing taxes, levies but excluding statutory GST for the Third Party Inspection & Quality Audit Services in the prescribed format. The statutory GST, as applicable, shall be reimbursed separately, on actual basis on submission of proof of the same having being paid by the bidder.

9. No claim on account of any duties, taxes, and other levies payable by the bidders in respect of the transaction between the bidders and Sub-Consultant / other agencies will be entertained by client.
10. If there is any contradiction in provisions of these tender documents with that of contract of executing agency, the provisions of the contract with the executing agency, shall prevail.
11. The bids submitted shall be valid for a period of six months. Non – adherence to this requirement any be a ground for determining the bid to be non responsive.
12. The following Documents shall be deemed to form an integral part of this TPQA Consultancy Contract;
  - The General Conditions of Contracts (called “GC”)
  - The Special Conditions of Contract (called “SC”)

**BIDDER ELIGIBILITY CONDITIONS**  
**(Basic Criterion for Bidder for participation in the bid process)**

1. The selection of the bidder based on previous experience, indicative equipment list (as mentioned below) with lab facilities and based on experience of technical persons and financial offer.
2. The Firm / Agency should be in existence at least for five (5) years in the field of providing Third Party Quality Testing and Assurance services in Telangana State. The firm shall furnish copy of Firm Registration certificate issued by the Government of Telangana.
3. The Firm should have successfully provided similar services in the last five years in any State Government Department or Corporation in Telangana State.
4. The TPQA Firm shall have inspected the works of a total value of not less than Rs.100.00 Crores in any two financial years of the last three financial years (i.e Years 2020-2021, 2021-22 and 2022-23). In this context the total value of works inspected shall be certified by the officials not less than the cadre of Executive Engineer.
5. Bidder should have minimum annual turnover of Rs.1.0 Crore or above for any one year in the last **five** financial years from the Quality Assurance services business in India immediately preceding the date of publishing of this RFP as per audited Balance sheets. The copies of certified Audited Annual Accounts / Profit & Loss Accounts for last **Five** years shall be attached/furnished along with the bid.
6. The Firm shall have been accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) for providing services in Telangana State.
7. The bidder shall have valid Certificate issued by NABL Accreditation Board for Quality Control Laboratory for testing of construction materials for minimum of any three successive years in the last five years.
8. The bidder shall submit details of following technical persons proposed to be employed on the work with their qualifications and experience.
  1. Civil Engineer/Electrical Engineer
  2. Structural Engineer
  3. Supporting Quality Control Staff
9. The Firm must produce PAN, GST Registration Certificate & PF Account Number.

# **GENERAL CONDITIONS OF CONTRACT**

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### **1. GENERAL PROVISIONS**

#### **1.1 Definitions**

Unless the context otherwise requires the following terms whenever used in this contract have the following meanings

- a) **Acceptance** is defined as those operations, inspections, sampling and accepting the tests that are conducted to determine whether the product or service will be accepted for use and payment. Acceptance is determined using a statistically based acceptance plan in construction with assurance that the executing agency has fulfilled the quality control obligations. Acceptance is the responsibility of the client.
- b) “Applicable Law” means the laws of India and the state of Telangana.
- c) **Confirmatory Testing** is defined as the sampling and testing which is carried out independent of quality control sampling and testing to confirm that the executing agency results which have been reported are correct and representative, with statistical parameters of the material being produced/ processed.
- d) “Contract” means the contract signed by the parties, to which these General Conditions of Contract (GC) are attached together with all the documents listed in Clause 1 of such signed contract.
- e) “GC” means the General Condition of Contract;
- f) “Government” means the Government of India or Government of

Telangana State as appropriate to the context;

- g) “Local Currency” means Indian Rupees;
- h) “Party” means the client or the consultants, as the case may be, and parties means both of them.
- i) “Personnel” means persons hired by the Consultants or by any Sub Consultant as employees and assigned to the performance of the services or any part hereof.

j) **Quality:**

**Quality** is defined as "The totality of characteristics of an entity that bears on its ability to satisfy the stated and implied need". **Quality Control** is defined as the procedure adopted and controls exercised to ensure that the materials proposed to be used in production, process adopted for production and workmanships of production conform to the prescribed standards and laid down acceptance criteria. The quality control is exercised by construction agency that ensures that the defined objective is achieved through appropriate tests, checks and inspections by suitable qualified personnel and by following correct processes, methodologies to produce the right outcome. Furthermore, the objective evidences of all tests, checks and inspections carried out from time to time are documented in prescribed formats for reference and record.

- k) **Quality Assurance** of a work is defined as a process which exercises various checks at different stages of a work right from its inception till its acceptance, to put it in service to ensure that the work has been properly designed and constructed as per approved designs, drawings and specifications.
- l) “SC” means Special Conditions of Contract by which these General Conditions of Contract may be amended or supplemented;
- m) “Services” means the work to be performed by the consultants pursuant to this contract as described in the clause 3.0 of SC;

## **1.2 Law Governing the Contract**

This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

## **1.3 Language – English**

#### **1.4 Notices & Location**

Any notices, request or consent required or permitted to be given or made pursuant to this contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the party to whom the communication is addressed as indicated in the agreement or when sent by registered post or facsimile to such party at the TSIIC HO. A party may change its address for notice hereunder by giving the other party notice of such change.

#### **1.5 Authorized Representatives**

Any action required or permitted to be taken, and any document required or permitted to be executed, under this contract by the client or the consultants shall be taken executed by the authorized representatives of consultant and Chief Engineer of TSIIC.

**3<sup>rd</sup> PARTY QUALITY CONTROL  
ASSURANCE CONTRACT AGREEMENT**

**Name of Work:** Appointment of 3<sup>rd</sup> Party Inspection & Quality Assurance Agency/Firm for All Engineering works of Telangana State Industrial Infrastructure Corporation Limited (TSIIC).

**Agreement No:**

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This Quality Assurance Contract Agreement (Herein called the “Contract”) is made on this day of the between

(Hereafter called the consultant) which expression shall unless executed by or repugnant to the subject of context include their successors, representatives, heir, executors to the administrators of the ONE PART.

**AND**

The Chief Engineer, TSIIC Ltd., having its registered office at “Parisrama Bhavanam”, 5th floor, 5-9-58/B, Fateh Maidan Road, Basheerbagh, Hyderabad - 500004, Telangana (herein after called the “client”) which expression shall unless executed by or repugnant to the subject or context include their successors in office and administrators assigns of the OTHER PART.

Whereas the consultant has vast experience in the field of quality assurance and adequate no of labs and trained staff.

And whereas the client is interested to have quality assurance of the infrastructure work undertaken by it is various Industrial Parks etc.

And whereas the consultant has offered to inspect units & control the quality of all the works and to the same and submitted a tender.

And whereas being on the assurance given by the consultant and since it is the successful bidder decided to entrust the works of quality assurance to the consultant of the terms & conditions mentioned below and the agreement is under.

Now therefore, this agreement witnesseth that the said are hereby appointed as Consultant for 3rd Party assurance Agency for Engineering works in for first above written.

**For and on behalf of  
Consultant**

**For and on behalf of  
TSIIC Limited**



## CHIEF ENGINEER

In Presence of

- 1.
- 2.

In Presence of

- 1.
- 2.

### 1.0 Notices

Any notice requested or consent made pursuant to this contract be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the party to whom the communication is addressed as indicated in the agreement

### 2.0 Commencement, Completion, Modification and Termination of Contract.

#### 2.1 Commencement of Services

The Consultant shall begin carrying out the services immediately from the date of execution of this contract/or (if required at other criteria be specified)

#### 2.2 Entire Agreement

This contract contains all covenants, stipulations, provisions and related Contracts agreed by the parties. No agent or representative of either party has authority to make, and the parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.

#### 2.3 MODIFICATIONS

Modifications of the terms and conditions of this contract, including any modification of the scope of the services or of the contract price, may only be made by written agreement between the client and consultant.

#### 2.4 Force Majeure Events

Any of the following events which is beyond the control of the Party claiming to be affected thereby (“Affected Party”) and which the Affected Party has been unable to overcome or prevent despite exercise of due care and diligence, and results in Material Adverse Effect on the Project shall constitute Force Majeure Event:

- a) act of God which includes epidemic, extremely adverse weather conditions, lightning, earthquake, landslide, cyclone, flood, chemical or radioactive contamination or ionizing radiation, fire or explosion (to the extent of contamination or radiation or fire or explosion originating from a source external to the Project Site);
- b) any judgment or order of any court of competent jurisdiction or statutory authority made against the Consultant/Project in any proceedings for reasons other than (i) failure of the Consultant to comply with any Applicable Law or Applicable Permit, or (ii) on account of breach of any Applicable Law or Applicable Permit or of any contract, or (iii) enforcement of this Contract, or iv) exercise of any of its rights under this Contract by the Authority.

#### **2.4.1 Notice of Force Majeure Event**

The Affected Party shall not be entitled to any relief for or in respect of a Force Majeure Event unless it shall have notified the other Party of the occurrence of the Force Majeure Event as soon as practicable and in any event no later than within 7 (seven) days of the date of occurrence of a Force Majeure Event or the date of knowledge thereof, the Affected Party shall notify the other Party of the same setting out, inter alia, the following in reasonable detail:

- a) the nature and extent of the Force Majeure Event with evidence in support thereof;;
- b) the estimated Force Majeure Period;
- c) the nature of and the extent to which, performance of any of its obligations under this Agreement is affected by the Force Majeure Event;
- d) the measures which the Affected Party has taken or proposes to take to alleviate/mitigate the impact of the Force Majeure Event and to resume performance of such of its obligations affected thereby; and
- e) assess the impact of the underlying Force Majeure Event,
- f) to determine the likely duration of Force Majeure Period and,
- g) to formulate damage mitigation measures and steps to be undertaken by the Parties for resumption of obligations the performance of which shall have been affected by the underlying Force Majeure Event.
- h) any other information relevant to the Affected Party's claim or the Authority may seek for

For so long as the Affected Party continues to claim to be materially affected by such Force Majeure Event, it shall provide the other Party with regular (and not less than weekly) reports containing information as required, and such other information as the other Party may reasonably request the Affected Party to provide.

#### **2.4.2 Extension of Time**

Any period which a party shall pursuant to this contract complete any action or task shall be extended for a period equal to the time during which such party was unable to perform such action as a result of Force Majeure.

2.4.3 Should the Party be prevented from fulfilling its contractual obligations by a state of Force Majeure lasting continuously for a period of one month, the parties' shall consult with each other regarding future implication of this Contract.

2.4.4 In the event of Force Majeure both parties shall put in their best efforts towards resumption of the work at the earliest and shall put in their best efforts towards mitigating the costs incurred by the other works.

#### **2.4.5 Suspension**

The Chief Engineer may by written notice of suspension to the Consultant suspend all payments to the consultant hereunder if the Consultant fail to perform any of their obligations under this contract, including the carrying out of the services provided that such notice of suspension (i) shall specify the nature of the failure and (ii) request the Consultant to remedy such failure within the period not exceeding thirty (30) days after the Consultant of such notice of suspension.

### **2.5 TERMINATION**

The client may terminate this contract, by not less than thirty (30) days written notice of termination to the consultants, to be given after occurrence of any of the events specified in paragraphs (a) to (g) through.

- a. If the consultant do not remedy a failure in the performance of their obligations under the contract, within thirty (30) days of receipt after being notified or within such further period as the client may be subsequently approved in writing.
- b. If the consultant becomes (or, if the Consultant consist of more than one entity, if any of their members becomes) insolvent or bankrupt or enter into any agreements 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, as the result of force majeure, the consultants are unable to perform a material of the service for a period of not less than sixty (60) days.
- d. If the consultants, in the judgement of the client has engaged in corrupt or fraudulent practices in competing for or in executing the contract.

- e. If the consultant does not/fails to undertake the quality assurance works with the agreement and breach any of the terms & conditions this contract.
- f. If the Consultant fail to comply with any final decision reached as a result of Settlement of Dispute pursuant to Clause 6 hereof
- g. If the Consultant submit to the TSIIC a statement which has a material effect on the right, obligations or interests of the TSIIC and which the Consultant knows to be false;

For the purpose of aforesaid Clause 2.5 d

“Corrupt practice” means the offering, giving or soliciting of anything of value to influence the action of an official in the selection process or in contract execution.

“Fraudulent practice” means a misrepresentation of fact in order to influence a selection process or the execution of a contract to detriment of the borrower, and includes collusive practice among consultants (prior to or after submission of proposals) deigned to establish price at artificial non – competitive levels and to deprive the borrower of the benefits of free and open competition.

### **2.5.3 By the Consultants**

The consultant may terminate this contract, by not less than thirty (30) days written notice to the client, such notice to be given after the occurrence of any of the events specified below if as the result of Force Majeure, the consultants are unable to perform a material portion of the service for a period of not less than thirty (30) thirty days.

### **2.5.3 Cessation of Rights and Obligations**

Upon termination of this Contract pursuant to Contract Conditions No. 2.5 hereof, or upon expiration of this Contract with the efflux of time 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 confidentially set forth in Contract Condition no. 3.3 of GC hereof;
- (iii) Any right which a Party may have under the Applicable Law.

### **2.5.4 Cessation of Services**

Upon termination of this Contract by notice pursuant to Contract Conditions No. 2.5

hereof, or with efflux of time, the Consultant shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultant, the Consultant shall proceed as provided by Contract Conditions No. 3.6 of GC hereof.

### **2.5.5 Payment upon Termination**

Upon termination of this Contract pursuant to Contract Condition no. 2.5 hereof, TSIIC shall make the payments for the milestone achieved prior to the effective date of termination after offsetting against these payments any amount that may be due from the Consultant to the TSIIC. However, TSIIC shall have the right to deduct from this termination payment, the genuine compensation and damages payable to the Authority for, inter alia, the time, cost and effort of the Authority for appointing a new Consultant due to default of Consultant leading to termination without prejudice to any other right or remedy that may be available to the Authority hereunder or otherwise.

## **3.0 OBLIGATIONS OF THE CONSULTANTS:**

### **3.1 General**

The consultant shall perform the Third Party Quality Assurance Service for the works of TSIIC. The consultants shall perform the service and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional technique and practices, and shall observe sound management practices, and employ appropriate method. The consultants shall always act, in respect of any matter relating to this contract or to the services, as faithful advisers to the client. The consultant shall take all steps to take action in accordance with the technical sanction/agreement of works contract between TSIIC and work contractor.

The consultant can also submit recommendation for betterment of the work regarding quality, quantity economy and progress of work in general to the CE, the consultant has to thoroughly check the quality and quantity in terms of prevailing IS codes and procedures and to satisfy the technical sanction accorded for the subject work and has to feel responsibility for the work with respect to quality and quantity as referred in technical sanction and deviations there upon approved by the technical sanction authority.

### **3.2 Conflict of Interests**

The consultancy fee of the consultants pursuant to clause 5 shall constitute the consultants sole consultancy fee in connection with this contract of the service and the consultants shall not accept for their own benefit any trade

commission, discount or similar payment in connection with activities pursuant to this contract of to the services or in the discharge of their obligations under the contract. If any other contract engaged is related to the consultant in any manner it shall forthwith inform the same to the client shall be competent to take appropriate decision for such works.

### **3.3 Confidentiality:**

The consultants and the personnel of either of them shall not, either during the term or within one, two years after the expiration of this contract, disclose any proprietary or confidential information relating to the project, the services, this contract or the clients business or operations without the prior written consent of the client.

### **3.4 Consultant Actions Requiring Clients Prior Approval:**

The consultant has to obtain prior written approval from the client

- I. For conducting special tests at any recognized laboratories at no extra cost and does the consultant have its labs owing the responsibility for the correctness of the report.
- II. For engaging any retired/ in service government / PUS engineers of Telangana

### **3.5 Reporting Systems:**

The consultant shall submit the test reports to the clients on weekly basis as per terms of reference.

The consultant would collect the information from the work site through detailed formats by carrying out relevant tests and base information along with data will be submitted to concerned Chief Engineer and forward the copies to the Zonal Manager and consolidated information to Chief Engineer. All the information, work wise, would be documented in a register.

### **3.6 Documents Prepared by the Consultants will be the Property of the Client:**

All plans, Drawings, Specifications, Designs, Reports and other documents submitted by the consultants would remain the property of the client only.

#### **4.0 CONSULTANT PERSONAL:**

As per the terms of reference adequate man power would be deputed on the work site to carryout necessary tests and preparation of reports. The consultant would depute adequate & properly trained / qualified man power and other resources at respective locations based on workload and specific requirement. All the liabilities of man power working on the works would be with consultants, and they shall not be treated as employee or engaged by the client.

#### **4.1 Description of Personnel**

The titles, job descriptions, minimum qualification and estimated periods of engagement in carrying out of the services of each of the Consultant's Key personnel shall be described in Technical proposal

#### **4.2 Approval of Personnel**

The Consultant personnel to be deployed for this work shall be got approved from the Chief Engineer.

#### **4.3 Removal and / or Replacement of Personnel**

(a) Except as the Chief Engineer may otherwise agree, no changes shall be made in the Key Personnel. If, for any reasons beyond the reasonable control of the Consultant, it becomes necessary to replace any of the personnel, the Consultant shall forthwith provide as a replacement another person of equivalent or better qualifications. (b) If the Chief Engineer (i) finds that any of the personnel has committed serious misconduct or has been charged with having committed a criminal action or (ii) has reasonable cause to be dissatisfied with the performance of any of the personnel, then the Consultant shall at the written request of the Chief Engineer specifying the grounds therefore, forthwith provide as a replacement, a person with qualification and experience acceptable to the Chief Engineer.

#### **5 PAYMENT TO THE CONSULTANTS:**

The Payment to the consultant along with GST would be made to the Consultants as specified in the payment schedule in the Special Conditions.

#### **6 SETTLEMENT OF DISPUTES:**

Except where otherwise provided in the contract, all disputes relating to the Contract or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, orders or these conditions or otherwise concerning the Quality Assurance works or the execution or failure to execute the

same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with by the Chief Engineer, TSIIC.

If the consultant is dissatisfied with the decision of the Chief Engineer, the consultant shall give in writing to the VC & MD, TSIIC with a copy to Chief Engineer on any matter in connection with or arising out of the contract, to be unacceptable within 15 days.

Any Dispute which is not resolved amicably as stated above, shall be finally decided through Arbitration. Such arbitration shall be held in accordance with the Arbitration and Conciliation Act 1996 and the venue of such arbitration shall be at Hyderabad, and the language of arbitration proceedings shall be English.



### **III. SPECIAL CONDITIONS OF CONTRACT**

#### **1.0 Brief Description of Task:**

This task involves assisting the client in ensuring good quality of construction for the works being taken up by the TSIIC

#### **2.0 Back Ground:**

TSIIC is executing works in the entire Telangana State and Infrastructure being created in Industrial Parks, IDA's IEs and any other works executed by the TSIIC in all respects. Thus the task involves providing quality control services in respect of the all TSIIC works for ensuring quality by way of quality control checks and offering Quality Auditing services i.e 3<sup>rd</sup> Party inspections for the following components. For ensuring good quality of construction and improving efficiency, it is proposed to provide third party quality assurance through an independent agency.

The type of works include and not limited to:

- a. Formation & metalling and providing CC/BT with CD works
- b. Improvement of roads.
- c. Improvements to parks and land scaping.
- d. Traffic divides foot paths, traffic signals.
- e. Shopping complexes/corporate building/factory sheds/any other buildings.
- f. Water Supply including OHTs, distribution system etc.
- g. Strom water drains/sewerage/Effluent treatment schemes & Disposal.
- h. Providing power supply internal & external including street lights.
- i. Other Civil works are executed etc including interiors & exteriors developments
- j. Construction of common effluent treatment plants, sewerage treatment plants etc.
- k. Bridges
- l. Revetment works and if any works entrusted by APIIC Ltd.
- m. Providing street lights, PIE works, laying of LT/Ht luminaries.

### **3.0 Scope of Services:**

Annexure-I, containing a list of indicative quality checks on materials, equipment and appurtenances is appended for guidance. In consultation with client based on the specifications in the bid documents and relevant standards, review of client practices, Standard Quality Assurance plan (tests, stage frequency, standards to be complied, guidance on judging from test results, critical workmanship requirements, critical stages of work that require Engineer"s presence "as a must" etc) shall be prepared for various types of works to be inspected and formats for documenting the quality test results and reporting of such tests.

3.1 The tasks of TPQA consultant are;

- a. Carryout required pre construction Quality Assurance checks
- b. Consultants shall carryout required Quality Assurance checks during construction. Review of quality Assurance plan of the executing Agency and suggest improvements that may need to be made to same to make it more effective.
- c. TPQA shall check to ensure that the site is equipped with necessary documents like copy of agreement, Contract specifications, BIS Codes, list of approved manufactures, tools for checking quality of work & testing facilities, calibration reports of equipment being used in field lab.
- d. TPQA shall check to ensure that site records like inspection register, cement register, material receipt registers, test register & site order book etc. are being maintained in prescribed forms. TPQA shall carry out random audit of materials received at site and give feedback.
- e. To ensure that all the materials, equipments and work shall conform to the Agreement.
- f. TPQA shall check on specific controls on various processes of execution being exercised by the executing agency which would have direct bearing on the quality of the work.
- g. To ensure that makes of all the material and equipments etc. shall be strictly as per agreement and shall be duly checked by the Consultant
- h. To ensure that the model numbers of various equipments used and work carried out shall be checked for their conformity to the agreement.
- i. Consultant shall provide a Testing and Inspection Plan and arrange testing of materials used in construction work for ascertaining their quality through their laboratories or, if need be, through reputed laboratories/ institutions preferably Government Labs/ Government Autonomous bodies or as approved by competent authority. All standard tests shall be arranged. Consultant shall report the results of testing to TSIIC and the Contractor with their suggestions and remedial measures. Consultant shall be responsible for all the inputs such as Labour, Machinery,

Chemicals and Power etc, specified in the scope of work.

- j. Senior representatives of Consultant will visit the site regularly at each stage of work and as per contractual requirement and as and when directed by Chief General Manager (Engineering)/Chief Engineer/General Manager (QC)/ZM.
- k. For the tests to be conducted at manufacture's works, the tests shall be conducted in the presence of General Manager (QC) / ZM or TSIIC representative as per standard schedule. The dispatch note shall be issued only after satisfactory completion of the test.
- l. The delivery challans of the materials may be checked for ascertaining the genuineness of the material.
- m. Consultant shall do their job by field visits, arranging the necessary quality assurance tests for materials and the construction works, analyzing the test results and furnishing the comments/ observations thereon and providing general observations on construction materials and work. The Consultant agency shall submit their report to TSIIC at various stages/ as and when needed other than every month but no later than 7th of every month.
- n. The Consultant shall be responsible for bringing-out in writing, to the notice of TSIIC any instances of deviations from accepted quality and durability of construction materials, procedure for completion, workmanship and general quality of works at appropriate stages of construction.
- o. Consultant shall inspect the construction site during the works under progress frequently, to achieve the stipulated standards of quality in the project. If there is any discrepancy/ error/omission, the team shall point out the same with suggestions and remedial measures with codal provisions.
- p. Consultant shall, highlight the problem area if any, and also suggest steps/ solutions to rectify the same so as to achieve the overall target of quality assurance.
- q. Inspections by TPQA have to bring out the aspect of overall workmanship. It is to be ensured that execution of work takes place with laid down procedures and sound engineering practice and the outcome conforms to the desired levels of functionality.
- r. Carryout required Quality Assurance checks post construction and submit report.
- s. The Quality Control inspection report shall be submitted to the Client (The Chief Engineer, Chief General Manager (Engineering) TSIIC Head Office, concerned Zonal Manager in charge of the work and the General Manager, Quality Control, TSIIC Head Office) through a covering letter within 10 working days of inspection as per proforma specified in **Annexure-II** attached. TPQA may however add any other details in inspection report, if so necessary.
- t. The TPQA shall be responsible for accuracy of service provided by them. The advice and/or opinion, if any, provided shall be with documentary proof of

standards /laws /codes etc. However, decision for execution of work will be of the Client and no claim of any kind of TPQA will be entertained in this regard.

3.2 The role of Quality Assurance consultant shall include conducting requires checks of activities of construction from the starting stage to the finishing stage. This would involve collection of samples and arranging testing. The consultant would be reporting to the concerned level of officers through weekly report and suggesting, interaction with various authorities as and when requires. All the tested and quality assurance inspections would be conducted at required stages and as per the laid down specifications.

- a) Establishment of central reporting station at Hyderabad for all kind of communications by weekly /stage wise reporting to the Chief Engineer / concerned Zonal Managers.
- b) District wise team would be working in respective sites for conducting Quality Control tests.
- c) Field staff with mobile testing equipment for onsite inspections including required checks of the works.

### **3.3 THE FOLLOWING TESTS ARE TO BE CONDUCTED:**

#### **3.3.1 General Tests on Materials**

1. Test on Cement
  - a. Standard consistency
  - b. Fineness
  - c. Initial and Final setting times
  - d. Soundness
  - e. Compressive strength
  - f. Specific gravity
2. Tests on fine aggregate
3. Tests on coarse aggregate
4. Compressive strength of Concrete (Cubes)
5. Tension test on steel rods
6. Tests on bricks
7. Concrete Mix Design
8. Sieve Analysis of fine coarse aggregates

### **3.3.2 Tests on Roads**

1. Test on Bitumen
  - a. Penetration
  - b. Softening point
  - c. Flash & Fire Point
  - d. Ductility Test
  - e. Solubility Test
  - f. Loss on Heating
  - g. Specific gravity
  - h. Bitumen extraction test
  
2. Tests on Coarse Aggregates
  - a. Impact value
  - b. Crushing value
  - c. Loss Angles abrasion
  - d. Flakiness/Elongation Index
  - e. Water absorption
  - f. Specific gravity
  - g. Stripping value
  
3. Test on Fine Aggregates
  - a. Specific gravity
  - b. Bulking
  - c. Density
  - d. Soundness tests 5 cycles.
  
4. Mix Design
  - a. Job mix formulae for anyone of BM, DBM, BC Mix seal etc.
  - b. Pavement Quality Concrete (PQC), RCC, PCC.
  - c. Marshal Stability testing on bituminous.
  - d. Mixes or hardness test for mastic asphalt on prepared sample
  
5. Field test
  - a. Pavement design of sub grade by CBR method, GSB tests
  - b. WBM tests
  - c. Laying jointing and pipe line test
  - d. Other tests like electrical works as per IS specifications for cables and materials agreement, specifications of contractors.

### **3.3.3 Building items .**

Buildings are mainly of R.C.C. framed Structure work with brick Masonry walls, water proofing of terraces and other wet areas, external

façade, flooring of stone/marble, wood/steel/aluminum works, false ceiling, roofing, finishing, Water Supply & sanitary installation including fixtures, rainwater harvesting, Tube wells, Sewage Treatment Plant, ETP, internal electrical works, HVAC works, lifts & dumb waiters, LV system, street lighting and all such similar allied works as per approved designs/drawings and tenders.

- a) Aluminum powder coating
- b) Un plasticized poly vinyle chloride  
(UPVC) Doors, windows and ventilator
- c) Wooden items relevant tests
- d) Relevant tests on glass
- e) Physical properties of necessary steel items
- f) Relevant tests on tiles
- g) Relevant test on painting

#### 3.3.4 Water Supply & Sanitary items

- a) Relevant tests on water supply & sanitary items

3.3.5 The following Electrical tests to be included and the tests to be done at CIPET (Central Institute of Plastics Engineering Technology) or Vimta Labs or equivalent labs.

##### 1. On Wires/UG cables

- a. Resistance test
- b. Insulation tests
- c. High Voltage test
- d. Short circuit test
- e. Continuity Test

##### 2. On Equipment

- a. D.G set

- Load test for 0%,25%,50%,75%,100% and 110%

b. A.C Equipment

- Temperature Test

Note: The above is an indicative list only, and the Consultant shall be conducting all reasonable test as per best industry practice and professional techniques and technology to provide the quality as envisaged in the terms of Contract

- 3.3.6 In addition, the consultant need to check the manufactures test certificates for the materials like pipes & fittings, electrical items Steel, Cement, Bitumen (for Viscosity) etc. The contractor will have to provide these certificates, to the consultants at the time of inspection.
- 3.3.7 The consultant shall faithfully conduct tests /checks and sampling required to be executed as per Telangana State Standard specifications/IRC specifications /MORTH specifications by the contractors.
- 3.3.8 The consultant will be fully responsible for the authenticity of the test results and submit test results in original to the General Manager (Engg), QC wing without hindrance of work.
- 3.3.9 Assessment about the process involved in the construction, like curing, pitting etc.

**3.3.10 Indicative List of Equipments**

1. Survey instruments including total station.
2. Equipment for condition survey on road and bridges
3. Sieves of all sizes i/c sieve shaker and balances of requires capacity
4. Cube strength testing machine
5. Core cutting machine
6. Equipment for cement testing
7. USPV (Ultra Sonic Pulse Velocity) Meter
8. Moisture meter
9. Hammer of all sizes requires to be used in building work
10. Rebound hammer
11. Leak Detection Equipments
12. Other miscellaneous equipment such as Screw Driver, Plumb Bob,

Ovens, Slump Cone, graduated Measuring Cylinders of required capacity, Gauge Tape, Vernier Calliper, Magnifying Glass, Sprit Level, Vibration Table, Dial Gauge etc

13. Project specific instrument, if required

#### **4 Procedure of Inspection**

- The field Quality Assurance staff at the site, which will be headed by one Senior Manager/Engineer, would inspect the construction and other activities. Field Quality Assurance team would consist of a number of Manager/Engineers from the discipline of civil engineering and one from the discipline of electrical engineering. The consultant would be provided schedule of works likely to be executed in the next week by concerned Zonal Manager so that consultant may plan weekly programme in advance besides this, there would be Junior Engineers/Supervisors having similar specialization as mentioned above, Lab Technicians and Field Assistant. However, the exact composition will depend upon the scope of work and the work load based on number of contracts executed by TSIIC of respective zones. Works programme for inspection and testing shall be coordinated by the Consultant along with TSIIC site in-charge.
- After obtaining the construction programme and the work schedule from CE/ZM a joint visit of TSIIC to the sites for inspections and overall appraisal shall be undertaken.
- All test, checks are to be carried out as per relevant IRC /MORTH codes and IS specifications, APSS and as per rules, Agreements and Drawings for qualitative and quantitative analysis.
- The consultants shall make its own arrangements for transport including local travel and his office accommodations.
- The consultant shall be supplied with all the latest construction drawings and contractors agreement along with technical specifications and interact directly with CE/ZM/concerned work.

#### **5 Schedule of Inspection**

The following inspection schedule shall be adhered by the consultants field Quality Assurance team, surprise checks everyday or alternative day or depending upon the job requirements. The Manager/Engineer will identify the items and the location on site, which will be inspected upon by the Assistant Managers/Site Engineers for the next working day. The concerned engineer of



TSIIC would be responsible for regular supervision of contraction work & workmanship of all the construction works. The contractor would be advised not to carry out important activity of construction without prior information to concerned Chief Engineer/Zonal Managers as well as third party assurance consultants

## **6 Reporting System**

Documentation of the reports duly signed & authenticated on each work taken up in the TSIIC with work wise photographs before commencing, during and after execution with final sets of report would be submitted to the Chief Engineer of TSIIC, Hyderabad, with a copy to concerned Zonal Engineers, further consultant has to submit summary of the report to CE/GM(QC) on weekly basis and final compliance report will be issued to work by quality control wing based on the report.

## **7 Consultant Fees & Fees Payment Schedule**

The consultancy fees to render quality assurance services is ( % ) of the total value of works inspected. Further, the Consultancy fee payable is subject to limitation given below based on the value of works inspected.

<b>S. No.</b>	<b>Total Value of Works Inspected</b>	<b>Maximum Consultancy Fee fixed ( % ) corresponding to "Total Value of works inspected "</b>	<b>Fee payable to the Consultant</b>
<b>a)</b>	Upto INR 20.00 Crores	0.50	Lower of Maximum fixed (%) or Consultant Quoted fee (%)
<b>b)</b>	Between INR 20 Crores to INR 50 crores	0.40	Lower of Maximum fixed (%) or Consultant Quoted fee (%)
<b>c)</b>	Between INR 50 Crores to INR 100 crores	0.30	Lower of Maximum fixed (%) or Consultant Quoted fee (%)
<b>d)</b>	Above INR 100 crores	0.20	Lower of Maximum fixed (%) or Consultant Quoted fee (%)

## **7.1 GST:**

In addition to above, TSIIC shall pay 18% of consultancy fee (or as stipulated by the Government from time to time) towards GST to the consultant and same shall be deposited by the consultant to the Government and its copy of receipt shall be submitted to the TSIIC.

## **7.2 Payment Schedule**

The payment shall be made based on the milestone achieved in that month and shall be linked to the monthly progress report (MPR) submitted to ZM concerned/GM QC along with a copy to the Chief General Manager (Engineering), Chief Engineer, TSIIC and VC & MD, TSIIC, both as hard/soft copy each month on or before 7<sup>th</sup> of each month failing which the payments shall be withheld. The consultant shall raise the invoice along with monthly progress report immediately after certifying the quality of work. The TSIIC shall arrange to make payments within two weeks of submission of invoice after ascertaining completion of QC Certification.

## **7.3 Standard Deductions**

Standard Deduction from the consultancy fee would be made as per the Income Tax law applicable in India

## **8. Indemnity**

In case the quality of any work is found inferior to the specification given to Quality Assurance consultant, i.e. unsatisfactory QC & QA Services, during the quality check by the State Vigilance Department, TSIIC authority, or any authority, the consultant shall indemnify the TSIIC to an extent of total consultancy fee payable for that particular work as “damages”.

Further, action including black listing and make Consultant ineligible for getting such tasks/assignments from Government Department, for a minimum period of two years and maximum period of seven years may be initiated by TSIIC.

## **9. Other Conditions:**

- 9.1 The consultants reporting shall be of recommendatory nature informing the TSIIC Ltd. About the quality of materials based on test results and field observations.
- 9.2 The Construction schedule of various works for which quality inspection is required will be give to the consultant by concerned ZM/ GM(QC)/DZM(E)/TSIIC Ltd well in advance. The programme of critical activities to be executed for the consequent month will also be give 15 days in advance.
- 9.3 In case of emergency consultant will have to submit specific report of that concerned work as indicated by the client.
- 9.4 Any delay in carrying out necessary quality checks to process further progress on the work and damages to that effect will be on the part of the consultant.
- 9.5 Terms of references and appendix A will be part of the contract.
- 9.6 TSIIC reserves the right to entrust Third Party Quality Assurance Service of any projects/work to any other agency.
- 9.7 **The Corporation shall retain security deposit till the expiry of 03 months period** after expiry of agreement period. The retained security deposit will be released to the Consultant on submission of NOC letters from all Zonal Managers of TSIIC.

## **10. Period of Agreement:**

*Two years* from the date of entering in to the agreement or extended from time to time on mutually agreed terms. The Consultant Quoted fee remains fixed for the entire agreement period.

## **11.0 Earnest Money Deposit (EMD)**

- 11.1 The Consultant shall furnish an EMD for INR 2 lakhs for due fulfillment of contract. The damages specified in Clause 8 under Special Conditions of Contract, shall be adjusted from the EMD and any shortfall shall be adjusted from any amount payable to the Consultant.
- 11.2 The Consultant shall replenish the amount so deducted to maintain the stipulated

EMD immediately and not more than 15 days

- 11.3** The EMD shall be forfeited in case of termination of Contract due to breach of any of the terms & conditions of Contract. This EMD will be retained as Security Deposit by TSIIC till completion of Agreement Period.

## APPENDIX – A (RELEVANT CODES)

The quality of materials and works are to be checked with respect to the corresponding IS codes and APSS & MORTH Specifications.

S.No	Description	I.S No.
A.	List of Indian Standards	
<b>I</b>	<b>CEMENT</b>	
	1. Ordinary and Low Heat Portland Cement	269-1989
	2. Pozzolana Portland Cement	1489-1991
<b>II</b>	<b>AGGREGATES</b>	
	1. Aggregates, Coarse & Fine from Natural resource of Concrete	383-1970
	2. Sand and Masonry Mortar	2116-1980
	3. Methods of tests for aggregates for concrete Part – I Particles Size and Shape Part – II Estimation of deleterious Material Organic impurities Part – III Soundness	2386 – 1963
	4. Specification for test sieves part – I wire cloth test sieves	460 – 978 Part – I
<b>III</b>	<b>BRICKS</b>	
	1. Common burnt clay building bricks	1077 – 1992
<b>IV</b>	<b>STEEL</b>	
	1. Mild steel medium tensile steel bars and hard drawn steels wire, concrete reinforcement. Part – I Mild steel & Medium Tensile Steel Bars	432 – 1982
	2. High Strength deformed steel bars and wires for concrete reinforcement	1986 – 2008
	3. High Tensile Steel for PSC Pipes	1784 – 1998(Part – I)
	4. Hand Drawn Wire	432 – 1982
	5. Bending and Flexing bars for concrete reinforcement	2502 - 1963
	6. Recommendations for detailing of reinforcement in reinforced concrete works.	5525 – 1960
<b>V</b>	<b>CONCRETE</b>	
	1. Plain and reinforced concrete, code of practice for	456 – 2000
	2. Laying of situ cement concrete flooring	2571 – 1970
	3. Sampling and analysis of concrete	1199 – 1959

<b>VI</b>	<b>Masonry</b>	
	1. Brick Masonry	2212 – 1991
	2. Construction of stone Masonry	1597 – 1992
<b>VII</b>	<b>PIPES AND FITTINGS</b>	
	1. Asbestos Cement pressure pipes	1592 – 2003
	2. Concrete pipe with & without reinforcement	458 – 2003
	3. PSC Pipes ( including fitting)	1343 – 1980
	4. Method of tests of concrete pipes	458-1988 3597-1998
	5. Materials for MS Specials	226 – 1976 & 2062 – 1999
	6. Specification for MS Special for PSC Pipes	
	7. Specification for steel cylinders reinforced concrete pipes	1916 – 1989
	8. Methods of tests of concrete pipes	3597 – 1998
	9. Centrifugally cast (Spun) iron pressure pipes for water gas and sewage including fittings	1536 – 2001 784 – 2011
	10. Specifications for Centrifugally cast (Spun) SI fitting for Water Gas and Sewage	8329 – 2000
	11. DI fitting for pipes for water, gas and sewage	9523 – 2000
	12. Dimensional requirement of rubber gaskets for mechanical joints and push on joints for use with CIDI Pipes	12820 – 2004
	13. CI specials for mechanical and push on flexible joints for pressure pipe lines for water and gas sewage	13382 – 2004
	14. HDPE Pipes	IS 4984 – 1995
	15. BWSC Pipes	IS 15155 – 2002
	16. UPVC Pipes	IS 4985 – 2000
	17. GRP Pipes	IS 12709 – 1994
	18. Horizontally cast iron double flanged pipes for water, gas and sewage.	7181 – 1986
	19. Cast iron fittings for pressure pipes, for water, gas and sewage	1538 – 1993
	20. Cast iron detachable joints for use with asbestos cement pressure pipes	8794 – 1988
	21. a. Rubber rings for jointing CI Pipes, RCC Pipes and AC Pipes b. Rubber rings for jointing PSC pipes	5382 – 1969 5382 – 1985
	22. Rubber rings for jointing AC Pipes with AC Coupling	10292 – 1988

	23. Pig lead	782 – 1978
	24. Hemp yarn	6587 – 1987
	25. Rubber insertion to be used jointing CIDF pipes	638 – 1979
	26. Bolts & Nuts to be used in jointing CIDF pipes	1363 – 2002
<b>VIII</b>	<b>WATER SUPPLY FITTING</b>	
	1. Sluice Values for water works purposes (50 to 300mm dia sizes)	780 – 1984
	2. Sluice Values for water works purposes (300 to 1200mm dia sizes)	2906 – 1984
	3. Surface boxes for sluice values	3950 – 1979
	4. Manhole covers and frames, cast iron	1726 – 1991
<b>IX</b>	<b>LAYING OF PIPES</b>	
	1. Laying of Asbestos and Cement pressure pipes	6530 – 1972
	2. Laying of Concrete Pipes – I	783 – 1985
	3. Laying of Cast - Iron Pipes	3114 – 1994
	4. Laying of PSC Pipes	126 of APSS & 783 - 1985
	5. Laying of PSC Pipes	126 of APSS & 783 - 1985
<b>X</b>	<b>MACHINERY</b>	
	1. Batch type concrete mixer	1791 – 1985
	2. Sheep foot roller	4616 – 1968
<b>XI</b>	<b>SAFETY</b>	
	1. Safety for excavation works	3764 – 1996
	2. Safety code for scaffolds and ladders Part – I scaffolds Part – II – Ladders	3696 – 1987 (Part – I) 3696 – 1991 (Part – I)
<b>XII</b>	<b>EARTH WORK AND FORMATION OF SS TANKS</b>	
	1. Method of test of soils for suitability of soil for embankment of SS Tanks	2720 – 1975 to 1987 Part – II to XII, XV, XVII, XX XXIX and 1228 – 1988
	2. Code of Practices for drainage system for earth and rock fill dams	9429 -1999
	3. Filters materials requirement	9429 – 1980 & 10379 – 1982
	4. Earthwork and formation of embankment for SS tanks	Sec.3 of APSS Sub.Sec.301 – 303
	5. Morrum (gravel) bracking to rough stone dry packing and gravelling to top and side slope	Sub Sec.621 of Sec. VII of APSS to 307

	of bunds 150 mm thick	
	6. Rough stone dry packing aprons and revetments	Sub – Sec 621 of sec.6 of APSS
<b>XIII</b>	<b>FILTRATION PLANTS WITH DUAL MEDIA AND TUBE SETTLERS</b>	
	1. Guide lines for flauculator devices	7208 – 1992
	2. Guide lines for rapid mixing devices	7090 – 1985
	3. Recommendations for handing and housing devices for chemicals for water treatment	9222 – Part – I, 1990
	4. Requirement for chlorination equipment	10553–1983 (Part – I)
	5. Recruitments for setting tank (clarified equipment for water treatment plant)	Part – IV 10313 – 1983
	6. Requirement of water filtration equipment	8419 – 77 Part – I, Part- I, Part –II – 1984
<b>Sl.No</b>	<b>BRIEF DESCRIPTION OF ITEM</b>	<b>APSS/MOST. Nos</b>
1.	Providing gravel base at OMC to obtain 98% proctors	138,1503 to 1505 and 1516 of APSS
2.	Providing, Laying, Spreading and compacting stone aggregates (Graded Metal)	108.1506 of APSS
3.	Cleaning of existing WBM surface	502, 502.4 of MOST
4.	Cleaning of existing BT surface	502.4.2 of MOST
5.	Providing and applying of Tack Coat over prepared surface	503 of MOST
6.	Providing and laying Bituminous Macadam	504 of MOST
7.	Providing and laying and consolidation of creased stone aggregate as per built up spray grout	1507
8.	Providing and laying single coat surface dressing	508
9.	Providing and laying single open graded premix carpet	509
10.	Providing and laying mix seal surfacing	510
11.	Providing laying, consolidation Dense Bituminous Concrete	511
12.	Providing laying BT surface dressing/ BT wearing coat	1510
13.	Providing laying Bituminous seal coat with 6mm chips	1512
14.	VCC for abutments, piers and wing walls	402 of APSS
15.	VRCC for wearing coat	402, 403 of APSS
16.	Providing HYSD Fe 415 grade bars/ Mild Steel Fe 250 grade bars	126 of APSS
17.	CRS Masonry for abutment and piers	601, 612, of APSS
18.	Flush pointing to CRS Masonry	906 of APSS



19.	Collection of material road works	1506 of APSS
20.	CC Roads	1515 of APSS

## FINANCIAL BID

(To be submitted in separate cover)

### BID OFFER

We M/s \_\_\_\_\_ hereby offer to render 3<sup>rd</sup> Party Inspection & Quality Control Assurance Agency Services for all Engineering works of TSIIC as indicated in the scope of work and as per the Terms & Conditions in this document at \_\_\_\_\_% in words \_\_\_\_\_ of value of works inspected and tested in all Zones of TSIIC.

Note:

- Percentage to be quoted in words & figures
- Quoted percentage is exclusive of GST
- Payment to the consultant will be made on actual value of work excluding L.S. Provisions, taxes etc as per following schedule.

S. No.	Total Value of Works Inspected	Maximum Consultancy Fee fixed (%) corresponding to "Total Value of works inspected "	Fee payable to the Consultant
a)	Upto INR 20.00 Crores	0.50	Lower of Maximum fixed (%) or Consultant Quoted fee (%)
b)	Between INR 20 Crores to INR 50 crores	0.40	Lower of Maximum fixed (%) or Consultant Quoted fee (%)
c)	Between INR 50 Crores to INR 100 crores	0.30	Lower of Maximum fixed (%) or Consultant Quoted fee (%)
d)	Above INR 100 crores	0.20	Lower of Maximum fixed (%) or Consultant Quoted fee (%)

### FOOT NOTE TO BID OFFER:

- The financial bid should include all costs as felt necessary by the TPQA for completing the job. The price bid shall also include the cost of all visits to be

made by Third Party Quality Inspection Agency (TPQA) to site of work. The cost of office expenses, stationary, travelling, attending meeting and related expenses shall also be deemed to be included in the financial bid.

2. The consultants shall carefully fill the bid offer in figures and words in terms of percentage. Over writing shall not be permitted. Errors if any in the bid offer shall be corrected by striking out and rewriting clearly and initiated.
3. If any difference is found in the bid offer between the percentage given by the consultants in words and figures the lower of the two shall only be considered.
4. The bidder is not allowed to make any alternations to the terms & conditions. For any such alternation the offer of the consultants is liable for rejection.
5. If two or more bidders offer the same percentage then selection of the bidder will be based on their credentials, performance experience in handling similar projects.
6. The TSIIC reserves the right to reject any bid or all the bids without assigning any reason thereof.
7. The contract for TPQA shall be awarded to the lowest Bidder offering the bid in conformity with the requirements of these specifications and documents.
8. Conditional bid / offer will not be accepted.

**Chief Engineer**

**Annexure-I**  
**(3.0 –Scope of Services)**

**List of indicative quality checks on materials, equipment and appurtenances for guidance.**

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The specified tests relating to the following items of work shall be conducted by the Consultant at the frequency specified by MORTH / IRC / APDSS / BIS / Water supply and sewerage manual or as agreed by both parties based on the requirement

1. GSB Tests
2. WMM Tests
3. Tests for aggregates
4. Sand, Cement, Concrete cube Testing and Bitumen content
- 5 .Non Destructive tests for CC works (rebound hammer/ultrasonic pulse velocity Meter.

**Only concrete core tests, if required as per site inspection and as requested by the Client shall be conducted and the actual charges for conducting that test will be paid in addition to the agreed consultancy charges.**

The following mandatory tests shall be conducted:

- A. For Bituminous Road works
  - a. B.T. Extraction Test for B.T content in B.T Sample.
  - b. Gradation Test for B.T Mix
  - c. Thickness of the B.T overlays at different locations.
  - d. Quality of the finished road surface.
- B. For Cement Concrete (C.C) Road Works
  - a. Sieve Analysis of coarse & fine aggregate
  - b. Testing of crushing strength of standard cubes.
  - c. Quality of the finished road surface.
  - d. Non Destructive testing and thickness.
- C. For Buildings Works
  - a. Testing of concrete (for critical elements) being used.
  - b. Brick / Stone Masonry works & Plastering.
  - c. Doors, Windows & Ventilators
  - d. Precast concrete works
  - e. Flooring etc
- D. Wet Mix Macadam (WMM) Roads.

Thickness of layer, testing of materials, comments on surface & camber.

E. Earth filling & Compaction works.-CBR value test, Soil tests.

F. Water supply- All Factory tests & Field Tests for all materials of pipes

G. Sewerage works - Factory Test, Field Test for all materials of pipes

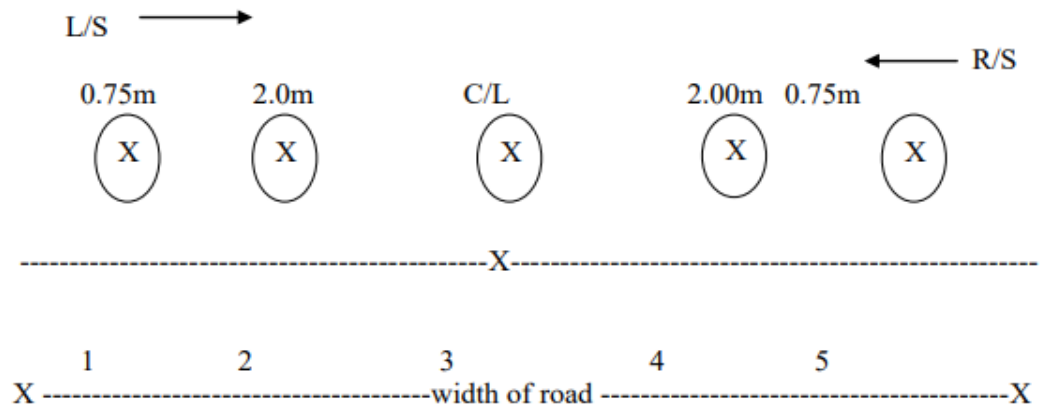
H. Mechanical works

I. Electrical works – Pumps & Motors.

In addition to the above, the supervision consultant shall perform their duties in accordance with MORTH / BIS / IRC and normal practices followed in Government Departments.. The concerned Engineer Incharge shall order for as many tests as required for quality assurance to his satisfaction within the ambit of codes provision and agreement.

#### A. BITUMINOUS (B.T) ROADS

1. The sample collection for BM/DBM/SDBC/BC should be carried out by making a trial pit of 150 mm x 150 mm with the full depth of the layer. The sample thus taken shall be thoroughly mixed and divided into four parts and one part (around 500 gms) shall be used for Bitumen Extraction. It is preferable to soak the sample in Benzene for 24 hours to get proper results. Necessary care shall be taken to see that the sample is true representative of the actual work executed as few higher size aggregates will adversely affect the presence of BT percentage.
2. The location and chainage of the point where sample is collected shall be mentioned for verification in case of disputes raised by Contractors/ Firms.
3. The depth of layers of BT road laid shall be taken only in cross-sections at random clearly mentioning the chainage / permanent land mark, for each cross section.
4. The number of pits for each cross section depends on the width of the road. For a road width up to 7.5 meters, three pits with two at 0.75 meters each from the edges and the third at the center of the road. Similarly for a road width between 7.5 meters to 11.0 meters, 5 pits at the road carriageway cross-section as follows should be taken.



## B. CEMENT CONCRETE (CC) ROADS/ CEMENT CONCRETE (CC) WORKS

1. Whether Mastic Pads being used are as per (This can be verified by Standards specification removing a Mastic Pad from the recently laid concrete Portion)
2. Whether water cement ratio maintained.
3. Whether lean Concrete is laid separately at least for a slab panel before starting the nominal Cement Concrete work. The compaction of the lean Concrete shall to be verified.
4. Verification shall be carried out to assess the depths of nominal Cement Concrete mix & lean Concrete mix at 3 points in a cross-section for the slab panel being Casted/ laid.
5. Verification of date of manufacturing of Cement bags, silt content and bulkage of sand etc.
6. Verification of grading of 20 mm metal stacks by sieving and recording the results.
7. Collections of samples of cement concrete cubes for assessing the 7 / 28 days compressive strength.
8. Comments on curing to the extent of work completed by that time.
9. After completion of work of CC road and cleaning of surface, the site shall be inspected again and observations on the surface should be made. The Expansion joints/ other joint fillings should also be verified.

### B.1 READY MIX CONCRETE (R.M.C) ROADS / WORKS

During the inspection of Casting / laying of CC roads with RMC the following shall be verified and reported.

1. The slump of the RMC before Casting / laying.
2. The computer printout about the details of mix and the time of departure.
3. Whether Screed Vibrators are used or not.
4. The slab panel width should be verified which should be less than the width of Screed Vibrator or 4.5 meters, whichever is less.
5. The cubes of RMC to be cast by taking the mix directly from the transit mixer.
6. The re-handling of RMC is not allowed by using shovel and the same is to be noted and the contractor shall be sufficiently warned or the work shall be rejected.
7. The surface of CC road to be verified for joint filling and other defects if any

#### B.2 DESIGNED CEMENT CONCRETE (CC) MIX / WORKS.

1. Check the design mix details with reference to the raw materials available at site vis-à-vis the designed materials. Conduct the sieve analysis for coarse and fine aggregate.
2. Check the calibration of the weigh batcher.
3. Verify the slump before use of concrete.
4. Cast CC Cubes as per the frequency mentioned in the IS Codes.

#### C. Additional Quality Tests for Structures (Buildings, ELSR, STP etc)

- i. Tensile strength test, Elongation test etc. for steel bars (Steel reinforcement) at regular intervals.
- ii. Water Quality test for water to be used in cement concrete.
- iii. Additional CC samples for nominal/ design mix.
- iv. Tests on cement to be used.
- v. Check on the mix design and procedure adopted for production of concrete.

#### D. WET MIX MACADAM (W.M.M.) ROADS

The metal used for WMM roads should conform to the relevant grade as per MORTH. Sieve Analysis shall be carried out by taking proper samples (Representative Sample, not less than 20 kg). The thickness of WMM road shall be checked by adopting cross-section only. Density of Compacted layer shall be checked and reported.

#### E. Water supply works :

- To check all Water supply pipelines for their quality of material used, sizes, alignment, trench sizes, gradient, laying and jointing, proper

cushion, backfilling, and testing for required pressure for the duration.

- To check the construction quality of intake works including pumping plants, Filtration beds, Water softening plants, miscellaneous water treatment plants.
- Physical and functional inspection, visual inspection for functionality of Valves, Fittings and Specials as per the estimate.
- Physical inspection, visual inspection and proper function of Orifices, Gauges, Chlorination plants any other Mechanical / Electrical equipments used in the project.
- To check the construction quality of Service reservoirs like Ground Level Service Reservoir (GLSR), Elevated Level Service Reservoir (ELSR) and any other Water retaining structures.

#### F. Sewerage Works:

- Random checking of laying as per gradient and jointing, dimensions of trench, backfill, Sewerage Line test for leakages, witnessing the water /air tests for identifying leaks in sewer lines etc., and manhole onstruction.
- Detail checking of Manhole construction activity.
- To check the construction quality of sewerage treatment plants such as Screening & Skimming tanks, Sedimentation tanks, flocculators, clarifiers, Sewerage filters, Contact beds, Trickling filters, Sludge tanks, Digestion tanks, Oxidation ponds and miscellaneous treatment plants with respect to the standard specifications as per relevant standards and as per the agreement conditions.

#### G. Mechanical works

Physical inspection, visual inspection for Mechanical equipments like Pumpsets with accessories, Motors, Bearings, Spare parts, filtration plant equipments etc and their functioning with respect to agreement conditions. Checking of design heads and delivery heads of pumps and motors during the trial run and commissioning

#### H. Electrical works

Transformers, main cables their routing, panel boards, Circuit breakers, Earthing, Distribution cables, Encasing of cables, motors, yard lighting, booster pumps and other related items.



Annexure – II  
(3.0 –Scope of Services)  
Proforma of Inspection Report

Name and address of TPQA Agency:		
1.0	Particulars work	
1.1	a) Name of Work	
	b) Description of work	
1.2	Executing Agency	
	a) Name	
1.3	Agreement No.	
1.4	Stipulated time and date of start	
1.5	Stipulated time and date of completion	
1.6	a) Estimated cost put to tender	
1.7	b) Schedule of rates applicable	
	Accepted tendered cost with overall percentage	
1.8	Percentage progress at time of inspection vis a vis expected as per contract and reasons for delay, if any:	
1.9	Inspection officers (Name & Designation)	
1.10	Officers and contractor present during inspection (Name & Designation)	
1.11	Date of inspection and number	
2.0	Quality control aids:	
2.1	Is site equipped with	
	a) Copy of agreement	
	b) Contract/applicable specification along with up to date correction slips	
	c) List of ISI marked /approved materials to be used:	
	e) Testing facilities to check conformations to acceptance criteria	
	f) Circulars on quality control	
2.2	Is field laboratory existing and well equipped	
3.0	Department procedure aspects	
3.1	Maintenance of inspection register	
3.2	Highlights of inspection by Client requiring compliance	
3.3	Are all site registers maintained in standard forms?	
3.4	Are test registers reviewed by authorized officer i.e. Engineer-in-charge with dates	
3.5	Cement registers	
	a) Is cement store checked as provided in the agreement	

	b) Comment on cement stock with reference to cement register	
3.6	Site order book and schedule of defects	
	a) Is site order book properly maintained	
	b) Is site order book reviewed by authorized officers (mention detail)	
	c) Have timely notices been issued to the contractor with the schedule of defects/damage and date of compliance? In case of failure to rectify defects/damages whether action under contract provisions initiated.	
4.0	Process control aspects	
4.1	Is soil investigation done? (give brief details)	
4.2	Suitability of water for construction	
	a) What is the source of water?	
	b) Has water been tested subsequently (i.e. after every 3 months) and found fit for use in works?	
	c) Has water been tested subsequently(i.e. after every 3 months) and found fit for use in works	
4.3	Are 10% (25% for concrete) of all samples for testing taken in presence of authorized representative of TPQA	
4.4	Are all mandatory tests carried out at stipulated frequency?	
4.5	Are materials approved by authorized officer of the executing agency? If so are approved samples available at site?	
4.6	Are samples units/items completed and approved by authorized officer of executing agency before start of mass finishing work?	
4.7	Specific control on RCC work like centering/shuttering proportioning with boxes, mixing by full bag capacity hopper fed mixer, control of slump, placing compaction with vibrator:	
4.8	Any other particular comments on adequate of process control	
5.0	Site inspection for observation and comments on quality control system in place	
5.1	Observations on floors slope (especially in bath, WC, kitchen, terrace, balcony etc.)	
5.2	Observation on QC for dampness/ leakages	
5.3	Samples collected by TPQA	
6.0	Observations on site material QC aspects.	
7.0	Observations on workmanship QC aspects.	

8.0	Comments on issues not specifically covered	
9.0	Suggestions, if any, for improving the quality	